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Filing date: **12/17/2012**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD

Proceeding	92054573
Party	Defendant Ortronics, Inc.
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Signature	/s/Mark D. Giarratana
Date	12/17/2012
Attachments	Exhibit S to Smith Dec.pdf (18 pages)(2713528 bytes) Exhibit T to Smith Dec.pdf (14 pages)(3509550 bytes)

EXHIBIT S

Cancellation Proceeding No. 92054573
LayerZero Power Systems, Inc. v. Ortronics, Inc.

Exhibit Offered by Ortronics, Inc.

Mighty Mo® GX Cabinets

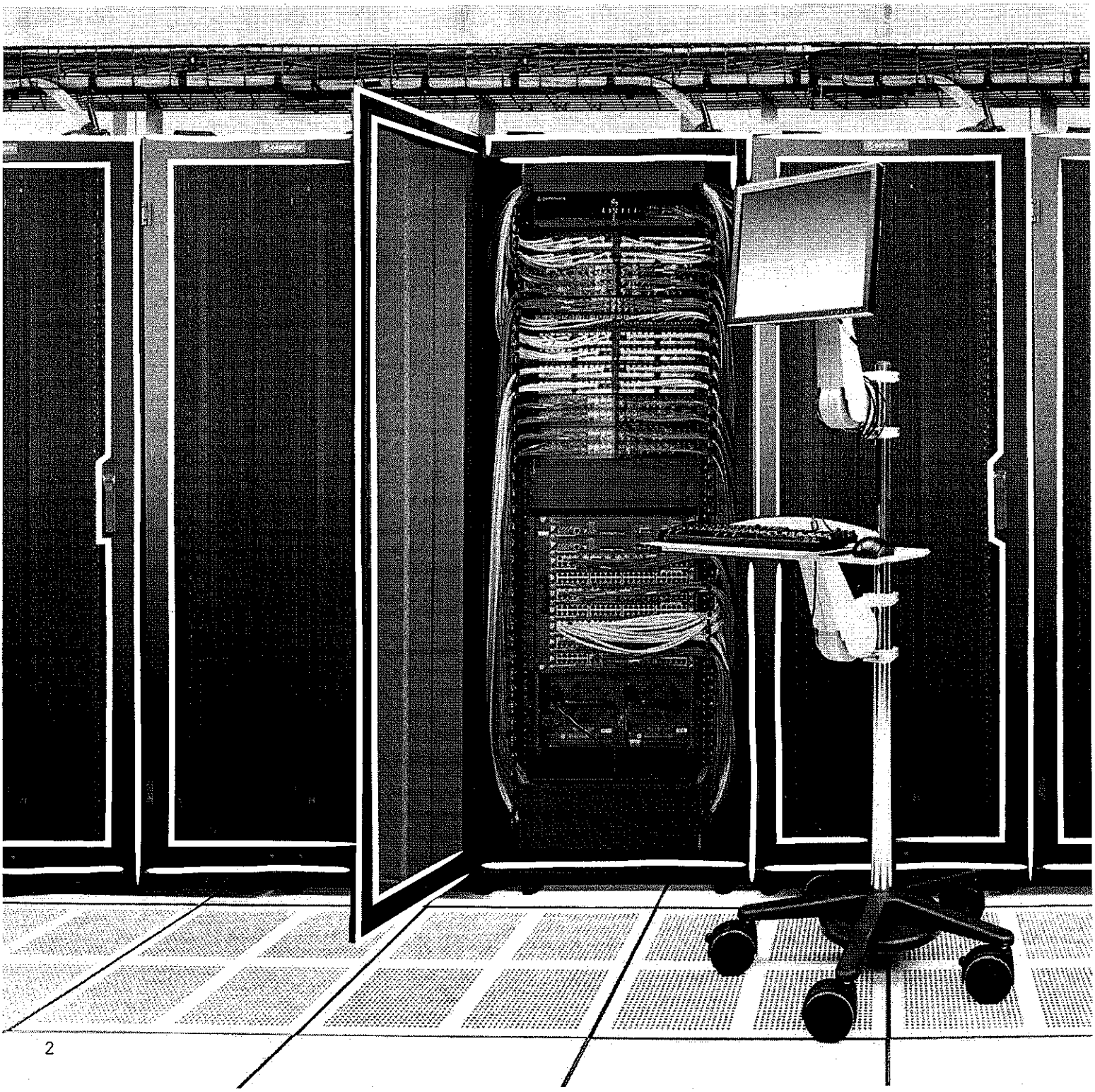
Designed to Perform, Configured to Fit

legrand®

Ortronics

Mighty Mo® GX

Configured By You, Made By Legrand | Ortronics



(adj.) ef·fi·cient

Performing or functioning in the best possible manner with the least waste of time and effort; having and using requisite knowledge, skill, and industry; competent; capable.

Ortronics® Mighty Mo® GX Cabinet system is an economical, configurable storage solution that allows you to build a cabinet to fit your server and networking equipment needs and airflow, cable and power requirements.

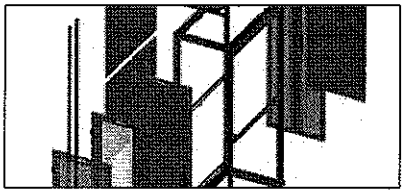
Mighty Mo GX is part of Layer Zero® Solutions

Features

The Mighty Mo GX Cabinet Series is made in the USA.

The Mighty Mo GX cabinet is fully modular and configurable to suit the needs of your specific installation. Each cabinet can be assembled with as few or as many accessories as needed to properly support your servers, switches and patch panels. The cabinets are designed to stand alone or easily gang together, as your network demands increase.

- Select models available for next day shipment
- Custom configured to meet equipment and space storage requirements
- Select accessories can be pre-installed, reducing installation time and packaging waste
- Configurations utilize a single part number and price to simplify ordering
- Available in 24U, 42U, 45U and 48U heights
- Available in 24" (match 24"W floor tiles), 29.5" and 31.5" widths
- Available in 36", 42" and 48" depths
- EIA mounting rails are available in 0.375" square hole or #12-24 tapped styles
- 3,000 lbs. static load capacity
- UL and cUL listed, UL 60950-1 2nd Edition, NWIN

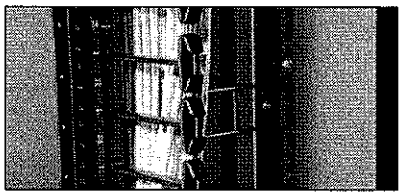


FULLY CONFIGURABLE

Mighty Mo GX cabinets are available in 29 different frame sizes and two colors (black or white). Built to your configuration, a single part number represents your cabinet design for simplified ordering and receiving. It arrives fully assembled for immediate, on-site installation.

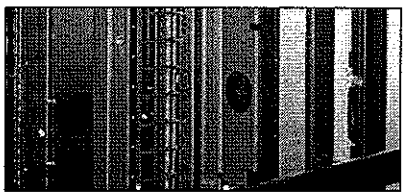
UNISTRUT FRAME DESIGN

The Unistrut design offers infinite mounting rail adjustments, enabling the installation of vertical accessories anywhere along the struts.



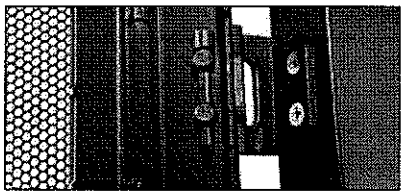
CABLE MANAGEMENT

Mighty Mo GX advanced cable management products provide improved management for both servers and high density switches. Available bend limiters provide standards compliant protection for fiber optic and 10G copper patch cords.



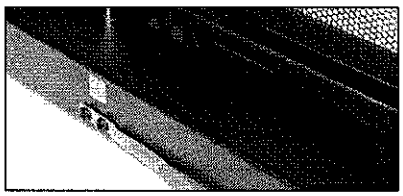
PASSIVE THERMAL MANAGEMENT

Mighty Mo GX baffles redirect the airflow of side vented equipment from the front to rear, ensuring the proper flow of air from cold aisle to hot aisle. Mighty Mo GX cabinets offer airflow baffles for single cabinet configurations, in between ganged cabinets and end of row cabinets.



ACCESS MANAGEMENT

Mighty Mo GX cabinet doors utilize 180° hinges to eliminate aisle blockage when loading or performing maintenance on equipment, without removing the door. All doors include locking handles to prevent unauthorized access and tampering. Side panels also come equipped with locks.



