

# QUANTUM 28000 SECURITY GATEWAY



**Top Security Effectiveness**  
 Leader with 99.7% malware block rate in Miercom NGFW Security Benchmark (2023)

**AI ML powered Threat Prevention**  
 Protect networks and users from zero-days, phishing, DNS, and ransomware attacks

**Hyperscale Network Security**  
 On-demand expansion and resilient access to mission-critical applications

**Unified Management and Ops Efficiency**  
 Increase protection and reduce TCO with a consolidated security architecture

**Industry Recognition**  
 Named a Leader for the 23rd time in the Gartner® Magic Quadrant™ for Network Firewalls  
 Named a Leader in the Forrester Wave™ Enterprise Firewalls Q4 2022  
 Awarded the Frost & Sullivan Firewall Company of the Year

## AI Deep Learning powered threat prevention to secure enterprise data centers

Check Point Quantum 28000 Next Generation Firewalls enable enterprises to deploy the industry's leading threat prevention capabilities at all points of their infrastructure, scaling security according to their changing business needs.

This enables enterprises to prevent and block even the most advanced attacks before they can disrupt business — greatly increasing the efficiency of their security operations.

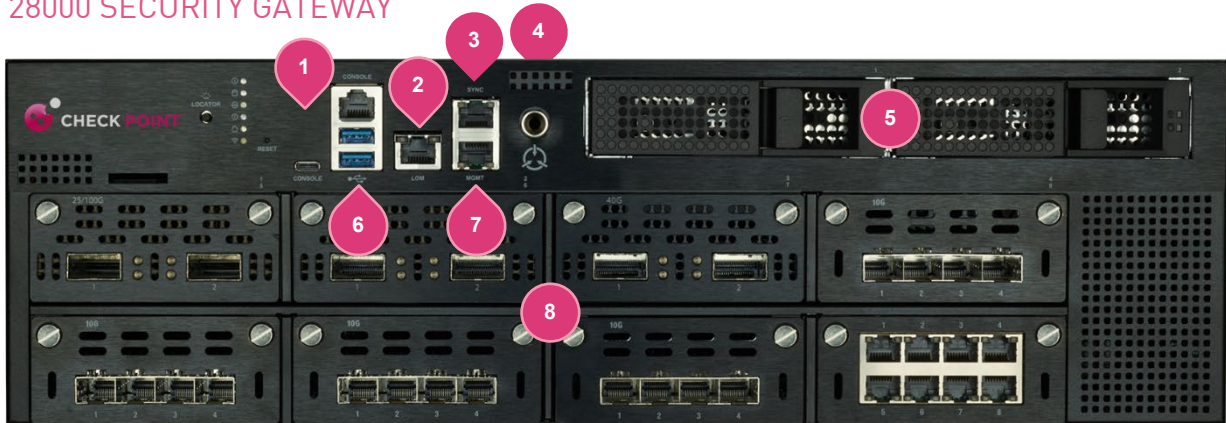
### PERFORMANCE HIGHLIGHTS

Firewall	Next Gen Firewall	Threat Prevention
145 Gbps	51.5 Gbps	30 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.

## SPOTLIGHT

### 28000 SECURITY GATEWAY



- |  |  |
|--|--|
| <ol style="list-style-type: none"> <li>1. RJ45 and USB Type-C console ports</li> <li>2. Lights-out Management port</li> <li>3. Sync 10/100/1000 Base-T port</li> <li>4. ESD ground point</li> <li>5. 2x 480GB SSD RAID1</li> </ol> | <ol style="list-style-type: none"> <li>6. 2x USB 3.0 ports</li> <li>7. Management 10/100/1000 Base-T port</li> <li>8. Eight network card expansion slots</li> </ol> <p>3x redundant power supplies (back view not shown)<br/>4x field replaceable fans (back view not shown)</p> |
|--|--|

#### AI Deep Learning Threat Prevention

The speed and sophistication of evasive zero-day DNS and phishing attacks requires AI Deep Learning to predict and block malicious behavior without human intervention. Quantum Firewalls use Check Point's threat intelligence cloud 40+ AI/ML engines to block emerging threats that haven't been seen before.

