

# AMC308/318 PRODUCT SHEET

## Octal T1/E1/J1 Communications Controller

### FEATURES

Octal T1/E1/J1 Communications Controller

Mid-Size, Single-Wide AMC Module

Full Compliance with AMC Specifications

Freescale™ MPC8568 PowerQUICC® III Processor

PCI Express® (AMC.1) and Gigabit Ethernet (AMC.2) Connectivity

Telco Clock Support for TCLKA, TCLKB, and TCLKC

NexusWare® Core CGL Distribution and Development Tools

NexusWare WAN Protocol Software:

- HDLC
- X.25
- Frame Relay

NexusWare SIP Session Initiation Protocol (SIP) Stack and API

NexusWare C7 SS7 MTP-2

Broad Operating System Support includes Solaris™, Windows®, and Linux®



The use of MicroTCA® and AdvancedTCA® systems for telecommunications, aerospace, and defense will require high-density, highly advanced I/O solutions for use in these form factors. As a long-time contributor to industry standards and emerging technologies, PT provides a powerful combination of hardware and advanced software that enables its customers to fully leverage AdvancedTCA and MicroTCA capabilities.

PT's AMC308/AMC318 AdvancedMC™ T1/E1/J1 communications controllers deliver a comprehensive high-capacity connectivity solution for use with AdvancedTCA or MicroTCA platforms. Coupling the AMC308 (or AMC318) with PT's extensive software offering provides the ability to deliver a wide range of Voice over IP (VoIP), Wireless and IP Multi-Media Subsystem (IMS) infrastructure application elements.

#### Hardware Features

The AMC308/AMC318 provides a high capacity solution for signaling and media applications and enables optimization of slot usage. The specialized architecture leverages the power of a Freescale™ MPC8568 Integrated Communications Controller (PowerQUICC® III) to deliver high-

performance and high-capacity processing. With eight T1/E1/J1 interfaces, support for high-performance PCI Express® interfaces, and Gigabit Ethernet, the AMC308/AMC318 modules enable rapid exchange of payload information and represent the ideal solution for a wide range of applications requiring T1/E1/J1 connectivity. Specific to the AMC318 is the ability to transmit TDM traffic over I-TDM. This ability allows for the AMC318 to transmit TDM traffic to other modules via the I-TDM interface over Ethernet.

#### NexusWare Software Support

NexusWare® is a family of Linux® software products that enable users of PT's broad range of COTS embedded hardware solutions to rapidly develop and deploy value-added capabilities with their solutions. This powerful combination of software and hardware enables system engineers, architects, and designers in telecommunications as well as aerospace and defense markets to create applications and bring to market solutions such as LTE, WiMAX, media gateways, managed WAN gateways, VoIP, lawful intercept, signaling gateways, and base station controllers.



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The NexusWare® family of products supported on the AMC308/AMC318 include:

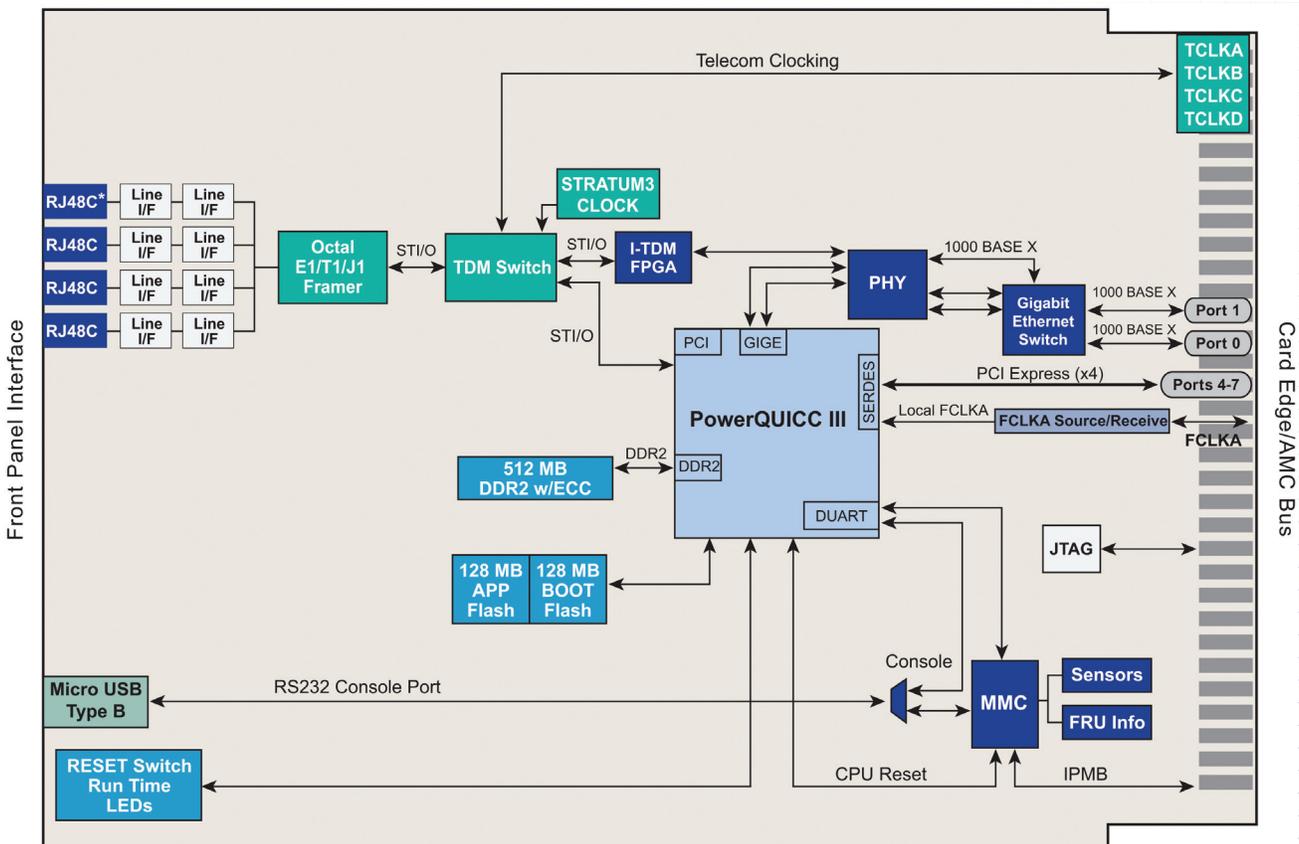
**NexusWare Core:** At the very center of the NexusWare Software Suite is NexusWare Core. NexusWare Core is a complete Carrier Grade Linux® (CGL) distribution. In addition to being a Linux distribution, NexusWare Core also provides a complete set of development tools.

