

CHECK POINT SECURITY APPLIANCE ACCESSORIES GUIDE



EXPAND NETWORK CAPACITY, INCREASE PERFORMANCE & RELIABILITY

Check Point security gateway appliances are built with flexibility and expansion capability to meet the diverse requirements in today's enterprise networks.

		1 GbE Copper	1 GbE Fiber	10 GbE	10/25/40/100 GbE	Memory	Redundant Storage	Redundant Power	LOM
6200	Base	10	0	0	-	8GB	-	-	○
	Plus	10	4	0	-	16GB	-	●	●
	Maximums	18	4	4	-	32GB	-	●	●
6400	Base	10	0	0	-	8GB	-	●	○
	Plus	10	4	0	-	16GB	-	●	●
	Maximums	18	4	4	-	32GB	-	●	●
6600	Base	10	0	0	-	8GB	-	○	○
	Plus	10	0	4	-	16GB	-	●	●
	Maximums	18	4	4	-	32GB	-	●	●
6700	Base	10	0	0	-	8GB	-	○	○
	Plus	10	0	4	-	16GB	-	●	●
	Maximums	18	4	4	-	32GB	-	●	●
6900	Base	10	0	0	-	16GB	○	○	○
	Plus	10	0	4	-	32GB	●	●	●
	Maximums	26	8	8	2	64GB	●	●	●
7000	Base	10	0	0	-	16GB	○	○	○
	Plus	10	0	4	-	32GB	●	●	●
	Maximums	26	8	8	2	64GB	●	●	●
16200	Base	10	0	0	-	48GB	○	○	○
	Plus	10	0	8	-	64GB	●	●	●
	Maximums	34	16	16	4	128GB	●	●	●
26000	Base	10	0	0	-	48GB	○	●	○
	Plus	10	0	12	-	96GB	●	●	●
	Maximums	66	32	32	8	128GB	●	●	●
28000	Base	2	0	4	-	64GB	○	●	○
	Plus	10	0	12	2	96GB	●	●	●
	Maximums	66	32	32	8	128GB	●	●	●
Lightspeed	QLS250	2	0	8	*2	128GB	●	●	●
	QLS450	2	0	8	*4	192GB	●	●	●
	QLS650	2	0	8	*6	192GB	●	●	●
	QLS800	2	0	0	*8	192GB	●	●	●
	MLS200	10	0	0	*2	64GB	●	●	●
	MLS400	2	0	0	*4	192GB	●	●	●

○ this is optional, *Quantum Lightspeed (QLS) 100GbE ports accelerate firewall throughput at ultra-low latency



NETWORK ACCESSORIES

	6200 - 6700	7000	16200	26000, 28000	QLS Lightspeed
Expansion Slots	1	2	4	8	-

NETWORK I/O MODULES

SKU	CPAC-8-1C-C	CPAC-4-1F-C	CPAC-4-10F-C	CPAC-2-40/100F-C
				
Supported Models	6000, 7000, 16200, 26000, 28000	6000, 7000, 16200, 26000, 28000	6000, 7000, 16200, 26000, 28000, QLS	6900, 7000, 16200, 26000, 28000
Number of Ports	8	4	4	2
Port Types	RJ-45 (Copper) 10/100/1000Base-T	SFP	SFP+	QSFP28
Speed	10M/100M/1 Gbps	1 Gbps	1/10 Gbps	100 Gbps
Transceivers/DACs		CPAC-TR-1T-C CPAC-TR-1SX-C CPAC-TR-1LX-C	CPAC-TR-10ER-C CPAC-TR-10LR-C CPAC-TR-10SR-C CPAC-TR-10T-C CPAC-DAC-10G-3M	CPAC-TR-100SR CPAC-TR-100LR CPAC-TR-100CWDM4 CPAC-TR-100SWDM4 CPAC-TR-100SR-BiDi CPAC-TR-100ERL4 CPAC-TR-40SR-QSFP-300m CPAC-TR-40LR-QSFP-10Km CPAC-TR-40SR-QSFP-BIDI CPAC-TR-40SWDM4 CPAC-TR-40ER4 CPAC-TR-25SR-ADP CPAC-TR-25LR-ADP CPAC-TR-10ER-ADP CPAC-TR-10LR-ADP CPAC-TR-10T-ADP CPAC-DAC-100G-3M CPAC-DAC-40G-3M CPAC-DAC-25G-3M CPAC-DAC-10G-3M


NETWORK TRANSCEIVER SPECIFICATION (1G Transceivers)

SKU	CPAC-TR-1T-C	CPAC-TR-1SX-C	CPAC-TR-1LX-C
			
Supported Models	6000, 7000, 16200, 26000, 28000,	6000, 7000, 16200, 26000, 28000	6000, 7000, 16200, 26000, 28000
Form Factor	SFP	SFP	SFP
Protocol	1000Base-T	1000Base-SX	1000Base-LX
Wavelength (nm)	-	850	1310
Connector	RJ-45	LC	LC
Distance (Max)	100m	300m (OM1) 550m (OM2)	10km
Supported Cable Type	CAT 5	multi-mode 62.5/125 µm Fiber (OM1) 50/125 µm Fiber (OM2)	Single mode 9/125 µm Fiber
Input Level (Receive Power) dBm	N/A	0 to -18dBm	0 to -19dBm
Output Level (Transmit Power) dBm	N/A	-2.5 to -9dBm	-3 to -9.5dBm
Supported NIC	CPAC-4-1F-C	CPAC-4-1F-C	CPAC-4-1F-C



NETWORK TRANSCEIVER SPECIFICATION (10G Transceivers)

SKU	CPAC-TR-10T-C	CPAC-TR-10SR-C	CPAC-TR-10LR-C	CPAC-TR-10ER-C		
						
Supported Models	6000, 7000, 16200, 26000, 28000, QLS, MLS	6000, 7000, 16200, 26000, 28000, QLS, MLS	6000, 7000, 16200, 26000, 28000, QLS, MLS	6000, 7000, 16200, 26000, 28000, QLS, MLS		
Form Factor	SFP+	SFP+	SFP+	SFP+		
Protocol	10GBASE-T	10GBASE-SR	10GBASE-LR	10GBASE-ER		
Wavelength (nm)	-	850	1310	1550		
Connector	RJ-45	LC	LC	LC		
Distance (Max)	30m	<table border="1"> <tr> <td>1GbE 220m(OM1) 550m(OM2) >550m (OM3) >550m(OM4)</td> <td>10GbE 26m(OM1) 82m(OM2) 300m(OM3) 400m(OM4)</td> </tr> </table>	1GbE 220m(OM1) 550m(OM2) >550m (OM3) >550m(OM4)	10GbE 26m(OM1) 82m(OM2) 300m(OM3) 400m(OM4)	10km	40km
1GbE 220m(OM1) 550m(OM2) >550m (OM3) >550m(OM4)	10GbE 26m(OM1) 82m(OM2) 300m(OM3) 400m(OM4)					
Supported Cable Type	CAT6a, CAT7	multi-mode 62.5/125 µm Fiber(OM1) 50/125 µm Fiber(OM2) 50/125 µm Fiber(OM3) 50/125 µm Fiber(OM4)	Single Mode 9/125 µm Fiber	Single Mode 9/125 µm Fiber		
Input Level (Receive Power) dBm	N/A	+0.5 - 12.5dBm (1GbE) +0.5 - 13.5dBm (1GbE) +0.5 -11.1dBm (10GbE)	-3 to -19dBm (1GbE mode) +0.5 to -12.6dBm (10GbE mode)	+0.5 - 16dBm		
Output Level (Transmit Power) dBm	N/A	-1 to -9.5dBm (1GbE mode) -1 to -5dBm (10GbE mode)	-3 to -11dBm (1GbE mode) +0.5 to -8.2dBm (10GbE mode)	+4 - 4dBm		
Supported NICs	CPAC-4-10F-C CPAC-2-40/100-C	CPAC-4-10F-C CPAC-2-40/100-C	CPAC-4-10F-C CPAC-2-40/100-	CPAC-4-10F-C CPAC-2-40/100-C		

