ORTRONICS®





designed to be better.™



ONE SOLUTION, UNLIMITED APPLICATIONS THE LX CABINET SYSTEM



CONNECTED INFRASTRUCTURE

Legrand[®] solutions, backed by industry leading customer advocacy, design and support teams, are the foundation for Connected Infrastructure, for a comprehensive approach to your network. Through Connected Infrastructure, Legrand delivers maximum performance, time savings, space optimization, superior customer experience and sustainability by design, to address your challenges, today and tomorrow.

MAXIMUM PERFORMANCE

Innovative cable management in the LX cabinet system reduces tension at the connection point, while supporting the weight of the cables to protect connection. The superior airflow management with the patent pending ventilation system creates a reliable and predicable environment for equipment for maximum uptime.



TIME SAVING

The LX cabinet platform allows for moves, adds and changes, creating a system that is easy to use and saves valuable time. Tool-less features, including air dams, vertical cable managers, all panels, overhead mounting brackets and security hinges allow for quick changes as well as reduced time on installation and removal.



SPACE AVAILABILITY

To maximize density, the LX offers up to 52RU and front to rear cable managers. The cabinet has the ability to manage 10g copper applications and offers passive and active cooling solutions with capabilities up to 30 kw, demonstrating optimized rack unit space.



CUSTOMER EXPERIENCE

The LX cabinet was designed in cooperation with the copper, fiber, and open racking teams, providing seamless integration to address the most critical application challenges while remediating system failure points.



SUSTAINABILITY

The LX cabinet superior airflow management contributes to a lower PUE by eliminating bypass airflow and recirculation for efficient cooling and front to rear airflow. In addition, the cabinet system is assembled regionally on both the East and West coast to reduce transport carbon emissions.





THE LX CABINET SYSTEM

The LX cabinet system is a comprehensive platform designed to address the most demanding enterprise data center applications with superior modular cable management and scalable airflow management, simplified access and engineered integration with copper and fiber connectivity to maximize network uptime.

Manufactured in the U.S. on the East and West coasts, lead times and the carbon footprint for delivery have been minimized. With each facility having extensive engineering and manufacturing teams, Legrand[®] is able to create purpose built solutions for customer-specific applications with a range of security options.

AVAILABLE STANDARD SIZES

- 42, 45, 47 and 52 RU heights
- 24", 30" and 32" widths
- 36", 42", 48" deep (with doors)
- Color: white or black

REGULATORY COMPLIANCE

- 3,000 lbs. static load capacity
- 2,250 lbs. roll on casters
- UL 2416 listed
- ASCE 7 tested (SEISMIC)
- RoHS compliant





DELIVERING SUPERIOR PERFORMANCE AND UPTIME FOR MISSION CRITICAL NETWORKS.

PROTECTION AND PERFORMANCE

To ensure maximum network performance, the LX cable management systems protect patch cords, cable, and equipment ports from damage by maintaining proper bend radius requirements, reducing tension on plugs and jacks, protecting network equipment ports, and supporting large cable bundles within the cabinet.

DENSITY

The LX frame structure and cable management systems are fully equipped to handle the density of today's high performance networks while allowing for easy moves, adds, and changes. The LX cabinet cable management system provides ample capacity for a minimum of 48 Category 6a patch cords per rack unit on a single side of the equipment, which is often necessary to avoid a fan tray, power supply or other removable part of the equipment.

AIRFLOW

The heat generated from increased server densities and higher speed network equipment makes cooling a top concern for today's IT administrators and data center managers. With heat being the most common reason for equipment failures, proper cooling is essential to reliable operations. Designed specifically to improve airflow, the LX cabinet design enables more efficient cooling and reduces power consumption.



THE LX ADVANTAGE

FRAME AND RAIL DESIGN

Supporting up to 3,000 lbs, the LX frame and rail design transfers the weight load to the frame in high density applications preventing deflection and ensuring equipment can be mounted in high density applications.

MAXIMUM AIRFLOW FRONT DOOR

The LX's profile door frame provides up to 82.6% maximum vented surface area ensuring an adequate air supply to equipment to maximize network uptime.



COMMON PLENUM

The LX's common plenum allows cooling calculation to be conducted at the row level instead of the cabinet level and allows for an overhead pathway to be perpendicular to the cabinets, simplifying the data center layout.



