



NITROX™ XL Security Acceleration Modules

PCI 3V or 3V/5V-Universal Boards for SSL and IPsec

System Performance

SSL

- Up to 14K SSL transactions per second
- Up to 1Gbps SSL record processing (ARC4 + MD5)

IPsec

- Up to 1Gbps of 3DES+SHA1 packet processing
- Up to 24K (180 bit exp) Diffie-Hellman operations/second
- Up to 5K (1024 bit exp) Diffie-Hellman operations/second

Unlimited SSL context or IPsec SAs with host memory

HW Random Number Generator

Hardware Specifications

NITROX Processor

Optional CN1001, CN1005, CN1010 or CN1120 processor

Choice of Industry Standard PCI Interfaces

- 3.3V PCI v2.2 compliant, 64/32bit, 66/33MHz
- 3V/5V Universal PCI v2.2 compliant, 64/32bit, 33MHz
- CN1001, CN1005, CN1010: PCI-X 64 bit/133 MHz

Dimensions

2.1 x 6.6 inch – 3V card, 2.6 x 6.6 inch – 3/5V card

Operating Data

Operating Temperature: 0°C to 55°C

Power Consumption (*depending on I/O options)

- CN1001 to CN1010: 1W to 1.5W
- CN1120: 4W
- No air-flow required

FCC Class A certified, CE compatibility



Picture of NITROX Half Height Board

Overview

The NITROX Half Height Board enables system designers to quickly integrate high performance SSL and IPsec into their systems. The NITROX Half Height Board can be used with a wide variety of networking equipment like routers, switches, web-servers, server load balancers, firewalls, SANs, and VPN gateways.

Software Support

Operating Systems

- Linux, BSD and Windows
- Software Development kit with low level drivers, diagnostics, APIs, source code and documentation

SSL systems

- Modified OpenSSL using Cavium's TurboSSL modifications

IPsec Systems

- Modified KAME, Free S/WAN and support for CheckPoint with Cavium's TurboIPsec modifications.

Ordering Information

| Part Number | System Interface | Performance | | | |
|-------------------|-----------------------------|-----------------|---------------|------------------------|-------------------------|
| | | RSA 1024b ops/s | DH 180b ops/s | IPsec Mbps (3DES+SHA1) | SSL Rec Mbps (ARC4+MD5) |
| CN1001-350-NHB | 3.3V 64/66 PCI/PCI-X 133MHz | 1,750 | 3,000 | 100 | 100 |
| CN1001-300-NHB-5V | 5V 64/33 PCI | 1,500 | 2,500 | 100 | 100 |
| CN1005-350NHB | 3.3V 64/66 PCI/PCI-X 133MHz | 3,500 | 6,000 | 400 | 400 |
| CN1005-300-NHB-5V | 5V, 64/33 PCI | 3,000 | 5,000 | 400 | 400 |
| CN1010-350-NHB | 3.3V 64/66 PCI/PCI-X 133MHz | 7,000 | 12,000 | 1,000 | 1,000 |
| CN1010-300-NHB-5V | 5V, 64/33 PCI | 6,000 | 10,000 | 1,000 | 1,000 |
| CN1120-350-NHB | 3.3V 64/66 PCI/PCI-X | 14,000 | 24,000 | 1,000 | 1,000 |

For CN1001, CN1005 and CN1010 parts with PCI-X add -X at the end of the part