QSFP28 ADAPTORS with 10GbE TRANSCEIVERS

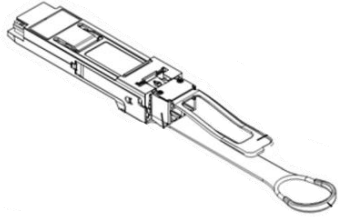
<p>Composed of a QSFP28 adaptor with an SFP+ transceiver to connect a Check Point security appliance QSFP28 port to a network SFP+ port. The graphic shows an adaptor without the transceiver (top) and the adaptor with an SFP+ transceiver inserted in the adaptor (bottom).</p> <p>Supported on QLS & MLS models. Matching I/O modules: NVIDIA 2-port 100G.</p>		
	Adaptor	Transceiver
CPAC-TR-10SR-ADP: QSFP28 adaptor with SFP+ transceiver module for short range links.	QSFP28	SFP+ 10GBase-SR
CPAC-TR-10LR-ADP: QSFP28 adaptor with SFP+ transceiver module for links up to 10km.	QSFP28	SFP+ 10GBase-LR
CPAC-TR-10ER-ADP: QSFP28 adaptor with SFP+ transceiver module for links up to 40km.	QSFP28	SFP+ 10GBase-ER
CPAC-TR-10T-ADP: QSFP28 adaptor with SFP+ transceiver module for links up to 30m over CAT6A or CAT7.	QSFP28	10GBASE-T RJ45 Copper

NETWORK TRANSCEIVER SPECIFICATION (25G Transceivers)

SKU	CPAC-TR-25SR-ADP	CPAC-TR-25LR-ADP
		
Supported Models	16200, 16600,26000, 28000, 28600, QLS, MLS	16200, 16600,26000, 28000, 28600, QLS, MLS
Form Factor	SFP28 with QSFP28 adaptor	SFP28 with QSFP28 adaptor
Protocol	25GBASE-SR	25GBASE-LR
Wavelength (nm)	850	1310
Connector	LC	LC
Distance (Max)	20m(OM2) 70m(OM3) 100m(OM4)	10km
Supported Cable Type	50/125 μm Fiber(OM2) 50/125 μm Fiber(OM3) 50/125 μm Fiber(OM4)	Single Mode 9/125 μm Fiber
Input Level (Receive Power) dBm	+3dBm to -11.dBm	+2dBm to -12dBm
Output Level (Transmit Power) dBm	+2.4dBm to -8.4dBm	+3dBm to -5dBm
Supported NIC	CPAC-2-40/100-C	CPAC-2-40/100-C

See SecureKnowledge sk92755 for more information

QSFP28 ADAPTORS with 25GbE TRANSCEIVERS

Composed of a QSFP28 adaptor with an SFP28 transceiver to connect a Check Point security appliance QSFP28 port to a network SFP28 port. The graphic shows an adaptor with an SFP28 transceiver inserted in the adaptor. Supported on 16200, 16600, 26000, 28000, 28600, QLS & MLS models. Matching I/O modules: NVIDIA 2-port 100G.		
	Adaptor	Transceiver
CPAC-TR-25SR-ADP: QSFP28 adaptor with SFP28 transceiver module for short range links.	QSFP28	SFP28 25GBase-SR
CPAC-TR-25LR-ADP: QSFP28 adaptor with SFP28 transceiver module for links up to 10km.	QSFP28	SFP28 25GBase-LR

NETWORK TRANSCEIVER SPECIFICATION (40G Transceivers)

SKU	CPAC-TR-40SR-QSFP-100m	CPAC-TR-40SR-QSFP-300m	CPAC-TR-40LR-QSFP-10Km	CPAC-TR-40SR-QSFP-BiDi	CPAC-TR-40SWDM4	CPAC-TR-40ER4
						
Supported Models	6700, 6900, 7000, 16200, 16600, 26000, 28000, 28600, QLS, MLS	6700, 6900, 7000, 16200, 16600, 26000, 28000, 28600, QLS, MLS	6700, 6900, 7000, 16200, 16600, 26000, 28000, 28600, QLS, MLS	6700, 6900, 7000, 16200, 16600, 26000, 28000, 28600, QLS, MLS	6700, 6900, 7000, 16200, 16600, 26000, 28000, 28600, QLS, MLS	6700, 6900, 7000, 16200, 16600, 26000, 28000, 28600, QLS, MLS
Form Factor	QSFP+	QSFP+	QSFP+	QSFP+	QSFP+	QSFP+
Protocol	40GBase-SR4	40GBase-SR4	40GBase-LR4	40GBase-SR-BiDi	40GBASE-SWDM4	40GBASE-ER4
Wavelength (nm)	830 to 860	840 to 860	1271,1291,1311,1331	832, 918	830 to 860	1271,1291,1311,1331
Connector	MPO-12	MPO-12	LC	LC	LC	LC
Distance (Max)	100m (OM3) 150m (OM4)	300m (OM3) 400m (OM4)	10km	100m (OM3) 150m (OM4)	300m (OM3) 400m (OM4)	40km
Supported Cable Type	multi-mode 50/125 µm fiber (OM3) 50/125 µm Fiber(OM4)	multi-mode 50/125 µm fiber (OM3) 50/125 µm Fiber(OM4)	single mode 9/125 µm Fiber	multi-mode 50/125 µm fiber (OM3) 50/125 µm Fiber(OM4)	Multi-Mode 50/125 µm Fiber(OM3/OM4)	Single Mode 9/125 µm Fiber
Input Level (Receive Power) dBm	+0dBm to -7.6dBm	+4dBm to -11.1dBm	+3.5dBm to -11.5dBm	+5dBm to -9.1dBm	+3.0dBm to -9.0dBm	-4.5dBm to -21.2dBm
Output Level (Transmit Power) dBm	+2.5dBm to -9.5dBm	+0.5dBm to -7.5dBm	+2.3dBm to -7dBm	+5dBm to -4dBm	+3.0dBm to -7.5dBm	+4.5dBm to -3.7dBm
Supported NIC	CPAC-2-40/100-C	CPAC-2-40/100-C	CPAC-2-40/100-C	CPAC-2-40/100-C	CPAC-2-40/100F-C	CPAC-2-40/100F-C

