



## APPLICATIONS

The rugged nature of the EM-Trust RAID solution makes it ideal for a wide range of industrial mass storage applications including:

- ▶ File/Application Servers
- ▶ Transaction Processing
- ▶ Mission Critical Systems
- ▶ Video Imaging
- ▶ Fault-Tolerant Storage Systems

# IPM-RAID-2HD

## Multi-Functional Industrial SATA RAID Controller



### IPM-RAID-2HD

#### FEATURES

- ▶ High-speed serial ATA RAID functionality
- ▶ Data mirroring or data striping options
- ▶ Hot-pluggable hard-disk 'blades'
- ▶ Operating system transparency
- ▶ Advanced data protection
- ▶ Zero configuration time
- ▶ Fast rebuild in the event of an error
- ▶ Complete with SteelVine Utility software
- ▶ 3U, 8HP CompactPCI format

#### BENEFITS

- ▶ Secure and fast data storage
- ▶ Unique solution for 19" systems
- ▶ Reduced maintenance outlay
- ▶ Easy-to-use (GUI-less operation)
- ▶ Low power consumption
- ▶ Single +5V power supply requirement
- ▶ Can be configured to be the main boot device
- ▶ Positioned anywhere in a 19" enclosure
- ▶ Long-term product availability
- ▶ Superior software compatibility





# IPM-RAID -2HD

Storage

## OVERVIEW

The IPM-RAID-2HD<sup>1.)</sup> is available in two basic modes to provide RAID 0 'striping', or RAID 1 'mirroring'. In striping mode, the host CPU sees all hard disks as a single entity with the storage capacity being the sum of both hard disks. In mirroring mode, the RAID controller duplicates the data across both HDDs, and therefore sees them with a capacity of a single unit.

In the unlikely event that a mirroring error on one of the blades occurs, then the faulty blade registers this fact by issuing an interrupt<sup>2.)</sup> and flashing the front-panel LED. High-speed (100 GB/hour) rebuild and restoration with less than 1% CPU load is accomplished automatically as soon as the replacement blade is installed.

### SPECIFICATION SUMMARY

- ▶ SteelVine processor
- ▶ Up to 3 Gb/s
- ▶ Advanced data protection
- ▶ GUI-less operation
- ▶ Suitable for harsh environments
- ▶ Unique industrial solution
- ▶ Zero configuration time
- ▶ Automatic rebuild

## SPECIFICATIONS

### STORAGE PROCESSOR

SATA to 2-port 3Gb/s SATA SteelVine™ Sil4723 Storage Processor

### SERIAL ATA FEATURES

Industry-leading SATALink™ technology with 1.5Gb/s or 3Gb/s link rate with auto-negotiation

### DATA PROTECTION

- ▶ Automatic mirroring (RAID 1 mode)
- ▶ Drive performance aggregation (RAID 0)
- ▶ Self-healing data storage (Auto-Rebuild)
- ▶ Power-failure (Auto-Rebuild-Resume)
- ▶ Double protection (Auto-Rebuild-Verify)
- ▶ No downtime (Automatic Failover)
- ▶ <1% host CPU loading during rebuild
- ▶ Fast rebuild of 100 GByte/hour
- ▶ No additional software configuration time

### INTERFACES

- ▶ Power-In: +5V power (backplane)
- ▶ SATA Input: Standard 7-pin Serial ATA connector (backplane)

### DIMENSIONS

- ▶ 3U x 8HP (backplane)
- ▶ 3U x 4HP (blade)

### VISUALIZATION

- Two front-panel LEDs on each HD- blade
- ▶ Green 'Status': HD ready/error (blinking)
  - ▶ Yellow 'Activity': Data transfer

### SOFTWARE SUPPORT

- Although the IPM-RAID is operating system independent, the SteelVine utility requires:
- ▶ Windows XP,
  - ▶ Win2000, Win2003
  - ▶ Linux RedHat & SuSE

### POWER

- ▶ ~0.8 W for the backplane
- ▶ ~5.0 W per installed blade (with HD)

### MASS

- ▶ 110g (per blade - without installed HD)
- ▶ 50g (backplane)

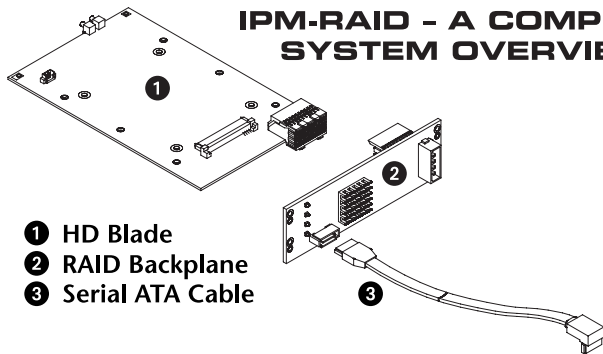
### CLIMATIC CONDITIONS

- ▶ +5°C to +55°C (standard)
- ▶ -25°C to +70°C (optional)<sup>3.)</sup>
- ▶ -40°C to +85°C (storage without HDs)
- ▶ Humidity 5% to 95% @ 40°C (non-condensing)

Notes:

- 1.) The RAID system requires a serial ATA host controller (CPU or dedicated device)
- 2.) The utility software 'SteelVine Management Tool' must be installed to access the firmware features or take advantage of the interrupt facility.
- 3.) Requires HDs designed for this spectrum

## IPM-RAID - A COMPLETE SYSTEM OVERVIEW



## ORDERING INFORMATION

PRODUCT	DESCRIPTION
IPM-RAID-2HD-R0-0	3U SATA RAID system comprising two blades (without HDs), dedicated backplane with standard power and serial ATA interfaces. Configured for RAID 0 (striping) operation
IPM-RAID-2HD-R1-0	As above, but configured for RAID 1 (mirroring) operation

Note:  
The system comes complete with cables & SteelVine utility software.  
The RAID configuration is set at time of order and cannot be subsequently altered.  
Contact an EMTrust sales representative for advice on mass-storage options



www.emtrust.de

**EMTrust GmbH**  
Gewerbering 1  
85258 Weichs  
Germany

Tel.: +49 8136 80 677-800  
Fax: +49 8136 80 677-809  
sales@emtrust.de

The information contained in this document has been carefully checked and is believed to be reliable. However, EMTrust GmbH makes no guarantee or warranty concerning the accuracy of said information and shall not be responsible for any loss or damage of what ever nature resulting from the use of, or reliance upon, it. EMTrust does not guarantee that the use of any information contained herein will not infringe upon the patent, trademark, copyright or other rights of third parties, and no patent or other license is implied hereby. Intel and Intel logo are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries. This document does not in any way extend EMTrust's warranty on any product beyond that set forth in its standard terms and conditions of sale. EMTrust reserves the right to make changes in the products or specifications, or both, presented in this publication at any time and without notice.

LIFE SUPPORT APPLICATIONS  
EMTrust's products are not intended for use as critical components in life support appliances, devices or systems in which the failure of a EMTrust product to perform could be expected to result in personal injury. All mentioned trademarks are registered trademarks of their owner.  
© 2009 EMTrust GmbH. All rights reserved. Rev. 1.1 / 19.10.2009