

## Video/Storage AdvancedMC™ Module with Audio

### FEATURES

Mid-Size, Single-Wide  
AdvancedMC Form Factor

High-Performance 2D, 3D, and  
Multimedia Video with 128 MB  
GDDR3 Memory and DAC  
Speeds of 400 MHz

QXGA Resolution up to 2048 x 1536

HDMI Connection for 480p,  
720p, and 1080i Output

Video Acceleration and Dual-  
Display Support for VGA,  
HDMI, and DVI-D

Supports Standard SATA and  
SAS\* Hard Drives

2.5-in. Hard Drive Options  
(Current market availability is  
up to 500GB)

Compatible with RAID array  
applications

Dual-Port Access for Storage  
(SAS Mode Only)

PCM and Dolby® Digital 5.1  
Audio Formats

Drivers Available for 32- and  
64-Bit Operating Systems:

- NexuWare® CGL OS and  
Development Environment
- Linux® x64
- Windows® XP
- Windows Vista®  
(32/64-bit support)

\* Contact sales@pt.com for  
SAS HDD options.



The AMC590 is a high-performance video/storage/audio AdvancedMC module that features the AMD/ATI Radeon™ E2400 video processor and SATA/SAS hard drive interfaces. Integrated into a mid-size, single AMC module, the AMC590 allows system designers to develop complete graphics and/or storage subsystems into their applications in a highly compact form factor that uses standards-based, hot-swappable, NEBS-compliant modules. This module is part of PT's line of AdvancedMC products and MicroTCA® products and is ideal for any embedded, compute, aerospace and defense, automation, or other graphic-intensive or storage-intensive application.

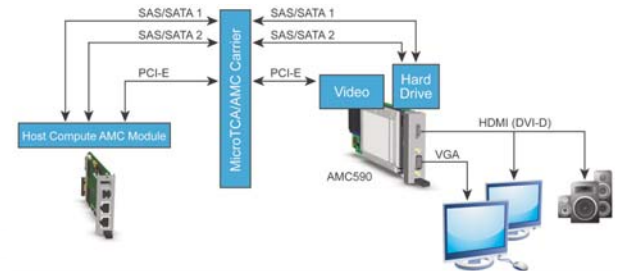
#### Video Features

The video block delivers exceptional 2D, 3D, and multimedia graphics with 128 MB of internal GDDR3 memory. Intensive graphics and multimedia applications can take advantage of the dual-display support, integrated audio, and up to x8 lane PCI Express® interface when coupled with high-performance compute modules. The AMC590 is compatible with Microsoft® DirectX® 10 and OpenGL® 2.0.

#### Storage Features

The storage block supports both Serial ATA (SATA) and Serial Attached SCSI (SAS) interfaces through the AMC connector ports. The board accommodates standard

2.5-in. hard drives; with a mid-size front panel for 9mm drives and full-size panel for 15 mm drives.



The Port Selector can convert SAS commands to SATA to enable the use of larger capacity SATA drives with compute modules that only support SAS interfaces.

#### Benefits

Connecting to external network-attached storage can be expensive. It typically requires separate chassis, sparring, cabling, power delivery, and management tools. Integrated storage is easily added to any existing AdvancedMC architecture. Discrete system hard drives and external storage devices can be consolidated inside a single chassis. Sparring, hot-swapping, and infrastructure configuration are simplified, and the mean time to repair is reduced. In short, total cost of ownership for storage is reduced.



