

Systems and solutions catalogue Edition 2008







A Group brand

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Corporate Overview



Ortronics, headquartered in New London, CT USA, leads the global data communications networking industry in the development, design of the most advanced, highest performing, structured cabling systems and solutions that supports today's multimedia networks, applications and emerging technologies.

For more than 40 years, Ortronics has developed its expertise in copper, fibre and wireless from the building entrance to the workstation to offer solutions suited to businesses whose operations rely on high data-transfer volumes.

Today, Ortronics offers the most extensive range of enhanced copper and fibre optic connectivity systems and solutions.

A group brand Legrand

Ortronics is a subsidiary of Legrand (www.legrandelectric.com), the world specialist in products and systems for electrical installations and information networks, offering solutions for use in residential, commercial and industrial buildings. Operating in over 70 countries with sales of \notin 4.1 billion, it employs about 35,000 people and its catalogue list more than 130,000 products. At Legrand, innovation drives growth: with nearly 5% of sales invested in R&D every year, the group brings out a steady of new, high added-value products.





As members of standards - setting organisations, we play an integral role in your future systems, by helping define the new standards.







> Expertise

Our goal is to provide you with the connectivity infrastructure to make your connections happen simply, reliably and seamlessly.

We've built our reputation on performance-in providing higher performing products, services, and support. Today, we rely on development and design engineering teams with leading-edge skills in electricity, electronics, optics and mechanics supported by a sales force with a strong expertise in connectivity.

The expertise of our teams ensures our ability to create innovative solutions and our ability to listen and respond, to guarantee high-quality service and 100% respect for deadlines.

Our Support Targets your Success

We offer outstanding support to make the journey from designing and specifying a system to installing and certifying it easy, productive and hassle-free. Among highlights of our support:

- > A network of Certified Installers, who undergo comprehensive training by Ortronics to acquire the skills to install our systems flawlessly
- > RCDD certified trainers and technical support
- > Third-party and field testing 🕕 🐲
- > Active industry standards participation
- > System Design Engineers to assist with your network design
- > 25-year performance warranty guaranteeing our system will perform to specification for any application designed to run on it
- > Global presence with operations worldwide
- > Global and local distribution partners
- > On-time delivery

> Technology

Ortronics engineers and fully equipped R&D labs allow us to lead the industry in innovation and technology, applying the best mix of theory and practice to achieve industry-leading performance and ease of use. In order to create long term innovation, we rely on 4 internal labs: Copper, Fibre, Active, and Mechanical.

By considering the electrical, mechanical, and environmental characteristics, we offer product and solution ranges that exceed current industry norms and standards.

RoHS Compliance

All products placed on the European market since 1 July 2006 under the Ortronics brand have been in compliance with the European Directive 2002/95/EC on the Restriction of the use of certain Hazardous substances (RoHS). Ortronics has actively involved itself to provide products with no lead (Pb), mercury (Hg), cadmium (Cd), hexavalent chromium (Cr (VI)), polybrominated biphenyls (PBB) and polybrominated diphenyl ethers (PBDE).

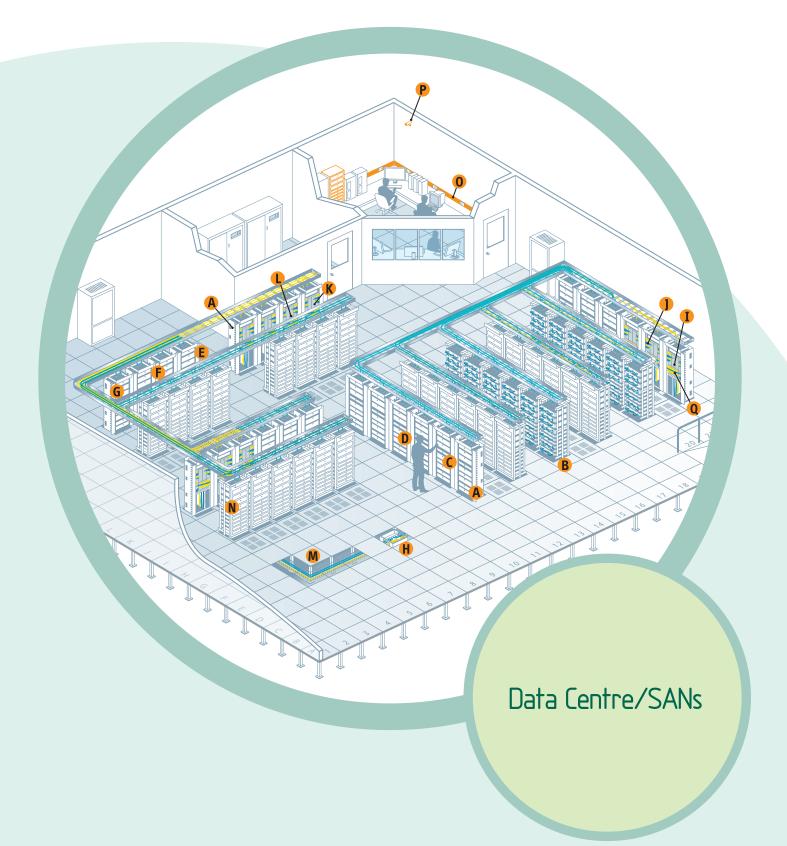
For further information, please log on to www.ortronics.eu

Data Centre/SANs

Mission-critical data centre and SANs require reliable, flexible and scalable infrastructures with guaranteed performance. Ortronics and the Legrand group companies offer a complete selection of high density copper and fibre optic structured cabling solutions for speeds up to 10 Gb/s and beyond as well as cable management and pathway systems to support these demands.

- Ortronics Mighty Mo 10 and Mighty Mo 6 Advanced Cable Management System
- ◎ B Ortronics Mighty Mo Server Rack and Blade Server Cabinet
- ⊙ **(** Ortronics OptiMo FC Series Fibre Cabinets
- ⊙ **D** Ortronics OptiMo Fibre Adapter Panels
- ⊙ **E** Ortronics OptiMo Fibre Cables and OptiMo Fibre Patch Cords
- © **F** Ortronics OptiMo Field-installable Fibre Connectors
- ⊙ G Ortronics Momentum Modular MTP/MPO-Based Cassettes
- ⊙ **H** Ortronics Consolidation Point Box
- ⊙ **I** Ortronics Clarity UTP Patch Panels
- ⊙ **1** Ortronics Clarity U/UTP Cables and Clarity U/UTP Patch Cords

- ⊗ K Ortronics Clarity FTP Patch Panels
- © **(**) Ortronics Clarity U/FTP, F/FTP Cables and Clarity U/FTP, F/FTP Patch Cords
- ⊙ M Cablofil underfloor Cable Management Systems
- ⊙ **N** Ortronics Power Distribution Units
- 0 Metal and Nonmetallic Raceway
- © P Ortronics Connectivity Solutions for IP Network Security Devices
- © **Q** Ortronics Clarity SNAP Pre-Terminated UTP Copper Cabling System



LAN/Enterprise & Government

Whether it is copper, fibre, wireless or cable management, from building entrance to desktop, Ortronics and the Legrand group companies offer more ways to connect to keep business moving seamlessly.

- ⊙ A Ortronics Mighty Mo 6 Advanced Cable Management System
- ⊙ **B** Ortronics Mighty Mo Server Rack and Blade Server Cabinet
- ⊙ **(** Ortronics Mighty Mo Cabinets and Wall Mount Cabinets
- ⊙ **D** Ortronics OptiMo FC Series Fibre Cabinets
- © **E** Ortronics OptiMo Fibre Adapter Panels, Patch Cords and Cables
- ⊙ **F** Ortronics Fib-or-Cop Workstation Outlet
- ⊙ G Ortronics Clarity UTP Patch Panels
- ⊙ **H** Ortronics Clarity U/UTP Cables and Clarity U/UTP Patch Cords
- © 1 Ortronics Clarity U/FTP, F/FTP Cables and Clarity U/FTP, F/FTP Patch Cords
- ⊙ **1** Ortronics Clarity Workstation Outlets

- ⊙ **K** Ortronics 110 Cross Connect Systems
- ⊙ **L** Cablofil Wire Mesh Cable Tray
- ⊙ M Cablofil Underfloor Cable Management Systems
- N Metal and Nonmetallic Raceway
- ⊙ **O** Floor Boxes
- ♥ P Open Space Solutions
- ♥ **Q** Wireless Access Points
- ⊙ **R** Ortronics Connectivity Solutions for IP Network Security Devices

LAN/Enterprise & Government

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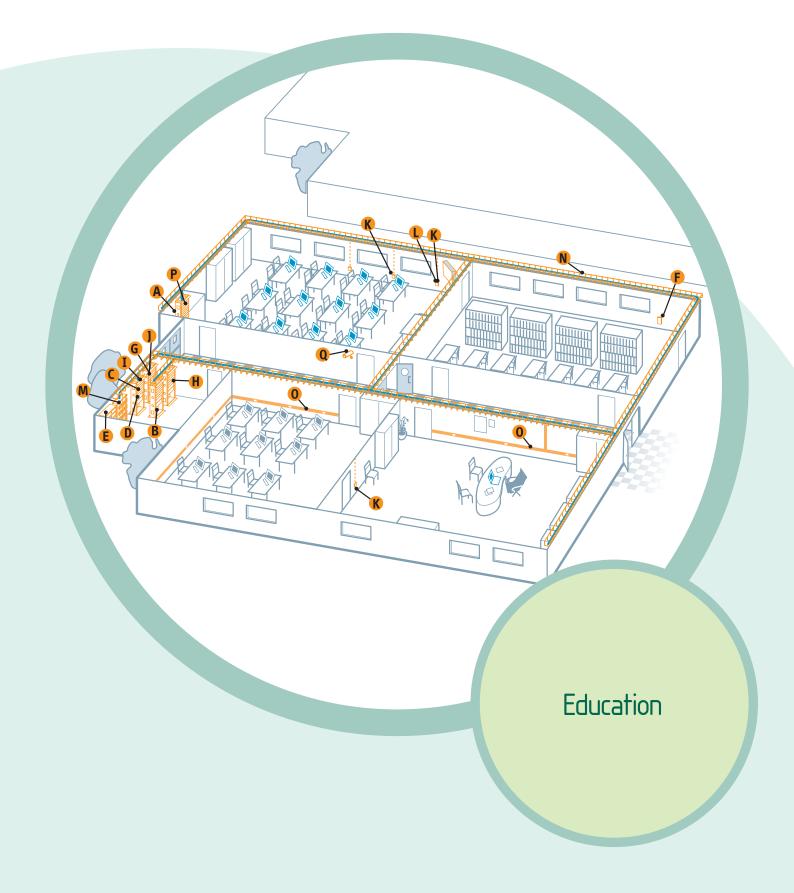
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Education

Ortronics and the Legrand group companies have all the integrated connectivity and cable management solutions needed for educational institutions to take advantage of new converging technologies such as distance learning, distributed computing, interactive teaching tools, wireless mobility and IP telephony.

- ⊙ A Ortronics Mighty Mo 6 Advanced Cable Management System
- \odot **B** Ortronics Mighty Mo Server Rack and Blade Server Cabinet
- ⊙ **(** Ortronics OptiMo FC Series Fibre Cabinets
- ◎ **D** Ortronics OptiMo Fibre Adapter Panels and Patch Cords
- ⊙ **(E)** Ortronics Fibre Optic Surface Mount Cabinets
- ⊙ **F** Ortronics Fibre Optic Workstation Systems
- ⊙ G Ortronics Clarity UTP Patch Panels
- ⊙ **H** Ortronics Clarity PoE Patch Panels
- ⊙ ① Ortronics Clarity U/UTP Cables and Clarity U/UTP Patch Cords
- © 1 Ortronics Clarity U/FTP, F/FTP Cables and Clarity U/FTP, F/FTP Patch Cords
- ⊙ **K** Ortronics Clarity TracJack and Wall Mounting Plates

- ⊙ **L** Ortronics Clarity Surface Mount Boxes
- ⊙ M Ortronics 110 Cross Connect Systems
- N Cablofil Wire Mesh Cable Tray
- ⊙ **0** Metal and Nonmetallic Raceway
- ◎ P Ortronics Power Distribution Units
- © **Q** Ortronics Connectivity Solutions for IP Network Security Devices

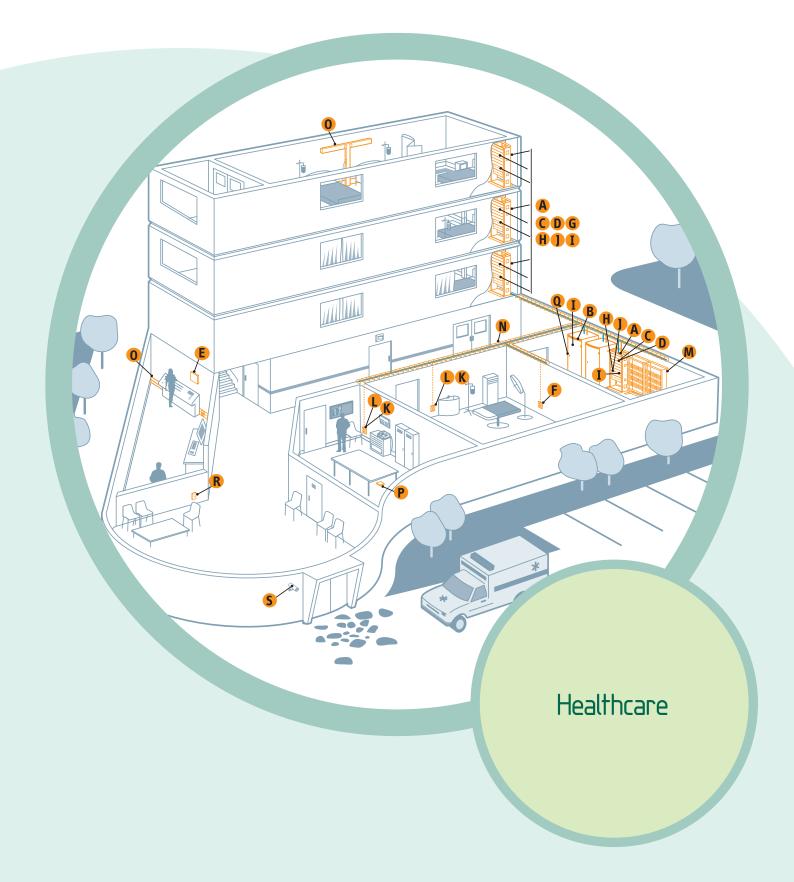


Healthcare

Healthcare facilities need a high performance network when adopting technologies for applications such as high resolution imaging, patient record management, and remote diagnostics and surgery. Ortronics offers the advanced structured cabling solutions needed for these high bandwidth applications, as well as cable management solutions from Ortronics and the Legrand group companies.

- Ortronics Mighty Mo 10 and Mighty Mo 6 Advanced Cable Management System
- ◎ B Ortronics Mighty Mo Cabinets and Wall Mount Cabinets
- ⊙ **(** Ortronics OptiMo FC Series Fibre Cabinets
- ⊙ D Ortronics OptiMo Fibre Adapter Panels, Patch Cords and Cables
- ⊙ **(E)** Ortronics Fibre Optic Surface Mount Cabinets
- ⊙ F Ortronics Fibre Optic Workstation Systems
- ⊙ **G** Ortronics Clarity UTP Patch Panels
- ⊙ **H** Ortronics Clarity PoE Patch Panels
- ⊙ ① Ortronics Clarity U/UTP Cables and Clarity U/UTP Patch Cords
- © 1 Ortronics Clarity U/FTP, F/FTP Cables and Clarity U/FTP, F/FTP Patch Cords
- ⊙ **K** Ortronics Clarity TracJack and Wall Mounting Plates

- ♥ L Ortronics Clarity Surface Mount Boxes
- ⊙ M Ortronics 110 Cross Connect Systems
- ⊙ **N** Cablofil Wire Mesh Cable Tray
- 0 Metal and Nonmetallic Raceway
- ⊙ P Floor Boxes
- ⊙ **Q** Ortronics Power Distribution Units
- ⊗ **R** Wireless Access Points
- ⊙ S Ortronics Connectivity Solutions for IP Network Security Devices

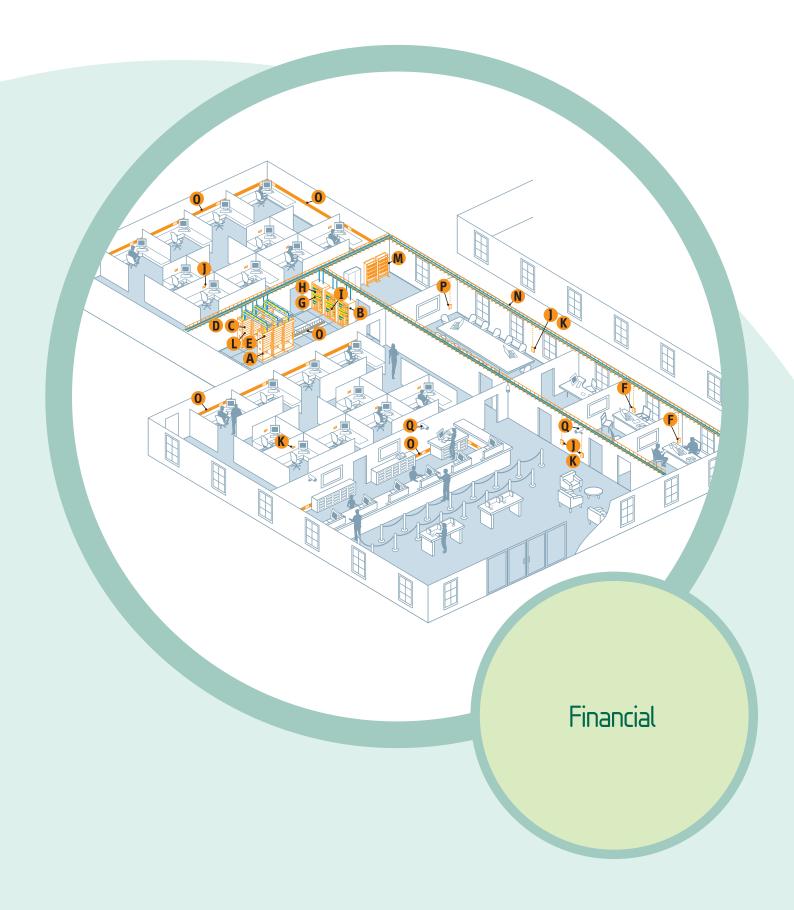


Financial

Financial institutions require 24/7 real-time networks that are fast, reliable, and secure to keep the global economy moving. Ortronics fibre optic and shielded copper systems are ideal for securing transactions and other confidential information.

- Ortronics Mighty Mo 10 and Mighty Mo 6 Advanced Cable Management System
- ⊙ B Ortronics Mighty Mo Cabinets and Wall Mount Cabinets
- ⊙ **C** Ortronics OptiMo FC Series Fibre Cabinets
- © **D** Ortronics OptiMo Fibre Adapter Panels and Patch Cords and Cables
- ⊙ **(E)** Ortronics Fibre Optic Surface Mount Cabinets
- ⊙ **F** Ortronics Fibre Optic Workstation Systems
- ⊙ **G** Ortronics Clarity UTP Patch Panels
- ⊙ **H** Ortronics Clarity PoE Patch Panels
- ⊙ **①** Ortronics Clarity UTP Patch Cords

- ⊙ **1** Ortronics Clarity TracJack and Wall Mounting Plates
- ⊙ **K** Ortronics Clarity Surface Mount Boxes
- ⊙ L Ortronics 110 Cross Connect Systems
- ◎ M Cablofil Wire Mesh Cable Tray
- N Cablofil Underfloor Cable Management Systems
- 0 Metal and Nonmetallic Raceway
- ♥ P Wireless Access Points
- © **0** Ortronics Connectivity Solutions for IP Network Security Devices

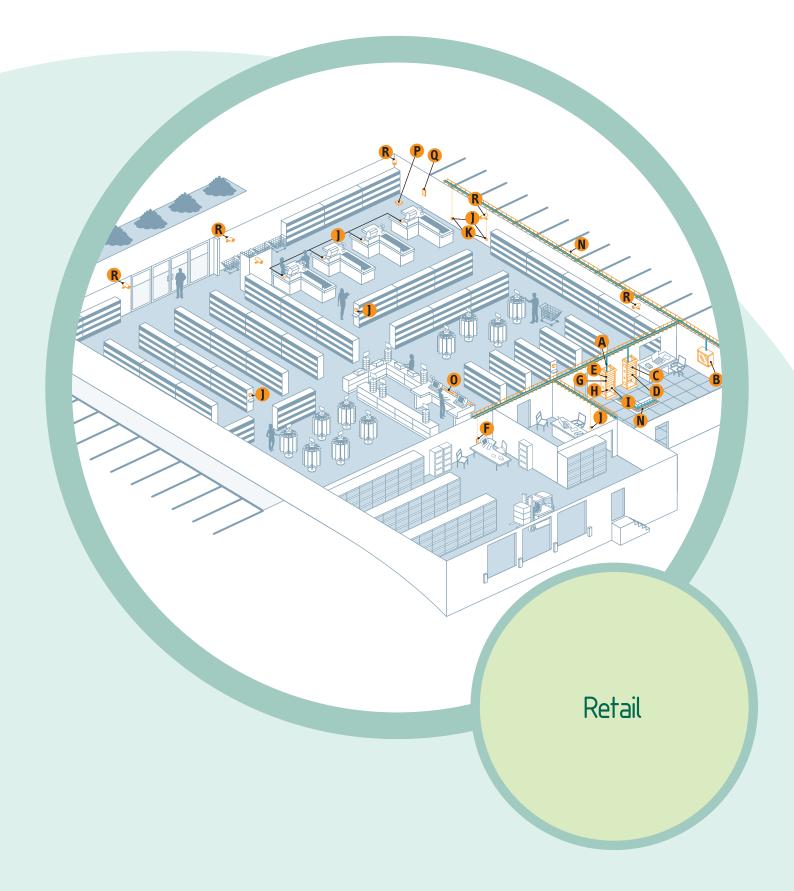


Retail

Ortronics knows that retailers are integrating IT into their business strategies. Ortronics and the Legrand group companies offer all the connectivity and cable management for standardization at store locations. Customized kits with everything from closet to workstation facilitate rapid deployment at every location.

- ◎ A Ortronics Mighty Mo 6 Advanced Cable Management System
- ⊙ **B** Ortronics Mighty Mo Telecom Cabinets
- ⊙ **(** Ortronics OptiMo FC Series Fibre Cabinets
- ◎ **D** Ortronics OptiMo Fibre Adapter Panels and Patch Cords
- ⊙ **(E)** Ortronics Fibre Optic Surface Mount Cabinets
- ⊙ **F** Ortronics Fibre Optic Workstation Systems
- ⊙ G Ortronics Clarity UTP Patch Panels
- ⊙ **H** Ortronics Clarity PoE Patch Panels
- ⊙ ① Ortronics Clarity U/UTP Cables and Clarity U/UTP Patch Cords
- ⊙ **1** Ortronics Clarity TracJack and Wall Mounting Plates

- ⊗ **K** Ortronics Clarity Surface Mount Boxes
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- ⊙ M Cablofil Wire Mesh Cable Tray
- N Cablofil Underfloor Cable Management Systems
- 0 Metal and Nonmetallic Raceway
- ♥ P Floor Boxes Devices
- ♥ Q Wireless Access Points
- © **R** Ortronics Connectivity Solutions for IP Network Security Devices



Training & Certification Programme

> Training

Protecting the investment in a structured cabling system is one of the main concerns of customers today. The structured cabling system provides a necessary foundation for a network to work effectively. Problems identified as applications are added while the network is live can be extremely costly to correct and may affect mission-critical system networks.

Ortronics addresses installation practices

- > By providing a select group of Certified Installers, globally, who guarantee their workmanship
- > By training the best consultants, architects and design engineers
- > By providing education for the customer information on today's leading technology and the latest standards

Visit www.ortronics.eu to see course descriptions and the current schedule or contact your local Ortronics representative.

> Certification

"Certification" is such an important component of a successfull installation that is often overlooked. The better the design, the products, and the installation, the higher return-of-investment the customer will receive.

Ortronics has developed comprehensive certification programmes to ensure the best project design and installation services.

The best installers in the industry are selected for the certified installer programme **COMMENT**

> Certified Installer Programme

Ortronics has the most stringent programme worldwide. The best installers in the industry are selected for the installer programme. Each Certified Installer company must meet and maintain the minimum training requirements:

> 1 project manager attends a 2-day management certification course

- > 30% of technicians successfully complete a 1-day copper installation course
- > 10% of technicians successfully complete a 1-day fibre installation course

Each certified installers company is evaluated every 12 months to ensure Ortronics is working with the best installers in the industry.

> Why choose an Ortronics Certified Installer ?

In addition to purchasing a product designed and manufactured to Ortronics exacting specifications, quality installation practices maximize the performance of a system. Selecting an installer with the best training will prevent performance degradation due to poor installation practices.

An Ortronics Certified installer can provide the quality installation that will maximize structured cabling system performance with quality assurance provided through extended product and performance guarantees. And, only an Ortronics Certified Installer can provide extended warranties. Ortronics stands behind all extended warranties.

Why is a warranty important to the customer ?

A product and/or application warranty ensures that the installed products are free from defects in materials and workmanship and will support applications developed by industry organizations like IEEE or ATM Forum. The products are warranted to meet or exceed the specifications of standards organizations including, but not limited to, ISO/IEC and TIA/EIA. Under the extended warranties, products are repaired or replaced and labor is paid by Ortronics. This offers customers the security of knowing they will receive the best structured cabling system and the system will maintain its performance integrity for years to come.

Ortronics Warranty Programme

> Basic Product Warranty

- > Guarantees product repair or replacement for five (5) years from the time of purchase, excluding labor costs
- > Basic warranty issued to the end-user on Ortronics connectivity products, racks, cable management and fibre products when purchased from an authorized distributor
- > The 25 Years Extended Product Warranty
- > Guarantees product repair or replacement for 25 years from the time of purchase including labor costs
- > Issued when an Ortronics certified installer installs Ortronics connectivity and cable
- > All requirements of the Ortronics Certification and Warranty programme must be met, which includes registering the project for warranty

> The 25 Year extended Product and Applications Warranty

- > Guarantees product repair or replacement for 25 years, from the time of purchase, including labor costs
- > Applications Assurance guarantees the performance of applications for the specified cabling category
- > Issued when an Ortronics certified installer installs Ortronics connectivity and cable
- > All requirements of the Ortronics certification and warranty programme must be met, which includes using only Ortronics patch cords
- > The project must be registered for warranty, and test data must be submitted to Ortronics

UTP Clarity^{10G}

TracJack® Modules20Patch Cords20Patch Panels20Cables20

10

TracJack[®] Modules

Clarity 10G Modular Jacks



RJ45 10G, T568A/B wiring, Icon compatible and shutters.



See p. 57 for Workstation

Patch Cords

Clarity 10G Patch Cords, 4-pair, PVC

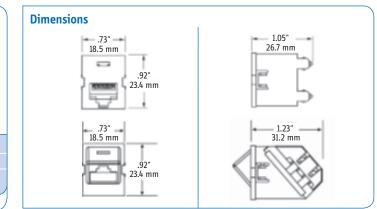
Part No.	Description	Colour	Length
OR-MC61003-09	4-pair, PVC, Clarity 10G	White	0.9 m (3')
OR-MC61005-09	4-pair, PVC, Clarity 10G	White	1.5 m (5')
OR-MC61007-09	4-pair, PVC, Clarity 10G	White	2.1 m (7')
OR-MC61009-09	4-pair, PVC, Clarity 10G	White	2.7 m (9')
OR-MC61015-09	4-pair, PVC, Clarity 10G	White	4.6 m (15')
OR-MC61020-09	4-pair, PVC, Clarity 10G	White	6.0 m (20')
OR-MC61025-09	4-pair, PVC, Clarity 10G	White	7.6 m (25')

Patch Panels



Cables

Clarity 10G, 4 pair	NEW
Part No.	Description
OR-100UC610L-EU-04	4 pair, 500 m reel, yellow



Clarity 10G 110/6 port Patch Panels

OR-PHD610U48		
Part No.	Description	Port
OR-PHD610U24	110/6 port Patch Panel	24
OR-PHD610U48	110/6 port Patch Panel	24
OR-PHDTJA24	TracJack panel with isolation for 10G	24

UTP Clarity ⁶ Channel Enhanced	
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Jak-Pak	_ 28
110 Patch Cords	_ 29
110 Accessories	_ 30
Cables	_ 30

3

UTP Clarity⁶ Channel Enhanced Category 6 solution

Clarity⁶ Channel Components

- > Clarity⁶ UTP Cable (LSZH/PVC)
- > Clarity⁶ Trac]ack Modular Jacks/Outlets
- > Clarity⁶ Modular to 110 Patch Panels
- > Clarity⁶ 110 Cross Connect Blocks
- > Clarity⁶ Enhanced Frequency Patch Cords

The Clarity⁶ Channel Guarantee

The Clarity⁶ horizontal channel gives you a cabling solution that provides a comfortable margin of additional performance over Category 6 requirements. All components are exceptionaly matched to work optimally together-surpassing all Category 6 requirements. You get full channel performance, without compromise. The Clarity⁶ Enhanced Category 6 solution provides a total usable bandwith of 250 MHz. The Clarity⁶ horizontal channel solution is engineered to surpass all requirements of Category 6 applications. Clarity⁶ is guaranteed to deliver lab verified channel performance of 5 dB better than all Category 6 crosstalk for standards compliant installations.

Applications Guaranteed

10Base-T	155 Mb/s ATM
100Base-TX	. 270 Mbps digital video
1000Base-T	Broadband video
1000Base-TX	1 Gb/s ATM (CB1G)

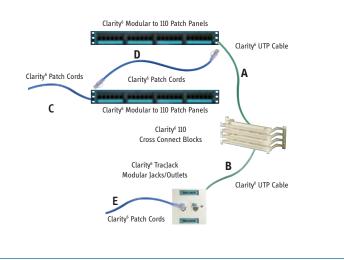
Standards Compliance

ANSI/TIA/EIA 568-B.1 + B.2 ANSI/TIA/EIA 568-B.2 Category 6 ISO/IEC-11801 (2nd edition) Class E

Clarity⁶ horizontal UTP solutions eliminate the need for special installation requirements or unique patch/interconnect cord length limitations.

100-metre Horizontal Channel

A+B = 90 metres, C+D+E = 10 metres.

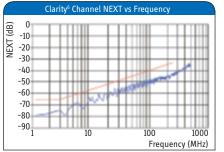


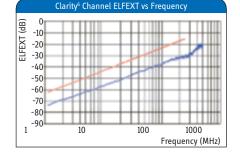
The Clarity⁶ channel model provides real world design flexibility. Ortronics Clarity⁶

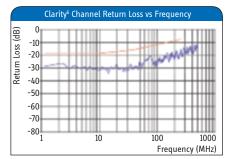
horizontal UTP solutions are engineered to optimise application performance utilising any standards compliant channel length and configuration. Ortronics

Clarity⁶ Performance

The independent test data shown below represents the worst case performance for a 100 metre 4-connector Clarity⁶ channel compared to the ISO/TIA (Category 6) standard. The significant margins shown for each measured parameter demonstrates the superior engineering of the Clarity⁶ solution. These performance margins are consistent across and beyond the range of ISO/TIA test frequencies.







Laboratory test results; your results may vary.

*Call or visit our web site for a free independent test report on the Clarity⁶ system 4-connector channel performance.

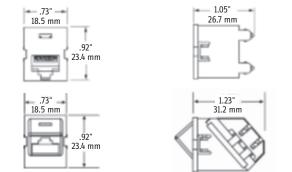
Frequency (MHz)	TIA CAT 6 Insertion Loss (dB)	Guaranteed Clarity ⁶ Insertion Loss % margin	TIA CAT 6 NEXT (dB)	Guaranteed Clarity ⁶ NEXT (dB)	TIA CAT 6 PSNEXT (dB)	Guaranteed Clarity ⁶ PSNEXT (dB)	TIA CAT 6 ELFEXT (dB)	Guaranteed Clarity ⁶ ELFEXT (dB)	TIA CAT 6 PSELFEXT (dB)	Guaranteed Clarity ⁶ PSELFEXT (dB)	TIA CAT 6 Return Loss (dB)	Guaranteed Clarity ⁶ Return Loss (dB)
1.0	2.1	15.0%	65.0	69.0	62.0	66.0	63.3	67.3	60.3	64.3	19.0	22.0
4.0	4.0	8.8%	63.0	67.0	60.5	64.5	51.2	55.2	48.2	52.2	19.0	22.0
10.0	6.3	7.8%	56.6	60.6	54.0	58.0	43.3	47.3	40.3	44.3	19.0	22.0
20.0	9.0	7.8%	51.6	55.6	49.0	53.0	37.2	41.2	34.2	38.2	19.0	22.0
31.25	11.3	8.0%	48.4	52.4	45.7	49.7	33.4	37.4	30.4	34.4	17.1	10.1
62.5	16.4	8.5%	43.4	47.4	40.6	44.6	27.3	31.3	24.3	28.3	14.1	17.1
100.0	21.2	8.6%	39.9	43.9	37.1	41.1	23.3	27.3	20.3	24.3	12.0	15.0
155.0	26.6	7.2%	36.7	40.7	33.8	37.8	19.4	23.4	16.4	20.4	10.1	13.1
200.0	31.5	6.3%	34.8	38.8	31.9	35.9	17.2	21.2	14.2	18.2	9.0	12.0
250.0	36.0	5.4 %	33.1	37.1	30.2	34.2	15.3	19.3	12.3	16.3	8.0	11.0

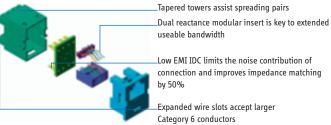
TracJack[®] Modules

Ortronics Clarity Trac]acks feature the improved performance of centre tuned Category 6 connector technology, combined with the ease and reliability of a frontloading individual jack with 110 termination.

	ntre Tuned, Category 6 Trac]acks		
OR-TI600/OR-	1645	Jack, Category 6, 8-position, T568A/B wiring, Icon and shutters compatible.	Features Meets Category 6 component specifications TIA/EIA- ETL 3rd party component tested and verified More transparent to the signal when used with Clari Uses dual reactance modular contact array New low emission IDC contacts Standard termination practice using 110 impact tool Easy lace IDC housing designed to accept larger Cate Easy to follow universal wiring label-guick and user
Part No.	Description		> Retention enhanced IDC contacts hold laced conductor
OR-TJ600-13 OR-TJ600-27 OR-TJ600-42 OR-TJ600-42 OR-TJ600-43 OR-TJ600-44 OR-TJ600-48 OR-TJ600-68 OR-TJ645-00 OR-TJ645-13 OR-TJ645-43 OR-TJ645-43 OR-TJ645-44 OR-TJ645-45 OR-TJ645-68 OR-TJ645-68 OR-TJ645-68	180° exit, fog white180° exit, black180° exit, ivory180° exit, dark purple180° exit, dark blue180° exit, dark red180° exit, dark yellow180° exit, dark green180° exit, dark green180° exit, dark grey180° exit, black45° exit, ivory45° exit, dark red45° exit, dark red45° exit, dark red45° exit, dark green45° exit, dark green45° exit, light grey45° exit, dark grey		 > Icon compatible, C6 marking on jack face > Flush and angled TracJacks are available in 12 colour > Backward compatible to Category 3, 5 and 5e > Centre tuned Category 6 technology > ROHS compliant Dimensions .73" .92" .34 mm .92" .34 mm
OR-TJ645-88 Products colou	45° exit, white		Clarity ⁶ Technological Advancements
fog white -00	-13 -27 -36 -42 -4	3 -44 -45 -68 -78 -88	Tapered towers Dual reactance useable bandw
part numbers. Fog white is st	(ex: OR-TJ600-45) andard, requiring no tail code.	les inserted at the end of Ortronics	Low EMI IDC lin connection and by 50%
Note: * only fo	r OR-T]600	See p. 75 for fibre TracJacks modules	Expanded wire Category 6 cond
			Specifications Materials > High impact plastic housing

- 568-B.2
- ty⁶ cords
- gory 6 conductors
- -friendly, eliminates confusion
- n position until punch down
- ٢S





- > Flame retardant UL® 94V-0
- > Modular contacts: beryllium copper, nickel under plating and minimum of 50 micro-inches of gold in contact area
- > IDC contacts: phosphor bronze, nickel under plating and tin lead over plate. Serve 22-24 AWG

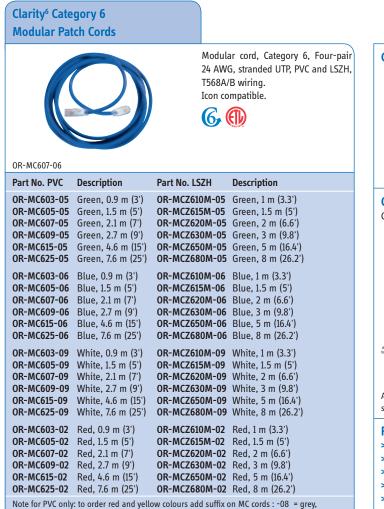
Performance

- > Meets Category 6 component requirements TIA/EIA-568-B.2
- > ETL 3rd party component verified
- > Meets FCC part 68 subpart F
- > Rated for 750 plug insertions
- > Exceeds 100 gram contact force
- > UL 1863 listed, file #E131600
- > Compatible with 110 impact tool
- > Exceeds IEEE 802.3af DTE power specifications by 500%

23

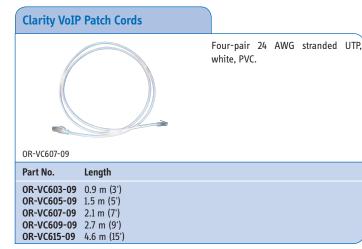
Patch Cords

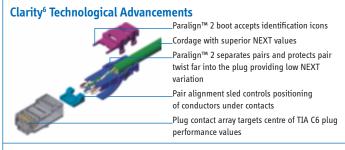
Clarity Patch Cords use centre tuned technology to elevate channel performance. Clarity⁶ cords are ETL verified to Category 6 component standards. More importantly, centre tuning these cords to Clarity jacks and panels provides significant elevation of channel performance that can be field measured.



