

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

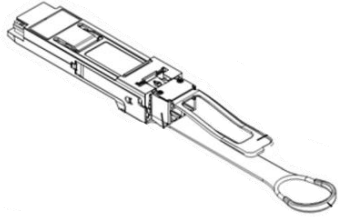
| | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------------------|
| <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) | 850 | 1295,1300, 1304,1309 | 1271,1291, 1311,1331 | 850,880, 910,940 | 855, 908 | 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) |

MAESTRO MHO - EXPAND NETWORK CAPACITY, INCREASE PERFORMANCE & RELIABILITY


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="0"> <tr> <td>1GbE</td> <td>10GbE</td> </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="0"> <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 | | | | | | | | | | |

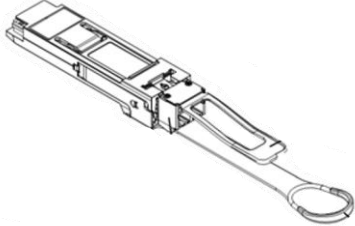
QSFP28 ADAPTORS with 10GbE TRANSCEIVERS

| <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) | 850 | 855, 908 | 850 | 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) | <table border="1"> <thead> <tr> <th>1GbE</th> <th>10GbE</th> </tr> </thead> <tbody> <tr> <td>220m(OM1)</td> <td>26m(OM1)</td> </tr> <tr> <td>550m(OM3)</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> </tbody> </table> | 1GbE | 10GbE | 220m(OM1) | 26m(OM1) | 550m(OM3) | 82m(OM2) | >550m (OM3) | 300m(OM3) | >550m(OM4) | 400m(OM4) | 10km |
| 1GbE | 10GbE | | | | | | | | | | | |
| 220m(OM1) | 26m(OM1) | | | | | | | | | | | |
| 550m(OM3) | 82m(OM2) | | | | | | | | | | | |
| >550m (OM3) | 300m(OM3) | | | | | | | | | | | |
| >550m(OM4) | 400m(OM4) | | | | | | | | | | | |
| 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 | | | | | | | | | | |
| Output Level (Transmit Power) dBm | -1 to -9.5dBm (1GbE mode) -1 to -5dBm (10GbE mode) | -3 to -19dBm (1GbE mode) +0.5 to -12.6dBm (10GbE mode) | | | | | | | | | | |
| Matching I/O Modules | CPAC-2-10F-B, CPAC-4-10F-B | -3 to -11dBm (1GbE mode) +0.5 to -8.2dBm (10GbE mode) | | | | | | | | | | |
| | | 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 |