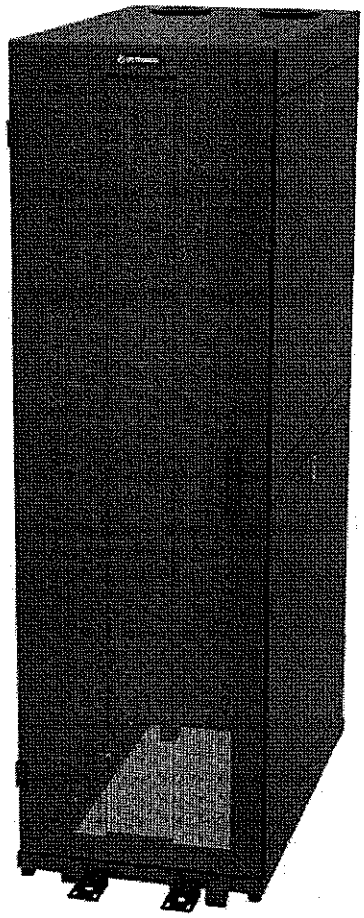
BONDING AND GROUNDING

Per the standard, every cabinet is bonded according to UL 60950-1 2nd Edition and offers a double-lug connection point at the front and rear of every frame.

c UL us LISTED

Pre-Configured Cabinets

PART NO.	DESCRIPTION
OR-GXC42242-A1-B	Server, cabinet assembly 42U (80.45"H), 24"W, 42"D, black
OR-GXN42292-A1-B	Network, cabinet assembly 42U (80.45"H), 29.5"W, 42"D, black



Server Cabinet Includes:

- 42U frame with levelers and casters
- Two pairs of RU labeled equipment mounting rails with 0.375" square holes
- Mounting rail spacing at 30"
- Full width front mesh door
- Split mesh rear door
- Solid top panel with (2) 4" diameter gland grommets
- Double-wide PDU-mount lacing bar
- Side panels, both sides
- Rack unit cage nuts, #12-24 thread (package of 50)
- Panel screws, #12-24 (package of 50)
- Color is black

Network Cabinet Includes:

- 42U frame with levelers and casters
- Two pairs of RU labeled equipment mounting rails with #12-24 tapped holes
- Mounting rail spacing at 16.25"
- Full width front mesh door
- Split mesh rear door
- Solid top panel with (2) 4" diameter gland grommets
- Double-wide PDU-mount lacing bar
- Side panels, both sides
- Panel screws, #12-24 (package of 50)
- Color is black

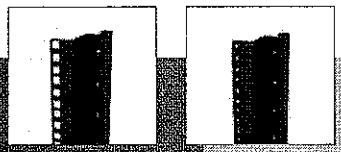
NEXT DAY SHIPMENT

The Mighty Mo GX offers two pre-configured cabinets, designed for servers or networking equipment. They are stocked and available in limited quantities for **next day shipment.**

Cabinet System

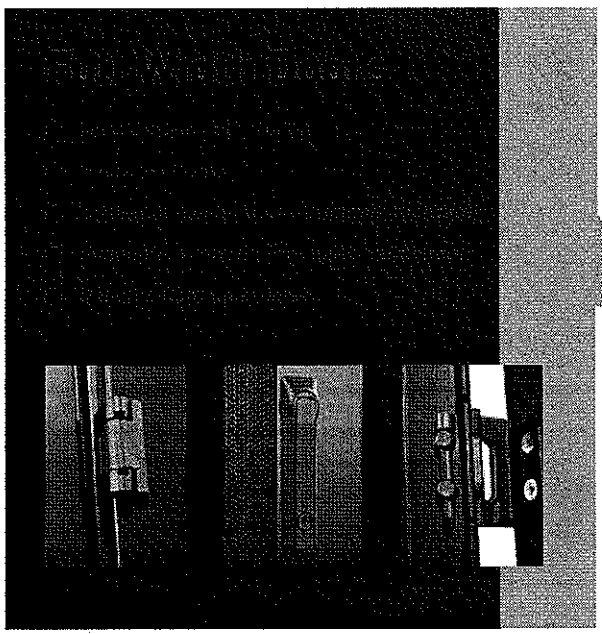
Side Panels

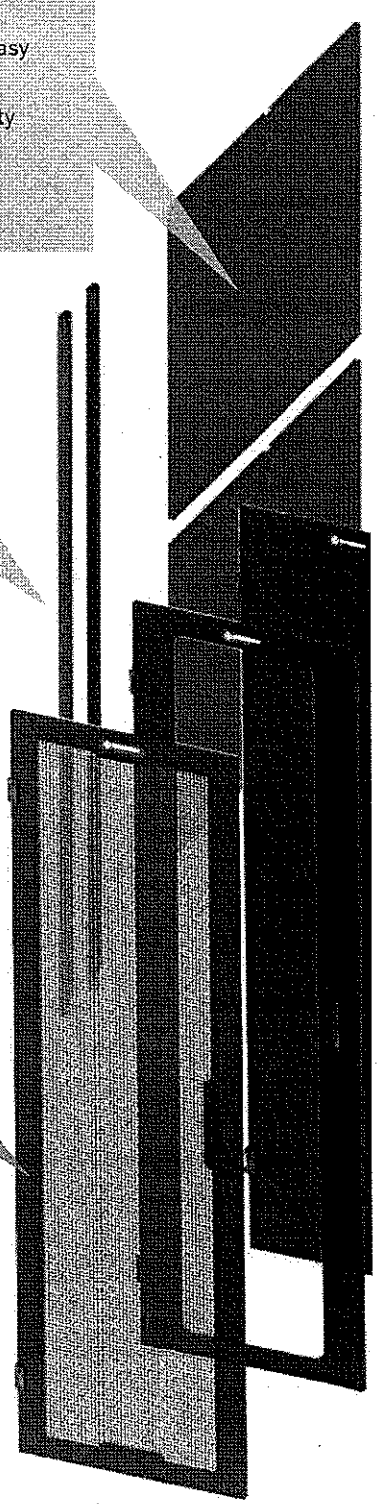
- 2-piece side panels simplify handling and allow easy access for MAC work
- Individually locking side panels for greater security
- Flush panels maintain exact cabinet width
- 24U cabinet has single piece side panel

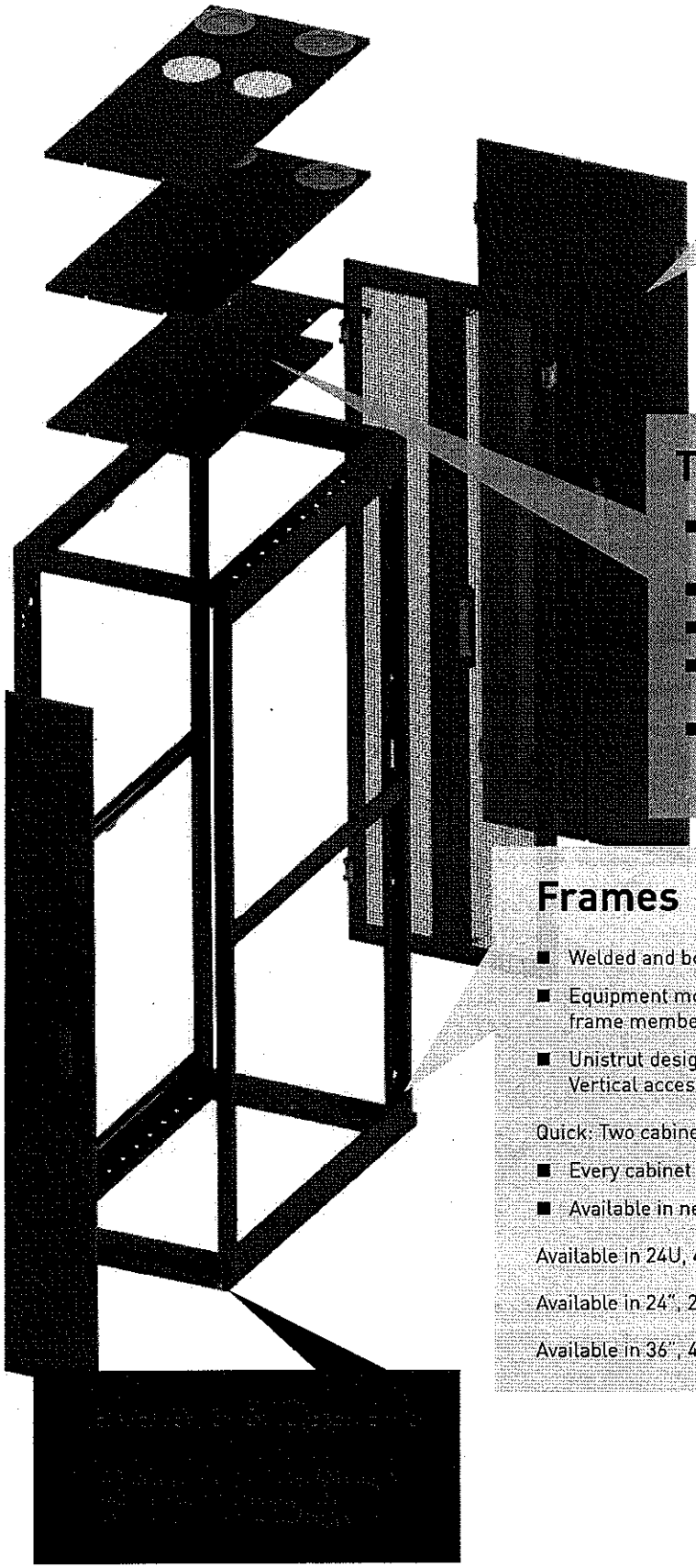


Mounting Rails

- EIA mounting rails are available with 0.375" square holes or #12-24 tapped holes
- Rack units are marked on each rail from top to bottom
- Rails positioned based on server rail spacing at 30" or network rail spacing at 16.25" cabinet design
- Fully adjustable along each frame







Split Doors

- Doors have 180° swing
- Lockable swing door handle is included
- Available in mesh and solid
- Mesh is 63% open area

Top Panels

- Top panels are single-piece construction a reversible to provide cable access in the fr
- Bolted to cabinet frame for added security
- Available in solid panel with two 4" cable g
- Available in vented with two 4" cable glan Optional fans are available.
- Available in cabling panel with two rectan that allow removal after cables are installe panel brush kit available.

Frames

- Welded and bolted steel four post frame
- Equipment mounting rails are supported by three front-to-back Unistrut frame members for added structural support
- Unistrut design allows for infinite mounting rail and accessory adjustment. Vertical accessories can be installed at any location along the strut.

