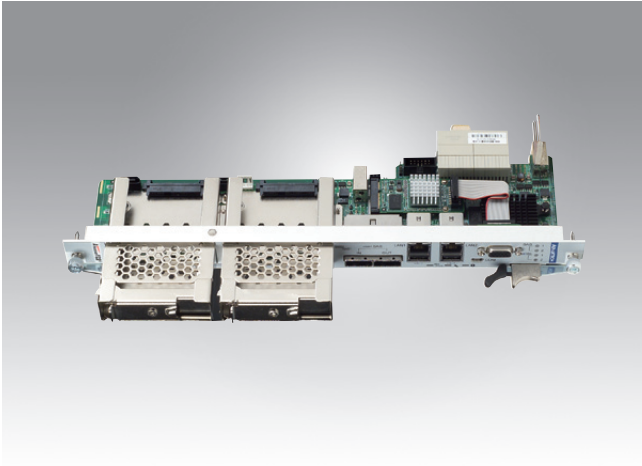# RTM-5101

AdvancedTCA® RTM for CPU Blade
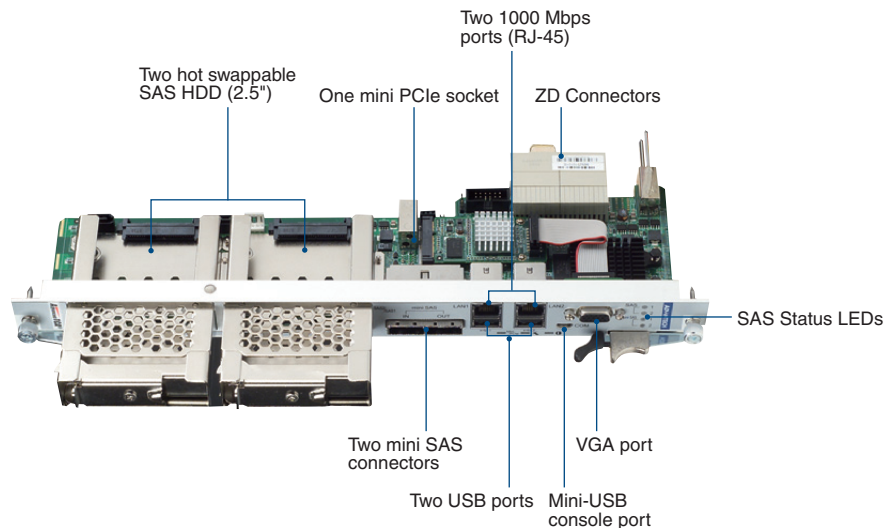

Features

- On board SAS controller
- Supports two 2.5" SAS HDDs (Hot swappable)
- Provides external SAS / HDD failover cabling (mini SAS connectors)
- Server Graphics for Debug / Bring Up (mini PCIe daughter card, option only)
- Two 1000 Mbps rear panel ports (RJ-45 connectors)
- Two USB 2.0 rear panel ports
- One console port (mini USB connector)
- Fully managed, hot swappable RTM
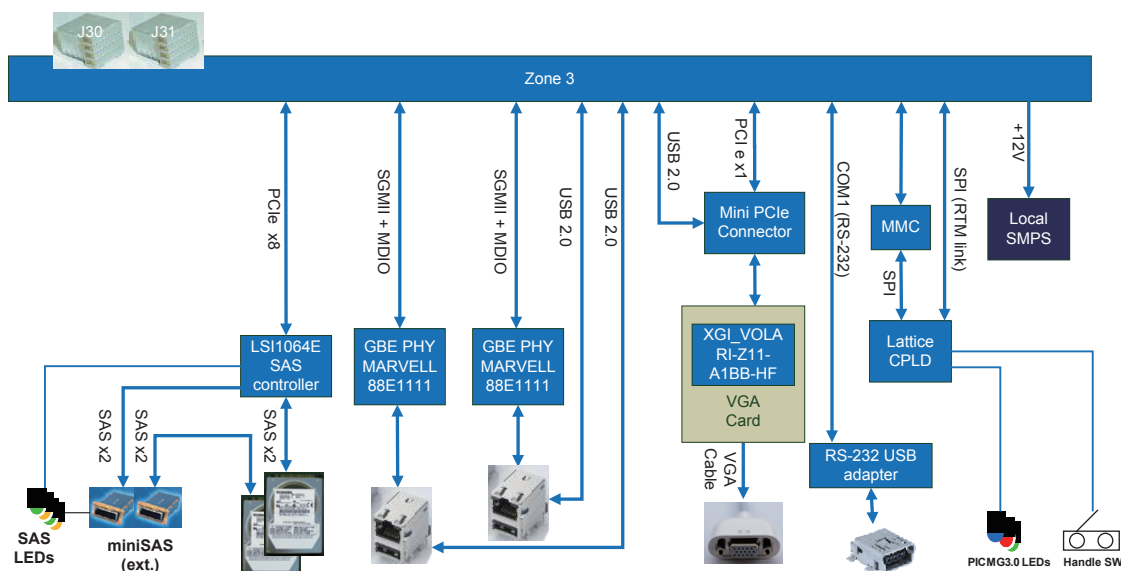
Introduction

