



**OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION**

**APPLICATION FOR OSHPD SPECIAL SEISMIC
CERTIFICATION PREAPPROVAL (OSP)**

OFFICE USE ONLY

APPLICATION #: OSP-0699

OSHPD Special Seismic Certification Preapproval (OSP)

Type: New Renewal

Manufacturer Information

Manufacturer: Stanford Health Care and School of Medicine

Manufacturer's Technical Representative: David Stoltz

Mailing Address: 1830 Embarcadero Rd., Palo Alto, CA 94303

Telephone: (408) 500-8284

Email: dstoltz@stanfordhealthcare.org

Product Information

Product Name: Internal Communication Servers and Routers

Product Type: Wireless Communication Systems

Product Model Number: See Certified Product List

General Description: Servers, routers, UPS, PDU, switches

Mounting Description: Rigid floor mounted within racks,

Tested Seismic Enhancements: None

Applicant Information

Applicant Company Name: Universal Structural Engineers, LLC

Contact Person: Kevin OKeefe

Mailing Address: 1660 S. Amphlett Blvd., Suite 335, San Mateo, CA 94402

Telephone: (650) 312-9233

Email: ktokeefe@universalstructuralengineers.com

Title: Structural Engineer





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California Licensed Structural Engineer Responsible for the Engineering and Test Report(s)

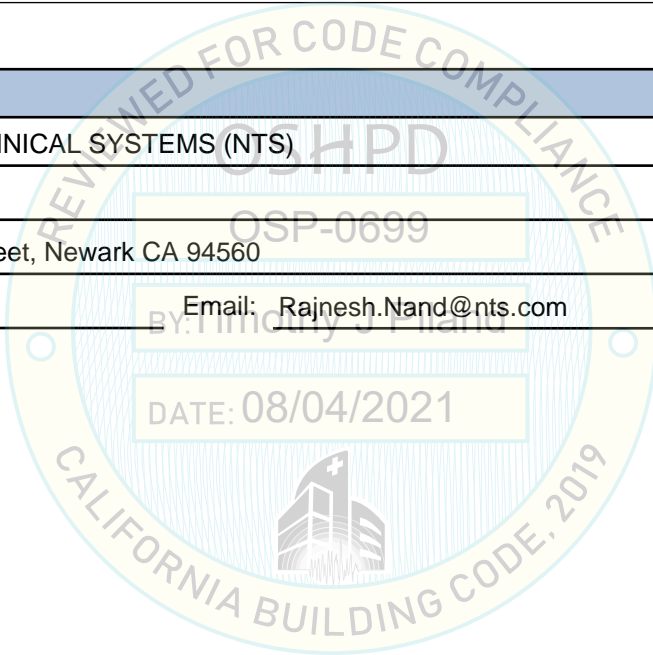
Company Name: UNIVERSAL STRUCTURAL ENGINEERS
Name: Kevin O'Keefe California License Number: S4192
Mailing Address: 1660 Amphlett Blvd., Suite 335, San Mateo, CA 94402
Telephone: (650) 312-9233 Email: ktokeefe@UniversalStructuralEngineers.com

Certification Method

GR-63-Core ICC-ES AC156 IEEE 344 IEEE 693 NEBS 3
 Other (Please Specify): _____

Testing Laboratory

Company Name: NATIONAL TECHNICAL SYSTEMS (NTS)
Contact Person: Rajnish Nand
Mailing Address: 38995 Cherry Street, Newark CA 94560
Telephone: (510) 578-3500 Email: Rajnish.Nand@nts.com





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Seismic Parameters

Design Basis of Equipment or Components (F_p/W_p) = 1.31

SDS (Design spectral response acceleration at short period, g) = 1.75

a_p (Amplification factor) = 2.5

R_p (Response modification factor) = 6

Ω_0 (System overstrength factor) = 2.0

I_p (Importance factor) = 1.5

z/h (Height ratio factor) = 1

Natural frequencies (Hz) = See Attachment

Overall dimensions and weight = See Attachment

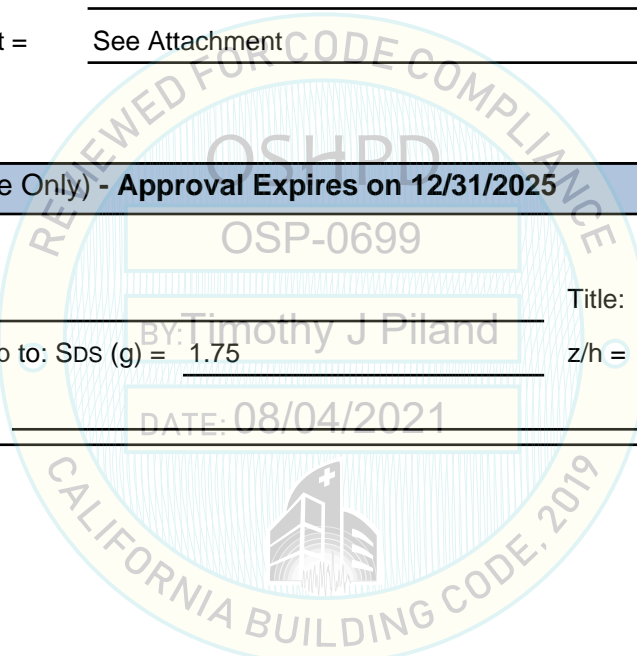
OSHPD Approval (For Office Use Only) - Approval Expires on 12/31/2025

Date: 8/4/2021

Name: Timothy Piland Title: Senior Structural Engineer

Special Seismic Certification Valid Up to: SDS (g) = 1.75 z/h = 1

Condition of Approval (if applicable): DATE: 08/04/2021



Universal Structural Engineers, LLC



STANFORD OSP ATTACHMENT 1

Table 1a-Certified Product List in UUT1

OSHPD Special Seismic Certification Summary of Certified Units						
Manufacturer: Varies, See below						
Equipment: IT Equipment (Equipment Configuration per below)						
Mounting Condition Tested: Mounted in Chatsworth 2 Post 13855-703, 2 Post rack bolted at the base						
Manufacturer	Model #	Height (in.)	Width (in.)	Depth (in.)	Equipment Weight (lbs.)	Unit
Cisco	C9300-48U w/ PWR-C1-1100WAC	1.73	17.5	16.1	20	UUT1
Cisco	C9200L-48P-4X w/ PWR-C5-1KWAC	1.73	17.5	11.3	14	UUT1
Cisco	C2960-X (WS-C2960X- 24PS-L)	1.73	17.5	13	14	UUT1
APC	PDU AP7800B	10.2	17.3	28.4	4	UUT1
Eaton	PDU ePBZ79	1.7	17	5.1	4	UUT1
Cisco	C9410R chassis Access Switch(Copper) w/ C9400-PWR-3200AC, C9400-SUP-1, C9400-LC-48U	22.61	17.3	16.3	178	UUT1
Eaton	9PX UPS 6kW (9PX6KTF5) w/ RK2PC, 9PXTFMR5, 9PX6K	10.2	17.3	28.4	204	UUT1
Rack Center of Gravity						
Center of Gravity for the whole rack including equipment, the rack and the vertical wire manager = 32.2 inches from the bottom of the rack.						

