



DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION
OFFICE OF STATEWIDE HOSPITAL PLANNING AND DEVELOPMENT

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

OFFICE USE ONLY

APPLICATION #: OSP-0555

HCAI Special Seismic Certification Preapproval (OSP)

Type: New Renewal

Manufacturer Information

Manufacturer: Cisco Systems, Inc.

Manufacturer's Technical Representative: Marc Mantelli

Mailing Address: 170 West Tasman Drive, San Jose, CA 95134

Telephone: (408) 526-7175 Email: mmantell@cisco.com

Product Information

Product Name: Networking Equipment

Product Model Number(s): See Attachment

Product Category: Internal Communication Servers and Routers

Product Sub-Category: Servers & Routers

General Description: Rack mounted networking equipment including switches, routers, and firewalls rigid mounted in four-post or two-post racks.

Mounting Description: Base Mounted Rigid

Tested Seismic Enhancements: None

Applicant Information

Applicant Company Name: Manwill Engineering LLC

Contact Person: Derek Manwill

Mailing Address: PO Box 1194, Bend, OR 97709

Telephone: (541) 241-2102 Email: derek@manwillSE.com

Title: President





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

Company Name: MANWILL ENGINEERING LLC
Name: Derek Manwill California License Number: S6266
Mailing Address: PO Box 1194, Bend, OR 97709
Telephone: (541) 241-2102 Email: derek@manwillse.com

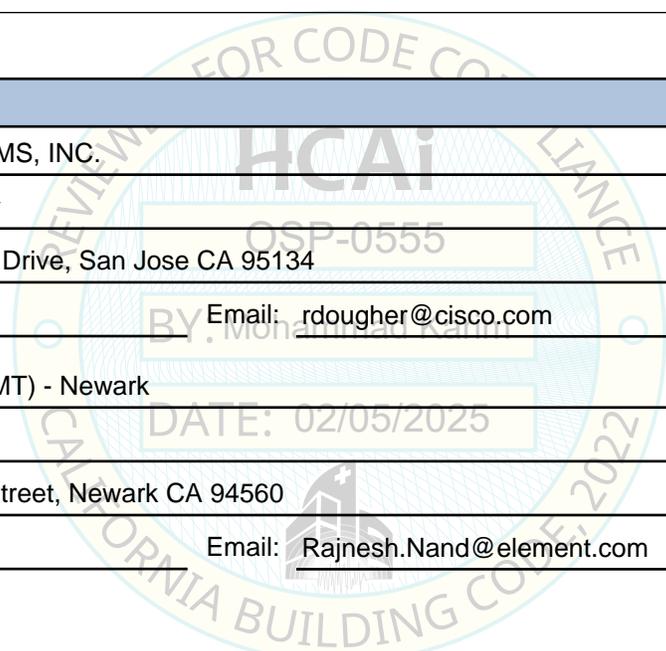
Certification Method

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

Testing Laboratory

Company Name: CISCO SYSTEMS, INC.
Contact Person: Rory Dougherty
Mailing Address: 170 W Tasman Drive, San Jose CA 95134
Telephone: (408) 424-2372 Email: rdougher@cisco.com

Company Name: ELEMENT (ELMT) - Newark
Contact Person: Rajnish Nand
Mailing Address: 38995 Cherry Street, Newark CA 94560
Telephone: (510) 578-3500 Email: Rajnish.Nand@element.com





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Seismic Parameters

Design Basis of Equipment or Components (F_p/W_p) = 1.44 (SDS=2.00, z/h=1), 1.13 (SDS=2.50, z/h=0)

SDS (Design spectral response acceleration at short period, g) = 2.00 (z/h=1), 2.50 (z/h=0)

a_p (Amplification factor) = 1.0

R_p (Response modification factor) = 2.5

Ω_0 (System overstrength factor) = 2.0

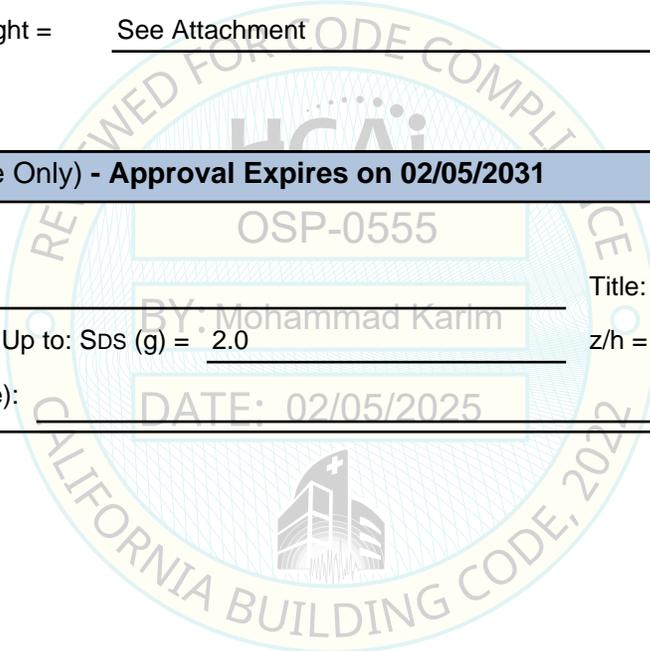
I_p (Importance factor) = 1.5

z/h (Height ratio factor) = 1 and 0

Natural frequencies (Hz) = See Attachment

Overall dimensions and weight = See Attachment

HCAI Approval (For Office Use Only) - Approval Expires on 02/05/2031	
Date: <u>2/5/2025</u>	
Name: <u>Mohammad Karim</u>	Title: <u>Supervisor, Health Facilities</u>
Special Seismic Certification Valid Up to: SDS (g) = <u>2.0</u>	z/h = <u>1</u>
Condition of Approval (if applicable): <u>DATE: 02/05/2025</u>	

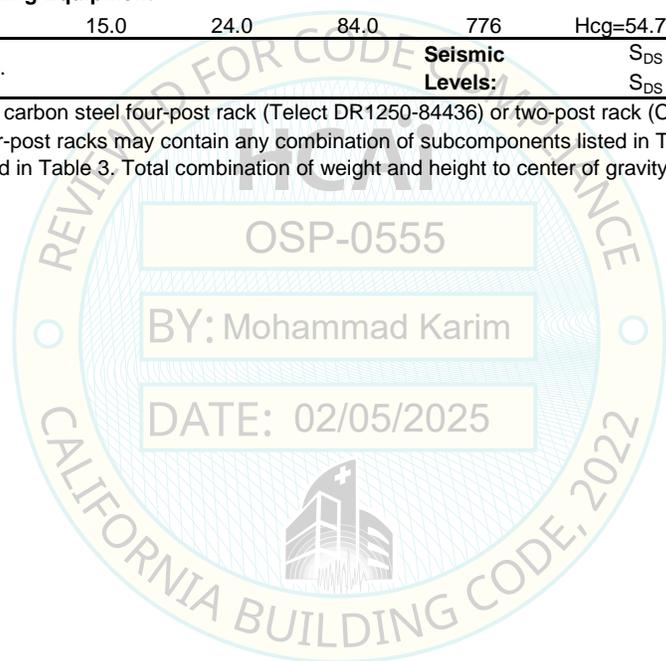


CISCO SYSTEMS, INC.
Networking Equipment

TABLE 1

Model Number	Dimensions (in)			Max. Wt. (lb)	Description / Notes	Basis
	Depth	Width	Height			
Four-Post Rack Mounted Networking Equipment						
Nexus 9504 Custom	36.0	24.0	84.0	944	Hcg=37.0-in, Telect 4-post	UUT 1
Catalyst 9000 Custom	36.0	24.0	84.0	791	Hcg=41.6-in, Telect 4-post	UUT 2
Catalyst 9600 Custom	36.0	24.0	84.0	789	Hcg=43.5-in, Telect 4-post	UUT 3
4-Post Custom 5	36.0	24.0	84.0	980	Hcg=46.4-in, Telect 4-post	UUT 5
Two-Post Rack Mounted Networking Equipment						
2-Post Custom 4	15.0	24.0	84.0	776	Hcg=54.7-in, Chatsworth 2-post	UUT 4
Mounting: Base Mounted, Rigid.				Seismic Levels:	$S_{DS} = 2.00g$ for $z/h = 1$ $S_{DS} = 2.50g$ for $z/h = 0$	$I_p = 1.5$

Product Construction: Welded carbon steel four-post rack (Telect DR1250-84436) or two-post rack (Chatsworth Seismic Frame 13855-703).
Options/Subcomponents: Four-post racks may contain any combination of subcomponents listed in Table 2. Two-post racks may contain any combination of components listed in Table 3. Total combination of weight and height to center of gravity (Hcg) must be less than or equal to the values listed above.