Quick: Two cabinets can be ganged together with 8 bolts

- Every cabinet includes adjustable, self leveling feet and ganging hardware
- Available in network or server frame orientation

Available in 24U, 42U, 45U and 48U heights

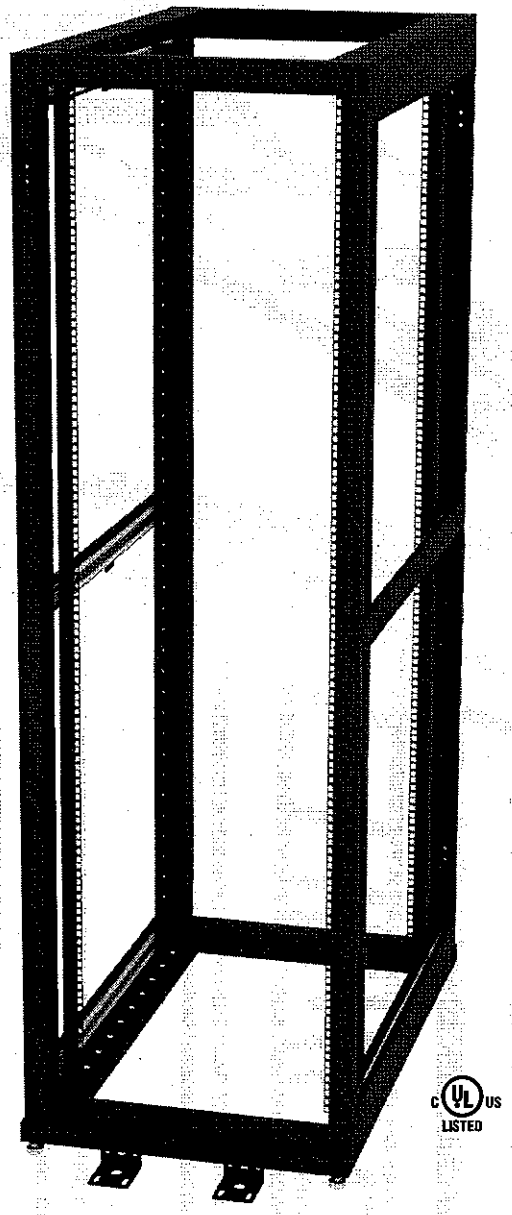
Available in 24", 29.5" and 31.5" widths

Available in 36", 42" and 48" depths

24" Wide GX Cabinets

Ideal for server applications, the 24"W Mighty Mo GX enclosure allows users to align with floor tiles, to stay "on grid" even when side panels are deployed. Speed of deployment was a primary consideration in design; the cabinets can be ganged by a single person without removing the doors. The cabinet provides maximum versatility with a static weight load capacity of 3,000 lbs., cable entry from the top or bottom and infinite rail adjustment. All cabinets are electrically bonded and UL and cUL listed, UL 60950-1 2nd Edition, NWIN.

These cabinets are configured-to-order, ensuring you get only what you need for your application. The structural components of the cabinet are available in black or white, while the accessories are available in black.



Configured-to-Order

Dimensions

- 24U - 24"W x 47.25"H x (36", 42")D
- 42U - 24"W x 78.75"H x (36", 42", 48")D
- 45U - 24"W x 84.00"H x (36", 42", 48")D
- 48U - 24"W x 89.25"H x (36", 42", 48")D

Weight Load Capacity

- 3,000 lbs. static
- 2,250 lbs. on casters

Agency Approvals

- UL60950-1
- RoHS compliant
- EIA compliant

Colors

- Black or white

FRAMES

24U	42U	45U	48U	DESCRIPTION
		OR-GXC452448-B	OR-GXC482448-B	48" deep frame with leveling feet
		OR-GXC452442-B	OR-GXC482442-B	42" deep frame with leveling feet
		OR-GXC452436-B	OR-GXC482436-B	36" deep frame with leveling feet

Note: Replace "-B" with "-W" for white

ENCLOSURE OPTIONS

	24U	42U	45U	48U	DESCRIPTION
EIA Mounting Rails		OR-GXC4224M38-B	OR-GXC4524M38-B	OR-GXC4824M38-B	0.375" square hole, 14 ga., black, includes 2 rails
		OR-GXC4224M12-B	OR-GXC4524M12-B	OR-GXC4824M12-B	#12-24 tapped, 12 ga., black, includes 2 rails
Doors, Full Width		OR-GXC4224DFM-B	OR-GXC4524DFM-B	OR-GXC4824DFM-B	Full width, mesh, 180° swing
		OR-GXC4224DFP-B	OR-GXC4524DFP-B	OR-GXC4824DFP-B	Full width, Plexiglas®, 180° swing
		OR-GXC4224DFS-B	OR-GXC4524DFS-B	OR-GXC4824DFS-B	Full width, solid, 180° swing
Doors, Split		OR-GXC4224DSM-B	OR-GXC4524DSM-B	OR-GXC4824DSM-B	Split, mesh, 180° swing
		OR-GXC4224DSS-B	OR-GXC4524DSS-B	OR-GXC4824DSS-B	Split, solid, 180° swing
Side Panels		OR-GXC4248SPSL-B	OR-GXC4548SPSL-B	OR-GXC4848SPSL-B	48" deep, solid, locking, covers 1 side of frame
		OR-GXC4242SPSL-B	OR-GXC4542SPSL-B	OR-GXC4842SPSL-B	42" deep, solid, locking, covers 1 side of frame
		OR-GXC4236SPSL-B	OR-GXC4536SPSL-B	OR-GXC4836SPSL-B	36" deep, solid, locking, covers 1 side of frame
Top Panels		OR-GXC2448TPS-B	OR-GXC2448TPS-B	OR-GXC2448TPS-B	48" deep, solid, includes (2) 4" dia. grommets
		OR-GXC2442TPS-B	OR-GXC2442TPS-B	OR-GXC2442TPS-B	42" deep, solid, includes (2) 4" dia. grommets
		OR-GXC2436TPS-B	OR-GXC2436TPS-B	OR-GXC2436TPS-B	36" deep, solid, includes (2) 4" dia. grommets
		OR-GXC2448TPV-B	OR-GXC2448TPV-B	OR-GXC2448TPV-B	48" deep, vented or fan, includes (2) 4" dia. grommets
		OR-GXC2442TPV-B	OR-GXC2442TPV-B	OR-GXC2442TPV-B	42" deep, vented or fan, includes (2) 4" dia. grommets
		OR-GXC2436TPV-B	OR-GXC2436TPV-B	OR-GXC2436TPV-B	36" deep, vented or fan, includes (2) 4" dia. grommets
		OR-GXC2448TPC-B	OR-GXC2448TPC-B	OR-GXC2448TPC-B	48" deep, cabling H-panel
		OR-GXC2442TPC-B	OR-GXC2442TPC-B	OR-GXC2442TPC-B	42" deep, cabling H-panel
		OR-GXC2436TPC-B	OR-GXC2436TPC-B	OR-GXC2436TPC-B	36" deep, cabling H-panel
Top Fans / Brush		OR-MMCFAN-6	OR-MMCFAN-6	OR-MMCFAN-6	6" fan for top panel, 120V, 235 CFM, 24" cord, 1 fan
		OR-GXCTPBK	OR-GXCTPBK	OR-GXCTPBK	Brush kit for cabling H-panel, covers both openings
Casters		OR-GXCCSTR-4	OR-GXCCSTR-4	OR-GXCCSTR-4	Casters, set of 4

Note: Replace "-B" with "-W" for white

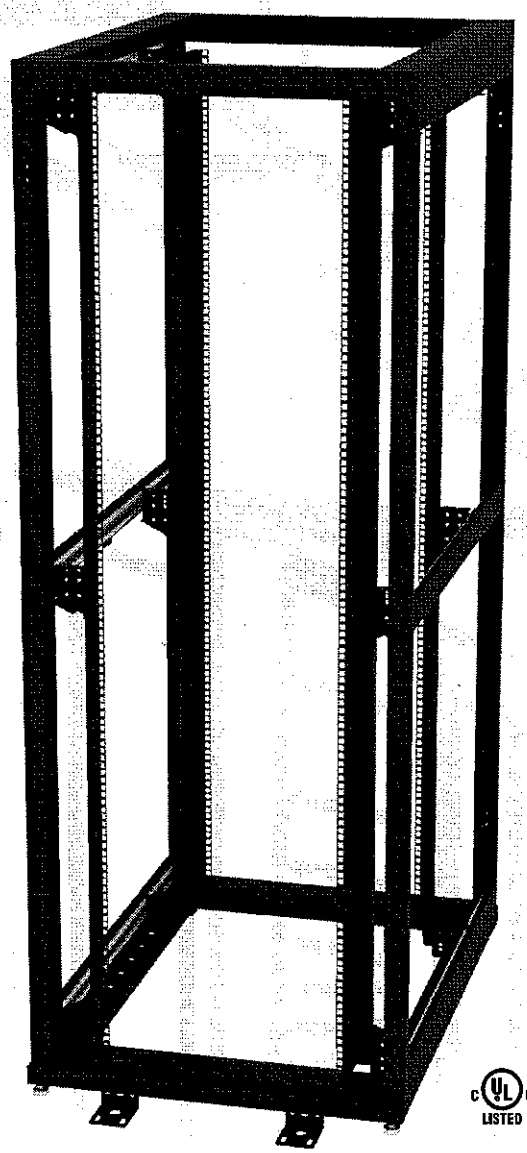
RECOMMENDED ACCESSORIES

	24U	42U	45U	48U	DESCRIPTION
Cable Management		OR-GXC42VFK	OR-GXC45VFK	OR-GXC48VFK	Vertical finger kit , covers 1 rail
		OR-MM6BLC	OR-MM6BLC	OR-MM6BLC	Bend limiting clip, 3.25" for vertical finger kits, qty 12
		OR-GXC42VPMLD	OR-GXC45VPMLD	OR-GXC48VPMLD	Cable lacing/PDU mount, double-wide
		OR-GXC4206VWT-B	OR-GXC4506VWT-B	OR-GXC4806VWT-B	Vertical wire trellis, 6" wide
Blanking Panels		OR-BFPT-1RU-10	OR-BFPT-1RU-10	OR-BFPT-1RU-10	Blanking panel, plastic, tool-less, 1U, pack of 10
Shelves		OR-MMCFSV-1924	OR-MMCFSV-1926	OR-MMCFSV-1926	Fixed - 19"EIA x 26"D, 4-point mount, 200 lbs. capacity
Hardware		OR-PS-1224CN	OR-PS-1224CN	OR-PS-1224CN	Single hole cage nuts, #12-24 thread, pkg of 50, clear
		OR-60400533	OR-60400533	OR-60400533	Panel mounting screws, #12-24 x 0.625", pkg of 50, black

Accessories are black unless noted otherwise

29.5" Wide GX Cabinets

The Mighty Mo GX 29.5"W was developed to meet the ever increasing cable densities while maintaining proper airflow patterns. Predictable air inlet temperature to side-breathing switches is ensured by installing an airflow baffle. Efficiency is gained by properly channeling the airflow to help solve the problem of over-temperature alarms. If the equipment has a front-to-rear airflow pattern, bypass airflow is eliminated by installing an air dam kit on the face of the cabinet. Side patching kits allow for mounting patch panels outside of the vertical rack unit space. Each kit contains (2) 1U 19" EIA mounting locations between the vertical mounting rail and the outside of the cabinet, allowing deployment of up to four additional patch panels per cabinet. A wide cable management offering facilitates proper routing of cabling to maintain the integrity of the network. The Mighty Mo GX will meet your most demanding network applications and is UL and cUL listed, UL 60950-1 2nd Edition, NWIN.



