

WANic™ 3860 Packet Processor

Intelligent High-performance 4-Port Gigabit Ethernet Packet Processor PCI-X Card

Features

Interface Support

- Supports intelligent high-performance Cavium OCTEON® 16 core 500 MHz CN3860-NSP (Network Services Processor)
- Up to 4 Gbyte of high-speed DDR2 packet memory via mini-RDIMMs
- Up to 256 Mbyte of RDRAM
- 4 front panel access ports of Gigabit Ethernet (GbE)
- Copper or fiber SFP line interface ports
- PCI-X connector

Compliance/Form Factor

- Designed for NEBS compliance
- PCI-SIG PCI-X 64bit 133 MHz 1.0b compliant for control and data plane
- PCI R 3.0

Software Support

- Support available for:
 - Popular Debian Linux®
 - Embedded boot loader and diagnostics (POST)

Applications

- Session Border Controller (SBC)
- Secure Access (e.g. IPsec)
- Network Address Translation (NAT)
- Traffic Management
- Firewall

Product Reliability

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

WANic 3860 is an intelligent high-performance Packet Processor based on the high-performance OCTEON multi-core processor. Ideal for applications demanding wire-speed communications for secure IP access, the WANic 3860 card is designed to enable rapid application development using open, modular, highly available systems based on PCI-X platform architectures.

WANic 3860 provides a 16-core Cavium OCTEON multi-core CN3860-NSP Network Services Processor with 1 Mbyte of shared L2 cache memory, delivering up to 4 Gbit/s line-speed packet processing for layers 2-7. To optimize application performance, the CN3860-NSP supports a 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

The packet processor card can be configured to enable a wide variety of applications. Up to 4 Gbyte of high-speed low-power/low-latency DDR2 memory is implemented using mini-DIMM modules. Up to 256 Mbyte of RDRAM can also be configured.

WANic 3860 supports high-speed communications via a 64-bit/133 MHz PCI-X bus interface for PCI-X platforms. It is keyed for 3 volts to ensure safe operation and compatible voltage.

For application flexibility, the WANic 3860 supports multiple front panel configuration options including:

- Four front panel ports of Gigabit Ethernet supporting IEEE 1000BaseT via Small Form factor Pluggable (SFP) transceivers, or
- Four front panel ports of Gigabit Ethernet supporting IEEE 1000BaseSX via Small Form factor Pluggable (SFP) transceivers

Software

The WANic 3860 software implementation is a comprehensive development package designed to improve time-to-revenue for our customers. This software development package is optimized to simplify application integration for multi-core processor development environments.

At its lowest level, the WANic 3860 software includes Universal Boot loader (U-Boot) and comprehensive Power On Self Test (POST) embedded in the hardware.

A Linux Support Package (LSP) and sample application code designed to exercise the WANic 3860 is provided to aid in application development. The LSP includes a Linux Operating System and user application diagnostics. It loads user application code from a TFTP server or Flash memory, and includes a well-defined Application Program Interface (API) to ease application development. Other operating systems are available upon request.

To further improve customer time to market, optional software modules such as an IPv4/IPv6 stack, IPsec, QoS management, multicast forwarding, IP filtering, VLAN, L2 tunneling and application programming frameworks will be available from GE Fanuc and/or its partners.



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Specifications

Processor

- OCTEON CN3860-NSP, 16 core 500MHz

Memory

- Up to 4 Gbyte of DDR2 SDRAM via mini-RDIMMs
- Up to 128 Mbyte flash memory
- Up to 256 Mbyte of RDRAM

Front-Panel

- 4x1 GbE via SFPs
- Status LEDs

Bus Interconnect

- PCI/PCI-X

Network Interface

- 4x1GbE MAC/PHY

PCI-SIG Compliance

- PCI-SIG PCI-X 64-bit 133MHz 1.0b compliant for control and data plane

Dimensions

- Form Factor: PCI R 3.0 dual slot card
- Dimensions: 4.2 inches (H) x 6.6 inches (W)
- Weight: 0.612 lbs. (277.598g)

Power Requirements

- +12.0 VDC and +3.3VDC
- Less than 53 watts

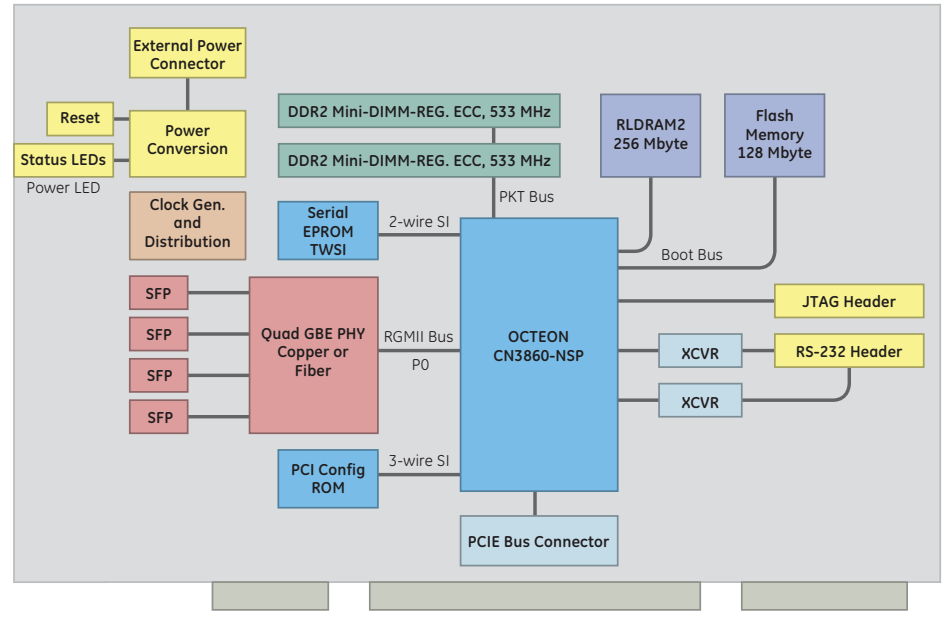
Environmental

- 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)
- RoHS 2002/95/EC compliant
- Designed for NEBs compliance

Block Diagram



Ordering Information

WANic 3860 Models:

84020-107

WANic 3860N-1T with 16-core CN3860-NSP @ 500MHz; 1 Gbyte DDR2; 256 Mbyte RDRAM; twisted pair copper ports (SFPs); 5/6 RoHS

84020-111

WANic 3860 Serial Adapter Cable Kit

Ask your GE Fanuc Intelligent Platforms sales person for additional models.

About GE Fanuc Intelligent Platforms

GE Fanuc Intelligent Platforms is a leading global provider of embedded computing solutions for a wide range of industries and applications. Our comprehensive product offering includes many types of I/O, single board computers, high performance signal processors, fully integrated, rugged systems including flat panel displays, plus high speed networking and communications products. The company is headquartered in the U.S. and has design, manufacturing and support offices throughout the world. Whether you're looking for one of our standard products or a fully custom solution, GE Fanuc Intelligent Platforms has the breadth, experience and 24/7 support to deliver what you need. For more information, visit www.gefanuc.com.

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Additional Resources

For more information, please visit the GE Fanuc Intelligent Platforms web site at:

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