-04 = vellow

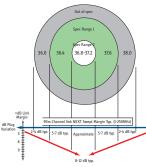
Clarity VoIP Patch Cords





Centre Tuned

Category 6 plug for patch cords (NEXT pair 1/3) vs channel link margins



TIA/EIA-568-B.2 Category 6 Plug Range (Pr 1/3) De-embedded NEXT

All conecting hardware was pre-wired and met the TIA/EIA-568-B.2 Category 6 component specifications

Performance

- > Meets Category 6 component requirements TIA/EIA-568-B.2
- > ETL 3rd party component verified
- > Cable assembly, UL® listed
- > Rated for 750 plug insertions
- > Plug & termination meets FCC part 68 and IEC 60603-7

Specifications

> Ortronics VoIP series patch cords provide an extra low-profile Clarity plug at one end to address cable bend requirements when plugging into the bottom of an IP phone set. The other cord end offers the full protective attributes of the Paralign™ 2 plug.

Patch Panels

Clarity Patch Panels combine the Ortronics commitment to ease and reliability of 110 termination with the ETL verified TIA/EIA-568-B.2 Category 6 performance of centre tuned connector technology. These 110 termination 19" panels are available in six and eight port module groupings, in 12, 24, 48, and 96 port sizes. Panels provide extensive designation abilities, icon compatibility, rear cable management and T568A/B wiring.

Clarity ⁶ Mod	Iular to 110 Patch Panels		Clarity ⁶ Modular to 110 Patch Pane	ls
		High density with 6 port modules, Category 6.		High density with 8 port modules, Category 6.
			Contraction Contraction Contraction	
DR-PHD66U24			OR-PHD68U24	
Part No.	Description	Rack Units	Part No. Description	Rack Units
OR-PHD66U24 OR-PHD66U48 OR-PHD66U96	48 port	1 2 4	OR-PHD68U24 24 port OR-PHD68U48 48 port OR-PHD68U96 96 port	1 2 4
Clarity ⁶ Mod	lular to 110 Patch Panels		Clarity ⁶ Max. Density Patch Panel	
		Standard density with 6 port modules, Category 6.		Category 6 UTP, Max. density.
OR-PSD66U24			OR-PMD6U481U	
Part No.	Description	Rack Units	Part No. Description	Rack Units
OR-PSD66U12 OR-PSD66U24 OR-PSD66U48 OR-PSD66U96	24 port 48 port	1 2 3 6	OR-PMD6U481U 48 port Features > Meets Category 6 component specification	
	anced Category 6 110 Patch Panels		 > ETL 3rd party component tested and veri > More transparent to signal with Clarity⁶ c > Dual reactance modular contact array (p. > New low emission IDC contacts 	fied cords
		Mini patch, 12 port, Category 6.	 > Standard termination practice-110 tool > Easy lace IDC housing designed to accep > Support T568B and T568A wiring > Easy to follow wiring labels, quick and u > Supplied label field > Icon compatible > Supplied full length metal rear cable ma > High density or standard density panel d 	ser-friendly, eliminates confusion nagement
OR-PMP612H			 Backward compatible to Category 3, 5 ar 	
Part No.	Description		> Available in either 6 or 8 port groupings	
OR-PMP612H OR-PMP61289	Hinged mounting 89D mounting		 > Centre tuned to Category 6 technology > RoHS compliant 	
Category 6 F Patch Panels	Feed-Through s	New	Specifications Materials > Panel: 2.4 mm aluminium, durable black	powder coat finish
1111111111		Category 6 RJ45 feed-through panels provide interface between two RJ45 plugs.	 Module: high impact plastic housing Flame retardant UL® 94V-0 Fully encased printed circuitry protection Modular contacts: beryllium copper, nick 50 micro-inches of gold in contact area 	el under plating and minimum
OR-PHD6FF24			 IDC contacts: phosphor bronze, nickel ur 22-24 AWG 	ider plating and tin lead over plate. Se
Part No.	Description	Rack Units	> Compatible with 110 impact tools	
OR-PHD6FF24	24-port, R]45, feed-through p. T568A/B, 482.6 x 44.45 mm	atch panel, Cat 6, 1	Performance > Meets Category 6 component requirement > Meets FCC part 68 subpart F > Rated for 750 plug insertions > Exceeds 100 gram contact force	nts TIA/EIA-568-B.2

- > UL 1863 listed, file #E131600
- > Exceeds IEEE 802.3af DTE power specifications by 500%

Hinged Patch Panels

Hinged Clarity panels include cable management facilities. Panels can be terminated in the hinged-down position while resting on management rings. Panels can also be mounted back-to-back on our 502.9 mm deep Mighty Mo racks.

Clarity ⁶ Patch P Hinged Wire M		
		High density with 6 port modules, Category 6.
OR-PHD66U24HM		
Part No.	Description	Rack Units
OR-PHD66U24HM OR-PHD66U48HM	24 port (43.2 x 88.9 mm rin 48 port (76.2 x 101.6 mm ri	5.
Clarity ⁶ Patch P		
Hinged Wire M	lanagement	
		Standard density with 6 port modules, Category 6.
OR-PSD66U24HM		modules, Category 6.
	Description	modules, Category 6.

Features

- > Provides access to rear of panel from front side of rack
- > Can be terminated in hinged down position
- > ETL verified to TIA Category 6 component spec
- > Centre tuned to Clarity⁶ patch cords
- > Universally wired 110 termination
- > New IDC housing
- > Supplied rear cable management
- > High density design
- > RoHS compliant

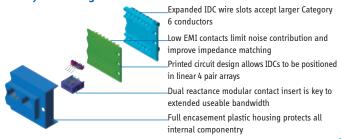
Materials

- > Panel: 2.4 mm aluminium, durable black powder coat finish
- > Module: high impact plastic housing
- > Flame retardant UL[®] 94V-0
- > Fully encased printed circuitry protection
- > Modular contacts: beryllium copper, nickel under plating and minimum 50 micro-inches of gold in contact area
- > IDC contacts: phosphor bronze, nickel under plating and tin lead over plate. Serve 22-24 AWG
- > Compatible with 110 impact tools

Performance

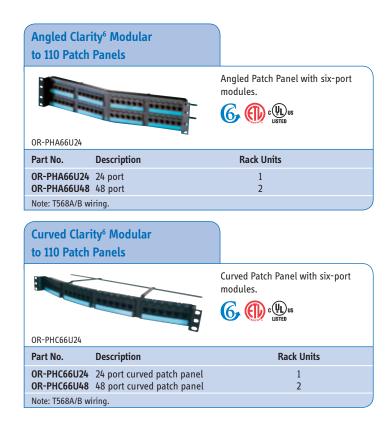
- > Meets Category 6 component requirements TIA/EIA-568-B.2
- > Meets FCC part 68 subpart F
- > Rated for 750 plug insertions. Exceeds 100 gram requirement
- > UL 1863 listed, file No. E131600

Clarity⁶ Technological Advancements



Curved and Angled Patch Panels

Ortronics angled Clarity patch panels offer a new slant to patch cord management. Built around the elevated performance of Clarity⁶, these high density patch panels utilize a unique, patented, recessed angle design to help direct cords more easily to vertical rack or cabinet management within a lower profile. Ortronics curved Clarity patch panels offer yet another alternative for patch cord management. These high density patch panels feature a new look, utilizing a patent pending, recessed curved design. This design provides another alternative for installations which have limited rack space for horizontal management.



Features

- > Unique recessed angle design (patent pending)
- > Exceed Category 6 component specifications TIA/EIA-568-B.2
- > ETL 3rd party component tested and verified
- > More transparent signal path when used with Clarity cords
- > Centre tuned technology
- > Dual reactance modular contact array
- > Low emission IDC contacts
- > Standard termination practice, compatible with 110 impact tool
- > Easy lace IDC housing
- > Support T568B and T568A wiring
- > Easy to follow wiring labels, quick and user-friendly
- > Label fields and icon compatible
- > Supplied rear cable management
- > RoHS compliant
- > Lower mounted profile directs cords more easily to vertical management
- > Deeper rear cable support bar addresses larger Category 6 cable designs
- > Time saving terminating with easy lace multi-port adapters
- > Rugged construction
- > Work especially well with the increased depth and enhancements of Mighty Mo 6 cable management racks

Specifications

Materials

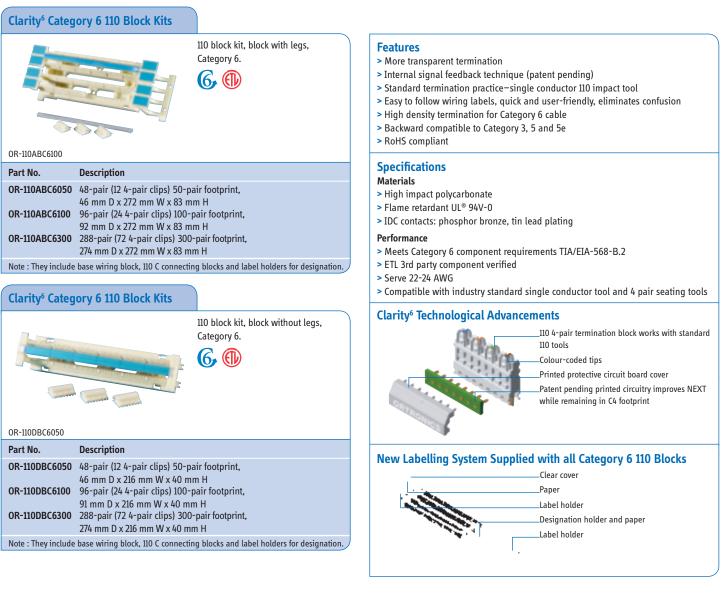
- > Panel: 2.4 mm aluminium, durable black powder coat finish
- > Module: high impact plastic housing
- > Flame retardant UL® 94V-0
- > Fully encased "protected" printed circuitry
- > Modular contacts: beryllium copper with nickel under plating and minimum 50 micro-inches of gold in contact area
- > IDC contacts: phosphor bronze, nickel under plating and tin lead over plate. Serve 22-24 AWG
- > Compatible with 110 impact tool

Performance

- > Clarity⁶ meets TIA Category 6 component requirements TIA/EIA-568-B.2
- > Meets FCC part 68 subpart F
- > Rated for 750 plug insertions
- > Exceeds 100 gram requirement
- > Exceeds the IEEE 802.3af DTE power specifications by 500%

110 Block Kits

Clarity 110 blocks are ETL verified to TIA/EIA-568-B.2 Category 6 component standards: with the ease and reliability of 110 termination and new installer friendly features all within the traditional 110 block footprint. Clarity blocks are available in 50, 100, and 300-pair sizes, and provide designation areas and rear cable entry. Clarity⁶ blocks use a signal feedback technique internal to the C6110C4 connector to control cross talk without compromising impedance.

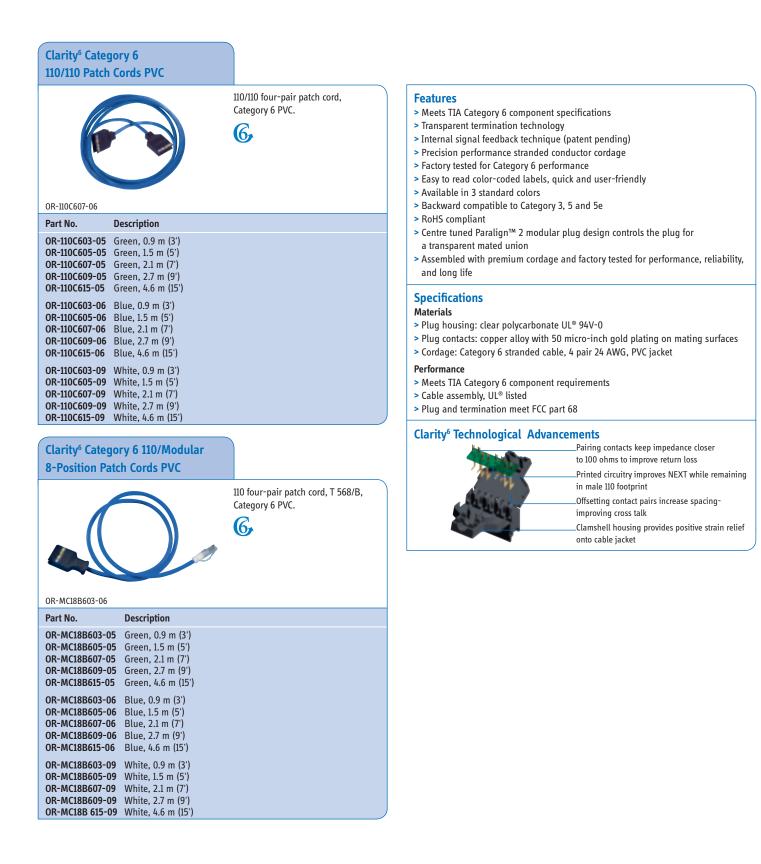


Jak-Pak

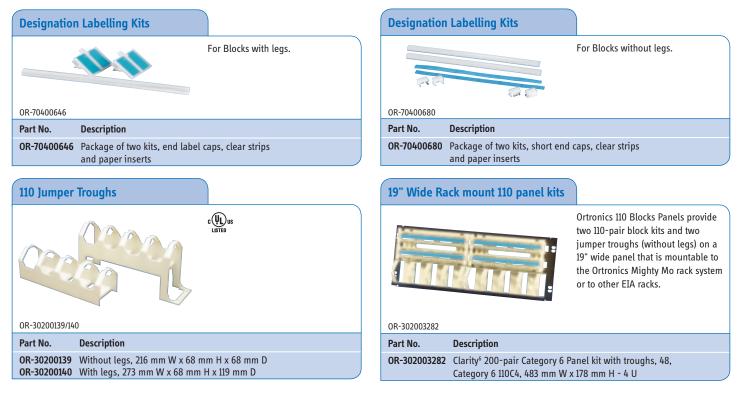


110 Patch Cords

Clarity 110 Patch Cords are ETL verified to TIA/EIA-568-B.2 Category 6 component standards. More importantly, Clarity 110 plug housing use an internal signal feedback technique to control cross talk without compromising impedance. Clarity 110 to Modular 8-Position Patch Cords use both signal feedback and centre tuning. This allows more transparent connector interfaces for significant elevation of channel performance that can be field measured.

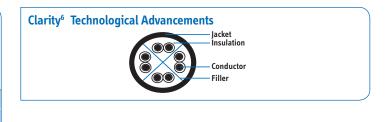


110 Accessories



Cables

Clarity ⁶ Category 4 pair U/UTP, Cal			
0R-100UC6H-EU-05		Cable Clarity ⁶ Category 6 4-pair U/UTP. 6 (,
0K-1000C6H-E0-05			
Part No.	Description		Color
	LSZH - Length 305 m box PVC - Length 305 m box		grey grey



UTP Clarity^{5E} Channel Enhanced Category 5e solution ______ 32 TracJack® Modules ______ 33 Patch Cords ______ 34 Clarity VoIP Patch Cords ______ 34 Patch Panels ______ 35 Hinged Patch Panels ______ 36 Angled Patch Panels ______ 37 Curved Patch Panels ______ 37 Clarity PoE Patch Panels ______ 37 I10 Block Kits ______ 38 Jak-Pak ______ 38 I10 Patch Cords ______ 39 I10 Accessories ______ 40 Cables ______ 40

UTP Clarity^{5E} Channel Enhanced Category 5e solution

Clarity^{5E} Channel Components

- > Clarity^{5E} UTP Cable (LSZH/PVC)
- > Clarity^{5E} Trac]ack Modular]acks/Outlets
- > Clarity^{5E} Modular to 110 Patch Panels
- > Clarity^{5E} 110 Cross Connect Blocks
- > Clarity^{5E} Enhanced Frequency Patch Cords
- The Clarity^{5E} Enhanced Category 5e provides a total usable bandwidth of 155 MHz.

The Clarity^{5E} Channel Guarantee

The Clarity^{5E} horizontal channel gives you a Category 5e solution that provides a comfortable margin of additional performance. All components are exceptionaly well matched to work together-surpassing all Category 5e requirements. You get full channel performance, without compromise. The Clarity^{5E} Enhanced Category 5e solution provides a total usable bandwith of 155 MHz. The Clarity^{5E} horizontal channel solution is engineered to surpass Category 5e application requirements. Clarity^{5E} guarantees installed static channel performance 6 dB better than all Category 5e crosstalk requirements for standards compliant designs/installations with field verification by Ortronics approved handheld channel testers.

Applications Guaranteed

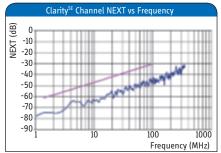
10Base-T 100Base-TX 1000Base-T 155 Mb/s ATM

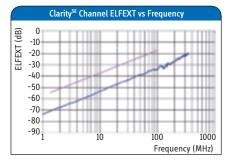
Standards Compliance

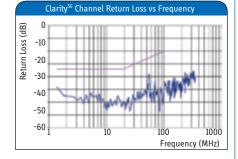
ANSI/TIA/EIA 568-B.1+B.2 ISO/IEC-11801 (2nd edition) Class D

Clarity^{5E} Performance

The independent test data shown below represents the worst case performance **for a 100 metre 4-connector channel** compared to the ISO/TIA (Category 5e) standard. * The significant margins shown for each measured parameter demonstrates the superior engineering of the Clarity^{5€} solution. These performance margins are consistent across and beyond the range of ISO/TIA test frequencies.







Laboratory test results; your results may vary.

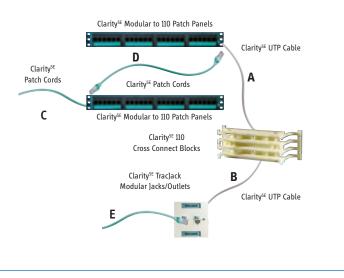
*Call or visit our web site for a free independent test report on the Clarity^{5E} system 4-connector channel performance.

ISO Standard Frequency (MHz)	TIA CAT 5e Attenuation (dB)	Guaranteed Clarity⁵ Insertion Loss % margin	TIA CAT 5e NEXT (dB)	Guaranteed Clarity⁵ NEXT (dB)	TIA CAT 5e PSNEXT (dB)	Guaranteed Clarity⁵ PSNEXT (dB)	TIA CAT 5e ELFEXT (dB)	Guaranteed Clarity⁵ ELFEXT (dB)	TIA CAT 5e PSELFEXT (dB)	Guaranteed Clarity⁵ PSELFEXT (dB)	TIA CAT 5e Return Loss (dB)	Guaranteed Clarity ^{₅E} Return Loss (dB)
1.0	2.2	1.3%	60.0	66.0	57.0	63.0	57.4	63.4	54.4	60.4	17.0	20.0
4.0	4.5	6.7%	53.6	59.6	50.9	56.9	45.3	51.3	42.4	48.4	17.0	20.0
10.0	7.1	7.9%	47.0	53.0	44.1	50.1	37.4	43.4	34.4	40.4	17.0	20.0
20.0	10.2	8.5%	42.0	48.0	39.0	45.0	31.4	37.4	28.4	34.4	17.0	20.0
31.2	12.9	8.9%	38.7	44.7	35.7	41.7	27.5	33.5	24.5	30.5	15.1	18.1
62.5	18.6	9.4%	33.6	39.6	30.6	36.6	21.5	27.5	18.5	24.5	12.1	15.1
100.0	24.0	9.4%	30.1	36.1	27.1	33.1	17.4	23.4	14.4	20.4	10.0	13.0
155.0	-	-	-	42.4	-	41.2	-	43.5	-	38.1	-	28.6

100-metre Horizontal Channel The Clarity^{5€} channel model prov

The Clarity^{5E} channel model provides real world design flexibility. Ortronics Clarity^{5E} horizontal UTP solutions are engineered to optimise application performance utilising a worst case 4-connector channel. Ortronics Clarity^{5E} horizontal UTP solutions eliminate the need for special installation requirements or unique patch/interconnect cord length limitations.

A+B < 90 metres, C+D+E < 10 metres.

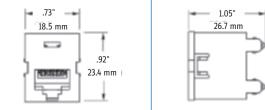


TracJack[®] Modules

Ortronics Clarity TracJacks feature the improved performance of centre tuned Category 5e connector technology, combined with the ease and reliability of a frontloading individual jack with 110 termination.

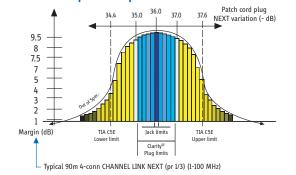
		-		wi		on and	shutter		568A/B atible.	 Features Meets Category 5e compon ETL 3rd party component te Mated union with Clarity^{5E} New low emission IDC cont Supports standard terminat Retention enhanced IDC cont Easy to follow universal wind 	ested a cords i tacts tion pr ntacts h ing lal
OR-TJ5E00/OR-	Descriptio	•								 > Fits in all TracJack plates ar > Icon compatible, 5E markin 	
OR-T]5E00	180° exit, f									> Flush and angled TracJacks	are a
OR-TJ5E00-00										> RoHS compliant	
OR-TJ5E00-13										Dimensions	
OR-TJ5E00-27											
OR-TJ5E00-36 OR-TJ5E00-42										.73"	
OR-TJ5E00-43										18.5 mm	Ŧ
OR-TJ5E00-44			w								1
OR-TJ5E00-45										- L J -	92"
OR-TJ5E00-68										23.4	4 mm
OR-TJ5E00-78 OR-TJ5E00-88											Ļ
OR-TJ5E45	45° exit, fo	g white									
OR-TJ5E45-00										Specifications	
OR-TJ5E45-13										Materials	
OR-TJ5E45-27 OR-TJ5E45-36										> High impact plastic housing	g
OR-TJ5E45-50										> Flame retardant UL [®] 94V-0	
OR-TJ5E45-43										> Modular contacts: berylliur	
OR-TJ5E45-44										50 micro-inches of gold in	
OR-TJ5E45-45										> IDC contacts: phosphor bro	nze, n
OR-TJ5E45-68										Serve 22-24 AWG	
OR-TJ5E45-78 OR-TJ5E45-88										Performance	
Products colour										> Meets TIA Category 5e com	•
fog										> Meets FCC part 68 subpart	
white -00	-13 -27	-36	-42	-43	-44	-45	-68	-78	-88	 Rated for 750 plug insertion Exceeds 100 gram requirem 	
										> UL 1863 listed, file #E131600	
These colour sa	moles correspo	and with th	e tail cod	es ince	rted at t	he end (of Ortron	ics nar	· •	 Compatible with 110 impact 	
numbers. (ex: 0		with th				e chư t		.cs puri	•	 Exceeds the IEEE 802.3af D 	
Fog white is sta		ng no tail o	code.)	 RoHS compliant 	p0
			Se	e p. 7	75 for fi	ibre Tra	ac]acks	modu	les /	•	
										Centre Tuned Compone	nts O
										▲	34.4

- t specifications TIA/EIA-568-B.2
- ed and verified
- ds is more transparent to signal
- ts
- n practice-110 impact tool
- cts hold laced conductors in position until punch down
- label-quick and user-friendly, eliminates confusion
- housings
- on jack face
- e available in 18 colours and 12 colours



- copper, nickel under plating and minimum of ntact area
- e, nickel under plating and tin lead over plate.
- onent requirements 568B.2
- nt
- power specifications by 500%

s Optimise Channel



Blue portion of chart shows Clarity^{5E} plugs and jacks designed to target the centre range from TIA/EIA-568-B.2 Category 5e requirement.

Patch Cords

Clarity Patch Cords use centre tuned technology to elevate channel performance. Clarity⁶ cords are ETL verified to Category 6 component standards. More importantly, centre tuning these cords to Clarity jacks and panels provides significant elevation of channel performance that can be field measured.

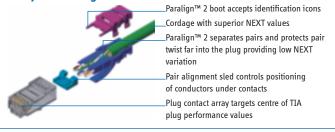
Clarity^{5E} Enhanced Category 5e **Modular Patch Cords** Modular cord, Category 5e, four-pair 24 AWG stranded UTP, PVC and LSZH, T568A/B wiring. Icon compatible. **(**5) OR-MC5E07-05 Part No. PVC Description Part No. LSZH Description OR-MC5E03-05 Green, 0.9 m (3') OR-MCZ510M-05 Green, 1 m (3.3') OR-MC5E05-05 Green, 1.5 m (5') OR-MCZ515M-05 Green. 1.5 m (5') OR-MC5E07-05 OR-MCZ520M-05 Green, 2 m (6.6') Green, 2.1 m (7') OR-MCZ530M-05 OR-MC5E09-05 Green, 2.7 m (9') Green, 3 m (9.8') OR-MC5E15-05 Green, 4.6 m (15') OR-MCZ550M-05 Green, 5 m (16.4') OR-MC5E25-05 Green, 7.6 m (25') OR-MCZ580M-05 Green, 8 m (26.2') OR-MCZ510M-06 OR-MC5E03-06 Blue, 0.9 m (3') Blue. 1 m (3.3') OR-MC5E05-06 Blue, 1.5 m (5') OR-MCZ515M-06 Blue, 1.5 m (5') OR-MC5E07-06 Blue, 2.1 m (7') OR-MCZ520M-06 Blue, 2 m (6.6') OR-MC5E09-06 Blue, 2.7 m (9') OR-MCZ530M-06 Blue, 3 m (9.8') OR-MC5E15-06 Blue, 4.6 m (15') OR-MCZ550M-06 Blue, 5 m (16.4') OR-MC5E25-06 Blue, 7.6 m (25') OR-MCZ580M-06 Blue, 8 m (26.2') OR-MC5E03-02 Red. 0.9 m (3') OR-MCZ510M-02 Red. 1 m (3.3') OR-MC5E05-02 Red, 1.5 m (5') OR-MCZ515M-02 Red, 1.5 m (5') OR-MC5E07-02 OR-MCZ520M-02 Red. 2.1 m (7') Red. 2 m (6.6') OR-MC5E09-02 Red, 2.7 m (9') OR-MCZ530M-02 Red, 3 m (9.8') OR-MC5E15-02 Red, 4.6 m (15') OR-MCZ550M-02 Red, 5 m (16.4') OR-MC5E25-02 Red, 7.6 m (25') OR-MCZ580M-02 Red, 8 m (26.2') OR-MC5E03-09 White, 0.9 m (3') OR-MCZ510M-09 White, 1 m (3.3') OR-MC5E05-09 White, 1.5 m (5') OR-MCZ515M-09 White, 1.5 m (5') OR-MC5E07-09 White, 2.1 m (7') OR-MCZ520M-09 White, 2 m (6.6') OR-MC7530M-09 OR-MC5E09-09 White, 2.7 m (9') White, 3 m (9.8') OR-MC5E15-09 White, 4.6 m (15') OR-MCZ550M-09 White, 5 m (16.4') OR-MC5E25-09 White, 7.6 m (25') OR-MCZ580M-09 White, 8 m (26.2') Note for PVC only: to order red and yellow colours add suffix on MC cords : -08 = grey, -04 = yellow

Features

- > Meets Category 5e component specifications TIA/EIA-568-B.2
- > ETL 3rd party component tested and verified
- > Factory tested for Category 5e performance
- > Transparent to signal with Clarity^{5E} jacks and panels
- > Snagless design also provides bend relief
- > Optimized plug paired bi-level contact array
- > Premium performance Category 5e stranded conductor cordage
- > Compatible with both T568A and T568B wiring
- > Icon compatibility to support TIA 606 standard
- > Available in 6 standard colors

> RoHS compliant

Clarity^{5E} Technological Advancements



Specifications

- > Centre tuned to Clarity jacks and panel for a more transparent mated union
- > Improved Paralign™ 2 plug termination better controls plug performance
- > Assembled with premium cordage, and factory tested for performance, reliability, and long life
- > Narrow Paralign™ plug profile supports use in high density panels and hubs
- > Icon compatible provides additional EIA/TIA 606 A designation compatibilities

Performance

- > Meets Category 5e component requirements TIA/EIA-568-B.2
- > ETL 3rd party component verified
- > Cable assembly, UL[®] listed
- > Rated for 750 plug insertions
- > Plug & termination meet FCC part 68 and IEC 60603-7

Clarity VoIP Patch Cords

Clarity VoIP Patch Cords										
		Four-pair 24 white, PVC.	AWG stranded UTP,							
OR-VC5E07-09	OR-VC5E07-09									
Part No.	Length	Part No.	Length							
OR-VC5E03-09 OR-VC5E05-09 OR-VC5E07-09	1.5 m (5')	OR-VC5E09-09 OR-VC5E15-09	· · · ·							

Specifications

> Ortronics VoIP series patch cords provide an extra low-profile Clarity plug at one end to address cable bend requirements when plugging into the bottom of an IP phone set. The other cord end offers the full protective attributes of the Paralign™ 2 plug.

Patch Panels

Clarity Patch Panels combine Ortronics commitment to ease and reliability with the ETL verified TIA/EIA-568.B.2 enhanced Category 5e performance of centre tuned connector technology. These 110 termination 19" panels are available in six and eight port module groupings, in 12, 24, 48 and 96 port sizes. Panels provide extensive designation abilities, icon compatibility, rear cable management and T568A/B wiring.



Hinged Patch Panels

Hinged Clarity panels include cable management panels. Panels can be terminated in the hinged-down position while resting on management rings. Panels can also be mounted back-to-back on our 502.9 mm deep Mighty Mo racks.

Clarity⁵ Patch Pa Wire Manageme	anels with Hinged ent	
OR-PHD5E6U48HM		High density with 6 port modules, Category 5e.
Part No.	Description	Rack Units
	24 port (43.2 x 88.9 mm ri 48 port (76.2 x 101.6 mm ri	
Clarity⁵ Patch Pa	anels with Hinged ent	
-	in annual provide the	Standard density with 6 port modules, Category 5e.
OR-PSD5E6U48HM		
Part No.	Description	Rack Units

Features

- > Provides access to rear of panel from front side of rack
- > Can be terminated in hinged down position
- > ETL verified to TIA Category 5e component spec
- > Centre tuned to Clarity^{5E} patch cords
- > Universal wiring
- > Easy lace 110 termination
- > Supplied rear cable management
- > High density design
- > RoHS compliant
- > Full encasement protects printed circuitry
- > Modular contacts: beryllium copper with nickel under plating and minimum 50 micro-inches of gold in contact area
- > IDC contacts: phosphor bronze, nickel under plating and tin lead over plate. Serve 22-24 AWG

Specifications

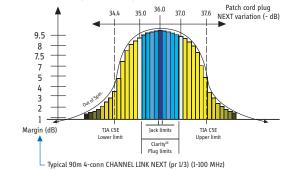
Materials

- > Panel: 2.4 mm aluminium
- > Six port jack housing: High impact thermoplastic UL 94V-0
- > Six port rear IDC housing: Polycarbonate
- > Printed circuit board: Two-sided FR.4 epoxy resin/glass base with solder mask
- > Front bezel/rear designation housing flame retardant: ABS UL® 94V-0
- > Rear wire management bar: 8 mm x 3 mm. Cold roller steel, round

Performance

- > Meets Category 5e component specifications TIA/EIA-568-B.2
- > Meets FCC part 68 subpart F
- > Rated for 750 plug insertions
- > Exceeds 100 gram requirement
- > UL 1863 listed, file #E131600
- > Compatible with 110 impact tools
- > Exceeds the IEEE 802.3af DTE power specifications by 500%

Centre Tuned Components Optimise Channel Performance



Blue portion of chart shows Clarity^{5E} plugs and jacks designed to target the centre range from TIA/EIA-568-B.2 Category 5e requirement

Curved and Angled Patch Panels

Ortronics angled Clarity patch panels offer a new slant to patch cord management. Built around the elevated performance of Clarity^{5E}, these high density patch panels utilize a unique, patented, recessed angle design to help direct cords more easily to vertical rack or cabinet management within a lower profile. Ortronics curved Clarity patch panels offer yet another alternative for patch cord management. Built around the elevated performance of Clarity^{5E}, these high density patch panels feature a new look, utilizing a patent pending, recessed curved design. This design provides another alternative for installations which have limited rack space for horizontal management.

Clarity^{5E} Enhanced Category 5e **Modular Patch Panels** Angled patch panel with six-port **Specifications** modules. > Lower mounted profile directs cords more easily to vertical management > ETL verified category performance **(5: (①)** 🔍 us > Compatibility with standard 110 tool termination practices > Time saving terminating with easy lace multi-port adapters OR-PHA5E6U48 > Rugged construction Rack Units Part No. Description > Label fields and icon compatibility > Work especially well with the increased depth and enhancements of Mighty Mo 6 OR-PHA5E6U24 24 port OR-PHA5E6U48 48 port cable management racks 2 > Icon compatible - provides additional EIA/TIA 606 A designation compatibilities Note: T568A/B wiring. Materials > Panel: 2.4 mm aluminium, durable black powder coat finish Clarity^{5E} Enhanced Category 5e > Module: high impact plastic housing **Modular Patch Panels** > Flame retardant UL[®] 94V-0 > Fully encased "protected" printed circuitry Curved patch panel with six-port > Modular contacts: beryllium copper with nickel under plating and minimum modules. T568A/B wiring. 50 micro-inches of gold in contact area **(5**] > IDC contacts: phosphor bronze, nickel under plating and tin lead over plate. Serve 22-24 AWG > Compatible with 110 impact tool OR-PHC5F6U24 Performance **Rack Units** Part No. Description > Clarity^{5E} meets TIA Category 5e component requirements TIA/EIA-568-B.2 OR-PHC5E6U24 24 port curved patch panel > Meets FCC part 68 subpart F OR-PHC5E6U48 48 port curved patch panel > Rated for 750 plug insertions

Exceeds 100 gram requirement
 Exceeds the IEEE 802.3af DTE power specifications by 500%

Clarity[®] PoE Patch Panels

Perfect for VoIP, wireless access points like the Ortronics Wi-Jack, security cameras and more, Ortronics Clarity PoE Patch Panel eliminates the need for a separate power supply and is the most cost effective way to deploy power where it is not easily accessible. It is available as a single unit or can be purchased in stages to delay the cost of the power until you're ready. And, the panel is designed to allow easy access to cable terminations even when active.

Clarity PoE Pa	tch Panels		
OR-PP5ECMS16			
Part No.	Description	Rack Units	MOD/110 Wiring
OR-PP5ECMS16	Clarity⁵ 16 port PoE powered panel, 260 watt, 1.75"x 19" x 10.5"	1	T568A/B
OR-PP5EUPF-16	Clarity ^{5E} 16 port PoE panel, without power or controller, 1.75" x 19"	1	T568A/B
OR-PPS2601U	US Power supply, 260 watt, with output cable, for use with OR-PP5EUPF16		
OR-CMS161U	Control module for 16 port PoE, for use with OR-PP5EUPF16		
Note: Delivered with	n USA plug (110/230 V).		