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Table 1b-Certified Product List in UUT2

OSHPD Special Seismic Certification Summary of Certified Units						
Manufacturer: Varies, See below						
Equipment: IT Equipment (Equipment Configuration per below)						
Mounting Condition Tested: Mounted in B-LINE E2Z48424301924B, 4 post rack bolted at the base						
Manufacturer	Model #	Height (in.)	Width (in.)	Depth (in.)	Equipment Weight (lbs.)	Unit
Philips HP Engage Flex Pro CPU	866424 By HP	3.94	13.27	15.12	14	UUT2
Commscope	PSU-SR-AC 7693531-00 w/ 7663610-00, 7663468-00	1.8	19	19.5	25	UUT2
Commscope	ION-E WCS4 (CAN) with mount rack 7635442-01 w/ 7642123-00, 7680813, 7688866-00, 7688867-00, 7642125-00	7	19	17.7	38	UUT2
Commscope	PSU-SR-AC 7693531-00 w/ 7663610-00, 7663468-00	1.8	19	19.5	25	UUT2
Commscope	ION-E WCS2 (TEN) 7635443-01 w/ 7642123-00, 7680813-00, 7633228-01, 7688866-00, 7688867-00, 7688868-00	3.5	19	17.7	25	UUT2
Hall Research	KVMC-UH-8-UHD	1.65	17.64	22.84	27	UUT2
Philips	865346	1.75	17.5	8.1	5	UUT2
Philips	866212	1.73	19	8.7	5	UUT2
Hall Research	ULTRA-4K-S	1.66	11.23	6.09	3	UUT2
Vertiv Geist	PDU-HORIZONTAL UI30024	1.72	17	9	12	UUT2
EATON UPS, L21-30P INPUT, (1) L21-30R OUTPUT Blade 8Kw	ZC0811108100000	10.3	17.4	26	312	UUT2
Rack Center of Gravity						
Center of Gravity for the whole rack including equipment, the rack and the vertical wire manager = 34.6 inches from the bottom of the rack.						

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STANFORD OSP ATTACHMENT 2: UNIT UNDER TEST SUMMARIES

Table 2a-UUT1 Product Summary-2 Post Rack

OSHPD Special Seismic Certification: Unit Under Test Summary-UUT 1

	UUT#	Component		
Rack:	1	Chatsworth 2 Post (13855-703)		
Equipment:		See Table 2a		
Unit Function	Networking equipment			
Unit Properties				
Equipment	Dimensions (in)			
Weight (lbs)	Depth	Width	Height	
725	15	24	84	
Lowest Natural Frequency (Hz)				
Front-Back	Side-Side	Vertical	45	
14.0	8.24	>33.3	8.46	
Unit Mounting:	Bolted to shake table with four (4) ½" diameter bolts.			
Seismic Test Parameters				
Building Code:	2019 California Building Code			
Test Criteria:	ICC-ES AC 156			
Lab Report No.	FR-135362.01-ENV Rev 0			
Sds (g)	Ip	z/h		
1.75	1.5	1.0		
ARIG (g) (horizontal)	AFLX (g) (horizontal)	ARIG (g) (vertical)	AFLX (g) (vertical)	
2.1	2.8	.47	1.17	
Construction:	Carbon Steel Rack			
Components:	1) C9300-48U with CISCO (PWR-C1-1100WAC) 2) C9200L-48P-4X with CISCO (PWR-C5-1KWAC) 3) CISCO C2960-X (WS-C2960X-24PS-L) 4) APC PDU (AP7800B) 5) EATON PDU (ePBZ79) 6) CISCO C9410R chassis Access Switch (Copper) with CISCO (C9400-PWR-3200AC), CISCO (C9400-SUP-1), CISCO (C9400-LC-48U) 7) EATON 9PX UPS 6kW (9PX6KTF5) with EATON RK2PC, CISCO (C9400-SUP-1), CISCO (C9400-LC-48U) 8) PANDUIT 6" Vertical Wire Manager (PE2VD6) w/o doors			
Center of Gravity	32.2 inches from the bottom of the rack.			
Note: The unit was full of contents during testing and remained function before and after the ICC-ES AC156 test. The unit maintained integrity during and after the ICC-ES AC156 Test.				

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Table 2a-UUT1 Components and Subcomponents

OSHPD Special Seismic Certification: Unit Under Test Summary: Components and Subcomponent					
#	2 POST CHATSWORTH RACK 1A/1C	Total Equip Weight(lb)	Sub-Component	Height (COG) (in)	Component Mounting
44					
43					
42	C9300-48U	20	CISCO (PWR-C1100WAC)	76.625	(4) # 10 SCREWS
41	C9200L-48P-4X	14	CISCO (PWR-C5-1KWAC)	74.875	(4) # 10 SCREWS
40	CISCO C2960-X (WS-C2960X-24PS-L)	14		73.125	(4) # 10 SCREWS
39					
38					
37					
36					
35					
34					
33					
32					
31	DUMMY WEIGHT	54		57.375	
30					
29					
28					
27					
26	APC PDU (AP7800B)	4		48.625	(4) # 10 SCREWS
25	EATON PDU (ePBZ79)	4		46.875	(4) # 10 SCREWS
24					
23					
22					
21					
20					
19					
18					
17					
16					
15	CISCO C9410R chassis Access Switch (Copper)	178	CISCO (C9400-PWR-3200AC) CISCO (C9400-SUP-1) CISCO (C9400-LC-48U)	27.625	(6) # 10 SCREWS
14					
13					
12					
11					
10					
9					
8	SPACE FOR AIR CIRCULATION				
7					
6			EATON RK2PC		9PX6K WITH (10) # 10 Strapped back of units to mount rail
5	EATON 9PX UPS 6kW (9PX6KTF5) (incl. 8.8# 4-post rail kit... 2-post kit is 5#)	204	EATON 9PXTFMR5 EATON 9PX6K	9.25	MOUNT RACK RAILS WITH (2) # 10 SCREWS PER SIDE.
4					
3					
2					
1					
	PANDUIT 6" Vertical Wire Manager (PE2VD6) w/o doors	48		43.7	(2) 3/8" Bolts Top & Bot
0					
0	Chatsworth 2 Post (13855-703)	185		43.7	(4) 1/2" Diameter Bolts
	Total Weight=	725			
	Total Equipment Weight r=	492			
	Total Equipment Weight with Vertical Wire Manager=	540			

