PERFORMANCE TECHNOLOGIES

PCI384

Quad T1/E1/J1 Telecom Adapter

Highlights

>> Quad T1/E1/J1 Communications Interface for PCI™ Systems

>> Software Programmable Interfaces

>> Motorola MPC8260 PowerQUICC® II Processor

>> H.100 Bus Support
- Capable of switching 96/128 time slots bi-directionally to any of the 4096 H.100 CT bus channels

>> NexusWare® CGL OS and Development Environment

>> 128 MB Dedicated Processor DRAM Memory
- Handles extensive onboard traffic and protocol requirements

>> Solaris™ Ready
- Proven interoperability with the Solaris Operating System on UltraSPARC and x64 server platforms

As next-generation IP networks become a reality, the need for high-density and high-performance access for new telecom and IP telephony systems becomes critical. The PCI384 addresses these needs by providing telecom OEMs and integrators with a high-density, highly advanced connectivity subsystem.

The PCI384 is ideally suited for both PSTN and IP telephony systems that handle large volumes of voice circuits for protocol processing or for transfer to the H.100 bus and PCI™ Buses. Application examples include SS7 network elements, wireless infrastructure equipment, media and signaling gateways, and telecom switching and routing equipment.

The PCI384 is an adaptable platform designed with an onboard Freescale™ MPC8260 PowerQUICC® II RISC communications processor. Combined with an embedded Linux® operating system, the PCI384 operates as a fully programmable communications subsystem capable of intra-chassis communication using the H.100 bus.

Hardware Features

The architecture of the PCI384 capitalizes on the MPC8260 PowerQUICC II processor. The advanced feature set of the MPC8260 allows for superior handling of four fully channelized T1/E1/J1 spans, increasing the number of possible active protocol links.

The PCI384 also supports the ECTF H.100 specification. By incorporating the H.100 interface device, the PCI384 can send or receive any of its possible time slots to the front panel. The PCI384 can switch all 128 of its DS-0 channels to any of the 4096 H.100 CT bus channels.

Other features include 128 MB of DRAM, which allows the PCI384 to execute protocols and WAN applications directly onboard. It also provides a monitor port and a console port for upgrades and management.

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, SS7 monitoring equipment for line usage and billing applications.

The NexusWare family of products includes:

NexusWare Core: At the very center of our NexusWare suite of software is NexusWare Core, which provides a comprehensive, highly integrated, Linux OS, 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.

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Ordering Information

>> **PT-PCI384-11935**
Quad T1/E1/J1 Communications Adapter

>> **PT-PCI384N-11928**
Quad T1/E1/J1 Communications Adapter with NexusWare Core Linux Development Environment and RTU

>> **PT-PCI384H-11929**
Quad T1/E1/J1 Communications Adapter with HDLC and RTU

>> **PT-PCI384X-11930**
Quad T1/E1/J1 Communications Adapter with X.25 and RTU

>> **PT-PCI384F-11931**
Quad T1/E1/J1 Communications Adapter with Frame Relay and RTU

Cable Options

>> **PT-ACC384-11938**
E1/75 Ω cable (RJ48C to BNC) Ungrounded Shield

>> **PT-ACC384-11939**
E1/75 Ω cable (RJ48C to BNC) Grounded Shield

>> **PT-ACC324-11977**
RS232 Debug Cable

>> **PT-ACC384-11940**
Two LVDS Clock Input Cables

>> **PT-ACC384-11937**
Two-position H.100 Cable

Software Options

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

RoHS • WEEE COMPLIANT

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NexusWare WAN: Extensive offering of protocol packages that includes, but is not limited to, HDLC, X.25, Frame Relay, and Radar Receiver. Combined with Performance Technologies' embedded products, these enhance the creation of flexible and efficient radar gateways, converged serial gateways, and front-end I/O systems.

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

Channel7™ SS7 MTP-2: Provides users of our PCI and PCI Express based T1/E1/J1 communication adapters a baseline SS7 MTP-2 solution for the creation of SS7 applications and systems. Operating system support includes: Solaris and Linux.

Technical Specifications

Interface
- Four RJ48C interfaces that are independently software programmable on receive and transmit termination. Operating modes supported are:
  - T1/100 Ω
  - E1/75 Ω
  - E1/120 Ω
  - J1/110 Ω
- One Micro DB 9 interface supporting:
  - RS232 Debug (optional cable)
  - Two LVDS Clock Inputs (optional cable)

Processor
- Freescale MPC8260 PowerQUICC II (MPC603e core)
- 64-bit data and 32-bit address bus

Framing Standards
- D-4, ESF, DS-1, PRI; AMI/B8ZS line encoding

Memory
- 128 MB dedicated DRAM
- 16 MB flash PROM
- 256 KB COM memory (high-speed local memory)

Specification Compliance
- PCI revision 2.2
- ECTF H.100-compliant
- ANSI T1. 102-1993
- IEEE 802.3

Physical Interface
- T1/E1/J1: Four RJ-48C connectors
- Monitors: One Micro DB 9

Protocol Support
- SS7/MTP-2
- HDLC
- Frame Relay
- LAPD
- X.25
- Optional NexusWare Core Linux OS and development environment

Agency Certifications
- FCC Class A
- CE
- EN 60950 (pending)
- NEBS Level 3-friendly

Compliance
- All currently applicable ANSI/ISO standards
- RoHS

MTBF
- > 200,000 power-on hours (POH)

Power
- 11 W maximum (2.2 A @ +5.0 V)
- 9.5 W idle (1.9 A @ +5.0 V)

Dimensions
- PCI short form, double card

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