Specifications

- > Compliant with IEEE 802.3af power specifications
- > LED indicators on front of panel easily identify the real time powering status of each port
- > Serial port provides installer detailed information and control of each port
- > Order as a single unit that includes 16 port panel, PoE controller and power supply or as separate components for a staged deployment
- > Clarity PoE panels only occupy 1 rack space
- > 260 watt power supply supports IEEE 802.3af maximum of 15.4 watts per channel measured at the IDC
- > Utilizes standard 110 termination
- > Meets TIA/EIA-568-B.2 Category 5e component specifications
- > Centre tuned Clarity technology for elevated performance
- > More transparent signal path when used with Clarity cords
- > Supplied label fields and icon compatible

110 Block Kits

Clarity 110 blocks are ETL verified to TIA/EIA-568-B.2 Category 5e with the ease and reliability of 110 termination and new installer friendly features all within the traditional 110 block footprint. Clarity blocks are available in 50, 100, and 300-pair sizes, and provide designation areas and rear cable entry. Clarity^{5E} blocks kits include base wiring block, 110C connecting blocks and label holders for designation.



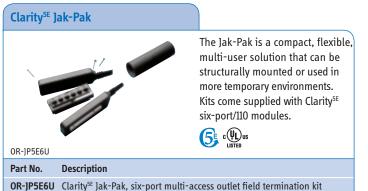
Clarity^{5E} Category 5e 110 Block Kits



OR-110DBC5E100

Part No.	Description
OR-110DBC5E050	50-pair (10 4-pair and 2 5-pair clips), 46 mm D x 216 mm W x 40 mm H
OR-110DBC5E100	100-pair (20 4-pair and 4 5-pair clips), 92 mm D x 216 mm W x 40 mm H
OR-110DBC5E300	300-pair (60 4-pair and 12 5-pair clips), 274 mm D x 216 mm W x 40 mm H
Note: They include b	ase wiring block, 110 C connecting blocks and label holders for designation.

Jak-Pak



Note: T568A/B wiring.

Features

- > 3rd party tested by independent test lab
- > Reliable and transparent termination
- > New low emission IDC contacts
- > Familiar termination practice-110 tool
- > Easy to lace and manage cables, for quick and user-friendly installation
- > High density termination
- > Rear cable entry
- > RoHS compliant

Specifications

Materials

- > High impact polycarbonate
- > Flame retardant UL[®] 94V-0
- > IDC contacts: phosphor bronze, tin lead plating

Performance

- > Meets TIA Category 5e component requirements TIA/EIA-568-B.2
- > Supports 22-24 AWG
- > Compatible with industry standard single conductor tool and 4 pair seating tools

New Labelling System Supplied with all Category 5e 110 Blocks



Label holder Designation holder and paper

Label holder

Clear cover

Paper

110 Patch Cords

Clarity 110 Patch Cords are ETL verified to TIA/EIA-568-B.2 Category 5e component standards. More importantly, Clarity 110 plug housing use an internal signal feedback technique to control cross talk without compromising impedance. Clarity 110 to Modular 8-Position Patch Cords use both signal feedback and centre tuning. This allows more transparent connector interfaces for significant elevation of channel performance that can be field measured.

		110/110 four-pair patch cord PVC, Category 5e.	Specifications > Internal signal feedback 110 plug of > Centre tuned Paralign™ 2 modula a transparent mated union > Assembled with premium cordage and long life Materials
OR-110C5E07-05	_		> Modular plug housing: clear poly
Part No.	Description		 > Plug contacts: copper alloy with 5 > Cordage: Category 5e stranded category 5e strande
OR-110C5E07-05	Green, 0.9 m (3') Green, 1.5 m (5') Green, 2.1 m (7') Green, 2.7 m (9') Green, 4.6 m (15')		 Performance Meets Category 5e component special spec
OR-110C5E03-06 OR-110C5E05-06 OR-110C5E07-06 OR-110C5E09-06 OR-110C5E15-06	Blue, 1.5 m (5') Blue, 2.1 m (7')		Clarity ^{5E} Technological Adva
OR-110C5E03-09 OR-110C5E05-09 OR-110C5E07-09 OR-110C5E09-09 OR-110C5E15-09	White, 1.5 m (5') White, 2.1 m (7')		

Patch Cords PVC



T 568/B, Category 5e. **(5**)

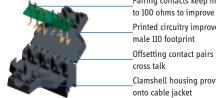
110/R]45 four-pair patch cord PVC,

OR-MC18B5E03-09

Part No.	Description
OR-MC18B5E03-05	Green, 0.9 m (3')
OR-MC18B5E05-05	Green, 1.5 m (5')
OR-MC18B5E07-05	Green, 2.1 m (7')
OR-MC18B5E09-05	Green, 2.7 m (9')
OR-MC18B5E15-05	Green, 4.6 m (15')
OR-MC18B5E03-06	Blue. 0.9 m (3')
OR-MC18B5E05-06	Blue, 1.5 m (5')
OR-MC18B5E07-06	Blue, 2.1 m (7')
OR-MC18B5E09-06	Blue, 2.7 m (9')
OR-MC18B5E15-06	Blue, 4.6 m (15')
OD MC1005503 00	
OR-MC18B5E03-09	White, 0.9 m (3')
OR-MC18B5E05-09	White, 1.5 m (5')
OR-MC18B5E07-09	White, 2.1 m (7')
OR-MC18B5E09-09	White, 2.7 m (9')
OR-MC18B5E15-09	White, 4.6 m (15')

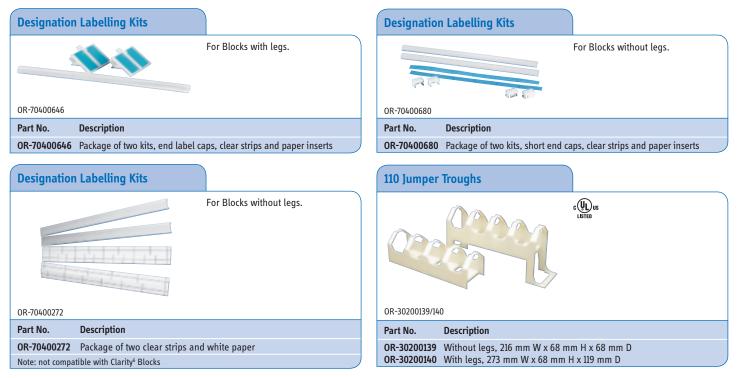
- design controls noise contributors
- ar plug design controls the plug for
- ge and factory tested for performance, reliability,
- vcarbonate UL[®] 94V-0
- 50 micro-inch gold plating on mating surfaces
- able, 4 pair 24 AWG, PVC jacket
- pecifications TIA/EIA-568-B.2
- oart 68

ancements



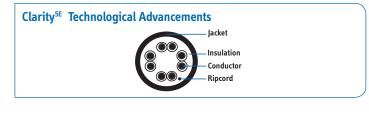
Pairing contacts keep impedance closer to 100 ohms to improve return loss Printed circuitry improves NEXT while remaining in Offsetting contact pairs increase spacing-improving Clamshell housing provides positive strain relief

110 Accessories



Cables

Clarity⁵ Category U/UTP, cables	5e 4 pair
Latits -	Cable Clarity ^{5E} Category 5e, 4-pair U/UTP, white. € €
OR-100UC5EH-EU-09	
Part No.	Description
OR-100UC5EH-EU-09 OR-100UC5ER-EU-09	LSZH - Length 305 m box PVC - Length 305 m box



UTP Cross Connect & Cables

58 30

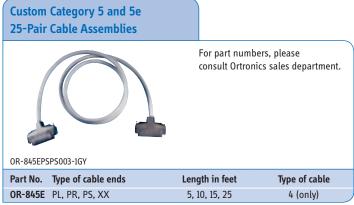
2>



UTP Cross Connect & Cables

Fast Ethernet Patch Panels

10/100 Base-T Fast Ethernet Patch Panels	NEW	Custom Ca 25-Pair Ca
OR-PHD1002148	Ortronics 10/100 Base-T panels provide a 50-pin connector interface between 25-pair cables and Fast Ethernet hubs. Twelve jacks are wired via a printed circuit board from each industry standard RJ 21 50-pin female connector. Panels provide front and rear label fields. Use with 845E cable assemblies.	OR-845EPSPS
Part No. Description	Rack Units	Part No. Ty
OR-PHD1002148 48 port, 8-position 1, 2, 3,	6, height 88,9 mm 2	OR-845E PL



Telephone Patch Panels

Category 5e	Telco Panels			
		provide (standa categor Etherne cabling label fie	cs Category 5e 25-p a 50-pin connecto rd R]21 wiring) betv y 5e 25-pair cable et hubs requiring fu . Panels provide fro elds. 68B wiring.	r interface ween gigabit Ill 4-pair
OR-PHD5E2124				
Part No.	Description	Part No.	Description	Rack Units
OR-PHD5E2124	24 Trac]acks port	OR-PHA5E2124	Angled 24 ports	1



Patch Panels

OR-PHD5E2148 48 TracJacks port

Patch Panel Kits		
Part No.	Description	Rack Units
OR-401045290 OR-401045291	16 TracJacks, Panel kit with she 24 TracJacks, Panel kit with she 32 TracJacks, Panel kit with she 48 TracJacks, Panel kit with she	lf 2 lf 2
Note: Trac]acks are not included		

OR-PHA5E2148 Angled 48 ports



2

Standard density TracJack patch panel kits. Kits are available to support front-loading TracJack modules, providing panel options to support a wide range of applications.

Cables

U/UTP Cat 5	
Part No.	Description
	U/UTP, LSZH, 25 pairs, 1000 m reel, grey U/UTP, LSZH, 50 pairs, 1000 m reel, grey

U/UTP Cat 3 Multi-pair Cables

Part No.	Description
	U/UTP, LSZH, 30 pairs, 1000 m reel, grey U/UTP, LSZH, 50 pairs, 1000 m reel, grey
OR-211UTP100P3LZ	U/UTP, LSZH, 100 pairs, 1000 m reel, grey
OR-211UTP200P3LZ	U/UTP, LSZH, 200 pairs, 1000 m reel, grey

110 Accessories44110 Patch Cords45110 Panels45Mighty Mo 110D100Distribution Frame46110 Wall Mount47110 Wall Mount Cross Connect8Block Kits48

110 Accessories

110 Wiring Blocks for Voice/Data **Designation labelling kits** OR-70400646 Part No. Description OR-70400646 Package of two kits, end label caps, OR-30200007 clear strips for block with legs OR-70400680 Package of two kits, end label caps, Part No. Description clear strips for block without legs OR-30200145 100 pairs, block with legs, OR-70400272 Package of two clear strips and 91.2 mm W x 272.3 mm H x 82.6 mm D white paper for block without legs 300 pairs, block with legs, OR-30200007 Note: OR-70400272 not compatible with Clarity⁶ blocks 274.1 mm W x 272.3 mm H x 82.6 mm D OR-30200143 100 pairs, block without legs, 91.2 mm W x 215.9 mm H x 40.4 mm D 110 C connecting block clips OR-30200022 300 pairs, block without legs, for Voice 274.1 mm W x 215.9 mm H x 40.4 mm D Package of ten. **110 Jumper Troughs** ----OR-30200108 Part No. Description OR-30200108 Three-pair (110C3) OR-30200109 Four-pair (110C4) **OR-30200110** Five-pair (110C5) OR-30200139/140 Part No. Description OR-30200139 Without legs, 216 mm W x 68 mm H x 68 mm D OR-30200140 With legs, 273 mm W x 68 mm H x 119 mm D 19" Rack mount 110 panels (unloaded) OR-30600167

Part No.	Description
OR-30600167	Panel for two 100-pair blocks without legs, 482.6 mm x 89 mm - 2 U
OR-30600150	Panel for two 100-pair blocks and two troughs without legs 482.6 mm x 177.8 mm - 4 U

110 Patch Cords

110 Patch Cords PVC		110 Patch Cords PVC	
	110 patch cords, One-pair grey, PVC, Package of ten.		110 patch cords, Two-pair grey, PVC, Package of ten.
0R-644056039-3FT/020-3FT		OR-644055869-3FT/782-3FT	
Part No. Description OR-644056039-3FT 110/110, 0.91 metre OR-644056039-5FT 110/110, 1.52 metres OR-644056039-7FT 110/110, 2.13 metres OR-644056020-3FT 110/R]45, 0.91 metre OR-644056020-3FT 110/R]45, 1.52 metres OR-644056020-3FT 110/R]45, 2.13 metres		Part No. Description OR-644055869-3FT 110/110, 0.91 metre OR-644055869-5FT 110/110, 1.52 metres OR-644055869-7FT 110/110, 2.13 metres OR-644055782-3FT 110/R]45, 0.91 metre OR-644055782-5FT 110/R]45, 1.52 metres OR-644055782-7FT 110/R]45, 2.13 metres	
110 Patch Cords PVC			
	110 patch cords, Four-pair grey, PVC, Package of ten.		
OR-644055696-3FT/779-3FT			
Part No. Description			
OR-644055696-3FT 110/110, 0.91 metre OR-644055696-5FT 110/110, 1.52 metres OR-644055696-7FT 110/110, 2.13 metres			
OR-644055779-3FT 110/R]45, 0.91 metre OR-644055779-5FT 110/R]45, 1.52 metres OR-644055779-7FT 110/R]45, 2.13 metres			

110 Panels

19" Wide Rack Mount 110 Panel Kits



Ortronics 110 block panels provide two 110-pair block kits and two jumper troughs (without legs) on a 19" wide panel that is mountable to the Ortronics Mighty Mo rack system or to other EIA racks.

OR-302003282		
Part No.	Description	Rack Units
OR-302003282	Clarity ⁶ 200-pair Category 6 panel kit with troughs, 48, Category 6 110C4, 483 mm x 178 mm	4
OR-302003251	Category 5e 200-pair panel kit with troughs, 40-110C4 and 8-110C5 clips, 483 mm x 178 mm	4
OR-302003253	Category 5e 200-pair panel kit with troughs, 40-110C5 clips, 483 mm x 178 mm	4

Mighty Mo 110D Distribution Frame

Mighty Mo 110D Distribution Frame



Ortronics Mighty Mo 110D Distribution Frame provides total vertical cable management to more effectively route cable in a 110 cross connect. Use with OR-30600166 to mount 100 or 300-pair blocks. Front and rear mounting supports up to 9000 pairs. Includes cable management straps in 165.1 mm deep vertical channels. Black.

OR-60400310

 Part No.
 Description

 0R-60400310
 990.6 mm W x 2184.4 mm H x 419.1 mm D

Cable Management Rings



These rings allow efficient routing of patch or cross connect cables between distribution racks. They can be mounted where needed on the front and back of the Mighty Mo 3. Black. The Snap type black plastic rings flex at the end for easy insertion or removal of cross connect cables. They snap in place on the front and back of the Mighty Mo 3 and Mighty Mo 4-Mation. Black.

OR-60400017

 Part No.
 Description

 OR-60400017
 50.8 mm x 152.4 mm, black, package of 14

 OR-60400062
 50.8 mm x 152.4 mm, black, package of 2

 OR-60400614
 Snap type, 44.5 mm x 152.4 mm, black, package of 14

 OR-60400542
 Snap type, 44.5 mm x 152.4 mm, black, package of 2

 Note: Includes mounting hardware except for the snap-type where no hardware is needed

110 Rack Mount Panel



900-pair rack mount panel with cable troughs.

OR-30600166

Part No. Description

OR-30600166 Accepts 100- or 300-pair blocks 870 mm W x 369.3 mm H

110 Wall Mount

110 Wall Mount Backboard Channels



Ortronics 110 Backboard channels are wall mount kits, complete with hardware to mount 110-pair 110 blocks without legs and jumper troughs without legs. Channels provide protected paths for terminated cables. Kits include bottom cable trough and grounding bar.

OR-806003246

Part No. Description

 OR-806003246
 300-pair backboard, 215.9 mm W x 628.7 mm H x 206.5 mm D

 OR-30200132
 900-pair backboard, 215.9 mm W x 1590.8 mm H x 206.5 mm D

OR-30200132

110 Wall Mount Horizontal Cable Management Bracket



Ortronics horizontal cable management brackets wall mount between 110 wiring blocks to organise, support and provide for future changes to horizontal runs of cable.

OR-60400020	
Part No.	Description
OR-60400020	273 mm W x 165.1 mm H x 114.3 mm D

110 Wall Mount Backboard Channels Accessories



Ortronics single or dual channel wall mount between 110 wall mount backboards to provide a managed path for patch cords or cross connect wire. The dual channel provides an added ability to separate cable types in vertical management.

011 00000000000000000000000000000000000		
OR-806003194/96		

Part No.	Description
OR-806003194	300-pair backboard size single channel,
	215.9 mm W x 606.6 mm H x 158.8 mm D
OR-806003196	900-pair backboard size single channel,
	215.9 mm W x 1568.6 mm H x 158.8 mm D
OR-806003197	300-pair backboard size double channel,
	215.9 mm W x 606.6 mm H x 158.8 mm D
OR-806003199	900-pair backboard size double channel,
	215.9 mm W x 606.6 mm H x 158.8 mm D

110 Wall Mount Cross Connect Block Kits



Contents of kit ar	nd quantity of each item i	nclude	ed _		-													
	4	2	100000		2.00	1 =	a (10.0.0)			0						
		3		302			and the second	•	Ò	F						T		
PART NO.	TERMINAL BLOCKS PRODUCT CODE*	Rivet/12 per package	Holder/Insert, Designation	110 AW4-300 Wiring Block w/legs	110 DW4-100 Wiring Block	110 AW4-100 Wiring Block w/legs -	110C-5 Connecting Block	110C-4 Connecting Block	No. 12 Ext. Lock Washer	No. 12-14X5/8 Phillips Head Screw	Grounding Bar	10-32 Nut	10-32x5/8 Phillips Head Screw	Instruction Sheet	Jumper Trough	Bottom Tray	300-Pair Panel	900-Pair Panel
OR-30203506	110-AB2-100FT		1			1	4	20										
OR-30200116	110-AA2-100FT		1			1	20											
OR-30200095	110-AA2-300FT		3	1			60											
OR-30203461	110-PA2-300FT	2	3		3		60		2	2	1	2	2	1	3	1	1	
OR-30200020	110-PB2-300FT	2	3		3		12	60	2	2	1	2	2	1	3	1	1	
OR-30200024	110-PA2-900FT	6	9		9		180		2	2	1	2	2	1	9	1		1
OR-30200026	110-PB2-900FT	6	9		9		36	180	2	2	1	2	2	1	9	1		1

* See explanation of terminal blocks product code below

Explanation of Terminal Blocks Product Code

110 - PB2 - 300 FT

- Field Terminated
 - Total quantity of pairs
 - Production series (indicates version of major change)
 - A = 5-pair 110 Type Connecting Blocks
 - B = 4-pair 110 type Connecting Blocks

 - A = Includes 110 Type Wiring Blocks with legs P = Includes 110 Type Wiring Blocks on a Back Panel with Horizontal Troughs and Bottom Tray

 - 110 Family of Terminal Blocks

FTP Clarity^{10G}

Shielded TracJack® Module50Shielded Patch Cords50Shielded Patch Panels50Shielded Cables50

Shielded TracJack® Module

Clarity 10G Shielded Modular Jack

0R-T]5600		Clarity Shielded TracJacks, RJ45 (8P8C), meet TIA Category 6a component specifications and are precisely tuned to the terminated plug values of Clarity patch cords for optimum performance that is field measurable in the channel. Clarity uses dual reactance technology to enhance signal-to-noise ratio, providing a nearly transparent signal path.	Clarity Shielded TracJack
Part No.	Description	Colour	
OR-T]S600	Trac]ack, Clarity 10G, 180° exit	fog white	

Shielded Patch Cords

Clarity Shielded	Patch Cords, LSZH	
Part No.	Description	Colour
OR-MCSZ610M-05	1.0 m	green
OR-MCSZ615M-05	1.5 m	green
OR-MCSZ620M-05	2.0 m	green
OR-MCSZ630M-05	3.0 m	green
OR-MCSZ650M-05	5.0 m	green
OR-MCSZ680M-05	8.0 m	green

Note: to order blue and grey colours add suffix on MC cords: -06 = blue, -08 = grey

Shielded Patch Panels





Shielded Cables

Clarity 4 pair, LSZ	н	
Part No.	Description	Colour
OR-100FC610L-EU-04 OR-100S6AL-04	F/UTP cable 10G LSZH, 5 S/FTP cable 10G LSZH, 5	yellow yellow

Clarity Cat.6 F/UTP-LSZH 100 2 - 4P - 24 AWG Conductor 2 Core insulation 3 Cross separator 4 Tape screen

5 Final sheath

Shielded TracJack Patch Panel Kit



Modules

- > Meets IEC 60603-7-5 2nd edition (draft) specifications
- > ETL 3rd party component tested and verified
- > Easy lace IDC housing designed to accept larger Category 6 conductors
- > Center tuned connectivity design
- > Compatible with 110 impact tool
- > Icon compatible and shutter

FTP Clarity⁶ Category 6

Shielded TracJack® Module52Shielded Patch Cords52Shielded Patch Panels52Shielded Cables52

FTP Clarity⁶ Category 6

Shielded TracJack[®] Module

Clarity⁶ Shielded, Category 6 TracJack



Clarity Shielded TracJacks, RJ45 (8P8C), meet TIA Category 6 component specifications and are precisely tuned to the terminated plug values of Clarity patch cords for optimum performance that is field measurable in the channel. Clarity uses dual reactance technology to enhance signal-to-noise ratio, providing a nearly transparent signal path.

Clarity Shielded TracJack Modules



- > Exceeds ISO 11801 2nd edition including EN50173 2nd edition
- > Meets IEC 60603-7-5 2nd edition (draft) specifications
- > ETL 3rd party component tested and verified
- > Easy lace IDC housing designed to accept
- larger Category 6 conductors > Center tuned connectivity design
- > Compatible with 110 impact tool
- > Icon compatible and shutter

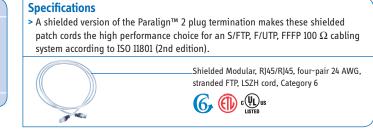
Description OR-TJS600 8-Position, 180° exit

Part No.

Shielded Patch Cords

Clarity [®] Shielde Modular Patch	1	
Part No.	Description	 Colour
OR-MCSZ610M-05	1.0 m	green
OR-MCSZ615M-05	1.5 m	green
OR-MCSZ620M-05	2.0 m	green
OR-MCSZ630M-05	3.0 m	green
OR-MCSZ650M-05	5.0 m	green
OR-MCSZ680M-05	8.0 m	green
NUMBER OF STREET	1 I I II II MC	00

Note: to order blue and grey colours add suffix on MC cords: -06 = blue, -08 = grey



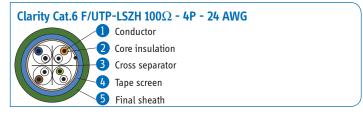
Shielded Patch Panels





Shielded Cables

Category 6, 4 pa	nr F/UTP, LSZH	
Part No.	Description	Colour
	4 pair, LSZH, 500 m reel, 23 AWG 4 pair, PVC, 500 m reel, 23 AWG 2 x 4 pair, LSZH, 500 m reel, 23 AV	green green VG green



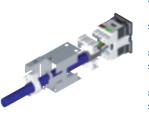


Shielded TracJack[®] Module

Clarity^{5E} Shielded, Category 5e Trac]ack

Clarity Shielded TracJacks, RJ45 (8P8C), meet TIA Category 5e component specifications and are precisely tuned to the terminated plug values of Clarity patch cords for optimum performance that is field measurable in the channel. Clarity uses dual reactance technology to enhance signal-to-noise ratio, providing (**UL**)us a nearly transparent signal path.

Clarity Shielded TracJack Modules



- > Exceeds ISO 11801 2nd edition including EN50173 2nd edition
- > Meets IEC 60603-7-5 2nd edition (draft) specifications
- > ETL 3rd party component tested and verified > Easy lace IDC housing designed to accept
- larger Category 6 conductors > Center tuned connectivity design
- > Compatible with 110 impact tool
- > Icon compatible and shutter

Description

OR-TJS5E00 8-Position, 180° exit

OR-T1S5E00

Part No.

Shielded Patch Cords

Clarity⁵ Shielde Modular Patch C		
Part No.	Description	Colour
OR-MCSZ5E10M-05 OR-MCSZ5E15M-05 OR-MCSZ5E20M-05 OR-MCSZ5E30M-05 OR-MCSZ5E50M-05 OR-MCSZ5E80M-05	1.5 m 2.0 m 3.0 m 5.0 m	green green green green green green
	d grey colours add suffix on MC	

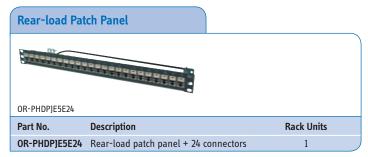
5

Specifications

> A shielded version of the Paralign[™] 2 plug termination makes these shielded patch cords the high performance choice for an S/FTP, F/UTP, FFFP 100 Ω cabling system according to ISO 11801 (2nd edition)



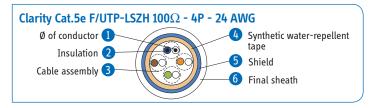
Shielded Patch Panels



Shielded 1	Trac]ack Patch Panel Kit	
		Panel kit for shielded, Clarity TracJacks, 1 U, TracJacks are not included.
OR-PHDT]S24		
Part No.	Description	Rack Units
OR-PHDTJS2	4 For 24 shielded Clarity Trac]a	cks 1

Shielded Cables

Category 5e, 4 pair F/UTP, LSZH		
Part No.	Description	Colour
	4 pair, LSZH, 500 m reel 4 pair, PVC, 500 m reel 2 x 4 pair, LSZH, 500 m reel	blue blue blue



Workstation

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TracJack[®] Modules

		Jack, Category 3, 8-position,
		180° exit, RJ25 Jack.
	-	USTED LISTED
ų		
DR-63730003		
Part No.	Description	
OR-63730003		ition, 180° exit, T568A/B wiring.
OR-63730003-88	Icon compatible, fog v Category 3 jack, 8-pos Icon compatible, white	ition, 180° exit, T568A/B wiring.
OR-63700005		180° exit, USOC wiring.
OR-63700005-88		180° exit, USOC wiring.
TracJack Modu	lles	
		Cuideo (Lurin DINI) to 110
		S-video (4-pin DIN) to 110, 180° exit.
0R-63700025	Contraction of the second	
	Description	
OR-63700025 Part No. OR-63700025 OR-63700025-88	Fog white	
Part No. OR-63700025 OR-63700025-88	Fog white White	
Part No. OR-63700025	Fog white White	

OR-63700058 Part No. Description OR-63700058 RCA F/F (red insulator) 180° exit OR-63700059 RCA F/F (white insulator) 180° exit OR-63700060 RCA F/F (yellow insulator) 180° exit

TracJack Modules



TracJack Modules



TracJack Modules Pair of speaker terminals (one red, one black), 180° exit. WLBTE OR-63700021 Part No. Description OR-63700021 Fog white

TracJack[®] Modules (contd.)

TracJack Module		
	CON I	BNC connector, (50 Ω) F/F, 180° exit. Φ
OR-63700023		
Part No.	Description	
00 00000	3 Fog white	



TracJack[®] Adapters

Mosaic™ /	Adapters	
0R-42100075		Mosaic adapter, Colour: white, Package of ten.
Part No.	Description	
OR-42100074 OR-42100075	· · · · · · · · · · · · · · · · · · ·	•
Programm	ne Mosaic™ Adapters	NEW
OR-FPK2PJ		Programme Mosaic adapter, colour: White. Package of ten.
Part No.	Description	
OR-FPK1TJ OR-FPK2TJ OR-FPIK2TJ OR-FPK1PJ OR-FPK2PJ OR-FPIK2PJ	Programme Mosaic 22.5 x 45.0 m Programme Mosaic 45.0 x 45.0 m	ım for Trac]ack ım angled for Trac]ack, no shutter ım for rear load with shutter

Trac]ack Ada	apters	NEW	
Ö		Cimabox, Quintela, M Light, Axolute, Vimar, Matix adapters.	5 5 5
OR-40300590	OR-42100052		
Part No.	Description		Pack
OR-42100025 OR-42100035	Cimabox adapter Quintela adapter		10 10
OR-42100022 OR-40300590 OR-40300591 OR-FPLT1TJ	Living Int. adapter, holds one TracJack, black 10		10 10
OR-FPAD1TJ OR-FPAC1TJ	Axolute dark adapter 10 Axolute clear adapter 10		10
OR-42100052 OR-42100051 OR-42100053	Vimar Idea adapter, black Gewiss Playbus adapter, black Gewiss System 20 adapter, wh		10 10 10
OR-FPMX1TJ	Matix adapter		10

TracJack[®] Faceplates

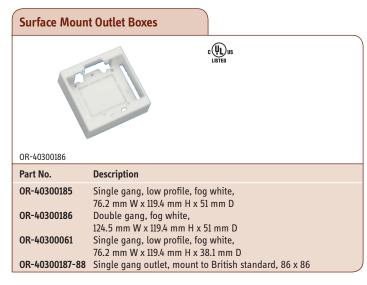
TracJack Faceplates for British Standard		TracJack Facepl for British Stan		
08-40300746P-88	Synergy Faceplates for British Standard.	08-42100018P-88		Ortronics 6C and 6Ce adapters and Ortronics 6C Faceplates hold 1 or more TracJack RJ 45 modules (shielded or unshielded). The internal shutter mechanism protects unused ports from contamination. Standard colour: Cloud white.
Part No. Description		Part No.	Description	
OR-40300745P-88 1 Trac]ack rear load Synerg OR-40300746P-88 2 Trac]ack rear load Synerg OR-40300747P-88 4 Trac]ack rear load Synerg Trac]ack Faceplates for British Standard	y Faceplate	OR-40300635P-88		odules
OR-40300460P-88	Single gang plastic TracJack Faceplate for British Standard Flush boxes. Dimensions (in mm): 86.0 W x 86.0 H x 10.0 D Standard colour: cloud white.			
Part No. Description				
OR-40300460P-88 Holds two TracJacks OR-40300279P-88 Holds four TracJacks				

TracJack® Faceplates for American Standard

Ortronics offers TracJack mountings with the Stylistics[®] rectangular (GFCI) footprint, with a variety of port capacities to match your workstation applications. Ortronics also offers plastic cover plates with recessed label fields and slotted screw holes to adjust alignment. All parts are ruggedly constructed from high impact thermo-plastic 94V-0 rated to ensure long life.

•	acJack Frames and lastic Cover Plates		TracJack Fa	ceplates	Single gang plastic Traclask Faceplat
		Stylistics Trac]ack frame and Stylistics plastic cover plates. e	OR-40300549		Single gang plastic TracJack Faceplate for American Standard flush boxes. Dimensions: 69.9 mm W x 114.3 mm H c (U) us
OR-41900017	OR-40300270		Part No.	Description	
Part No.	Description		OR-40300549	Holds one Trac]ack	
	Holds three Trac]acks Holds four Trac]acks		OR-40300547		
	Single gang 69.9 mm W x 114.3 r Double gang 114.3 mm W x 114.3			i Holds four Trac]acks i Holds six Trac]acks	

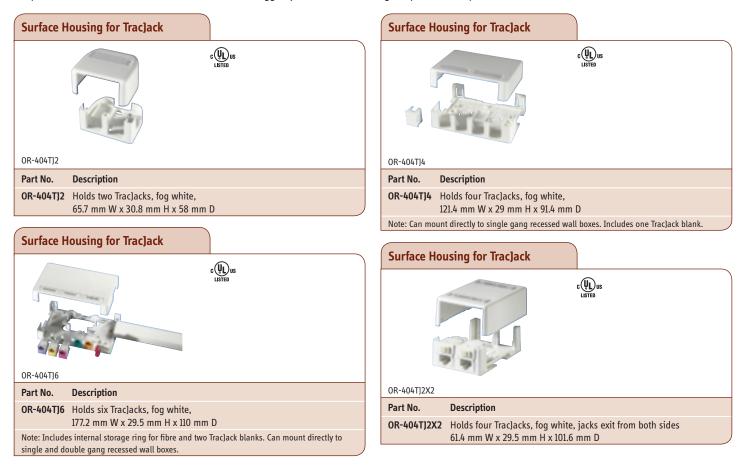
Surface Mount Outlet Boxes





Surface Housing for TracJack®

Ortronics TracJack Surface Mount Boxes are available to house from two to six TracJacks. Bases are easily installed with supplied screws or double-sided adhesive. Snap-on covers have recessed label fields. Boxes are ruggedly constructed from high impact thermo-plastic 94V-0 rated.



Workstation

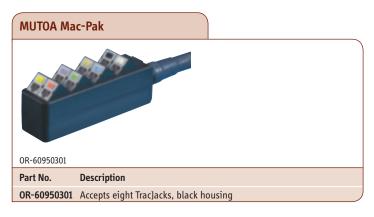
MUTOA Cabinet

Ortronics MUTOA Cabinet provides up to 18 ports (copper or fibre) for an enclosed multi-user outlet point. The cabinet is lockable on the administrative side, fully gasketed to offer top and bottom cable access, and provides labelling fields.



MUTOA Mac-Pak

The MUTOA Mac-Pak is a compact, flexible, multi-user solution that can be structurally mounted or used in more temporary environments. Kits come ready to accept TracJack modules.



Jak-Pak

The Jak-Pak is a compact, flexible, multi-user solution that can be structurally mounted or used in more temporary environments.





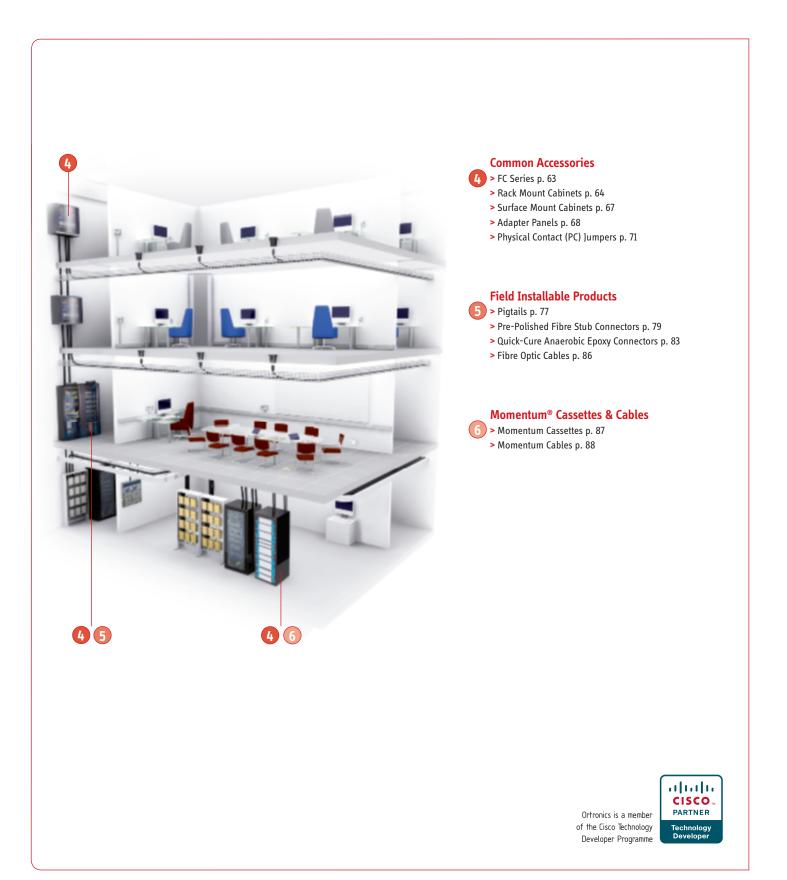
Ortronics is a member of the Cisco Technology Developer Programme

Fibre

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We provide you EXPERT SOLUTIONS in Fibre

We give you more ways to connect and more ways to make it easy to create a cabling infrastructure that adds capabilities and reduces hassles. Get the fibremanagement products to round out any installation with cabinets, patch panels, splice trays, and workstation outlets.



