



Quantum 16600 Hyperscale Security Gateway for Maestro



Check Point Maestro brings scale, agility and elasticity of the cloud on premise with efficient N+1 clustering based on Check Point HyperSync technology, maximizing the capabilities of your existing security gateways. Create your own virtualized private-cloud premise by stacking multiple Check Point security gateways together. Group them by security feature set, policy or the assets they protect and further virtualize them with virtual systems technology. With the Maestro Hyperscale Orchestrator and 16600 Hyperscale security gateways, businesses of all sizes can have cloud-level security on premise.



Highest Security Effectiveness

Integrated with R80 and ThreatCloud to set a new standard of prevention against advanced 5th generation cyber attacks



State-of-the-Art SSL Inspection

Threat Prevention that delivers lightning fast SSL-encrypted traffic inspection without compromising up time or scalability



850 Gbps of Gen V Performance

Hyperscale ready, high performance threat prevention hardware for the fastest Gen V security gateway in the industry

PERFORMANCE HIGHLIGHTS

Gen II Security	Gen III Security	Gen V Security
Firewall	NGFW ¹	Threat Prevention + SandBlast ²
87 Gbps	30 Gbps	17.6 Gbps

Performance measured with enterprise testing conditions. Additional performance details on page 3. 1: Includes Firewall, Application Control, and IPS. 2: Includes Firewall, Application Control, URL Filtering, IPS, Antivirus, Anti-Bot and SandBlast Zero-Day Protection

HIGH PERFORMANCE, SCALABLE SECURITY

16600 Hyperscale Security Gateway



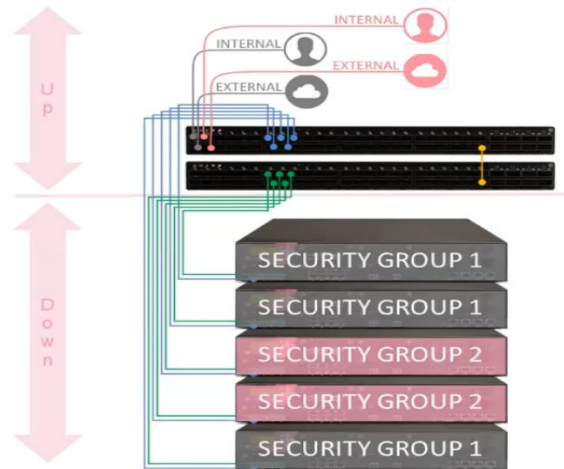
- | | |
|---------------------------------|---------------------------------------|
| 1. Sync 10/100/1000 Base-T port | 5. Lights-out Management port |
| 2. RJ45 console port | 6. Management 10/100/1000 Base-T port |
| 3. 2x 100 GbE QSFP28 ports | 7. 2x USB 3.0 ports |
| 4. USB Type-C console port | 8. Redundant hot-swap power supplies |

Hyperscale Security System

With Maestro, you can start with two gateways and then can grow to up to 52 gateways. For example, when you start with 35.2 Gbps using two 16600HS gateways you can finish with an 850 Gbps security solution that supports over 500 million concurrent connections. Simply by using Check Point Maestro.

Hyperscale Orchestrator Connections

When a Security Group is created, an IP address is created for a Single Management Object connection to the security management server. Easily create and assign IP addresses to the internal and external network interfaces. These uplinks are the visible components of the Maestro security solution.



Fully Operational within Minutes

When we add a gateway to the system, it gets all the configurations, the policy, even the software version, updated and aligned with the existing deployment, ready to go within 6 minutes.

Maestro Traffic Distribution

HyperSync tracks the Active/Standby/Backup state of group members. Sync traffic is limited to only the Active and Standby members handling the connection.

Cost-Efficient N+1 Deployments

Now businesses of all sizes can enjoy cloud-level resiliency and telco-grade technology using the efficient Maestro N+1 clustering design.



SPECIFICATIONS

Performance

Enterprise Test Conditions

Threat Prevention (Gbps) ¹	17.6
NGFW (Gbps) ²	30
IPS (Gbps)	42
Firewall (Gbps)	87

RFC 3511, 2544, 2647, 1242 PERFORMANCE (LAB)

Firewall 1518B UDP (Gbps)	117
VPN AES-128 (Gbps)	17
Connections/sec	375,000
Concurrent connections	32M

1. Includes Firewall, Application Control, URL Filtering, IPS, Antivirus, Anti-Bot and SandBlast Zero-Day Protection with logging enabled. 2. Includes Firewall, Application Control and IPS with logging enabled.