# AMC590 PRODUCT SHEET

## Technical Specifications

### ORDERING INFORMATION

#### PT-AMC590-12359

AMC Storage w/120 GB HDD, Video w/128MB DDR, Audio

#### PT-AMC590-12360

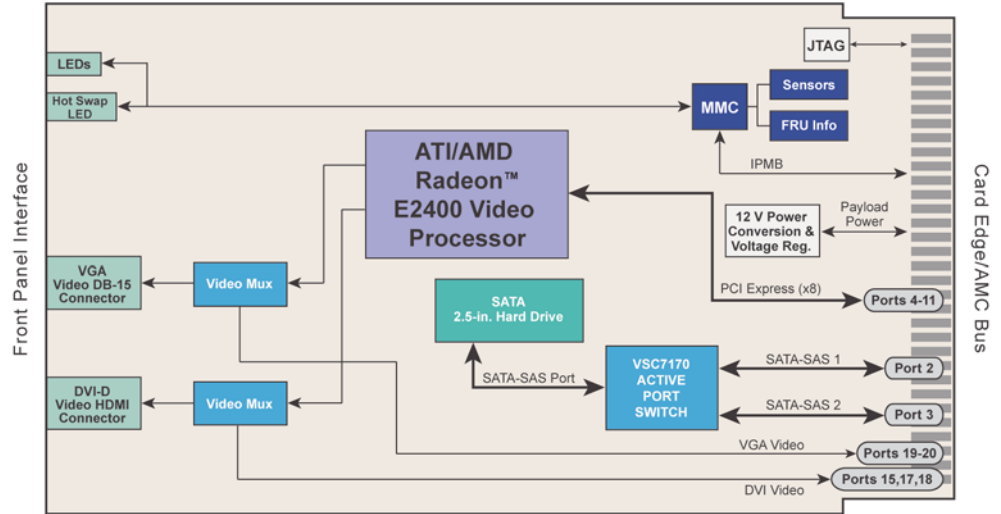
AMC Storage Module w/120 GB SATA HDD

#### PT-AMC590-12284

Video/Audio Module w/128 MB DDR

#### PT-AMC590-12381

HDMI Retention Clip for PT-AMC590, 25-Pack



AMC590 - Video/Storage/Audio AMC Module

### 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 [sales@pt.com](mailto:sales@pt.com) for higher capacity HDD options and/or SAS options

### Video Features

- AMD/ATI Radeon™ E2400 video processor
- Internal 128 MB GDDR3 Memory
- High-performance 2D, 3D, and multimedia graphics
  - QXGA resolution up to 2048 x 1536
  - HDMI output for 480p, 720p, and 1080i
  - 32 bits per pixel
  - DirectX 10 and OpenGL 2.0 support
  - Video acceleration
    - Advanced de-interlacing algorithms
    - Programmable, independent gamma control for video overlay
  - SMARTSHADER™ 4.0
  - SMOOTHVISION™ 2.0
- Dual-display mode
- Integrated HD audio codec supports PCM and Dolby® Digital 5.1 Audio Format

### Storage Feature

- SATA and SAS interfaces per AMC.3
- SAS to SATA converter: Allows SATA drives to interface with SAS commands
- 2.5-in. (9.5 mm) hard drive (SATA Gen1, 2, 1x, 2x)
- Compatible with RAID array applications
- Dual port SAS operation – AMC Port 2 and Port 3
- Single port SATA operation – AMC Port 2 or Port 3
- Auto negotiation of data transfer rate of 1.5 Gbps or 3.0 Gbps for each channel

### Front Panel Interfaces

- DB15 VGA connector
- HDMI connector (High Definition Multimedia Interface)
  - Including 5.1 Dolby Audio
- LEDs
  - In-service
  - Out-of-service
  - Hot swap

### AMC Connector Ports

- Port 2: SATA/SAS 1 (AMC.3)

- Port 3: SATA/SAS 2 (AMC.3)
- Ports 15, 17, 18: HDMI interface
- Ports 19, 20: VGA Interface
- Ports 4-11: x8 PCI Express® Lanes (AMC .1)
  - Auto negotiates to x1, x2, x4, or x8 lanes

### Power

- Payload Power: +12 V
- Management Power: +3.3 V
- Nominal - Maximum:
  - PT-AMC590-12359: 15W - 24W
  - PT-AMC590-12360: 6W - 10W
  - PT-AMC590-12284: 12W - 18W

### Mechanical

- Single-width, mid-size AMC.0 form factor
- Dimensions: 73.5 mm (W) x 180.6 mm (D) x 28.95 mm (H) (2.9 in x 7.1 in x 1.1 in)
- Weight:
  - PT-AMC590-12359: 0.227 kg (8.0 oz.)
  - PT-AMC590-12360: 0.204 kg (7.2 oz.)
  - PT-AMC590-12284: 0.135 kg (4.8 oz.)

### 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

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

### MTBF

- 311,305 hours per Bellcore SR-332 Issue 1

### CONTACT US

PT  
205 Indigo Creek Drive  
Rochester, NY 14626

tel: +1.585.256.0200  
fax: +1.585.256.0791  
E-mail: [sales@pt.com](mailto:sales@pt.com)

