



Telum™ NPA-38x4

Intelligent High-Performance 4-Port Gigabit Ethernet Packet Processor AdvancedMC™

Interface Support

- Supports intelligent high-performance Cavium Octeon CN38xx-SCP (Secure Communications Processor) in multiple configurations
- 512 MB of high-speed DDR2 packet memory
- 4 front access Gigabit Ethernet (GbE) ports
- Copper ports
- 4 ports of GbE to AdvancedMC (AMC) connector ports 4-7
- 2 ports of GbE to AMC port 0 & 1

AdvancedMC Compliance

- AMC.0 compliant, single-width, full-height module
- AMC.2 Type 4 with four GbE lanes in Fat Pipes Region
- AMC.2 Type E2 with 2 GbE lanes in Common Options Region
- AMC.0 MMC
- Module hot swap
- IPMI v1.5

Software Support

- Support available for:
 - Carrier Grade Linux
 - UBoot, BSP, POST

Applications

- Session Border Controller (SBC)
- IPsec
- Network Address Translation (NAT)
- TCP/IP Offload Engine (TOE)
- Firewall

Telum NPA-38x4 is a cost-effective, intelligent high-performance Packet Processor AdvancedMC designed for secure access applications in Telecom environments. This AdvancedMC has a high-end state-of-the-art 12-core Cavium Octeon CN3850-SCP Secure Communications Processor and 512MB of high speed DDR2 memory allowing it to enable a wide variety of applications.

To optimize application performance, the CN3850-SCP supports dual-issue, five-stage pipeline and optimized latencies as well as auto instruction pre-fetching and advanced data pre-fetching features to minimize memory delays.

High-speed communications are enabled by four lanes of GbE (AMC.2 Type 4) to the Fat Pipes Region of the AdvancedMC connector. For control purposes, two lanes of GbE to AMC ports 0 and 1 in the Common Options Region are provided.

Telum NP-38x4 is a single-width, full-size form factor module. It supports multiple configuration options including:

- 4 front panel GbE ports supporting IEEE 1000BaseT or 1000BaseSX via Small Form factor Pluggable (SFP) transceivers, or
- 4 ports of GbE to the AdvancedMC connector for Rear Transition Module (RTM) support.

Intelligent Platform Management Interface (IPMI) & Hot Swap Compliance

An AMC.0 Module Management Controller (MMC) subsystem that is IPMI v1.5 compliant initializes board level parameters, monitors board voltage and temperature conditions, maintains system status, and manages hot swap operation for high availability applications. A microcontroller is used as the IPMI intelligence and connects to the AdvancedMC management bus. This module is hot swap capable and is field replaceable in accordance with AMC.0.

Software

To simplify system integration, the Telum NPA-38x4 employs a comprehensive set of software drivers that supports Carrier Grade Linux operating systems on the CN3850-SCP core.

Product Reliability

- Reliability calculated via Telcordia Issue 1
- Technical support for OEM customers and resellers



Specifications

Bus Interconnect

- x4 Gigabit Ethernet
- AMC.2 Type 4 compliant
- AMC.2 Type E2 compliant

On-Board Resources

- Octeon CN38xx-SCP Network Processor
- Quad GbE MAC/PHY
- AMC.0 compliant MMC

Dimensions

- Single-width; AMC.0 compliant
- Weight: 0.728 lbs. (0.33 Kg)

Power Requirements

- +12.0V
- Less than 40 watts (CN38xx-SCP configuration dependent)

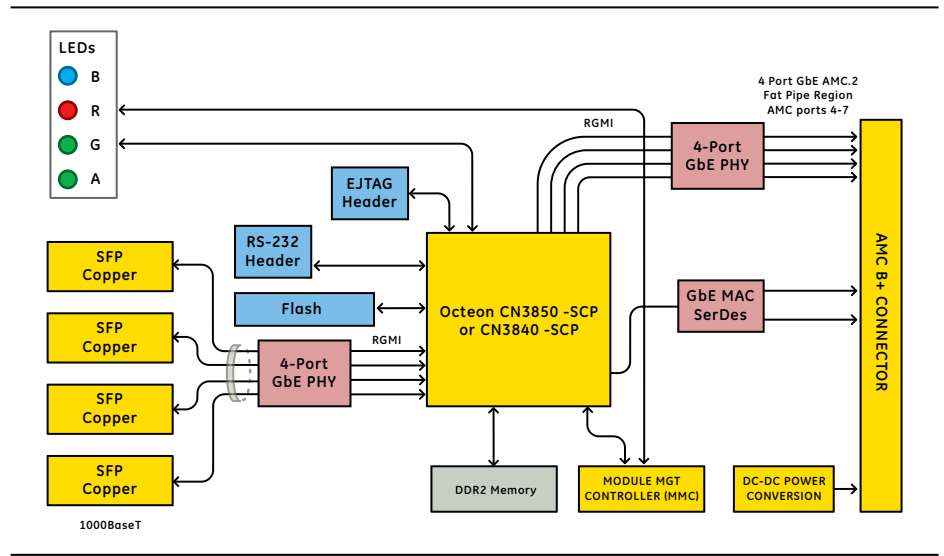
Environmental

- Temperature
 - Operating: 0° to +55°C
 - Storage: -40° to +85°C
- Relative Humidity
 - Operating: 5% to 95%, noncondensing
 - Storage: 5% to 95%, noncondensing

Regulatory Compliance:

- CE Mark
- Emissions
 - FCC 47CFR Part 15 Class A (USA)
 - EN55022: 1998/A1:2000/A2:2003 Class A ITE (EU)
 - VCCI Class A ITE (Canada)
 - AS/NZ CISPR 22:2002
 - AS/NZ CISPR 22:2002 Class A (Aus. New Zealand)
 - ICES-003 Issue 3 Class A (Canada)
 - VCCI Class A ITE
- Immunity
 - EN55024:1998/A1:2001/A2:2003 (EU)
- Safety
 - UL60950-1 (USA)
 - CSA 22.1 no. 60950-1-03 (Canada)
 - EN 60950-1 (EU)

Block Diagram



Ordering Information

Full Size AMCs with GbE to AMC ports 4-7:

88020-330

Telum NPA-3854S-05T AdvancedMC with 12-core CN3850-SCP @ 500MHz; 512MB DDR2; twisted pair ports

About GE Intelligent Platforms

GE Intelligent Platforms, a General Electric Company (NYSE: GE), is an experienced high-performance technology company and a global provider of hardware, software, services, and expertise in automation and embedded computing. We offer a unique foundation of agile, advanced and ultra-reliable technology that provides customers a sustainable advantage in the industries they serve, including energy, water, consumer packaged goods, government and defense, and telecommunications. GE Intelligent Platforms is a worldwide company headquartered in Charlottesville, VA and is part of GE Home and Business Solutions. For more information, visit www.ge-ip.com.

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