Additional Features

Highlights

- 2x 100 GbE QSFP28 ports
- 2x CPUs, 24 physical cores, 48 virtual cores
- 1x 480 GB storage
- 2x AC power supplies
- 128 GB memory
- Virtual Systems: up to 250

Content Security

First Time Prevention Capabilities

- CPU-level, OS-level and static file analysis
- File disarm and reconstruction via Threat Extraction
- Average emulation time for unknown files that require full sandbox evaluation is under 100 seconds
- Maximal file size for Emulation is 100 MB
- Emulation OS Support: Windows XP, 7, 8.1, 10

Applications

- Use 8,000+ pre-defined or customize your own applications
- Accept, prevent, schedule, and apply traffic-shaping

Data Loss Prevention

- Classify 700+ pre-defined data types
- End user and data owner incident handling

Dynamic User-based Policy

- Integrates with Microsoft AD, LDAP, RADIUS, Cisco pxGrid, Terminal Servers and with 3rd parties via a Web API
- Enforce consistent policy for local and remote users on Windows, macOS, Linux, Android and Apple iOS platforms

Network

Network Connectivity

- Total physical and virtual (VLAN) interfaces per appliance: 1024/4096 (single gateway/with virtual systems)
- 802.3ad passive and active link aggregation
- Layer 2 (transparent) and Layer 3 (routing) mode

High Availability

- Active/Active L2, Active/Passive L2 and L3
- Session failover for routing change, device and link failure

IPv6

- NAT66
- CoreXL, SecureXL

Unicast and Multicast Routing (see SK98226)

- OSPFv2, BGP, RIP
- Static routes, Multicast routes
- Policy-based routing
- PIM-SM, PIM-DM, IGMP v2, and v3

Maestro

Maximums

- Up to 8 Security Groups
- Up to 31 gateways in a Security Group
- Up to 52 gateways in a Security Group (dual site deployment, 26 from each site)
- 32x 100 GbE ports or 128x 10GbE (MHO 175)

Physical

Power Requirements

- Single Power Supply rating: 850W
- Power input: 100 to 240V (47-63Hz), 40--72VDC
- Power consumption avg/max: AC188W/438W
- Maximum thermal output AC: 1494 BTU/hr.

Dimensions

- Enclosure: 1RU
- Dimensions (WxDxH): 17.4 x 24 x 1.73 in. (442 x 610 x 44mm)
- Weight: 28.7 lbs. (13 kg)

Environmental Conditions

- Operating: 0° to 40°C, humidity 5% to 95%
- Storage: -20° to 70°C, humidity 5% to 95% at 60°C

Certifications

- Safety: UL, CB, CE, TUV GS
- Emissions: FCC, CE, VCCI, RCM/C-Tick
- Environmental: RoHS, WEEE, REACH¹, ISO14001¹ factory certificate

ORDERING QUANTUM 16600HS MAESTRO SOLUTIONS

MAESTRO HYPERSCALE SOLUTION PACKAGES	SKU
Maestro Solution with 2x 16600HS firewalls and 1x Orchestrator (MHO-175), includes SandBlast (SNBT) Security Subscription Package for 1 Year. Each appliance includes 2x 1GbE copper on-board, 2x 100GbE QSFP28 ports, 2x AC PSUs, 1x 480GB SSD, 128 GB RAM, telescopic rails, plus 2x 100 G DAC cables (3m, 3m). MHO-175 includes 1x 100 G DAC (3m).	CPAP-SG16602-HS-MHS-SNBT
Maestro Solution with 3x 16600HS firewalls and 1x Orchestrator (MHO-175), includes SandBlast (SNBT) Security Subscription Package for 1 Year. Each appliance includes 2x 1GbE copper on-board, 2x 100GbE QSFP28 ports, 2x AC PSUs, 1x 480GB SSD, 128 GB RAM, telescopic rails, plus 2x 100 G DAC cables (3m, 3m). MHO-175 includes 1x 100 G DAC (3m).	CPAP-SG16603-HS-MHS-SNBT

SECURITY GATEWAY APPLIANCES FOR SCALE-UP	SKU
16600HS security gateway for Maestro, SandBlast subscription for the first year, includes 2x 1GbE copper on-board, 2x 100GbE QSFP28 ports, 2x AC PSUs, 1x 480GB SSD, 128 GB RAM, plus 2x 100 G DAC cables (3m, 3m).	CPAP-SG16600-HS-MHS-SNBT

