

AMC123 PRODUCT SHEET

Intel® Integrated Processor AdvancedMC™ Module

FEATURES

Intel EP80579 1.2 GHz
Integrated Processor

Mid-Size, Single Compute
Module

Excellent Performance-per-Watt
Computing Solution for
Application-Ready Systems

Onboard Flash Storage Options
for OS, Program, and Data via
SATA II or USB 2.0 Interface

Up to 4 GB, PC2-5300 64-bit
Memory with ECC

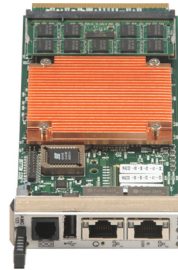
IEEE 1588 Time Synchronization
Hardware Assist

Ethernet, PCI Express®, and
SATA II AMC Interconnect
Support

Full Compliance with AMC
Specifications

Operating Systems Supported:

- NexusWare® Core CGL OS and Development Tools
- Linux®
- Windows® XP, Windows XP Embedded
- Solaris™ 10 or Later
- Wind River® VxWorks® 6.6
- FreeBSD® 6.3



The AMC123 is a best-of-class performance, very low power, high value AdvancedMC™ (AMC) compute module with the Intel EP80579 Integrated Processor, and is designed for embedded applications. As a compute module option for PT's IPnexus® Application-Ready Systems, which tightly integrates a MicroTCA® -based platform, other configurable AMC modules, and the NexusWare family of Linux software products, it meets the needs for cost-effective and modular processing in a low-profile, appliance- style form factor for COTS-based telecom, wireless, as well as aerospace and defense applications. The AMC123 is ideal for control-plane and/or service related functions or for scalable clustering computing solutions.

Hardware Features

The AMC123 features the Intel EP80579 Integrated Processor that supports up to 4 GB DDR2 memory with ECC. This innovative and highly integrated System-on-a-chip (SoC) processor delivers an outstanding combination of performance, power efficiency, and cost-effectiveness compared to discrete, multi-chip solutions.

Onboard flash storage for OS, application, and data is supported by one of two options (up to 16 GB):

1. SATA solid-state disk module (SDM) with a SATA II interface, allowing operating systems to boot locally
2. USB solid-state disk drive (uSSD) storage module with a USB 2.0 interface.

A total of three 1 Gigabit Ethernet ports are configurable by one of two options:

1. One at the front panel and two at the AMC card edge
2. Two at the front panel and one at the AMC card edge

The front panel also features a serial console port, USB 2.0 port, and LEDs. High I/O bandwidth is supported via eight-lanes of PCI Express and two SATA ports routed to the AMC card edge connector.

IPnexus Application-Ready Systems

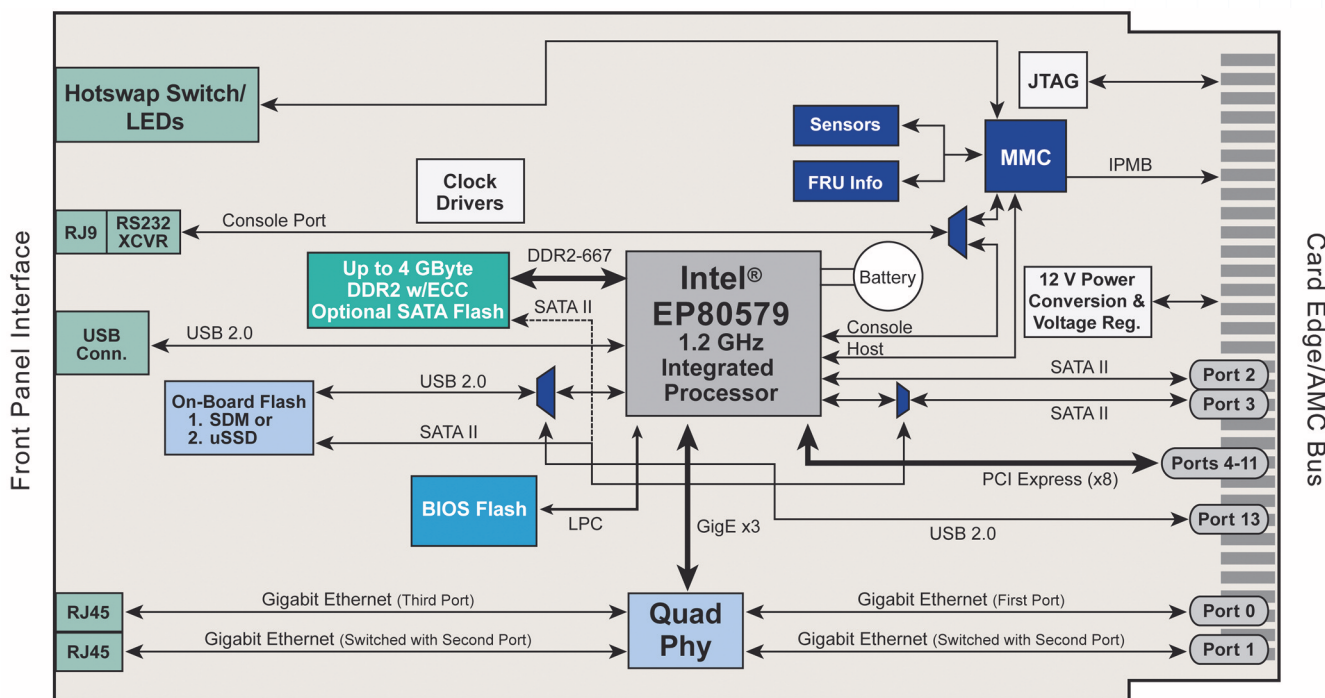
PT's IPnexus Application-Ready Systems offer a highly integrated and comprehensive COTS-based hardware and software solution to rapidly develop and deploy value-added capabilities to embedded applications. Developers can immediately begin development of their application on receipt of these systems, eliminating the time and costs normally associated with integrating, troubleshooting, and configuring building blocks from one or more vendors. Application-Ready Systems come integrated with an operating system, drivers, APIs, and other value-added software options.