SECURITY

The LX's unique security hinge allows for tool-less removal of the doors.

VERTICALLY SPLIT DIVIDER PANELS

The LX's half depth divider panels allow the end user to maintain front-to-rear airflow. Eliminates bypass airflow and recirculation when rails are not set on the same plane providing maximum efficiency.



RELIABILITY

UL2416 Listed. Independently tested performance for weight loads, bonding and safety for consistent reliability.











VERTICAL MANAGERS

Tool less mounting with 4" or 6" fingers spaced at every rack unit. Allows for vertical management of cabling in high density applications and maximizes uptime over the life of the application.



FULLY CONFIGURABLE

LX cabinets are built to your configuration and arrive fully assembled with all components installed, reducing equipment deployment time and overall costs.

CABLE MANAGEMENT

The cabinet solution provides pathways from front to rear, side to side and easy entry/egress out the top or bottom of the cabinet allowing for proper cable management regardless of the application.

TOOL-LESS DESIGNS

Reduces labor time for deployment, moves, adds and changes. Top panels, side panels, air dams, blanking panels, overhead cablofil brackets, chimneys.



ENGINEERED INTEGRATION

All LX cabinet components are designed with the intent to integrate with other Legrand[®] products.





THE LX CABINET STRUCTURE

FRAMES

- Fully welded, 12 and 14 gauge steel construction
- High weight load with no deflection by transferring the weight load to the frame – 3000 lbs. static load
- Front to rear rail markers for easy rail adjustment and alignment
- No center front to back frame member maximizes network performance by providing optimum environment for unimpeded airflow and cable management

RAILS

- 0.375" square hole or tapped #12-24
- Easy to populate accurately with RU markings
- Maintains 19" EIA spacing under heavy loads by preventing deflection as weight load is transferred to the frame
- 12-gauge steel and a proprietary design provides maximum rail strength
- Continuous front to rear adjustment allows for optimum equipment positioning and cabling

DOORS

- Patented security hinge provides maximum security and tool-less door removal
- Slim profile mesh door frame margins provide maximum vented surface area (82.6%) ensuring all equipment is properly cooled
- Wide array of security/locking options
- Field reversible

SIDE/DIVIDER PANELS

- Vertically split, hinged side panels allow access to equipment and cabling without removal
- Tool-less removal if needed
- Lockable for added security

TOP PANELS

- Two-piece top panel, front and rear panels selected independently
- Tool-less removal allows the cable entry panel to be installed after the cabinet is cabled
- Rotatable top panels eliminate tension at the cable connection points by allowing the cable bundles to be placed in the front, center or rear
- Cable access top panels come with two grommets, each grommet has members that can be separated to ensure a good seal regardless of the cable bundle size



RAIL SUPPORT BRACKETS TRANSFER LOAD



RACK UNIT LABELING







- Flat perforated
- Solid

CABLE MANAGEMENT

The LX Cable Management innovative designs allow for maximized uptime and eliminate signal degradation while providing leading vertical, horizontal, front to rear, and overhead cable management for any application. LX cable management offers vertical manager fingers and bend limiting clips to solve application challenges such as proper bend radius and cable bundle support. LX cable management offerings can be tool-lessly installed and removed to allow for easy adjustments and quick deployment.

VERTICAL

L-SHAPED VERTICAL MANAGERS

- Compatible with bend limiting clips for proper bend radius
- Tool-less installation and removal
- 4" or 6" fingers available, fingers align to RU spaces
- Optional support shelf eliminates tension at connection point and provides strain relief
- Ships installed, ready for deployment

WIRE TRELLIS

- Provides vertical pathway for high density cable management
- Offers strain relief with optional hook and loop ties at each RU space

LACING BARS

- Single wide and double wide available
- 90° rear facing PDU bars for meter reading and power cord traceability
- Tear drop slots for tool-less PDU deployment
- Adjustable front to rear minimizing power cord length and densities while maximizing airflow
- Ideal for vertical cable management, compatible with hook and loop straps
- Take up spools mount in multiple locations for eliminating cable slack
- Compatible with quarter turn cable rings for vertical cable management

