*i*SPAN® 56MC2 Octeon™ Plus PCI-Express 10 GE Packet Processor Card

High Performance Packet Processing for Broadband Networks

FEATURES

PCI-Express x4 or x8
Standard Height, Full Length

Cavium Networks high performance Octeon Plus 56xx family of Packet Processors

Front panel I/O options:
- 2x 10 GE SFP+
- 1x 10 GE SFP+

Application Support includes:
- TCP/IP off load
- Wire-speed IPSEC acceleration
- SRTP Off-load
- IPv4/IPv6 L2/L3 wire-speed forwarding

Other application toolkits available include:
- Policy Management and Routing
- On board RTP/RTCP processing
- GTP-u protocol support
- Compression / De-compression off-load

APPLICATIONS

Media Servers	Wireless Gateways (Enterprise & Carrier)
VoIP	Deep packet Content Inspection
Edge/Access Routers	Line rate crypto and security functions
Policy Enforcement	Stateful Protocol Identification

Wire-Speed Packet Processing

The Interphase *i*SPAN® 56MC2 PCI-Express Packet Processor Card extends the broad portfolio of communication processing and network processing solutions to address the growing need for 10 GE wire-speed packet processing solutions for the delivery of broadband services in the Enterprise, Wireless (3G, WiMax, WLAN, Femtocell), Voice Over IP and IMS network infrastructure.

High Performance – Multi-Core Processor

The 56MC2 is based on the Cavium Octeon Plus high-performance multi-core processor architecture which provides:

- A pin compatible chip that can support 8 to 12 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

Flexible Architecture

With its one or two 10 GE interchangeable SFP+ modules, powerful onboard Octeon Plus packet processor, dual management interface and upgradeable memory, the *i*SPAN 56MC2 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 56MC2 into a specialized communications interface which can be easily integrated into solution platforms.

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External Interfaces

- Single or Dual 10 Gigabit Ethernet
  - SFP+ receptacles on the front panel for maximum configurability
  (SFP+ Modules must be purchased separately)
  - One RS-232 console port

PCI-Express Connectivity

- 2x 10 GE: PCI-Express x4
- 1x 10 GE: PCI-express x8

Processor

The *i*SPAN 56MC2 is designed around the Cavium Octeon Plus 56xx processor family:

- Support for NSP, or CP device family options
  - NSP – Network Services Processor supports encryption, reg-ex acceleration, TCP acceleration, compression/decompression, networking and QOS
  - CP – Secure Communications Processor supports encryption, networking, TCP acceleration and QOS

Memory

- Up to 4 GB of DDR2 SDRAM Memory (1 GB Standard)
- 8 MB downloadable 8-bit Boot Flash Memory
- Up to 2 GB of downloadable NAND Flash memory for firmware storage organized in dual banks (1 GB Standard)
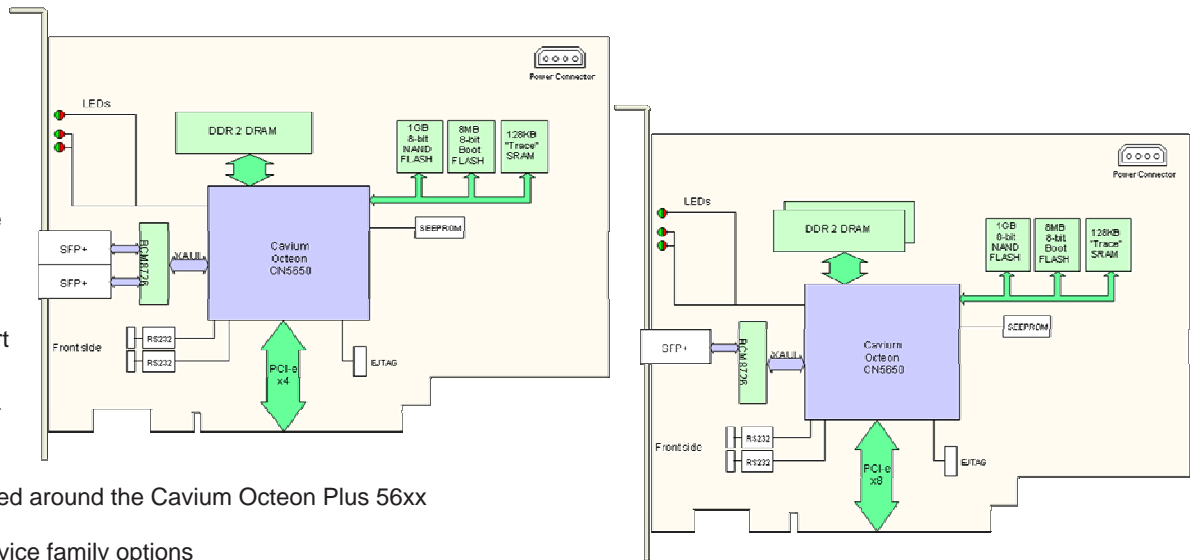- Optional 128MB of Persistent Memory

Operating Systems

- Cavium Simple Executive
- Wind River PNE Linux® distribution with Cavium Octeon extensions

Applications

Interphase provides ready-to-use application / protocol suites that transform the 56MC2 into a specialized communications interface which can be integrated into solution platforms.

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.

Technical Specifications

Architecture	
Processor	Octeon Plus 56xx processors running at up to 800MHz
	8, 10, or 12 Core
Memory	
RAM	Up to 4GB of DDR2 SDRAM System memory
Flash	8 MB NOR Flash, Up to 2 GB NAND Flash
Persistent Memory	Optional 16 MB
Mechanical	
Form Factor	PCI-Express, Standard Height, Full Length
Length	255 mm (10 in)
Width	98 mm (3.86 in)
Operating Environment	
Power Consumption	< 70W typical depending on number of cores (8, 10, or 12), processor speed, and memory
Temperature	0 to 55˚C (32 to 144.5 ˚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)

About Interphase Corporation

Interphase Corporation (NASDAQ: INPH) is a leading provider of robust building blocks, highly integrated subsystems and innovative gateway appliances for the converged communications network. Incorporated in 1977, Interphase has a long history of providing solutions for telecom and enterprise applications, and addressing the need for high speed connectivity. Interphase has established a key leadership role in delivering next generation PCI-X, PCI-Express, AdvancedTCA® and AdvancedMC™ and custom solutions to the marketplace.

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