Configured-to-Order

Dimensions

- 42U – 29.5"W x 78.75"H x (36", 42", 48")D
- 45U – 29.5"W x 84.00"H x (36", 42", 48")D
- 48U – 29.5"W x 89.25"H x (36", 42", 48")D

Weight Load Capacity

- 3,000 lbs. static
- 2,250 lbs. on casters

Agency Approvals

- UL60950-1
- RoHS compliant
- EIA compliant

Colors

- Black or white

FRAMES

42U	45U	48U	DESCRIPTION
		OR-GXC482948-B	48" deep frame with leveling feet
		OR-GXC482942-B	42" deep frame with leveling feet
		OR-GXC482936-B	36" deep frame with leveling feet

Note: Replace "-B" with "-W" for white

ENCLOSURE OPTIONS

	42U	45U	48U	DESCRIPTION
EIA Mounting Rails		[redacted]	OR-GXC4829M38-B	0.375" square hole, 14 ga., black, includes 2 rails
		[redacted]	OR-GXC4829M12-B	#12-24 tapped, 12 ga., black, includes 2 rails
Doors, Full Width		[redacted]	OR-GXC4829DFM-B	Full width, mesh, 180° swing
		[redacted]	OR-GXC4829DFP-B	Full width, Plexiglas®, 180° swing
		[redacted]	OR-GXC4829DFS-B	Full width, solid, 180° swing
Doors, Split		[redacted]	OR-GXC4829DSM-B	Split, mesh, 180° swing
		[redacted]	OR-GXC4829DSS-B	Split, solid, 180° swing
Side Panels		[redacted]	OR-GXC4848SPSL-B	48" deep, solid, locking, covers 1 side of frame
		[redacted]	OR-GXC4842SPSL-B	42" deep, solid, locking, covers 1 side of frame
		[redacted]	OR-GXC4836SPSL-B	36" deep, solid, locking, covers 1 side of frame
Top Panels		[redacted]	OR-GXC2948TPS-B	48" deep, solid, includes (2) 4" dia. grommets
		[redacted]	OR-GXC2942TPS-B	42" deep, solid, includes (2) 4" dia. grommets
		[redacted]	OR-GXC2936TPS-B	36" deep, solid, includes (2) 4" dia. grommets
		[redacted]	OR-GXC2948TPV-B	48" deep, vented or fan, includes (2) 4" dia. grommets
		[redacted]	OR-GXC2942TPV-B	42" deep, vented or fan, includes (2) 4" dia. grommets
		[redacted]	OR-GXC2936TPV-B	36" deep, vented or fan, includes (2) 4" dia. grommets
		[redacted]	OR-GXC2948TPC-B	48" deep, cabling H-panel
		[redacted]	OR-GXC2942TPC-B	42" deep, cabling H-panel
		[redacted]	OR-GXC2936TPC-B	36" deep, cabling H-panel
Top Fans / Brush		[redacted]	OR-MMCFAN-6	6" fan for top panel, 120V, 235 CFM, 24" cord, 1 fan
		[redacted]	OR-GXCTPBK	Brush kit for cabling H-panel, covers both openings
Casters		[redacted]	OR-GXCCSTR-4	Casters, set of 4

Note: Replace "-B" with "-W" for white

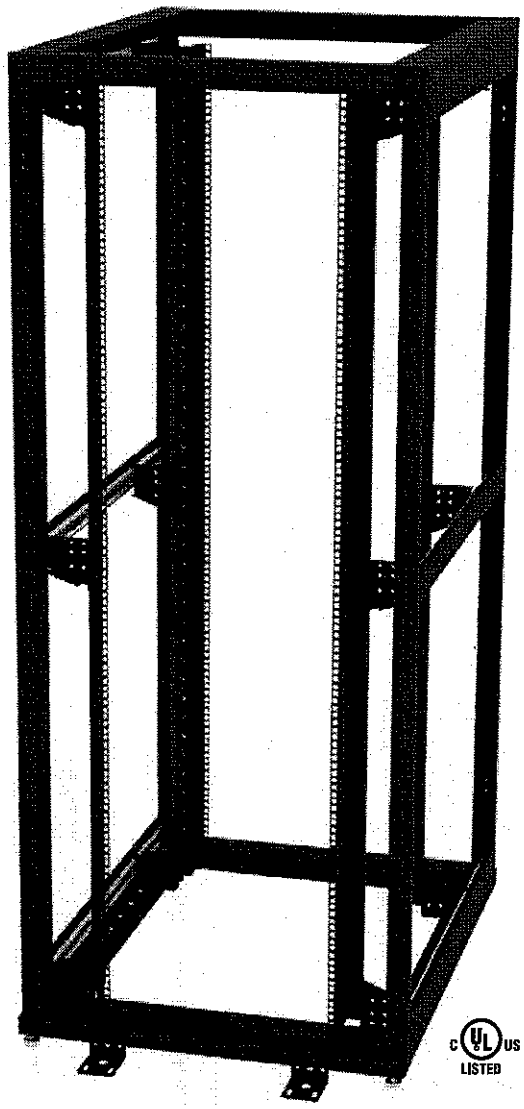
RECOMMENDED ACCESSORIES

	42U	45U	48U	DESCRIPTION
Cable Management		[redacted]	OR-GXC48VFK	Vertical finger kit, covers 1 rail
		[redacted]	OR-MM6BLC	Bend limiting clip, 3.25" for vertical finger kits, qty 12
		[redacted]	OR-GXC48VPMLD	Cable lacing/PDU mount, double-wide
		[redacted]	OR-GXC4806VWT-B	Vertical wire trellis, 6" wide
		[redacted]	OR-GXC29WMK-5	Wire manager kit, mounts between (2) 29.5"W frames, kit of 5
		[redacted]	OR-GXC4829SPB-B	Side patching baffle - covers one side of cabinet
Airflow Management		[redacted]	OR-GXC4829ADK-B	Air dam kit, 29.5" W cabinets
		[redacted]	OR-GXCAB481629	Angled airflow baffles, 16.25"D, mounts between (2) 29.5"W frames
		[redacted]	OR-GXCAB483029	Angled airflow baffles, 30"D, mounts between (2) 29.5"W frames
Blanking Panels		[redacted]	OR-BFPF-1RU-10	Blanking panel, plastic, tool-less, 1U, pack of 10
Shelves		[redacted]	OR-MMCFSV-1926	Fixed shelf - 19" EIA x 26"D, 4-point mount, 200 lbs. capacity
Hardware		[redacted]	OR-PSF12240N	Single hole cage nuts, #12-24 thread, pkg of 50, clear
		[redacted]	OR-60400533	Panel mounting screws, #12-24 x 0.625", pkg of 50, black

Accessories are black unless noted otherwise

31.5" Wide GX Cabinets

The 31.5"W Mighty Mo GX possesses all the features and benefits of the 29.5"W cabinet while providing more width for cable intensive applications. The extra width allows for larger cable bundles to be managed to the sides of the cabinet and not impede airflow. Multiple top panels are also available providing flexibility for cable entry and egress. The Mighty Mo GX is UL and cUL listed, UL 60950-1 2nd Edition, NWIN. These cabinets are configured-to-order, ensuring you get only what you need for your application.