Note: The Panduit 6 Vertical Wire Manager (PE2VD6) is to be attached to the 2 post rack as part of this OSP.

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Table 2b-UUT2 Product Summary-4 Post Rack

OSHPD Special Seismic Certification: Unit Under Test Summary-UUT 2			
	UUT#	Component	
Rack:	2	B-Line 4-Post (E2Z48424301924B)	
Equipment:		See Table 2b	
Unit Function	Networking equipment		
Unit Properties			
Equipment	Dimensions (in)		
Weight (lbs)	Depth	Width	Height
1002	30	24	84
Lowest Natural Frequency (Hz)			
Front-Back	Side-Side	Vertical	45
22.0	6.41	24.4	6.30
Unit Mounting:	Bolted to shake table with four (4) ½" diameter bolts.		
Seismic Test Parameters			
Building Code:	2019 California Building Code		
Test Criteria:	ICC-ES AC 156		
Lab Report No.	FR-135362.01-ENV Rev 0		
Sds (g)	Ip	z/h	
1.75	1.5	1.0	
ARIG (g) (horizontal)	AFLX (g) (horizontal)	ARIG (g) (vertical)	AFLX (g) (vertical)
2.1	2.8	.47	1.17
Construction:	Carbon Steel Rack		
Components:	1) Philips HP Engage Flex Pro CPU (866424) By HP 2) COMMSCOPE PSU-SR-AC (7693531-00) with 7663610-00,7663468-00 3) COMMSCOPE ION-E WCS4 (CAN) with mount rack (7635442-01), 7642123-00, 7680813, 7688866-00,7688867-00, 7642125-00 4) COMMSCOPE PSU-SR-AC (7693531-00) with 7663610-00,7663468-00 5) COMMSCOPE ION-E WCS2 (TEN) (7635443-01) with 7642123-00,7680813-00, 7633228-01, 7688866-00, 7688867-00,7688868-00 6) HALL RESEARCH(KVMC-UH-8-UHD) 7) PHILIPS(865346) 8) PHILIPS(866212) 9) HALL RESEARCH (ULTRA-4K-S) 10) VERTIV GEIST PDU-HORIZONTAL(UI30024) 11) EATON UPS, L21-30P INPUT, (1) L21-30R OUTPUT Blade 8Kw (ZC0811108100000) 13) PANDUIT 12" Vertical Wire Manager(PE2VD12) w/o doors		
Center of Gravity	34.6 inches from the bottom of the rack.		
Note: The unit was full of contents during testing and remained function before and after the ICC-ES AC156 test. The unit maintained integrity during and after the ICC-ES AC156 Test.			



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Table 2b-UUT2 Components and Subcomponents

OSHPD Special Seismic Certification: Unit Under Test Summary: Components and Subcomponents					
#	B-LINE E2Z4 RACK 1A/1C	Total Equip Weight(lb)	Sub-components	Height (COG) (in)	Component Mounting
45	Philips HP Engage Flex Pro CPU (866424) By HP	14		75.75	Trey: (4)# 12 Screws in front & 4 in back with strap for Philips
44					
43					
42	COMMSCOPE PSU-SR-AC (769353100)	25	7663610-00,7663468-00	71.375	(4) # 12 Screws
41	COMMSCOPE ION-E WCS4 (CAN) with mount rack (7635442-01)	38	7642123-00,7680813	67	(4) # 12 Screws
40			7688866-00,7688867-00		
39			7642125-00		
38					
37	COMMSCOPE PSU-SR-AC (769353100)	25	7663610-00,7663468-00	64.625	(4) # 12 Screws
36	COMMSCOPE ION-E WCS2 (TEN) (7635443-01)	25	7642123-00,7680813-00,7633228-01	60	
35			7688866-00,7688867-00,7688868-00		
34	HALL RESEARCH(KVMC-UH-8-UHD)	27		57.375	(4) # 12 Screws
33	PHILIPS(865346)	5		55.625	(4) # 12 Screws
32	PHILIPS(866212)	5		53.875	(4) # 12 Screws
31	HALL RESEARCH (ULTRA-4K-S)	3		52.125	(4) # 12 Screws
30					
29					
28					
27					
26					
25					
24					
23	VERTIV GEIST PDU-HORIZONTAL(U130024)	12		48.625	(4) # 12 Screws
22	DUMMY WEIGHT	179		32.875	
21					
20					
19					
18					
17					
16					
15					
14					
13					
12					
11					
10					
9	EATON UPS, L2130P INPUT, (1) L2130R OUTPUT Blade 8Kw (ZC081108100000)	312		9.25	(6) # 12 Screws in Front
8					(6) # 12 Screws in Back
7					
6					
5					
4					
3					
2					
1					
0	PANDUIT 12" Vertical Wire Manager(PE2VD12) w/o doors	68		43.7	(3) M 12 BOLTS PER RACK
0	B-LINE(E2Z48424301924B)	264		43.7	(4) 12" Diameter Bolts
	Total Weight=	1002.00			
	Total Equipment Weight r=	670.00			
	Total Equipment Weight with Vertical Wire Manage=	670.00			

Note: The Panduit 12 Vertical Wire Manager (PE2VD12) is to be attached to the 4 post rack as part of this OSP.