FC Series

Everything to make fibre shine. Get the fibre-management products to round out any installation with cabinets, patch panels, splice trays, and workstation outlets.

Rack Mount Fibre Cabinets



Ortronics FC Series, Rack-Mount Fibre Cabinets for Patch and Splicing Applications 482.6 mm-deep cabinet chassis provides more room for internal Fibre management and is optimised for use with Mighty Mo 6 266.7 mm-deep rack system. Available in 1, 2, 3, 4 rack, unit.

OR-FC03U-P

Part No.	Application	Height	Depth (mm)	Adapter Panels Capacity	Splice Tray Capacity
OR-FC01U-P		1U		3	-
OR-FC02U-P	Patching	2U	486	6	-
OR-FC03U-P	Fatching	3U	400	9	-
OR-FC04U-P		4U		12	-
OR-FC01U-C		1U		3	2
OR-FC02U-C	Culicing (Datching	2U	486	6	6
OR-FC03U-C	Splicing/Patching	3U	400	9	11
OR-FC04U-C		4U		12	16
OR-FC01U-S		1U		-	4
OR-FC02U-S	Culture .	2U	100	-	12
OR-FC03U-S	Splicing	3U	486	-	22
OR-FC04U-S		4U		-	32
				60.6 I	

See p. 68 for adapter panels

Cable Fastening Brackets



Provide robust backbone cable retention when installing from above or below cabinet. Accommodates cable of all diametres to be fastened using flexible and strong hook/loop straps.

OR-FCBR-001	OR-FCBR-002	
Part No.	Cabinet	Position
OR-FCBR-001 OR-FCBR-002 OR-FCBR-003	2, 3, 4U	Top Top Bottom

Splice Tray for Fusion Splices



Accessory



Mighty Mo 6 Cable Management Racks with FC Series

- Ao 6 Cable Management Ra
 - Front viewable label card
 Easily removable drop-down
 - card is hinged to the front
 - > Plexiglas door of cabinet

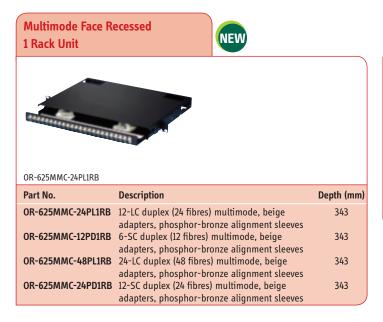
Rack Mount Cabinet - 615 serie

The Ortronics range of 615 serie mount fibre enclosure is ideally suited to both large and small fibre installations. Designed for use with our FibreMo fibre optic cable management rack system and our equipment cabinets, our fibre cabinet offers complete flexibility in terms of cable entry and exit ; access to terminations from front, rear, and top ; and accommodation for the unique needs of optical fibre bend radius limitation through enhanced patch cord management devices and novel internal fibre management components.



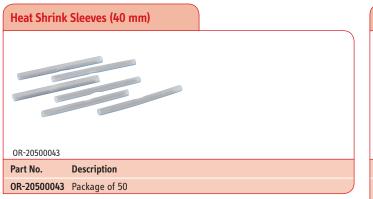
Rack Mount Fibre Cabinets 625 Series Pre-Loaded

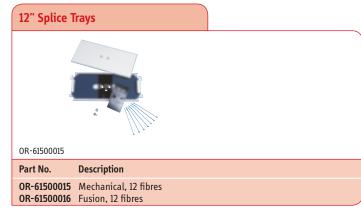
The Ortronics range of pre-loaded rack mount fibre enclosures (625 Series) provides a comprehensive range ideally suited to both large and small installations. These enclosures are offered in 1U and 2U as a standard product. 625 Series fibre cabinet products are available with LC and SC adapters for single-mode or multimode appliations.



- > Pre-loaded with fibre adapters for simple, quick installations
- > Slide-out drawer provides easy access for quick, reliable fibre termination and fibre management
- Bend limiters included to support minimum bend radius requirements ensuring low loss transmission (2U and 4U pre-loaded cabinets only)
- > Universal mounting (482.6 mm or 584.2 mm) for most rack types with standard EIA hole pattern
- Internal fibre management ring to provide proper bend radius and slack storage of excess fibre
- > Termination access from front, top, and rear for internal fibre termination and management

Splice Accessories





Rack Mount Cabinets Accessories



 OR-604045565
 Holds cables 13.0 mm - 18.0 mm in diameter

 OR-604045564
 Holds cables 5.0 mm - 18.0 mm in diameter

 OR-604045566
 Holds cables 18.0 mm - 25.0 mm in diameter

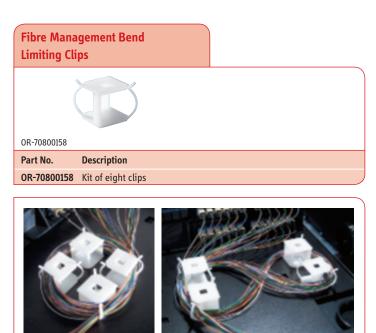
D-ring Cable Management Straps

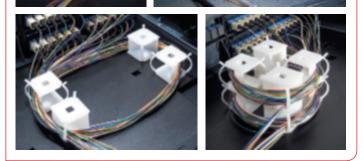


Ortronics D-Ring Cable Management Straps include a D-Ring for easy adjustments. The straps have a hook and loop type closure to secure and administer cables without damage. Package of 12.

OR-70700084-00

Part No.	Description
OR-70700107-00	Black, 19.05 mm W x 305 mm L
OR-70700084-00	Black, 19.05 mm W x 457 mm L





Fibre

Surface Mount Cabinets

- Ortronics 615 series Surface Mount Fibre Cabinets secure, protect, and organise up to 192 single-mode or multimode optical terminations.
- > Adapter panels snap-in for easy installation, removal, and expansion
- > Surface/wall mountable is ideal for space limited installations
- > Top/Bottom cable entry simplifies installations, moves, adds, and changes
- > Internal cable management included-facilitates organisation and clean installations
- > Fully gasketed with lock option minimises dirt/contamination



Surface Mount Cabinets (contd.)

Surface Mount	Fibre Cabinet		8	" Splice Tra	rays & Splice Protection
Patch Cabinet, Holds 16 adapter panels, ST, SC, FC: 96 fibres, High density ST, SC: 192 fibres, MT-R], LC: 192 fibres.			R-62600002	Description	
-			0	R-62600002	8" splice trays, mechanical, 12 fibres
OR-615SMFC-96P					8" splice trays, fusion, 12 fibres
Part No.	Description				Heat shrink sleeves, 40 mm, package of 50
OR-615SMFC-96P	Gasketed cable entry 425 mm W x 343 mm H x 1 9.1 kg	78 mm D			

Fibre

Adapter Panels

The Ortronics 615 series six-pack adapter panels are used with our popular 615 and FC series modular fibre cabinets, offering great flexibility in structured cabling design. Adapter panels are available with LC, SC, ST, FC, and MT-R] adapters and feature options ideal for both single-mode and multimode applications. Where applicable, the adapters used (LC, SC, ST, and FC) contain application specific alignment sleeves to ensure optimal performance in conjunction with the economic constraints of network design. For multimode applications, phosphor-bronze (metal) alignment sleeves are used, while single-mode devices contain ceramic alignment sleeves ensuring dependable transmission in demanding single-mode applications.

- > Standard adapter panel is front removable, ideal for simple moves, adds, and changes
- > Plunger/grommet fastener holds adapter panels securely in place

Fibre Optic Adapter Panels Fibre Optic Adapter Panels alala. OR-OFP-LCD12LC OR-OFP-LC024LC Part No. Description Part No. Description OR-OFP-LCD12MB 6-LC duplex (12 fibres) multimode, beige adapters, OR-OFP-LCQ24MB 6-LC quad (24 fibres) multimode, beige adapters, phosphor-bronze alignment sleeves 6-LC duplex (12 fibres) single-mode, blue adapters, phosphor-bronze alignment sleeves OR-OFP-LCD12AC OR-OFP-LCQ24AC 6-LC quad (24 fibres) single-mode, blue adapters, ceramic alignment sleeves ceramic alignment sleeves OR-OFP-LCD12LC 6-LC duplex (12 fibres) multimode, aqua adapters, OR-OFP-LCQ24LC 6-LC quad (24 fibres) multimode, aqua adapters, ceramic alignment sleeves ceramic alignment sleeves **Fibre Optic Adapter Panels** Fibre Optic Adapter Panels OR-OFP-SCD06LC OR-OFP-SCD08LC Part No. Description Part No. Description **OR-OFP-SCD06MB** 3-SC duplex (6 fibres) multimode, beige adapters, OR-OFP-SCD08MB 4-SC duplex (8 fibres) multimode, beige adapters, phosphor-bronze alignment sleeves phosphor-bronze alignment sleeves OR-OFP-SCD06AC OR-OFP-SCD08AC 3-SC duplex (6 fibres) single-mode, blue adapters, 4-SC duplex (8 fibres) single-mode, blue adapters, ceramic alignment sleeves ceramic alignment sleeves 3-SC duplex (6 fibres) multimode, aqua adapters, OR-OFP-SCD08LC OR-OFP-SCD06LC 4-SC duplex (8 fibres) multimode, aqua adapters, ceramic alignment sleeves ceramic alignment sleeves Note: Designation strip kit provided for accurate port identification. NEW **Fibre Optic Adapter Panels Fibre Optic Adapter Panels** OR-OFP-MPA72LA OR-OFP-SCD12LC Part No. Description Part No. Description **OR-OFP-MPA72MA** 6-MPO (72 fibres) multimode, beige, feed-through adapters, OR-OFP-SCD12MB 6-SC duplex (12 fibres) multimode, beige adapters, Tvpe A **OR-OFP-MPA72CA** 6-MPO (72 fibres) single-mode, green, feed-through adapters, phosphor-bronze alignment sleeves OR-OFP-SCD12AC 6-SC duplex (12 fibres) single-mode, blue adapters, Type A OR-OFP-MPA72LA 6-MPO (72 fibres) multimode, aqua, feed-through adapters, ceramic alignment sleeves OR-OFP-SCD12LC 6-SC duplex (12 fibres) multimode, aqua adapters, Type A ceramic alignment sleeves Note: Type A adapters are KeyUp/KeyDown

Adapter Panels (contd.) 📾

Fibre Optic Adapter Panels		
OR-OFP-SCS06LC		
Part No.	Description	
OR-OFP-SCS06MB OR-OFP-SCS06AC	phosphor-bronze alignment sleeves 6-SC simplex (6 fibres) single-mode, blue adapters,	
OR-OFP-SCS06LC	ceramic alignment sleeves 6-SC simplex (6 fibres) multimode, aqua adapters, ceramic alignment sleeves	
Fibre Optic Adapter Panels		
OR-OFP-STSO6NB		
Part No.	Description	
OR-OFP-STS06NB OR-OFP-STS06NC	6-ST simplex (6 fibres) multimode adapters, phosphor-bronze alignment sleeves 6-ST simplex (6 fibres) single-mode, metal adapters,	

Fibre Optic Adapter Panels



OR-OFP-MTD12LA

Part No.	Description
OR-OFP-MTD12MA	6-MT-R] duplex (12 fibres) feed-through, multimode, beige adapters
OR-OFP-MTD12AA OR-OFP-MTD12LA	6-MT-R] duplex (12 fibres) single-mode, blue adapters 6-MT-R] duplex (12 fibres) multimode, aqua adapters

Fibre Optic Adapter Panels



OR-OFP-STD08LC	
Part No.	Description
OR-OFP-STD08MB	4-ST duplex (8 fibres) multimode adapters,
	phosphor-bronze alignment sleeves, beige
OR-OFP-STD08AC	4-ST duplex (8 fibres) single-mode adapters,
	ceramic alignment sleeves, blue
OR-OFP-STD08LC	4-ST duplex (8 fibres) multimode adapters,
	ceramic alignment sleeves, aqua adapters

Fibre Blank Panel

OR-OFP-BLANK	3
Part No.	Description
OR-OFP-BLANK	Blank panel, black

Fibre Optic Adapter Panels

OR-OFP-STDI2LC	
Part No.	Description
OR-OFP-STD12MB	6-ST duplex (12 fibres) multimode adapters with
OR-OFP-STD12AC	phosphor-bronze alignment sleeves, beige
UK-UFP-SIDIZAC	6-ST duplex (12 fibres) single-mode adapters, ceramic alignment sleeves, blue
OR-OFP-STD12LC	6-ST duplex (12 fibres) multimode adapters,
	ceramic alignment sleeve, aqua adapters

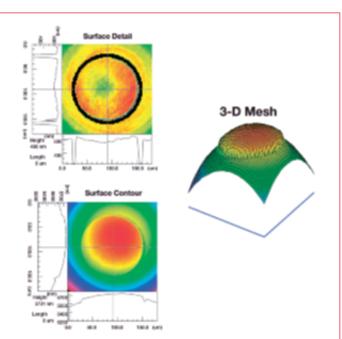
ceramic alignment sleeves

Physical Contact (PC) Assemblies

Ortronics premium fibre optic assemblies offer the best performance available for today's demanding optical networks.

The objective in the production of any fibre optic assembly is the creation of a lens at the tip of the fibre and connector. To produce the highest quality lenses, Ortronics combines proprietary polishing techniques with advanced laser interferometry and state-of-the-art insertion and return loss testing. Taking such care ensures that each assembly will consistently provide complete customer satisfaction.

Using proprietary manufacturing techniques, Ortronics has developed a comprehensive line of fibre optic assemblies exhibiting industry leading PC finishes. The mix of products supports the needs of premises structured cabling systems in backbone, horizontal and collapsed backbone environments. Ortronics has selected the finest optical fibres and connectors available to ensure robust performance. Whether multimode or single-mode; ST, SC, LC, FC, or MT-R], Ortronics offers the right product to meet demanding network requirements now and in the future.



Features	Benefits
Physical Contact (PC) Assemblies	Ortronics uses proprietary processes to create PC end finishes improving contact between mated fibres ensuring low loss coupling
Connector End Identification Included	Allows user to trace individual connectors to their factory-tested performance
Test Report Included with Packaged Product	Detailed schematic test report included with each packaged assembly
Non-Contact Dust Caps Used	Non-contact dust caps are critical in minimising end-face damage and contamination during shipment, handling, and installation
User Instructions Included	Provides a quick reference for users of this product to ensure safe and proper handling in the field. Useful to assist installers in optimising transmission in advanced communications networks
Safety Instructions Included	Provides installer tips encouraging safe and effective use of these advanced fibre optic assemblies
Cleaning Instructions Included	A simple, effective guide to assist field-cleaning efforts and ensure low loss connections
All Assemblies Meet or Exceed TIA/EIA-568B.3 Requirements	Ortronics fibre assemblies provide industry leading performance
Single-mode	
Maximum Insertion Loss (IL): 0.50dB	Ortronics fibre assemblies provide industry leading IL performance meeting or exceeding requirements of TIA/EIA568-B.3
Typical Insertion Loss: 0.30dB	With typical IL values below 0.30dB, Ortronics fibre assemblies help to conserve link budget by ensuring low loss and dependable transmission of critical data
Minimum Return Loss (RL): ≤-40dB	Ortronics fibre assemblies provide industry leading RL performance meeting or exceeding requirements of TIA/EIA568-B

Physical Contact (PC) Jumpers

Duplex (2 fibre) Jumpers, LSZH	Duplex (2 fibre) Jumpers, LSZH
Multimode (62.5/125)	Laser optimised 50/125 OM3
OR-626DA2BL-CC001M Part No. Description	OR-626DF3LL-EG002M Part No. Description
OR-626DA2BL-CC001M MT-RJ to MT-RJ, 1 m OR-626DA2BL-CC002M MT-RJ to MT-RJ, 2 m OR-626DA2BL-CC003M MT-RJ to MT-RJ, 3 m	OR-626DF2LL-CC001M MT-RJ to MT-RJ, 1 m OR-626DF2LL-CC002M MT-RJ to MT-RJ, 2 m OR-626DF2LL-CC003M MT-RJ to MT-RJ, 3 m
OR-626DA3BL-GG001M LC to LC, 1 m OR-626DA3BL-GG002M LC to LC, 2 m OR-626DA3BL-GG003M LC to LC, 3 m	OR-626DF3LL-GG001M LC to LC, 1 m OR-626DF3LL-GG002M LC to LC, 2 m OR-626DF3LL-GG003M LC to LC, 3 m
OR-626DA3BL-EG001M ST to LC, 1 m OR-626DA3BL-EG002M ST to LC, 2 m OR-626DA3BL-EG003M ST to LC, 3 m	OR-626DF3LL-EG001M ST to LC, 1 m OR-626DF3LL-EG002M ST to LC, 2 m OR-626DF3LL-EG003M ST to LC, 3 m
OR-626DA3BL-FG001M LC to SC, 1 m OR-626DA3BL-FG002M LC to SC, 2 m OR-626DA3BL-FG003M LC to SC, 3 m	OR-626DF3LL-FG001M LC to SC, 1 m OR-626DF3LL-FG002M LC to SC, 2 m OR-626DF3LL-FG003M LC to SC, 3 m
OR-626DA3BL-EE001M ST to ST, 1 m OR-626DA3BL-EE002M ST to ST, 2 m OR-626DA3BL-EE003M ST to ST, 3 m	OR-626DF3LL-EE001M ST to ST, 1 m OR-626DF3LL-EE002M ST to ST, 2 m OR-626DF3LL-EE003M ST to ST, 3 m
OR-626DA3BL-FF001M SC to SC, 1 m OR-626DA3BL-FF002M SC to SC, 2 m OR-626DA3BL-FF003M SC to SC, 3 m	OR-626DF3LL-FF001M SC to SC, 1 m OR-626DF3LL-FF002M SC to SC, 2 m OR-626DF3LL-FF003M SC to SC, 3 m
OR-626DA3BL-EF001M ST to SC, 1 m OR-626DA3BL-EF002M ST to SC, 2 m OR-626DA3BL-EF003M ST to SC, 3 m	OR-626DF3LL-EF001M ST to SC, 1 m OR-626DF3LL-EF002M ST to SC, 2 m OR-626DF3LL-EF003M ST to SC, 3 m
OR-626DA2BL-CF001M MT-R] to SC, 1 m OR-626DA2BL-CF002M MT-R] to SC, 2 m OR-626DA2BL-CF003M MT-R] to SC, 3 m	OR-626DF2LL-CF001M MT-RJ to SC, 1 m OR-626DF2LL-CF002M MT-RJ to SC, 2 m OR-626DF2LL-CF003M MT-RJ to SC, 3 m
OR-626DA2BL-CE001M MT-R] to ST, 1 m OR-626DA2BL-CE002M MT-R] to ST, 2 m OR-626DA2BL-CE003M MT-R] to ST, 3 m	OR-626DF2LL-CE001M MT-RJ to ST, 1 m OR-626DF2LL-CE002M MT-RJ to ST, 2 m OR-626DF2LL-CE003M MT-RJ to ST, 3 m
Note: LC, SC and ST cable assemblies have connectors with ceramic ferrules MT-R] (no pins)	Note: LC, SC and ST cable assemblies have connectors with ceramic ferrules MT-RJ (no pins) For PVC part numbers, please consult us.

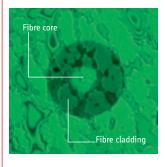
Ultra Physical Contact (UPC) Assemblies

Using proprietary manufacturing techniques, Ortronics has developed a comprehensive line of fibre optic assemblies exhibiting industry leading UPC finishes. These products are offered in a variety of connector styles and are well suited to installations where conservation of optical budget is a concern. The product mix supports the needs of premises structured cabling systems in backbone and collapsed backbone environments. Ortronics has selected the finest optical fibres and connectors available to ensure robust performance for high bit rate networks.

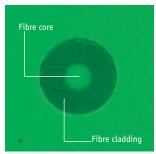
Fibre End-Face Cleanliness

Does Cleanliness Really Matter? It is an important, but frequently overlooked issue in fibre optics

(These photos of the ferrule end-face of a multimode fibre optic connector are magnified 178 times.)



This is what a fingerprint looks like on the end-face of a fibre Hand contaminants and dust particles on the end-face of a fibre can reduce light transmission



This is what the same end-face looks like after cleaning with a pre-moistened isopropyl alcohol wipe Proper cleaning practices of ferrule end-faces and adapter alignment sleeves ensure optimum transmission

Features	Benefits
Ultra Physical Contact (UPC) Assemblies	Ortronics uses proprietary processes to create UPC end finishes ensuring low loss coupling and minimised return loss
Connector End Identification Included	Allows user to trace individual connectors to their factory-tested IL and RL performance
Test Report Included with Packaged Product	Detailed schematic test report included with each packaged assembly
Non-Contact Dust Caps Used	Non-contact dust caps are critical in minimising end-face damage and contamination during shipment, handling, and installation
User Instructions Included	Provides a quick reference for users of this product to ensure safe and proper handling in the field. Useful to assist installers in optimising transmission in advanced communications networks
Safety Instructions Included	Provides installer tips encouraging safe and effective use of these advanced fibre optic assemblies
Cleaning Instructions Included	A simple, effective guide to assist field-cleaning efforts and ensure low loss connections
All Assemblies Meet or Exceed TIA/EIA-568B.3-1 Requirements	Ortronics fibre assemblies provide industry leading IL and RL performance and meet or exceed requirements of TIA/EIA568-B.3

Fibre

Ultra Physical Contact (UPC) Jumpers

Duplex (2 fibre) Jumpers, LSZH	
08-626DC3IL-SS001M	Single-mode
Part No.	Description
OR-626DC3IL-SS001M OR-626DC3IL-SS002M OR-626DC3IL-SS003M	LC to LC, 1 m LC to LC, 2 m LC to LC, 3 m
OR-626DC3IL-QS001M OR-626DC3IL-QS002M OR-626DC3IL-QS003M	ST to LC, 1 m ST to LC, 2 m ST to LC, 3 m
OR-626DC3IL-RS001M OR-626DC3IL-RS002M OR-626DC3IL-RS003M	SC to LC, 1 m SC to LC, 2 m SC to LC, 3 m
OR-626DC3IL-QQ001M OR-626DC3IL-QQ002M OR-626DC3IL-QQ003M	ST to ST, 2 m
OR-626DC3IL-RR001M OR-626DC3IL-RR002M OR-626DC3IL-RR003M	SC to SC, 2 m
OR-626DC3IL-QR001M OR-626DC3IL-QR002M OR-626DC3IL-QR003M	ST to SC, 2 m
OR-626DC3IL-TT001M OR-626DC3IL-TT002M OR-626DC3IL-TT003M	FC to FC, 1 m FC to FC, 2 m FC to FC, 3 m
Note: LC, SC and ST cable MT-R] (no pins) For PVC part numbers, ple	assemblies have connectors with ceramic ferrules

Workstation Systems

Fib-Or-Cop II provides greater multimedia capacity, addressing the increasing need for fibre in horizontal cabling systems. This larger version of the Fib-or-Cop has the ability to mount six TracJack modules in the face, with a choice of fibre (LC, SC, ST or MT-R]) and/or copper (TracJack) exiting from the bottom. The new design allows the cover to be removed without disrupting the copper connections. The wide variety of connectors located in the bottom positions can be further protected by an optional snap-on shroud. In addition, the Ortronics line of workstation solutions offers many alternative designs to accommodate multimedia needs for in-wall and surfacemount installations.

Fib-or-Cop	П
OR-62100041	
Part No.	Description
OR-62100041	Base and cover for six TracJacks, 127 mm W x 203.2 mm H x 30.2 mm D
Note: Refer to p	age 42 for Trac]ack copper modules
Fib-or-Cop	II Protective Bottom Shroud
OR-62100038	
Part No.	Description
OR-62100038	Protective bottom shroud, package of five

Fib-or-Cop II Bottom Adapter Plates



OR-62100050	
Part No.	Description
OR-62100044	3-ST duplex (6 fibres) multimode, beige adapters, phosphor-bronze alignment sleeves
OR-62100045	3-ST duplex (6 fibres) single-mode, blue adapters, ceramic alignment sleeves
OR-62100046	6-SC simplex (6 fibres) multimode, beige adapters, phosphor-bronze alignment sleeves
OR-62100047	6-SC simplex (6 fibres) single-mode, blue adapters, ceramic alignment sleeves
OR-62100048	3-SC duplex (6 fibres) multimode, beige adapters, phosphor-bronze alignment sleeves
OR-62100049	3-SC duplex (6 fibres) single-mode, blue adapters, ceramic alignment sleeves
OR-62100050	6-LC duplex (12 fibres) multimode, beige adapters, phosphor-bronze alignment sleeves
OR-62100051	6-LC duplex (12 fibres) single-mode, blue adapters, ceramic alignment sleeves
OR-62100052	6-MT-RJ (12 fibres) feed-through multimode, beige adapters
OR-62100053	6-MT-R] (12 fibres) single-mode, blue adapters

TracJack[®] Modules

TracJack is a versatile single-module solution-the perfect combination of high quality, enhanced performance, labour savings, ease of use, and flexibility in design. TracJack front removable snap-in modules make moves, adds, and changes easy. All TracJack products are compatible with Fib-or-Cop II and the complete line of TracJack Faceplates and Surface Mount Boxes. TracJack modules are available in LC, SC, ST, FC, and MT-R] styles in order to suit any installation requirement.

TracJack Modules		TracJack Modules	
	1-LC (2 fibres), Multimode, 180° exit, flush, 1 unit.		1-SC Simplex, Multimode, 180° exit, flush, 1 unit.
OR-63700039		OR-63700017	
Part No. Description		Part No. Description	
OR-63700039 Phosphor-bronze aligoneent sl		OR-63700017 Phosphor-bronze align OR-63700078 Ceramic alignment slee	
TracJack Modules		TracJack Modules	
	2-SC Simplex, Multimode, 180° exit, flush, 1 unit.		Beige adapter, phosphor-bronze alignment sleeves, 180° exit, flush, 1 unit.
OR-63700066		OR-63700013	
Part No. Description		Part No. Description	
OR-63700066 Phosphor-bronze ali OR-63700081 Ceramic alignment sl		OR-63700013 2-ST multimode OR-63700011 1-ST simplex multimode	e
TracJack Module	1-MT-R] (2 fibres) Feed-through, Multimode.	Features: > Snap-in module > Modular design > Front removable > No special tools required > Fully compatible with all TracJack far Benefits: > Simple, secure installation > Flexibility in structured cabling syste	
00 (070000)		> Facilitates quick moves, adds, and c	
OR-63700026			
Part No. Description		 Reduced installation expense Provides wide range of design possi 	Liliai

Physical Contact (PC) Pigtails

OR-626PF9ZR-DZ001M 1 connector pigtail, MT-RJ, with pins, PC, 1 m OR-626PF9ZR-DZ002M 1 connector pigtail, MT-RJ, with pins, PC, 2 m

1	Single (1) Connecto	Pr Pigtail PVC			
		Multimode (62.5/125)			ST-PC
	OR-626PA9FR-EZ001M				
	Part No.	Description			
		1 connector pigtail, ST-PC , 1 m 1 connector pigtail, ST-PC , 2 m			SC-PC
		1 connector pigtail, SC-PC , 1 m 1 connector pigtail, SC-PC , 2 m			
		1 connector pigtail, LC-PC, 1 m 1 connector pigtail, LC-PC, 2 m			
		1 connector pigtail, MT-RJ , with pins, PC, 1 m 1 connector pigtail, MT-RJ , with pins, PC, 2 m			LC-PC
	Single (1) Connecto	or Pigtail PVC			
		Laser optimised 50/125 OM3			MT-RJ (with pins)
	OR-626PF9FR-EZ001M			Note: All pigtail products include a 1 m breakout section terminated ends. LC, SC and ST cable assemblies have c	
	Part No.	Description	'		
		1 connector pigtail, ST-PC, 1 m 1 connector pigtail, ST-PC, 2 m			
		1 connector pigtail, SC-PC, 1 m 1 connector pigtail, SC-PC, 2 m			
		1 connector pigtail, LC-PC, 1 m 1 connector pigtail, LC-PC, 2 m			

Physical Contact (PC) Pigtails (contd.)

Six Connector Pigtails LSZH	Twelve Connector Pigtails LSZH
Multimode (62.5/125)	Multimode (62.5/125)
OR-626SA4ZL-EZ001M	OR-626TA4ZL-EZ001M
Part No. Description	Part No. Description
OR-626SA4ZL-EZ001M 6 connector pigtails, ST-PC, 1 metre OR-626SA4ZL-EZ002M 6 connector pigtails, ST-PC, 2 metres	OR-626TA4ZL-EZ001M12 connector pigtails, ST-PC, 1 metreOR-626TA4ZL-EZ002M12 connector pigtails, ST-PC, 2 metres
OR-626SA4ZL-FZ001M 6 connector pigtails, SC-PC, 1 metre OR-626SA4ZL-FZ002M 6 connector pigtails, SC-PC, 2 metres	OR-626TA4ZL-FZ001M12 connector pigtails, SC-PC, 1 metreOR-626TA4ZL-FZ002M12 connector pigtails, SC-PC, 2 metres
OR-626SA4ZL-GZ001M 6 connector pigtails, LC-PC, 1 metre OR-626SA4ZL-GZ002M 6 connector pigtails, LC-PC, 2 metres	OR-626TA4ZL-GZ001M 12 connector pigtails, LC-PC, 1 metre OR-626TA4ZL-GZ002M 12 connector pigtails, LC-PC, 2 metres
OR-626TA4ZL-DZ001M6 connector pigtails, MT-RJ-PC, 1 metreOR-626TA4ZL-DZ002M6 connector pigtails, MT-RJ-PC, 2 metres	Twelve Connector Pigtails LSZH
Six Connector Pigtails LSZH	Laser optimised 50/125 OM3
	OR-626TF4ZL-EZ00IM Part No. Description
OR-626SF4ZL-EZ001M	OR-626TF4ZL-EZ001M 12 connector pigtails, ST-PC, 1 metre
Part No. Description	OR-626TF4ZL-EZO02M 12 connector pigtails, ST-PC, 2 metres
OR-626SF4ZL-EZ001M 6 connector pigtails, ST-PC, 1 metre OR-626SF4ZL-EZ002M 6 connector pigtails, ST-PC, 2 metres	OR-626TF4ZL-FZ001M12 connector pigtails, SC-PC, 1 metreOR-626TF4ZL-FZ002M12 connector pigtails, SC-PC, 2 metres
OR-626SF4ZL-FZ001M 6 connector pigtails, SC-PC, 1 metre OR-626SF4ZL-FZ002M 6 connector pigtails, SC-PC, 2 metres	OR-626TF4ZL-GZ001M12 connector pigtails, LC-PC, 1 metreOR-626TF4ZL-GZ002M12 connector pigtails, LC-PC, 2 metres
OR-626SF4ZL-GZ001M 6 connector pigtails, LC-PC, 1 metre OR-626SF4ZL-GZ002M 6 connector pigtails, LC-PC, 2 metres	

Note: All pigtail products include a 1 meter breakout section consisting of 900 µm buffered fibre with terminated ends. LC, SC and ST cable assemblies have connectors with ceramic ferrules. For other lengths and configurations, and for FC, SC, ST and MTR] assembly part numbers, consult Ortronics sales department.

Ultra Physical Contact (UPC) Pigtails

One Connector Pigt	ails PVC	
		Single-mode
OR-626PC9FR-QZ002M		
Part No.	Description	
OR-626PC9FR-QZ001M		
OR-626PC9FR-QZ002M	1 connector pigtail, ST -	UPC, 2 metres
		UPC, 2 metres UPC, 1 metre
OR-626PC9FR-QZ002M OR-626PC9FR-RZ001M	1 connector pigtail, ST - 1 connector pigtail, SC -	UPC, 2 metres UPC, 1 metre UPC, 2 metres UPC, 1 metre

Six Connector Pigtails LSZH



6 connector pigtail, ST-UPC, 1 metre 6 connector pigtail, ST-UPC, 2 metres
6 connector pigtail, SC-UPC, 1 metre 6 connector pigtail, SC-UPC, 2 metres
6 connector pigtail, LC-UPC, 1 metre 6 connector pigtail, LC-UPC, 2 metres

Twelve Connector Pigtails LSZH

	Single-mode	
OR-626TC4ZL-SZ00IM		
Part No.	Description	
OR-626TC4ZL-QZ001M OR-626TC4ZL-QZ002M	12 connector pigtail, ST-UPC, 1 metre 12 connector pigtail, ST-UPC, 2 metres	
OR-626TC4ZL-RZ001M OR-626TC4ZL-RZ002M	12 connector pigtail, SC-UPC, 1 metre 12 connector pigtail, SC-UPC, 2 metres	
OR-626TC4ZL-SZ001M OR-626TC4ZL-SZ002M	12 connector pigtail, LC-UPC, 1 metre 12 connector pigtail, LC-UPC, 2 metres	

Pre-Polished Fibre Stub Connectors

For use on tight buffered cables.

LC Connectors Pre-Polished, 50/125, 900 Micron Buffer



OptiMo 10G field-installable LC connector for use with 50 micron multimode fibre is suitable for 10 Gigabit applications. The OptiMo 10G technology incorporates a factorybonded fibre stub, ceramic ferrule, and precise factory polish. Designed for installation on 900 micron buffered fibre. Optional kits available for installation on 2.0 mm diameter jacketed cables (see OR 20500267).

OR-205KAS9GA-50T

Part No.Description0R-205KAS9GA-50TIndividually packaged0R-205KAS9GB-50TPackage of 25

LC Connectors Pre-Polished, 62.5/125, 900 Micron Buffer



OptiMo field-installable LC connector for use with 62.5 micron multimode fibre incorporates a factory-bonded fibre stub, ceramic ferrule, and precise factory polish. Designed for installation on 900 micron buffered fibre. Optional kits available for installation on 2.0 mm diameter jacketed cables (see OR-20500267).

OR-205KAS9GA-62

OR-205KAS9GA-09
Part No.

 Part No.
 Description

 OR-205KAS9GA-62
 Individually packaged

 OR-205KAS9GB-62
 Package of 25

LC Connectors Pre-Polished, Single-mode, 900 Micron Buffer



 Part No.
 Description

 OR-205KAS9GA-09
 Individually packaged

 OR-205KAS9GB-09
 Package of 25

for use with single-mode fibre incorporates a factory-bonded fibre stub, ceramic ferrule, and precise factory polish. Designed for installation on 900 micron buffered fibre. Optional kits available for installation on 2.0 mm diameter iacketed cables (see OR-20500267).

OptiMo field-installable LC connector

The most critical point in any optical interconnect is the physical contact interface between mated connector pairs. When polishing fibre connectors, a small lens is created at the tip of the connector and the shape of this lens critically impacts transmission of light. Using advanced laser interferometry equipment to monitor the manufacturing process, Ortronics OptiMo pre-polished field termination connectors exhibit highly controlled end-face geometry resulting in reliable, low insertion loss, minimal return loss connections. In addition, our approach eliminates imprecise epoxy application, time consuming curing, and highly variable hand polishing from field installation practices. The net effect is reduced installation expense, higher yield field terminations, and better performance.

Factory produced connector polish

> Reliable end-face quality

Factory polish process monitored using advanced laser interferometry

> Helps to ensure exacting end-face geometry parameters such as Radius of Curvature, Apex Offset and Fibre Undercut/Protrusion

No polishing required in the field

> Eliminates need for expensive polishing paper and fixtures

No epoxy required

 Eliminates need for expensive consumables, curing ovens, electric power, and reduces labour expense

Unlimited shelf life connector

> No need for short shelf life epoxies

62.5/125, Enhanced 50/125 and Single-mode options

> OptiMo field termination technology accommodates all fibre types and is suitable for high bit rate systems such as 10 Gigabit Ethernet

Lightweight, convenient Termination Kit

> Small size, no electricity necessary

Pre-Polished Fibre Stub Connectors (contd.)

For use on tight buffered cables.