Configured-to-Order

Dimensions

- 42U – 31.5"W x 78.75"H x (36", 42", 48")D
- 45U – 31.5"W x 84.00"H x (36", 42", 48")D
- 48U – 31.5"W x 89.25"H x (36", 42", 48")D

Weight Load Capacity

- 3,000 lbs. static
- 2,250 lbs. on casters

Agency Approvals

- UL60950-1
- RoHS compliant
- EIA compliant

Colors

- Black or white

FRAMES

42U	45U	48U	DESCRIPTION
	OR-GXC453148-B	OR-GXC483148-B	48" deep frame with leveling feet
	OR-GXC453142-B	OR-GXC483142-B	42" deep frame with leveling feet
	OR-GXC453136-B	OR-GXC483136-B	36" deep frame with leveling feet

Note: Replace "-B" with "-W" for white

ENCLOSURE OPTIONS

	42U	45U	48U	DESCRIPTION
EIA Mounting Rails	[redacted]	[redacted]	OR-GXC4831M3B-B	0.375" square hole, 14 ga., black, includes 2 rails
	[redacted]	[redacted]	OR-GXC4831M12-B	#12-24 tapped, 12 ga., black, includes 2 rails
Doors, Full Width	[redacted]	[redacted]	OR-GXC4831DFM-B	Full width, mesh, 180° swing
	[redacted]	[redacted]	OR-GXC4831DFP-B	Full width, Plexiglas®, 180° swing
	[redacted]	[redacted]	OR-GXC4831DFS-B	Full width, solid, 180° swing
Doors, Split	[redacted]	[redacted]	OR-GXC4831DSM-B	Split, mesh, 180° swing
	[redacted]	[redacted]	OR-GXC4831DSS-B	Split, solid, 180° swing
Side Panels	[redacted]	[redacted]	OR-GXC4848SPSL-B	48" deep, solid, locking, covers 1 side of frame
	[redacted]	[redacted]	OR-GXC4842SPSL-B	42" deep, solid, locking, covers 1 side of frame
	[redacted]	[redacted]	OR-GXC4836SPSL-B	36" deep, solid, locking, covers 1 side of frame
Top Panels	[redacted]	[redacted]	OR-GXC3148TPS-B	48" deep, solid, includes (2) 4" dia. grommets
	[redacted]	[redacted]	OR-GXC3142TPS-B	42" deep, solid, includes (2) 4" dia. grommets
	[redacted]	[redacted]	OR-GXC3136TPS-B	36" deep, solid, includes (2) 4" dia. grommets
	[redacted]	[redacted]	OR-GXC3148TPV-B	48" deep, vented or fan, includes (2) 4" dia. grommets
	[redacted]	[redacted]	OR-GXC3142TPV-B	42" deep, vented or fan, includes (2) 4" dia. grommets
	[redacted]	[redacted]	OR-GXC3136TPV-B	36" deep, vented or fan, includes (2) 4" dia. grommets
	[redacted]	[redacted]	OR-GXC3148TPC-B	48" deep, cabling H-panel
	[redacted]	[redacted]	OR-GXC3142TPC-B	42" deep, cabling H-panel
	[redacted]	[redacted]	OR-GXC3136TPC-B	36" deep, cabling H-panel
Top Fans / Brush	[redacted]	[redacted]	OR-VMCFAN-4	6" fan for top panel, 120V, 235 CFM, 24" cord, 1 fan
	[redacted]	[redacted]	OR-GXCTFBK	Brush kit for cabling H-panel, covers both openings
Casters	[redacted]	[redacted]	OR-GXCCSTR-4	Casters, set of 4

Note: Replace "-B" with "-W" for white

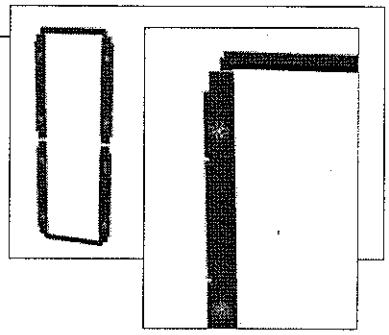
RECOMMENDED ACCESSORIES

	42U	45U	48U	DESCRIPTION
Cable Management	[redacted]	[redacted]	OR-GXC48VFK	Vertical finger kit, covers 1 rail
	[redacted]	[redacted]	OR-VM6BLC	Bend limiting clip, 3.25" for vertical finger kits, qty 12
	[redacted]	[redacted]	OR-GXC48VPMLD	Cable facing/PDU mount, double-wide
	[redacted]	[redacted]	OR-GXC4806VWT-B	Vertical wire trellis, 6" wide
	[redacted]	[redacted]	OR-GXC31WMK-5	Wire manager kit, mounts between (2) 31.5"W frames, kit of 5
	[redacted]	[redacted]	OR-GXC4831SPB-B	Side patching baffle - covers one side of cabinet
Airflow Management	[redacted]	[redacted]	OR-GXC4831ADK-B	Air dam kit, 31.5" W cabinets
	[redacted]	[redacted]	OR-GXCABV4831	Angled airflow baffles, 16.25"D, mounts between (2) 31.5"W frames
	[redacted]	[redacted]	OR-GXCAB4830	Angled airflow baffles, 30"D, mounts between (2) 31.5"W frames
Blanking Panels	[redacted]	[redacted]	OR-BFP-1RU-10	Blanking panel, plastic, tool-less, 1U, pack of 10
Shelves	[redacted]	[redacted]	OR-MMCFSV-1926	Fixed shelf - 19" EIA x 26" D, 4-point mount, 200 lbs. capacity
Hardware	[redacted]	[redacted]	OR-PS-1224CN	Single hole cage nuts, #12-24 thread, pkg of 50, clear
	[redacted]	[redacted]	OR-0040088	Panel mounting screws, #12-24 x 0.625", pkg of 50, black

Accessories are black unless noted otherwise

Airflow Management

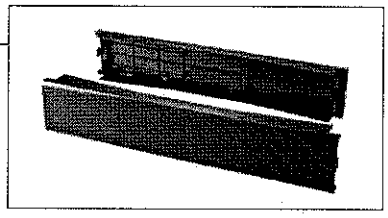
AIR DAM KITS



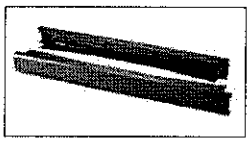
Blocking the opening from the edge of the front mounting rails to the side panel of the cabinet, as well as the space above and below the mounting rails, keeps hot and cold air from mixing. There are 3" starburst shaped cable pass throughs; 2 per section, 4 per side. Air Dam kits cover both sides of the cabinet. Available for the 29.5" and 31.5" cabinet widths.

	CABINET WIDTH	
FRAME HEIGHT	29.5"	31.5"
42U	OR-GXC4229ADK-B	OR-GXC4231ADK-B
45U	OR-GXC4529ADK-B	OR-GXC4531ADK-B
48U	OR-GXC4829ADK-B	OR-GXC4831ADK-B

FILLER PANELS

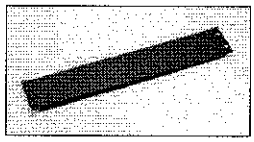


Improve network performance by utilizing filler panels to fill all open rack spaces and control airflow, improving the separation of the hot and cold aisles. Tool-less plastic panels work with tapped or square holes. Use the 19" rack mount fan panel to eliminate hot spots.



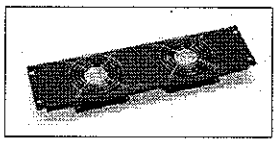
Filler Panels, Tool-less Snap-in 19" EIA (Ships in packs of 10)

HEIGHT	PART NUMBER
1U	OR-BFPT-1RU-10
2U	OR-BFPT-2RU-10



Filler Panels, Formed Steel 19" EIA

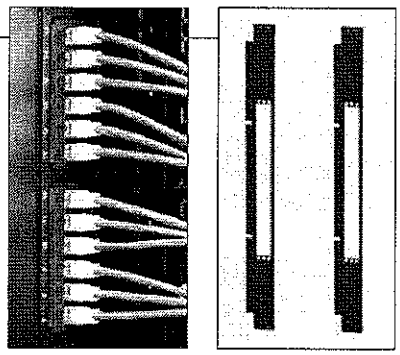
HEIGHT	PART NUMBER
1U	OR-MMCFPS-1-B
2U	OR-MMCFPS-2-B
3U	OR-MMCFPS-3-B
4U	OR-MMCFPS-4-B
5U	OR-MMCFPS-5-B
6U	OR-MMCFPS-6-B



Filler Panels, Fan - 19" EIA-120V

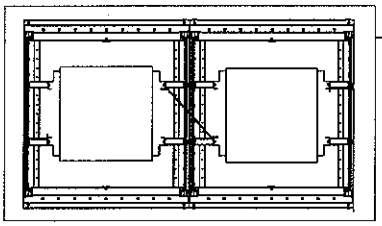
HEIGHT	PART NUMBER
2U	OR-MMCFANP19-4-2

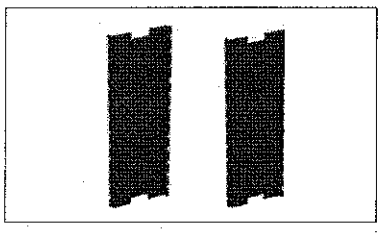
SIDE PATCHING BAFFLES



Zero RU patching: 1RU patch panels can be vertically mounted outside of your typical equipment panel space in a 'side patching baffle'. Kit includes 1RU 19" equipment mounting location per section (2RU total - one on top and bottom, for each side). Available for the 29.5" and 31.5" cabinet widths. Side patching can allow the use of a single length patch cord.

	CABINET WIDTH	
FRAME HEIGHT	29.5"	31.5"
42U	OR-GXC4229SPB-B	OR-GXC4231SPB-B
45U	OR-GXC4529SPB-B	OR-GXC4531SPB-B
48U	OR-GXC4829SPB-B	OR-GXC4831SPB-B



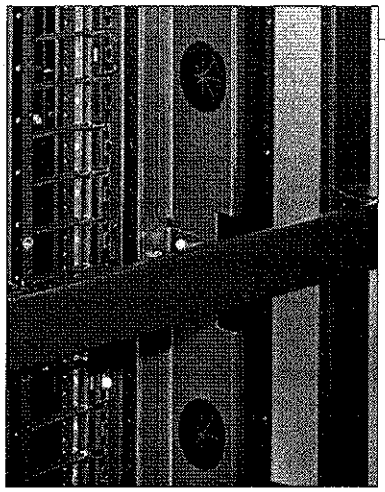


AIRFLOW BAFFLES, BETWEEN CABINETS

Angled airflow baffles are designed to work with side breathing switches and redirect airflow to maintain separation between the hot and cold aisles. They mount to the mounting rails of one cabinet, across to the adjoining cabinet. The baffle is notched to allow installation around the center Unistrut. Available for the 29.5" and 31.5" cabinet widths.