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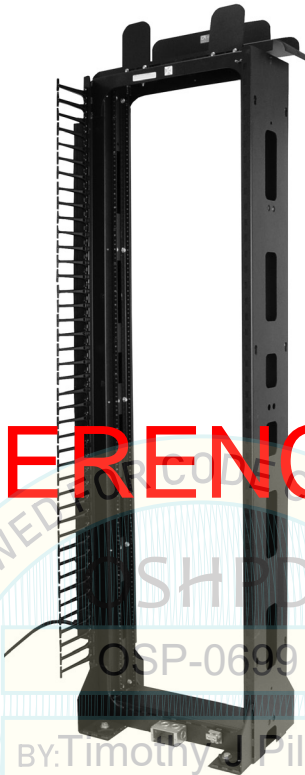
CHATSWORTH 2-POST 13855-703

SeismicFrame® Two-Post Rack

Support rack-mount network equipment in data centers and premise networks where seismic activity exists.

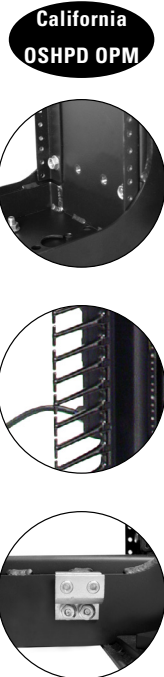
KEY FEATURES

- Welded, steel network equipment rack engineered specifically to protect equipment in areas with seismic activity
- Independently seismic-tested and certified meets industry-recognized records of Technologies, Inc. GR-63-CONE Network Equipment Building Systems (NEBS) Zone 4 requirements
- 1,000 lb (453.6 kg) load rating for seismic areas
- Supports 19" EIA-310-D compliant rack-mount equipment like patch panels and network switches; 23" W version also available
- 19" W rack fits within a 24" (610 mm) raised access floor tile
- Available with #12-24 threaded or square-punched adjustable-depth equipment mounting rails
- Equipment mounting rails have marked and numbered rack-mount spaces (U); numbering can start at the top or bottom of the rack
- Fully bonded rack has two masked grounding locations and includes a Two Mounting Hole Ground Terminal Block for easy connection to the Telecommunications Grounding Busbar
- Vertical Power Strips and T-shaped Cable Management Fingers attach directly to the rack channel to provide power and cable distribution for equipment



ADVANTAGES

- ➔ **Adjustable Depth Mounting Rails**
Set 6" (150 mm) or 3" (80 mm) apart
- ➔ **Cable Management**
Built-in locations on rack
- ➔ **Two Mounting Hole Ground Terminal Block**
Included for easy connection to the Telecommunications Grounding Busbar



California OSHPD OPM

FOR REFERENCE ONLY

SPECIFICATIONS

	Welded, steel frame
Includes	Equipment mounting rails, two pairs 50 each equipment mounting screws/cage nuts 1 each Two Mounting Hole Ground Terminal Block
Available Sizes	Height: 7" (2.1 m) Widths: 24" (610 mm) and 28" (710 mm) Depth: 15" (380 mm) at base; 9.6" (244 mm) vertical channels Height: 44U
Equipment Space	Width: 19" EIA or 23" Rail depths: 6" (150 mm) or 3" (80 mm) Two pairs of L-shaped equipment mounting rails fixed in place at 6"D (150 mm) or 3"D (80 mm) 19" W EIA-310-D compliant or 23" W
Equipment Support	Universal Hole Pattern, 5/8"-5/8"-1/2" alternating vertical mounting hole spacing Threaded #12-24 or square-punched equipment mounting holes Includes 50 each mounting screws or cage nuts and mounting screws
Load Capacity	1000 lb (453.6 kg) of equipment in seismic areas
Bonding and Grounding	Rack components are bonded through welds Mounting rails are bonded to the rack through attachment hardware; optional zinc-plated mounting rails provide direct metal contact with rack-mount equipment Includes two masked ground connection points located at the top and base of the rack Includes one Two Mounting Hole Ground Terminal; Block for connection to the Telecommunications; Grounding Busbar

Availability: Global

United States

Agoura Hills, CA
800-834-4969

Canada

Toronto, Ontario, Canada
+905-850-7770

Europe

Buckinghamshire, UK
+441628524834

Middle East & Africa

Dubai, UAE
+971-4-2602125

Doha, Qatar

+974-4-267422

Latin America

+52-55-5203-7525
Toll Free within Mexico
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Asia Pacific

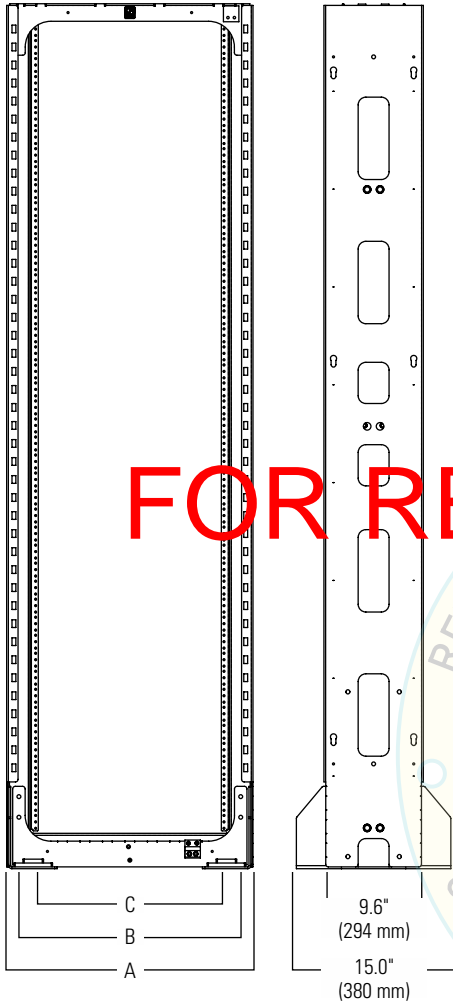
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CHATSWORTH
PRODUCTS

CHATSWORTH 2-POST 13855-703

DIMENSIONS



Certifications:	EIA-310-D compliant; UL Listed NWIN per UL 60950, File E227626 OSHPD OPM-0249-13, California, Office of Statewide Health Planning and Development (OSHPD), Preapproval of Manufacturer's Certification (OPM) GR-63-CORE, NEBS, Zone 4 US Patent Number: 8,424,691
Material	Steel
Construction	Welded Mounting rails attach with hardware
Finish	Epoxy-polyester hybrid powder coat paint in black, gray or computer beige Mounting rails are painted or zinc-plated
Installation	Each rack must be secured to the structural floor Order a seismic-rated, concrete anchor kit separately Use a 3/4" x 5-1/2" L seismic-rated, concrete anchor When bayed in a continuous row, the spacing between racks should be determined by a licensed structural engineer familiar with seismic applications and codes. Each installation requirement varies.
Environment	For indoor use only, in environmentally controlled areas; may not be used outdoors, in industrial or harsh environments, or in plenum spaces

FOR REFERENCE ONLY

Design Features

CPI's SeismicFrame® Two-Post Rack is designed specifically to support network equipment in areas with seismic activity. When earthquakes occur, equipment racks move back-and-forth with the building causing violent vibration through racks and equipment. An earthquake can easily damage or destroy non-seismic racks and equipment that are not carefully braced. The welded, steel SeismicFrame Two-Post Rack resists the swaying motion caused by earthquakes to reduce the amount of vibration transferred through the rack to equipment and is less likely to be damaged during a seismic event, which means faster network recovery.