SC Connectors Pre-Polished, 50/125,		ST Connectors Pre-Polished, 50/125,	
900 Micron Buffer		900 Micron Buffer	
OR-205KAS9FA-50T	OptiMo 10G field-installable SC connector for use with 50 micron multimode fibre is suitable for 10 Gigabit Ethernet (10GBASE-SR). The OptiMo 10G technology incorporates a factory-bonded fibre stub, ceramic ferrule, and precise factory polish. Designed for installation on 900 micron buffered fibre. Optional kits available for installation on 2.4 to 3.0 mm diameter jacketed cables (see OR-20500237).	OR-205KAS9EA-50T	OptiMo 10G field-installable ST connector for use with 50 micron multimode fibre is suitable for 10 Gigabit Ethernet (10GBASE-SR). The OptiMo 10G technology incorporates a factory-bonded fibre stub, ceramic ferrule, and precision factory polish. Designed for installation on 900 micron buffered fibre. Optional kits are available for installation on 2.4 to 3.0 mm diameter jacketed cables (see OR-20500236).
Part No. Description	01 20300237).	Part No. Description	
OR-205KAS9FA-50T Individually packaged OR-205KAS9FB-50T Package of 25		OR-205KAS9EA-50T Individually packaged OR-205KAS9EB-50T Package of 25	
Note: All 50/125 field-installable connectors are suit (10GBASE-SR) systems.	able for use with 10 Gigabit	ST Connectors Pre-Polished, 62.5/125,	
		900 Micron Buffer	
SC Connectors Pre-Polished, 62.5/125, 900 Micron Buffer			OptiMo field-installable ST connector for use with 62.5 micron multimode fibre incorporates a factory-bonded
	OptiMo field-installable SC connector for use with 62.5 micron multimode fibre incorporates a factory-bonded fibre stub, ceramic ferrule, and precise factory polish. Designed for installation on 900 micron buffered fibre. Optional kits available for installation on 2.4 to 3.0	OR-205KAS9EA-62	fibre stub, ceramic ferrule, and precise factory polish. Designed for installation on 900 micron buffered fibre. Optional kits are available for installation on 2.4 to 3.0 mm diameter jacketed cables (see OR-20500236).
OR-205KAS9FA-62	mm diameter jacketed cables (see OR-20500237).	Part No. Description	
Part No. Description	08-20300237).	OR-205KAS9EA-62 Individually packaged OR-205KAS9EB-62 Package of 25	
OR-205KAS9FA-62 Individually packaged OR-205KAS9FB-62 Package of 25		ST Connectors Pre-Polished,	
CC Comparison Day Dallahad		Single-mode, 900 Micron Buffer	
SC Connectors Pre-Polished, Single-mode, 900 Micron Buffer			OptiMo field-installable ST connector for use with single-mode fibre
 t	OptiMo field-installable SC connector for use with single-mode fibre. The OptiMo technology incorporates a factory-bonded fibre stub, ceramic ferrule, and precise factory polish. Designed for installation on 900 micron buffered fibre. Optional kits are available for installation on 2.4 to	OR-205KAS9EA-09	incorporates a factory-bonded fibre stub, ceramic ferrule, and precise factory polish. Designed for installation on 900 micron buffered fibre. Optional kits are available for installation on 2.4 to 3.0 mm diameter jacketed cables (see OR-20500236).
	3.0 mm diameter jacketed cables (see	Part No. Description	
OR-205KAS9FA-09	OR-20500237).	OR-205KAS9EA-09 Individually packaged	
Part No. Description		OR-205KAS9EB-09 Package of 25	
OR-205KAS9FA-09 Individually packaged OR-205KAS9FB-09 Package of 25			

Accessories for Pre-Polished Fibre Stub Connectors

For use on tight buffered cables.



Accessories for Pre-Polished Fibre Stub Connectors (contd.)

For use on tight buffered cables.



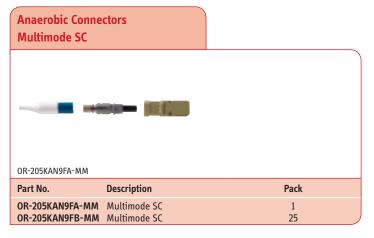
Anaerobic Connectors LC

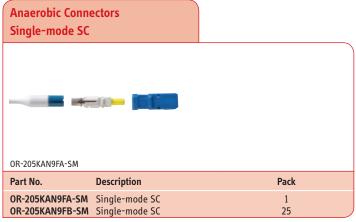
Anaerobic Connee Multimode LC	ctors	
OR-205KAN9GA-MM		
Part No.	Description	Pack
	Multimode Pre-Radius LC Multimode Pre-Radius LC	1 25

Anaerobic Connectors Single-mode LC

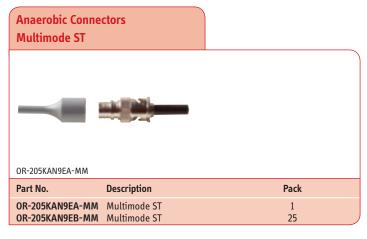


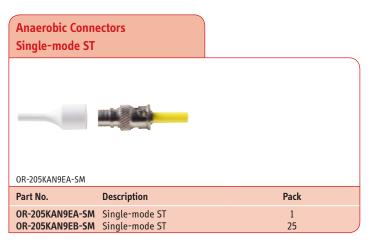
Anaerobic Connectors SC





Anaerobic Connectors ST





Termination Kits

Anaerobic Field Installable Connector

Termination Kit



Description

OR-85400010

Part No.

OR-85400010 Contains all tools necessary for complete OptiMo LC, ST and SC anaerobic terminations: contractor bag, micro strip tool, scribe tool, jacket strip tool, scissors, cut length templates, polishing pad, polishing pucks, microscope

Anaerobic Field Installable Connector Polishing Kit



OR-85400011		
Part No.	Description	
OR-85400011	Consumables necessary for complete OptiMo LC, ST and SC terminations: kemwhips, dispensing tips, syringe, type G polishing paper, type F polishing paper (terminates approx, 100 connectors)	
OR-85400012	Consumables necessary for complete OptiMo LC, ST, and SC terminations: dispensing tips, syringe, type G polishing paper, type F polishing paper, type M polishing paper (terminates approx. 100 connectors)	

Savings at every step

Optimo quick-cure, anaerobic epoxy field-installable connectors speed installation time. You'll benefit from high productivity and low connector costs-which translates directly into savings.

> Low cost solution

- > No capital equipment
- > Fast application
- > Minimal tools
- > Flexible solution

Performance you can count on

- Optimo field-installable connectors don't sacrifice performance for convenience.
- > Ceramic ferrule
- > Reliable performance
- > Single-mode or multimode
- > Pre-radius LC

Accessories for Quick-Cure Anaerobic Epoxy Connectors

For use on tight buffer and loose tube cables.

Polish Paper	Syringe
	A - # O & H
OR-60300184	OR-60300183
Part No. Description	Part No. Description
OR-60300184 10 sheets of type F polishing paper, SM only OR-60300185 10 sheets of type F polishing paper	OR-60300183 Syringe 10/pk
OR-60300186 20 sheets of type G polishing paper	Primer
Dispensing Tips	
	OR-70600022 Part No. Description
OR-60300182 Part No. Description	OR-70600022 Anaerobic Primer
OR-60300182 Dispensing tips 125/pk	
	Kemwhipes
Adhesive	OR-60300179 Part No. Description
Part No. Description	OR-60300179 250 dry wipes
OR-70600021 Adhesive	

Fibre Optic Cables

(1) Add Optimo breakout kit, 6 fibres (see p. 81). (2) Add Optimo breakout kit, 12 fibres (see p. 81). *The same typology of fibres with increased traction force can be ordered. Please contact your Ortronics representative. For OM3+/OM4, please contact your Ortronics representative. **Fibre Cables Tight** Fibre Cables Loose Tube* 62.5/125 LSZH, OM1, reel 2100 m. 62.5/125 LSZH, OM1, reel 2100 m. Colour: orange. Colour: orange. OR-211F06TGLZ OR-211F04L0LZADL Part No. Description Part No. Description OR-211F04L0LZADL OR-211F02TGLZ 2 fibres 4 fibres (1) OR-211F04TGLZ OR-211F06L0LZADL 6 fibres (1) 4 fibres OR-211F06TGLZ 6 fibres OR-211F08L0LZADL 8 fibres (2) OR-211F08TGLZ 8 fibres OR-211F012L0LZADL 12 fibres (2) OR-211F012TGLZ 12 fibres OR-211F024L0LZADL 24 fibres OR-211F024TGLZ 24 fibres Fibre Cables Loose Tube* **Fibre Cables Tight** 50/125 LSZH, OM2, reel 2100 m. 50/125 LSZH, OM2, reel 2100 m. Colour: orange. Colour: orange. OR-211F04L0LZAD50L OR-211F024TGLZ50 Part No. Description Part No. Description OR-211F04L0LZAD50L 4 fibres (1) OR-211F02TGLZ50 2 fibres OR-211F06L0LZAD50L 6 fibres (1) OR-211F04TGLZ50 4 fibres OR-211F08L0LZAD50L 8 fibres (2) OR-211F06TGLZ50 6 fibres OR-211F012L0LZAD50L 12 fibres (2) OR-211F08TGLZ50 8 fibres OR-211FO24LOLZAD50L 24 fibres OR-211F012TGLZ50 12 fibres OR-211F024TGLZ50 24 fibres Fibre Cables Loose Tube* **Fibre Cables Tight** 50/125 LSZH, OM3, reel 2100 m. Colour: aqua. 50/125 LSZH. OM3. reel 2100 m. Colour: aqua. OR-211F04L0LZAD50-0M3L Description Part No. OR-211F012TGLZ50-0M3 OR-211F04L0LZAD50-0M3L 4 fibres (1) Part No. Description OR-211F06L0LZAD50-0M3L 6 fibres (1) OR-211F02TGLZ50-0M3 2 fibres OR-211F08L0LZAD50-0M3L 8 fibres (2) OR-211F04TGLZ50-0M3 4 fibres OR-211F012L0LZAD50-0M3L 12 fibres (2) OR-211F06TGLZ50-0M3 6 fibres OR-211FO24LOLZAD50-OM3L 24 fibres OR-211F08TGLZ50-0M3 8 fibres OR-211F012TGLZ50-OM3 12 fibres OR-211F024TGLZ50-OM3 24 fibres Fibre Cables Loose Tube 9/125 LSZH, OS1, reel 2100 m. **Fibre Cables Tight** Colour: yellow. 9/125 LSZH, OS1, reel 2100 m. Colour: yellow. OR-211F04L0LZAD9 Part No. Description OR-211F012TGLZ9 OR-211F04L0LZAD9 4 fibres (1) OR-211F06L0LZAD9 6 fibres (1) Part No. Description OR-211F08L0LZAD9 8 fibres (2) OR-211F02TGLZ9 2 fibres OR-211F012L0LZAD9 12 fibres (2) OR-211F04TGLZ9 4 fibres OR-211FO24LOLZAD9 24 fibres OR-211F06TGLZ9 6 fibres OR-211F08TGLZ9 8 fibres

OR-211F012TGLZ9 12 fibres

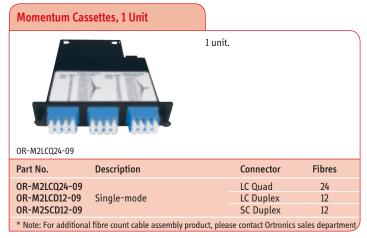
Momentum[®] Cassettes

See p. 75 for fibre TracJacks modules

Momentum 2, Ortronics next generation modular pre-terminated fibre optic cabling solutions, are designed for use in mission critical data centres, storage area networks, and local area network environments. Momentum 2 improves upon the success of the popular first generation Momentum products from Ortronics through enhancements including:

- > Increased cable plant loss budget through reductions in DMD, insertion loss and modal noise
- > Improved backbone link loss promoting more interconnect points and/or longer link length
- > Increased fibre count ribbon backbones (backbones available with up to 72 fibres)
- > Increased port density (72 fibres in 1 rack unit)
- > Improved ease of use
- > Simplified systems design
- > Industry leading support of today's most demanding optical applications

1 unit, 4900/500 MHz-km. 0R-M2CL024-50E Part No. Description Connector Fibres 0R-M2LC024-50E LC Quad 24 0R-M2LC024-50E LC Quad 24	Momentum Cas	settes, 1 Unit		
OR-M2LCQ24-50E LC Quad 24	OR-M2CLQ24-50E		1 unit, 4900/500 MHz-k	.m.
	Part No.	Description	Connector	Fibres
OR-M2LCD12-50E 50/125 LOMF* OM3 LC Duplex 12 OR-M2SCD12-50E SC Duplex 12	OR-M2LCD12-50E	50/125 LOMF* OM3	LC Duplex	12
* Note: For additional fibre count cable assembly product, please contact Ortronics sales depart	* Note: For additional	fibre count cable assembly produ	ct, please contact Ortronics	sales departme





Ortronics combines state-of-the-art optical ribbon cabling, industry leading MTP termination techniques, advanced LC polishing and the industry's favorite hardware to create the simplest, quickest, highest performance cassette based structured cabling system available.

Compact, pre-terminated modular system

> Provides quick and easy deployment, adds, moves and changes, eliminating costly field installation time

12 and 24-fibre 1 unit modular cassettes

> Maximum port density conserves rack space

Best-in-class 10 GBASE-SR, 10 Gig Ethernet performance

 Low insertion loss combined with ultra low differential mode delay (DMD) enhances 10 Gig performance

Unsurpassed optical performance

> Lowest insertion loss cassette modules support high optical performance in installed links

High fibre count backbones available

> MTP* to MTP ribbon backbone cables offered in 12, 24, 48 and 72-fibre count options

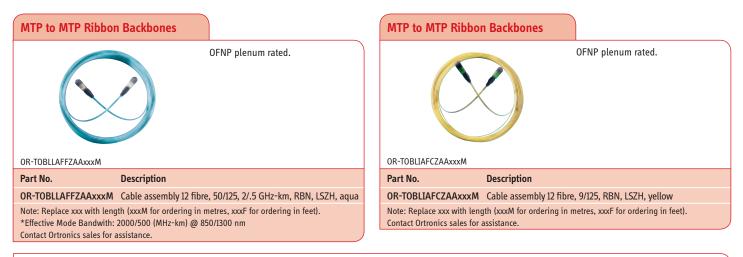
Common cassette mounting footprint

- > Fits in all Ortronics rack mount cabinets and raised floor patch panels
- * MTP is a registred trademark of US conec

Fibre

Momentum[®] Cables

Momentum Backbone cables can be ordered with 62.5/125 and standard 50/125 optical fibre for legacy and low data rate applications. Laser enhanced 50/125 and single-mode versions are also available.



It's the System That Counts

The performance of a fibre optic cabling system needs to be viewed from a system standpoint and not just as an assembly of individual components. The high-performance and premium-performance fibre cassettes and associated cabling products such as patch cords and MTP/MPO backbone cables are perfect examples.

The optical loss performance of a modular cassette-based MTP/MPO link is primarily affected by connector end-face polishing and connector end preparation at the factory. Therefore, it is essential that the MTP/MPO backbone cables and patch cords are prepared with a high-quality process that compliments the cassette mannufacturing process, otherwise, the expected end-to-end link insertion loss performane will not be realized. Simply put, to achieve improved performance you need high performance or premium cassettes and matching backbone and patch cables.

In addition, the low DMD Gigalite 10-XB glass fibre used in all Ortronics 50 micron LOMF cassettes allow the ISI (inter-symbol interference) penalty to be reallocated to the channel budget. When used with the corresponding Gigalite 10-XB backbone MTP/MPO cables and patch cords, the system designer can realize a significant loss budget improvement that may be used for additional splices, connections or extended distances runs.



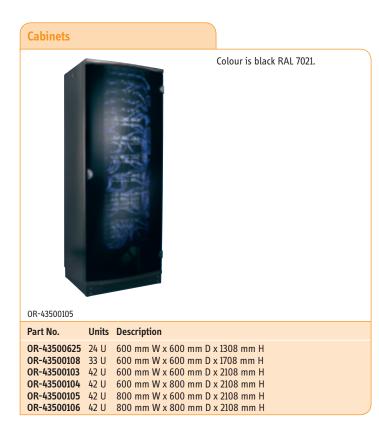
Cabinets 90 Technical Information for Cabinets 91 Cabinets Tech new 92 Wall Mount Cabinets 93 Server Cabinets 95 Wall Mount Cabinet Accessories 95 Cabinet Accessories 96 Telecom Enclosure 98

S ORTRONICS

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Cabinets

The cabinets have a curved safety glass front door, removable side panels and a solid rear door, all with locks 2433 A. They are also equipped with four adjustable EIA mounting uprights for 19" equipment, cable access at the top and bottom and integrated 100 mm plinth. Colour is black RAL 7021.



Extension Cabinets



Extension cabinets (-EX) come without sides and are supplied with a baying kit to connect cabinets together. Colour is black RAL 7021.

OR-43500103-EX

Part No.	Units	Description
OR-43500103-EX	42 U	600 mm W x 600 mm D x 2108 mm H
OR-43500104-EX	42 U	600 mm W x 800 mm D x 2108 mm H
OR-43500105-EX	42 U	800 mm W x 600 mm D x 2108 mm H
OR-43500106-EX	42 U	800 mm W x 800 mm D x 2108 mm H

Technical Information for Cabinets

General features of the cabinet

- > Metal extendable cabinets. Sheet painted or galvanised depending on whether or not it is a casing part.
- > Textured polyester coating with excellent scratch resistance
- > IP 20 : Index of protection against ingress of solids objects and liquids IEC/EN 60529.
- > IK 08 : Index of protection against mechanical impacts IEC/EN 62262.
- > Permissible load rating : 10 kg/U or 1 U = 44.45 mm. (i.e. 330 kg for 33 U and 420 kg for 42 U)

Conformity to Standards

Cabinets comply with the following standards:

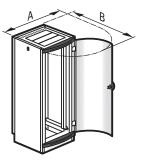
IEC 60529 EN 60529	(NF C 20-010) Degrees of protection provided by enclosures (IP code)				
IEC 62262 EN 62262	(NF EN 50102, NF C 20-015) Degrees of protection provided by enclosures for electrical equipment against external mechanical impact (IK code)				
IEC 60950-1 EN 60950-1 C 77-210-1	Information technology equipment - Safety				
EIA-310-D	Cabinets, racks, panels and associated equipment (ANSI/EIA/310-D-1992)				
IEC 60297-1 et 2 DIN 41414-7	(NF C 20-150, NF C 20-151) Dimensions of mechanical structures of the 482.6 mm (19 in) series.				
IEC 60917-1 EN 60917-1	Modular order for the development of mechanical structures for electronic equipment practices				
IEC 60917-2-1 EN 60917-2-1	Modular order for the development of mechanical structures for electronic equipment practices. Interface co-ordination dimensions for the 25 mm equipment practice (dimensions for cabinets and racks)				

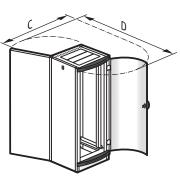
Cabinets are designed to be integrated into installations that comply with the following standards:

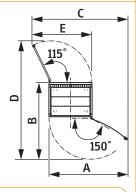
EN 50173-1	Information technology - Generic cabling systems
EN 50174-1 & 2 C 90-480-1 & 2	Information technology - Cabling installation
ISO IEC 11801	Information technology - Generic cabling for customer premises
NF C 15-100 Partie 4-41	Low voltage electrical installations - Rules

Cabinet overall dimensions









				Dimensions in mm				
Part No.	H ⁽¹⁾ .	Closed	d door	Front door open		Front and Back doors open		
		W D		А	В	E	C	D
OR-43500625	1308							
OR-43500108	1708	610	687 1100	1100	1248	843	1343	1820
OR-43500103	2108							
OR-43500104		810		1470	1448	1125	1795	2216
OR-43500105]	610	887	1100	1448	843	1343	2020
OR-43500106		810	007	1470	1648	1125	1795	2416

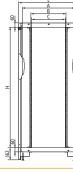
(1) Without levelling feet

Cabinets Tech new

Usable dimensions of front panel (mm)

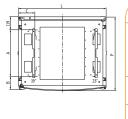
All cabinets are supplied in 19" configuration

For 800-mm wide cabinets, the position of the uprights may be modified to accept 23" equipment.



(Part No.	н	L	Α	В	С
	OR-43500625	1 080				
	OR-43500108	1 480 600		500	465	451
	OR-43500103/104 OR-43500103EX/104EX		600	500	405	451
	OR-43500105/106 OR-43500105EX/106EX OR-43500627	1 880	800	700	465 566 (in 23")	451 552 (in 23")

Usable depth (mm)



Weight (kg)

Part No.

OR-43500625

OR-43500108

OR-43500627

OR-43500103/43500103EX

OR-43500104/43500104EX

OR-43500105/43500105EX

OR-43500106/43500106EX

The weights given are net weights (excluding packaging)

Part No.	L	Р	Α	В	С
OR-43500625 OR-43500108 OR-43500103 OR-43500103EX	600	687	425	104	47
OR-43500104 OR-43500104EX	600	887	625		
OR-43500105 OR-43500105EX	800	687	425	115	147
OR-43500106 OR-43500106EX	800	887	625	115	147

Weight (kg)

Extension cabinet

-

-

74

87

93

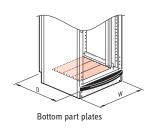
107

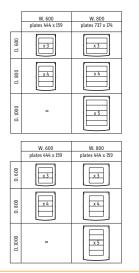
-

Cabinet overall dimensions

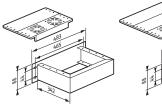


Top part plates

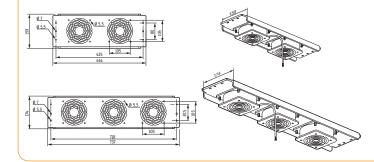




Fan Tray Features







		Ventilation zone
Part No.	Cross-section (cm2)	Max. cross-section ⁽¹⁾ (cm2)
OR-43500603	114	229
OR-43500604		344

Weight (kg)

Standard cabinet

65

86

102

122

121

141

160

(1) With addition of fan plate Part No. OR-43500601

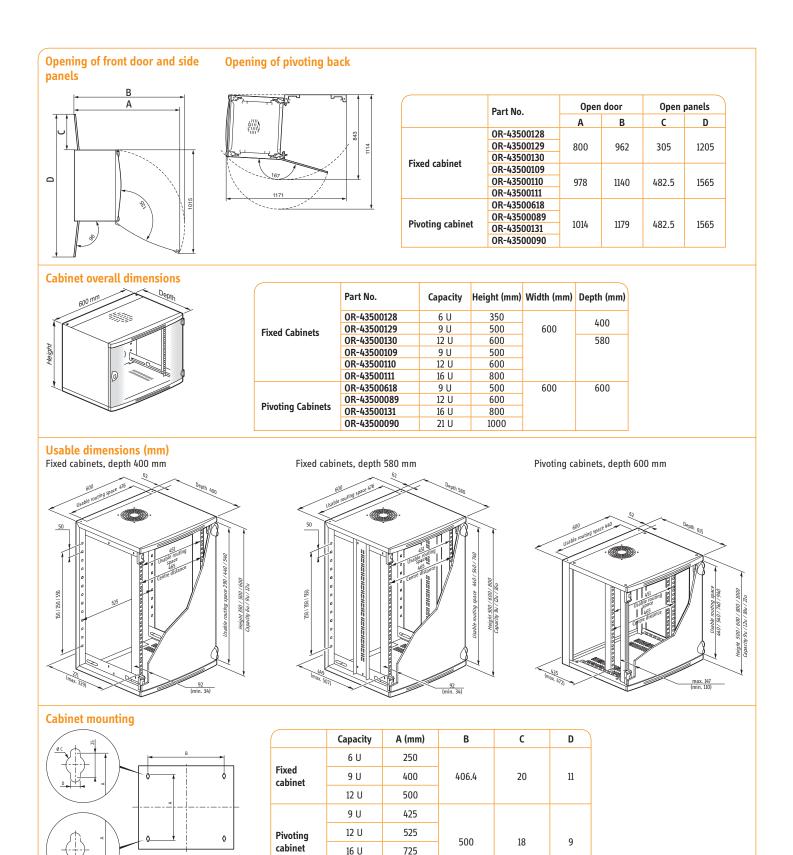
			Ventilation zone				
Cabinet width (mm)	Part No.	Dimension (mm)	Quantity	Cross-section (cm²)	Flow rate (m³/h)		
600 OR-43500601 444 x 159 x 50		2 fans	114	180			
800	OR-43500602	737 x 174 x 50	3 fans	172	270		



Wall Mount Cabinets

IP 20, IK 08. > M 00668 0 0. Units Description 500618 9 U 600 mm W × 600 mm D × 500 mm H 500090 12 U 600 mm W × 600 mm D × 500 mm H 500090 12 U 600 mm W × 600 mm D × 500 mm H 500090 12 U 600 mm W × 600 mm D × 1000 mm H 500090 12 U 600 mm W × 600 mm D × 1000 mm H 11 Wall Mount Cabinets IP 20, IK 08. 00128 Colour is black RAL 7021. 00128 IP 20, 000 mm W × 400 mm D × 350 mm H 100129 000 mm W × 400 mm D × 500 mm H 11 Wall Mount Cabinets M 12 Wall Mount Cabinets M 13 IG U 600 mm W × 400 mm D × 500 mm H 14 Wall Mount Cabinets M 17 Wall Mount Cabinets M 18 Wall Mount Cabinets P 20, IK 08. 19 Zu, IK 08. IP 20, IK 08.	novable side p L 7021 texture ratch dex of protecti 20 dex of protecti rmissible load	unt Cabinets. The cabinets have a curved safety glass front door, e panels and a solid rear door, all with locks 2433A red polyester coating with excellent resistance to corrosion and ction (weatherproofing) against ingress of solid bodies and liquid ction against mechanical impacts: IK 08 ad rating: 3 kg/U (i.e. 48 kg for 16 U cabinet) standards with the following standards: (NF C 20-010) Degrees of protection provided by enclosures (IP code) (EN 50102, NF C 20-015) Degrees of protection provided by en closures for electrical equipment against external mechanical
00688 0. Units Description 500618 9 U 600 mm W x 600 mm D x 500 mm H 1000 mm H 500090 12 U 600 mm W x 600 mm D x 600 mm H 1000 mm H 500090 21 U 600 mm W x 600 mm D x 600 mm H 1000 mm H 500090 21 U 600 mm W x 600 mm D x 1000 mm H 1000 mm H 500090 21 U 600 mm W x 600 mm D x 1000 mm H 1000 mm H 1 Wall Mount Cabinets Im 1000 mm W x 600 mm D x 1000 mm H 00128 0. Units Description 1000 mm H x 400 mm D x 500 mm H 500128 6 U 600 mm W x 400 mm D x 500 mm H 1000 mm H 1000 mm H 500129 9 U 600 mm W x 400 mm D x 500 mm H 1000 mm H 1000 mm H 1000 mm H 11 Wall Mount Cabinets 12 U 600 mm W x 400 mm D x 600 mm H 1000 mm H 1000 mm H 1000 mm H 12 Wall Mount Cabinets Im deep Colour is black RAL 7021. 12 0. JK 08. 11 0.000 mm H 1000 mm H <td< td=""><td>formity to s nets comply w 60529 60529 62262 62262 60950-1 60950-1</td><td>standards with the following standards: (NF C 20-010) Degrees of protection provided by enclosures (IP code) (EN 50102, NF C 20-015) Degrees of protection provided by enclosures closures for electrical equipment against external mechanical</td></td<>	formity to s nets comply w 60529 60529 62262 62262 60950-1 60950-1	standards with the following standards: (NF C 20-010) Degrees of protection provided by enclosures (IP code) (EN 50102, NF C 20-015) Degrees of protection provided by enclosures closures for electrical equipment against external mechanical
006/8 0. Units Description 500018 9.U 600 mm W × 600 mm D × 500 mm H 500089 12.U 600 mm W × 600 mm D × 800 mm H 500090 12.U 600 mm W × 600 mm D × 800 mm H 11.	60529 60529 62262 62262 60950-1 60950-1	 (NF C 20-010) Degrees of protection provided by enclosures (IP code) (EN 50102, NF C 20-015) Degrees of protection provided by enclosures for electrical equipment against external mechanical
500089 12 U 600 mm W x 600 mm D x 800 mm H 500090 21 U 600 mm W x 600 mm D x 1000 mm H I Wall Mount Cabinets I nm deep Colour is black RAL 7021. IP 20, IK 08. IE 00128 Colour is black RAL 7021. 00128 Colour m W x 400 mm D x 350 mm H 00128 600 mm W x 400 mm D x 350 mm H 00128 600 mm W x 400 mm D x 500 mm H 12 U 600 mm W x 400 mm D x 500 mm H 12 U 600 mm W x 400 mm D x 500 mm H 12 U 600 mm W x 400 mm D x 500 mm H 13 U 10 000 mm W x 400 mm D x 500 mm H 14 Wall Mount Cabinets nm deep 14 Wall Mount Cabinets nm deep 15 Wall Mount Cabinets nm deep 15 Wall Mount Cabinets nm deep 16 Wall Mount Cabinets nm deep 17 Wall Mount Cabinets nm deep 18 Wall Mount Cabinets nm deep 19 20, IK 08. 19 20, IK 08.	62262 60950-1 60950-1	(EN 50102, NF C 20-015) Degrees of protection provided by en closures for electrical equipment against external mechanical
I Wall Mount Cabinets nm deep Colour is black RAL 7021. IP 20, IK 08. IF 20, IK 08. IF 20, IK 08. Oot28 o. Units Description So0128 o. Units Description S00128 6 U 600 mm W x 400 mm D x 350 mm H S00129 9 U 600 mm W x 400 mm D x 500 mm H S00120 12 U 600 mm W x 400 mm D x 600 mm H S00120 12 U 600 mm W x 400 mm D x 600 mm H If Wall Mount Cabinets nm deep Colour is black RAL 7021. IP 20, IK 08. IF 20, IK 08.	60950-1	impact (IK code).
Colour is black RAL 7021. IP 20, IK 08. Cab Source Securition Colour is black RAL 7021. IF 20, IK 08. Cab Source Securition Source Securit		Information technology equipment - Safety
00128 00128 0. Units Description 500128 600 mm W x 400 mm D x 350 mm H 500129 9 U 600 mm W x 400 mm D x 500 mm H 500130 12 U 600 mm W x 400 mm D x 600 mm H U U Solution Image: Solution of the solutio	-310-D	Cabinets, racks, panels and associated equipment (ANSI/EIA/310-D-1992).
00128 0. Units Description ISI 500128 6 U 600 mm W × 400 mm D × 350 mm H Pa 500129 9 U 600 mm W × 400 mm D × 500 mm H UT 500130 12 U 600 mm W × 400 mm D × 600 mm H UT HWall Mount Cabinets nm deep Colour is black RAL 7021. Colour is black RAL 7021. IP 20, IK 08. OR-	60297-1 & 2 41414-7	(NF C 20-150, NF C 20-151) Dimensions of mechanical structures of the 482.6 mm (19 in) series.
00128 o. Units Description 500128 6 U 600 mm W x 400 mm D x 350 mm H 500129 9 U 600 mm W x 400 mm D x 500 mm H 500130 12 U 600 mm W x 400 mm D x 600 mm H I Wall Mount Cabinets nm deep Colour is black RAL 7021. Colour is black RAL 7021. IP 20, IK 08. OR-	nets are desig wing standarc	igned to be integrated into installations that comply with the rds:
00128 o. Units Description 500128 6 U 600 mm W × 400 mm D × 350 mm H 500129 9 U 600 mm W × 400 mm D × 600 mm H 500130 12 U 600 mm W × 400 mm D × 600 mm H Wall Mount Cabinets nm deep Colour is black RAL 7021. IP 20, IK 08.	50173-1	Information technology - Generic cabling systems.
o. Units Description 500128 6 U 600 mm W x 400 mm D x 350 mm H 500129 9 U 600 mm W x 400 mm D x 500 mm H 500130 12 U 600 mm W x 400 mm D x 600 mm H I Wall Mount Cabinets nm deep Colour is black RAL 7021. IP 20, IK 08. IP 20, IK 08.	50174-1 & 2 0-480-1 & 2	Intermation technology - Cabling installation
500128 6 U 600 mm W × 400 mm D × 350 mm H 500129 9 U 600 mm W × 400 mm D × 500 mm H 500130 12 U 600 mm W × 400 mm D × 600 mm H I Wall Mount Cabinets nm deep Hir Colour is black RAL 7021. IP 20, IK 08. IP 20, IK 08.	IEC 11801	Information technology - Generic cabling for customer premises.
500130 12 U 600 mm W x 400 mm D x 600 mm H UT I Wall Mount Cabinets Hir nm deep Colour is black RAL 7021. Hir I P 20, IK 08. OR-	C 15-100 tie 4-41	Low voltage electrical installations - Rules.
nm deep Colour is black RAL 7021. IP 20, IK 08.	E C90-483	Residential cabling of communication networks
Colour is black RAL 7021. IP 20, IK 08.	ged Wall M	Mount Brackets
Dar	04004068	Ortronics hinged wall mount brack meet smaller system requirements and allow easy access to the rear of the panels. Holes in back allow for rear cable feed through. These brackets are available in four heig with 19" #12-24 threaded EIA patter Fully assembled. Colour is black.
		Units Description
OR-	5 04004396 2	2 U 482.6 mm W x 152.4 mm D x 88.9 mm H 3 U 482.6 mm W x 152.4 mm D x 133.35 mm H
OK-	504004301	4 U 482.6 mm W x 152.4 mm D x 177.8 mm H 6 U 482.6 mm W x 152.4 mm D x 266.7 mm H
500109 9 U 600 mm W x 580 mm D x 500 mm H 500110 12 U 600 mm W x 580 mm D x 600 mm H	504004301 3 504004068 4	

Wall Mount Cabinets (contd.)



21 U

925

Server Cabinets

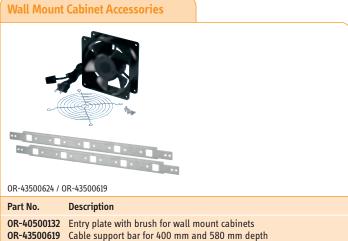
The Mighty Mo Server Cabinet features the curved safety front door, removable sides, and a perforated metal back door all with locks 2433 A. The top can be fitted with the standard fan plates for increased thermal management. The four 19" uprights are adjustable to fit any server reinforced structure for full load rating 500 kg. Supplied with 50 M6 cage nuts. Uses standard Mighty Mo cabinets accessories. Colour is black RAL 7021.

Server Cabi	net Accessories		
OR-43500628	e e e e e e e e e e e e e e e e e e e	Shelves.	
Part No.	Description	Depth. (mr	n)
OR-43500629	Fixed shelf for 1000 mm depth or Telescopic shelf for 1000 mm de 111 for technical information.		
Server Cabi	net Accessories		
		Pair of lateral cable supports.	
OR-43500616			
Part No.	Description		
OR-43500616	Pair of lateral cable supports 67 for 1000 mm depth cabinets	75 mm between 19" uprights	



Wall Mount Cabinet Accessories

OR-43500630 Pair of lateral cable supports 875 mm between structural uprights for 1000 mm depth cabinets



OR-43500624 / OR-43500619		
Part No.	Description	
	Entry plate with brush for wall mount cabinets Cable support bar for 400 mm and 580 mm depth wall mount cabinets	
	Cable support bar for 600 mm depth wall mount cabinets 230 V fan direct mounting	

Cabinet Accessories

Cable Mana			Cable Mana			
Cable Mana Cabinet Acc	The second se		Cable Mana Cabinet Acc			
Cabinet Acc	essories		Cabinet Acc	essories		
<u>+</u> -1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	1	Galvanised steel.				Colour is black RAL 7021.
	1-1-1-1-1-1-1-1-			Ť		
<u>+</u> -1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1				• 		
OR-43500614/61	5/616			11 -14-		
Part No.	Description			1		
OR-43500615	Pair of lateral cable supports 27 for 600 mm depth cabinets Pair of lateral cable supports 47 uprights for 600 mm depth cabi for 800 mm depth cabinets	'5 mm between structural inets or between 19" uprights				
OR-43500616	Pair of lateral cable supports 67 uprights for 800 mm depth cab			44	1000	
Wired Cable	· - ·	Galvanised steel.		**** 1*		
	+ + + + + + + + + + + + + + + + + + + +	Galvanised steet.	P			
			OR-41700305	OR-43500612 Description	OR-43500643	
0R-43500631			OR-41700305	-	nanagement ch	annel for 800 mm cabinets.
Part No.	Units Description			(1560 x 100 x 15	0 mm)	
OR-43500631	24 U 200 mm W x 50 mm D x					s for 800 mm width cabinets, 42 U width cabinets, 42 U
	33 U 200 mm W x 50 mm D x 42 U 200 mm W x 50 mm D x		230 Volt Far	n Assemblies		
Fan Tray	100 - 100 - 1	2 units. Colour is black RAL 7021.				Fan plate with cord and fans, to be mounted in the top cut-outs of cabinets. Colour is black RAL 7021.
•			OR-43500601			
	•		Part No.	Description		
OR-43500603			OR-43500601	For 600 mm wie	dth cabinets - 2	fans
Part No.	Description		OR-43500602	For 800 mm wi	dth cabinets - 3	fans
OR-43500603 OR-43500604	Fan tray with two fans depth 60 Fan tray with two fans can be u and 1000 mm		Cable Entry	Plates		
Ventilated 1	op Plates					Plates mount in the cut-outs of any size Mighty Mo Cabinets to seal or filter out dust and dirt. Colour is
· (# 3)		Top plates mount in the top cut-outs of Mighty Mo Cabinet allowing heat to exit. Colour is black RAL 7021.	OR-40500136			black RAL 7021.
		to exit. Colour is black the 7021.	Part No.	Description		Capacity
OR-40500142			OR-40500135	Plain metal pla		
Part No.	Description			Bottom of 600		
OR-40500142	Ventilated plate for 600 mm wi		OR-40500136	· · ·	ate for:	8 x 40 cables
OR-40500143	Ventilated plate for 800 mm wi	dth cabinets	OR-43500600	Top or bottom of Bottom of 800 Brush entry pla Top of 800 mm	mm width cabi ite for:	



Cabinet Accessories (contd.)

