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Promentum MPCBL0050

Dual Core Xeon processor module

FEATURE SUMMARY

- High performance AdvancedTCA® blade based on the Dual-Core Intel Xeon LV5138 processor that provides 4 processor cores on a single module
- RTM support SAS Hard drive, fibre channel and 4xGbE connector providing flexibility for storage options.
- Supports Solaris 10
- Superior subsystem scalability and density

The RadiSys® MPCBL0050 single board computer (SBC) features the Dual-Core Intel® Xeon® processor LV 5138 and it combines Intel® 64 Technology+ (Intel® 64) with dual-core, dual processing capabilities for a total of four processor cores on a single platform, providing performance boost, superior subsystem scalability and density. This fifth-generation design achieves significant performance improvements for compute-intensive and database-access applications including IP Multimedia Subsystems (IMS), wireless control plane, and IPTV.

The MPCBL0050 SBC is optimized to support first-generation AdvancedTCA chassis that limit front-board power to less than 200W. It also interoperates with AdvancedTCA products from RadiSys and with third-party building blocks meeting the PICMG* 3.0 specification.

PRODUCT BENEFITS

- High performance Intel® based AdvancedTCA® blade based on the Dual-Core Intel Xeon LV5218 process that provides 4 processor cores on a single moduleSupport Mid size AMC for I/O
- RTM support SAS Hard drive, fibre channel and 4xGbE connectors providing flexibility for storage options.
- Supports Solaris 10 – in certification testing at SUN
- Superior subsystem scalability and density (subscribers/transactions per board), supporting the maximum number of network elements in an AdvancedTCA* chassis
- Support both the RadiSys MPRTM0040 and MPRTM0050 which provides a choice of cost effective storage & limited connectivity, vs a full featured RTM with fibre channel and 4xGbE connectors

Dual-Core Intel® Xeon® Processor LV 5138

- Enables performance improvement greater than five times that of the first-generation MPCBL0001 single board computer¹
- Intel 64 supports 64-bit instructions and provides flexibility for 64-bit and 32-bit applications and operating systems
- Power-optimized 1066 MT/s front-side bus (FSB) and 4 MB shared L2 cache per physical processor allow dynamic allocation between cores, based on application load

AdvancedMC

Compliant with the revised AMC.0 specification (AMC.0 R2.0), the MPCBL0050 SBC provides one AdvancedMC* site to support the next-generation mezzanine card standard optimized for AdvancedTCA. The increased board area and power envelope support high-density I/O mezzanines while PCI Express* and Gigabit Ethernet interfaces provide maximum throughput.

AdvancedMC can help reduce time-to-market by providing an easy-to-use expansion slot. These cards provide full hot swap support and allow management via an onboard IPMB.

Features	Benefits
Intel® 5000P chipset with 1066 MT/s FSB	<ul style="list-style-type: none">• Optimized support for intensive computing demands of high-performance applications• Rapid data transfer to and from applications• Reduced I/O bottlenecks and improved network performance by freeing CPU for other processing tasks
AdvancedMC* mezzanine site	<ul style="list-style-type: none">• Module hot-add and hot-swap, easy expandability, and higher throughput bandwidth than PMCs• Compliant with revised AMC.0 specification (AMC.0 R2.0)
Optional Intel NetStructure® Rear Transition Module (RTM)	<ul style="list-style-type: none">• Support for fibre channel, one Serial Attached SCSI (SAS)-based hard disk drive, expansion external SAS ports, four Ethernet ports• Convenient rear-access cable configuration
Power and thermal <200W	<ul style="list-style-type: none">• Meets power limits of first-generation AdvancedTCA chassis
Intelligent Platform Management Controller (IPMC)	<ul style="list-style-type: none">• Carrier-grade system reliability and manageability• Controls board power and monitors onboard sensors using dual Intelligent Platform Management Bus (IPMB) connections
Redundant BIOS images, IPMC firmware images, and dual 256 MB flash drives	<ul style="list-style-type: none">• Redundancy on key items enables high reliability for field deployments
Dual Star Gigabit Ethernet base and four fabric backplane ports	<ul style="list-style-type: none">• Redundant backplane features support high I/O requirements and access to high-speed storage systems