	NGFW	NGTP	SNBT
Firewall, VPN, Mobile Access	✓	✓	✓
Content Awareness	✓	✓	✓
Application Control	✓	✓	✓
Intrusion Prevention System	✓	✓	✓
URL Filtering		✓	✓
Antivirus and Anti-Bot		✓	✓
DNS Security		✓	✓
Threat Emulation (sandboxing)		✓	✓
Threat Extraction (CDR)		✓	✓
Zero Phishing		✓	✓

Next Generation Firewall, Next Generation Threat Prevention and SandBlast packages

#### IoT Security

Quantum IoT Protect now provides autonomous threat prevention. Quantum Firewalls discover IoT assets, feed those to the IoT Cloud Service to automatically map IoT devices to profiles and then apply a zero-trust policy on the firewalls to prevent IoT threats in 5 minutes.

#### 100, 40 and 25 GbE Connectivity

If you're ready to move from 10 to 25, 40 or 100 GbE, so is the 28000 Next Generation Security Gateway. The 28000 Security Gateway lets you connect your 10 GbE server uplinks to your core network.

#### Integrated SD-WAN

Security protects you when you're connected. SD-WAN ensures you're always connected, and the connection offers the best user experience for the lowest cost. Quantum SD-WAN in Quantum firewalls keeps you secure and connected.

#### Remote Management and Monitoring

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

## DATA CENTER GRADE PLATFORM

	1 GbE copper	1 GbE fiber	10 GbE	100/40/25* GbE	Memory	Redundant Power	Redundant Storage	LOM
Base model	2	0	4	0	64 GB	●	○	○
Plus model	10	0	12	2	96 GB	●	●	●
Max capacity	66	32	32	8	128 GB	●	●	●

○ optional accessory

## SPECIFICATIONS

### Performance

#### Enterprise Test Conditions

Threat Prevention <sup>1</sup> (Gbps)	30
NGFW <sup>2</sup> (Gbps)	51.5
IPS (Gbps)	52.2
Firewall (Gbps)	145

#### RFC 3511, 2544, 2647, 1242 Performance (Lab)

Firewall 1518B UDP (Gbps)	316.5
VPN AES-128 (Gbps)	49
Connections/sec	615,000
Concurrent connections <sup>3</sup>	10/20/32M <sup>3</sup>

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. 3. Performance measured with Base/Plus/maximum memory.

### Additional Features

#### Highlights

- 2x CPUs, 36 physical cores, 72 virtual cores (total)
- 1x 480GB SSD, (2x in Plus package)
- 3x AC power supplies (DC option)
- 64, 96 and 128 GB memory options
- Lights-Out-Management card (optional in Base package)
- Virtual Systems (base/PLUS/max mem): 125/250/250

#### Network Expansion Slot Options (7 of 8 slots open)

- 8x 10/100/1000Base-T RJ45 port card, up to 66 ports
- 4x 1000Base-F SFP port card, up to 32 ports
- 4x 10GBase-F SFP+ port card, up to 32 ports
- 2x 100/40/25G QSFP28 port double-slot-width card, up to 8 ports

### 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 10,000+ 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

### Content Security (continued)

#### Dynamic User-based Policy

- Integrates with Microsoft AD, LDAP, RADIUS, Cisco pxGrid, Terminal Servers and with 3<sup>rd</sup> 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

- Integrated SD-WAN network optimization and resilience
- 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
- ClusterXL or VRRP

#### IPv6

- NAT66, NAT64, NAT46
- CoreXL, SecureXL, HA with VRRPv3

#### Unicast and Multicast Routing (see SK98226)

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

### Physical

#### Power Requirements

- Single Power Supply rating AC: 850W, DC: 1300W
- Power input: 100 to 240V (47-63Hz), 40--72VDC
- Power consumption avg/max: 472/826W
- Maximum thermal output AC: 2818.4 BTU/hr.