The SeismicFrame Two-Post Rack supports 19" W EIA-310-D compliant or 23" W equipment with two pairs of mounting rails that can be spaced 6" (150 mm) or 3" (80 mm) apart. The mounting rails are marked and numbered with rack-mount spaces (U) and can be attached so that numbering starts at the bottom or top of the rack mount space. Choose threaded or square-punched mounting rails with a painted or zinc-plated finish. The mounting holes in threaded mounting rails are tapped with #12-24 threads to speed installation of panel-mount equipment with #12-24 screws. The square-punched rails accept cage nut hardware allowing you to change threads at each U to match equipment mounting requirements.

CPI's SeismicFrame Two-Post Rack ships fully assembled and includes a Two Mounting Hole Ground Terminal Block for bonding the rack to the Telecommunications Grounding Busbar and 50 each equipment mounting screws or cage nuts and screws. The rack is rated for a 1000 lb (453.6 kg) seismic Zone 4 load per Section 4.4 of the Telcordia® Technologies, Inc. GR-63-CORE Network Equipment Building Systems (NEBS) requirements.

See reverse for product details. Contact CPI Technical Support, or visit the CPI website (www.chatsworth.com/seismic) for configuration assistance.

Description	19 in (mm)	23 in (mm)
Overall Width (A)	24.0 (610)	28.0 (710)
Frame Opening (B)	19.3 (490)	23.3 (592)
Rail Clearance (C)	17.75 (450)	21.75 (552)

USE WITH

- SeismicFrame Two-Post Rack Vertical Cabling Section
- Top-Mount Cable Waterfall Tray
- Cable Management Fingers Kit
- SeismicFrame Two-Post Rack Concrete Floor Anchor Kit

RELATED PRODUCTS

- Heavy Duty Equipment Shelf for 6" (150 mm) Channel
- Vertical Cabling Section Offset Mounting Bracket Kit for Single-Sided Wide Vertical Cabling Section
- 3" (80 mm) Channel Rack-To-Runway Mounting Plate
- Cable Runway J-Bolt Kit

CHATSWORTH 2-POST 13855-703

ORDERING INFORMATION



SeismicFrame® Two-Post Rack		
Part Number	Description H x W ft (m)	Shipping Weight lb (kg)
13853-X03	7 (2.1) x 19", 44U, Tapped #12-24 Zinc Rails	180 (81.6)
13854-X03	7 (2.1) x 19", 44U, Square-Punched Zinc Rails	178 (80.7)
13855-X03	7 (2.1) x 19", 44U, Tapped #12-24 Painted Rails	180 (81.6)
13856-X03	7 (2.1) x 19", 44U, Square-Punched Painted Rails	178 (80.7)
13883-X03	7 (2.1) x 23", 44U, Tapped #12-24 Zinc Rails	185 (83.9)
13884-X03	7 (2.1) x 23", 44U, Square-Punched Zinc Rails	183 (83.0)
13885-X03	7 (2.1) x 23", 44U, Tapped #12-24 Painted Rails	185 (83.9)
13886-X03	7 (2.1) x 23", 44U, Square-Punched Painted Rails	183 (83.0)

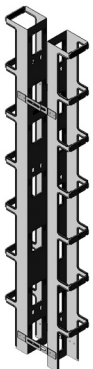
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Notes: X=Color; 1=Gray, 2=Computer Beige, 7=Black
 *Must Use 4 Seismic-rated concrete anchors (sold separately).

Cable Management:

- The top of the rack is punched with attachment points for the CPI Top-Mount Cable Waterfall Tray and Cable Runway
 - Attach 9" W (230 mm), 12" W (300 mm), 15" W (380 mm) and 18" W (460 mm) Cable Runway to racks in perpendicular (front-to-back) orientation with the Cable Runway J-Bolt Kit; 23" W racks will also support 20" W (510 mm) Cable Runway
 - Attach 12" W (300 mm) to 24" W (610 mm) Cable Runway in parallel (side-to-side) orientation with the 3" W (80 mm) Channel Rack-To-Runway Mounting Plate.
 - The front of the rack is punched with attachment points for the CPI Cable Management Fingers Kits
 - The sides of the rack are punched with three pairs of centered, 1/2-20 threaded attachment points for CPI SeismicFrame Two-Post Rack Vertical Cabling Section
 - Attach a CPI Single-Sided Wide Vertical Cabling Section to the side of the rack with the CPI Vertical Cabling Section Offset Mounting Bracket Kit
 - Evolution® Cable Management and MCS-EFX Master Cabling Section with Extended Fingers will also attach to the side of the rack
- Shelves:**
- Use CPI Heavy Duty Equipment Shelf for 6" (150 mm) Channel with the rack's mounting rails set 6" (150 mm) apart
 - When rails are set 3" W (80 mm) apart, the maximum shelf width on 19" W racks is 19.3" W (490 mm) and the maximum shelf width on 23" W racks is 23.3" W (592 mm)

ACCESSORIES



SeismicFrame Two-Post Rack Vertical Cabling Section

Provide a double-sided, front and rear cable pathway next to SeismicFrame Two-Post Rack.