NETWORK TRANSCEIVER SPECIFICATION (100G Transceivers)

SKU	CPAC-TR-100SR	CPAC-TR-100LR	CPAC-TR-100CWDM4	CPAC-TR-100SWDM4	CPAC-TR-100SR-BiDi	CPAC-TR-100ERL4
						
Supported Models	16200, 16600, 26000, 28000, 28600, QLS, MLS	16200, 16600, 26000, 28000, 28600, QLS, MLS	16200, 16600, 26000, 28000, 28600, QLS, MLS	16200, 16600, 26000, 28000, 28600, QLS, MLS	16200, 16600, 26000, 28000, 28600, QLS, MLS	16200, 16600, 26000, 28000, 28600, QLS, MLS
Form Factor	QSFP28	QSFP28	QSFP28	QSFP28	QSFP28	QSFP28
Protocol	100GBase-SR4	100GBase-LR4	100GBASE-CWDM4	100GBASE-SWDM4	100GBASE-SR1.2	100GBASE-ERL4
Wavelength (nm)	840 to 860	1295,1300, 1304,1309	1271,1291, 1311,1331	850,880, 910,940	844 to 918	1295, 1300, 1304, 1309
Connector	MPO-12	LC	LC	LC	LC	LC
Distance (Max)	70m(OM3) 100m(OM4)	10km	2km	75m(OM3) 100m(OM4) 150m(OM5)	70m(OM3) 100m(OM4/5)	40km
Supported Cable Type	50/125 µm Fiber(OM3) 50/125 µm Fiber(OM4)	single mode 9/125 µm Fiber	single mode 9/125 µm Fiber	50/125 µm Fiber(OM3) 50/125 µm Fiber(OM4) 50/125 µm Fiber(OM5)	Multi-Mode 50/125 µm Fiber(OM3/OM4/OM5)	Single Mode 9/125 µm Fiber
Input Level (Receive Power) dBm	+2.4dBm to -10.3dBm	+4.5dBm to -10.6dBm	+2.5dBm to -10dBm	+3.4dBm to -9.5dBm	+4.0dBm to -7.9dBm	-3.9dBm to -16.6dBm
Output Level (Transmit Power) dBm	+2.4dBm to -8.4dBm	+4.5dBm to -4.3dBm	+2.5dBm to -4dBm	-3dBm to -5.5dBm	+4.0dBm to -6.0dBm	+2.9dBm to -2.9dBm
Supported NIC	CPAC-2-40/100-C	CPAC-2-40/100-C	CPAC-2-40/100-C	CPAC-2-40/100-C	CPAC-2-40/100-C	CPAC-2-40/100-C

See SecureKnowledge sk92755 for more information

DIRECT ATTACHED CABLES (10G, 25G, 40G and 100G)

SKU	CPAC-DAC-10G-3M	CPAC-DAC-25G-3M	CPAC-DAC-40G-3M	CPAC-DAC-100G-3M
Supported Models	5600, 5800, 5900, 6000, 7000, 15000, 16200, 23000, 26000, 28000, QLS, MLS	16200, 26000, 28000, QLS, MLS	5800, 6700, 6900, 7000, 15000, 16200, 16600, 23000, 26000, 28000, 28600, QLS, MLS	16200, 16600, 26000, 28000, 28600, QLS, MLS
Form Factor	SFP+	SFP28	QSFP+	QSFP28
Protocol	10BASE-CU	25GBASE-CR1	40BASE-CR4	100BASE-CR4
Distance (Max)	3m	3m	3m	3m
Cable Type	30AWG	30AWG	28AWG	28AWG
Compatible	SFP+ MSA, SFF-8431, SFF-8432	SFP28 MSA, SFF-8402, SFF-8436	QSFP+ MSA, SFF-8436, SFF-8685	QSFP+ MSA, SFF-8436, SFF-8685
Operation Relative Humidity	10 to 90%	5 to 85%	5 to 85%	5 to 85%
Matching I/O Modules	CPAC-4-10F-C CPAC-2-40/100-C	CPAC-2-40/100-C	CPAC-2-40/100-	CPAC-2-40/100-C

See SecureKnowledge sk148192 for more information

FAIL-OPEN NETWORK I/O MODULES (6000, 7000, 16000, 26000, 28000)

SKU	CPAC-4-1C-BP-C	CPAC-2-10FSR-BP-C
Supported Models	6200, 6400, 6600, 6700, 6900, 7000, 16200, 26000, 28000	6200, 6400, 6600, 6700, 6900, 7000, 16200, 26000, 28000
Number of Ports	4	2
Port Types	RJ-45 (copper) 10/100/1000Base-T	SFP+ 10GBase-SR
Speed	1 Gbps	10 Gbps
Transceivers	NA	included

STORAGE

Redundant drives are configured in a RAID1 mirror increasing system reliability. RAID status monitoring is available via SNMP.

REDUNDANT STORAGE OPTIONS

	3000, 6200 - 6600	6700	6900, 7000, 16200, 16600, 26000, 28000, 28600	MLS200	QLS, MLS400
SSD Options	1x 240GB	1x 480GB	1x 480GB	2x 480GB	2x 960GB
Redundant Drive	NA	NA	Optional	✓	✓
RAID Setup			RAID1	RAID1	RAID1

POWER SUPPLIES

Dual power supplies increase the overall reliability of the security appliance. In the dual power supply configuration an audible alarm occurs when one power supply fails. Power Supply status is also monitored via SNMP or in the GAIa Web UI.

POWER SUPPLY OPTIONS

	3000	6200, 6400 ¹	6600, 6700, 7000, 6900, 16200	16600, 26000, 28000, 28600, QLS, MLS
Redundant Power Supply	Optional	NA	Optional	Included
DC Power Supply	NA	NA	Optional	Optional

¹ 6200, 6400 power supplies are not Field Replaceable Units (FRU)

POWER SUPPLY SPECIFICATION (6000, 7000)

	6600, 6700, 6900	7000, MLS200
AC SKU	CPAC-PSU-AC-6600/6700/6900	CPAC-PSU-AC-7000/MLS200
AC Power Input	100 to 240V (47-63Hz)	100 to 240V (47-63Hz)
Output Power	300W	500W

POWER SUPPLY SPECIFICATION (16000, 26000, Lightspeed)

	16200, QLS250	16600, 26000, 28000, 28600, QLS450, QLS650, QLS800, MLS400
AC SKU	CPAC-PSU-AC-16000	CPAC-PSU-AC-26000/28000/MLS400
AC Power Input	100 to 240V (47-63Hz)	100 to 240V (47-63Hz)
Output Power	1300W	850W

LIGHTS-OUT MANAGEMENT

Lights-Out Management (LOM) provides out-of-band remote management to remotely diagnose, start, restart and manage the security appliance from a remote location.

