



Secure Network Compute Module (NCM)

NCM3001: Industry's First AI-Driven Endpoint Security

Features

- Dimensions: 141mm (L) x 56mm (H)
- 2x 1G Ethernet RJ-45 port with in-line encryption
- Supports 802.1q VLAN tagging with RFC 2819 RMON statistics
- Complete Ethernet packet processing with flow handling and Firewall rules:
 - Exact
 - Ternary/Wildcard, and
 - Denial of Service (DoS)
- Conforms with the following IEEE standards:
 - IEEE 802.3ab (1GBASE-T)
 - IEEE 802.3az EEE (Energy Efficient Ethernet)
- PCIe x2 with Integrity and Data Encryption (IDE)
- Contains four ARM A53 Application cores with 32 KB L1 cache and 1 MB L2 cache.
- Built-in Artificial Intelligence (AI) / Machine Learning (ML) hardware with 4 independent ML islands at up to 4 TFLOPS per second
 - Platform security – side-channel attack detection
 - Network security – network anomaly detection
 - Cyber security – ransomware/attack detection
- USB2.0 A-type interface on front panel
- Optional micro-HDMI interface on front panel with 2D-GPU acceleration
- On-board LED's provide power and system health status feedback via GPIO pins
- SmartNIC can Offload and secure various management protocols
 - IPSec, TLS
- DHCP snooping to ensure that only authorized DHCP servers can assign IP addresses.
- Up to 3M flows on card
- Single-Root IOV (SR-IOV)
- Multiple queues per virtual machine
- DPDK, zero-copy, kernel bypass, packet direct
- 9.5KB Jumbo Frame support
- Per Flow statistics
- Quality of Service (QOS)
- Operating system: Linux & Windows
- Operating temp: 0-55°C
- Ordering part number: NCM3001-03

PRODUCT DESCRIPTION

The NCM3001 is a PCIe-based AI-driven acceleration card that leverages the Axiado TCU technology. It contains x2 1GE ports for high-speed communication with the network. Built-in Artificial Intelligence (AI) and Machine Learning (ML) hardware provide robust network anomaly and ransomware detection. In addition, trust services can be off-loaded from the server using acceleration engines provided by the Axiado TCU solution.

