PERFORMANCE TECHNOLOGIES

MB6108

Media and Voice Processor

Highlights

- >> Robust Feature Set for VoIP Media Gateway and Server Applications
- >> Field-Hardened Voice Processing Technology
- >> Up to 8 T1/E1 Line Interfaces
- >> Support for 384 ports of G.711
- >> Powerful and Simple to use API
- >> Onboard Application Processor and NexusWare® CGL OS and Development Environment
- >> Scalable Port Densities to meet Application Needs

The Media Blade 6108 combines Performance Technologies' world-class media and voice processing technology and network access components into an integrated, open systems solution for media gateway, media servers and enhanced service applications. Delivered in a 6U CompactPCI® form factor, the Media Blade 6108 adheres to the PICMG® 2.16 standard for Ethernet-based packet switching backplane and provides IPMI support for chassis management, allowing it to integrate seamlessly into standards-based platforms.

Fully Functional Software-Based Feature Set

The Media Blade 6108 provides a robust feature set of functionality for media gateway applications. Performance Technologies' NexusWare® software delivers field-hardened functionality for functions such as voice coding, echo cancellation, conferencing and fax relay. Performance Technologies' feature-rich NexusWare Carrier Grade Linux (CGL) and development environment allows OEM customers to leverage signaling and protocol stacks such as MTP2, SIP, HDLC, and ISDN. In addition, NexusWare provides a powerful API that is common across all Performance Technologies products, which allows OEMs to bring media solutions to market faster and more economically.

Scalable for Carrier Grade Gateway Applications

The Media Blade 6108 offers a wide range of scalability, up to 384 ports of low-bit rate VoIP, and provides integral support for wireless interworking functions including T.38 fax. Designed to be an enabling solution for OEM gateways, the Media Blade 6108 can be used in a variety of carrier-grade applications including media gateways, trunk gateways, Class 5 replacement switches, digital loop carriers, access gateways, radio network controllers, mobile switching centers and base station controllers.

Delivering a Wide Range of Solutions for Communications OEMs

Performance Technologies is a world leader in delivering platforms, components and software for the world's evolving communications infrastructure. In addition to the Media Blade 6108, Performance Technologies provides other platform and component solutions that can enable a wide range of VoIP applications including softswitches, application servers, media servers and signaling gateways.

PERFORMANCE TECHNOLOGIES

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NexusWare Software Support

The NexusWare software suite offers a CGL Registered and POSIX-compliant Linux® operating system and development environment. In addition, the suite includes an extensive list of installable protocols that can be leveraged to build robust solutions, such as media gateways, lawful intercept platforms and SS7 monitoring equipment for line usage/billing applications.

The NexusWare family of products includes:

NexusWare Core: At the very center of the NexusWare suite of software is NexusWare Core, which provides a comprehensive, highly integrated, Linux development, integration, and management environment. It is intended for system engineers who use Performance Technologies' embedded products to build packet-based systems, including next-generation wireless and IP-based systems.

NexusWare C7: Comprehensive SS7 MTP-2 installable software package for NexusWare Core. NexusWare C7 provides a foundation for building SS7 applications, including next-generation wireless and IP telephony systems, to equipment manufacturers and application developers who use Performance Technologies' embedded products.

NexusWare WAN: Extensive offering of protocol packages including, but not limited to, HDLC, X.25, Frame Relay, and Radar Receiver. When combined with Performance Technologies' embedded products, these will enhance the ability of developers to create flexible and efficient radar gateways, converged serial gateways, and front-end I/O systems.

The WAN software products are offered as installable software packages for NexusWare Core or as turnkey packages for those developers interested in the protocol package by itself. Whether the installable or the turnkey solution is chosen, developers will be provided with a well-documented and powerful API to assist in the development process.