The RTM-5101 is a single slot (6HP) ATCA rear transition module for I/O extension of Advantech ATCA CPU blades. To meet serviceability, RTM-5101 is designed as a fully managed, and hot swappable FRU. On board SAS controller (LSI logic: LSI1064) supports two 2.5" hot swappable SAS HDDs which operates up to 3.0 Gbit/s and provides external mini SAS connectors on rear panel for failover cabling. Via USB-to-UART transceiver, frontboard UART can be exported to miniUSB connector on RTM (if frontboard UART MUX is routed accordingly.) Two Ethernet GbE ports provide extra two I/O Lans for rear access. Two USB ports (USB 2.0) support versatile USB devices (keyboard, mouse, USB stick, USB-CDROM… etc). One PCI Express x1 interface supports one mini PCIe socket for flexible expansion. Advantech provides mini PCIe VGA module (optional) for debugging purpose.

Specifications

Rear Panel Interface	Serial (COM)	One mini USB connector (USB slave type)
	Ethernet	Two 1000 Mbps ports
	USB 2.0	Two USB connectors (Type A)
	SAS	Two hot swappable 2.5" SAS HDD bays; Two mini SAS connectors
Internal interface	PCIe	One mini PCIe x1 socket (PS: mini PCIe VGA module is optional)
IPMI	MMC Controller	Atmel ATMega128L
	IPMI	Compliant with IPMI 1.5 using Pigeon Point System (PPS) Solution
Zone 3	RTM	Advantech common RTM interface Type 1
	Interface	Three PCIe x 4, Two SATA, Two SGMII, Two USB, 1 x UART, GPIO, MMC management interface
Power Requirements		8W typical without hard drives 18W typical with two hard drives
Physical Characteristics	Dimensions (W x D)	6HP, 322.25 x 94 mm (PCB size) PS: 322.25 x 123.92 mm (the width to HDD's edge that extends out of rear panel)
	Weight	1.15 kg with two hard drives 0.6 kg without hard drives
Environment		Operating	Non-operating
	Temperature	0 ~ 55° C (32 ~ 131° F)	-40 ~ 70° C (-40 ~ 158° F)
	Humidity	5 to 93%@40°C (non condensing)	95% @ 40° C (non-condensing)
	Shock	3G, half-sine 11ms, each axis	18G, half-sine 11ms, each axis
	Vibration	5 - 200 Hz, 0.2G, each axis	5 Hz to 20 Hz @ 1 m2/s3 (0.01 g2 /Hz) (flat) 20 Hz to 200 Hz @ -3 dB/oct (slope down)
Compliance	Environment	ETSI EN300019-2-1 Class1.2, EN300019-2-2 Class 2.3, ETSI EN300019-2-3 Class 3.1E
	PICMG	3.0 R3.0
	EMC	FCC47 CFR Part15, Class A, CE Mark (EN55022/EN55024/EN300386) Designed to meet GR1089-Core

Block Diagram

Ordering Information

Part Number	Description
RTM-5101-A1E	RTM Module hosts SAS controller with VGA daughter card

Note: Advantech may make changes to specification and product descriptions at any time, without notice.

Related Products

Part Number	Description
MIC-5320 series	ATCA CPU blade with single Intel Xeon CPU
MIC-5322 Series	ATCA CPU blade with dual Intel Xeon CPUs