16.25" Rail Spacing	CABINET WIDTH	
FRAME HEIGHT	29.5"	31.5"
42U	OR-GXCAB421629	OR-GXCAB421631
45U	OR-GXCAB451629	OR-GXCAB451631
48U	OR-GXCAB481629	OR-GXCAB481631

30.00" Rail Spacing	CABINET WIDTH	
FRAME HEIGHT	29.5"	31.5"
42U	OR-GXCAB423029	OR-GXCAB423031
45U	OR-GXCAB453029	OR-GXCAB453031
48U	OR-GXCAB483029	OR-GXCAB483031



AIRFLOW BAFFLES, END OF ROW

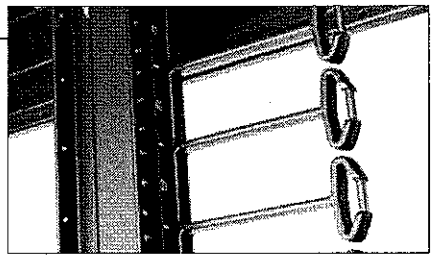
Blocking the opening from the edge of the front mounting rails to the side panel of the cabinet maintains the separation between the hot and cold aisles. These baffles work with side breathing switches. There are 3" starburst shaped cable pass throughs; 2 per section, 4 per side. Available for the 29.5" and 31.5" cabinet widths.

16.25" Rail Spacing	CABINET WIDTH	
FRAME HEIGHT	29.5"	31.5"
42U	OR-GXCAB421629SA	OR-GXCAB421631SA
45U	OR-GXCAB451629SA	OR-GXCAB451631SA
48U	OR-GXCAB481629SA	OR-GXCAB481631SA

30.00" Rail Spacing	CABINET WIDTH	
FRAME HEIGHT	29.5"	31.5"
42U	OR-GXCAB423029SA	OR-GXCAB423031SA
45U	OR-GXCAB453029SA	OR-GXCAB453031SA
48U	OR-GXCAB483029SA	OR-GXCAB483031SA

Cable Management

VERTICAL FINGER KITS

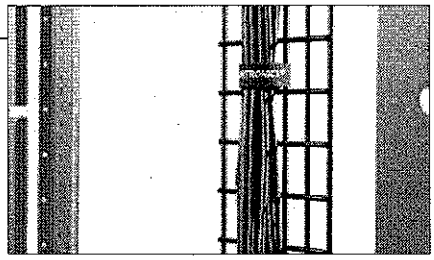


Provide support and maintain the proper bend radius for patch cords and cable at each rack unit. Also protects equipment ports from damage by minimizing tension on the cords. Vertical finger kits mount directly to the vertical mounting rails. Each kit covers 1 rail. Bend limiting clips provide bend limitation for fiber optic jumpers.

CABINET HEIGHT	PART NUMBER
42U	OR-GXC42VFK
45U	OR-GXC45VFK
48U	OR-GXC48VFK

PART NUMBER	DESCRIPTION
OR-MM6BLC	Mighty Mo bend limiting clip 3.25" long, snaps onto fingers, qty 12

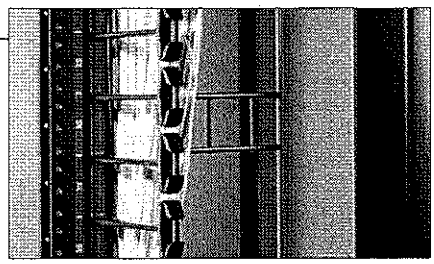
VERTICAL WIRE TRELLIS



Flat wire form has vertical and horizontal wire cross hatch pattern. The horizontal wires are set at every 1 rack unit to provide a flexible lacing back-drop. The trellis is 6" wide to accommodate several cable bundles at one time.

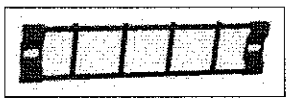
CABINET HEIGHT	PART NUMBER
42U	OR-GXC4206VWT-B
45U	OR-GXC4506VWT-B
48U	OR-GXC4806VWT-B

WIRE MANAGER KIT

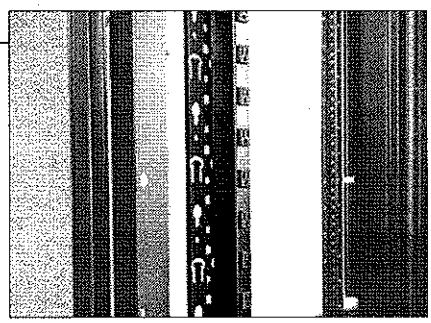


Set of (5) 2" tall wire forms connect cable management fingers between cabinets to simulate a wire management 'cage' within the open space between two ganged cabinets. Wire managers mount to vertical mounting rails between adjoining cabinets. As many wire forms as desired can be installed between cabinets.

CABINET HEIGHT	PART NUMBER
29.5"	OR-GXC29WMK-5
31.5"	OR-GXC31WMK-5

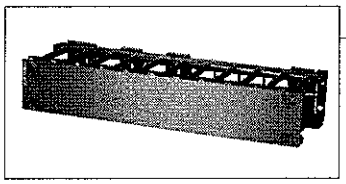


PDU MOUNT / LACING BARS



Available in single and double widths. Button mount allows for tool-less mounting of vertical PDUs. The tear-drop shaped slots allow hook and loop fasteners to be dropped over the bar and tightened instead of trying to feed the fasteners through from the back.

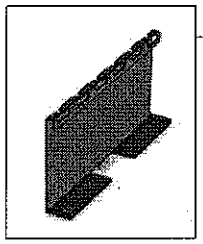
CABINET HEIGHT	SINGLE WIDE PART NUMBER	DOUBLE WIDE PART NUMBER
24U	OR-GXC24VPMLS	OR-GXC24VPMLD
42U	OR-GXC42VPMLS	OR-GXC42VPMLD
45U	OR-GXC45VPMLS	OR-GXC45VPMLD
48U	OR-GXC48VPMLS	OR-GXC48VPMLD



HORIZONTAL CABLE MANAGERS

Horizontal cable managers organize cables and maximize system performance.

PART NUMBER	DESCRIPTION
OR-MM6HMF1RU	Horizontal manager, fingers, cover, 1 rack unit
OR-MM6HMF2RU	Horizontal manager, fingers, cover, 2 rack units
OR-60400131	Horizontal manager, 9 steel rings, 3.5" D, 1 rack unit
OR-60400057	Horizontal manager, 5 steel rings, 4" D, 2 rack units

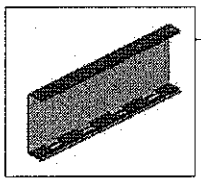


CABLE TRAY MOUNTING BRACKETS

Cable tray mounting brackets mount to the top of the cabinet and use the Cablofil FAS method to attach cable tray without any additional hardware. They can be used alone or in conjunction with cable troughs.

TRAY WIDTH	PART NUMBER
6"	OR-MMCCTMB06-B
12"	OR-MMCCTMB12-B
18"	OR-MMCCTMB18-B

Note: Replace "-B" with "-W" for white

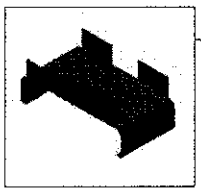


CABLE RUNWAY BRACKETS

Cable runway brackets mount to the top of the cabinet, providing a surface to attach 6", 12" or 18" wide runway.

RUNWAY WIDTH	PART NUMBER
6"	OR-MMCCRMB06-B
12"	OR-MMCCRMB12-B
18"	OR-MMCCRMB18-B

Note: Replace "-B" with "-W" for white



CABLE TROUGHS

Cable troughs provide low profile cable routing that mounts to the top of the cabinet. They can be used alone or in conjunction with Cablofil® cable tray. Available in 6", 12" and 18" widths.

	CABINET WIDTH		
TROUGH WIDTH	24"	29.5"	31.5"
6"	OR-MMC2406CTCE-B	OR-GXC2906CTCE-B	OR-GXC3106CTCE-B
12"	OR-MMC2412CTCE-B	OR-GXC2912CTCE-B	OR-GXC3112CTCE-B
18"	OR-MMC2418CTCE-B	OR-GXC2918CTCE-B	OR-GXC3118CTCE-B

Note: Replace "-B" with "-W" for white

EXHIBIT T

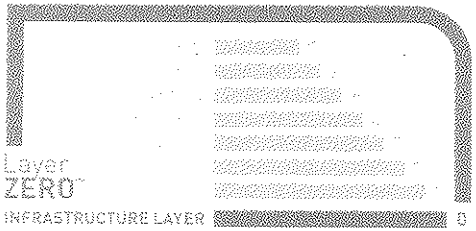
Cancellation Proceeding No. 92054573
LayerZero Power Systems, Inc. v. Ortronics, Inc.

Exhibit Offered by Ortronics, Inc.

ENCYCLOPEDIA OF LAYER ZERO

a user's guide

ORTRONICS

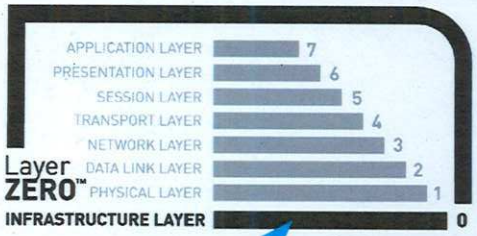

Layer
ZERO™
INFRASTRUCTURE LAYER
0

LAYER ZERO DEFINED

Layer Zero™

lay•er ze•ro \ lā-ɚr zir-ō\

Layer Zero is the new foundation layer for the ISO/OSI model introduced by Ortronics. Layer Zero - the Infrastructure Layer™ - addresses the critical role that the physical infrastructure plays in network performance. A new level of stability is introduced to the network by recognizing the importance of the underlying layer and emphasizing best practices in pathway and physical support design. Layer Zero encompasses the entire physical infrastructure that supports your network: not only racks and cabinets with advanced cable management, but underfloor and overhead systems, pathways solutions and more.