CISCO SYSTEMS, INC.
Networking Equipment

TABLE 2. SUBCOMPONENTS - 4-Post Racks

Model Number	Dimensions (in)			Max. Wt. (lb)	Description / Notes	Basis
	Depth	Width	Height			
Type: Nexus 9504 - Mfr: Cisco Systems, Inc.						
N9K-C9504	33.2	17.5	12.3	248	Main chassis, 4 linecard slots	UUT 1
Type: Nexus 9504 Parts - Mfr: Cisco Systems, Inc.						
N9K-C9504-FM-E					Part included in main chassis. Fabric module, 100G, ACI, NX-OS	UUT 1
N9K-C9504-FAN					Part included in main chassis. Fan tray, port-side intake	UUT 1
N9K-SC-A					Part included in main chassis. System controller	UUT 1
N9K-SUP-B					Part included in main chassis. Supervisor B	UUT 1
N9K-PAC-3000W-B					Part included in main chassis. 3000W power supply	UUT 1
N9K-X9732C-EX					Part included in main chassis. Agg/ACI linecard, 32 port 100G	UUT 1
QSFP-40G-SR-BD					Part included in main chassis. QSFP40G BiDi short transceiver	UUT 1
GLC-TE					Part included in main chassis. 1000BASE-T SFP transceiver	UUT 1
SFP-10G-SR					Part included in main chassis. 10GBASE-SR SFP module	UUT 1
Type: Catalyst 6807 - Mfr: Cisco Systems, Inc.						
C6807-XL	18.1	17.4	17.5	195	Main chassis, 7 slot, 10RU	UUT 1
Type: Catalyst 6807 Parts - Mfr: Cisco Systems, Inc.						
C6807-XL-FAN					Part included in main chassis. Fan tray	UUT 1
C6800-SUP6T					Part included in main chassis. Sup6T, 440G/slot, 8x10GE, 2x40GE	UUT 1
SFP-10G-SR					Part included in main chassis. 10GBASE-SR SFP module	UUT 1
QSFP-40G-SR-BD					Part included in main chassis. QSFP40G BiDi short transceiver	UUT 1
C6800-32P10G					Part included in main chassis. 32 port 10GE with dual DFC4	UUT 1
C6800-XL-3KW-AC					Part included in main chassis. 3000W power supply	UUT 1
Type: Catalyst 3650 - Mfr: Cisco Systems, Inc.						
C1-WS3650-48TQ/K9	17.6	17.5	1.7	20	Switch, 48 Port Data 4x10G Uplink	UUT 1
Type: Catalyst 3650 Parts - Mfr: Cisco Systems, Inc.						
S3650UK9-163					Part included in main chassis. UNIVERSAL	UUT 1
PWR-C2-1025WAC/2					Part included in main chassis. 1025W secondary power supply	UUT 1
PWR-C2-250WAC					Part included in main chassis. 250W power supply	UUT 1
C3650-STACK-KIT					Part included in main chassis. Stack module	UUT 1
C3650-STACK					Part included in main chassis. Stack module	UUT 1
STACK-T2-1M					Part included in main chassis. Stacking cable	UUT 1
Type: Catalyst 9300 - Mfr: Cisco Systems, Inc.						
C9300-24T	17.5	17.5	1.7	19	Switch 24-port data only	UUT 2
C9300-24P	17.5	17.5	1.7	19	Switch 24-port PoE+	INTERP
C9300-24U	17.5	17.5	1.7	19	Switch 24-port UPOE	INTERP
C9300-48T	17.5	17.5	1.7	21	Switch 48-port data only	INTERP
C9300-48P	17.5	17.5	1.7	21	Switch 48-port PoE+	INTERP
C9300-48U	17.5	17.5	1.7	21	Switch 48-port UPOE	UUT 2
Type: Catalyst 9300 Parts - Mfr: Cisco Systems, Inc.						
C9300-NM-4G					Part included in main chassis. 4 x 1GE network module	UUT 2
C9300-NM-2Q					Part included in main chassis. 2 x 40GE network module	INTERP
C9300-NM-4M					Part included in main chassis. 4 x MGig network module	INTERP
C9300-NM-8X					Part included in main chassis. 8 x 10GE network module	UUT 2
GLC-SX-MM-RGD					Part included in main chassis. 1G SFP optical module	UUT 2
SFP-10G-SR					Part included in main chassis. 10G SFP optical module	UUT 2

Notes: Table continues on the next page. Additional notes, information, and seismic parameters are shown at the end of the table.

CISCO SYSTEMS, INC.
Networking Equipment

TABLE 2. SUBCOMPONENTS - 4-Post Racks (continued)

Model Number	Dimensions (in)			Max. Wt. (lb)	Description / Notes	Basis
	Depth	Width	Height			
Type: Catalyst 9300 Parts - Mfr: Cisco Systems, Inc. (continued)						
PWR-C1-350WAC					350WAC power supply	UUT 2
PWR-C1-715WAC					715WAC power supply	INTERP
PWR-C1-1100WAC					1100WAC power supply	UUT 2
FAN-T2					Fan module	UUT 2
Type: Catalyst 9400 - Mfr: Cisco Systems, Inc.						
C9407R	16.3	17.3	17.4	146	7 slot chassis	UUT 2
C9410R	16.3	17.3	22.6	174	10 slot chassis	UUT 2
Type: Catalyst 9400 Parts - Mfr: Cisco Systems, Inc.						
C9400-LC-12QC					12-Port 40GE/4-port 100GE	EXTRAP
C9400-LC-24XS					24-Port 10G ethernet SFP+	UUT 2
C9400-LC-24XY					20-Port 25GE and 4-Port 10GE	INTERP
C9400-LC-24S					24-Port Gigabit Ethernet(SFP)	INTERP
C9400-LC-48T					48-Port 10/100/1000 RJ-45	INTERP
C9400-LC-48UX					48Port UPOE 24p mGig 24p RJ-45	INTERP
C9400-LC-48HX					48-Port UPOE+ 10G mGig	INTERP
C9400-LC-48HN					48-Port UPOE+ 5G (RJ-45)	INTERP
C9400-LC-48H					48-Port UPOE+ 10/100/1000 (RJ-45)	INTERP
C9400-LC-48TX					48-Port 10 Gigabit Ethernet Data	INTERP
C9400-LC-48XS					48-Port 10 Gigabit Ethernet(SFP+)	INTERP
C9400-LC-48P					48-Port POE+ 10/100/1000 (RJ-45)	INTERP
C9400-LC-48S					48-Port Gigabit Ethernet(SFP)	INTERP
C9400-LC-48U					48-Port UPOE 10/100/1000 RJ-45	UUT 2
C9400-SUP-1					Supervisor 1 module	UUT 2
C9400X-SUP-2XL					Supervisor 2XL module	INTERP
SFP-10G-SR					10G SFP optical module	UUT 2
SFP-10G-SR-X					10G SFP optical module	UUT 2
QSFP-40G-SR4					40G QSFP optical module	UUT 2
C9410-FAN					10 slot chassis fan tray	UUT 2
C9407-FAN					7 slot chassis fan tray	UUT 2
C9410-ACC-KIT					10 slot chassis accessory kit	UUT 2
C9407-ACC-KIT					7 slot chassis accessory kit	UUT 2
C9410-RACK-KIT					10 slot chassis rack mount	UUT 2
C9407-RACK-KIT					7 slot chassis rack mount	UUT 2
C9400-S-BLANK					Slot blank cover	UUT 2
C9400-PWR-3200AC					3200W power supply	UUT 2
Type: Catalyst 9500 - Mfr: Cisco Systems, Inc.						
C9500-12Q	21.5	17.5	1.7	28	Switch 12-port 40G QSFP+	EXTRAP
C9500-24Q	21.5	17.5	1.7	29	Switch 24-port 40G QSFP+	UUT 2
C9500-40X	21.5	17.5	1.7	28	Switch 40-port 10G SFP/SFP+	UUT 2
Type: Catalyst 9500 Parts - Mfr: Cisco Systems, Inc.						
C9500-NM-8X					Network module 8-port 10G SFP+	UUT 2
C9500-NM-2Q					Network module 2-port 40G QSFP+	UUT 2
QSFP-H40G-AOC3M					40G QSFP optical module	UUT 2

Notes: Table continues on the next page. Additional notes, information, and seismic parameters are shown at the end of the table.