HORIZONTAL

FRONT-TO-REAR CABLE MANAGEMENT

- Front-to-rear cable management available on 30"W and 32"W cabinets
- Position at almost any height on the rails to align with cabling
- Versatile offering aligns with air dams and side patching
- Adjustable depths from 16.25"D to 24"D or from 19"D to 30"D

HIGH DENSITY CABLE MANAGER

- 2RU high density cable manager can be mounted in any RU space
- Brush panel installs post termination
- Compatible with fiber take up spools for high density fiber applications
- Strain relief cut-outs accept hook and loop ties
- Compatible with most rail spacings, adjustable depths from 16.25"D to 30"D



L-SHAPED VERTICAL MANAGERS



WIRE TRELLIS



HIGH-DENSITY CABLE MANAGER



LACING BARS/PDU MOUNTING

La legrand®



SIDE PATCHING



INTRA-CABINET CABLE MANAGEMENT



TWO TIER MANAGER



ADJUSTABLE OVERHEAD BRACKETS

SIDE PATCHING

- Allows for up to an additional 8RU of mounting space outside RU space
- Ideal for switches, fiber cassettes and patch panels
- Accepts a plastic blanking panel to prevent bypass airflow until used
- Grommets above and below align with optional front-to-rear cable managers
- Accepts 1RU pass thru blanking panel for high density front-to-rear cabling

INTRA-CABINET CABLE MANAGEMENT

- Continuous cable pathway, raceway brackets allow vertical and horizontal deployment of fiber raceway
- Intra-cabinet cable management using 2"x2" or 4"x4" fiber raceway when rear divider is removed
- Raceway sold separately

OVERHEAD

OVERHEAD MINI RACK

- Maximizes density per square foot
- Mount switches with non standard airflow patterns
- Ideal for patching on top/outside of cabinet
- Horizontal supports accept wire mesh cable tray, ladder tray and fiber raceway (up to 25lbs per lf)
- Allows overhead space to be used for bussway, lighting, fire suppression

TWO TIER MANAGER

- Available in 6"W, 12"W and 18"W, ideal for mounting wire mesh cable tray, ladder tray or fiber raceway - non-adjustable
- Each tier can manage a unique solution
- Quick cable deployment without threaded rod interference
- Horizontal supports accept wire mesh cable tray, ladder tray and fiber raceway (up to 25lbs per lf)
- Allows overhead space to be used for bussway, lighting, fire suppression

ADJUSTABLE OVERHEAD BRACKETS

- Available in 6"W, 12"W and 18"W, ideal for mounting wire mesh cable tray, ladder tray or fiber raceway
- Tool-less installation and adjustment
- Preset locating pin for repeatable deployment across the data center



OVERHEAD MINI RACK

AIRFLOW MANAGEMENT

LX airflow management provides maximized efficiency with predictable operating environment to ensure maximum equipment reliability. The LX Cabinet should be deployed following best practices with the use of air dams and blanking panels at a minimum, while the airflow chimney should be deployed with bottom panels, blanking panels, and air dam kits. The LX airflow management accessories ensure maximum efficiency by eliminating bypass airflow and recirculation, as well as ensuring uniform intake temperatures.

AIR DAM KITS

- Vertical rubber seal eliminates recirculation and bypass airflow
- Tool-less installation and removal
- Compatible with the "L" shaped vertical managers
- Pass-thru grommets align with front-to-rear cable managers

BLANKING PANELS

- Cover open 19" EIA RU space to prevent recirculation and stabilize air inlet temperature
- Fits tapped or square holes, reusable between styles
- Tool-less snap-in installation
- Seals against angled patch panels
- Available in 1 or 2 RU 10 packs in black or white

BOTTOM PANELS

- Maintain proper airflow and direct hot air to the return plenum
- Knock-outs accept optional grommets to ensure proper seal for cable entry
- Optional airflow director prevents turbulence in a chimney application
- Eliminates recirculation and bypass airflow
- Tool-less removal and installation

FLOOR SEAL BRACKETS

- Seals from the face of the cabinet to the floor
- Eliminates bypass airflow and recirculation in a containment application

SEAL KITS

- Seals above and below rails 19" EIA rails to eliminate recirculation and bypass airflow
- Ideal when using angled airflow baffles
- Bottom panel recommended when deploying a seal kit







