



iSPAN® 55MC8 PCI-X Quad SFP GE Packet Processor

High Performance Multicore Packet Processing Engine

FEATURES

PCI-X card for Rack Mount Server form-factor

Cavium Networks high performance OCTEON Plus 58xx family of SCP Packet Processors with 4 to 16 cores @ up to 750MHz

4x SFP Gigabit Ethernet interfaces on front panel

High bandwidth PCI-X host connectivity

High Speed SPI 4.2 connector for inter-card connectivity and expansion

Rich Ecosystem of software tools and applications available through Interphase Partners including:

- TCP/IP off load
- Wire-speed IPSEC acceleration
- SRTP Off-load
- IPv4/IPv6 L2/L3 wire-speed forwarding
- Policy Management and Routing
- On board RTP/RTCP processing
- GTP-u protocol support
- Compression / De-compression off-load

APPLICATIONS

Media Servers

ASN Gateways

VoIP

Edge/Access Routers

Deep Packet Content Inspection

Line Rate Crypto and Security Functions

Stateful Protocol Identification

Policy Enforcement

Packet Processing Engine

The Interphase iSPAN® 55MC8 PCI-X™ Quad SFP Gigabit Ethernet Packet Processor extends the broad Interphase portfolio of communication and network processor solutions for use with PCI-X enabled rack-mount server platform solutions. The iSPAN 55MC8 addresses the growing need for wire-speed packet inspection and processing requirements for the delivery of broadband services in the Wireless, Voice Over IP, and IMS network infrastructure.

High Performance – Multicore

The iSPAN 55MC8 is based on the Cavium OCTEON® Plus high-performance multicore processor architecture which provides:

- A pin compatible chip that can support 4 to 16 cnMIPS® Plus MIPS 32/64 architecture compatible cores
- Per core hardware acceleration for packet processing and security including addition of support for Kasumi for wireless security
- Integrated co-processors for packet I/O, compression/decompression, IDS and anti-virus

Flexibility

With its, powerful onboard OCTEON Plus packet processor, dual management interface, and upgradeable memory, the iSPAN 55MC8 is extremely versatile and provides the functionality necessary for migrating to next-generation infrastructures and converged networks.

Cavium Simple Executive and Linux®-based ready-to-use application / protocol suites are available to transform the iSPAN 55MC8 into a specialized communications interface which can be easily integrated into solution platforms.





55MC8 Solution Components

Hardware

The iSPAN 55MC8 PCI-X packet processor is designed around the Cavium OCTEON Plus 58xx processor family. It connects to the host processor through a 64bit 133MHz PCI-X interface.

Processor/Memory

- Processor models CN58xx @ up to 750MHz with 4, 8, 12 or 16 cores
 - SCP: Secure Communications Processor supports encryption, networking, TCP acceleration and QOS
 - NSP: Network Services Processor supports encryption, reg-ex acceleration, TCP acceleration, compression/decompression, networking and QOS
 - EXP: Extreme Processor supports networking, reg-ex acceleration, compression/decompression, TCP acceleration and QOS
- Up to 4 GB of DDR2 SDRAM Memory (default 2 GB)
- 8 MB downloadable 8-bit Boot Flash Memory
- 1 GB of downloadable NAND Flash memory for firmware storage
- 16MB of Persistent / "Trace" PSRAM. Can be used to store event logs for fault isolation
- Optional RLD RAM up to 128 MB in two banks with NSP processor
- PCI-X host connectivity

Front Panel Interfaces

Four Gigabit Ethernet SFP cages on the front panel

Additional Connectivity

The 55MC8 design includes an SPI4.2 inter-card connector for expansion ports and inter-card communication. This allows two 55MC8s to be interconnected using a separately orderable SPI 4 Interconnect PCB (Part # PBOSPIB).

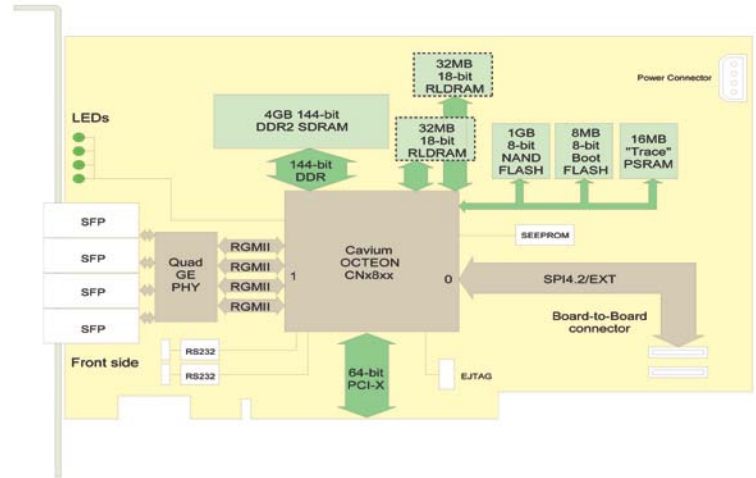
Applications

Interphase supports Wind River PNE Linux® distribution with Cavium OCTEON extensions and the Cavium Networks "Simple Executive".

Packet Processing Modules available from 3rd parties include: TCP/IP off load, IPv4 & IPv6 stacks, Unicast and multi-cast routing acceleration, IPSEC acceleration, Stateful Firewall, SRTP Offload, Transport Protocols, and Mobile-IP.

Power and Cooling

The iSPAN 55MC8 is a high power PCI-X card. The power and cooling requirements, as described in the Installation Manual, must be met for correct and safe operation of the 55MC8.



Technical Specifications – Model 55MC8-000

Architecture

Processor	Cavium OCTEON Plus CN5860 SCP @ 600MHz with 16 cores
RAM Memory	2 GB of DDR2 SDRAM System memory (4 GB optional); no RLD RAM
Persistent Memory	16MB of Persistent / "Trace" PSRAM
EEPROM Memory	8 MB NOR Flash, 1 GB NAND Flash
Connectivity	PCI-X, 4x Gigabit Ethernet, SPI4.2

Mechanical

Form Factor	Standard Height
Length	255 mm (10 in)
Width	98 mm (3.86 in)

Environment

Power Consumption	67W max for 16 core implementation at 750MHz
Operating Temperature	0 to 50°C (32 to 134.3 °F)
Storage Range	-40 to 80 °C (-40 to 176 °F)
Relative Humidity	5% to 95% non-condensing
Altitude	0 to 2000 M (0 to 6500 ft)

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About Interphase Corporation

Interphase Corporation (NASDAQ: INPH) delivers solutions for LTE and WiMAX, interworking gateways, packet processing, network connectivity, and security for key applications for the Communications, Aerospace-Defense, and Enterprise markets. Founded in 1974, Interphase provides expert Engineering Design and Contract Manufacturing services, in addition to its COTS portfolio, and plays a leadership role in next generation AdvancedTCA® (ATCA), AdvancedMC™ (AMC), PCI-X, and PCIe standards and solutions.

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