CISCO SYSTEMS, INC.
Networking Equipment

TABLE 2. SUBCOMPONENTS - 4-Post Racks (continued)

Model Number	Dimensions (in)			Max. Wt. (lb)	Description / Notes	Basis
	Depth	Width	Height			
Type: Catalyst 9500 Parts - Mfr: Cisco Systems, Inc. (continued)						
QSFP-40G-SR4					40G QSFP optical module	UUT 2
SFP-10G-SR					10G SFP optical module	UUT 2
FAN-T4-R					Fan	UUT 2
PWR-C4-950WAC-R					950W power supply	UUT 2
C9500-ACC-KIT-19I					Accessory kit 19" rack mount	UUT 2
C9500-4PT-KIT					Extension rails/brackets four-point	UUT 2
Type: ASR 1002 - Mfr: Cisco Systems, Inc.						
ASR1002-HX	19.3	17.3	3.5	34	Router 4x10GE+4x1GE, 2xP/S	UUT 1
Type: ASR 1002 Parts - Mfr: Cisco Systems, Inc.						
SFP-10G-SR					10GBASE-SR SFP module	UUT 1
GLC-TE					1000BASE-T SFP transceiver	UUT 1
ASR1002HX-IPSECHW					Crypto module	UUT 1
ASR1000X-AC-750W					750W power supply	UUT 1
EPA-10X10GE					10X10GE ethernet port adapter	UUT 1
Type: Firepower 4120/4140 - Mfr: Cisco Systems, Inc.						
FPR4120-NGFW-K9	29.7	16.9	1.8	40	NGFW appliance, 1U, 2 x NetMod	UUT 1
FPR4140-NGFW-K9	29.7	16.9	1.8	41	NGFW Appliance, 1U, 2 x NetMod	UUT 1
Type: Firepower 4120/4140 Parts - Mfr: Cisco Systems, Inc.						
FPR4K-PWR-AC-1100					1100W power supply	UUT 1
SFP-10G-SR					10GBASE-SR SFP module	UUT 1
FPR4K-SSD200					SSD for FPR-4110/4120	UUT 1
FPR4K-SSD-BBLKD					SSD slot carrier	UUT 1
GLC-TE					1000BASE-T SFP transceiver	UUT 1
FPR4K-FAN					Fan	UUT 1
FPR4K-NM-8X10G					8 port SFP+ network module	UUT 1
SFP-10G-SR					10GBASE-SR SFP module	UUT 1
FPR4K-PWR-AC-1100					1100W power supply	UUT 1
SFP-10G-SR					10GBASE-SR SFP module	UUT 1
FPR4K-SSD400					SSD for FPR-4140/4150	UUT 1
FPR4K-SSD-BBLKD					SSD slot carrier	UUT 1
GLC-TE					1000BASE-T SFP transceiver	UUT 1
FPR4K-FAN					Fan	UUT 1
FPR4K-PWR-AC-1100					1100W power supply	UUT 1
FPR4K-NM-4X40G					4 port QSFP+ network module	UUT 1
QSFP-40G-SR4					QSFP transceiver module w/ MPO	UUT 1
Type: Catalyst 9600 - Mfr: Cisco Systems, Inc.						
C9606R	16.1	17.4	14.0	135	6 slot chassis	UUT 3
Type: Catalyst 9600 Parts - Mfr: Cisco Systems, Inc.						
C9600-LC-24C					24-Port 40GE/12-Port 100GE	UUT 3
C9600X-LC-32CD					30-Port 100G, 2-Port 400G	INTERP
C9600X-LC-56YL4C					56-Port 10G/25G/50G, 4-Port 100G	INTERP
C9600-LC-40YL4CD					40-Port 1/10/25/50G,2x200G,2x400	INTERP
C9600-LC-48S					48-Port 1Gig Fiber	INTERP

Notes: Table continues on the next page. Additional notes, information, and seismic parameters are shown at the end of the table.

CISCO SYSTEMS, INC.
Networking Equipment

TABLE 2. SUBCOMPONENTS - 4-Post Racks (continued)

Model Number	Dimensions (in)			Max. Wt. (lb)	Description / Notes	Basis
	Depth	Width	Height			
Type: Catalyst 9600 Parts - Mfr: Cisco Systems, Inc. (continued)						
C9600-LC-48TX					48-Port Copper	UUT 3
C9600-LC-48YL					48-Port 25GE/10GE/1GE	UUT 3
C9606-FAN					C9606 chassis fan tray	UUT 3
C9600-SUP-1					Supervisor 1 module	UUT 3
C9600X-SUP-2					Supervisor 2 module (identical to 1)	INTERP
SFP-10G-SR					10GBASE-SR SFP optical module	UUT 3
SFP-25G-SR-S					25GBASE-SR SFP optical module	UUT 3
QSFP-H40G-AOC3M					QSFP active optical cable	UUT 3
QSFP-100G-SR4-S					QSFP transceiver module w/ MPO	UUT 3
QSFP-40/100-SRBD					QSFP transceiver module w/ LC	UUT 3
C9606-SLOT-BLANK					Slot blank cover	UUT 3
C9600-PWR-2KWDC					2000W DC power supply	UUT 3
C9600-PWR-2KWAC					2000W AC power supply	UUT 3
Type: Catalyst 8500 - Mfr: Cisco Systems, Inc.						
C8500-20X6C	26.9	17.3	5.2	77	20X6C Edge Platform	UUT 5
Type: Catalyst 8500 Parts - Mfr: Cisco Systems, Inc.						
PWR-CH1-950WDC					950W DC power supply, sim.to ASR	INTERP
PWR-CH1-1100WAC					1100W AC power supply	UUT 5
C8500-FAN-3R					Fan Tray, 3RU	UUT 5
Type: Secure Firewall 3100/4200 - Mfr: Cisco Systems, Inc.						
FPR-3105	31.0	16.9	1.7	23	Firewall 3105	UUT 5
FPR-3110	31.0	16.9	1.7	23	Firewall 3110	INTERP
FPR-3120	31.0	16.9	1.7	23	Firewall 3120	INTERP
FPR-3130	31.0	16.9	1.7	25	Firewall 3130	INTERP
FPR-3140	31.0	16.9	1.7	25	Firewall 3140	UUT 5
FPR-4215	32.0	16.9	1.7	43	Firewall 4215	UUT 5
FPR-4225	32.0	16.9	1.7	43	Firewall 4225	INTERP
FPR-4245	32.0	16.9	1.7	46	Firewall 4245	UUT 5
Type: Secure Firewall 3100/4200 Parts - Mfr: Cisco Systems, Inc.						
FPR3K-PWR-AC-400					400W AC power supply	UUT 5
PWR-CC1-400WDC					400W DC power supply	UUT 5
FPR4200-PWR-AC					AC power supply	UUT 5
FPR3K-SSD900					900GB SSD	UUT 5
FPR4200-SSD1800					1.8TB SSD	UUT 5
FPR3K-XNM-8X10G					8X10G SFP+ Netmod	UUT 5
FPR3K-XNM-6X1SXF					6X1G FTW Netmod, SX-Multimode	INTERP
FPR3K-XNM-6X10LRF					6X10G FTW Netmod, LR-Single	INTERP
FPR3K-XNM-6X10SRF					6X10G FTW Netmod, SR-Multimode	INTERP
FPR3K-XNM-8X1GF					8X1G Copper FTW Netmod, RJ45	INTERP
FPR4K-XNM-6X25LRF					6X25G FTW Netmod, LR-Single	UUT 5
FPR4K-XNM-8X1GF					8X1G Copper FTW Netmod, RJ45	UUT 5
FPR4K-XNM-4X200G					4X200G Netmod	UUT 5
FPR4K-XNM-8X25G					8X25G ZSFP Netmod	UUT 5

Notes: Table continues on the next page. Additional notes, information, and seismic parameters are shown at the end of the table.

CISCO SYSTEMS, INC.
Networking Equipment

TABLE 2. SUBCOMPONENTS - 4-Post Racks (continued)

Model Number	Dimensions (in)			Max. Wt. (lb)	Description / Notes	Basis
	Depth	Width	Height			
Type: Secure Firewall 3100/4200 Parts - Mfr: Cisco Systems, Inc. (continued)						
FPR4K-XNM-2X100G					Part included in main chassis. 2X100G QSFP+ Netmod	INTERP
FPR4K-XNM-4X40G					Part included in main chassis. 4X40G QSFP+ Netmod	INTERP
FPR4K-XNM-6X10LRF					Part included in main chassis. 6X10G FTW Netmod, LR-Single	INTERP
FPR4K-XNM-6X10SRF					Part included in main chassis. 6X10G FTW Netmod, SR-Multimode	INTERP
FPR4K-XNM-6X25SRF					Part included in main chassis. 6X25G FTW Netmod, SR-Multimode	INTERP
FPR4K-XNM-8X10G					Part included in main chassis. 8X10G SFP+ Netmod	INTERP
FPR3K-FAN					Part included in main chassis. Fan Tray	UUT 5
FPR4200-FAN					Part included in main chassis. Fan	UUT 5
FPR3K-SLIDE-RAILS					Part included in main chassis. Slide Rail Kit	UUT 5
FPR4200-SLD-RAILS					Part included in main chassis. Slide Rail Kit	UUT 5
Type: UCS C220 - Mfr: Cisco Systems, Inc.						
UCSC-C220-M5	29.8	16.9	1.7	44	M5	UUT 5
SNS-3615-K9	29.8	16.9	1.7	44	Rebrand, Small for ISE app.	INTERP
SNS-3655-K9	29.8	16.9	1.7	44	Rebrand, Medium for ISE app.	INTERP
SNS-3695-K9	29.8	16.9	1.7	44	Rebrand, Large for ISE app.	INTERP
UCSC-C220-M6N	30.0	16.9	1.7	43	M6N	INTERP
SNS-3715-K9	30.0	16.9	1.7	43	Rebrand, Small for ISE app.	INTERP
SNS-3755-K9	30.0	16.9	1.7	43	Rebrand, Medium for ISE app.	INTERP
SNS-3795-K9	30.0	16.9	1.7	43	Rebrand, Large for ISE app.	INTERP
UCSC-C220-M6	30.0	16.9	1.7	43	M6	UUT 5
Type: UCS C220 Parts - Mfr: Cisco Systems, Inc.						
UCSC-PSU1-770W					Part included in main chassis. 770W AC power supply	UUT 5
UCSC-PSU1-1050W					Part included in main chassis. 1050W AC power supply	UUT 5
UCSC-RAILB-M4					Part included in main chassis. Rail kit	UUT 5
UCSC-RAIL-M6					Part included in main chassis. Rail kit	UUT 5
Mounting: Mounted within a 4-post rack.				Seismic Levels:	S _{DS} = 2.00g for z/h = 1 S _{DS} = 2.50g for z/h = 0	I _p = 1.5

Construction/Options: Model number uniquely identifies manufacturer, materials, and configuration of subcomponents.