Promentum MPCBL0050 Specifications

FEATURE	FUNCTION	DESCRIPTION
Physical	Dimensions	8U, 14 in (35.56 cm) x 1.2 in. (3.048 cm) x 11.02 in (28 cm)
	Compliance	AdvancedTCA - PICMG 3.0 r2.0 with ECN 002 AdvancedMC- AMC.0 R2.0 AMC.1, AMC.2 IPMI – IPMI v2.0
Processor	Type	Dual-Core Intel® Xeon® processor LV 5138Δ at 2.13 GHz
	Front Side Bus	1066 MT/s
Memory	Cache Memory	4 MB L2 cache per processor
	Maximum Memory Capacity	16 GB using four 4 GB Fully Buffered DIMMs
	DIMM Slots	Four
Chipset	Memory Controller Hub	Intel® 5000P chipset
	I/O Controller Hub	Intel® 6321ESB I/O Controller Hub
Operating System	Linux*	Validated with MontaVista Linux Carrier Grade Edition (CGE)* 4.0; Validated with RHEL 4u4 and RHEL 5 Validation in progress with Solaris 10
Connectors, Front Panel	Ext FC Links	One USB 2.0 port
		One serial port (RJ45)
		One AdvancedMC* single-width, mid-size (x4/x8 PCI Express, x1 SAS, dual Gb Ethernet)
		Two 10/100/1000 Ethernet ports LEDs for hot swap, out-of-service, health, hard drive activity, and Ethernet ports
Connectors, Rear Transition Module Ports		x3 SAS
		x4 PCI Express
		Four 10/100/1000 Ethernet ports
		One serial port (RJ45), one USB port

Connectors, Backplane		Dual Gigabit Ethernet (AdvancedTCA* base interface) Quad Gigabit Ethernet (AdvancedTCA fabric interface; PICMG 3.0 R2.0, PICMG 3.1, option 2) Dual IPMB connections (Zone 1) Support for RTM (Zone 3)
Power	Supported Voltage (normal)	-38VDC to -72VDC
	Maximum Power Draw	< 198W with 20W AMC, MPRTM0050 with Fiber Channel SFPs, 146GB SFF SAS HDD, Four 4 GByte FB-DIMMs under load
Environment	Ambient Operating Temperature (normal)	5° C to 40° C (board intake temperature)
	Operating (short term)	-5° C to 55° C
	Storage	-40° C to 70° C
	Airflow Operating	30 CFM minimum
	Humidity Operating	15% to 90% non-condensing at 55° C
	Storage	5% to 95% non-condensing at 40° C
	Vibration Operating	5 to 100 Hz: 1G @ 0.25 octave/minute
	Shock Non-Operating	50 G, 170 inches/second trapezoidal
Regulatory Compliance	NEBS	Demonstrated NEBS Level-3 compliance GR-1089, GR-63
	Safety	UL/cUL 60950-1 Safety for Information
		EN/IEC 60950-1 Safety for Information Technology Equipment (CB Report and Certificate)
	Emissions	CISPR22:1997 and 2003/EN55022:1998 and EN55022 A1:2000 and A2:2003 Class A
		EN 300 386 V1.3.2:2003
		FCC Rules CFR 47:2003 Part 15B Class A

Hazardous Substances

Content meets requirements of EU RoHS directive relying on exemptions for lead in solders for network infrastructure equipment for switching, signaling, transmission and network management for telecommunications (telecom). Also meets requirements for lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit flip chip packages (flip chip). Products using telecom exemption ONLY comply with the RoHS directive if used in exempted applications. Products using flip chip exemption may be labeled as Pb-free second-level interconnect.

Ordering Information

Order information to come.



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