Thermostat		Lighting Kit
0R-43500617	Mounted with magnetic plate.	OR-43500611 Part No. Description OR-43500611 230 V lighting kit 35 W incandescent ; IP 20
Part No. Description		Grounding Kit
OR-43500617 Thermostat 12 V to 250 V, adjus Normally open contact 5A. Nor		The grounding kit provides a positive
Floor Mounting Kit	The floor mounting kit includes a set of four feet with assembly hardware. Floor fastening bolts are not included.	ground between the chassis and side panels/back door.
		Part No. Description
FOUT		OR-40500140 Use with with all Mighty Mo Cabinets ; +2.5 mm ²
OR-40500137		
Part No. Description		Earthing Strip
OR-40500137 Use with with all Mighty Mo C	abinets	
Casters		
la c	Four swivelling double casters mount	OR-40500145
	inside the pedestal and only increase the height of the cabinet by 18 mm.	Part No. Description
	Weight capacity of the cabinet with	OR-40500145 Earthing Strip, Length 200 mm, 6 mm ²
	casters is 380 kg.	
OR-40500141		
Part No. Description		
OR-40500141 Use with all Mighty Mo Cabine	ts	

Telecom Enclosure 🗤

The Mighty Mo telecom enclosure combines advanced cable management with security and flexibility to change the way you bring high performance to the desktop. Based on the foundation of Mighty Mo technology, the wall mount telecom enclosure provides capacity for both active and passive equipment and can support up to 48 users.

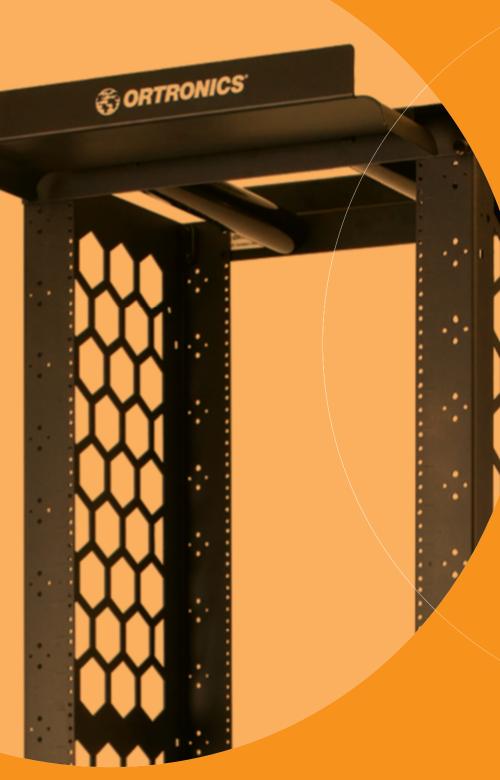


Accessories	
Part No.	Description
OR-MMTEHMR2RU	Cable management panel for the Mighty Mo telecom enclosure, 482.6 mm W x 88.13 mm H x 171.45 mm D, 2 rack units
OR-MMTEFK	Includes fan, guard, filter, 915 mm cord with plug, and mounting hardware. Works with all Mighty Mo wall mount cabinets. 102 mm diameter, 120 volt, 42 CFM fan

One example of Telecom Enclosure cabling in an office environment

Features & Benefits:

- > Cable management to support and organize cables, ensuring proper bend radius for minimum distortion and maximum network performance
- > A lockable front door provides security and protection in public areas
- > Attractive exterior blends well with office decor
- > Silkscreened glass door reveals patch panels, labeling, designation and equipment while obscuring vertical cables
- > Three-sided access to installed components allows easy installation and MACs
- > Swing-out access supports easy re-termination and patching
- > Cable entry brush prevents dirt and debris from entering the enclosure and simplifies rearrangements of the exiting cables to accommodate moves, adds and changes
- > Optional double-sided cable management panels with front rings to manage patch cords and a rear trough with slots to protect and route
- > Optional cooling fans are available to protect active equipment

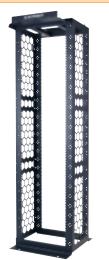


Mighty Mo 10 CableManagement Racks100Mighty Mo 10 Accessories101Mighty Mo 6 Cable102Management Racks102Mighty Mo 6 Vertical103Cable Management103Mighty Mo 6 Cabinets104Accessories106Server Rack Accessories106

Mighty Mo® 10 Cable Management Racks 🚥

The patented Mighty Mo advanced racking system is specifically designed for higher density cabling system applications such as data centres, SANs and main cross connect areas. It is easy to assemble and offers many configuration options, extra vertical cable capacity, and other functional and aesthetic elements. The Mighty Mo system features an innovative vertical management "cage" with individual 1-rack unit fingers and a double-hinged door. Horizontal cable managers, available with covers, are designed to match the layout of Ortronics Clarity patch panels. Mighty Mo racks and accessories work together to mount, manage and organize virtually any structured cabling equipment and provide a unified, streamlined look.

Mighty Mo 10 Cable Management Racks



Mighty Mo 10 racks are designed to maximize the airflow of network equipment. Honeycomb side rails and baffles combine to manage intake and exhaust air creating cold aisle/hot aisle air distribution from side vented equipment. The bottom flange turns inward, allowing it to fit on a 610 x 610 mm floor tile. Choose from the new Mighty Mo 10 rack, specifically designed to improve airflow in data centres, or the Mighty Mo 6 for standard LAN applications

- > Patented channel construction has built-in strain relief, bend radius control, and cable routing with floor and ceiling access to distribution cables
- > Top trough with built-in waterfall provides bend radius control and efficient patch cable routing
- > Vented double hinged front and rear doors are available for additional secutity on Mighty Mo 6 and Mighty Mo 10 racks
- > Can be assembled as a 482.6 mm or 584.2 mm rack. No additional hardware required; no need for two sizes of racks
- > Unless otherwise noted, all Mighty Mo 6 and Mighty Mo 10 components are compatible with both racks

OR-MM10716

Part No. Description

OR-MM10716412.75 mm channel depth, 2135 mm high, black, 45 rack units**OR-MM10816**412.75 mm channel depth, 2440 mm high, black, 51 rack unitsNote: Static capacity: 680 kg. Assembly required.

Mighty Mo 10 Server Rack



The Mighty Mo 10 Server Rack works with all of the Mighty Mo 6 and 10 racks and cable management. The mounting rails adjust from 317.5 mm to 762 mm, independent of the structural members allowing the rails to be adjusted after the rack is installed. Mighty Mo vertical managers can be mounted front or rear. Colour is black.

OR-MM107SVR		
Part No.	Description	
OR-MM107SVR	Four-post aluminium frame with steel EIA rails, supplied with 50 # 12-24 cage nuts and screws, 45 rack units, 2135 mm H	
OR-MM107SVRABR	Server rack baffle rail for mounting airflow baffles	
Note: Static capacity: 363 kg. (evenly distributed) Assembly required.		

Mighty Mo[®] 10 Accessories 🕬

Mighty Mo 10 Cable Management Cage With Door



Cage design promotes efficient routing of patch cords between racks. Hinged doors allow easy access during moves, adds, and changes. 406.4 mm wide cage creates a 311.15 mm gap between racks. 304.8 mm wide cage creates a 209.55 mm gap between racks for front-to-back routing of equipment cables and patch cords. Both are supplied with four spools and 12 bend-limiting clips.

Mighty Mo 10 Airflow Baffles

OR-MM10AB71612	Mighty Mo 10 airflow baffles mount between racks and direct intake and exhaust air on side flow network equipment from cold aisle to hot aisle.
Part No.	Description
OR-MM10AB71612	For use with 2135 x 406.4 mm Mighty Mo 10 rack and 304.8 mm
	wide Mighty Mo 10 cage
OR-MM10AB71616	For use with 2135 x 406.4 mm Mighty Mo 10 rack and 406.4 mm
	wide Mighty Mo 10 cage
OR-MM10AB81612	For use with 2440 x 406.4 mm Mighty Mo 10 rack and 304.8 mm
	wide Mighty Mo 10 cage
OR-MM10AB81616	For use with 2440 x 406.4 mm Mighty Mo 10 rack and 406.4 mm
	wide Mighty Mo 10 cage
Note: Includes all ha	rdware necessary to mount between two Mighty Mo 10 racks.
Not intended for use	with Mighty Mo 6 racks.

Mighty Mo 10 Waterfall Extension

OR-MM10WFE	
Part No.	Description
OR-MM10WFE	Increases the height of the front flange of the Mighty Mo waterfall by 57.15 mm when additional cable capacity is required

OR-MM10VMD712

Part No. Description

OR-MM10VMD712With door, 308.1 x 330.2 x 2135 mm, 45 rack unitsOR-MM10VMD716With door, 416 x 330.2 x 2135 mm, 45 rack unitsOR-MM10VMD812With door, 308.1 x 330.2 x 2440 mm, 45 rack unitsOR-MM10VMD816With door, 416 x 330.2 x 2440 mm, 45 rack unitsNote: All cable managers include hardware necessary to mount the cage on the face of twoMighty Mo 6 or 10 racks.

Mighty Mo 10

Vented Door Assemblies



Door design allows mounting to the front or rear of any Mighty Mo 6 or Mighty Mo 10 rack. The doublehinged door pivots to the right or left and is easily removed.

OR-MM10VDA7248	
Part No.	Description
OR-MM10VDA7248	2135 x 610 mm with 213 mm of clearance behind door for use with VMD-style vertical managers
OR-MM10VDA7244	2135 x 610 mm with 112 mm of clearance behind door for use without vertical managers
Note: Door designed to	work with Mighty Mo racks assembled in the 482.6 mm configuration.

Mighty Mo[®] 6 Cable Management Racks

The patented Mighty Mo 6 is a complete advanced racking system specifically designed for higher density cabling system applications such as SANs, DATA Centres and main cross connect areas.



Mighty Mo 6 Cable Management Cages



① Hinged latches allow easy access during moves, adds, and changes. 152.4 mm wide cage creates a 63.5 mm gap between racks for front-toback routing of equipment cables and patch cords.

② Dual snap-on hinged covers allow easy access during moves, adds, and changes. 152.4 mm wide cage creates a 63.5 mm gap between racks for front-to-back routing of equipment cables and patch cords. 152.4 mm wide cage is supplied with four spools and 12 bend-limiting clips.

① OR-MM6VML706 ② 0R-MM6VMS704

~	
Part No.	Description
1	
OR-MM6VML706	152.4 mm x 152.4 mm x 2135 mm
OR-MM6VML704	102 mm x 152.4 mm x 2135 mm
OR-MM6VML804	102 mm x 152.4 mm x 2440 mm
OR-MM6VML806	152.4 mm x 152.4 mm x 2440 mm
2	
OR-MM6VMS704	102 mm x 152.4 mm x 2135 mm
OR-MM6VMS706	152.4 mm x 152.4 mm x 2135 mm
OR-MM6VMS804	102 mm x 152.4 mm x 2440 mm
OR-MM6VMS806	152.4 mm x 152.4 mm x 2440 mm
Ŭ	ll hardware necessary to mount cage on face of two Mighty Mo 6 racks, f row. Patent No. 6,365,834

Note (2): Includes all hardware necessary to mount cage on face of two Mighty Mo 6 racks, single rack or end of row. Patent No. 6,946,605 and 7,026,553



Mighty Mo 6 Standard Features

> Racks now equipped with three rows of hook and loop tie-off points and 609.6 mm-457.2 mm cable straps

Rear ladder rack flange accepts 152.4 mm to 457.2 mm ladder rack

- Cable runway bracket attaches 152.4 mm to 457.2 mm
- > Rack spaces are stamped every unit, numbered every fifth unit

> Four slack storage spools included with every vertical manager with doors. The 254 mm cage allows front or back mounting to separate copper and fibre

> Extruded-aluminium front door features full length latches; open the door to the right or left with a simple twist

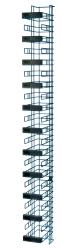
Mighty Mo[®] 6 Vertical Cable Management

Mighty Mo 6 Vertical Cable Management Cages with Door



Cage design promotes efficient routing of patch cords between racks. Hinged doors allow easy access during moves, adds, and changes. 254 mm wide cage creates a 165.1 mm gap between racks. 152.4 mm wide cage creates a 63.5 mm gap between racks for front-to-back routing of equipment cables and patch cords. Both are supplied with four spools and 12 bend-limiting clips.

Vertical Backbone Cable Management Channel



The channel design optimizes space and provides many convenient fastening points to assist with the installation of bulky fibre optic backbone cables. In addition, the channel mounts outside of the rack rails to accomodate for the bend radius requirements of various fibre optic cable diameters.

Part No.	Description (W x D x H)
	254 mm x 330.2 mm x 2135 mm 152.4 mm x 203.2 x 2135 mm
	254 mm x 330.2 mm x 2440 mm 152 4 mm x 203 2 mm x 2440 mm

a single rack or end of a row. Patent No. 6,946,605, 6,968,647 and 7,026,553

OR-MM6VMD710

OR-MM6VMD810 254 mm x 330.2 mm x 2440 mm OR-MM6VMR810 OR-MM6VMR810 152.4 mm x 203.2 mm x 2440 mm OR-MM6VMR810 Note: All cable managers include hardware necessary to mount the cage on the face of two Mighty Mo 6 racks. The 152.4 mm wide model contains gusset brackets and is recommended for

OR-M	OR-MM6VMR710		
Part N	lo.	Description	
OR-M	M6VMR710	7 ft. Mighty Mo 6 vertical backbone cable management channel with snap-on hinged latches (2135 mm H).Black	
OR-M	M6VMR810	8 ft. Mighty Mo 6 vertical backbone cable management channel with snap-on hinged latches (2440 mm H). Black	

Mighty Mo[®] 6 Cabinet Accessories

Mighty Mo 6 End Panels



Visually finishes the end of a row of Mighty Mo 6 racks. It mounts flush and provides a surface for the Vertical Cable Management Channel while concealing cables in the rack channel. Colour is black.

Mighty Mo 6 Ceiling Extension Kits



Mounts on the top of Mighty Mo 6 Racks with 635 mm channels. The kit extends one channel 731.5 mm and is supplied with a cover to hide the cables, colour is black.

OR-MM6CEK10

Part No. Description

OR-MM6CEK10 For rack with 266.7 mm channel depth, one per kit with cover OR-MM6CEK16 For rack with 412.8 mm channel depth, one per kit with cover Note: Extension uses rack hardware for mounting

Mighty Mo 6 Cable Management Panels



Organizes patch cords vertically and horizontally on our Mighty Mo 6 racks. The finger design encourages defined and traceable routing of individual patch cords, colour is black.

OR-MM6HMF2RU

Part No.	Description	Rack Units
OR-MM6HMF1RU OR-MM6HMF2RU OR-MM6HMF4RU	Multiple fingers	1 2 4
OR-MM6HM62RU OR-MM6HM81RU	6 port finger spacing 8 port finger spacing 8 port finger spacing 8 port finger spacing	1 2 1 2

OR-MM6EPN706 Description STANDARD for use with 152.4 mm Mighty Mo 6 vertical cable managers OR-MM6EP706 For 2135 mm rack with 165.1 mm channel OR-MM6EP710 For 2135 mm rack with 266.7 mm channel OR-MM6EP716 For 2135 mm rack with 412.8 mm channel OR-MM6EP810 For 2440 mm rack with 266.7 mm channel OR-MM6EP816 For 2440 mm rack with 412.8 mm channel NARROW for use with 101.6 mm Mighty Mo 6 vertical cable managers NEW OR-MM6EPN706 For 2135 mm rack with 163.4 mm channel OR-MM6EPN710 For 2135 mm rack with 266.7 mm channel OR-MM6EPN716 For 2440 mm rack with 412.8 mm channel

Note: Includes mounting hardware

Mighty Mo® 6 Cabinet Accessories (contd.)

Mighty Mo 6 Cable Management **Spools**



They mount at rack unit intervals, providing flexibility and proper bend radii for cables on the front of the 152.4 mm wide cage with door and on the front and rear of the 254 mm wide cage with door. Set of four, colour is black.

OR-MM6CMS8

Part No.	Description
OR-MM6CMS8	203.2 mm long for 254 mm vertical cable management cage with door
OR-MM6CMS6	152.4 mm long for 152.4 mm vertical cable management cage with door
OR-MM6CMS10	254 mm long for 254 mm vertical cable management cage with door

Mighty Mo 6 Cable Trough

NEW

OR-MM6CT4RUK		For supporting fibre cables at the bottom of Mighty Mo racks. The kit includes an extension that bridges the space between racks.
Part No.	Description	Rack Units
		,

OR-MM6CT4RU Cable trough, 4RU OR-MM6CT4RUK Cable trough kit, 4RU Note: Includes mounting hardware

Mighty Mo Overhead Cable **Pathway Rack**

NEW



The Mighty Mo overhead cable pathway racks come with everything needed to mount the bracket to any Cablofil cable tray 50.8 mm or deeper.

4

4

Mighty Mo 6 Rack Base Dust Covers



Prevents the accumulation of dust and debris in the rack base. The dust cover is scored so it can easily be bent to clear cables coming up from the floor into the channel.

OR-MM6BDC10

Part No. Description OR-MM6BDC06 For rack with 165.1 mm channel depth OR-MM6BDC10 For rack with 266.7 mm channel depth OR-MM6BDC16 For rack with 412.8 mm channel depth

Mighty Mo 6 Bend Limiting Clip



Snaps on to any finger on the vertical management cage to provide bend limitation for fibre jumpers entering and exiting the cage. Set of 12. Colour is black.

Description Part No.

OR-MM6BLC 82.5 mm long for vertical management cages with door

Mighty Mo 6 Runway Mounting **Brackets**



Mounts on top of the Mighty Mo 6 rack and provides a mounting location on the side for 152.4 mm to 457.2 mm ladder racking. Colour is black.

OR-MM6CRB10

Part No. Description **OR-MM6CRB06** For rack with 165.1 mm channel depth **OR-MM6CRB10** For rack with 266.7 mm channel depth OR-MM6CRB16 For rack with 412.8 mm channel depth

OR-60401001

Part No.	Description	Rack Units
OR-60401001	599.44 mm W x 187.96 mm H x 228.6 mm D. Capacity: 41 kg	2
OR-60401015	599.44 mm W x 320.04 mm H x 228.6 mm D. Capacity: 41 kg	5

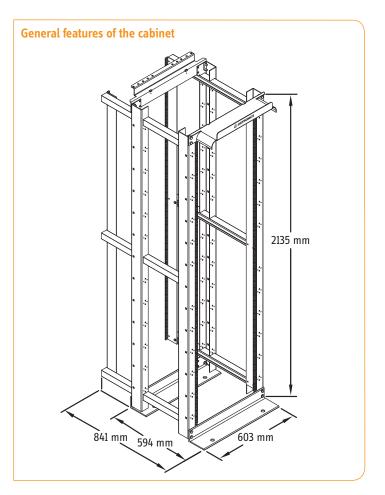
Server Rack

The Server Management Rack will support almost any server available today. Ortronics has given the old "four post" rack a new dimension with the addition of patent pending adjustable equipment mounting rails. The rails can be adjusted after the rack is completely installed! No other manufacturer offers this type of flexibility. Server rack can be assembled as a 19" or 23" rack without additional hardware. Speednuts are included with every Server cabinet and increase the speed and ease of assembly. The Server cabinet's base angles are reversible. This allows them to be mounted facing out for a wider stance if the rack is to be free standing, or either of the bottom angles can be turned inward to keep the footprint within a 0.2 m².



The mounting rails adjust from 152.4 mm to 812.8 mm, independent of the structural members. This makes it possible to mount "half height" rails on the frame, enabling equipment with different depth requirements to be mounted on one rack. Colour is black. Construction : Aluminium Frame with Steel EIA Rails, UL Listed.

OR-MM67SVR		
Part No. Description		
OR-MM67SVR	Four-post aluminium frame with steel EIA rails, supplied with 50 No. 12-24 cage nuts and screws, 44 rack units, 2135 mm H	
Note: Assembly required.		



Server Rack Accessories





Cable Management Panels _____ 108 Equipment Shelves _____ 110 Cable Management Straps and Accessories _____ 112

Cable Management Panels

Complete cable management maximises your system's performance. Ortronics has the largest selection of horizontal cable managers in the industry. Our wide array of panel styles will meet all your cable management requirements.



Cable Management Panels (contd.)

Cable Management Panels



2 axes.Horizontal and front to back management. With round shaped rings for an optimal protection of the cords (respect of the bending radius).

OR-43500638

 Part No.
 Description

 OR-43500638
 New Design cable management panel 1 U

 OR-43500641
 New Design cable management panel 2 U

Bend Limiting Cable Management Panels





falls that protect against cable crimping and also maintain proper bend radius. The panels are ideal at the top of standard 482.6 mm EIA racks. Color is black.

Ortronics CPU Tie Down Kit includes

mounting plates with rubber

bumpers which can be quickly

attached to the EIA pattern on the

front and rear of any rack with a rail

depth of from 76.2 mm to 165.1 mm.

The hook and loop strap with elastic

centre safely holds the CPU in place against the rubber bumpers. The CPU

can be easily removed for service,

colour is black.

Ortronics bend limiting cable management panels have curved

OR-60400099

 Part No.
 Description

 OR-60400099
 88.9 mm H x 88.9 mm D rings with waterfall, 2 rack units

 OR-60400114
 88.9 mm H x 152.4 mm D rings with waterfall, 2 rack units

Computer Tie Down Kit



OR-60400523

Part No. Description

OR-60400523 One hook and loop type strap, two brackets Note: mounting hardware included with all shelves. Patent pending

Computer Tie Down Kit



Rear support brackets allow the folding keyboard shelf to support any standard computer monitor up to 15.9 kg. The brackets adjust from 159 mm to 432 mm, colour is black.

OR-60400606

 Part No.
 Description

 OR-60400606
 Use with folding keyboard shelf

Feed-Through Cable Management Panel



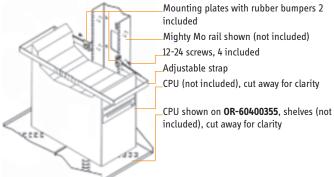
Ortronics Feed-Through Cable Management Panel provides organised management of patch cables from front to back. Brush helps position cables and protects from dust.

OR-43500637

Part No. Description

OR-43500637 1 U brush panel Note: Includes mounting hardware

Computer Tie Down Kit Installation Instructions



Monitor Strap Kit



The monitor strap kit consists of hook and loop straps which can secure a monitor with a base of any size or shape to the equipment shelves on these pages. The monitor screen remains fully adjustable, colour is black.

OR-70700126

Part No. Description

OR-70700126 Hook and loop type straps, kit of two

Equipment Shelves

Ortronics offers a full range of sturdy equipment shelves to support your valuable equipment. From vented equipment shelves to Ortronics newest addition, the Folding Keyboard Shelf, there is a shelf to fit your needs.



Equipment Shelves (contd.)

Note: mounting hardware included with all shelves

Equipment S	Shelves			
		miscella gear. It Mighty	s Equipment S neous equipm can be used oi Mo cabinets oi ions, colour is	nent or test n standard r for wall mount
OR-43500607	Description		Depth (mm)	Load Capacity
OR-43500642	Fixed shelf for 250 mm de Fixed shelf for 300 mm de Fixed shelf for 600 mm de	pth cabinets pth cabinets	250 300 425 625	20 kg 20 kg 80 kg 80 kg
Equipment				
08-43500610		Colour i	s black, load ca	apacity is 50 kg.
OR-43500610	Description		1	Depth (mm)
OR-43500609 OR-43500610	Telescopic shelf for 600 n Telescopic shelf for 800 n		nets	440 640

Equipment Shelves Dimensions Part No. Depth (mm) OR-43500642 250 OR-43500606 300 OR-43500607 425 OR-43500608 625 OR-43500609

Double Equipment Shelves for Mighty Mo Racks



Ortronics double equipment shelf supports miscellaneous equipment, test gear, etc. The double shelves work with Mighty Mo racks with 165.1 mm deep channels, shelf width is 431.8 mm, colour is black.

440

640

822

640

OR-60400355

OR-43500610

OR-43500628

OR-43500629

Part No. Description

OR-60400355 482.6 mm W x 610 mm H x 133.4 mm D, 68 kg capacity

Cable Management Straps and Accessories

Ortronics Cable Management Straps and Accessories provide an organised solution for the management of patch and horizontal distribution cables.



Cable Management Straps and Accessories (contd.)

Wire Distribution Spool		Mounting S	Screws	
	This spool has a No. 12-24 stud molded in place and can be threaded into the EIA holes on any Ortronics rack. Use it to mount cable management panels, patch panels or screw it anywhere additional cable management is desired, colour is black.	0R-43500621	and and a	
OR-60400013 Part No. Description		Part No.	Description	
OR-60400013 365.8 mm - 731.5 mm		OR-43500621 OR-43500622	50 quick fixing fastener 50 black screws M6 x 10 + was	hers
Panel Mounting Screws		OR-43500623	50 cage nuts M6	
~		Grounding	Kit for Racks	
			61	This kit provides a reliable systems ground for the distribution rack. One grounding kit is recommended for each rack.
		OR-60400010		
OR-60400005		Part No.	Description	
Part No. Description		OR-60400010	Single conductor ground lug f	or six AWG to 14 AWG conductors
OR-60400005 No. 12-24 x 15.875 mm, package OR-60400533 No. 12-24 x 15.875 mm, package				

Cable Management Straps and Accessories (contd.)

Colour-Coded Cable Management Straps



Ortronics Colour-Coded Cable Management Straps provide an organised solution for the management of patch and horizontal distribution cables. The straps have a hook and loop type closure to secure and administer cables without damaging the construction of the copper or fibre cable, Sold in packages of ten.

Colour is burgandy, load capacity is

Sold in package of twenty.

Part No. Description

OR-70700080-XX 152 mm L x 15.9 mm W, grip range: 15.98 mm to 41.3 mm diameter OR-70700079-XX 305 mm L x 15.9 mm W, grip range: 31.8 mm to 82.6 mm diameter Note: To order coloured straps, specify colour by putting colour code at end of part number. (Example: To order a 6" red OR-70700080 strap : OR-70700080-22). Colour Code: -00=Black, -22=Red, -23=Orange, -24=Yellow, -25=Green, -26=Blue

50 kg.

Cable Management Straps



OR-70700143 152 mm OR-70700144 305 mm

D-ring Cable Management Straps



Ortronics D-Ring Cable Management Straps provide an organised solution for the management of horizontal distribution cables. The 19 mm straps have a hook and loop type closure to secure and administer cables without damaging the construction of the copper or fibre cable, sold in packages of ten, colour is black.

Part No. Description

OR-70700107-00 Black, 305 mm L, grip range: 38 mm to 63.5 mm diameter **OR-70700084-00** Black, 457 mm L, grip range: 51 mm to 102 mm diameter

Cable Tie



Releasable cable tie with fuse alert system. With the simple pinch release, cable ties may be adjusted or re-used. The patented fuse alert system prevents overtightening of data cables, box of 50.

OR-70800231/232/233

 Part No.
 Description

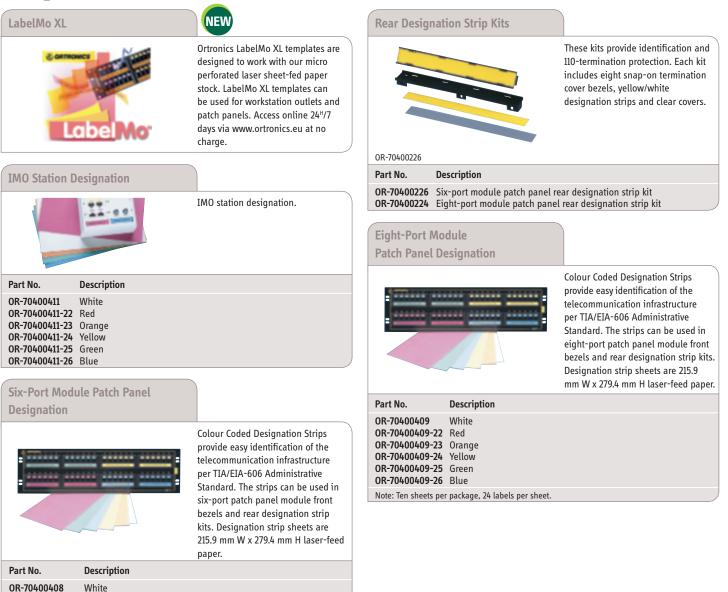
 OR-70800231
 150 mm L x 12.5 mm W

 OR-70800232
 187 mm L x 12.5 mm W

 OR-70800233
 226 mm L x 12.5 mm W



Designation



 OR-70400408-22
 Red

 OR-70400408-23
 Orange

 OR-70400408-24
 Yellow

 OR-70400408-25
 Green

 OR-70400408-26
 Blue

Note: Ten sheets per package, 48 labels per sheet.

Designation (contd.)

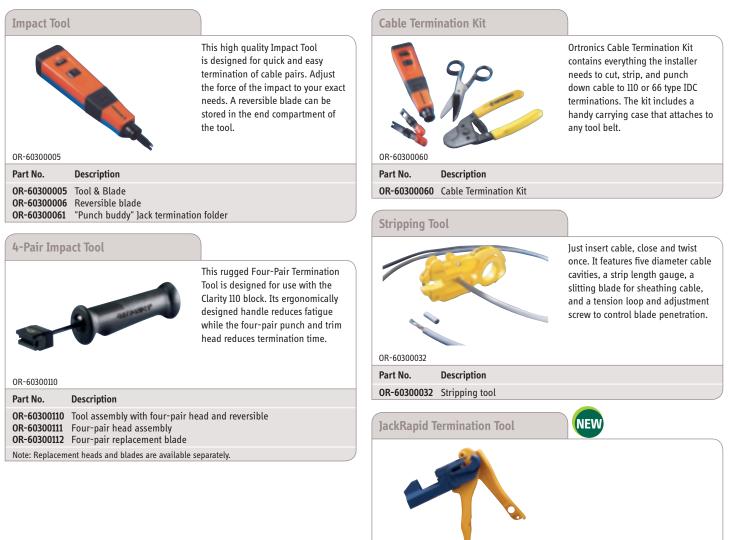


 OR-20328154
 "Voice" icon grey

 OR-20328155
 "Data" icon grey

 OR-20328156
 Blank icon grey

Tools



OR-3093721 Part No.

OR-3093721 JR-ORT-2

OR-3093774 JR-ORT-2-H

Model Name

Description

OR-3057463 JR-ERGOHANDLE JackRapid Ergonomic Handle

JackRapid Termination Tool (for Ortronics TJ5E00, TJ600, TJ610)

JackRapid replacement blade head (for Ortronics TJ5E00, TJ600,TJ610)

Technical Pages

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TIA/EIA-568-B Standard Summary

Ortronics Participation in Standards

actively participates in the development of (United States Technical Advisory Group) working telecommunications standards. Ortronics is also a group, which is responsible for setting the US member of the Fibre Optic LAN Section (FOLS), which position in the International Standards Organisation is a group within TIA promoting and advancing the use of fibre in Enterprise systems.

Ortronics is a member of EIA/TIA and Ortronics is also a member of the US TAG (ISO).

Ortronics is a corporate member of BICSI (Building Industry Consulting Service International) and requires that all training personnel must have or be working to obtain their RCDD (Registered Communications Distribution Designer) status through the BICSI Certification Program.

ANSI/TIA/EIA-568-B Summary

> Purpose

The purpose of this standard is to define a generic telecommunications wiring system for commercial buildings that will support a multi-product, multivendor environment; as well as providing direction for the design of telecommunication products for commercial enterprises and to enable the planning and installation of building wiring with limited knowledge of the telecommunication products that will be installed.

> Scope

specifies This standard the minimum requirements for the telecommunication wiring within a commercial building and between buildings in a campus environment.

It recommends the topology and distances, specifies the type of cable media, which determines performance and the requirements for the workstation outlets; including type of connectors and pin assignments to insure interconnectability.

> Elements of Telecommunication Wiring System Structure

- Horizontal wiring
- Backbone wiring
- Work Area (WA)
- Equipment Room
- Entrance Facilities
- Telecommunications Room (TR)
- Administration

> Horizontal Wiring System Structure

The horizontal wiring system is based on a star topology that extends from each individual workstation outlet to the telecommunications room. It includes the mechanical termination of the outlets, the horizontal cables, and cross connections located in the telecommunications room.

> Horizontal Distance Requirements

The maximum distance for the horizontal cable is 90 metres (295 ft) from the telecommunications room to the telecommunications outlet/connector. regardless of media type. A total of 10 metres (32.8 ft) (5 metres in the TR and 5 metres in the

WA) is allowed for the work area cables, patch cables, jumper cords and equipment cables in the telecommunications rooms.

> Recognised Cables for Horizontal Wiring

- Four pair, 100 Ω unshielded twisted pair cable (UTP or ScTP)
- 2 strand 62.5/125 micron fibre optic cable
- 2 strand 50/125 micron fibre optic cable
- A horizontal system should operate regardless the application.

Conductor identification	Colour code	Abbreviation
Pair 1	White-Blue Blue	(W-BL) (BL)
Pair 2	White-Orange Orange	(W-O) (O)
Pair 3	White-Green Green	(W-G) (G)
Pair 4	White-Brown Brown	(W-BR) (BR)

> Backbone Wiring System Structure

The function of the backbone cable is to provide interconnections between telecommunications closets, equipment rooms, and entrance facilities in the telecommunications cabling system structure. Backbone cabling consists of the backbone cables, main and intermediate cross connects, mechanical terminations, and patch cords or jumpers used for backbone-to-backbone cross connection. Backbones between buildings are called interbuilding backbones. Backbones within the same building are called intrabuilding backbones.

> Recognised Cables for Backbone Wiring

- Four pair, 100 Ω twisted pair cable (UTP or ScTP)
- Multiple pair 24 AWG, 100 Ω UTP (solid Category 3.4 or 5)
- multimode Multiple-strand, 50/125um or 62.5/125µm optical fibre cable terminated with the SC or small form factor connector for new installs
- Multiple-strand 9/125µm single-mode optical fibre terminated with the SC or small form factor connectors for new installs

The backbone cable(s) shall use a star topology. There shall be no more than two hierarchical levels of cross-connects in the backbone cabling. Maximum backbone distances are applications dependent.

> Work Area

A minimum of two telecommunications outlets/ connectors shall be provided for each individual work area. One telecommunications outlet/ connector may be associated with voice and the other with data.

One telecommunication outlet/ connector shall be supported by:

• Four pair 100 Ω UTP or ScTP cable (Category 5e or higher performance)

The other telecommunications outlet/connector shall be supported by a minimum of one of the following horizontal media. This media choice should be based on present and projected needs.

- Four pair 100 Ω UTP or ScTP cable (Category 5e or higher performance)
- Two strands of multimode optical fibre, 62.5/125 µm or 50/125 µm.

> Telecommunications Room

A telecommunications room is an enclosed space for housing telecommunications equipment, cable terminations and cross-connect wiring. The room is the recognised transition point between the backbone and horizontal facilities.