- Separate front and rear 6"W x 6.38"D (150 mm x 162 mm) cable managers attach with included offset brackets to align with the front and rear of the rack
- Large cable pass-through ports on the back of each manager align with ports in the side of the frame; spin-open plastic latches secure cables inside the managers
- Includes one Single-Sided Cable Management Fingers Kit to organize cables by U
- Made of aluminum
- Includes installation hardware

SeismicFrame® Two-Post Rack Accessories		
Part Number	Description	Shipping Weight lb (kg)
13704-X03	VCS Vertical Cabling Section	35 (15.9)
13696-001	Cable Management Fingers Kit, Single-Sided, Black	7 (3.2)
13696-002	Cable Management Fingers Kit, Double-Sided, Black	14 (6.4)
13699-701	VCS Offset Mounting Bracket Kit, Black	2 (0.9)

Notes: X=Color; 1=Gray, 2=Computer Beige, 7=Black.



Cable Management Fingers Kit

Organize patch cords and jumper cables by U.

- 7U T-shaped plastic cable guides snap onto the front and rear of the rack frame
- Openings between the T-shaped guides align with each U on the rack
- Single-Sided Kit includes 12 cable guides for one side (front or rear) of the rack
- Double-Sided Kit includes 24 cable guides for both sides (front and rear) of the rack



Vertical Cabling Section (VCS) Offset Mounting Bracket Kit

Attach a CPI Single-Sided Wide Vertical Cabling Section to the side of the SeismicFrame Two-Post Rack so that it aligns with the front of the rack.

- Kit includes four Offset Mounting Brackets
- Use two brackets per side to attach the Vertical Cabling Section
- Brackets are slotted allowing front-to-rear adjustment
- Made of steel

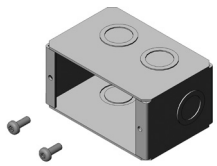
CHATSWORTH 2-POST 13855-703

ACCESSORIES



Vertical Power Strip Mounting Hardware Kit
 Attach CPI 33"L (711 mm) Vertical Power Strips and PDUs directly to the side of SeismicFrame Two-Post Rack or the back of the SeismicFrame Two-Post Rack Vertical Cabling Section.

- Includes mounting hardware that allows tool-less attachment of two CPI 33"L (711 mm) Vertical Power Strips or PDUs to the keyholes on the sides of the SeismicFrame Two-Post Rack
- Top/Bottom keyholes are spaced 64.75" (1645 mm) apart, matches CPI eConnect PDUs
- Top/Middle keyholes are spaced 28" (711 mm) apart; matches CPI 33"L (838 mm) Vertical Power Strips



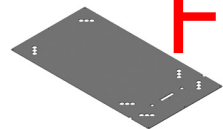
Duplex Electrical Outlet Box
 Provides a location for a power connection at the base of the rack.

- Includes a single-gang electrical outlet box for a single duplex receptacle and two self-tapping Torx head T25 installation screws
- Outlet box is welded steel, 3-3/4"H x 1-13/16"W x 2-1/2"D (95 mm x 46 mm x 64 mm) with a 15.5 in³ (250 cm³) wiring capacity, has eight (four accessible) concentric knockouts for 1/2" or 3/4" conduit, and is zinc galvanized for corrosion protection
- UL Listed



Tool-less Bend Radius Kit for Fiber Patch Cords
 Tool-less Bend Radius Kit for Fiber Patch Cords ensures proper bend radius support for fiber optic patch cords when transitioning through T-shaped cable guides. It snaps onto the finger manager without any tools, and can be used for new or retrofit applications.

- Provides proper bend radius support for fiber optic patch cords
- Tool-less installation
- May be installed in upward or downward orientations on either side of a T-shaped cable guide
- Available in packs of 10 or 50



SeismicFrame Two-Post Rack Floor Drilling Template
 Quickly and easily locate and drill holes for SeismicFrame Two-Post Rack floor anchors.

- Durable 28"W x 15"D (710 mm x 380 mm) aluminum template locates floor mounting holes for 19"W and 23"W SeismicFrame Two-Post Racks
- Notched to indicate outside width of the 19"W rack for easy alignment when installing multiple racks

SeismicFrame® Two-Post Rack Accessories		
Part Number	Description	Shipping Weight lb (kg)
13697-001	Vertical Power Strip Mounting Kit, Clear	1 (0.5)
13698-001	Duplex Electrical Outlet Box, Zinc	1 (0.5)
13703-701	Floor Drilling Template, Black	6 (2.7)

Additional Accessories		
Part Number	Description	Shipping Weight lb (kg)
15275-X01	Top-Mount Cable Waterfall Tray	14 (6.4)
40605-001	#12-24 Screws, Pack of 50, Zinc	1 (0.5)
40605-005	#12-24 Screws, Pack of 50, Black	1 (0.5)
12637-001	M6 Cage Nuts and Screws, pack of 25, Gold	1 (0.5)
12638-001	#10-32 Cage Nuts and Screws, Pack of 25, Zinc	1 (0.5)
12639-001	#12-24 Cage Nuts and Screws, Pack of 25, Black	1 (0.5)
12293-X19	Heavy Duty Shelf for 6" (150 mm) Channel, For 19" Rack	10 (4.5)
10595-X12	3" (80 mm) Channel Rack-To-Runway Mounting Plate Using J-Bolts 9 to 12" W (230 mm to 300 mm) Runway, Steel	5 (2.3)
10595-X18	3" (80 mm) Channel Rack-To-Runway Mounting Plate Using J-Bolts 15 to 18" W (380 mm to 460 mm) Runway, Steel	7 (3.2)
12408-X24*	3" (80 mm) Channel Rack-To-Runway Mounting Plate Using J-Bolts 20 to 24" W (510 mm to 610 mm) Runway, Aluminum	4 (1.8)
32697-001	Tool-less Bend Radius Kit for Fiber Patch Cords, Pack of 10, Black	1 (0.5)
32697-002	Tool-less Bend Radius Kit for Fiber Patch Cords, Pack of 50, Black	3 (1.4)

X=Color; 1=Gray, 2=Computer Beige, 7=Black, E=Glacier White. 10595 is available in (-0) for Gold Finish color. Kits include gold color hardware; gray and black kits include black color hardware. *P/N 12408-X24 and 12409-X24 include hat-shaped mounting plate that adds 1.25" to the height of the rack.