TOOL-LESS FRONT TO REAR BLANKING PANELS



SIDE CARS

SIDE BREATHING SWITCH COOLING

AIRFLOW BAFFLES

- Deploy side-to-side breathing equipment in a front-to-rear airflow pattern
- Lightweight and thermally neutral material does not conduct or emit heat
- Adjustable depth allowing for compatibility with chassis brackets
- Best performing solution in the smallest footprint when used between two cabinets
- Accommodates a wide array of switches
- Large air reservoir ensures switch availability by preventing over-temperature alarms, automatic shut downs, and switch failures

FRONT TO REAR BLANKING PANELS

- Tool-less attachment to the rails
- Available in 1RU and 5RU
- Contain several inches of adjustment for use with chassis brackets
- Allows switch to be mounted in any location within the cabinet
- Eliminates recirculation and bypass airflow providing a predictable air inlet temperature that increases equipment reliability

SIDE CARS

- Allows side breathing equipment to be deployed in a front-to-rear airflow pattern
- Allows for side breathing equipment to be placed anywhere in the aisle
- Maintains manufacturer's clearance guidelines for airflow
- Mounts to either side of the cabinet
- Seamless integration with angled airflow baffles and front to rear blanking panels providing a consistent operating environment for high density switches

, 105.0° 100.0°

Available in all heights, 8"W



TEMPERATURE CONTROL

The first two examples show hot and cold air mixing at the intake with exhaust temperatures reaching the 105°F mark. The LX cabinet airflow baffle solution reduces the inlet temperature by 20°. This reduction allows the data center temperature set point to be raised, creating significant OPEX savings.

1 90.0°

85 N°

80.0°

, 75.0° , 70.0°

. 65 0°

95.0°

CABINET VENTILATION SYSTEM

The patent pending LX cabinet ventilation system offers full width and off-set chimney solutions. The full width chimney is passive with an optional fan tray and the off-set chimney has the ability to attach to the cabinet on either side. Either chimney can be deployed in stratification or return plenum application and offer tool-less installation and vertical adjustment. The off-set chimneys provide the ability to run bussway, lighting, and fire suppression perpendicular to cabinets and up to 30kW of heat dissipation when properly deployed.

CHIMNEYS – FULL WIDTH AND OFFSET

- Available for 39"D and 45"D frames
- Common plenum allows cooling calculation at the row level
- Common plenum provides redundancy
- Tool-less adjustment for quick deployment
- Deploy in a stratification or return plenum application
- The common plenum provides a shared return path, reducing the numbers of chimneys required
- Full width only: Field upgrade to add a fan tray without interrupting the equipment inside of the cabinet
- Offset only: Justify to either side of the cabinet, providing a pathway for cabling, fire suppression, lighting or bussway
- Offset only: Two adjacent off-set chimneys provide a wider pathway for high density applications

FAN TRAY FOR FULL WIDTH CHIMNEY

- Cools up to 21kW or 14 kW N+1
- Dual power inputs for N+1 performance
- Field upgradeable without interrupting the equipment inside of the cabinet
- 85-264 VAC self sensing power supply allows for global deployment
- Easily deployed to overcome positive plenum pressure or obstructions in the return plenum
- Control methods include setting the fan speed in 10% increments or setting a defined return temperature by deploying a temperature sensor in the return path
- The digital LCD display communicates operating parameters and turns red if a fault is detected

OPTICOOL-READY

OptiCool® ready frames are fully configurable, available in all standard heights, widths, and depths. OptiCool supports low-to high-density application of 30kW or 20kW N+1 in-rack redundancy and allows for above rack or below floor refrigerant distribution.

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OFF-SET CHIMNEY



FULL WIDTH CHIMNEY





OPTICOOL DOORS

La legrand®



COMMON PLENUM WITH SHARED CHIMNEY

The LX cabinet ventilation system offers a rear common plenum for equal distribution of pressure and temperature, while providing redundancy in the cooling solution. Configured with air dams and half-depth divider panels, the hot air is contained at the cabinet row level allowing for shared chimneys or OptiCool[®] doors reducing install costs.

- Patent pending
- Assists with balancing non-uniform airflow
- Half-depth dividers allow for common plenum at rear of cabinet
- Common plenum allows shared chimneys or OptiCool[®] door, reducing initial costs
- Shared chimneys improve lighting dispersion and cable pathway access

SECURITY

The LX contains a variety of locking options to prevent unauthorized cabinet entry or tampering. From a traditional mechanical lock to the most advanced electronic lock, whether in a network closet or a Tier 4 data center. Unique security hinge allows for tool-less removal of the doors.