LIGHTS-OUT MANAGEMENT OPTIONS

	3000	6000, 7000, 16200, 26000, 28000	16600, 28600, QLS, MLS
LOM	NA	Optional	Included

LIGHTS-OUT MANAGEMENT SPECIFICATION

SKU	Features
CPAC-NLOM-C	LOM/IPMI module with front 1 GbE RJ-45

MEMORY

Additional system memory increases connection capacity and improves the overall ability of the security appliance.

MEMORY OPTIONS

	3000	6200 6700	6900 7000	16200	16600	26000	28000 MLS200	28600	QLS250	QLS450 QLS650 QLS800 MLS400
Base GB	8	8	16	48	128	48	64	192	128	192
Plus GB	16	16	32	64	-	96	96	-	-	-
Maximums GB	NA	32	64	128	128	128	128	192	128	192

* Plus options are not available in the QLS or MLS models, max memory of the MLS200 is 64 GB

MEMORY SPECIFICATION

Model	SKU	Start	Target	Modules
6200	CPAC-RAM8GB-6200	8	16	1x 8GB DDR4
	CPAC-RAM16GB-6200	16	32	1x 16GB DDR4
	CPAC-RAM24GB-6200	8	32	3x 8GB DDR4
6400	CPAC-RAM8GB-6400	8	16	1x 8GB DDR4
	CPAC-RAM16GB-6400	16	32	1x 16GB DDR4
	CPAC-RAM24GB-6400	8	32	3x 8GB DDR4
6600	CPAC-RAM8GB-6600	8	16	1x 8GB DDR4
	CPAC-RAM16GB-6600	16	32	2x 8GB DDR4
	CPAC-RAM24GB-6600	8	32	3x 8GB DDR4
6700	CPAC-RAM8GB-6700	8	16	1x 8GB DDR4
	CPAC-RAM16GB-6700	16	32	2x 8GB DDR4
	CPAC-RAM32GB-6700	8	32	3x 8GB DDR4
6900	CPAC-RAM16GB-6900	16	32	2x 8GB DDR4
	CPAC-RAM48GB-6900	16	64	4x 16GB DDR4
	CPAC-RAM32GB-6900	32	64	2x 16GB DDR4
7000	CPAC-RAM16GB-7000	16	32	1x 16GB DDR4
	CPAC-RAM32GB-7000	32	64	2x 16GB DDR4
	CPAC-RAM48GB-7000	16	64	3x 16GB DDR4
16200	CPAC-RAM16GB-16000	48	64	2x 8GB ECC DDR4
	CPAC-RAM64GB-16000	64	128	8x 8GB ECC DDR4
	CPAC-RAM80GB-16000	48	128	10x 8GB ECC DDR4
26000	CPAC-RAM48GB-26000	48	96	4x 8GB ECC DDR4
	CPAC-RAM32GB-26000	96	128	4x 8GB ECC DDR4
	CPAC-RAM80GB-26000	48	128	10x 8GB ECC DDR4

28000	CPAC-RAM32GB-28000	64	96	4x 8GB ECC DDR4
	CPAC-RAM32GB-28000	96	128	4x 8GB ECC DDR4
	CPAC-RAM64GB-28000	64	128	8x 8GB ECC DDR4

RACK MOUNT OPTIONS




Slide rails provide simple installation (5-10 minutes) and easy maintenance access for 6000, 7000, 16000, 26000, 28000 and Lightspeed Security Appliances in a standard 19-inch (48.26 cm) rack (see specification EIA-310-D). For the desktop form factor of the 3000 Security Appliances, shelf rack mount kits available. Slide rails are optional in the 6200 and 6400, included in the 6600 to 28000.

RACK KIT SPECIFICATION

	SKU	Depth
16200, 16600, 26000, 28000, 28600, QLS, MLS	CPAC-RAIL-L	22 in (55.9 cm) to 32 in (81.3 cm)
	CPAC-RAIL-EXT-L	24 in (61 cm) to 36 in (91.4 cm)
6000, 7000	CPAC-RAILS-6000/7000	22 in (55.9 cm) to 32 in (81.3 cm)
	CPAC-RAIL-EXT-6000/7000	24 in (61 cm) to 36 in (91.4 cm)
3600, 3800	CPAC-1500/3600/3800-RM-DUAL	Single/Dual 3000 1U Shelf Rack Mount L-23" x W-19" x H-3" (58.4 x 48.3 x 7.6 cm)

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NETWORK TRANSCEIVER SPECIFICATION (1G Transceivers)

SKU	CPAC-TR-1T-C	CPAC-TR-1SX-C	CPAC-TR-1LX-C
			
Supported Models	MHO140	MHO140	MHO140
Form Factor	SFP	SFP	SFP
Protocol	1000Base-T	1000Base-SX	1000Base-LX
Wavelength (nm)	-	850	1310
Connector	RJ-45	LC	LC
Distance (Max)	100m	300m (OM1) 550m (OM2)	10km
Supported Cable Type	CAT 5	multi-mode 62.5/125 μm Fiber (OM1) 50/125 μm Fiber (OM2)	Single mode 9/125 μm Fiber
Input Level (Receive Power) dBm	N/A	0 to -18dBm	0 to -19dBm
Output Level (Transmit Power) dBm	N/A	-2.5 to -9dBm	-3 to -9.5dBm





NETWORK TRANSCEIVER SPECIFICATION (10G Transceivers)