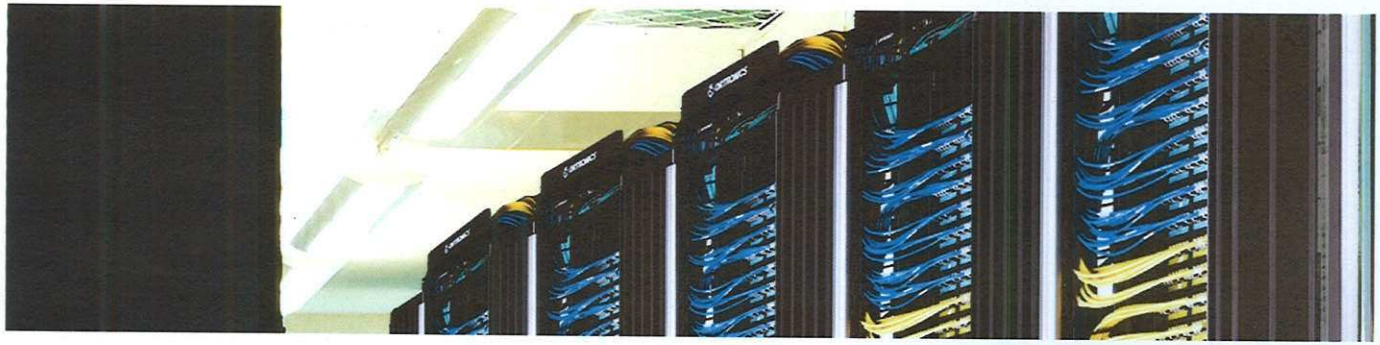
layer zero encompasses the entire physical infrastructure that supports your network.

HOW DOES LAYER ZERO IMPACT THE NETWORK?

The innovative Layer Zero™ approach to physical infrastructure solutions can maximize network performance in a data center, commercial office, healthcare facility or educational institution. Layer Zero solutions can have a dramatic effect on the system by lowering the overall temperature in the data center, reducing the risk of equipment failure and enhancing system performance, all while providing significant energy savings.

hot spot challenges

One of the most popular attempts to address hot spots is to spread the density load throughout the data center. The expectation is that by scattering the higher heat producing racks throughout the room, high temperatures won't congregate in one spot. However, the dynamic allocation of server loads means those loads, as well as their physical location, change over time. Much of the predictability for higher cooling needs is lost in this environment.



a solution that works

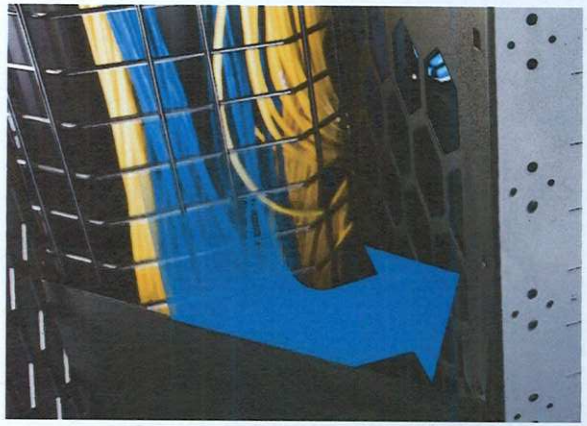
Instead of spreading the load throughout the room, choose a physical infrastructure that allows high density racks to maintain proper temperature regardless of their location in the server room.

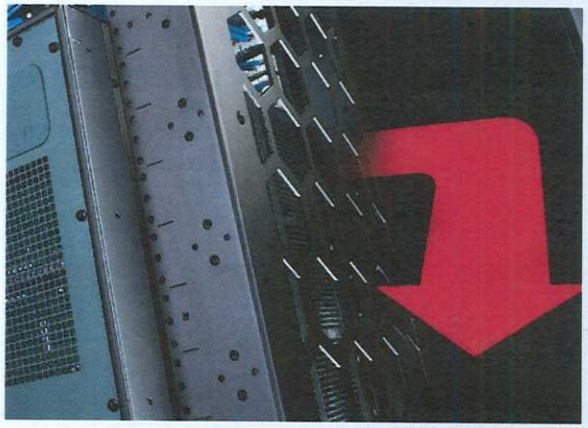
proper layer zero solutions maximize performance and create energy savings

WHY THE NEED FOR LAYER ZERO™?

The amount of data that networks are being designated to handle is growing at exponential rates. Advances in technology are placing an even greater burden on network hardware, software, bandwidth and connectivity. Systems are being called on to support more media rich, higher bandwidth applications such as Facebook®, Hulu®, Netflix® and ecommerce. Networks must have greater security, storage capacity and more in depth processing to support the demands of applications such as POS and medical imaging and to comply with governmental regulations. These increased demands strain the existing physical infrastructure with increased loads, higher temperatures and higher densities, creating a need for better performance, better cooling and more flexibility.

cool air in

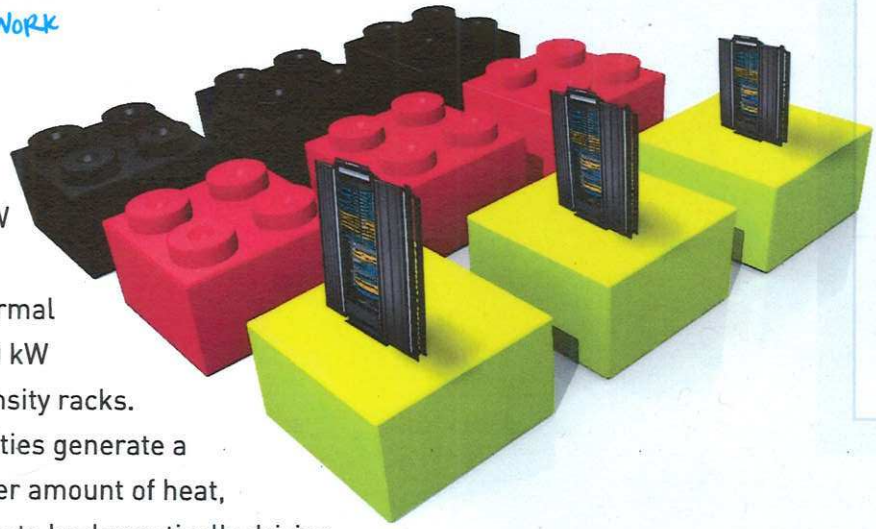




hot air out

increased loads, higher temperatures, higher densities
WHERE'S THE RELIEF?

the building blocks for your network



Today's networks are being taxed in ways they never have been before: the average kW usage has increased from 1 – 2 kW for a normal density rack to over 20 kW used by some high density racks. These increased densities generate a correspondingly greater amount of heat, driving up electrical costs by dramatically driving down the efficiency of conventional air conditioning systems. Network managers need to be able to integrate the greater network demands without being forced to reconfigure their entire cooling system.

YOUR NETWORK IS ONLY AS GOOD AS YOUR WEAKEST LINK

Realizing how the distribution of hot and cold air affects the entire network

the green grid™ member

Virtualization means each server is running at higher utilization and power consumption levels. Virtualized servers tend to be grouped in ways that create hot spots. - The Impact of Virtualization on a Data Center Physical Infrastructure, THE GREEN GRID

LAYER ZERO ADDS TO THE BOTTOM LINE

Layer Zero™ solutions can lower a customer's energy costs for cooling switches by 60%.

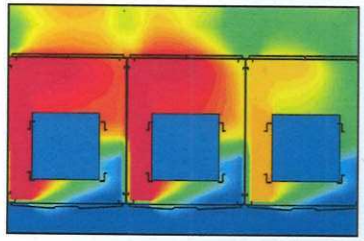
Passive cooling, proper airflow and cable management can allow an increase to the overall ambient temperature threshold by up to 15º.

Every 1º increase in set point

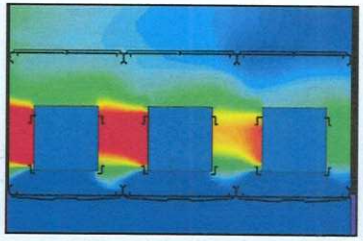
=

4% savings in energy costs

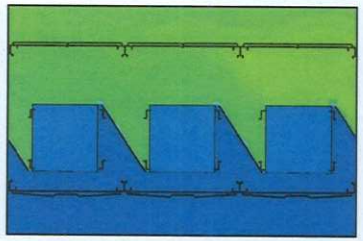
15º x 4% = 60% savings



The first two examples show hot and cold air mixing at the intake with exhaust temperatures reaching the 105°F mark.



In an Ortronics study, the Mighty Mo® cabinet with airflow baffles reduced the exhaust temperature by 20°. The intake air only needed to be cooled to 55°F.



The alternative rack system needed intake air cooled to 40°F to generate the same lower exhaust temperature. This reduction allowed the ambient temperature threshold to be raised by 15°F.

7 KEY ELEMENTS TO AN EFFECTIVE NETWORK

Ortronics has identified 7 key elements that shape the effectiveness of your network. Managing these 7 elements will maximize your network's potential.