CISCO SYSTEMS, INC.
Networking Equipment

TABLE 3. SUBCOMPONENTS - 2-Post Racks

Model Number	Dimensions (in)			Max. Wt. (lb)	Description / Notes	Basis
	Depth	Width	Height			
Type: Catalyst 8500/8530 - Mfr: Cisco Systems, Inc.						
C8530L-8S2X2Y	12.0	17.5	1.7	13		EXTRAP
C8455-G2	12.0	17.5	1.7	13	Rebrand of C8530L-8S2X2Y	EXTRAP
C8530L-8S8X4Y	18.0	17.5	1.7	16		UUT 4
C8475-G2	18.0	17.5	1.7	16	Rebrand of C8530L-8S8X4Y	INTERP
C8500-12X	16.3	17.5	1.7	17		INTERP
C8500L-8S4X	16.3	17.5	1.7	17		UUT 4
C8530-12X	18.5	17.5	1.7	20		INTERP
C8550-G2	18.5	17.5	1.7	20	Rebrand of C8530-12X	INTERP
C8500-12X4QC	18.5	17.5	1.7	21		INTERP
C8570-G2	18.5	17.5	1.7	21	Rebrand of C8530-12X4QC	INTERP
C8530-12X4QC	18.5	17.5	1.7	21		UUT 4
Type: Catalyst 8500/8530 Parts - Mfr: Cisco Systems, Inc.						
PWR-CH1-400WAC					Part included in main chassis. 400W AC power supply	UUT 4
PWR-CH1-400WDC					Part included in main chassis. 400W DC power supply	INTERP
PWR-CC1-400WHV					Part included in main chassis. 400W HVDC power supply	INTERP
PWR-CH1-750WACR					Part included in main chassis. 750W AC power supply	UUT 4
PWR-CH1-950WDCR					Part included in main chassis. 950W DC power supply, sim. to 8300	INTERP
C8500L-FAN-1R					Part included in main chassis. Fan tray	UUT 4
C8300-RM-19-1R					Part included in main chassis. Rack mount kit	UUT 4
C8500L-RM-19-1R					Part included in main chassis. Rack mount kit	UUT 4
C8500-ACCKIT-19					Part included in main chassis. Accessory kit	UUT 4
Type: Catalyst 9800 - Mfr: Cisco Systems, Inc.						
CW9800H1	18.4	17.3	1.7	21		UUT 4
CW9800H2	18.4	17.3	1.7	21		INTERP
CW9800M	18.4	17.3	1.7	21		INTERP
C9800-40-K9	19.5	17.3	1.7	23		UUT 4
C9800-80-K9	20.5	17.3	3.5	32		UUT 4
Type: Catalyst 9800 Parts - Mfr: Cisco Systems, Inc.						
C9800-AC-750W-R					Part included in main chassis.	UUT 4
C9800-DC-950W					Part included in main chassis.	UUT 4
C9800-AC-1100W					Part included in main chassis.	UUT 4
Type: Catalyst 8200/8300/8330 - Mfr: Cisco Systems, Inc.						
C8200L-1N-4T	11.8	17.3	1.7	10		UUT 4
C8200-1N-4T	11.8	17.3	1.7	10		INTERP
C8330-1N1S-4M2X	16.3	17.5	1.7	16		UUT 4
C8375-E-G2	16.3	17.5	1.7	16		INTERP
C8300-1N1S-4T2X	16.3	17.5	1.7	18		UUT 4
C8300-1N1S-6T	16.3	17.5	1.7	18		INTERP
C8300-2N2S-6T	18.5	17.3	3.5	33		INTERP
C8330-2N1S-4M2S	18.5	17.3	3.5	33		INTERP
C8355-E-G2	18.5	17.3	3.5	33		INTERP
C8300-2N2S-4T2X	18.5	17.3	3.5	33		UUT 4

Notes: Table continues on the next page. Additional notes, information, and seismic parameters are shown at the end of the table.

CISCO SYSTEMS, INC.
Networking Equipment

TABLE 3. SUBCOMPONENTS - 2-Post Racks (continued)

Model Number	Dimensions (in)			Max. Wt. (lb)	Description / Notes	Basis
	Depth	Width	Height			
Type: Catalyst 8200/8300/8330 Parts - Mfr: Cisco Systems, Inc.						
C-NIM-8T	Part included in main chassis.				8-port 1G RJ45	UUT 4
C-NIM-4X	Part included in main chassis.				4-port 1G/10G LAN/WAN	INTERP
C-NIM-8T	Part included in main chassis.				8-port 10M/100M/1G LAN/WAN	INTERP
C-NIM-8M	Part included in main chassis.				8-port 100M/1G/2.5G LAN/WAN PoE	INTERP
C-NIM-1X	Part included in main chassis.				1-port 10-Gbps/1-Gbps WAN	INTERP
C-NIM-2T	Part included in main chassis.				2-port 100-Mbps/1-Gbps WAN	INTERP
C-NIM-1M	Part included in main chassis.				1-port 2.5-Gbps/1-Gbps WAN	INTERP
C8200-RM-19-1R	Part included in main chassis.				Rack mount kit	UUT 4
PWR-CC1-250WAC	Part included in main chassis.				250W AC power supply	UUT 4
PWR-CC1-400WAC	Part included in main chassis.				400W AC power supply	UUT 4
PWR-CC1-400WHV	Part included in main chassis.				400W HVDC power supply	INTERP
C-NIM-1X	Part included in main chassis.				1-port 10G SFP/SFP+ with MACSec	UUT 4
C8300-RM-19-1R	Part included in main chassis.				Rack mount kit	INTERP
PWR-CC1-500WAC	Part included in main chassis.				500W AC power supply	UUT 4
PWR-CC1-400WDC	Part included in main chassis.				400W DC power supply	UUT 4
C-NIM-8M	Part included in main chassis.				8-port 2.5mGig RJ45	UUT 4
PWR-CC1-650WAC	Part included in main chassis.				650W AC power supply	UUT 4
PWR-CC1-1000WAC	Part included in main chassis.				1000W AC power supply	UUT 4
PWR-CC1-650WDC	Part included in main chassis.				650W DC power supply	INTERP
PWR-CC1-650WDCR	Part included in main chassis.				650W DC power supply	INTERP
C-SM-40P8M2X	Part included in main chassis.				40-port 1G, 8-port 2.5 mGig Ethernet	UUT 4
C8300-RM-19-2R	Part included in main chassis.				Rack mount kit	UUT 4
Type: Catalyst 9300/X/L/LM - Mfr: Cisco Systems, Inc.						
C9300LM-48T-4Y	11.9	17.5	1.7	11	Mini 48p Data	EXTRAP
C9300LM-24U-4Y	13.0	17.5	1.7	12	Mini 24p UPoE	EXTRAP
C9300LM-48U-4Y	13.0	17.5	1.7	12	Mini 48p UPoE	EXTRAP
C9300LM-48UX-4Y	13.0	17.5	1.7	12	Mini 48p 8mGig	UUT 4
C9300X-24HX	20.6	17.5	1.7	14	24-port mGig UPoE+	INTERP
C9300X-48HXN	20.6	17.5	1.7	14	48-port, 8xmGig+40x5G 90W UPOE-	INTERP
C9300X-48TX	22.0	17.5	1.7	15	48-port mGig data only	INTERP
C9300X-48HX	22.0	17.5	1.7	15	48-port mGig UPoE+	UUT 4
C9300X-12Y	19.2	17.5	1.7	15	12x25G Fiber Ports	INTERP
C9300X-24Y	20.7	17.5	1.7	16	24x25G Fiber Ports	INTERP
C9300L-24T-4G	19.2	17.5	1.7	15	24p data ,4x1G Uplink	INTERP
C9300L-24T-4X	19.2	17.5	1.7	15	24p data ,4x10G Uplink	INTERP
C9300L-24P-4G	19.2	17.5	1.7	15	24p PoE ,4x1G Uplink	INTERP
C9300L-24P-4X	19.2	17.5	1.7	15	24p PoE ,4x10G Uplink	INTERP
C9300L-48T-4G	19.2	17.5	1.7	15	48p data ,4x1G Uplink	INTERP
C9300L-48T-4X	19.2	17.5	1.7	15	48p data ,4x10G Uplink	INTERP
C9300L-48PF-4G	19.2	17.5	1.7	16	48p Full PoE+ ,4x1G Uplink	UUT 4
C9300L-48PF-4X	19.2	17.5	1.7	16	48p Full PoE+ ,4x10G Uplink	INTERP
C9300L-48P-4G	19.2	17.5	1.7	16	48p PoE ,4x1G Uplink	INTERP

Notes: Table continues on the next page. Additional notes, information, and seismic parameters are shown at the end of the table.