SKU	CPAC-TR-10T-C	CPAC-TR-10SR-C	CPAC-TR-10LR-C	CPAC-TR-10ER-C										
														
Supported Models	MHO140	MHO140	MHO140	MHO140										
Form Factor	SFP+	SFP+	SFP+	SFP+										
Protocol	10GBASE-T	10GBASE-SR	10GBASE-LR	10GBASE-ER										
Wavelength (nm)	-	850	1310	1550										
Connector	RJ-45	LC	LC	LC										
Distance (Max)	30m	<table border="1" style="font-size: small;"> <tr> <th>1GbE</th> <th>10GbE</th> </tr> <tr> <td>220m(OM1)</td> <td>26m(OM1)</td> </tr> <tr> <td>550m(OM2)</td> <td>82m(OM2)</td> </tr> <tr> <td>>550m (OM3)</td> <td>300m(OM3)</td> </tr> <tr> <td>>550m(OM4)</td> <td>400m(OM4)</td> </tr> </table>	1GbE	10GbE	220m(OM1)	26m(OM1)	550m(OM2)	82m(OM2)	>550m (OM3)	300m(OM3)	>550m(OM4)	400m(OM4)	10km	40km
1GbE	10GbE													
220m(OM1)	26m(OM1)													
550m(OM2)	82m(OM2)													
>550m (OM3)	300m(OM3)													
>550m(OM4)	400m(OM4)													
Supported Cable Type	CAT6a, CAT7	multi-mode 62.5/125 μm Fiber(OM1) 50/125 μm Fiber(OM2) 50/125 μm Fiber(OM3) 50/125 μm Fiber(OM4)	Single Mode 9/125 μm Fiber	Single Mode 9/125 μm Fiber										
Input Level (Receive Power) dBm	N/A	<table border="1" style="font-size: small;"> <tr> <td>+0.5 - 12.5dBm (1GbE)</td> <td rowspan="3">62.5 um MMF 50 um MMF 50 um MMF</td> </tr> <tr> <td>+0.5 - 13.5dBm (1GbE)</td> </tr> <tr> <td>+0.5 -11.1dBm (10GbE)</td> </tr> </table>	+0.5 - 12.5dBm (1GbE)	62.5 um MMF 50 um MMF 50 um MMF	+0.5 - 13.5dBm (1GbE)	+0.5 -11.1dBm (10GbE)	-3 to -19dBm (1GbE mode) +0.5 to -12.6dBm (10GbE mode)	+0.5 - 16dBm						
+0.5 - 12.5dBm (1GbE)	62.5 um MMF 50 um MMF 50 um MMF													
+0.5 - 13.5dBm (1GbE)														
+0.5 -11.1dBm (10GbE)														
Output Level (Transmit Power) dBm	N/A	-1 to -9.5dBm (1GbE mode) -1 to -5dBm (10GbE mode)	-3 to -11dBm (1GbE mode) +0.5 to -8.2dBm (10GbE mode)	+4 - 4dBm										

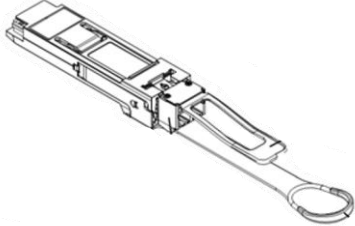
QSFP28 ADAPTORS with 10GbE TRANSCEIVERS

<p>Composed of a QSFP28 adapter with an SFP+ transceiver to connect a Check Point security appliance QSFP28 port to a network SFP+ port. The graphic shows an adapter without the transceiver (top) and the adapter with an SFP+ transceiver inserted in the adapter (bottom).</p> <p>Supported on Maestro MHO175.</p>		
	Adaptor	Transceiver
CPAC-TR-10SR-ADP: QSFP28 adaptor with SFP+ transceiver module for short range links.	QSFP28	SFP+ 10GBase-SR
CPAC-TR-10LR-ADP: QSFP28 adaptor with SFP+ transceiver module for links up to 10km.	QSFP28	SFP+ 10GBase-LR
CPAC-TR-10ER-ADP: QSFP28 adaptor with SFP+ transceiver module for links up to 40km.	QSFP28	SFP+ 10GBase-ER
CPAC-TR-10T-ADP: QSFP28 adaptor with SFP+ transceiver module for links up to 30m over CAT6A or CAT7.	QSFP28	10GBASE-T RJ45 Copper

NETWORK TRANSCEIVER SPECIFICATION (25G Transceivers)

SKU	CPAC-TR-25SR-ADP	CPAC-TR-25LR-ADP	CPAC-TR-25SR	CPAC-TR-25LR
				
Supported Models	MHO140/175	MHO140/175	MHO140	MHO140
Form Factor	SFP28 with QSFP28 adaptor	SFP28 with QSFP28 adaptor	SFP28	SFP28
Protocol	25GBASE-SR	25GBASE-LR	25GBASE-SR	25GBASE-LR
Wavelength (nm)	850	1310	850	1310
Connector	LC	LC	LC	LC
Distance (Max)	20m(OM2) 70m(OM3) 100m(OM4)	10km	20m(OM2) 70m(OM3) 100m(OM4)	10km
Supported Cable Type	50/125 µm Fiber(OM2) 50/125 µm Fiber(OM3) 50/125 µm Fiber(OM4)	50/125 µm Fiber(OM2) 50/125 µm Fiber(OM3) 50/125 µm Fiber(OM4)	Single Mode 9/125 µm Fiber	Single Mode 9/125 µm Fiber
Input Level (Receive Power) dBm	+3dBm to -11. dBm	+3dBm to -11. dBm	+2dBm to -12dBm	+2dBm to -12dBm
Output Level (Transmit Power) dBm	+2.4dBm to -8.4dBm	+2.4dBm to -8.4dBm	+3dBm to -5dBm	+3dBm to -5dBm

QSFP28 ADAPTORS with 25GbE TRANSCEIVERS

<p>Composed of a QSFP28 adaptor with an SFP28 transceiver to connect a Check Point security appliance QSFP28 port to a network SFP28 port. The graphic shows an adaptor with an SFP28 transceiver inserted in the adaptor.</p> <p>Supported on Maestro MHO175.</p>		
	Adaptor	Transceiver
CPAC-TR-25SR-ADP: QSFP28 adaptor with SFP28 transceiver module for short range links.	QSFP28	SFP28 25GBase-SR
CPAC-TR-25LR-ADP: QSFP28 adaptor with SFP28 transceiver module for links up to 10km.	QSFP28	SFP28 25GBase-LR

NETWORK TRANSCEIVER SPECIFICATION (40G Transceivers)

SKU	CPAC-TR-40SR-QSFP-100m	CPAC-TR-40SWDM4	CPAC-TR-40SR-QSFP-300m	CPAC-TR-40LR-QSFP-10Km	CPAC-TR-40ER4	CPAC-TR-40SR-QSFP-BiDi
						
Supported Models	MHO140/170/175	MHO175	MHO140/170/175	MHO140/170/175	MHO175	MHO140/170/175
Form Factor	QSFP+	QSFP+	QSFP+	QSFP+	QSFP+	QSFP+
Protocol	40GBase-SR4	40GBASE-SWDM4	40GBase-SR4	40GBase-LR4	40GBASE-ER4	40GBase-SR-BiDi
Wavelength (nm)	830 to 860	830 to 860	840 to 860	1271,1291,1311,1331	1271,1291,1311,1331	832, 918
Connector	MPO-12	LC	MPO-12	LC	LC	LC
Distance (Max)	100m (OM3) 150m (OM4)	300m (OM3) 400m (OM4)	300m (OM3) 400m (OM4)	10km	40km	100m (OM3) 150m (OM4)
Supported Cable Type	multi-mode 50/125 μm fiber (OM3) 50/125 μm Fiber(OM4)	Multi-Mode 50/125 μm Fiber(OM3/OM4)	multi-mode 50/125 μm fiber (OM3) 50/125 μm Fiber(OM4)	single mode 9/125 μm Fiber	Single Mode 9/125 μm Fiber	multi-mode 50/125 μm fiber (OM3) 50/125 μm Fiber(OM4)
Input Level (Receive Power) dBm	+0dBm to -7.6dBm	+3.0dBm to -9.0dBm	+4dBm to -11.1dBm	+3.5dBm to -11.5dBm	-4.5dBm to -21.2dBm	+5dBm to -9.1dBm
Output Level (Transmit Power) dBm	+2.5dBm to -9.5dBm	+3.0dBm to -7.5dBm	+0.5dBm to -7.5dBm	+2.3dBm to -7dBm	+4.5dBm to -3.7dBm	+5dBm to -4dBm

