



# NITROX™ XL Security Acceleration Board

## Mini-PCI board for IPsec, SSL and Wireless applications

### System Performance

#### IPsec Protocol Processing

- 200 Mbps IPsec performance
- 3000 (180 bit exp) Diffie-Hellman Ops
- Support for IPv4 and IPv6

#### Wireless Security Protocol Processing

200 Mbps of 802.11i (CCMP) packet processing (AES CTR w/CBC MAC)

#### SSL Protocol Processing

- 1750 (1024bit exp) SSL TPS
- 200 Mbps SSL processing (ARC4 + MD5)

#### Multiple algorithms supported

- RSA and Diffie-Hellman
- DES, 3DES, AES (256bit, all modes), ARC4
- MD5, SHA-1, HMAC-MD5, HMAC-SHA-1

#### 100Mbps Hardware Random Number Generator



Picture of NITROX Mini-PCI Board (Actual size)

### Overview

The NITROX Mini PCI Board enables system designers to quickly integrate high performance IPsec, SSL or Wireless security protocol processing into their systems. The NITROX Mini-PCI Board can be used with a wide variety of networking equipment like home gateways, wireless appliances, SME routers, switches, web-servers, server load balancers, firewalls, storage and VPN gateways.

### Hardware Specifications

#### CN 501 or 505 NITROX *Lite* Processors

#### Industry Standard Mini PCI Interface

- Standard Mini-PCI Type III (A form factor)
- 32bit 33MHz, 3.3V

**Dimensions:** 2.0 x 2.3 inches

#### Operating Data

Operating Temperature: 0°C to 55°C

Power Consumption: 2W, no heat sink required

**FCC Class A certification, CE compatibility**

### 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)	CCMP Mbps (AES CTR w/CBC MAC)
CN501-183-NMB	Mini-PCI Type III A	900	1,550	100	100	100
CN505-183-NMB	Mini-PCI Type III A	1750	3,000	200	200	200