CISCO SYSTEMS, INC.
Networking Equipment

TABLE 3. SUBCOMPONENTS - 2-Post Racks (continued)

Model Number	Dimensions (in)			Max. Wt. (lb)	Description / Notes	Basis
	Depth	Width	Height			
Type: Catalyst 9300/X/L/LM - Mfr: Cisco Systems, Inc. (continued)						
C9300L-48P-4X	19.2	17.5	1.7	16	48p PoE ,4x10G Uplink	INTERP
C9300L-24UXG-4X	19.2	17.5	1.7	16	24p, 8mGig ,4x10G Uplink	INTERP
C9300L-24UXG-2Q	19.2	17.5	1.7	16	24p, 8mGig ,2x40G Uplink	INTERP
C9300L-48UXG-4X	19.2	17.5	1.7	17	48p, 12mGig ,4x10G Uplink	INTERP
C9300L-48UXG-2Q	19.2	17.5	1.7	17	48p, 12mGig ,2x40G Uplink	INTERP
C9300-24UB	19.2	17.5	1.7	17	24-port UPOE	INTERP
C9300-24H	19.2	17.5	1.7	17	24-port UPOE+	INTERP
C9300-24S	20.7	17.5	1.7	17	24-port Fiber	INTERP
C9300-48UB	19.2	17.5	1.7	17	48-port UPOE Deep Buffer	INTERP
C9300-48H	19.2	17.5	1.7	17	48-port UPoE+	INTERP
C9300-48S	20.7	17.5	1.7	17	48-port Fiber	INTERP
C9300-24UXB	20.2	17.5	1.7	18	24p mGig, UPOE	INTERP
C9300-24UX	20.2	17.5	1.7	18	24-port mGig and UPOE	INTERP
C9300-48UXM	22.2	17.5	1.7	20	48-port(12 mGig&36 2.5Gbps)	INTERP
C9300-48UN	22.2	17.5	1.7	20	48-port of 5Gbps	UUT 4
Type: Catalyst 9300/X/L/LM Parts - Mfr: Cisco Systems, Inc.						
C9300-NM-8X	Part included in main chassis.				8x 10G/1G Network Module	UUT 4
C9300X-NM-8M	Part included in main chassis.				8x 10G/1G Multigigabit Network Mod	INTERP
C9300X-NM-2C	Part included in main chassis.				2x 100G/40G Network Module	INTERP
C9300X-NM-4C	Part included in main chassis.				4x 100G/40G Network Module	INTERP
C9300-NM-4G	Part included in main chassis.				4x 1G Network Module	INTERP
C9300-NM-4M	Part included in main chassis.				4x Multigigabit Network Module	INTERP
C9300-NM-2Q	Part included in main chassis.				2x 40G Network Module	INTERP
C9300-NM-2Y	Part included in main chassis.				2x 25G/10G/1G Network Module	INTERP
C9300X-NM-8Y	Part included in main chassis.				8x 10G/25G Network Module SFP+	UUT 4
FAN-T2	Part included in main chassis.				Fan module	UUT 4
ACC-KIT-T1	Part included in main chassis.				Accessory kit	UUT 4
PWR-C1-350WAC-P	Part included in main chassis.				350W AC power supply	INTERP
PWR-C6-600WAC	Part included in main chassis.				600W AC power supply	UUT 4
PWR-C1-715WDC	Part included in main chassis.				715W DC power supply	INTERP
PWR-C6-715WDC	Part included in main chassis.				715W DC power supply	INTERP
PWR-C1-715WAC-P	Part included in main chassis.				715W AC power supply	UUT 4
PWR-C6-1KWAC	Part included in main chassis.				1000W AC power supply	UUT 4
PWR-C1-1100WAC-P	Part included in main chassis.				1100W AC power supply	UUT 4
PWR-C1-1900WAC-P	Part included in main chassis.				1900W AC power supply	UUT 4
Type: Catalyst 9500/X - Mfr: Cisco Systems, Inc.						
C9500-24Y4C	18.0	17.5	1.7	21		EXTRAP
C9500-32QC	18.0	17.5	1.7	22		EXTRAP
C9500-48Y4C	18.0	17.5	1.7	22		UUT 4
C9500-16X	21.5	17.5	1.7	24		INTERP
C9500-32C	21.2	17.5	1.7	26		UUT 4
C9500X-60L4D	21.8	17.5	1.7	28		UUT 4
C9500X-28C8D	21.8	17.5	1.7	29		UUT 4

Notes: Table continues on the next page. Additional notes, information, and seismic parameters are shown at the end of the table.

CISCO SYSTEMS, INC.
Networking Equipment

TABLE 3. SUBCOMPONENTS - 2-Post Racks (continued)

Model Number	Dimensions (in)			Max. Wt. (lb)	Description / Notes	Basis
	Depth	Width	Height			
Type: Catalyst 9500/X Parts - Mfr: Cisco Systems, Inc.						
C9K-PWR-650WACL-R					650W AC power supply	UUT 4
C9K-PWR-650WAC-R					650W AC power supply	INTERP
C9K-PWR-930WDC-R					930W DC power supply	UUT 4
C9K-PWR-1500WAC-F					1500W AC power supply	UUT 4
C9K-PWR-1500WDC-F					1500W DC power supply	UUT 4
C9K-PWR-1500WAC					1500W AC power supply	UUT 4
C9K-PWR-1500WDC					1500W DC power supply	INTERP
C9K-PWR-1600WDC-R					1600W DC power supply	UUT 4
C9K-PWR-1600WAC-R					1600W AC power supply	UUT 4
C9500X-FAN-1U-F					Fan module	UUT 4
C9500X-FAN-1U-R					Fan module	UUT 4
C9K-T2-FANTRAY					Fan tray	UUT 4
C9K-T1-FANTRAY					Fan tray	UUT 4

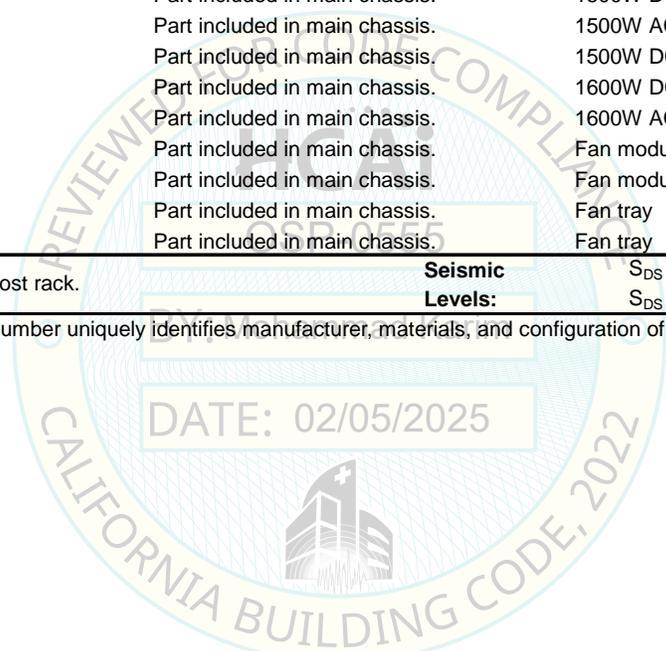
Mounting: Mounted within a 2-post rack.

Seismic Levels:

S_{DS} = 2.00g for z/h = 1
S_{DS} = 2.50g for z/h = 0

I_p = 1.5

Construction/Options: Model number uniquely identifies manufacturer, materials, and configuration of subcomponents.



UUT 1

Manufacturer: Cisco Systems, Inc.
 Model number: Nexus 9504 Custom
 Unit function: Networking Equipment
 Serial number: N/A

Dimensions (in)			Weight (lb)	Res. Freq. (Hz)		
Depth	Width	Height		F-B	S-S	V
36.0	24.0	84.0	944	14.0	4.9	21.4

Code & criteria: 2022 CBC, ICC-ES AC156

Test laboratory: Element Newark (NTS)

Report: 18012TR1.1 (dated 4-11-18), tested on 3-14-18

S _{DS} (g)	z/h	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)
2.00	1.00	3.20	2.40	1.68	0.68
2.50	0.00				

Importance Factor, I_p = 1.5: Unit was full of operating content during the shake table test. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.

Mounting: Rigid base mounted with (4) total 1/2-in A574 bolts through 1/4-in thick plate washers. Networking equipment is rigid mounted to the four-post rack.

Construction: Welded carbon steel four post rack (Telect DR1250-84436).

