

NCP-5260

3U Dual Xeon System with Dual Packetarium NPU slots



Features

- Packetarium™ Card module design.
- Hybrid design for Intel® IA architecture as control plane, and Packetarium Card as data plane
- Hybrid design to lower risk and shorter development schedule for SW
- 1 to 2 Packetarium™ Card slots support
- Dual Intel® Xeon 5500 series support
- Sixteen 10 GbE external interfaces
- 10 GbE Switch w/ L2 switch management
- IPMI 2.0 HW Management
- Linux support
- FIPS Level 2 compliant



Introduction

The NCP-5260 represents a new generation of hybrid system designs with Intel® architecture processing on the control plane, and Packetarium™ network processing cards for the data plane. It integrates up to two powerful, multi-Core Packetarium™ network processing cards for wire speed packet processing and accommodates up to 16 x 10 GbE external interfaces. The main carrier board provides the high-speed switched interconnects between Packetarium cards. The Intel® Xeon-based server board provides storage, system-management and remote management network connections.

Each network processing card is linked by dual XAUI ports to a Broadcom 10 GbE switch on the carrier board. The 10 GbE switch provides sixteen front panel 10 GbE SFP+ ports. The carrier board incorporates a MPC8545 processor for overall switch management.

A SATA controller on the server board connects to two 2.5" SATA HDD slots.

The scalability of the NCP-5260 positions it ideally for OEMs designing high bandwidth systems in enterprise networking. It is particularly applicable for applications in service provider networks for enhanced security, in content-aware routing and subscriber-based services.

The initial Packetarium™ network processing cards supported by the NCP-5260 are based on the RMI XLR 732 8-Core processor. Each processor supports up to 4 GB of memory on two DIMM sockets. Two PCIe x4 provide control plane connectivity with the carrier while two XAUI ports connect to the data plane. The card is designed with IPMI 2.0 H/W Management, remotely managed via a local Module Management Controller (MMC) connected to the carrier's IPMB-L (I²C) bus. A console port and a 1000 Mbps port provide further management interface options. Other network processing cards in the Packetarium family are compatible.

Hybrid System Specifications

Intel® x86 Server System		
Processor System	CPU Processor	2 x Intel Xeon Nehalem Quad-Core Processors (under 65W)
System Memory	Memory Socket	12 x 240 pin DDR3 DIMM slots
	Memory Type and Capacity	DDR3 800/1066/1333Mhz UDIMM/RDIMM up to 96 GB
I/O Bus	Interface	4 x PCIe x8 to I/O board
Ethernet Switch System		
Processor System	Local Management Processor	Freescale MPC8545 PowerQUICC III
	Max. Speed	1 GHz
System Memory	Memory Socket	200 pin SODIMM slot
	Memory Type and Capacity	Unbuffered 1 GB DDR2 667 MHz DIMM
Boot Flash	Boot Flash/Type	S29GL01GP11TFIR10 TSOP56
	Max Flash Size	1 Gbit
Networking Interface	Ethernet Switch	Broadcom BCM56820 for 10 GbE
	Ethernet Port	SFP+ (10 GbE/1 GbE) port x 16
Expansion	Packetarium Card Slot	2 Slots
I/O Interface	x86 Debug Port	RJ-45 RS-232 x 1
	x86 USB Port	TYPE-A USB 2.0 x 2
	x86 NIC Port	RJ-45 (10/100/1000 Mbps) x 1
Management Interface	Management Ethernet NIC	Intel 82574
	Management Port	RJ-45 (10/100/1000 Mbps) x 1
Others		
Storage	Storage Interface	SAS/SATA HDD Tray x 2
Power	Type/Watts	1 + 1 redundant hot-swappable/800 W
	Input	AC 110 V _{AC} to 240 V _{AC} at 50-60 Hz

Hybrid System Specifications (Cont.)

Cooling	FAN	2 x hot-swappable fans
SW Support	Operating system	Linux Kernel 2.6
	HW Management	IPMI 2.0
	Switch Management	Broadcom FastPath
Physical Characteristics	Dimensions (W x H x D)	480 x 133.35 x 661.6 mm (18.90" x 5.25" x 26.05")
	Weight	about 30 kg
Environment	Operating Environment	Temperature: 0 to 40° C Humidity: 20% to 90% RH
	Storage Temperatures	Temperature: -20 to 70° C Humidity: 5% to 95% RH
Compliance	EMC/Safety	CE/FCC/UL/CB (planned)
	FIPS	Level 2 compliant

Packetarium™ Card

NCPB-2410 RMI XLR

Packetarium Network Processing Card		
Processor System	Processor	Netlogic XLR732
	Max. Speed	1.2 GHz
	Processor Cores	8 Cores
System Memory	Memory Socket	Two 240-pin DDR2 DIMM slots
	Memory type and capacity	ECC registered DDR2 800 MHz DIMMs, up to 4 GB
Boot Flash	Redundant Boot Flash/Type	S29GL01GP11TFIR10 TSOP56
	Max Flash Size	1 Gbit
Interface	Physical Connection	PCIe x 1 + PCIe x 16 Gold Fingers
	Logical Connection	Two PCIe x4 Two XAUI One 1000 Mbps
Cooling	CPU Heatsink	Passive Aluminum Cooler
SW Support	Bootloader	Netlogic XLR SDK
	Operating System	Linux Kernel 2.6
Physical Characteristics	Dimensions (W x H)	245.6 x 148.6 mm (9.67" x 5.85")
	Weight	0.5 kg

Ordering Information

Part Number	Description
NCP-5260-FRA0E	NCP-5260 Chassis + x86 Server board + Main Ethernet Switch Board + 2 Packetarium Cards
NCPB-2410	Packetarium Card RMI XLR 732