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The configurable components include a MicroTCA®-based platform, AMC modules (such as compute, storage/video, and communications controllers), and the NexusWare® family of Linux® software products ideal for solutions such as WiMAX, media gateways, managed WAN gateways, Voice over IP (VoIP), lawful intercept, radar servers, signaling gateways, and base station controllers. The NexusWare Software Suite is made up of the following products:

- NexusWare Core is a complete Carrier Grade Linux (CGL) distribution, with web-based management, GUI-based IDE, and Kernel Builder
- NexusWare SIP is an installable Session Initiation Protocol (SIP) stack and API software package
- NexusWare C7 is a comprehensive SS7 MTP-2 installable software package
- NexusWare WAN protocols provides a wide range of WAN protocols



AMC123 – Mid-Size, Single Compute Module

Technical Specifications

Processor

- Intel 1.2GHz EP80579 Integrated Processor
 - IA-32 core, based on the Intel Pentium® M 32-bit processor
 - 32 KByte L1 split instruction and data caches
 - 256 KByte 2-way L2 cache
 - Integrated I/O controller hub
 - Power-optimized circuitry
 - Duty cycle configuration management provides reduced switching power
 - Four-channel Enhanced Direct Memory Access (EDMA) controller
 - 400/533 Mhz internal Front Side Bus (FSB)
 - Intel SpeedStep® Technology
 - IEEE 1588 time synchronization hardware assist for real-time network clock synchronization

Memory

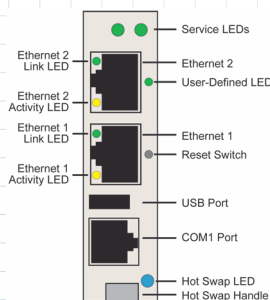
- 64-bit 333.5 MHz PC2-5300 with Error Correction Code (ECC)
- 200-pin SO-RDIMM connector socket that can be populated with a single DDR2-667 Registered SDRAM (64-bit + ECC)
- Supports up to 4 GB DRAM
- ECC checking with double-bit detect and single-bit correct

Storage

- Onboard flash storage options
 - A SATA solid-state disk module (SDM) via a SATA II interface - up to 16GB
 - A USB solid-state disk drive (uSSD) module via a USB 2.0 interface - up to 16GB
 - A Solid State Double Data Rate (SSDDR) module combines a SATA Solid State Drive (SATA SSD) and DDR Synchronous Dynamic RAM (DDR SDRAM) technologies in a single SODIMM package
- Off-board storage options
 - Dual SATA II Interface
 - Compatible with AMC590 video and storage AdvancedMC Module

Front Panel Interfaces

- 2 x 10/100/1000 Ethernet Ports
 - One can be switched to AMC Port 1
 - One USB 2.0 Port
 - RJ9 Serial Port
- LEDs
 - In-Service
 - Out-of-Service
 - Hot-Swap
 - User-Defined
 - Ethernet Link and Activity
- Reset Switch



AdvancedMC™ Connector Ports

- Port 0: 1 Gb Ethernet Channel 1 (AMC.2)
- Port 1: 1 Gb Ethernet Channel 2 (AMC.2)
 - Can be switched to the front panel
- Port 2: SATA II 1 (AMC.3)
- Port 3: SATA II 2 (AMC.3)
- Ports 4-11: x8 PCI Express® Lanes (AMC.1)
 - Supports x1, x4, or x8 lanes
 - Two x4 PCI Express Interfaces, Ports 4-7, 8-11 (x1, or x4)
- Port 13: USB 2.0

Power Consumption

- Payload Power: +12 V
- Management Power: +3.3 V
- Typical: 20 W
- Maximum: 30 W

Mechanical

- Mid-size, single AMC.0 form factor
- Dimensions: 73.5 mm (W) x 180.6 mm (D) x 18.96 mm (H) (2.9 in. x 7.1 in. x 0.75 in.)
- Weight: .295 kg (0.65 lb) with a 2 GB DDR2, heat-sink, and flash loaded

Environmental

- Operating: 0 to 55°C (32 to 131°F)
- Non-operating: -20 to 80°C (-4 to 176°F)
- Humidity: 5 to 90% RH non-condensing

Agency Certifications (Pending)

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

MTBF

- TBD

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ORDERING INFORMATION

PT-AMC123-12337

Processor AMC, EP80579,
1.2 GHz, 1 GB DDR

PT-AMC123-12338

Processor AMC, EP80579,
1.2 GHz, 2 GB DDR

PT-UDM4G-12376

USB Disk Module Kit, 4 GB

PT-SDM4G-12377

SATA Disk Module Kit, 4GB

PT-ACC101-12383

RS232 Console Cable Kit, RJ11/RJ11
and RJ11/RJ9

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
go.pt.com/software or call your
local representative.

To discuss specific requirements
and/or pricing, contact sales@pt.com

CONTACT US

www.pt.com

E-mail: sales@pt.com

