



### Highlights

- >> Multipurpose Intelligent Sub-System Communications for 6U CompactPCI® Systems
  
- >> Eight Fully Programmable High Speed Channels
  
- >> Supports Standard PCI Bus and PICMG® 2.16
  
- >> 128MB of Shared DRAM Memory
  
- >> Motorola MPC8255 PowerQUICC II™ processor
  
- >> Fully Programmable to Support V.35, RS-530, RS-449, RS-422 and RS-232
  
- >> NexusWare® WAN Protocol Software:
  - Radar Receiver
  - Tadi B
  - HDLC
  - X.25
  - Frame Relay
  
- >> Broad OS System Support: Solaris, Windows® and Linux®
  
- >> Front or Rear Panel I/O Options
  
- >> Hot-Swap Support

The CPC358 is an eight-port serial communications processor designed to operate in either CompactPCI® systems as a peripheral or in a PICMG® 2.16 chassis as a stand-alone communications system. It provides OEMs, integrators and end users with a high performance platform for use in server farms or datacom/telecom applications.

Featuring the Motorola MPC8255 PowerQUICC II™ processor running at 233MHz, the CPC358 can independently process protocols such as X.25, Frame Relay, LAPD and Radar Receiver in an Internet/WAN environment. In telecom applications, the CPC358 will also support MTP-2 on all eight links.

The CPC358 supports either front or rear panel I/O and hot-swap (PICMG 2.1) and SMB/IPMI (PICMG 2.9) standards.

### Hardware Features

The CPC358 is designed as a fully programmable and independent communications sub-system capable of sustaining high data rates for a variety of protocols used in synchronous communications.

The CPC358 uses the Motorola MPC8255 PowerQUICC II communications microprocessor running at 233MHz. One of the processors is configured as the Master and the other is configured as the Slave. The default mode of operation uses the Slave processor with its CPU core disabled, leaving the CPM active for serial communication.

Specifically designed for use in a PICMG 2.16 environment (or a PCI-based chassis), two independent MAC/PHYs are offered to provide Ethernet redundancy in a 2.16 node slot. The CPC358 will automatically switch over to the secondary Ethernet MAC/PHY if link is lost on the primary MAC/PHY or the primary fabric fails. The CPC358 supports mid-plane Ethernet wiring, allowing for the cable-free interconnect between the CPC358 and other CompactPCI-based Ethernet components such as our embedded Ethernet switches. Optionally the two Ethernet ports can be brought out to the RTM when PICMG 2.16 is not used.

The CPC358 supports eight identical, individually programmable, synchronous/serial I/O ports. The ports are capable of electrically interfacing to V.35, RS-530, RS-449, RS-422 and RS-232 equipment. Each port is brought out in groups of four to an 80-pin connector that supports Performance Technologies' quad connection Hydra line of serial I/O cables.



# CPC358

## Eight-Port WAN Communications Adapter

### Ordering Information

- >> **PT-CPC358-11932**  
8-port Sync/Serial Controller, Rear I/O
- >> **PT-CPC358-11933**  
8 port Sync/Serial Controller, Front I/O
- >> **PT-RTM358-11934**  
RTM for PT-CPC358-11932
- >> **PT-RTM358-11970**  
RTM for PT-CPC358-11933

### Cable Options

- >> **PT-ACC334-11918**  
4 x V.35 Hydra Cable, DTE with Thumbscrews
- >> **PT-ACC334-11919**  
4 x RS232 Hydra Cable, DTE with Jackscrews
- >> **PT-ACC334-12274**  
4 x RS232 Hydra Cable, DTE with Thumbscrews
- >> **PT-ACC334-11969**  
4 x EIA530 Hydra Cable, DTE with Jackscrews
- >> **PT-ACC334-12273**  
4 x EIA530 Hydra Cable, DTE with Thumbscrews
- >> **PT-ACC334-11920**  
4 x RS449 Hydra Cable (Socket) Sun Substitute, DTE with Jackscrews
- >> **PT-ACC334-11921**  
4 x RS449 Hydra Cable (Pin), DTE with Jackscrews
- >> **PT-ACC358-11971**  
4 x V.35 Hydra Cable, DCE with Thumbscrews
- >> **PT-ACC358-12275**  
RS232 Debug Cable (console)

Software options are shown on the following page.

### Extensive 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/billing applications, radar gateways, and converged serial gateways.

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 using 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 equipment manufacturers and application developers using Performance Technologies' embedded products with a foundation for building SS7 applications, including next-generation wireless and IP telephony systems.

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

# CPC358

## Eight-Port WAN Communications Adapter



### Specifications

#### Performance

- Eight Ports @ 2 Mbps bi-directional, simultaneously.

#### Processors

- 233 MHz Motorola MPC8255 PowerQUICC II™ processor

#### Memory

- 128MB shared DRAM
- 32MB Application Flash

#### Bus Structure

- CompactPCI® 2.0, revision 3.0-compliant, including all PCI required configuration registers and protocols

#### Physical Interface

- V.35
- RS-530
- RS-449
- RS-422
- RS-232

#### Modem Control

- CTS
- DSR
- DTR
- DCD
- RTS (also RI, LT for V.35)

#### Protocol Support

- HDLC
- Frame Relay
- LAPD
- X.25
- TADIL-B
- Radar Receiver

#### Compliance

- All currently applicable ANSI/ISO standards

#### Specification Compliance

- PCI local bus specification, revision 2.2, including all PCI required configuration registers and protocols
- PICMG® 2.1 hot-swap
- PICMG® 2.16 CompactPCI packet switching backplane
- PICMG® 2.9 system management bus (SMB/IPMI)

#### Agency Certifications

- FCC Class A
- CE
- UL 1950
- NEBS Level 3-friendly

#### MTBF

- > 116,788 Hrs per

#### Power

- 21.8W maximum (preliminary calculations):
  - 5.8 A @ +3.3 V
  - 0.5 A @ +5 V
  - < 10 mA @ +12 V
  - < 10 mA @ +-12 V

#### 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)

### Ordering Information

#### Software Options

- >> **PT-NXSWARE-11359**  
NexusWare® Linux-based Software
- >> **PT-HDLCKIT-11490**  
HDLC Connectivity Kit
- >> **PT-FRAMKIT-11661**  
Frame Relay Development Kit
- >> **PT-X25KIT-11612**  
X.25 Development Kit
- >> **PT-ASYNKIT-11702**  
Async Development Kit
- >> **PT-RADKIT-11705**  
Radar Receiver Development Kit
- >> **PT-TADKIT-11893**  
TADIL-B Development Kit
- >> For additional information on software options, visit us at: [www.pt.com](http://www.pt.com)



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