NETWORK TRANSCEIVER SPECIFICATION (100G Transceivers)



SKU	CPAC-TR-100SR-MHO140/170	CPAC-TR-100SR-BiDi	CPAC-TR-100SR	CPAC-TR-100LR	CPAC-TR-100CWDM4	CPAC-TR-100SWDM4
						
Supported Models	MHO140/170	MHO175	MHO175	MHO140/170/175	MHO140/170/175	MHO140/170/175
Form Factor	QSFP28	QSFP28	QSFP28	QSFP28	QSFP28	QSFP28
Protocol	100GBase-SR4	100GBASE-SR1.2	100GBase-SR4	100GBase-LR4	100GBASE-CWDM4	100GBASE-SWDM4
Wavelength (nm)	840 to 860	844 to 918	840 to 860	1295,1300, 1304,1309	1271,1291, 1311,1331	850,880, 910,940
Connector	MPO-12	LC	MPO-12	LC	LC	LC
Distance (Max)	70m(OM3) 100m(OM4)	70m(OM3) 100m(OM4/5)	70m(OM3) 100m(OM4)	10km	2km	75m(OM3) 100m(OM4) 150m(OM5)
Supported Cable Type	50/125 μm Fiber(OM3) 50/125 μm Fiber(OM4)	Multi-Mode 50/125 μm Fiber(OM3/OM4/ OM5)	50/125 μm Fiber(OM3) 50/125 μm Fiber(OM4)	single mode 9/125 μm Fiber	single mode 9/125 μm Fiber	50/125 μm Fiber(OM3) 50/125 μm Fiber(OM4) 50/125 μm Fiber(OM5)
Input Level (Receive Power) dBm	+2.4dBm to -10.3dBm	+4.0dBm to -7.9dBm	+2.4dBm to -10.3dBm	+4.5dBm to -10.6dBm	+2.5dBm to -10dBm	+3.4dBm to -9.5dBm
Output Level (Transmit Power) dBm	+2.4dBm to -8.4dBm	+4.0dBm to -6.0dBm	+2.4dBm to -8.4dBm	+4.5dBm to -4.3dBm	+2.5dBm to -4dBm	-3dBm to -5.5dBm

DIRECT ATTACHED CABLES (10G, 25G, 40G and 100G)

SKU	CPAC-DAC-10G-3M	CPAC-DAC-25G-3M	CPAC-DAC-40G-3M	CPAC-DAC-100G-3M
Supported Models	MHO140	MHO140/175	MHO140/170/175	MHO140/170/175
Form Factor	SFP+	SFP28	QSFP+	QSFP28
Protocol	10BASE-CU	25GBASE-CR1	40BASE-CR4	100BASE-CR4
Distance (Max)	3m	3m	3m	3m
Cable Type	30AWG	30AWG	28AWG	28AWG
Compatible	SFP+ MSA, SFF-8431, SFF-8432	SFP28 MSA, SFF-8402, SFF-8436	QSFP+ MSA, SFF-8436, SFF-8685	QSFP+ MSA, SFF-8436, SFF-8685
Operation Relative Humidity	10 to 90%	5 to 85%	5 to 85%	5 to 85%

See SecureKnowledge sk148192 for more information

SPLITTER CABLES (MHO140, MHO175)

	From	Connecting Cable	To
CPAC-DAC-40/10G-3M 40 GbE to four 10 GbE interfaces DAC Splitter, 3m length	1x Maestro QSFP+	Copper	4x 10G SFP+
Composed of a QSFP+ transceiver at one end and four individual SFP+ transceivers at the other end. Additional transceivers ARE NOT needed.			
	From	Connecting Cable	To
CPAC-TR-40SPLIT-QSFP-xM MTP/MPO to 4 Duplex LC Breakout Cable, OM3, 3 and 6 meter lengths	1x Maestro QSFP28, QSFP+ transceiver not included	Fiber	4x 10G SFP+ SFP+ transceivers not included
Composed of an MTP/MPO female connector at one end and four individual Duplex LC connectors at the other end.			

* The CPAC-TR-40SR-QSFP-100m is recommended when using the splitters CPAC-TR-40SPLIT-QSFP-3M or CPAC-TR-40SPLIT-QSFP-6M

APPENDIX: 2016 SECURITY APPLIANCE ACCESSORIES

5000, 15000 AND 23000 ACCESSORY SUMMARY

These models are available in a base and a High Performance Pack (HPP) option. The HPP package includes the base system plus additional supported accessories such as Network Interface Cards (NIC), transceivers, disk drives, power supplies and memory for high connection capacity. Below is a summary comparison table.

		1 GbE Copper	1 GbE Fiber	10 GbE	40 GbE	100/25 GbE	Memory	Redundant Storage	Redundant Power	LOM
5100	Base	6	0	-	-	-	8	-	-	○
	HPP	6	4	-	-	-	16	-	-	●
	Maximums	14	4	-	-	-	32	-	-	●
5200	Base	6	0	-	-	-	8	-	-	○
	HPP	6	4	-	-	-	16	-	-	●
	Maximums	14	4	-	-	-	32	-	-	●
5400	Base	10	0	-	-	-	8	-	-	○
	HPP	10	4	-	-	-	16	-	-	●
	Maximums	18	4	-	-	-	32	-	-	●
5600	Base	10	0	0	-	-	8	-	○	○
	HPP	10	4	0	-	-	16	-	●	●
	Maximums	18	4	4	-	-	32	-	●	●
5800	Base	10	0	0	0	-	8	-	○	●
	HPP	10	0	2	0	-	16	-	●	●
	Maximums	26	8	8	4	-	32	-	●	●
5900	Base	10	0	0	0	-	8	○	○	●
	HPP	10	0	4	0	-	16	●	●	●
	Maximums	26	8	8	4	-	32	●	●	●
15400	Base	10	0	2	0	0	8	○	●	●
	HPP	10	0	6	0	0	24	●	●	●
	Maximums	26	12	12	6	6	64	●	●	●
15600	Base	10	0	2	0	0	16	●	●	●
	HPP	10	0	6	0	0	32	●	●	●
	Maximums	26	12	12	6	6	64	●	●	●
23500	Base	10	0	2	0	0	16	●	●	●
	HPP	10	0	10	0	0	64	●	●	●
	Maximums	42	20	20	10	10	128	●	●	●
23800	Base	10	0	2	0	0	32	●	●	●
	HPP	10	0	10	0	0	64	●	●	●
	Maximums	42	20	20	10	10	128	●	●	●
23900	Base	10	0	2	0	0	48	●	●	●
	HPP	10	0	10	0	0	64	●	●	●
	Maximums	42	20	20	10	10	128	●	●	●






○ this is optional

5000, 15000 AND 23000 SERIES NETWORK ACCESSORIES



Check Point 3000, 5000, 15000 and 23000 Security Appliances can be ordered with 1 GbE copper, 1 GbE fiber, 10 GbE fiber, 40 GbE or 100/25 GbE network interface cards. The modules and port density varies depending upon the security appliance and the number of expansion slots available.