SECURITY GATEWAY ACCESSORIES	SKU
100G QSFP28 Direct Attach Copper (DAC) cable, 1 meter	CPAC-DAC-100G-1M
100G QSFP28 Direct Attach Copper (DAC) cable, 3 meters	CPAC-DAC-100G-3M
100G QSFP28 Direct Attach Copper (DAC) cable, 5 meters	CPAC-DAC-100G-5M
40G QSFP+ Direct Attach Copper (DAC) cable, 1 meter	CPAC-DAC-40G-1M
40G QSFP+ Direct Attach Copper (DAC) cable, 3 meters	CPAC-DAC-40G-3M
Replacement 16GB RAM memory module for 16600 and 28600 Security Gateway	CPAC-RAM16GB-16/28K-HS
Replacement AC power supply for 16600HS, 26000, 28000, 28600HS Security Gateways	CPAC-PSU-AC-26000/28000
Dual DC power supplies for 16000, 26000, 28000 Security Gateways	CPAC-PSU-DC-Dual-16000/26000/28000
DC power supply for 16000, 26000, 28000 Security Gateways	CPAC-PSU-DC-16000/26000/28000
Lights-Out Management Module	CPAC-LOM-C
Extended slide rails for 16600 Security Gateways (24" - 36")	CPAC-RAIL-EXT-L

MAESTRO HYPERSCALE ORCHESTRATOR	SKU
Maestro Hyperscale Orchestrator 175 with 32x 100 GbE ports, plus 1x 100 G DAC cable (3m).	CPAP-MHO-175

MAESTRO HYPERSCALE ORCHESTRATOR ACCESSORIES	SKU
Fan replacement for Maestro Hyperscale Orchestrator 175	CPAC-FAN-MHO175
AC power supply unit replacement for Maestro Hyperscale Orchestrator 140 and 175	CPAC-PSU-AC-MHO140/175
Rail kit for Maestro Hyperscale Orchestrators 140 and 175	CPAC-RAIL-MHO140/175

MHO-175 TRANSCEIVERS	SKU
100G CWDM4, LC connector, 2Km/ single mode fiber	CPAC-TR-100CWDM4
100G SWDM4, LC connector, 75m/OM3 fiber	CPAC-TR-100SWDM4
QSFP28 transceiver module for 100G fiber ports - short range (100GBase-SR4)	CPAC-TR-100SR
QSFP28 transceiver module for 100G fiber ports - long range (100GBase-LR4)	CPAC-TR-100LR
QSFP+ transceiver module for 40G fiber ports - short range (40GBase-SR) CPAC-TR-40SR-QSFP-300m	CPAC-TR-40SR-QSFP-300m
QSFP+ transceiver module for 40G fiber ports - long range (40GBase-LR) CPAC-TR-40LR-QSFP-10Km	CPAC-TR-40LR-QSFP-10Km
Bi-directional QSFP transceiver for 40G fiber Ports - short range (40GBase-SR-BD) CPAC-TR-40SR-QSFP-BiDi	CPAC-TR-40SR-QSFP-BIDI
QSFP+ splitter for 40G fiber ports for Maestro (MHO140 and MHO175) - 3 meters	CPAC-TR-40SPLIT-QSFP-3M
QSFP+ splitter for 40G fiber ports for Maestro (MHO140 and MHO175) - 6 meters	CPAC-TR-40SPLIT-QSFP-6M

ORDERING MAESTRO SOLUTIONS (Continued)

All-inclusive Security

	NGFW	NGTP	SNBT (SandBlast)
	Basic access control with IPS	Prevent known threats	Prevent known and zero- day attacks
Firewall	✓	✓	✓
VPN (IPsec)	✓	✓	✓
Application Control	✓	✓	✓
Content Awareness	✓	✓	✓
IPS	✓	✓	✓
URL Filtering		✓	✓
Anti-Bot		✓	✓
Anti-Virus		✓	✓
Anti-Spam		✓	✓
SandBlast Threat Emulation			✓
SandBlast Threat Extraction			✓

Each gateway requires a license for the enabled security feature. The first year purchase includes the SNBT package. Security subscription extensions, NGFW, NGTP and SNBT are available for subsequent years.