Subcomponents: Cisco Systems, Inc. - Nexus 9504 (N9K-C9504), Cisco Systems, Inc. - Nexus 9504 Parts (N9K-C9504-FM-E, N9K-C9504-FAN, N9K-SC-A, N9K-SUP-B, N9K-PAC-3000W-B, N9K-X9732C-EX, QSFP-40G-SR-BD, GLC-TE, SFP-10G-SR), Cisco Systems, Inc. - Catalyst 6807 (C6807-XL), Cisco Systems, Inc. - Catalyst 6807 Parts (C6807-XL-FAN, C6800-SUP6T, SFP-10G-SR, QSFP-40G-SR-BD, C6800-32P10G, C6800-XL-3KW-AC), Cisco Systems, Inc. - Catalyst 3650 (C1-WS3650-48TQ/K9), Cisco Systems, Inc. - Catalyst 3650 Parts (S3650UK9-163, PWR-C2-1025WAC/2, PWR-C2-250WAC, C3650-STACK-KIT, C3650-STACK, STACK-T2-1M), Cisco Systems, Inc. - ASR 1002 (ASR1002-HX), Cisco Systems, Inc. - ASR 1002 Parts (SFP-10G-SR, GLC-TE, ASR1002HX-IPSECHW, ASR1000X-AC-750W, EPA-10X10GE), Cisco Systems, Inc. - Firepower 4120/4140 (FPR4120-NGFW-K9, FPR4140-NGFW-K9), Cisco Systems, Inc. - Firepower 4120/4140 Parts (FPR4K-PWR-AC-1100, SFP-10G-SR, FPR4K-SSD200, FPR4K-SSD-BBLKD, GLC-TE, FPR4K-FAN, FPR4K-NM-8X10G, SFP-10G-SR, FPR4K-PWR-AC-1100, SFP-10G-SR, FPR4K-SSD400, FPR4K-SSD-BBLKD, GLC-TE, FPR4K-FAN, FPR4K-PWR-AC-1100, FPR4K-NM-4X40G, QSFP-40G-SR4).

Testing notes: Height to center of gravity (Hcg) = 37.0-in.

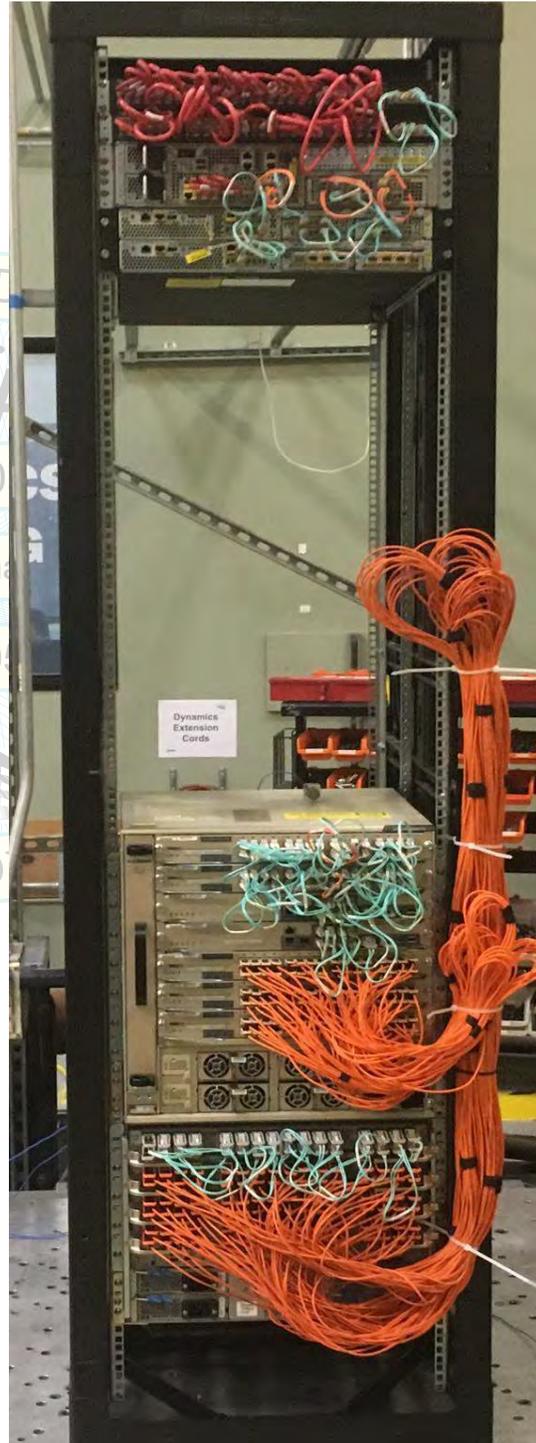


UUT 1 - RACK CONFIGURATION

CG of unit = 37-in from bottom. Total height = 84-in.

RU	Subcomponent	Weight, lb	CG, in
Top			
45			
44	Catalyst 3650 2	20	78.6
43	Catalyst 3650 1	20	76.9
42			
41	ASR 1002	34	74.3
40	Firepower 4120	40	71.6
39	Firepower 4140	41	69.9
38			
37			
36			
35			
34			
33			
32			
31			
30			
29			
28			
27			
26			
25			
24			
23			
22			
21			
20			
19			
18			
17			
16	Catalyst 6807	195	28.8
15			
14			
13			
12			
11			
10			
9			
8			
7	Nexus 9504	248	13.9
6			
5			
4			
3			
2			
1			

Empty rack and miscellaneous cabling = 346-lb.



UUT 2

Manufacturer: Cisco Systems, Inc.
 Model number: Catalyst 9000 Custom
 Unit function: Networking Equipment
 Serial number: N/A



Dimensions (in)			Weight (lb)	Res. Freq. (Hz)		
Depth	Width	Height		F-B	S-S	V
36.0	24.0	84.0	791	12.7	4.9	24.2

Code & criteria: 2022 CBC, ICC-ES AC156

Test laboratory: Element Newark (NTS)

Report: 18012TR1.1 (dated 4-11-18), tested on 3-14-18

S _{DS} (g)	z/h	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)
2.00	1.00	3.20	2.40	1.68	0.68
2.50	0.00				

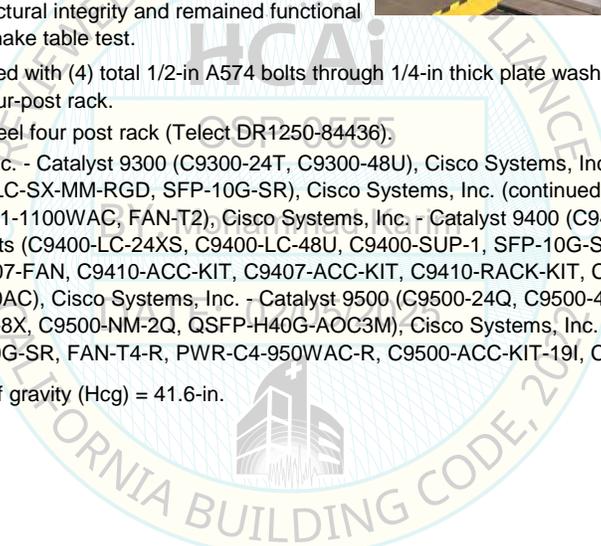
Importance Factor, I_p = 1.5: Unit was full of operating content during the shake table test. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.

Mounting: Rigid base mounted with (4) total 1/2-in A574 bolts through 1/4-in thick plate washers. Networking equipment is rigid mounted to the four-post rack.

Construction: Welded carbon steel four post rack (Telect DR1250-84436).

Subcomponents: Cisco Systems, Inc. - Catalyst 9300 (C9300-24T, C9300-48U), Cisco Systems, Inc. - Catalyst 9300 Parts (C9300-NM-4G, C9300-NM-8X, GLC-SX-MM-RGD, SFP-10G-SR), Cisco Systems, Inc. (continued) - Catalyst 9300 Parts (PWR-C1-350WAC, PWR-C1-1100WAC, FAN-T2), Cisco Systems, Inc. - Catalyst 9400 (C9407R, C9410R), Cisco Systems, Inc. - Catalyst 9400 Parts (C9400-LC-24XS, C9400-LC-48U, C9400-SUP-1, SFP-10G-SR, SFP-10G-SR-X, QSFP-40G-SR4, C9410-FAN, C9407-FAN, C9410-ACC-KIT, C9407-ACC-KIT, C9410-RACK-KIT, C9407-RACK-KIT, C9400-S-BLANK, C9400-PWR-3200AC), Cisco Systems, Inc. - Catalyst 9500 (C9500-24Q, C9500-40X), Cisco Systems, Inc. - Catalyst 9500 Parts (C9500-NM-8X, C9500-NM-2Q, QSFP-H40G-AOC3M), Cisco Systems, Inc. (continued) - Catalyst 9500 Parts (QSFP-40G-SR4, SFP-10G-SR, FAN-T4-R, PWR-C4-950WAC-R, C9500-ACC-KIT-19f, C9500-4PT-KIT).

Testing notes: Height to center of gravity (Hcg) = 41.6-in.



UUT 2 - RACK CONFIGURATION

CG of unit = 41.6-in from bottom. Total height = 84-in.

RU	Subcomponent	Weight, lb	CG, in
Top			
45			
44	C9300-24T	19	78.6
43	C9300-48U	21	76.9
42	C9500-40X 2	28	75.1
41	C9500-40X 1	28	73.4
40	C9500-24Q	29	71.6
39			
38			
37			
36			
35			
34			
33			
32			
31			
30			
29			
28			
27			
26			
25			
24			
23			
22	C9407	146	39.3
21			
20			
19			
18			
17			
16			
15			
14			
13			
12			
11			
10	C9410	174	19.1
9			
8			
7			
6			
5			
4			
3			
2			
1			

Empty rack and miscellaneous cabling = 346-lb.



