

# IP Security Nokia IP1280

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Nokia for Business

Nokia IP1280 security platform is a high-end, next-generation security appliance designed for demanding price/performance and multigigabit Ethernet throughput requirements of large businesses and service providers.



Using just a two-rack-unit form factor, Nokia IP1280 security platform features a single quad-core Intel Xeon™ processor and is purpose-built to run Check Point VPN-1 Power, Check Point VPN-1 UTM, and next-generation multiprocessing security applications such as Check Point Multi-Core.

Nokia IP1280 is optimized to provide scalability and investment protection into the next decade by enabling customers to boost performance as needed with the addition of one next-generation, high port density Nokia Accelerated Data Path (ADP) services module. Nokia is the leading provider of security appliances with Check Point software. For over ten years Nokia and Check Point have had one of the most long-standing, successful collaborations within the security industry.

### **Performance Boosts Without Large-Scale Upgrades**

Nokia IP1280 provides significant performance improvement through optional Nokia ADP services modules and Nokia IPSO™ software upgrades in phases, allowing customers to deploy now, expanding capacity and performance as their needs grow. The power boost options help avoid costly hardware large-scale upgrades. This non-bladed appliance approach helps to avoid a costly up-front chassis investment while offering high performance and redundancy features.

### **Excellent Price/Performance and Port Density**

Nokia IP1280 provides superior price/performance on key investment criteria such as price per port and price per gigabyte, all in a smaller form factor, than competing products. It is a two-rack-unit (2RU) security appliance that delivers more than 10 Gbps of large-packet throughput, and 5 Gbps of small-packet throughput when equipped with a Nokia ADP services module and Check Point SecureXL software. The optional Nokia ADP services modules are available with 12 ports of Gigabit Ethernet in 1000Base-T, as well as 12 ports of Gigabit Ethernet in 1000Base-X, with interchangeable small form-factor pluggable (SFP) modules for SX, LX, and copper interfaces as needed. In addition, 10 Gigabit Ethernet Nokia ADP services modules provide three ports with XFP modules for SR and LR-10km fiber.

### **Enhanced Business Continuity, Reliability, and Extensibility**

Nokia IP1280 delivers enhanced business continuity through features such as redundant dual hot-swappable power supplies, hot-swappable fan trays, and optional redundant hard disk drives with RAID 1. For optimal reliability, Nokia IP1280 offers the option of either disk-based or flash-based configurations and includes features such as Nokia IP Clustering and Virtual Router Redundancy Protocol (VRRP). Nokia IP1280 interoperates with existing PMC interface cards approved by Nokia, providing additional investment protection. In addition, Nokia Horizon Manager helps enable central and remote management of multiple Nokia IP1280 security appliances.

### **Nokia IPSO Advantage**

Nokia IPSO is a proven, secure operating system that natively supports key networking needs such as dynamic and multicast routing, IPv6, VLANs, link aggregation, and transparent mode, among many other features, making integration into complex networks easy and virtually transparent. Nokia IPSO includes role-based administration, AAA with support for centralized databases, and third-party administrator authorization. Superior element management capability is accessible through an extensive command line interface and Nokia Network Voyager graphical interface for secure, remote administration over a variety of out-of-band management channels. Nokia IPSO has a robust network management capability supporting SNMP v2 and v3, and interoperability with major systems' management tools.

### **Nokia Quality Assurance**

Extensively tested by Nokia Quality Assurance for standards compliance and interoperability with Check Point VPN-1 preinstalled at the factory, Nokia security platforms set a high standard for rapid deployment and dependability.

### **Nokia First Call—Final Resolution Global Support**

Like all Nokia Firewall/VPN appliances, Nokia IP1280 security platform with Check Point VPN-1 Power is backed by world-class Nokia First Call—Final Resolution technical support and service. This offers organizations a single point of technical support and assistance, globally, for both Nokia IP1280 security platform and Check Point VPN-1 applications.

# Technical specifications

## LAN Support

- 10/100 Base-T (10/100 Mbps Ethernet) – PCI Mezzanine Card (PMC)
- 1000Base-T (10/100/1000 Mbps Ethernet) – PMC
- 1000Base-SX (1000 Mbps Ethernet) – SFP, Multi-Mode Fiber (MMF) ADP
- 1000Base-LX (1000 Mbps Ethernet) – SFP, Single-Mode Fiber (SMF) ADP
- 10 GBase-SR (10 Gbps Ethernet) – XFP, MMF ADP
- 10 GBase-LR 10 km (10 Gbps Ethernet) – XFP, SMF ADP

## Performance

- Firewall – 10 Gbps Large Packet, 800 Mbps Small Packet with Check Point SecureXL

## Management

- SNMP RFC 1157, SNMPv2c, SNMPv3
- Telnet RFC 854
- FTP RFC 959
- SSHv2 (Secure Telnet and FTP)
- HTTP Server RFC 2068
- SSL/TLS RFC 2246
- Command line utilities supported in Nokia Horizon Manager

## Environment Operating Conditions

- Temperature: 32°-104°F / 0°-40°C
- Altitude: 10,000 ft / 3048 m
- Humidity: 10%-90% (non-condensing)

## Environment Non-Operating Conditions

- Temperature: -20°C to +70°C
- Humidity: Up to at least 95% (non-condensing)