**NexusWare SIP:** NexusWare SIP is a Session Initiation Protocol (SIP) stack and API software package included with NexusWare Core that provides a powerful foundation for application developers for building SIP proxy servers, SIP location servers, SIP registrar servers, and SIP media gateways for wireless and IP telephony systems.

**NexusWare WAN:** NexusWare WAN protocols provides a wide range of WAN protocols which allows OEMs and

System Integrators to create flexible and efficient radar gateways, converged serial gateways, and front-end I/O systems. NexusWare WAN software products are offered both as installable software packages for NexusWare Core and as turnkey packages for those developers interested in the protocol package by itself. Whether the installable or the turn-key solution is chosen, developers will be provided with a well-documented and powerful API to assist the development process.

**NexusWare C7:** NexusWare C7 is a comprehensive SS7 MTP-2 installable software package that provides a powerful foundation for building SS7 applications for wireless and IP telephony systems. NexusWare C7 provides extensive system scalability. The distributed processing architecture of NexusWare C7 allows the addition of SS7 links into existing equipment without compromising overall host system performance.



\*Note: Each RJ48C carries two T1/E1/J1 interfaces

### Performance

- Eight individually software selectable T1/E1/J1 lines
- PCI Express® x4 link on AMC ports 4-7 (AMC.1 Type 4)
- 2 Gigabit Ethernet links on AMC port 0 and port 1
- I-TDM Gigabit Ethernet link on AMC port 0 or 1 (AMC318 only)
- Telecom clocks on TCLKA, TCLKB, and TCLKC
- PCI Express 100 MHz clock input on AMC FCLKA

### Protocol Support

- MTP2 Link Layer
- Transparent (Voice Stream)
- HDLC
  - LAPD (Q.921), LAPB, LAPF
- X.25
- Frame Relay
- ATM (AAL0, AAL1, AAL2, AAL5)

### Processor

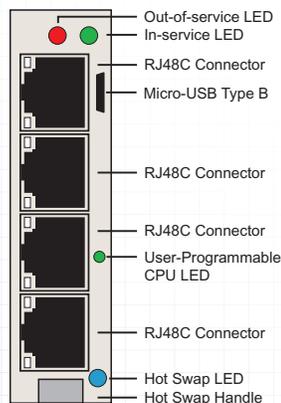
- 1 GHz Freescale™ MPC8568 PowerQUICC® III

### Memory

- 512 MB DDR2 SDRAM w/ECC
- 256 MB Flash memory

### Front Panel Interfaces

- Front access on 4 RJ48C connectors\*
- LEDs
  - Out-of-Service
  - In-Service
  - CPU
  - Hot-Swap
- Hot Swap Handle



### Telecom Clock Management

- Line interfaces configurable LT (slave) or NT (master) mode
- Three synchronization modes supported
  - Free-running Stratum 3 internal clock
  - Recovered clock from any T1/E1/J1 line
  - System telecom clock reference (via AMC TCLKA or TCLKC)
- Synchronized clock can be forwarded to AMC TCLKB with Stratum 3 hold-over capabilities

AMC308	AMC318
Typical: 15W	Typical: 16W
Maximum: 20W	Maximum: 21W

### Power Consumption

- Payload power: +12 V
- Management power: +3.3 V

### Mechanical

- Mid-size, single AMC.0 form factor
- Dimensions: 73.5 mm (W) x 180.6 mm (D) (2.9 in. x 7.1 in.)

### Environmental

- Operating: 0 to 55°C (32 to 131°F)
- Non-operating: -40 to 80°C (-40 to 176°F)
- Humidity: 5% to 95% non-condensing

### Agency Certifications

- FCC Class A
- CE
- UL 60950
- EN 60950
- EN 300 386
- Designed to meet NEBS Level 3 and ETSI installations

### MTBF – per Bellcore SR-332 Issue 2

**AMC308:** 375,303 hours

**AMC318:** TBD

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## Octal T1/E1/J1 Communications Controller

### ORDERING INFORMATION

**PT-AMC308-12292**

8-port T1/E1/J1 w/o I-TDM

**PT-AMC318-12354**

8-port T1/E1/J1 with I-TDM

**PT-ACC308-12387**

T1/E1/J1 Splitter Cable

**PT-ACC308-12388**

RS232 Debug Cable (console)

#### Software Options

PT's NexusWare® suite of software provides a comprehensive Carrier Grade Linux® (CGL) OS and development environment as well as middleware and protocol communications software.

For more information visit [www.pt.com](http://www.pt.com)  
or call your local representative.

### CONTACT US

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