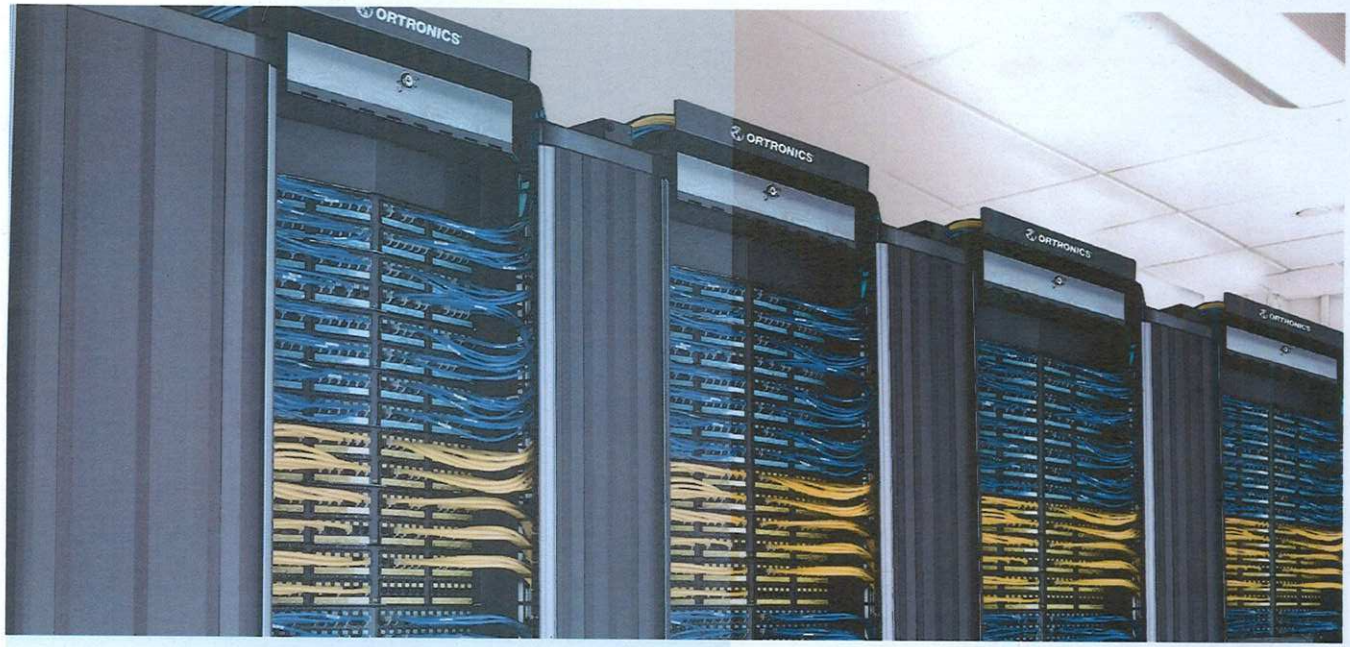
more efficient cooling of network equipment

With the right planning, the defining elements of capacity, density, efficiency and scalability can be aligned through the infrastructure. One basic best practice: adopt the rack as the basic building block for data center density. – Energy Efficient Data Center Solutions and Best Practices, CISCO

Ortronics is a solution developer partner within the Cisco Developer Network Program.

LAYER ZERO PROMOTES MORE EFFICIENT COOLING OF NETWORK EQUIPMENT THROUGH PROPER AIRFLOW AND CABLE MANAGEMENT.

CHANGING THE WAY YOU LOOK AT YOUR NETWORK



airflow management

Heat exhaust and hot spots are better managed using a passive cooling design, ensuring proper airflow and protecting equipment with better ventilation.

Layer Zero™ infrastructure solutions manage heat across the entire network. Honeycomb side rails allows for better equipment ventilation; airflow baffles isolate cold aisle and hot aisle air more effectively; wire mesh cable trays promote air circulation.

LAYER ZERO OFFERS A MORE COMPLETE SOLUTION FOR YOUR INFRASTRUCTURE NEEDS.

density

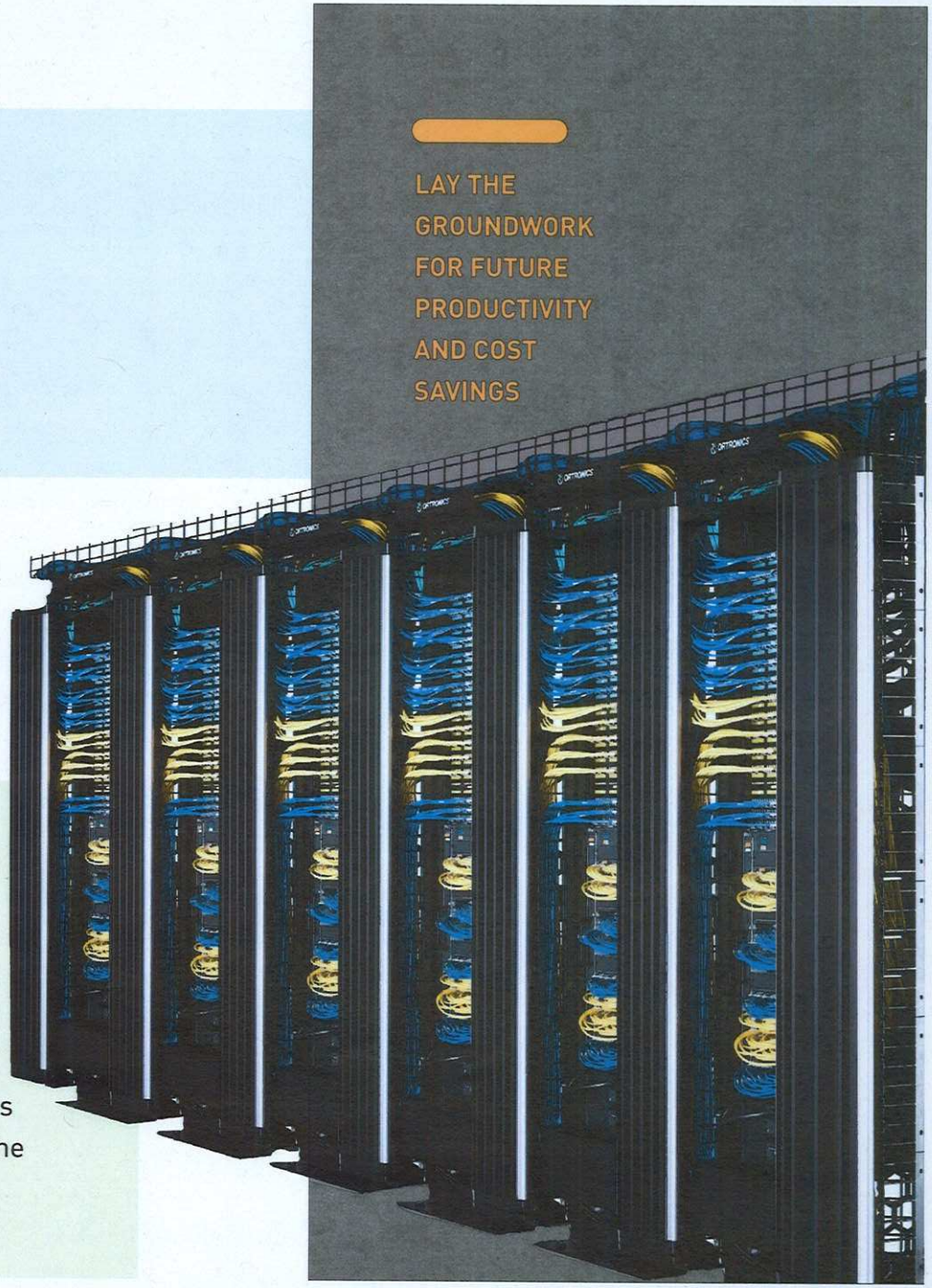
Higher density drives up energy costs because it dramatically drives down the efficiency of conventional air conditioning systems. Density demands of virtualization, convergence and consolidation require greater support.

Layer Zero can help you optimize your network real estate by organizing cable bulk, allowing for more patch cords per rack unit, while still increasing cooling. We allow up to 48 patch cords per unit on a single side of the equipment, with deeper cable channels providing ample room even when the switch is loaded to capacity.

energy efficiency

True passive thermal management: cooling without fans - not introducing any additional power requirements.

Mighty Mo® racks and cabinets use passive cooling to lower equipment temperatures. Airflow baffles and honeycomb sides isolate and direct intake and exhaust air without introducing the additional energy consumption of fans.



CHANGING THE WAY YOU LOOK AT YOUR NETWORK

DESIGNED TO PROVIDE ROOM TO GROW

network performance

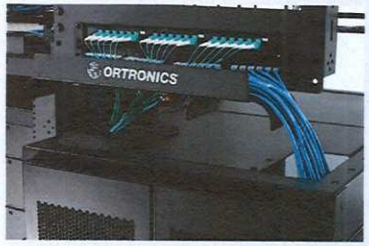
Maximize network performance by minimizing signal loss due to improper cable support; eliminate hot spots that cause network failure and provide proper support for network equipment.

Our cable management optimizes cable support and patch cord routing. Bend limiting clips ensure proper bend radius; large fingers and deeper channels are recessed flush with the face of the switch to prevent strain on the cables.

flexibility

Assure a flexible physical design that will support technology demands from the physical layer: a well thought out Layer Zero™ infrastructure enables MAC work to have a minimal impact.

Our infrastructure solutions can be adjusted even after installation. They are optimized for copper and fiber connectivity and heavy equipment. They are fully modular and are configurable to suit the needs of your specific installation.



scalability

Layer Zero™ solutions support fast and seamless adaptations to changing business requirements, facilitating growth without major disruptions.

Mighty Mo® racks and cabinets are built with higher weight thresholds, allowing equipment to be added as necessary. Our overhead cable pathway racks fully integrate with Cablofil® cable trays, providing alternative cable pathways, as well as room for additional patch panels. Mighty Mo systems offer additional cable capacity with larger cable channels, vertical managers and waterfall extensions.

protection

Protect customer investment by reducing the risk of equipment failure at all points of the infrastructure: airflow management, thermal management and cable management. Reduction in risk lowers the total cost of ownership.

Protecting the network means safeguarding all elements, not just switches and cables. Wire mesh cable trays enable airflow across cable while removing it from harm. Extended vertical managers create smoother bend radiuses, reducing stress on switch ports.

CHANGING THE WAY YOU LOOK AT YOUR NETWORK

REDUCTION IN RISK LOWERS THE TOTAL COST OF OWNERSHIP