

## Accelerator Boards

# NITROX® PX XL Half Height Accelerator Board Family

## Product Brief



### OVERVIEW

NITROX PX XL Half Height Board (NHB) security accelerator products are the latest additions to the Cavium Networks market-leading family of NITROX security accelerator boards. The NITROX PX XL are ideal for accelerating the encrypt/decrypt and demanding asymmetric protocol operations for a wide variety applications of networking applications such as secure routers and applications, web-servers, and server load balancers. These cards provide market-leading performance for SSL, IPsec, WLAN or combinations of these protocols, freeing up the CPU cycles for other applications.

### FEATURES

- Full, single-operation protocol offload for IPsec or SSL protocols
- Concurrent multi-protocol operations on a single card
- Support for wide performance range with same API and drivers
- Highest performance single PCI Card SSL Offload processing in the industry SSL
- Single, half-height PCI slot for 500Mbps–10Gbps performance
- Unlimited SSL context or IPsec SAs with host memory
- Hardware Random Number Generator
- Software development kit with low level drivers, diagnostics, APIs, source code and documentation

#### System

- Bus type PCI-Express 1.1
- Bus width x4 Lane for CN16XX XL
- Bus width x8 Lane PCI Express for NHB4

### BENEFITS

- Highest cryptographic offload performance in the industry to free up CPU for maximum application processing
- Supports very large number of user connections/sec at minimal cost per connection
- Simple, proven system addition for high performance IPsec VPN and SSL processing functionality
- Meets ever increasing performance requirements with the same software architecture
- Single slot form factor means minimum system real estate impact
- Great flexibility for combination of SSL, IPsec and WLAN security protocols on a single card

#### Operating Systems

- Linux: Fedora Core 6, 2.6.18 kernel for 64-bit architecture or Fedora Core 4, 2.6.11 kernel for 32-bit architecture
- FreeBSD 6.2 64-bit architecture
- Windows 64-bit Windows 2003 Server/XP SP2



CN15XX-NHB-G  
NITROX PX PCI/PCI-X Half Height Card



NHB1620-NHB-G  
NITROX PX Quad Processor PCIe Half Height Card



NHB1620-NHB4-G  
NITROX PX PCIe Half Height Card

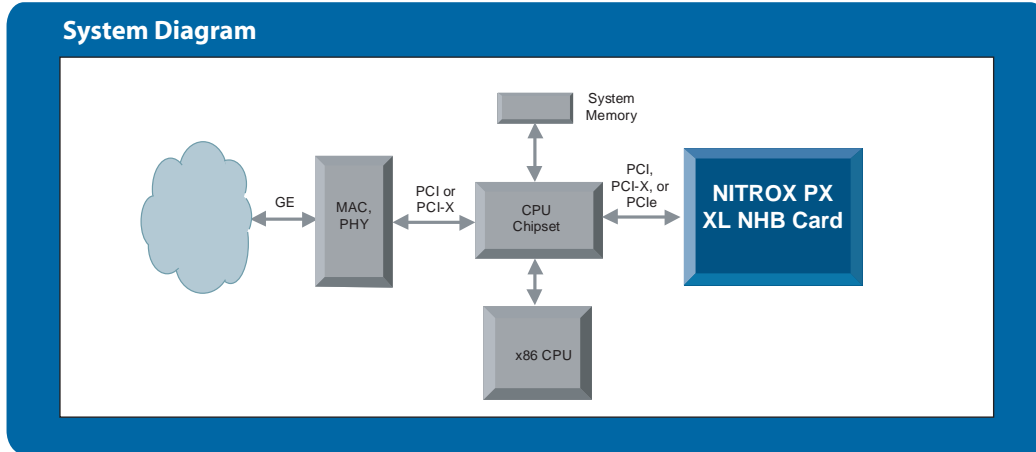
### ORDERING INFORMATION

Device	Interface	Max RSA, 1024-bit Exp CRT, OPs/sec	Performance		
			Max DH, 180-bit Exp with 1024-bit Mod OPs/sec	Full IPsec Packet Processing Mbps	Full SSL Record Throughput Mbps
CN15XX-350-NHB-G	PCI-X 64-bit 133 MHz	4,000 - 13,000	6,000 - 20,000	500 - 1,500	500 - 1,500
CN1520-400-NHB-G		17,000	6,000 - 20,000	2,500	2,500
CN16XX-350-NHB-G	PCI-Express x4	4,000 - 13,000	20,000	500 - 1,500	500 - 1,500
CN1620-400-NHB-G		17,000	25,000	2,500	2,500
CN1620-400-NHB4-G	PCI-Express x8	65,000	90,000	6,000	6,000

## Security Processors

# NITROX® XL Half Height Accelerator Board

## Product Brief



### Applications

Integrated Security Appliances

- I
- S
- S
- C

### Software Support

Multi Protocol Support

- IPsec
- M
- W
- 

### NITROX PX

Device	IPsec (i), SSL (s) or Multi-Service (p) Support	Data/Control Interface or Alternate Data Path	Local DDR2 required for SA or Context	Performance	
				MAX RSA 1024-bit Exponent	Full IPsec or SSL Processing Throughput Mbps (w/AES + SHA)
CN1505-350BGA256	i, s, w or p	PCI-X 64-bit / 133 MHz	No	4K	500 Mbps
CN1510-350BGA256	i, s, w or p		No	8K	1.0 Gbps