> Equipment Room

An equipment room is an area within a building where telecommunications systems are housed. The distinction between the telecommunications room and equipment room is the nature or complexity of the equipment they contain.

> Entrance Facilities

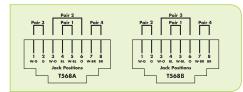
The entrance facility is an entrance to a building for both public and private network service cables, including the entrance point at the building wall and continuing to the entrance room or space.

TIA/EIA-568-B Standard Summary

Ortronics Participation in Standards

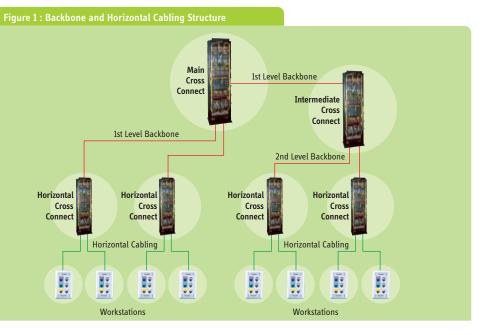
> UTP Wiring Schemes

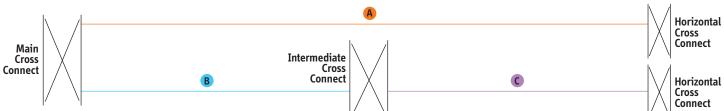
Each 4 pair cable must be terminated in an 8-position modular jack at the work area. Two wiring schemes are acceptable, T568A and T568B. Modular Jack Wiring (front view)



> Patch Cable and Cross Connect Jumpers:

Cables used for patch cords and cross connect jumpers shall meet the performance and mechanical requirements of the TIA/EIA-568-B Wiring Standard (Section 10). To assure adequate flex life, it is strongly recommended that UTP patch cords have stranded conductors.





Backbone Cable: Figure 2 - Maximum Distances/Data Applications					
Media Type	А	В	С		
Category 3, 4 or 5 UTP	90m (295 ft)				
62.5 or 50/125 µm Optical Fibre	2000m (6560 ft)	1700m (5575 ft)	300m (984 ft)		
Single-mode Optical Fibre	3000m (9840 ft)	2700m (8855 ft)	300m (984 ft)		

Backbone Cable: Figure 2 - Maximum Distances/Voice Applications					
Media Type A B C					
Category 3, 4 or 5 UTP	800m (2624 ft)	500m (1640 ft)	300m (984 ft)		
62.5 or 50/125 μm Optical Fibre 2000m (6560 ft) 1700m (5575 ft) 300m (984 ft					
Single-mode Optical Fibre 3000m (9840 ft) 2700m (8855 ft) 300m					

Twisted Pair Cable and Associated Connecting Hardware Categories

Twisted Pair Cable and Associated Connecting Hardware Categories

> Category 3

- Network systems that require up to 16MHz of Network systems that require up to 100 MHz of Network systems that require up to 250 MHz bandwidth
- 1-16 MHz
- · Return Loss not specified
- Not recommended for new installations

> Category 5e/Class D

- bandwidth
- EIA specifications for bandwidth are from EIA specifications for bandwidth are from 1-100 MHz
 - Additional Specifications: Far-end Crosstalk, Power Summations, Delay Skew, Propagation delay

> Category 6/Class E

- TIA/EIA specifications for link and channel bandwidth are from 1-200 MHz
- TIA/EIA performance specifications for components are characterised from 1-250 MHz
- Additional Specifications: Far-end Crosstalk, Power Summations, Delay Skew, Propagation Delay, ELFEXT

Mains Twisted Pair Application Standards							
Application (protocol)	Standard	Common name	Nominal data rate (Mbps)	Specified cable	Encoding scheme	Number of active pairs	ACR @ carrier freq. (dB)
Ethernet							
10Base-T	IEEE 802.3	Ethernet	10	UTP	Manchester	2	11.5
100Base-TX	IEEE 802.3u	Fast Ethernet	100	UTP	4B5B/NRZI/MLT3	2	3.1
100Base-T4	IEEE 802.3u	Fast Ethernet	100	UTP	8B6T	4	12.5
1000Base-T	IEEE 802.3ab	Gigabit Ethernet	1000	UTP	PAM5	2 or 4	3.1
ATM							
ATM25	ITU-T/ATM Forum	ATM	25	UTP	NRZ	2	4.4
ATM-155	ITU-T/ATM Forum	ATM	155	UTP	NRZ	2	3.1

TIA/EIA-568-B.2-1 Standard Summary

Transmission Performance of UTP Cabling Systems

Two test configurations are defined, the permanent > TIA/EIA TSB-67 Test Configuration: permanent Link link and the channel.

> Permanent Link

The permanent link is intended to be used to verify the performance of the permanently installed cabling. The permanent link includes:

- Up to 90 metres of horizontal cabling
- A horizontal Cross Connect

• A telecommunications outlet/connector

* Note: Permanent link has replaced basic link, which included up to 2 metres of test equipment cord at the horizontal crossconnect in the closet and up to 2 metres of test equipment cord at the telecommunications outlet/ in the work area. The permanent link does not include either of these cords.

> Channel

The channel is intended to be used to verify the performance of the overall channel.

The channel includes:

- Up to 90 metres of horizontal cabling
- A horizontal Cross Connect (patch cords up to 5 metres)*
- A telecommunications outlet/connector
- A work area equipment cord (equipment cord up to 5 metres)*
- * The total length of equipment cords, patch cords, and jumpers shall not exceed 10 metres.

> Tester Requirements for channels or links:

Test equipment should have the proper level of accuracy to be of use.

- Category 5e requires the use of a Level IIe tester
- Category 6 requires the use of a Level III tester

> Required field tests:

• Wi	ire	Мар
------	-----	-----

- Length
- Insertion Loss
- Return Loss
- NEXT
- PSNEXT
- PSELFEXT
 Propagation Delay
 Delay Skew

• FEXT

PSFEXT

ELFEXT

> Wire Map

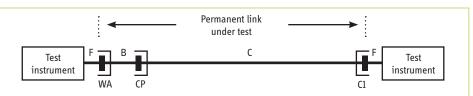
The wire map test is used to verify pair to pin termination at each end and to check for installation connectivity errors.

> Length

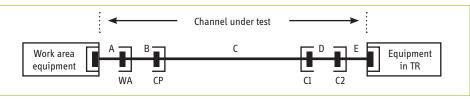
Calibration of the NVP (Nominal Velocity of Propagation) is critical to the accuracy of field tester length measurements. The maximum physical length of the permanent link shall be 90 metres. The maximum physical length of the channel shall be 100 metres.

> Insertion Loss (formerly Attenuation)

The insertion loss test measures signal loss in the permanent link or channel.



> TIA/EIA TSB-67 Test Configuration: The Channel



> Cables and cords

Work area cord	А
Option transition cabling	В
Horizontal cabling	С
Patch cord or jumper cable	D
Telecommunication room	
equipment cord	Е
Test equipment cord	F

> Return Loss

Return Loss is essentially an echo caused when the outbound signal encounters a change in resistance or impedance. It is best summarized by imagining water moving down a pipe that is one inch in diameter which is attached to a pipe that has a diameter of only half an inch. As the water encounters the smaller pipe some will be reflected backwards. That reflection, or echo, may travel back to the transmitting end of the cable as noise. Return Loss measurements are critical for verifying that a link or channel will support a new, high speed LAN system such as Gigabit Ethernet because the transmitters are operating in full duplex mode-transmitting and receiving simultaneously. Therefore, a signal reflection or echo will appear to be a received signal and cause bit-errors, which results in re-transmissions which slows the data speed considerably.

> Connecting hardware

Telecommunications outlet/	
connector	WA
Optional transition/consolidation	
point connector	CP
Horizontal cross-connect or	
interconnect	C1, C2

> NEXT

Crosstalk is unwanted noise in a cabling circuit. Crosstalk gets worse as the frequency increases. Cable construction, hardware construction and installation affect NEXT. Crosstalk is expressed in dB with a higher NEXT loss value considered to be better than a lower reading. Near-End Crosstalk loss (NEXT) is a measure of signal coupling from one pair to another within a UTP cabling link. It is measured at the near (transmitting) end. A balanced signal is applied to a disturbing pair at the near end of the link and the remaining pairs are checked for crosstalk from that disturbing pair.

With pair-to-pair NEXT testing, all pair combinations are tested, and the worst case values are reported. (In a 4-pair cable, six combinations must be tested. Pr1 to Pr2, Pr1 to Pr3, Pr1 to Pr4, Pr2 to Pr3, Pr2 to Pr4, and Pr3 to Pr4.)

Annex C - Link Test Diagnostic Information			
Measurement Result	Possible Cause		
NEXT 'Fail'	Near end connector termination problem. Short cable with far end connection termination problem. Split pair. External noise sources. Link component performance problem/non-category component		
Attenuation 'Fail'	Excessive length. High temperature. Connection termination problem. Link component performance problem/non-category component		
Wire Map 'Fail'	Transposed pairs. Split pairs (NEXT will be high on these pairs) Pair swap or other miswiring. Opens. Shorts		
Length 'Fail'	Incorrect setting of NVP. Actual excessive length. Opens. Shorts		
Return Loss 'Fail'	Impedance mismatch between components of the channel, untwisting at connector, connection too close, asymetric twisting, high resistance contact, or poor cable or connector design		
Troubleshooting Information for Diagnostic Failures.			

Test Parameters for Cat. 5e and Cat. 6

Additional Test Parameters for Category 5e and Category 6

The continued development of high speed > PSELFEXT applications has resulted in the need for improved transmission performance and higher categories of twisted pair cabling. Category 5e and Category 6 have been developed to address these requirements and specify additional test parameters that were not part of the now obsolete Category 5.

> PSNEXT

Power sum NEXT testing was developed for 25pair binder group backbone cables. In a multipair cable, any given pair receives crosstalk interference from other energized pairs sharing the same sheath (jacket). The total crosstalk energy a pair receives is specified as power sum crosstalk. The power sum test is part test and part calculation. The first pair is energized and checked against all other pairs in the cable. This data is used to create a sum that equals numbers relative to all pair combinations. The power sum test is now to be used in verifying horizontal cabling components and links along with pair-topair testing.

> ELFEXT

Equal Level Far-End Crosstalk is a measure of the unwanted signal coupling from a transmitter at the near-end into a neighbouring pair measured at the far-end relative to the received signal level measured on that same pair. Crosstalk is a major source of signal loss in four pair cabling systems. A signal from one pair is coupled onto adjacent pairs and is difficult for the receiver to separate from the intended data signal. TIA/EIA-568-B requires the measurement of the amount of noise received at the near end of each pair when a signal was inserted at the near end. Also measured is the amount of signal received at the far end of an adjacent pair when the signal is inserted at the near end. This measurement is call FEXT. Attenuation causes a signal to weaken as it travels through the length of a cable so a longer channel will always show less FEXT than a shorter channel. To determine the ability of a channel to provide sufficient FEXT rejection, the attenuation is added to the measurement and each circuit will be measured at an equal level. Thus the name: Equal Level Far-End Crosstalk.

Power Sum Equal Level Far-End Crosstalk is a computation of the unwanted signal coupling from multiple transmitters at the near-end into a pair measured at the far-end relative to the received signal level on that same pair.

> FEXT

Far-end Crosstalk is a measure of the unwanted signal coupling from a transmitter at the near-end into a neighbouring pair measured at the far-end.

Propagation Delay

We know that electricity travels, or propagates, at the speed of light, 186,000 miles per second. When the signals are transmitted through copper cabling at high frequencies (above 20 MHz) then a certain amount of delay is experienced. TIA/EIA-568-B specifies that the propagation delay for a basic link will not exceed 518 nanoseconds and a channel will exceed 555 nanoseconds for ethernet.

Delay Skew

Newer protocols such a Gigabit Ethernet will make more extensive use of the capabilities of cable by utilising all four pairs to transmit and receive at the same time. These systems break the information into four parts and use one cable pair to carry each part. A four pair cable can be visualised as a four pipeline system. For these new high speed networks, other parameters like propagation time will be very important as it will be impossible to break the information into four parts and reassemble it at the other end if some of the parts arrive at different times. These time differences are known as delay skew. The Maximum delay skew between pairs in a basic link must be less than 45 nanoseconds and less than 50 nanoseconds for a channel.

TIA/EIA-568-B.1 Standard Summary

Additional Horizontal Cabling Practices for Open Offices

Because an open office floor plan using modular furniture has become so common, TIA incorporated optional connection schemes and topologies that are easily changed when portions of the horizontal cabling and pathways supported by office furniture or movable partitions are frequently reconfigured. These are optional practices for horizontal cabling in open office environments. These architectures simplify adds, moves, and changes when spaces are frequently rearranged. There are two main architectural variations.

> Multi User Telecommunication Outlet Assembly (MUTOA)

The MUTOA performs the same function as an outlet, but is intended to serve up to 12 work areas. Their use allows the horizontal cabling to remain intact each time the open office plan is changed.

> MUTOA Guidelines

- The MUTOA shall be located in an accessible area, not in ceilings or floors.
- The MUTOA shall be located on permanent building structures or on furniture that is permanently secured to the building structure.
- The MUTOA shall serve up to 12 work areas.
- Space capacity should be considered when sizing the MUTOA.
- The MUTOA shall not be used with a CP in the same horizontal channel.
- Administration should follow the TIA/EIA-606-A standard.
- · Each work area cable shall be labelled on both ends with a unique cable identifier.
- The cable end at the MUTOA shall be identified with the work area served, and the work area end shall be identified with the associated MUTOA and port.

> Consolidation Point (CP)

The Consolidation Point separates the horizontal cable into two pieces. This allows a change to the cabling by changing the smaller piece of horizontal cable near the work station end without having to re-pull the whole horizontal

cable. Each horizontal cable run from the telecommunications closet terminates in an IDC interconnect, where it is interconnected with a second, smaller piece of solid UTP. The total length of both pieces of the horizontal cable must not exceed 90 metres. The work area cables are then terminated to a telecommunications outlet.

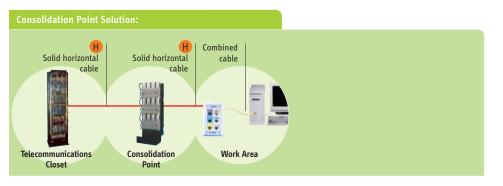
> Consolidation Point Guidelines

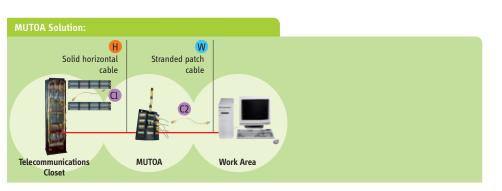
- Cross connections are not allowed in the CP.
- No more than one CP is allowed in any horizontal link.
- · Consolidation points and MUTOAS cannot be combined in any single horizontal link.

- The Consolidation Point must be at least termination hardware) that provide the basic 15 metres (49 feet) from the telecommunications closet.
- The CP shall be in an accessible area.
- The CP shall be located on permanent building structures or on furniture that is permanently secured to the building structure.
- Administration should follow the TIA/EIA-606-A standard.

> Administration

buildings Modern require effective an telecommunications infrastructure to support the wide variety of services that rely on the transport of electronic information. This infrastructure can be thought of as the collection those components (telecommunications of spaces, cable pathways, grounding, wiring and support for the distribution of all information within a building or campus. Administration of the telecommunications infrastructure include documentation (labels, records, drawings, reports, and work orders) of cables, termination hardware, patching and Cross Connect facilities, conduits, and other path-ways, telecommunications closets, and other telecommunications spaces. TIA/EIA-606-A Administration Standard for the telecommunications infrastructure of commercial buildings sets the guidelines for administration of the telecommunications wiring system. The most important factor with administration is that an agreed upon labelling scheme is used consistently, it is documented, and all labels are permanent (not hand printed).





Maximum MUTUA Horizontal Distances				
Horizontal Cable Max. Length				
н				
90 metres/295 feet				
85 metres/295 feet				
80 metres/295 feet				
75 metres/295 feet				
70 metres/295 feet				
H 90 metres/295 feet 85 metres/295 feet 80 metres/295 feet 75 metres/295 feet				

ISO 11801 (ed 2) Standard Summary

ISO 11801 ed 2 Generic Cabling for Customer Premises Standard Summary

The ISO 11801 ed 2 standard specifies minimum requirements for telecommunications cabling within a commercial building, up to and including the telecommunications outlet/connector, and between buildings in a campus environment. It specifies component requirements, cabling distances, telecommunications outlet/connector configurations, and a recommended topology.

> Telecommunications Cabling System Structure

The elements of the telecommunications cabling system structure are:

- Campus Distributor
- Campus Backbone Cable
- Building Distributor
- Building Backbone Cable
- Floor Distributor
- Horizontal Cable
- Consolidation Point (optional)
- Telecommunications Outlet

> Cabling Subsystems

Generic cabling contains three cabling subsystems: horizontal, building backbone, and campus backbone cabling.

> Horizontal Cabling

The horizontal cabling is the portion of the telecommunications cabling system that extends from the work area telecommunications outlet (TO) to the floor distributor (FD) in the telecommunications closet. The horizontal cabling uses a star physical topology. The maximum horizontal distance shall be 90 metres regardless of media type.

Recognized cables

Preferred:

- 100 Ω balanced cables
- \bullet 62.5/125 μm multimode optical fibre cables

Alternative

+ 50/125 μm multimode optical fibre cables

> Telecommunications Outlet/Connectors

A minimum of 2 telecommunications outlet/ connectors shall be provided for each individual work area.

They shall be configured as:

- 1. One outlet connector shall be supported by a 100 Ω balanced cable, Category 5e/Class D or higher.
- 2. The other shall be supported by either: • 100 Ω Category 5e/Class D cable
 - 62.5/125 μm or 50/125 μm multimode fibre cable.

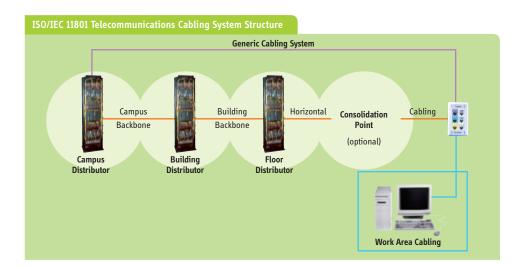
> Backbone Cabling

The building backbone cabling subsystem extends from the floor distributor (FD) to the building distributor (BD). The campus backbone cabling subsystem extends from the BD to the campus distributor (CD).

The function of the backbone cabling is to provide interconnections between telecommunications rooms, equipment rooms, and entrance facilities in the telecommunications cabling system structure, within or between buildings. The backbone cabling uses a star topology.

> Recognized Backbone Cables:

- 100 Ω balanced cable
- 62.5/125 µm multimode optical fibre cable
- 50/125 µm multimode optical fibre cable
- Single-mode optical fibre cable



IEEE Approves 10GBASE-T Standard

On June 8, 2006, IEEE approved the much anticipated IEEE-802.3an standard, 10GBASE-T, popularly referred to as 10Gigabit Ethernet over twisted pair. This standard provides transmission of 10 Gigabits per second throughput using Ethernet frames over Twisted Pair. 10Gigabit per second Ethernet transmission has been available over fibre for about three years, under IEEE-802.3ae. This has led to the wide expectation of 10GBASE-T electronics entering the market soon and the likely wide acceptance and deployment by the end-user community. This should also further spur TIA to complete development of a standard for Category 6a UTP cabling to support these electronics.

> Twisted Pair Cabling for 10GBASE-T Development Continues

The most-watched current TIA project is developing standards for balanced line twisted pair transmission media to support 10 Gigabit Ethernet. The development is along three lines:

1. Augmented Category 6, also called Category 6a. The objective is to develop a standard for higher performance Cat 6a UTP that will carry 10 Gig-Ethernet the full 100 metre channel. This project is now in Draft 5.

This work will be based on new testing parameters (Power-Sum Alien NEXT, or PSANEXT, and Power-Sum Alien Equal Level FEXT, or PSAELFEXT that measure cross-talk between cables not just within individual cables; and transverse conversion loss, TCL, and transverse conversion transfer loss, TCTL, that measure how well balanced the pairs in a cable are). The results of this work will be published as Addendum 10 to the TIA/EIA-568-B.2 standard. Products are on the market from several manufacturers, including Ortronics, but performance claims are confusing and difficult for end users to evaluate since there is not yet a standard.

ANSI/TIA/EIA-568-B.2-10 is not expected to be completed until 1Q-2Q 2007.

2. Legacy Category 6.

Field testing is being developed to qualify existing installations of Cat 6 to carry 10 Gig-Ethernet. This legacy Cat 6 will support 10 Gig-Ethernet signals, but not for the full 100 metre channel. The target has been 55 metres, but some in the industry feel this may be optimistic. Discussion at the February 1, 2006, TIA meeting in Palm Springs suggests addressing different lengths of existing permanent links as follows:

• Links < 33 metres: probably will work without further testing or mitigation

- Links 33 to 55 metres: may work but should be tested (methods to be developed) and may require mitigation practices, such as:
 - Unbundling horizontal cables
 - Using non-adjacent patch panel ports,
 - Upgrading to Cat 6a patch cords
 - Upgrading to Cat 6a patch panels and/or outlets
 - Changing cross-connects to interconnects
 - Reducing pathway fill
- Links > 55 metres: probably won't work without one or more of the above mitigation practices (and maybe not even then).

When complete (probably 1Q-2Q 2007), this work will be published as TSB-155, an informational bulletin rather than part of the main TIA-568 standard.

3. FTP Category 6.

The third approach is to use existing Cat 6 standard cable with a foil shield. The existing TIA/EIA-568-B.2 standard for FTP provides ample performance to carry 10 Gig-Ethernet 100 metres since the shield provides much improved alien crosstalk performance over Cat 6 UTP. These products are more mature than Cat 6a UTP, having been on the market for four or five years.

One of the challenges TIA faces in developing the standard is specifying a method of testing for alien crosstalk.

For component testing at the factory, two methods are currently under development. First is the "6 around 1" method which is the most rigorous approach since cables are held firmly together for extended distances. Second is the "real world" model in which cables are more loosely held together in conduit. The second model makes performance numbers easier to achieve, but is less consistent. Most expect that the "6 around 1" method will be adopted. For field testing of alien crosstalk, tester manufacturers have also developed two methods. Fluke uses the existing DTX1800 with additional modules and a synchronisation cable between the main and remote testers. One unit injects a disturbing signal into a cable run, and the other unit measures the alien crosstalk in the adjacent victim cable. The disturber is then moved to five other nearby cables, in turn, and then an algorithm calculates the total impact on the victim cable. Fluke has prototypes in laboratories around the industry (including ours). Agilent is developing a method using six small disturber units plugged into different cable runs, and a main unit, such as a WireScope, to measure the impact on the victim cable. Agilent has not yet delivered a prototype for trials. Because of the mathematical impracticality of testing every combination of seven cables in

an actual installation, most expect this testing to be optional in the standard, and that the final recommended procedure will be for sampling of likely trouble spots (such as very long runs), rather than certification of every permanent link or channel. Because of the complexity (and therefore expense) of testing for alien crosstalk in the field, some predict that most users will choose to rely on factory testing.

IEEE Approves 10GBASE-T Standard

ANSI/TIA/EIA-568-B Commercial Building Cabling

In addition to the Cat 6a project, the TIA TR-42 committee is working on the C revision of the 568 standard which will probably not be published until late 2007. This will wrap the roughly twenty addenda to the three sections of the B revision into a new standard. In addition, a new "C.O" standard called "Generic Cabling" will cover both commercial building and residential cabling systems (and in the future probably others, such as industrial cabling). TIA-568-C.1 will follow from the current TIA-568-B.1, specifically covering commercial building cabling. As with the current B revision, C.2 will contain component performance requirements for copper products and C.3 will contain component performance requirements for fibre products.

The committee has published TSB-140, an informative Addendum 7 of 568-B.1 has been developed to bulletin to clarify field test procedures for optical fibre using optical loss test sets, OLTS, and optical time domain reflectometres, OTDR. This bulletin includes testing for polarity. The intent for this work is to upgrade the level of understanding and practices in fibre testing, since these test procedures are poorly understood by most technicians.

The committee has also published TSB-153 which address the possibility and characteristics of Electro-Static Discharge from cabling which might damage electronics when connected. This bulletin suggests procedures to prevent this damage.

recommend specific methods of maintaining polarity with array connectors (i.e., MTP®/MPO) as used in cassette-based systems such as the Momentum® product line used in Data Centres and SANs. In prior drafts of Addendum 7, four connectivity methods of maintaining polarity were described. The final draft narrowed this to two methods, a move supported by Ortronics. The committee has approved this Addendum and it is now available from Global Documents.

ANSI/TIA-942 Data Centre Cabling

This new "Telecommunications Infrastructure Standard for Data Centres", TIA-942, has now been published and is available from Global Documents. The high density and mission critical nature of data centres creates demands on cabling beyond specifications provided in TIA/EIA-568-B. This new standard specifies cabling requirements for data centres and computer rooms, both for single-tenant installations and multi-tenant hosting data centres. The standard is designed to be scalable to any size installation.

ANSI/IEEE-802.3af Power over Ethernet

This standard was approved 6/12/2003 and specifies methods of providing power to Data Terminal Equipment, DTE, over four pair balanced line cabling. The standard provides for power to be injected from the end-point piece of equipment, such as an Ethernet switch, or in the mid-span, generally by a PoE equipped patch panel or a standalone device between the switch and the patch panel. The power is 48v DC and is provided on two pairs, either pins 1, 2, 3, and 6, or on pins 4, 5, 7, and 8, in either polarity. Up to 15.4 watts is injected and 12.95 watts is available to the powered device. The device injecting the power monitors each line as it applies a low voltage, 2.7v to 10.1v. When it detects a signature resistance of 25 ohms, indicating that the powered device needs power, the voltage and current are increased. This prevents damage to equipment that is not PoE compatible.

There is currently an issue with certification testing of cabling that includes PoE equipped patch panels. To protect non-PoE Ethernet switches from potential damage, these panels have capacitors to block the flow of the 48v DC back along the patch cords to the switch. Standard industry certification testers use DC signals to perform wiremap tests. Since the capacitors block DC current, these panels will always show wiremap failures. Tester manufacturers are currently working on this problem.

The major market driver for this standard is the rapid expansion in the adoption of wireless Local Area Networks, WLANs, and of Voice over Internet Protocol, VoIP, premise telephone systems.

Being able to power wireless Access Points and VoIP telephones over the same four pair cable that provides communication connectivity, instead of providing 120v AC at the device, gives many benefits. Wireless APs are often installed where no separate power is available, requiring additional expensive electrical cabling. Powering devices from the Telcom Room, TR, allows a central Uninterruptible Power Supply, UPS, to provide reliable conditioned power. In addition to WLANs and VoIP, many other applications that rely on PoE have entered the market.

A new project, PoE Plus, is exploring the possibility of increasing power to 30 watts over two pairs and 50-60 watts over all four pairs. One issue being addressed by the committee is the heat generated in the cable by this additional power.

European Standards

Design Standards

> Current published documents

- EN 50173-1:2002: Information technology -Generic Cabling Systems - General requirements and office areas
- > Significant changes are taking place within the next six months to produce the following:
- EN 50173-1 Ed.2:2006 (in preparation): Information technology – Generic Cabling
- Systems General requirements - EN 50173-2:2006 (in preparation): Information
- technology Generic Cabling Systems Office premises
- EN 50173-3:2007 (in preparation): Information

technology - Generic Cabling Systems - Industrial premises

- EN 50173-4:2006 (in preparation): Information technology - Generic Cabling Systems - Homes
- EN 50173-5:2006 (in preparation): Information technology - Generic Cabling Systems - Data Centres

Installation Standards

- > Current published documents
- EN 50174-1:2000: Information technology -
- Cabling installation Part 1: Specification and quality assurance
- EN 50174-2:2000: Information technology -Cabling installation - Part 2: Installation
- planning and practices inside buildings - EN 50174-3:2003: Information technology -
- Cabling installation Part 3: Installation planning and practices outside buildings
- > Significant changes are taking place within the next six months to produce the following:
- EN 50174-1 Ed.2:2007 (in preparation): Information technology – Cabling Installation -
- Part 1: Specification and quality assurance - EN 50174-2 Ed.2:2007 (in preparation): Information technology – Cabling Installation – Part 2: Installation planning and practices inside buildings

Commissioning Standards

 EN 50346:2002: Information technology -Testing of installed cabling - EN 50346 A.1: 2007 (in preparation): Information technology -Testing of installed cabling

Acronyms and Symbols

ANSI	American National Standards Institute	I
AO	Apex Offset	I
ASTM	American Society for Testing and Materials	I
ATM	Asynchronous Transfer Mode	I
AWG	American Wire Gauge	
BICSI	Building Industry Consulting Service International	K K
CAD		K
CCIA	Computer Aided Design Computer and	
	Communications Industry Association	u
CFM	Cubic Feet per Minute	L
СО	Central Office	L
СРС	Customer Premises Communication	
CPE	Customer Premises Equipment	
CSA	Canadian Standards Association	L.
CSMA/CD	Carrier Sense Multiple Access with Collision Detection	L
dB	Decibel	Ν
DB-9	A D-Type Connector With 9 Pins	٨
DB-15	A D-Type Connector With 15 Pins	
DB-25	A D-Type Connector With 25 Pins	N N
DB-50	A D-Type Connector With 50 Pins	٨
DUT	Device Under Test	Ν
EIA	Electronic Industries Association	N
ELFEXT	Equal Level Far-End Crosstalk	Ň
EMI	Electromagnetic Interference	N
FCC	Federal Communications Commission	N
FEXT	Far-End Crosstalk	N
FDDI	Fibre Distributed Data Interface	N
FDM	Frequency Division Multiplexing	N
FDX	Full Duplex	0
FOIRL	Fibre Optic Inter-Repeater Link	
FOTP	Fibre Optic Test Procedures	0
FOTS	Fibre Optic Transmission System	P
FTTD	Fibre To The Desk	P
FTTH	Fibre To The Home	P
FUP	Fibre Undercut/Protrusion	P
НС	Horizontal Cross Connect	P
HDX	Half Duplex	P
HVAC	Heating, Ventilation, and Air Conditioning	P
Hz	Hertz	P
IC	Intermediate Cross Connect	
IDC	Insulation Displacement Connector	P
IEC	Interconnect Electro-Technical Committee	R

IEEE	Institute of Electrical and
	Electronic Engineers
IL	Insertion Loss
ISDN	Integrated Services Digital
	Network
ISO	International Standardisation
Khan a	Organisation
Kbps	Kilobits per second
KHz	Kilohertz (1000 Hertz)
KPSI	A unit of tensile strength
	expressed in thousands of Pounds per Square Inch
lbf	Pound Force
LAN	Local Area Network
LASER	Light Amplification By
LAJEN	Stimulated Emission Of
	Radiation. A device which
	produces coherent light with a
150	narrow range of wavelengths.
LED	Light Emitting Diode
LLDPE	Linear Low Density Polyethylene,
	usually cable jacketing
MAP	Manufacturing Automation
	Protocol
MAU	Medium Attachment Unit
	(Ethernet) Multistation Access
Mhaa	Unit (Token Ring)
Mbps	Megabits per Second
MC	Main Cross-Connect
MDPE	Medium Density Polyethylene, usually cable jacketing
MHz	Megahertz
MIC	Media Interface Connector
MM]	Modified Modular Jack
MUX	Multiplexer
NEC	National Electrical Code
NEMA	National Electrical
	Manufacturers Association
NIC	Network Interface Card
NEXT	Near End Crosstalk
NVP	Nominal Velocity of
	Propagation
OFNP	Optical Fibre Non-metalic
	Plenum-rated
OFNR	Optical Fibre Non-metalic Riser-rated
PAM	Pulse Amplitude Modulation
PBX	
РСМ	Private Branch Exchange Pulse Coded Modulation
PE	
PoE	Polyethylene Power over Ethernet
PSELFEXT	Powersum Equal Level Far-End Crosstalk
PSNEXT	Powersum Near-End Crosstalk
PTSS	Passive Transmission
а а	Subsystem
PUR	Polyurethane
PVC	Polyvinyl Chloride
RF	Radio Frequency
R of C	Radius of Curvature

RI	Ring In
RO	Ring Out
SAN	Storage Area Network
SNA	Systems Network Architecture
SOHO	Small Office/Home Office
SRL	Structural Return Loss
STP	Shielded Twisted Pair
SYNC	Synchronous
SYS	System
TBB	Telecommunications Bonding Backbone
TBBIBC	Telecommunications Bonding Backbone Interconnecting Bonding Conductor
тс	Telecommunications Closet
TDM	Time Division Multiplexing
TDR	Time Domain Reflectometre
TGB	Telecommunications Grounding
	Busbar
TIA	Telecommunications Industry Association
TMGB	Telecommunications Main Grounding Busbar
TP-PMD	Twisted Pair Physical Layer Medium Dependent
TSB	Telecommunications System Bulletin
UL	Underwriters Laboratories
UHF	Ultra High Frequency
U	Unit
UPC	Ultra Physical Contact
UPS	Uninterruptible Power Supply
UTP	Unshielded Twisted Pair
VHF	Very High Frequency
VPN	Virtual Private Network
USOC	Universal Service Order Code
1Base-5	Starlan
10Base-2	Thinnet
10Base-5	Thicknet
10Base-T	Ethernet over Twisted Pair
10Broad-36	
100Base-T	100 Mbps over Twisted Pair
1000Base-T	1000 Mbps over Twisted Pair ohm
6	Category 6 Hardware
5e	Category 5e Hardware
5	Category 5 Hardware
4	Category 4 Hardware
3	Category 3 Hardware
6P4C	6 position 4 contact
6P6C	6 position 6 contact
8P8C	8 position 8 contact
10GFC	10 Gigabit Fibre Channel
10GBASE-SR	10 Gigabit Ethernet
802	802-1x, 802.11i

Absorption - Loss of power in an optical fibre, resulting from conversion of optical power into heat and caused principally by impurities, such as transition metals and hydroxyl ions, and also by exposure to nuclear radiation.

ACR - The difference between the crosstalk attenuation and the attenuation of the link in decibels.

Active device - Any device or circuit which introduces gain or uses a source of energy other than that inherent in the signal.

Adjustable attenuator - An attenuator in which the level of attenuation is varied with an internal adjustment. Also known as Variable Attenuator.

Amplitude Modulation (AM) - A transmission technique in which the amplitude of the carrier is varied in accordance with the signal.

American Standard Code for Information Interchange - A code with seven information signals plus one parity check signal, designed for interworking between computers.

American Wire Gauge (AWG) - Standard American method of classifying wire diameter: the Brown & Sharpe (B&S) gauge.

Apex Linear Offset - For Physical Contact (PC) and Ultra Physical Contact (UPC) connectors, Apex Linear Offset is defined as the distance from the centre of the optical axis (fibre core) to the apex of the spherical dome surface of the ferrule. For Angled Physical Contact (APC) connectors, apex linear offset (a.k.a. dome offset) is defined as the distance between the ferrule centre and the vertex of the spherically polished end face relative to the angle of the reference plane. The reference plane is the theoretical plane of contact, which for APC connectors makes an angle of 8º (the theoretical angle of contact) with a plane perpendicular to the axis of the ferrule. For all physical contact singlefibre connectors (connectors containing a single fibre within the ferrule, e.g. SC, ST, LC, and FC), the ideal ferrule surface is spherical with its apex at the centre (zero apex offset). If the apex offset is too large, poor physical contact (or no physical contact at all) will be achieved between the fibre cores when the connector is mated with another connector, resulting in poor insertion loss and return loss

Architecture - The interaction between hardware and software in a computing system to achieve the most economic, efficient, secure, rapid, or easiest to maintain system.

Asynchronous Transfer Mode (ATM) - The technology selected by the CCITT to deliver broadband-ISDN services for the worldwide telecommunications network. It is a fast, packet-switched technology based on a fixed packet (or cell) size.

Attachment Unit Interface (AUI) - Branch cable interface located between a Medium Attachment Unit (MAU) and a data station.

Attenuation - The reduction in power level due to leakages, induction etc., resulting in the received signal being lower in volume than the original transmitted signal. In optical fibre systems there are other causes of attenuation, such as absorption, scattering, and losses into radiation modes. In optical fibres, it is measured in decibels per kilometre at a specified wavelength.