#### Dimensions

- Enclosure: 3RU
- Dimensions (WxDxH): 17.4 x 24 x 5.2 in. (442 x 610 x 132mm)
- Weight: 46.3 lbs. (21 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, REACH<sup>1</sup>, ISO14001<sup>1</sup>

## ORDERING QUANTUM 28000 SECURITY GATEWAYS

SECURITY APPLIANCE <sup>1</sup>	SKU
28000 Base configuration: 2x 1GbE copper ports, 4x 10GbE SFP+ ports, 4x SR transceivers, 64 GB RAM, 1x SSD, 3x AC PSUs, telescopic rails, SandBlast (SNBT) Security Subscription Package for 1 Year	CPAP-SG28000-SNBT
28000 Plus configuration: 10x 1GbE copper ports, 12x 10GbE SFP+ ports, 12x SR transceivers, 2x 100GbE QSFP28 ports, 2x 40G SR transceivers, 96 GB RAM, 2x 480GB SSD, 3x AC PSUs, Lights-Out Management (LOM), telescopic rails, 5 Virtual Systems, SandBlast (SNBT) Security Subscription Package for 1 Year	CPAP-SG28000-PLUS-SNBT
Quantum IoT Network Protection for 1 year for 28000 appliances	CPSB-IOTP-28000-1Y
Quantum IoT Network Protection for 1 year for 28000 PLUS appliances	CPSB-IOTP-28000-PLUS-1Y
Quantum SD-WAN subscription for 1 year for 28000 appliances	CPSB-SDWAN-28000-1Y
Quantum SD-WAN subscription for 1 year for 28000 PLUS appliances	CPSB-SDWAN-28000-PLUS-1Y

The Base package includes 2 virtual systems (VS) - one management VS and one production/data VS. These are not additive or counted when adding additional VS licenses. Plus includes 5 VS licenses which are additive when adding additional VS licenses. <sup>1</sup> Renewal NGFW, NGTP and SandBlast (SNBT) packages are available.

## Accessories

INTERFACE CARDS AND TRANSCEIVERS	
8 Port 10/100/1000 Base-T RJ45 interface card	CPAC-8-1C-C
4 Port 1000Base-F SFP interface card; requires additional 1000Base SFP transceivers	CPAC-4-1F-C
SFP transceiver module for 1G fiber ports - long range (1000Base-LX)	CPAC-TR-1LX-C
SFP transceiver module for 1G fiber ports - short range (1000Base-SX)	CPAC-TR-1SX-C
SFP transceiver to 1000 Base-T RJ45 (Copper)	CPAC-TR-1T-C
4 Port 10GBase-F SFP+ interface card	CPAC-4-10F-C
SFP+ transceiver module for 10G fiber ports - for links up to 40km (10GBASE-ER)	CPAC-TR-10ER-C
SFP+ transceiver module for 10G fiber ports - long range up to 10km (10GBase-LR)	CPAC-TR-10LR-C
SFP+ transceiver module for 10G fiber ports - short range (10GBase-SR)	CPAC-TR-10SR-C
SFP+ transceiver 10GBASE-T RJ45 (Copper) - for links up to 30m over CAT6a/CAT7	CPAC-TR-10T-C
10G Direct Attach Copper (DAC) Cable, (10BASE-CU) 3 meters	CPAC-DAC-10G-3M
2 Port 10/25/40/100G QSFP28 Dual Width interface card *	CPAC-2-40/100F-C
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
100G SWDM4, LC connector, 75m/OM3 fiber	CPAC-TR-100SWDM4
100G CWDM4, LC connector, 2Km/ single mode fiber	CPAC-TR-100CWDM4
QSFP+ transceiver module for 40G fiber ports - short range (40GBase-SR)	CPAC-TR-40SR-QSFP-300m
QSFP+ transceiver module for 40G fiber ports - long range (40GBase-LR)	CPAC-TR-40LR-QSFP-10Km
Bi-directional QSFP transceiver for 40G fiber ports - short range (40GBase-SR-BD)	CPAC-TR-40SR-QSFP-BIDI
QSFP28 to SFP28 Adapter - 10G/25G fiber adaptor	CPAC-TR-QSFP28-SFP28
SFP28 transceiver module for 25G fiber ports with QSFP28 adaptor - short range (25GBase-SR)	CPAC-TR-25SR-ADP
SFP28 transceiver module for 25G fiber ports with QSFP28 adaptor - long range (25GBase-LR)	CPAC-TR-25LR-ADP
SFP+ transceiver module for 10G fiber with QSFP28 adaptor - for links up to 40km (10GBASE-ER)	CPAC-TR-10ER-ADP
SFP+ transceiver module for 10G fiber with QSFP28 adaptor - long range up to 10km (10GBase-LR)	CPAC-TR-10LR-ADP
SFP+ transceiver module for 10G fiber with QSFP28 adaptor - short range (10GBase-SR)	CPAC-TR-10SR-ADP
SFP+ transceiver 10GBASE-T RJ45 (Copper) with QSFP28 adaptor - for links up to 30m over CAT6a/CAT7	CPAC-TR-10T-ADP
100G Direct Attach Copper cable (QSFP28), 3 meters	CPAC-DAC-100G-3M
40G Direct Attach Copper cable (QSFP28), 3 meters	CPAC-DAC-40G-3M
25G Direct Attach Copper cable (QSFP28), 3 meters	CPAC-DAC-25G-3M
10G Direct Attach Copper cable, (10BASE-CU) 3 meters	CPAC-DAC-10G-3M