## High Availability

- VRRP (Active/Passive) RFC 2338
- Check Point FireWall-1 State Sync
- IP Clustering (Active/Active)

## Power Requirements

- AC Input Voltage: 100-240V
- Frequency: 50/60Hz
- AC Input Current Maximum: 8.3-3.4A
- DC Input Voltage: 40-60V
- DC Input Current Maximum: 20-13A
- Maximum Power Dissipation: 625W = 2131 BTU/hr

## Safety

- CSA 60950 - 1 - 03/UL 60950-1, First Edition

## Security

- Secure Administrative Access
- Role-Based Administration
- Third-Party Administrator Authorization

- Read/Write and Read-Only Access Modes
- SSH (Secure Telnet and FTP)
- SSL/TLS (Secure HTTP) RFC 2246
- Encrypt End-User Passwords
- S/Key (one-time password) RFC-1760
- Access Control Lists
- Traffic Management
- MD5 Routing
- Authentication (RIPv2) RFC 1723
- Centralized Authentication
- NTP Client and Server RFC 1305
- RADIUS Client, TACACS+ Client

## System Indicators

- 10/100/1000 Ethernet Port Status
- Power Status on System
- Failure Status on System
- Port Status on Network Interface Cards
- System Operational Indicator

## Emission Compliance

- FCC Part 15, Subpart B, Class A
- EN55022A: 2006, CISPR 22 Class A
- 1998, EN61000-3-2, EN61000-3-3

## Immunity

- EN55024: 1998

## FLASH Base System Configuration

- 4 GB CompactFlash
- Dual, Redundant Hot-Swappable Power Supplies
- 4 GB System RAM (expandable via 8 DIMM slots)
- 4-port 1000Base-T Ethernet NIC

## HDD Base System Configuration

- 128 MB CompactFlash
- Dual, Redundant Hot-Swappable Power Supplies
- 4 GB System RAM (expandable via 8 DIMM slots)
- One 80 GB HDD
- 4-port 1000Base-T Ethernet NIC

## Dimensions

- Height – 3.5 in (8.6 cm) – 2U
- Width – 17 in (43.18 cm) without mounting brackets – 2U, or 19 in (48.2 cm) with mounting brackets
- Depth – 24.89 in (63.22 cm) including front bezel
- Depth – 25.41 in (64.54 cm) including front handles
- Weight – with accessories (power and console cables, Nokia ADP services module) – 55 lbs
- Weight – without accessories – 52 lbs
- Product Kit (Accessory Kit) includes Box, CD, documentation, power cord, others. weight is approximately 1.75 lbs (0.8 kg)
- Front Access, slide-out tray for maintenance

## Options

- NIM6130000 – Additional 4 GB RAM (total of 8 GB)
- NIY5695000 – Up to two 80 GB HDD with Hardware RAID 1
- Dual, Redundant Hot-Swappable DC Power Supplies
- NIF4423000 – 2-port 1000Base-LX, Ethernet, SFP PMC
- NIF4424000 – 4-port 10/100 Base-T, Ethernet PMC
- NIF4425000 – 2-port 1000Base-T, Ethernet PMC
- NIF4422000 – 2-port 1000Base-SX, Ethernet, SFP PMC
- NIF4426000 – 4-port 1000Base-T Ethernet PMC
- NIM5610000 – 1GB PC Card Option
- NIF4428000 – Single-slot PCMCIA Carrier
- NIF4450000 – 6U PMC Carrier

## Internet Protocols

- IPSec (RFCs 2401-2411, 2451)
- GRE (RFCs 1701 and 1702) Generic Routing Encapsulation
- IP RFC 791
- ICMP RFC 792
- ARP RFC 826
- ICMP Router Discovery (Server) RFC 1256
- Router Discovery v6 (ICMP v6) RFC 2466
- CIDR RFC 1519
- Static Routes
- RIP RFC 1058
- RIP Version 2 (with Authentication) RFC 1723
- RIPng (IPv6) RFC 2080
- OSPF RFC 2328
- OSPF NSSA RFC 3101
- OSPFv3 (IPv6) RFC 2740
- DVMRP (Multicast) RFC 1075
- IGMP (Multicast) RFC 2236, IGMPv3 RFC 3376
- PIM-SM and PIM-SSM RFC 4601
- PIM-DM RFC 3973
- PIM-DM State Refresh draft-ietf-pim-refresh-02.txt
- Multicast Tunnels
- IGRP (Optional) Cisco
- BGP4 (Optional) RFC 1771
- BGP4++ RFC 2545, 2858 (Unicast IPv6)
- IPv4 RFC 791
- IPv6 Core RFCs
- VRRPv2 RFC 3768
- VRRPv3 (IPv6) draft-ietf-vrrp-ipv6-spec-08.txt
- Mobile IP (IPv4) RFC 2794, RFC 3024, RFC 3344, RFC 3519
- Requirements for IPv4 Routers RFC 1812
- Differentiated Services (EF) RFC 2598
- Bootp/DHCP Relay RFC 2131
- Route Aggregation and Redistribution
- Unnumbered Interfaces
- Link Negotiation IEEE 802.3ad
- Flow Control IEEE 802.3x
- Private (RFC 1918) and Public IP Routing
- VLAN 802.1Q

## Work together. Smarter.

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