ATTACHMENT 2: UNIT UNDER TEST SUMMARIES

SPECIAL SEISMIC CERTIFICATION

UUT 3

Manufacturer: Cisco Systems, Inc.
 Model number: Catalyst 9600 Custom
 Unit function: Networking Equipment
 Serial number: N/A



Dimensions (in)			Weight (lb)	Res. Freq. (Hz)		
Depth	Width	Height		F-B	S-S	V
36.0	24.0	84.0	789	15.6	5.8	22.0

Code & criteria: 2022 CBC, ICC-ES AC156

Test laboratory: Element Newark (NTS)

Report: 20122TR1.0 (dated 7-2-21), tested on 6-30-21

S _{DS} (g)	z/h	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)
2.00	1.00	3.20	2.40	1.68	0.68
2.50	0.00				

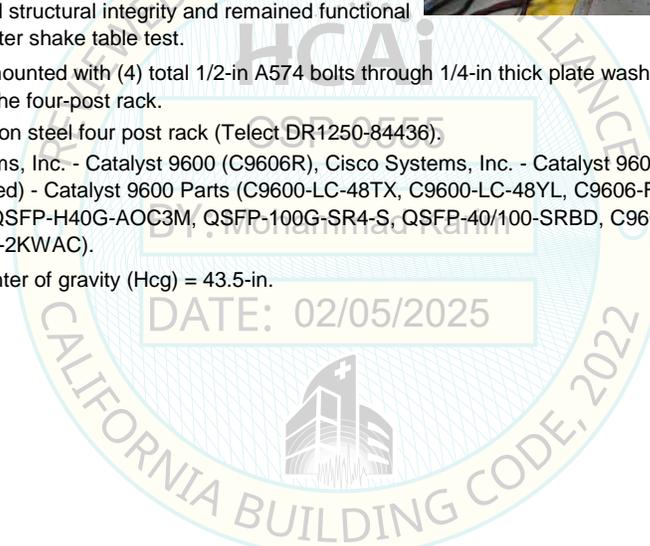
Importance Factor, I_p = 1.5: Unit was full of operating content during the shake table test. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.

Mounting: Rigid base mounted with (4) total 1/2-in A574 bolts through 1/4-in thick plate washers. Networking equipment is rigid mounted to the four-post rack.

Construction: Welded carbon steel four post rack (Telect DR1250-84436).

Subcomponents: Cisco Systems, Inc. - Catalyst 9600 (C9606R), Cisco Systems, Inc. - Catalyst 9600 Parts (C9600-LC-24C), Cisco Systems, Inc. (continued) - Catalyst 9600 Parts (C9600-LC-48TX, C9600-LC-48YL, C9606-FAN, C9600-SUP-1, SFP-10G-SR, SFP-25G-SR-S, QSFP-H40G-AOC3M, QSFP-100G-SR4-S, QSFP-40/100-SRBD, C9606-SLOT-BLANK, C9600-PWR-2KWDC, C9600-PWR-2KWAC).

Testing notes: Height to center of gravity (Hcg) = 43.5-in.

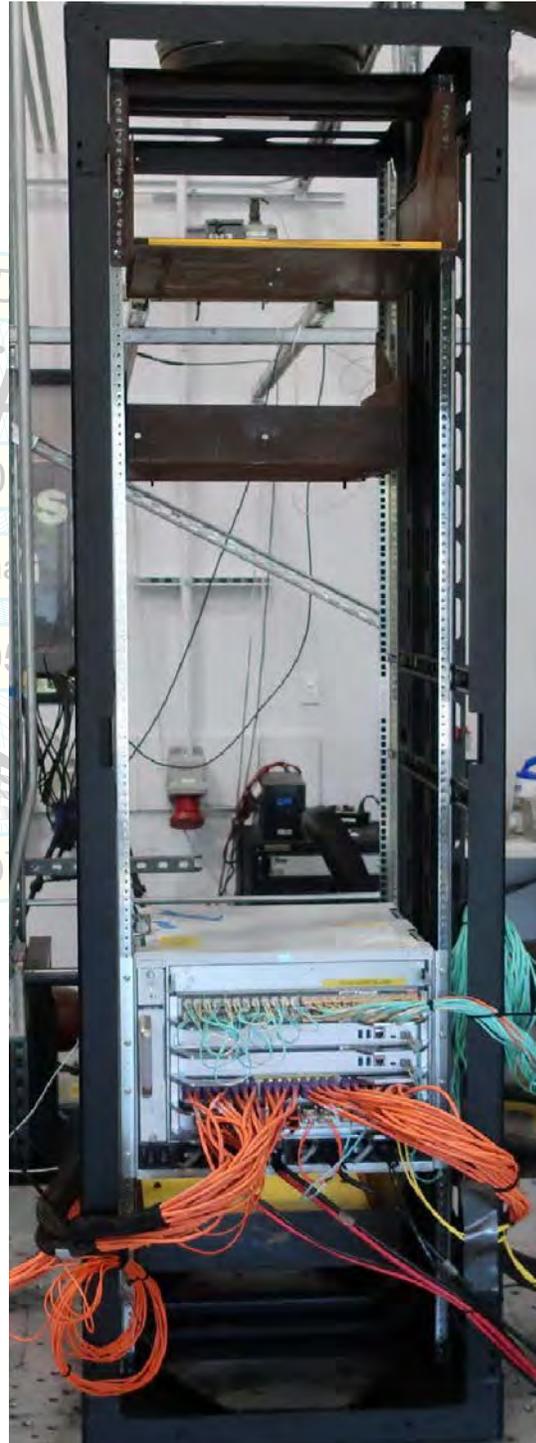


UUT 3 - RACK CONFIGURATION

CG of unit = 43.5-in from bottom. Total height = 84-in.

RU	Subcomponent	Weight, lb	CG, in
Top			
45	Added Weight 4	78	83.0
44			
43			
42			
41			
40			
39	Added Weight 3	70	72.5
38			
37			
36			
35			
34			
33	Added Weight 2	70	62.0
32			
31			
30			
29			
28			
27			
26			
25			
24			
23			
22			
21			
20			
19			
18			
17			
16			
15			
14			
13			
12	C9606R	135	24.4
11			
10			
9			
8			
7			
6			
5			
4			
3			
2	Added Weight 1	90	6.9
1			

Empty rack and miscellaneous cabling = 346-lb.



ATTACHMENT 2: UNIT UNDER TEST SUMMARIES

SPECIAL SEISMIC CERTIFICATION

UUT 4

Manufacturer: Cisco Systems, Inc.
 Model number: 2-Post Custom 4
 Unit function: Networking Equipment
 Serial number: N/A



Dimensions (in)			Weight (lb)	Res. Freq. (Hz)		
Depth	Width	Height		F-B	S-S	V
15.0	24.0	84.0	776	10.3	5.9	>33

Code & criteria: 2022 CBC, ICC-ES AC156

Test laboratory: Cisco Systems, Inc.

Report: 24103TR1.1 (dated 2-4-25), tested on 12-17-24

S _{DS} (g)	z/h	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)
2.00	1.00	3.20	2.40	1.68	0.68
2.50	0.00				

Importance Factor, I_p = 1.5: Unit was full of operating content during the shake table test. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.

Mounting: Rigid base mounted with (4) total 1/2-in A574 bolts through 1/4-in thick plate washers. Networking equipment is rigid mounted to the two-post rack.

Construction: Welded carbon steel two-post rack (Chatsworth SeismicFrame 13855-703).