	3100, 3200	5100, 5200, 5400, 5600	5800, 5900	15000	23000
Expansion Slots	0	1	2	3	5

NETWORK I/O MODULES (5000, 15000 and 23000)

SKU	CPAC-8-1C-B	CPAC-4-1F-B	CPAC-4-10F-B	CPAC-2-40F-B	CPAC-2-100/25F
					
Supported Models	5000, 15000, 23000	5000, 15000, 23000	5600, 5800, 5900, 15000, 23000	5800, 5900, 15000, 23000	15000, 23000
Number of Ports	8	4	4	2	2
Port Types	RJ-45 (Copper) 10/100/1000Base-T	SFP	SFP+	QSFP+	QSFP28
Speed	1 Gbps	1 Gbps	10 Gbps	40 Gbps	100/25 Gbps
Transceivers		CPAC-TR-1T-B CPAC-TR-1SX-B CPAC-TR-1LX-B	CPAC-TR-10SR-B CPAC-TR-10LR-B	CPAC-TR-40SR-QSFP-300m CPAC-TR-40LR-QSFP-10K CPAC-TR-40SR-QSFP-BIDI	CPAC-TR25SR-ADP CPAC-TR-25LR-ADP CPAC-TR-100SR CPAC-TR-100LR



FAIL-OPEN NETWORK I/O MODULES (5000, 15000 and 23000, transceivers included)

SKU	CPAC-4-1C-BP-B	CPAC-2-10FSR-BP-B
		
Supported Models	5000, 15000, 23000	5600, 5800, 5900, 15000, 23000
Number of Ports	4	2
Port Types	RJ-45 (copper) 10/100/1000Base-T	SFP+ 10GBase-SR
Speed	1 Gbps	10 Gbps
Transceivers	NA	CPAC-TR-10SR


NETWORK TRANSCEIVER SPECIFICATION (1G Transceivers)

SKU	CPAC-TR-1T-B	CPAC-TR-1SX-B	CPAC-TR-1LX-B
			
Supported Models	5100 – 23900, MHO140	5100 – 23900, MHO140	5100 – 23900, MHO140
Form Factor	SFP	SFP	SFP
Protocol	1000Base-T 1G Ethernet	1000Base-SX 1G Ethernet	1000Base-LX 1G Ethernet
Wavelength (nm)		850	1310
Connector	RJ-45	LC	LC
Distance (Max)	100m	300m (OM1) 550m (OM2)	10km
Supported Cable Type	Cat 5	multi-mode 62.5/125 µm Fiber (OM1) 50/125 µm Fiber (OM2)	Single mode/125 µm Fiber
Input Level (Receive Power) dBm	N/A	0 to -18dBm	0 to -19dBm
Output Level (Transmit Power) dBm	N/A	-2.5 to -9dBm	-3 to -9.5dBm
Matching I/O Module	CPAC-4-1F-B	CPAC-4-1F-B	CPAC-4-1F-B

NETWORK TRANSCEIVER SPECIFICATION (10G Transceivers)

SKU	CPAC-TR-10SR-B		CPAC-TR-10LR-B
			
Supported Models	5600 – 23900, MHO140		5600 – 23900, MHO140
Form Factor	SFP+		SFP+
Protocol	10GBASE-SR 10G		10GBASE-LR 10G
Wavelength (nm)	850		1310
Connector	LC		LC
Distance (Max)	1GbE 220m(OM1) 550m(OM3) >550m (OM3) >550m(OM4)	10GbE 26m(OM1) 82m(OM2) 300m(OM3) 400m(OM4)	10km
Supported Cable Type	multi-mode 62.5/125 µm Fiber(OM1) 50/125 µm Fiber(OM2) 50/125 µm Fiber(OM3) 50/125 µm Fiber(OM4)		Single Mode 9/125 µm Fiber
Input Level (Receive Power) dBm	+0.5 - 12.5dBm (1GbE) +0.5 - 13.5dBm (1GbE) +0.5 -11.1dBm (10GbE)	62.5 um MMF 50 um MMF 50 um MMF	-3 to -19dBm (1GbE mode) +0.5 to -12.6dBm (10GbE mode)
Output Level (Transmit Power) dBm	-1 to -9.5dBm (1GbE mode) -1 to -5dBm (10GbE mode)		-3 to -11dBm (1GbE mode) +0.5 to -8.2dBm (10GbE mode)
Matching I/O Modules	CPAC-2-10F-B, CPAC-4-10F-B		CPAC-2-10F-B, CPAC-4-10F-B

NETWORK TRANSCEIVER SPECIFICATION (40G Transceivers)

SKU	CPAC-TR-40SR-QSFP-300m	CPAC-TR-40LR-QSFP-10K	CPAC-TR-40SR-QSFP-BiDi
			
Supported Models	5800 – 23900, MHO140/170/175	5800 – 23900, MHO140/170/175	5800 – 23900, MHO140/170/175
Form Factor	QSFP+	QSFP+	QSFP+
Protocol	40GBase-SR 40G	40GBase-LR 40G	40GBase-SR-BiDi 40G
Wavelength (nm)	850	1310	832, 918
Connector	MPO-12	LC	LC
Distance (Max)	300m (OM3) 400m (OM4)	10km	100m (OM3) 150m (OM4)
Supported Cable Type	Aqua: multi-mode 50/125 μm fiber (OM3) 50/125 μm Fiber(OM4)	Yellow: single mode 9/125 μm Fiber	Aqua: multi-mode 50/125 μm fiber (OM3) 50/125 μm Fiber(OM4)
Input Level (Receive Power) dBm	+4dBm to -11.1dBm	+3.5dBm to -11.5dBm	+5dBm to -9.1dBm
Output Level (Transmit Power) dBm	+0.5dBm to -7.5dBm	+2.3dBm to -7dBm	+5dBm to -4dBm
Matching I/O Module	CPAC-2-40F-B	CPAC-2-40F-B	CPAC-2-40F-B

NETWORK TRANSCEIVER SPECIFICATION (100/25G Transceivers)

SKU	CPAC-TR25SR-ADP	CPAC-TR-25LR-ADP	CPAC-TR-100SR-B	CPAC-TR-100LR-B
				
Supported Models	15400 - 23900	15400 - 23900	15400 – 23900, MHO140/170/175	15400 – 23900, MHO140/170/175
Form Factor	SFP28 with QSFP28 adaptor	SFP28 with QSFP28 adaptor	QSFP28	QSFP28
Protocol	25GBASE-SR 25G Ethernet	25GBASE-LR 25G Ethernet	100GBase-SR4 100G Ethernet	100GBase-LR4 100G Ethernet
Wavelength (nm)	850	1310	850	1310
Connector	LC	LC	MPO-12	LC
Distance (Max)	20m(OM2) 70m(OM3) 100m(OM4)	10km	70m(OM3) 100m(OM4)	10km
Supported Cable Type	50/125 μm Fiber(OM2) 50/125 μm Fiber(OM3) 50/125 μm Fiber(OM4)	Single Mode 9/125 μm Fiber	50/125 μm Fiber(OM3) 50/125 μm Fiber(OM4)	single mode 9/125 μm Fiber
Input Level (Receive Power) dBm	+3dBm to -11.dBm	+2dBm to -12dBm	+2.4dBm to -10.3dBm	+4.5dBm to -10.6dBm
Output Level (Transmit Power) dBm	+2.4dBm to -8.4dBm	+3dBm to -5dBm	+2.4dBm to -8.4dBm	+4.5dBm to -4.3dBm
Matching I/O Module	CPAC-2-100/25F	CPAC-2-100/25F	CPAC-2-100/25F	CPAC-2-100/25F

POWER SUPPLIES

Dual power supplies increase the overall reliability of the security appliance. In the dual power supply configuration an audible alarm occurs when one power supply fails. Power Supply status is also monitored via SNMP or in the GAIa Web UI.