Attenuation-limited operation - The condition in a fibre optic link when operation is limited by the power of the received signal (rather than by bandwidth or by distortion).

Authorization – The process of establishing and enforcing the network activities that are permitted for a given user. Various users who have been authenticated may each be granted authorization for different types of network access or activities.

Backbone - A facility (e.g. cable or conductors) between telecommunications rooms, the entrance facilities, the equipment rooms with or between buildings.

Backscattering - The return of a portion of scattered light to the input end of a fibre; the scattering of light in the direction opposite to its original propagation.

Balun - Balanced/unbalanced device used when interconnecting balanced circuits with unbalanced circuits, such as coaxial feed cables with balanced antennae.

Band - 1. A range of frequencies between upper and lower limits. 2. A group of tracks on a magnetic drum or one side of a magnetic disc.

Bandwidth - The difference between the limiting frequencies of a continuous frequency band.

Bandwidth-limited operation - The condition in a fibre optic link when bandwidth, rather than received optical power, limits performance. This condition is reached when the signal becomes distorted, principally by dispersion, beyond specified limits.

Beamsplitter - An optical device, such as a partially reflecting mirror, that splits a beam of light into two or more beams and that can be used in fibre optics for directional couplers.

Bend loss - A form of increased attenuation in a fibre that results from bending a fibre around a restrictive curvature (a macrobend) or from minute distortions in the fibre (microbends).

Bend radius - Minimum radius to which a fibre or cable can be bent before breakage or excessive signal attenuation occurs.

Bit - Abbreviation for binary digit. The smallest element of information in binary system. A 1 or 0 of binary data.

Bit Error Rate (BER) - The number of erroneous bits divided by the total number of bits over a stipulated period of time. Two examples of bit error rate are: a) transmission BER-number of erroneous bits received divided by the total number of bits transmitted; and b) information BER-number of erroneous decoded (corrected) bits divided by the total number of decoded (corrected) bits. Usually expressed as a number and a power of 10, e.g., 2.5 erroneous bits out of 100,000 bits transmitted equals 2.5 in 10-5 or 2.5 x 10-5.

Bridging connection - A parallel connection through which some of the signal energy in a circuit may be withdrawn, usually with imperceptible effect on the normal operation of the circuit.

Buffer - A protective layer over the fibre, such as coating, an inner jacket or a hard tube.

Buffer coating - A protective layer, such as an acrylic polymer, applied over the fibre cladding for protective purposes.

Buffer tube - A hard plastic tube, having an inside diameter several times that of a fibre, that holds one or more fibres.

Bus network - A network topology in which all terminals are attached to a transmission medium serving as a bus.

Bus Interface Unit (BIU) - The data circuit equipment that provides physical access to the bus.

Byte - A group of eight bits makes a byte. Typically a 16 bit "word" is itself divided up into two bytes for handling. A byte is usually the smallest addressable unit of information in a data store or memory.

Cabinet, telecommunications (cabinet, T) - An enclosure used for terminating telecommunications cables, wiring and connection devices with a hinged cover, usually flush mounted in the wall.

Cable, colour-coded - Cable having colour-coded insulation on the conductors to aid identification.

Cable, optical fibre - Cable made up of glass fibres protected by plastic coverings: sometimes metallic wires are included as strength members.

Cable, paired - Cable whose conductors are made up in pairs twisted together.

Cable riser - Cable running vertically in a building to serve upper floors.

Cable, shielded - Cable with metal tape shield wrapped around the insulation conductors.

Cable attenuation - The measure of the loss in electrical strength encountered by signals sent through submarine cable. Usually expressed as a function of frequency and measured between reactance-free resistors representing the resistive component of the cable impedance at high frequencies.

Cable assembly - Fibre optic cable that has connectors installed on one or both ends. General use of these cable assemblies includes the

interconnection of multimode and single-mode fibre optical cable systems and opto-electronic equipment. If connectors are attached to only one end of the cable, it is known as a pigtail. If connectors are attached to both ends, it is known as a jumper.

Cable bend radius - Cable bend radius during installation infers that the cable is experiencing a tensile load. Free bend infers a lower allowable bend radius since it is at a condition of no load.

Cable plant - The cable plant consists of all the optical elements, for example, fibre, connectors, splices, etc. between a transmitter and a receiver.

Cable run - A length of installed media, which may include other components along its path.

Cable sheath - A covering over the optical fibre or conductor assembly that may include one or more metallic members, strength members, or jackets. Capacitance - The property of a system of conductors and dielectrics that permits the storage of electrically separated changes when potential differences exist between the conductors.

Carrier sense multiple access with collision detection - A technique used to control the transmission channel of a local area network to ensure that there is no conflict between terminals that wish to transmit.

CCITT - From the French for International Telegraph and Telephone Consultative Committee (Comité Consultatif International Téléphonique et Télégraphique). The CCITT is one of four permanent organisations of the International Telecommunication Union (the ITU). The CCITT deals with technical problems relating to telephone and telegraph services.

CDDI - Copper Data Distributed Interface is the term used for a copper cable on which a high speed 100 Mbs data is run. Sometimes called FDDI over copper cable.

Centre wavelength (Laser) - The nominal value central operation wavelength. It is the wavelength defined by a peak mode measurement where the effective optical power resides.

Centre wavelength (LED) - The average of the two wavelengths measured at the half amplitude points of the power spectrum.

Central member - The centre component of a cable. It serves as an anti-buckling element to resist temperature-induced stresses. Sometimes serves as a strength element. The central member is composed of steel, fibreglass, or glass-reinforced plastic.

Channel - A path for transmitting or receiving telecommunications signals.

Chromatic dispersion - Spreading of a light pulse caused by the difference in refractive indices at different wavelengths.

Circuit, two-wire - A circuit in which information signals in both directions are carried by the same two-wire path.

Cladding - The outer concentric layer of glass that surrounds the fibre core and has a lower index of refraction.

Cleave - The process of separating an optical fibre by a controlled fracture of the glass, for the purpose of obtaining a fibre end, which is flat, smooth, and perpendicular to the fibre axis.

Closed architecture - An architecture that is compatible only with hardware and software from a single vendor.

Coating - A material put on a fibre during the drawing process to protect it from the environment. **Coaxial cable** - A cable with one or more coaxial

pairs under one outer sheath. Communication network - An organisation of

stations capable of intercommunication, but not necessarily on the same channel.

Communications system - A collection of individual communications networks, transmission systems, relay stations, tributary stations, and terminal equipment capable of interconnection and inter-operation to form an integral whole. These individual components must serve a common purpose, be technically compatible, employ common procedures, respond to some form of control, and, in general, operate in unison.

Computer peripherals - The auxiliary devices under control of a central computer, such as card punches and readers, high speed printers, magnetic tape units, and optical character readers.

Connecting hardware - A device providing mechanical cable terminations.

Connector - A device for making connectable/ disconnectable connections of a fibre to another fibre, source, detector, or other devices.

Consolidation point - A location for the interconnection between horizontal cables that extend from building pathways and horizontal cables that extend into work areas.

Controller - A unit that controls input/output for one or more devices.

Core - The central light-carrying part of an optical fibre; it has an index of refraction higher than that of the surrounding cladding.

Coupler - A multiport device used to distribute optical power.

Cross connect - A facility for the interconnection and termination of cabling.

Crosstalk - The phenomenon in which a signal transmitted on one circuit or channel of a

transmission system creates an undesired effect or interference in another circuit or channel.

Daisy chain - A method of sending data signals along a bus. Any devices which do not need the signal pass it on until it reaches the device which does want it, this device then breaks the daisychained signal continuity.

Data communication - The movement of encoded information by means of electric transmission systems via one or more data links according to a protocol.

Data connection - The interconnection of a number of data circuits on a tandem basis by means of switching equipment to enable data transmission to take place between data terminal equipment. (a) Where one or more of the data circuits which are interconnected is a virtual data circuit, the overall connection is known as a virtual data connection. (b) The overall connection includes the data circuit terminating equipment at the respective data terminal installation locations.

Data concentrator - A unit that permits a common transmission medium to serve more data sources than there are channels currently available.

Data Terminal Equipment (DTE) - Equipment/ digital end instruments that convert user information into data signals for transmission, or reconvert the received data signals into user information.

Data transmission - The sending of data from one place to another by means of signals over a channel.

dBm - Decibel referenced to a milliwatt.

dBµ - Decibel referenced to a microwatt.

Decibel - A standard logarithmic unit for the ratio of two powers, voltages or currents. In fibre optics, the ratio is power.

Demarcation point - A point where the operational control or ownership changes.

Dielectric - Nonmetallic and, therefore, nonconductive. Glass fibres are considered dielectric. A dielectric cable contains no metallic components.

Digital signal - 1. A nominally discontinuous electrical signal that changes from one state to another in discrete steps. 2. A signal that is timewise discontinuous i.e., discrete, and can assume a limited set of values.

Dispersion - A general term for those phenomena that cause a broadening or spreading of light as it propagates through an optical fibre. The three types are modal, material and waveguide.

Distribution duct - A raceway of rectangular crosssection placed within or just below the finished floor and used to extend the wires or cables to a specific work station/area.

Distribution network - Part of the local exchange cable network, comprising small cables between

subscribers' Distribution Points (DPs) and cabinets, Remote Line Units (RLUs) or other flexibility points.

Distribution panel - A rack mounted patch panel that terminates horizontal cabling from workstations.

Duct - 1. A single enclosed raceway for wires or cables. See also raceway; 2. A single enclosed raceway for wires or cables usually used in soil or concrete; 3. An enclosure in which air is moved. Generally part of the HVAC system of a building.

Duplex cable - A two-fibre cable suitable for duplex transmission.

Duplex transmission - Transmission in both directions, either one direction at a time (half duplex) or both directions simultaneously (full duplex).

Earth ground - A connection to earth obtained by a grounding electrode.

Electronic Industries Association (EIA) A USA trade organisation that issues its own standards and contributes to ANSI; developed RS-232. Membership includes US manufacturers.

ElectroMagnetic Interference (EMI) - Any electrical or electromagnetic interference that causes undesirable response, degradation or failure in electronic equipment. Optical fibres neither emit nor receive EMI.

EMI segregation - Isolation of the telecommunications signal from electromagnetic interference.

Encryption – 1. A security mechanism that transforms the readable content in a message into a seemingly random collection of characters, numbers and/or symbols to provide confidentiality. 2. A modification of a bit stream to make it appear random and control emissions.

Entrance facility (telecommunications) - An entrance to a building for both public and private network service cables (including wireless) including the entrance point of the building and continuing to the entrance room or space.

Entrance point (telecommunications) - The point of emergence for telecommunications cabling through an exterior wall, a floor, or from a conduit.

Equipment, peripheral - Equipment which itself has no on-line role but works closely with on-line equipment, e.g., a card punch or sorter.

Equipment room, telecommunications A centralised space for telecommunications equipment that serves the occupants of the building. An equipment room is considered distinct from a telecommunications room because of the nature or complexity of the equipment.

Ethernet - A baseband local-area network marketed by Xerox Corporation and developed jointly by Xerox, Digital Equipment Corporation and Intel Corp. **Fan-out cable** - Multi-fibre cable constructed in the tight buffered design. Designed for ease on connectorisation and rugged applications for intraor inter-building requirements.

Federal Communications Commission - (FCC) In the U.S., a board of seven commissioners, appointed by the President, with the power to regulate all interstate and foreign electrical communications systems originating in the U.S., including radio, television, facsimile, telegraph, telephone, and cable systems; the federal regulatory body.

Ferrule - A mechanical fixture, generally a rigid tube, used to confine and align the stripped end of a fibre.

Far-End Crosstalk (FEXT) - A measure of the unwanted signal coupling from a transmitter at the near-end into a neighboring pair measured at the far (receiving) end relative to the received signal level measured on that same pair.

Fibre - Dielectric material that guides light; waveguide.

Fibre channel - A developing ANSI standard designed to provide a standardised protocol and system-level interconnect, while being flexible and cost effective. It specifies several data rates from 133 to 1,062 Mb/s.

Fibre optic attenuator - A component that is installed in a fibre optic transmission system to reduce the power in the optical signal. It is often used to limit the optical power received by the photodetector to within the limits of the optical receiver.

Fibre optic cable - A cable containing one or more optical fibres.

Fibre optic communication system - The transfer of modulated or unmodulated optical energy through optical fibre media which terminates in the same or different media.

Fibre optic link - A combination of fibre optic spans and repeaters which are concatenated to form a transmission path.

Fibre Optic Test Procedure (FOTP) - Standards developed and published by the Electronic Industries Association (EIA) under the EIA-RS-455 series of standards.

Fibre optic sub-system - A functional entity with defined bounds and interfaces which is part of a system. It contains solid state and/or other components and is specified as a subsystem for the purpose of trade and commerce.

Fibre optic span - An optical fibre/cable which is terminated at both ends and which may include devices which possibly add, subtract or attenuate optical signals.

Fibre (Spherical) Undercut/Protrusion - The difference in the height betwen the centre of the optical axis (fibre core) and the theoretical height in

the centre based on the spherical dome surface of the ferrule. If the centre of the optical axis is above this theoretical height, the term fibre protrusion is used. If the centre of the optical axis is below this theoretical height, the term fibre undercut is used. A fibre undercut that is too large may prevent physical contact between mated connectors, especially at higher temperatures. A fibre protrusion that is too large will lead to pushback problems in the connector to which it is mated.

Frame, Main Distribution (MDF) - Frame on which external distribution cables terminate, together with their associated protective devices (on the vertical side) and with internal cables to the central office line units (on the horizontal side). Interconnection is made by running jumper wires between the termination blocks.

Frequency - The number of complete cycles of a periodic activity which occur in a unit time, i.e., the number of times the quantity passes through its zero value in the same sense in unit time.

Frequency Modulation (FM) - A method of transmission in which the carrier frequency varies in accordance with the signal.

Fresnel Reflection - The reflection that occurs at the planar junction of two materials having different refractive indices; Fresnel reflection is not a function of the angle of incidence.

Furniture cluster - An adjoining group of work areas, typically including space division, work surfaces, storage and seating.

Fusion splicing - A permanent joint accomplished through the application of localized heat sufficient to fuse the ends of the optical fibre, forming a continuous single fibre.

Graded-index fibre - An optical fibre whose core has a non-uniform index of refraction. The core is composed on concentric rings of glass whose refractive indices decrease from the centre axis. The purpose is to reduce modal dispersion and thereby increase fibre bandwidth.

Grounding - A conducting connection, whether intentional or accidental, between an electrical circuit (telecommunications) or equipment and the earth, or to some conducting body that serves in place of the earth.

Header duct (trenchduct, feeder duct) A raceway of rectangular cross-section placed within the floor to tie distribution duct(s) or cell(s) to the telecommunications room.

Hierarchical computer network - A computer network in which processing and control functions are performed at several levels by computers specially suited for the functions performed.

Horizontal wiring - The portion of the wiring system extending from the workstation (telecommunications outlet) to the BHC (Backbone to Horizontal Cross Connect) in the telecommunications

telecommunications room are considered part of the horizontal wiring.

Hub - In Local Area Networks, it is the core of a star topology; seen in ARCNET, Ethernet, and Token Ring applications. Hub hardware can be either active or passive.

Identifier - An item of information that links a specific element of the telecommunications infrastructure with its corresponding record.

Impedance - The total passive opposition offered to the flow of an alternating current. It consists of a combination of resistance, inductive reactance, and capacitive reactance. It is the vector sum of resistance and reactance (F+iX) or the vector of magnitude Z at an angle O.

Impedance matching - Matching impedances of adjoining circuit elements so that power transfer across the interface is maximised, in order to improve performance or to accomplish a specific effect.

Index-matching material - A material, used at optical interconnection, having a refractive index close to that of the fibre core and used to reduce Fresnel reflections.

Index of refraction - The ratio of the velocity of light in free space to the velocity of light in a given material. Symbolised by n.

Infrastructure, telecommunications - A collection of those telecommunications components, excluding equipment, that together provide the basic support for the distribution of all information within a building or campus.

Insertion loss - The difference between the power received at the load before and after the insertion of apparatus at some point in the line. If the resulting number is negative, an insertion gain is indicated.

Institute of Electrical and Electronic Engineers (IEEE) - The U.S. organisation for professional electrical engineers.

Integrated Services Digital Network (ISDN) An integrated digital network in which the same time division switches and digital transmission paths are used to establish connections for different services, for example: telephony, data, telex, facsimile.

Integrated system - A telecommunication system that moves analog and digital traffic over the same switched network.

Interconnection - A connection scheme that employs connecting hardware for the direct connection of a cable to another cable or to an equipment cable without a patch cord.

Interface EIA Standard RS232 B or C Standardized method adopted by the EIA to insure uniformity of interface between data communication equipment and data processing terminal equipment.

between first level and second level backbone cabling.

Jack - A device into which a plug is inserted in order to make electrical contacts.

Jack contact - The current carrying metallic member in a modular jack.

Jumper - Fibre optic cable that has connectors installed on both ends.

Keying - The mechanical feature of a connector system that guarantees correct orientation of a connection, or prevents the connection to a jack, or to an optical fibre adapter of the same type intended for another purpose.

Light-Emitting Diode (LED) - A semi-conductor diode that emits light when forward current is applied.

Lightguide cable - An optical fibre, multiple fibre, or fibre bundle which includes a cable jacket and strength members, fabricated to meet optical, mechanical and environmental specifications.

Lightwaves - Electromagnetic waves in the region of optical frequencies. The term 'light' was originally restricted to radiation visible to the human eye, with wavelengths between 400 and 700 nm. However, it has become customary to refer to radiation in the spectral regions adjacent to visible light (in the near infrared range from 700 to about 2000 nm) as 'light' to emphasize the physical and technical characteristics they have in common with visible light.

Link - A fibre optic cable with connectors attached to a transmitter (source) and receiver (detector).

Local Area Network (LAN) - A geographically limited network interconnecting electronic equipment.

Macrobending - Macroscopic axial deviations of a fibre from a straight line, in contrast to microbending.

Main cross-connect - A cross connect for, first level backbone cables, entrance cables, and equipment cables.

Mbps - Megabits (millions of bits) per second.

Mechanical splicing - Joining two fibres together by mechanical means to enable a continuous signal. Elastomeric splicing is one example of mechanical splicing.

Media (telecommunications) - Wire, cable, or conductors used for telecommunications.

Megahertz (MHz) - One million Hertz.

MIC Plug - The male part of the MIC which terminates a fibre optic cable.

MIC Receptacle - The female part of the MIC which is contained in an FDDI node.

Microbending - Curvatures of the fibre which involve axial displacements of a few micrometres

room. The outlet and Cross Connect facilities in the Intermediate cross-connect - A cross connect and spatial wavelengths of a few millimetres. Microbends cause loss of light and consequently increase the attenuation of the fibre.

> Micron (µM) - Another term for micrometre. One millionth of a metre. 10-6 metre.

> Midspan devise - When doing Power over Ethernet, power can be implemented by inserting power sourcing equipment between the Data Terminal Equipment (DTE) and the device to be powered. These powering devices are called "midspan" Power Sourcing Equipment (PSE). The midspan PSE allows for the power to be supplied externally to the Ethenet equipment. This implementation will offer both data and power on the twisted-pair link segment without burdening each port of the Ethernet equipment with the need to provide power, and will allow for the support of legacy Ethernet equipment that lacks the powering capability. Midspan power cannot be used with 1000BASE-T.

> Modal dispersion - Dispersion resulting from the different transit lengths of different propagating modes in a multimode optical fibre.

> Mode - In guided wave propagation, such as through a waveguide or optical fibre, a distribution of electromagnetic energy that satisfies Maxwell's equations and boundary conditions. Loosely, a possible path followed by light rays.

> Modular jack - A telecommunications connector as specified in Part 68 Rules, Subpart F and can have 6 or 8 contact positions, but not all the positions need be equipped with jack contacts.

> Modular plug - A telecommunications connector for cable or cords per the Part 68 Rules. A modular plug can have 6 or 8 contact positions, but not all the positions need be equipped with contacts.

> Modulation - The process by which the characteristic of one wave (the carrier) is modified by another wave (the signal). Examples include Amplitude Modulation (AM), Frequency Modulation (FM). and Pulse-Coded Modulation (PCM).

> Monochromatic - Consisting of a single wavelength. In practice, radiation is never perfectly monochromatic but, at best, displays a narrow band of wavelengths.

> Multimedia - 1. An application that communicates to more than one of the human sensory receptors;

> 2. Applications that communicate information by more than one means.

> Multimode optical fibre - An optical fibre that will allow many bound modes to propagate. The fibre may be either a graded-index or step-index fibre.

> Multiplexing - The process by which two or more signals are transmitted over a single communications channel. Examples include timedivision multiplexing and wavelength-division multiplexing.

Multi-Station Access Unit (MSAU) - A device which functions as a hub in a star-wired Token Ring network. Provides a connection point for nodes (typically eight) plus Ring In/Ring Out ports for connection to additional MAUs on the network.

Multi-User Telecommunications Outlet Assembly (MUTOA) - A grouping in one location of several telecommunications outlet/connectors.

Nanometre - A unit of measurement equal to one billionth of a metre. (10-9 metre).

Near-end crosstalk (NEXT) - The optical power reflected from one or more input ports, back to another input port.

National Electric Code (NEC) - Affects communications cabling by defining flame and smoke requirements for cables used inside buildings.

Network connectivity - The topological description of a network which specifies the interconnection of the transmission nodes in terms of circuit termination locations and quantities.

Ohm - The derived SI unit of electric resistance. It is the resistance between two points of a conductor when a constant potential difference of 1 volt, applied between these two points, produces in this conductor a current of 1 ampere, the conductor not being the source of any electromotive force.

Optical fibre - Any fibre, made of dielectric material, that guides light.

Open office - A floor space division provided by furniture, moveable partitions, or other means instead of building walls.

Optical fibre duplex connector - A mechanical media termination device designed to transfer optical power between two pairs of optical fibres.

Optical Fibre Non-metallic Plenum-rated Indicates cable for use in ducts or plenums or other spaces used for environmental air in accordance with Section 770.154(A) of the NEC and containing no metallic members and no other electrically conductive materials. This cable exhibits a maximum peak optical density of 0.5, a maximum average optical density of 0.15, and a maximum flame spread distance of 5 ft when tested per UL 910, "Standard for Test for Flame-Propagation and Smoke-Density Values for Electrical and Optical-Fibre Cables Used in Spaces Transporting Environmental Air."

Optical Fibre Non-metallic Riser-rated Indicates cable for use in vertical runs in a shaft in accordance with Section 770.154(B) of the NEC and containing no metallic members and no other electrically conductive materials. The flame propagation height of this cable is less than 12 ft when tested per ANSI/UL 1666, "Test for Flame Propagation Height of Electrical and Optical-Fibre Cables Installed Vertically in Shafts. **Optical Return Loss (ORL)** - The ratio (expressed in units of dB) of optical power reflected by a component or an assembly to the optical power incident on a component port when that component or assembly is introduced into a link or system.

Optical Time Domain Reflectometre (OTDR) A method of evaluating optical fibres based on detecting backscattered (reflected light). Used to measure fibre attenuation, evaluate splice and connector joints, and locate faults.

Optical waveguide - Waveguide with a core consisting of optically transparent material of low attenuation (usually silica glass) and with cladding consisting of optically transparent material of lower refractive index than that of the core. It is used for the transmission of signals with lightwaves. In addition, there are planar dielectric waveguide structures in some optical components, such as laser diodes, which are referred to as optical waveguides.

Outlet/connector, telecommunications - A connecting device in the work area, on which horizontal cable terminates.

Passive device - A component of the broadband system which is not supplied with activating power. Patch cord - A length of cable with connectors on one or both ends used to join horizontal telecommunications circuits to backbone telecommunications circuits.

Patching - Connecting circuits by means of cords with plugs inserted into appropriate jacks.

Patch panel - A Cross Connect system of mateable connectors that facilitates administration.

Photodiode - A semiconductor diode that produces current in response to incident optical power and is used as a detector in fibre optics.

Pigtail - A short length of fibre permanently attached to a component, such as a source, detector, coupler or connector.

Plenum - The air handling space between walls, under structural floors, and above drop ceilings, which can be used to route intra-building cabling.

Plenum cable - A cable whose flammability and smoke characteristics allow it to be routed in a plenum area without being enclosed in a conduit.

Point-to-point - A connection established between two specific locations, as between two buildings.

Poke-thru system - Penetrations through the fire resistive floor structure to permit the installation of horizontal telecommunications cables.

Port - Hardware entity at each end of the link.

Power over Ethernet (PoE) - Power over Ethernet extends the capability of Ethernet over twisted-pair. The implementation will allow power to be delivered along with data over 10BASE-T, 100BASE-T, and 1000BASE-T twisted-pair link segments. The standard was developed and written by the IEEE 802.3af task group. **Power sum** - A formula for evaluating the link performance of cable that takes into account the crosstalk influence from all the pairs on the pair being measured. This method simulates performance during the heaviest periods of use.

Powersum equal level far-end crosstalk (**PSELFEXT**) - A computation of the unwanted signal coupling from multiple transmitters at the near-end into a pair measured at the far-end relative to the received signal level on that same pair.

Preform - A glass structure from which an optical fibre waveguide may be drawn.

Prefusing - Fusing with a low current to clean the fibre end. Precedes fusion splicing.

Prewiring - 1. Wiring installed before the walls are enclosed or finished; 2. Wiring installed in anticipation of future use or need.

Primary coating - The plastic coating applied directly to the cladding surface of the fibre during manufacture to preserve the integrity of the surface.

Pulse-Coded Modulation (PCM) - A technique in which an analog signal, such as a voice, is converted into a digital signal by sampling the signal's amplitude and expressing the different amplitudes as a binary number. The sampling rate must be twice the highest frequency in the signal.

Pulse spreading - The dispersion of an optical signal with time as it propagates through an optical fibre.

Polyvinyl Chloride (PVC) - Material used in manufacture of a type of jacketing material.

Raceway - Any channel designed for holding wires or cables; e.g. conduit, electrical metallic tubing, sleeves, slots, underfloor raceways, cellular floors, surface raceways, lighting fixture raceways, wireways, cable troughs, busways, auxiliary gutters, and ventilated flexible cableways.

Radio frequency interference - Electromagnetic interference within the frequency band for radio transmission.

Radius of Curvature - The radius of the spherical dome surface of the ferrule. More technically, radius of curvature is the radius of the "best fitting" sphere over a "fitting region" on the connector ferrule (defined by the standards bodies). For physical contact single-fibre connectors (connectors containing a single fibre within the ferrule, e.g. SC, ST, LC, and FC), the calculations of other numerical end face geometry parameters (such as apex offset and fibre spherical undercut-protrusion) are made against the spherical surface defined by the radius of curvature. Furthermore, requirements on those parameters are typically based on a radius of curvature within a specific range (defined by the standards bodies).

Rayleigh Scattering – The scattering of light that results from small variations in material density or composition.

Rearrangement - An action taken to replace, add, adapt or remove existing premises wiring system components.

Receiver (**Rx**) - An optoelectronic circuit that converts an optical signal to an electrical retimed serial logic signal.

Receiver sensitivity - The minimum acceptable value of average received power at point R to achieve a 10-12 BER. It takes into account power penalties caused by use of a transmitter with worst-case values of extinction ratio, jitter, pulse rise and fall times, optical return loss at point S, receiver connector degradations, and measurement tolerances. The receiver sensitivity does not include power penalties associated with dispersion, jitter, or reflections from the optical path; these effects are specified separately in the allocation of maximum optical path penalty. Sensitivity takes into account worst-case operating and End-Of-Life (EOF) conditions.

Record - A collection of detailed information related to a specific element of the telecommunications infrastructure.

Record drawing (as built) - A plan, on paper, that graphically documents and illustrates the installed telecommunications infrastructure in a building, or portion thereof.

Reinforced concrete - A type of construction in which steel (reinforcement) and concrete are combined, with the steel resisting tension and the concrete resisting compression.

Report - A presentation of a collection of information from the various records.

Resident - The individual responsible and accountable for the telecommunications services provided to the premises who may reside on the premises or, in the case of a rental unit, be the owner or property manager.

Residential gateway - A device that enables communication among networks in the residence and between residential networks and service providers' networks.

Return loss - A ratio expressed in dB of the power of the outgoing signal to the power of the reflected signal.

Room, mechanical equipment - An enclosed space serving the needs of mechanical building systems.

Room, telecommunications - An enclosed space for housing telecommunications equipment, cable terminations and Cross Connect wiring. The TR is the recognised transition point between the backbone and horizontal facilities., **Saddle** - A device for establishing the position of the raceway or raceways within the concrete relative to the screed line, and for maintaining the spacing between the raceways.

Screed line - The line to which poured concrete is leveled.

Screen - An element of a cable formed by a shield. Screened twisted-pair (ScTP) - A balanced cable with an overall screen.

Service entrance - See entrance facility (telecommunications).

Service equipment (power) - The necessary equipment, usually consisting of a circuit breaker or switch and fuses, and their accessories, located near the point of entrance of supply conductors to a building or other structure, or an otherwise defined area, and intended to constitute the main control and means of cutoff of the electrical supply.

Service fitting - An outlet box to house the connections for telecommunications at the user work area. See also insert.

Service provider - The operator of any service that furnishes telecommunications content (transmissions) delivered over access provider facilities.

Sheath - See cable sheath.

Shield - A metallic layer placed around a conductor or group of conductors.

Shielded enclosure cabinet - A metal electronics cabinet, constructed with welded seams and conductive gaskets on the doors that serve as an effective shield against electromagnetic radiation.

Single-mode optical fibre - An optical fibre that carries only one path of light.

Slab on grade - Concrete floor placed directly on soil, without basement or crawlspace.

Sleeve - An opening, usually circular, through the wall, ceiling, or floor to allow the passage of cables.

Slip sleeve - An oversized conduit that moves easily along an inner conduit and covers a gap or missing part of the smaller conduit.

Slot - An opening through a wall, floor, or ceiling, usually rectangular, to allow the passage of cables.

Space (telecommunications) - An area used for housing the installation and termination of telecommunications equipment and cable, e.g., common equipment rooms, equipment rooms, common telecommunications rooms, telecommunications rooms, work areas, and maintenance holes/handholes.

Splice - A joining of conductors in a splice closure, meant to be permanent.

Splice box - A box, located in a pathway run, intended to house a cable splice.

Splice closure - A device used to protect a splice.

Star topology - A topology in which telecommunications cables are distributed from a central point.

Station conductor - A wire that terminates at the equipment side of the protector.

Support strand (messenger) - A strength element used to carry the weight of the telecommunications cable.

Suspended ceiling - A ceiling that creates an area or space between the ceiling material and the structure above.

T568A – One of two acceptable UTP wiring schemes specified in TIA/EIA-568B.1 telecommunications standard. T568A is recommended for new installations and is the only wiring scheme recognized by the US federal government and is predominant in Canada.

T568B - One of two acceptable UTP wiring schemes specified in TIA/EIA-568B.1 telecommunications standard. T568B accommodates pre-existing cabling, allowing consistency with cabling already installed, and is predominant in the US.

Telecommunications - Any transmission, emission, and reception of signs, signals, writings, images, and sounds, that is, information of any nature by cable, radio, optical, or other electromagnetic systems.

Telecommunications bonding backbone A conductor that interconnects the telecommunications main grounding busbar (TMGB) to the telecommunications grounding busbar.

Telecommunications closet - See room, telecommunications.

Telecommunications entrance facility - See entrance facility (telecommunications).

Telecommunications entrance point - See entrance point (telecommunications).

Telecommunications entrance room or space See entrance room or space (telecommunications).

Telecommunications equipment room - See equipment room (telecommunications).

Telecommunications grounding busbar - A commonpoint of connection for telecommunications system and equipment bonding to ground, and located in the telecommunications room or equipment room.

Telecommunications infrastructure - See infrastructure (telecommunications).

Telecommunications main grounding busbar

- A busbar place in a convenient and accessible location and bonded, by means of the bonding conductor for telecommunications, to the buildings service equipment (power) ground.

Telecommunications media - See media (telecommunications).

Telecommunications outlet - See outlet/connector Underfloor raceway - A pathway placed within (telecommunications).

Telecommunications room room. See telecommunications.

Telecommunications service entrance - See entrance facility (telecommunications).

Telecommunications space See space (telecommunications).

Terminal - 1. a point at which information may enter or leave a communications network

2. The input-output associated equipment.

3. A device by means of which wires may be connected to each other.)

Termination - This term is outmoded. See connecting hardware

Termination hardware - This term is outmoded. See connecting hardware.

Termination position - A discrete element of connecting hardware where telecommunications conductors are terminated.

Through penetration - A continuous opening that passes through both surfaces of a fire-rated barrier.

TIA/EIA-568-B1 -Commercial Building Telecommunications Cabling Standard; Part 1: **General Requirements**

TIA/EIA-568-B2 Building Commercial Telecommunications Cabling Standard; Part 2: **Balanced Twisted-Pair Cabling Components**

TIA/EIA-568-B3 Commercial Building Telecommunications Cabling Standard; Part 3: Optical Fibre Cabling Components Standard

TIA/EIA-570-A - Residential Telecommunications Infrastructure Standard (Note: Current version of this standard is TIA/EIA-570-B)

TIA/EIA-606-A - Administration Standard for **Commercial Telecommunications Infrastructure**

Topology - The physical or logical arrangement of a telecommunications system.

Transfer impedance - A measure of shielding performance determined by the ratio of the voltage on the conductors enclosed by a shield to the surface currents on the outside of the shield

Transition point - A location in the horizontal cabling where flat undercarpet cable connects to round cable.

Trenchduct - See header duct.

Trough - A pathway for the containment of cable, typically provided with a removable cover.

Two-level duct - An underfloor raceway system installed with the header raceways and the distribution raceways on two different planes.

Underground cable - A telecommunications cable designed to be installed under the surface of the earth in a trough or duct that isolates the cable from direct contact with the soil.

the floor and from which wires and cables emerge to a specific floor area.

Uninterruptible power supply - A buffer between utility power or other power source and a load that requires continuous precise power.

Unit - The modular unit "U" on which panel heights are based is equal to 1.75" as specified in EIA-STD-310-D for Cabinets, Racks, Panels and Associated equipment.

Usable floor space - Floor space which is capable of being used as a work area.

User code - A unique designation assigned to a person who is expected to use the circuit, equipment, service etc. serving a particular work area (e.g.: telephone number, a name, a circuit number, telecommunications outlet/connector, or a logical address).

Utility column - An enclosed pathway extending from the ceiling to furniture or to the floor, that forms a pathway for electrical wiring, telecommunications cable, or both.

Utility tunnel - An enclosed passageway, usually placed between buildings, for the distribution of utility services.

Virtual Private Network (VPN) - A combination of hardware and software technologies designed to enable secure passage of organisational network traffic over the Internet.

Wire - An individually insulated solid or stranded metallic conductor.

Wire run - See cable run.

Work area (workstation) - A building space where the occupants interact with telecommunications terminal equipment.

Work area cable (cord) - A cable connecting the telecommunications outlet/connector to the terminal equipment.

Zone box - An enclosure used to house one or more of the following; a) a consolidation point, b) a horizontal connection point, c) building automation system outlets.

OR-100FC5EH-EU-0954
OR-100FC5ER-EU-0954
OR-100FC610L-EU-0450
OR-100FC6H-EU-05
OR-100FC6R-EU-0552
OR-100S6AL-0450
OR-100UC5EH-EU-0940
OR-100UC5ER-EU-0940
OR-100UC610L-EU-0420
OR-100UC6H-EU-0530
OR-100UC6R-EU-0530
OR-110ABC5E050
OR-110ABC5E100
OR-110ABC5E300
OR-110ABC605028
OR-110ABC610028
OR-110ABC6300
OR-110C5E03-05
OR-110C5E03-06
OR-110C5E03-09
OR-110C5E05-05
OR-110C5E05-06
OR-110C5E05-09
OR-110C5E07-05
OR-110C5E07-06
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OR-110C5E15-05
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OR-110C603-09
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OR-110DBC5E100
OR-110DBC5E300
OR-110DBC6050
OR-110DBC6100
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OR-205KAN9GB-SM83
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OR-211F04L0LZAD9
OR-211F04L0LZADL86
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2) the defective product is returned to Ortronics; and

3) Ortronics, upon examination of the returned product, is satisfied that the defect was not caused by misuse, neglect, improper installation or modification.

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