FOR REFERENCE ONLY

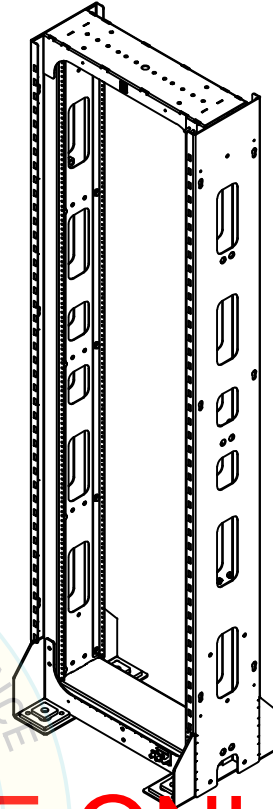
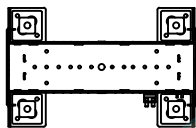


CPI now offers Extended Limited Warranties on CPI-Branded Electronic products, available for two additional years beyond the expiration of the Original Warranty Period (3 years).

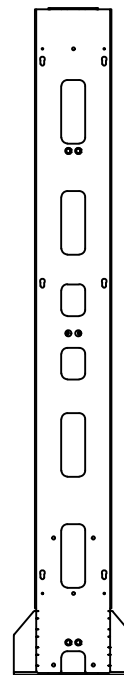
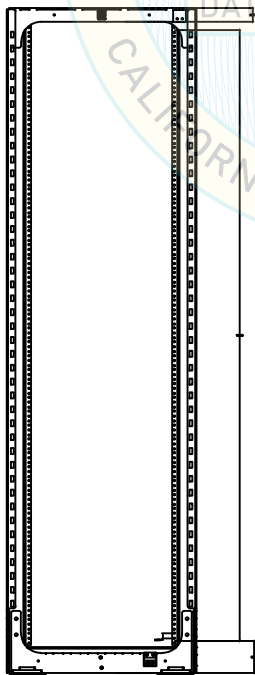
Interested in learning more about our Cable Managers? Call us at 800-834-4969, or email Technical Support at techsupport@chatsworth.com.

Contact CPI Customer Service, or visit www.chatsworth.com/warranty for more information.

CHATSWORTH 2-POST 13855-703

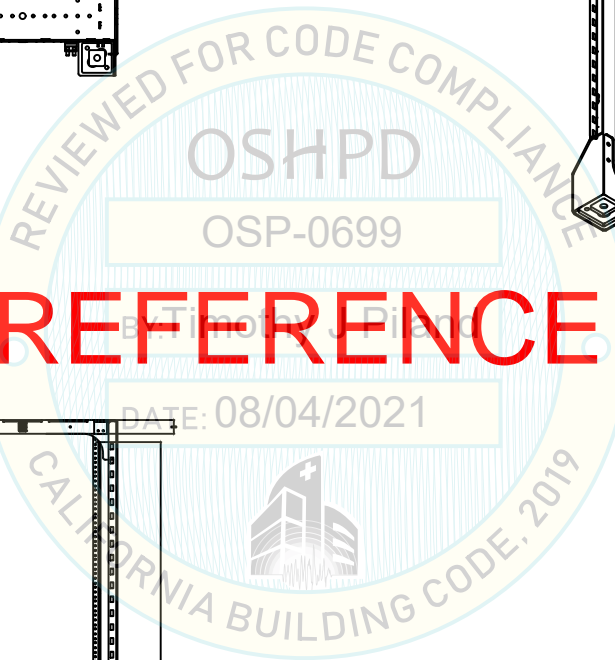


FOR REFERENCE ONLY



13853-X03

RACK,2P,SEI,19"W,12-24 MTG HOLES, 7'



Server & Network Enclosures

E2 Zone 4 Enclosure

E2Z4 Enclosure Features

- Tested in accordance with NEBS GR-63-CORE and ANSI T1.329. Complete Bellcore test results available upon request on cabinets up to 30" (762mm) deep
- Seismic anchor kits. Kit includes seismic rated anchor bolts, leveling shims, and anchor plates
- Reinforced cabinet frame for added rigidity
- Heavy duty 12 ga. (2.6mm) steel welded frame
- Lift-off locking solid side panels with compression latches. (Other type/style patterns available.)
- Smoked plexiglass removable front locking door. (Other type/style patterns available)
- Louvered top/bottom removable rear locking door. Other type/style patterns available
- Two (2) pair of heavy-duty adjustable mounting rails available with #12-24 tapped holes or square pierced holes (for cage nuts)
- Load Capacity in non-seismic applications is 2500 lbs. (1134kg)
- Load Capacity 850 lbs. (386kg), [450 lbs. (204kg) equipment weight] in accordance with NEBS GR-63-CORE and ANSI T1.329
- Lift lugs (4) in corners of top frame - threaded 5/8" engaged 11 threads
- Open base for floor-routed cable access
- Perforated top panel for ventilation and optional fan mounting
- Quick-release hinge design permits fast and easy removal of front and rear doors
- Two (2) 3" (76mm) diameter holes with snap in bushings to protect cables
- Fifty (50) #12-24 mounting screws for tapped rails or fifty (50) #12-24 screws and fifty (50) #12-24 cage nuts for square pierced rails
- See page ii for link to OPM approvals



Select from the following options:

- Two (2) standard colors (custom colors available upon request)
- Four (4) heights, two (2) widths and nine (9) depths. Depths up to 30" (762mm) are seismically qualified
- 19" (482mm) or 23" (584mm) EIA mounting options.

**Mounting Rails
Usable "U" space chart
1U = 1.75" (44mm)**

Cabinet Height	Mounting Units U
60" (1524mm)	29
72" (1829mm)	36
78" (1981mm)	39
84" (2133mm)	42

FOR REFERENCE ONLY

Server & Network Enclosures

E2 Zone 4 Enclosure

Use the following matrix to build the part number for your desired E2 Zone 4 seismic enclosure

E2Z48424301924B

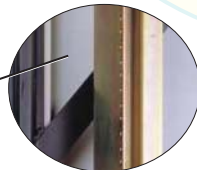
Product	Cabinet Dimensions			EIA Mounting	Hole Style	Color
	Height	Width *	Depth			
E2Z4 Cabinet	60" (1524mm)	24" (609mm)	24" (609mm)	19" (482mm)	24 = #12-24 Tapped Holes SQ = Square Pierced Rails	A = Gray B = Black
	72" (1829mm)	29" (736mm)	26" (660mm)	23" (584mm)		
	78" (1981mm)		28" (711mm)			
	84" (2133mm)		30" (762mm)			

* 24" only available for 19" EIA
29" available for 19" or 23" EIA

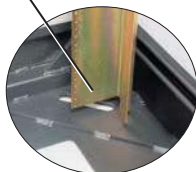
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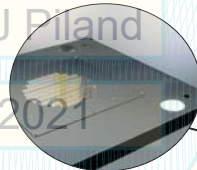
Lateral Cross Bracing
Adds rigidity to cabinet in seismic situations.