LOCK OPTIONS INCLUDE:

- Keyed lock for swing handled doors to prevent unauthorized access and tampering. The key also unlocks side panels.
- Combination lock has 1,000 possible combinations with a master key if over-ride is needed
- Electronic solution can be integrated into the existing building access system or DCIM system, providing remote monitoring in addition to audit trail reporting, ensures compliance with industry specific regulations, including HIPPA, Sarbanes Oxley and PCI





COMBINATION LOCK

KEYED LOCK



- RFID proximity reader within the handle Visual monitoring with multi-colored LED built into the handle and remote monitoring
- Compatible with existing 125kHz with Wiegand output employee proximity cards
- Biometric locks and Mifare HID I class solutions available



ELECTRONIC LOCKING SOLUTION





LX DIMENSION TABLES

CABINET HEIGHTS	42U	45U	47U	52U
Overall cabinet height with levelers	80.16 (2036)	85.41 (2169)	88.91 (2258)	97.66 (2481)
Overall cabinet height with casters	81.35 (2066)	86.60 (2200)	90.10 (2289)	98.85 (2511)
Vertical frame opening	73.63 (1870)	78.88 (2003)	82.38 (2092)	91.13 (2315)
CABINET WIDTHS	24"	30"	32"	
Overall width	24.00 (610)	30.00 (762)	32.00 (813)	
Frame opening	20.00 (508)	26.00 (660)	28.00 (711)	
Panel width	19" EIA	19" EIA	19" EIA	
CABINET DEPTHS	33"	39"	45"	
Overall frame depth	33" (838)	39" (991)	45" (1143)	
Overall depth with doors (profile)	36.13" (918)	42.13" (1070)	48.13" (1223)	
Minimum rail spacing	5.63" (143)	5.63" (143)	5.63" (143)	
Maximum rail spacing	30.50" (775)	36.50" (927)	42.50" (1080)	

TOP







SIDE



SERVER/NETWORK CONFIGURATION RAIL SPACING



TOP PANEL CABLE OPENING FILL RATES

PART NO.	DESCRIPTION	NOMINAL DIAMETER	RECTANGULAR CABLE OPENING WITH GROMMET TOP PANEL	4" CABLE PORT WITH GLAND GROMMET DIVIDER PANEL	3" CABLE PASS THROUGHS (AIR DAMS)	HIGH DENSITY TOP PANEL
52-200-X5, 52-200-X8, 52-240-X5, 52-240-X8	Cobra Cat 5e	0.19	655	230	115	1205
66-246-XA, 66-246-XB, 66-272-XA, 66-272-XB, 66-240-XA, 66-240-XB	DataGain® Cat 6+	0.22	500	170	75	899
54-246-XA, 54-246-XB, 54-272-XA, 54-272-XB	NextGain® Cat 6eX	0.23	435	150	70	822
6H-272-xA, 6H-272-xB	10Gain® XP Cat 6A	0.275	325	100	55	822
6A-272-xB	10Gain Cat 6A (CMP)	0.32	225	70	35	575
6A-272-xA	10Gain Cat 6A (CMR)	0.35	185	60	32	425
6B-272-xA	Cat 6B (CMR)	0.295	275	90	45	355
6B-272-XB	Cat 6B (CMP)	0.295	275	90	45	500

Notes: All cable counts are per opening.

OVERALL HEIGHTS FOR FULL WIDTH AND OFFSET CHIMNEYS

HEIGHT	HEIGHT WITH 22"-34" (A) EXTENSION MIN/MAX	HEIGHT WITH 34"-46" (A) EXTENSION MIN/MAX	HEIGHT WITH 46"-58" (A) EXTENSION MIN/MAX
42RU	103.4/115.4"	115.4/127.4"	127.4"/139.4"
45RU	108.6/120.6"	120.6"/132.6"	132.4/144.6"
47RU	112.1/124.1"	124.1/136.1"	136.1/148.1"
52RU	120.9/132.9"	132.9/144.9"	144.9/158.9"

Notes: Subtract 1.2" if casters are not used.







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