MB6108
Technical Specifications

PERFORMANCE TECHNOLOGIES

Media Specifications

Port Capacity

- Up to 240 VoIP connections with 128ms echo canceller, tone relay and tone gen/det functions;
- Up to 120 TDM-to-TDM cross connections with 128ms echo canceller and tone gen/det functions;
- Up to 504 IP-to-IP cross connections
- Up to 96 T.38 Fax Relay connections
- Up to 336 conference bridges

Voice Coding

- Wireline: G.711 w.Appendix I & II, G.726, G.723.1A, G.729A/B
- Wireless: AMR, EVRC, QCELP
- All codecs can be flexibly mixed

Echo Cancellation

- G.168-2002-compliant, up to 128 ms configurable tail lengths

In-Band Signaling

- DTMF, MF detection and generation, packet & TDM side
- Detection of fax and data modem tones
- Generation and detection of call progress tones
- Caller ID Type 1 and 2

Media Protocols

- RTP/RTCP per RFC 3550/3551
- DTMF over RTP per RFC 2833

Fax

- T.38 Internet Fax Protocol, Fax Class 2.0, G.711 pass-through

Media Server Capabilities

- Conferencing up to 642 participants
- Announcements, recording: local and host storage options
- Full support of Lawful Interception/CALEA requirements

Quality of Assurance

- VLAN, IEE 802.1P/Q, and MPLS Management Interfaces
- SNMP version 3, Command Line Interface

Base Card Specifications

Interface

- 8 T1 Ports @ 1.544 Mbps
- 8 E1 Ports @ 2.048 Mbps
- 8 J1 Ports @ 1.544 Mbps
- Three 10/100/1000 Ethernet ports

Framing Standards

- AMI/B8ZS
- D-4, ESF
- DS-1, PRI

Processor

- 800 MHz PowerPC processor
- 512 MB dedicated DDR SDRAM
- 32 KB/32 KB instruction/data L1 cache
- 256 KB L2 cache and/or high speed packet/code store
- 128 MB flash PROM

Framing Standards

- AMI/B8ZS
- D-4, ESF
- DS-1, PRI

Specification Compliance

- ECTF H.110 hardware compatibility specification: CT Bus revision 1.0
- I2C Bus specification, version 2.1
- IEEE P1386 2.4a March 21, 2001 common mezzanine card family
- IEEE P1386.1 Draft 2.4 Jan 12, 2001 PCI mezzanine cards, PMC
- IEEE Std. 802.3 - 2000 edition CSMA/CD access method and physical layer specification
- IPMI intelligent platform management specification, version 1.5
- JEDEC JESD79C Double Data Rate (DDR) SDRAM specification
- PCI Local Bus specification revision 2.2
- PICMG 2.0 R 3.0 CompactPCI® core specification

MB6108

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Ordering Information

>> **PT-MB6108-12285**
8-port T1/E1/J1 Media Blade

>> **PT-RTM308-11966**
8-port RTM
(Eight RJ48C Connectors)

Cable Options

>> **PT-ACC324-11977**
Console Cable

Software Options

>> **PT-NXSWARE-11359**
NexusWare Linux Software

>> **PT-NWC7KIT-11943**
MTP2 Development Kit

>> **PT-HDLCKIT-11490**
HDLC Development Kit

>> **PT-FRAMKIT-11661**
Frame Relay Development Kit

>> **PT-X25KIT-11612**
X.25 Development Kit

>> This product is available with a variety of software options. For more information, contact sales@pt.com.

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Specification Compliance (cont.)

- PICMG 2.1 R2.0 hot-swap specification
- PICMG 2.9 R1.0 CompactPCI system management specification
- PICMG 2.15 R1.0: ECN 2.15 PCI telecom mezzanine/carrier card specification
- PICMG 2.16 R1.0 CompactPCI packet switched backplane
- VITA 32-199x processor PMC standard draft 0.41-compatible

Physical Interface

- T1/E1/J1: 8 T1/E1/J1 connections via eight RJ48C connectors on RTM
- Ethernet: Two RJ-45 connectors on RTM, one RJ-45 on front panel
- Monitor: One nine-pin subminiature on front panel

Power

- 34 W maximum
- 3.3 V supply, 15 W maximum
- 5 V supply, 18 W maximum
- +12 V supply, 60 mW maximum
- -12 V supply, 40 mW maximum

Dimensions

- 6U Eurocard form factor

Temperature

- Operating: 0 to 50°C (32 to 122°F)
- Non-operating: -20 to 80°C (-4 to 176°F)

Agency Certifications (pending)

- FCC Class A
- CE
- UL 60950 / EN 60950
- ETSI EN 300 386
- Designed to meet the requirements of NEBS Level 3