#12-24 Tapped or Square Pierced Mounting Rail Options
Improves installment flexibility.



Heavy Duty Corner Construction
Extra welded gusset plates maintain cabinet integrity in seismic situations.



Top Panel
Perforated for better ventilation and fan mounting. 3" (76mm) cable access holes provided in every cabinet. Solid and louvered styles are available.



Heavy-Duty Side Panel Compression Latch
Ergonomic design is rugged and built to last.



Seismic Anchor Kit



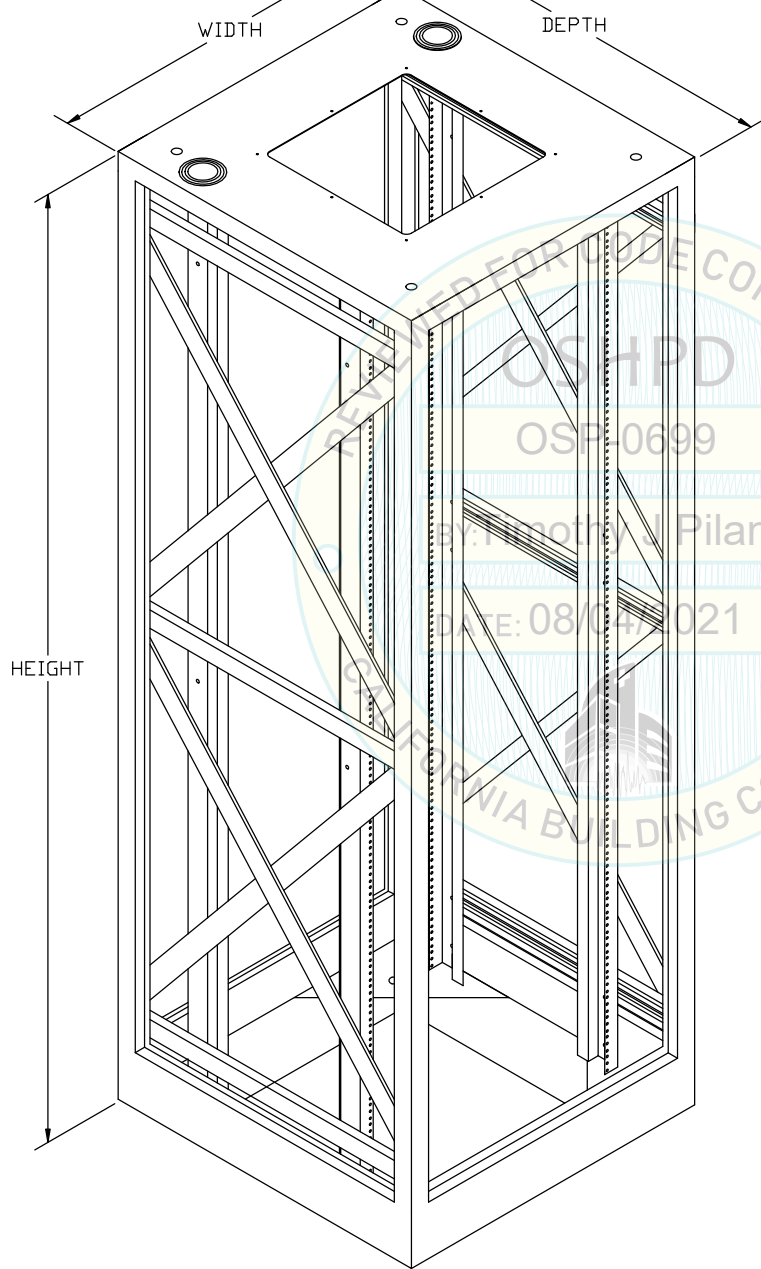
Server & network enclosures

E2Z48424301924B

~~E2-Z4-FD-722936-19-SQ-B~~

PRODUCT	CABINET DIMENSIONS			EIA MOUNTING	TAP	COLOR
Z4 = SEISMIC ZONE 4 HD = HEAVY DUTY FRAME ONLY	HEIGHT	WIDTH	DEPTH	19" 23"	SQ = IEC SQUARE HOLES 24 = #12-24 TAPPED HOLES	A = GRAY B = BLACK
	60" 72" 78" 84"	24" 29"	24" 26" 28" 30" 32" 36" 40" 42" 46"			

FOR REFERENCE ONLY

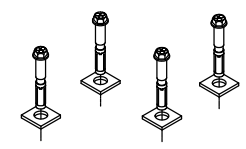


INCLUDES:

- (1) SEISMIC CABINET FRAME
- (4) ADJUSTABLE MOUNTING RAILS
- (1) SEISMIC ZONE 4 ANCHORING HARDWARE KIT

FEATURES:

- CONFORMS TO EIA-310-D
- TESTED IN ACCORDANCE WITH NEBS GR-63-CORE AND ANSI-T1.329. COMPLETE BELLCORE RESULTS AVAILABLE UPON REQUEST.
- TESTED TO 850 lbs. TOTAL SYSTEM WEIGHT.
- 5/8"-11 THREADS IN TOP CORNERS FOR LIFTING LUGS AND OVERHEAD EQUIPMENT ATTACHMENT
- TWO (2) PAIR OF HEAVY-DUTY "S" SHAPED #12-24 TAPPED OR (2) PAIR OF HEAVY-DUTY "L" SHAPED UNTAPPED MOUNTING RAILS.



<p>COOPER B-Line</p> <p>21000 EAST 32ND PARKWAY AURORA, COLORADO 80011</p> <p>OFFICE: (303) 375-8000 FAX: (303) 375-8015</p>	DWG. NO.	E2Z4FD	TITLE	E2 ZONE 4 SEISMIC FRAME ONLY CABINET		
	DRAWN BY	M. MCRAE	PROJECT	-		
	MATERIAL	12 GA CR STEEL FRAME	FINISH	SEE NOTES		
	DATE	03/16/99	SCALE	NTS	REVISION	A
	DWG. NO.	E2-Z4-FD-XXXXXX-XX-XX_S			SHEET 1 OF 1	

08/04/2021

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