\* CPAC-2-40/100F-C 25G transceivers will be supported in a future Jumbo Hot Fix

## ORDERING QUANTUM 28000 SECURITY GATEWAYS (continued)

FAIL-OPEN NETWORK INTERFACE CARDS	
4 Port 1GE copper Bypass (Fail-Open) Network interface card (10/100/1000 Base-T)	CPAC-4-1C-BP-C
2 Port 10GE Short-range Fiber Bypass (Fail-Open) Network interface card (10GBase-SR)	CPAC-2-10FSR-BP-C

MEMORY	SKU
Memory upgrade kit from 64GB to 96G or 96GB to 128GB for 28000 Security Gateways	CPAC-RAM32GB-28000
Memory upgrade kit from 64GB to 128GB for 28000 Security Gateways	CPAC-RAM64GB-28000

SPARES AND MISCELLANEOUS	SKU
480GB SSD for 16000/28000 Security Gateways	CPAC-SSD-480G-C
AC power supply for 16600HS, 26000, 28000, 28600HS Security Gateways	CPAC-PSU-AC-26000/28000
Dual DC power supplies for 16000, 26000 and 28000 Security Gateways	CPAC-PSU-DC-Dual-16000/26000/28000
DC power supply for 16000 and 28000 Security Gateways	CPAC-PSU-DC-16000/28000
Replacement Lights-Out Management Module	CPAC-NLOM-C
Replacement Fan	CPAC-FAN-26000/28000
Slide rails for 28000 Security Gateways (22" - 32")	CPAC-RAIL-L
Telescopic slide rails for 28000 Security Gateways (24" - 36")	CPAC-RAIL-EXT-L

## All-inclusive Security

	NGFW	NGTP	SNBT (SandBlast)
	Basic access control plus IPS	Prevent known threats	Prevent known and zero- day attacks
Firewall	✓	✓	✓
VPN (IPsec)	✓	✓	✓
Mobile Access	✓	✓	✓
Identity Awareness	✓	✓	✓
Application Control	✓	✓	✓
Content Awareness	✓	✓	✓
IPS	✓	✓	✓
URL Filtering		✓	✓
Anti-Bot		✓	✓
Anti-Virus		✓	✓
Anti-Spam		✓	✓
DNS Security		✓	✓
SandBlast Threat Emulation			✓
SandBlast Threat Extraction			✓
Zero Phishing			✓
IoT Network Protection	optional	optional	optional
SD-WAN Network Optimization	optional	optional	optional

The first-year purchase includes the SNBT package. Security subscription renewals, NGFW, NGTP and SNBT are available for subsequent years. Optional security capabilities can be ordered a-la-carte or separately.