POWER SUPPLY OPTIONS (5000, 15000 and 23000)

	3000	5100, 5200, 5400 ¹	5600, 5800, 5900	15000, 23000
Redundant Power Supply	NA	NA	Optional	Included
DC Power Supply	NA	Optional	Optional	Optional

¹ 5100, 5200, 5400 power supplies are not Field Replaceable Units (FRU)

POWER SUPPLY SPECIFICATION (5000, 15000 and 23000)

	5600, 5800	5900	15000	23000
AC SKU	CPAC-PSU-5600/5800	CPAC-PSU-AC-5900	CPAC-PSU-AC-15000	CPAC-PSU-AC-23000
DC SKU	CPAC-PSU-DC-5600/5800	CPAC-PSU-DC-5900	CPAC-PSU-DC-Dual-15000/23000	
AC Power Input	90 to 240V (47-63Hz)	90 to 240V (47-63Hz)	90 to 240V (47-63Hz)	90 to 240V (47-63Hz)
AC Input Current	5600: 0.75A 5800: 0.84A	5900: 1.38A	15400: 7.1A 15600: 7.1A	23500: 9.4A 23800: 9.4A
DC Input Current			-40.5V/24A -48V/19.2A, -60V/16.0A	-40.5V/24A -48V/19.2A, -60V/16.0A
Output Power	275W	275W	AC(550W), DC(800W)	800W

STORAGE

Redundant drives are configured in a RAID1 mirror increasing system reliability. RAID status monitoring is available via SNMP.

REDUNDANT STORAGE OPTIONS (5000, 15000 and 23000)

	3000	5100 – 5800	5900	15400	15600, 23000
HDD Options		1x 1TB		1x 1TB	2x 1TB
SSD Options ¹	1x 240GB	1x 240GB	1x 480GB	1x 480GB	2x 480GB
Redundant Drive	NA	NA	Optional	Optional	Included
RAID Setup			RAID1	RAID1	RAID1

¹ Local logging and standalone configuration (management and gateway) may not be supported for the SSD option, see sk113053

LIGHTS-OUT MANAGEMENT

Lights-Out Management (LOM) provides out-of-band remote management to remotely diagnose, start, restart and manage the security appliance from a remote location.

LIGHTS-OUT MANAGEMENT OPTIONS (5000, 15000 and 23000)

	3100, 3200	5100, 5200, 5400, 5600	5800, 5900, 15000, 23000
LOM	NA	Optional	Included

LIGHTS-OUT MANAGEMENT SPECIFICATION

SKU	Features
CPAC-LOM-B (5000-23000)	LOM/IPMI module with front 1 GbE RJ-45

MEMORY

Additional system memory increases connection capacity and improves the overall ability of the security appliance.

MEMORY OPTIONS (5000, 15000 and 23000)

	3100, 3200	5100, 5200	5400, 5600, 5800, 5900	15400	15600	23500	23800	23900
Default	8	8	8	8	16	16	32	48
HPP	NA	16	16	24	32	64	64	64
Maximum	NA	16	32	64	64	128	128	128

MEMORY SPECIFICATION (5000, 15000 and 23000)

Model	SKU	Start	Target	Modules
5100, 5200, 5400, 5600, 5800	CPAC-RAM8GB-5000	8	16	1x 8GB DDR3
	CPAC-RAM16GB-5000	16	32	2x 8GB DDR3
	CPAC-RAM24GB-5000	8	32	3x 8GB DDR3
5900	CPAC-RAM8GB-5900	8	16	3x 8GB ECC DDR4
	CPAC-RAM24GB-5900	8	32	3x 8GB ECC DDR4
	CPAC-RAM16GB-5900	16	32	2x 8GB ECC DDR4
15400	CPAC-RAM16GB-15400	8	24	2x 8GB ECC DDR4
	CPAC-RAM40GB-15400	24	64	5x 8GB ECC DDR4
	CPAC-RAM56GB-15400	8	64	7x 8GB ECC DDR4
15600	CPAC-RAM16GB-15600	16	32	2x 8GB ECC DDR4
	CPAC-RAM32GB-15600	32	64	4x 8GB ECC DDR4
	CPAC-RAM48GB-15600	16	64	6x 8GB ECC DDR4
23500	CPAC-RAM48GB-23500	16	64	6x 8GB ECC DDR4
	CPAC-RAM64GB-23500	64	128	8x 8GB ECC DDR4
	CPAC-RAM112GB-23500	16	128	14x 8GB ECC DDR4
23800	CPAC-RAM32GB-23800	32	64	4x 8GB ECC DDR4
	CPAC-RAM64GB-23800	64	128	8x 8GB ECC DDR4
	CPAC-RAM96GB-23800	32	128	12x 8GB ECC DDR4
23900	CPAC-RAM16GB-23900	48	64	2x 8GB ECC DDR4
	CPAC-RAM64GB-23900	64	128	8x 8GB ECC DDR4
	CPAC-RAM80GB-23900	48	128	10x 8GB ECC DDR4

RACK MOUNT OPTIONS

Slide rails provide simple installation (5-10 minutes) and easy maintenance access for 5000, 15000 and 23000 Security Appliances in a standard 19-inch (48.26 cm) rack (see specification EIA-310-D). A shelf rack mount kit is available for the 3100 and 3200. Slide rails are optional in the 5100 through the 5600 and included in the 5800 through the 23000.

RACK KIT SPECIFICATION (3000, 5000, 15000 and 23000)

	SKU	Depth
15000, 23000	CPAC-RAIL-L	22 in (55.9 cm) to 32 in (81.3 cm)
	CPAC-RAIL-EXT-L	24 in (61 cm) to 36 in (91.4 cm)
5000	CPAC-RAIL-5000	22 in (55.9 cm) to 32 in (81.3 cm)
	CPAC-RAIL-EXT-5000	24 in (61 cm) to 36 in (91.4 cm)
3100, 3200	CPAC-RM-DUAL-3000	Single/Dual 3000 1U Shelf Rack Mount