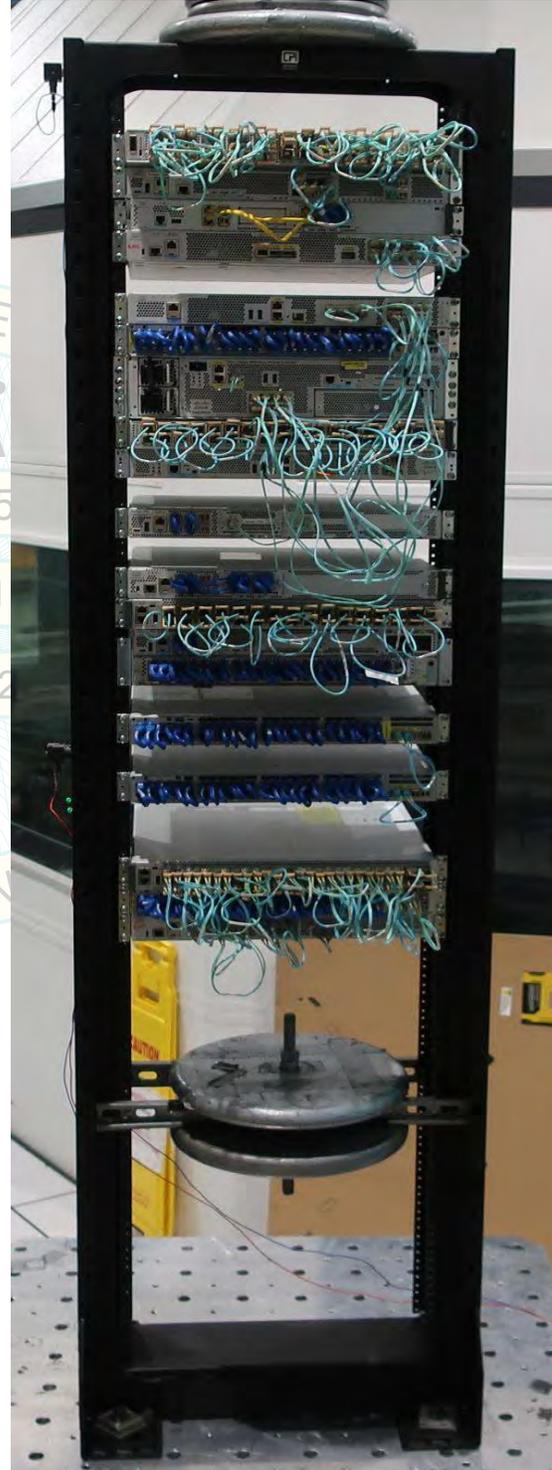
Subcomponents: Cisco Systems, Inc. - Catalyst 8500/8530 (C8530L-8S8X4Y, C8500L-8S4X, C8530-12X4QC), Cisco Systems, Inc. - Catalyst 8500/8530 Parts (PWR-CH1-400WAC, PWR-CH1-750WACR, C8500L-FAN-1R, C8300-RM-19-1R, C8500L-RM-19-1R, C8500-ACCKIT-19), Cisco Systems, Inc. - Catalyst 9800 (CW9800H1, C9800-40-K9, C9800-80-K9), Cisco Systems, Inc. - Catalyst 9800 Parts (C9800-AC-750W-R, C9800-DC-950W, C9800-AC-1100W), Cisco Systems, Inc. - Catalyst 8200/8300/8330 (C8200L-1N-4T, C8330-1N1S-4M2X, C8300-1N1S-4T2X, C8300-2N2S-4T2X), Cisco Systems, Inc. - Catalyst 8200/8300/8330 Parts (C-NIM-8T, C8200-RM-19-1R, PWR-CC1-250WAC, PWR-CC1-400WAC, C-NIM-1X, PWR-CC1-500WAC, PWR-CC1-400WDC, C-NIM-8M, PWR-CC1-650WAC, PWR-CC1-1000WAC, C-SM-40P8M2X, C8300-RM-19-2R), Cisco Systems, Inc. - Catalyst 9300/X/L/LM (C9300LM-48UX-4Y, C9300X-48HX, C9300L-48PF-4G), Cisco Systems, Inc. (continued) - Catalyst 9300/X/L/LM (C9300-48UN), Cisco Systems, Inc. - Catalyst 9300/X/L/LM Parts (C9300-NM-8X, C9300X-NM-8Y, FAN-T2, ACC-KIT-T1, PWR-C6-600WAC, PWR-C1-715WAC-P, PWR-C6-1KWAC, PWR-C1-1100WAC-P, PWR-C1-1900WAC-P), Cisco Systems, Inc. - Catalyst 9500/X (C9500-48Y4C, C9500-32C, C9500X-60L4D, C9500X-28C8D), Cisco Systems, Inc. - Catalyst 9500/X Parts (C9K-PWR-650WACL-R, C9K-PWR-930WDC-R, C9K-PWR-1500WAC-F, C9K-PWR-1500WDC-F, C9K-PWR-1500WAC, C9K-PWR-1600WDC-R, C9K-PWR-1600WAC-R, C9500X-FAN-1U-F, C9500X-FAN-1U-R, C9K-T2-FANTRAY, C9K-T1-FANTRAY).

Testing notes: Height to center of gravity (Hcg) = 54.7-in.
 Testing at the manufacturer's lab meets the requirements of PIN 58 Item #21. See test report.

UUT 4 - RACK CONFIGURATION

RU	Subcomponent	Weight, lb	CG, in
Top	Added Weight 2	100	87.7
45			
44			
43	C9500X-60L4D	32	79.8
42	C8500L-8S4X	17	78.0
41	C8200L-1N-4T	10	76.3
40	C8530-12X4QC	22	74.5
39			
38	CW9800H1	21	71.0
37	C9300-48UN	25	69.3
36			
35	C9800-80-K9	34	66.7
34	C9500X-28C8D	32	64.0
33	C9800-40-K9	23	62.3
32			
31	C8300-1N1S-4T2X	18	58.8
30			
29	C8330-1N1S-4M2X	17	55.3
28	C9500-32C	30	53.5
27			
26	C8300-2N2S-4T2X	35	50.9
25			
24	C9300LM-48UX-4Y	15	46.5
23			
22	C9300L-48PF-4G	19	43.0
21			
20			
19	C9500-48Y4C	25	37.8
18	C9300X-48HX	24	36.0
17	C8530L-8S8X4Y	17	34.3
16			
15			
14			
13			
12			
11			
10	Added Weight 1	100	22.0
9			
8			
7			
6			
5			
4			
3			
2			
1			

CG of unit = 54.7-in from bottom. Total height = 84-in.



Empty rack and miscellaneous cabling = 160-lb.

UUT 5

Manufacturer: Cisco Systems, Inc.
 Model number: 4-Post Custom 5
 Unit function: Networking Equipment
 Serial number: N/A



Dimensions (in)			Weight (lb)	Res. Freq. (Hz)		
Depth	Width	Height		F-B	S-S	V
36.0	24.0	84.0	980	11.8	4.6	>33

Code & criteria: 2022 CBC, ICC-ES AC156

Test laboratory: Cisco Systems, Inc.

Report: 24103TR1.1 (dated 2-4-25), tested on 12-17-24

S _{DS} (g)	z/h	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)
2.00	1.00	3.20	2.40	1.68	0.68
2.50	0.00				

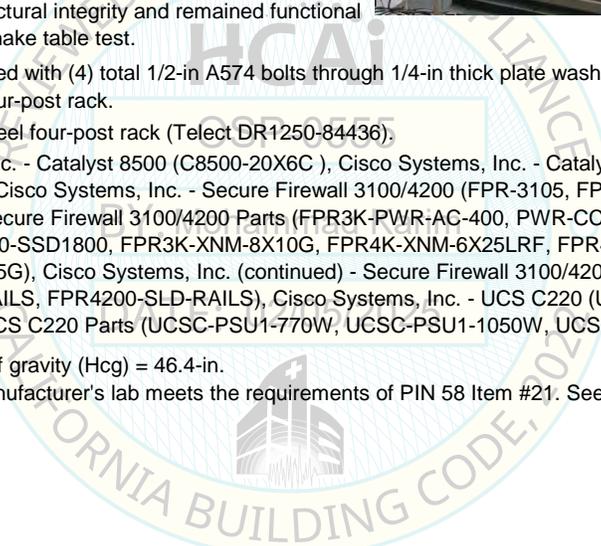
Importance Factor, I_P = 1.5: Unit was full of operating content during the shake table test. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.

Mounting: Rigid base mounted with (4) total 1/2-in A574 bolts through 1/4-in thick plate washers. Networking equipment is rigid mounted to the four-post rack.

Construction: Welded carbon steel four-post rack (Telect DR1250-84436).

Subcomponents: Cisco Systems, Inc. - Catalyst 8500 (C8500-20X6C), Cisco Systems, Inc. - Catalyst 8500 Parts (PWR-CH1-1100WAC, C8500-FAN-3R), Cisco Systems, Inc. - Secure Firewall 3100/4200 (FPR-3105, FPR-3140, FPR-4215, FPR-4245), Cisco Systems, Inc. - Secure Firewall 3100/4200 Parts (FPR3K-PWR-AC-400, PWR-CC1-400WDC, FPR4200-PWR-AC, FPR3K-SSD900, FPR4200-SSD1800, FPR3K-XNM-8X10G, FPR4K-XNM-6X25LRF, FPR4K-XNM-8X1GF, FPR4K-XNM-4X200G, FPR4K-XNM-8X25G), Cisco Systems, Inc. (continued) - Secure Firewall 3100/4200 Parts (FPR3K-FAN, FPR4200-FAN, FPR3K-SLIDE-RAILS, FPR4200-SLD-RAILS), Cisco Systems, Inc. - UCS C220 (UCSC-C220-M5, UCSC-C220-M6), Cisco Systems, Inc. - UCS C220 Parts (UCSC-PSU1-770W, UCSC-PSU1-1050W, UCSC-RAILB-M4, UCSC-RAIL-M6).

Testing notes: Height to center of gravity (Hcg) = 46.4-in.
 Testing at the manufacturer's lab meets the requirements of PIN 58 Item #21. See test report.



UUT 5 - RACK CONFIGURATION

CG of unit = 46.4-in from bottom. Total height = 84-in.

RU	Subcomponent	Weight, lb	CG, in
Top			
45			
44			
43			
42			
41	Added Weight 2	144	76.0
40			
39			
38			
37	FPR-4245	53	68.1
36			
35			
34	FPR-4215	50	62.9
33			
32			
31	FPR-3140	34	57.6
30			
29			
28	FPR-3105	32	52.4
27			
26			
25	UCSC-C220-M6	49	47.1
24			
23			
22	UCSC-C220-M5	47	41.9
21			
20			
19			
18	C8500-20X6C	81	34.0
17			
16			
15			
14			
13			
12			
11			
10			
9			
8	Added Weight 1	144	18.3
7			
6			
5			
4			
3			
2			
1			

Empty rack and miscellaneous cabling = 346-lb.

