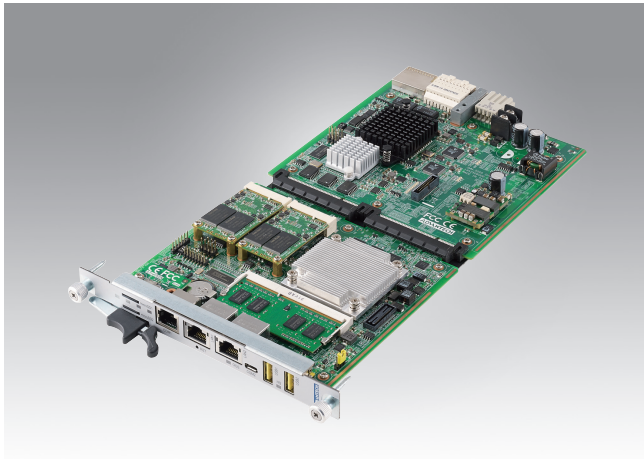# SMM-5060

Netarium™ System Management Module

Features

- ATCA / eATCA Shelf and System Management
- ARM9 based Shelf Management controller with Advantech IPMI core
- Full event log synchronization, robust redundancy and failover
- Optional Netarium™ System Manager on Intel® Atom™ Processor C2000 series
- Features include SoL Proxy, System Explorer, System Boot Server, etc.
- Up to two GbE (RJ45), two USB (host) ports, and two console ports (one RJ-45 and one micro-USB) on front panel
- Two microSD slots for shelf and system event logs storage.
- Up to two internal MO300 SSDs for OS, system management applications, and extended event logs storages
- System mount RAID boot disks and LCD module support
- HPM.1 updates, HPM.2, HPM.3 and HPI options
- Option to host customer applications

Introduction

Advantech's SMM-5060 is the intelligence in Netarium™ ATCA or eATCA systems responsible for platform health and management as a whole. All individual FRU elements in the system including each power supply, fan module, node blade, hub blade, RTM or eRTM, backplane, and even the module itself can be monitored and controlled through the Shelf Manager residing in the SMM-5060's BMC module. The SMM-5060's Shelf Management (ShM) is ATCA compliant and supports the latest PICMG specifications such as HPM.1, HPM.2 and HPM.3. In addition to providing full redundancy and failover support, Advantech's ShM features full log and state synchronization. All firmware and software on the Shelf Manager supports redundant images and can be upgraded via HPM.1 for maximum reliability.

As an option, the SMM-5060 can be extended with System Manager functionality via a module based on the Intel® Atom™ processor C2000. Advantech's System Manager (SysM) acts as centralized service access point (such as SoL Proxy), blade boot server (provisioning OS images and node blades' applications), and advanced configuration manager enabling any iA node in the Netarium™ system to boot with a tailored set of BIOS settings yielding best performance for a specific workload. In addition, an integrated web front end, the System Explorer can be used to provide graphical displays of various levels of system information such as system inventory, health views, sensor status, system IDs, and event logs, leading to a friendlier shelf/system management user experience. An LCD module implemented on the chassis can also be interfaced to the SMM-5060 and used to display system statistics or status to onsite technicians, allowing the Netarium™ system to be managed like a big appliance. Customers who are using appliances for their entry and mid-range network gear can now have a consistent system management view for their high end product line based on Advantech's Netarium™ platform and SMM-5060.

Specifications

Processor System	X86 CPU	Intel® Atom™ Processor C2000 Series (C2358/ 2 Cores/ 2 Threads/ 1 MB L2 Cache or C2558/ 4 Cores/ 4 Threads, 2 MB L2 Cache)
	Max. Speed	2.4 GHz
	BIOS	Carrier Grade UEFI BIOS based on AMI 1. Redundant flash with HPM.1 update & rollback 2. Configuration settings can be changed by IPMI
	BMC Processor	ARM9 based Microcontroller (400MHz)
Memory	Technology	x86: Up to 2 x DDR3 1333 MHz 4GB with ECC (4GB on board, 4GB on SODIMM) BMC: On-board DDR3/ 1600 MHz/ 512 MB
	Max. Capacity	Up to 8GB for x86 module
Ethernet	Devices	x86: Intel i354 Quad port Gigabit Ethernet controller BMC: 2 integrated 10/100/1000 Mbit MACs
	Interface	Up to 2 x GbE uplink Interfaces (only one uplink for basic shelf management SKU) 2 x Base Interface (100 Mbps) 1 x Cross-over interface to other SMM-5060 (GbE)
Front I/O Interface	Serial (COM)	2 x Console ports (1 RJ-45 connector for x86 module and 1 micro-USB connector for BMC module)
	Ethernet	2 x GbE ports (RJ-45 connectors)
	USB 2.0	2 x Type A ports (available only for x86 SKU)
	SDHC	2 x MicroSD Sockets
Mass Storage	Onboard	2 x 64GB (or 2 x 32GB) MO300 SATA SSD (available only for x86 SKU)
	Off board (system connector)	Two SATA-II Interfaces (available only for x86 SKU)
Operating System	Compatibility	CentOS 6 64 bit (default), RHEL6 64bit, others on request
Shelf Management	BMC	ARM 9 based controller (400MHz)
	IPMI	IPMI 2.0 based on Advantech IPMI Core
Watchdog Timer	Supervision	BMC watchdog
	Interval	IPMI compliant

Specifications

Miscellaneous	LEDs	x1 blue for hot swap, x1 red for failure and OOS, x4 green/amber for general purpose (user definable)	
Compliance	Standards	PICMG 3.0, IPMI v1.5, HPM.1, HPM.2, HPM.3	
Power Consumption	Configuration	Based on Intel® Atom™ C2558, 2 x 1333MHz 2GB DDR3 memory	
	Measured	30W max.	
Physical	Dimensions	6HP, 278.3 mm x 144.8 mm	
		Operating	Non-operating
	Temperature	-5 ~ 55° C (23 ~ 131° F) NOTE1	- 40 ~ 70° C (-40 ~ 158° F)
Environment	Humidity	IEC60068-2-78 (95%RH @ 40° C)	
	Vibration (5 ~ 500Hz)	IEC60068-2-6 (0.002G2/Hz, 1Grms)	
	Shock	IEC60068-2-27 (10G, 11ms)	
	Altitude	4000m above sea level	10,000m above sea level
Regulatory	Conformance	UL94V0, FCC Class B, CE, RoHS & WEEE Ready	
	NEBS Level 3	Designed to meet GR-63-CORE and GR-1089-CORE	

Ordering Information

Part Number [2]	Description
SMM-5060P1-M4E	Netarium™ system management module with Intel® Atom™ Processor C2558 module, 4GB DDR3 with ECC, 2x MO300 64GB SSDs, 2x USB host ports, 2x GbE uplink ports
SMM-5060P2-M2E	Netarium™ system management module with Intel® Atom™ Processor C2358 module, 2GB DDR3 with ECC, 2x MO300 32GB SSDs, 2x USB host ports, 2x GbE uplink ports, no system mount SATA interfaces to backplane
SMM-5060B1-M1E	Netarium™ shelf management module. No Intel processor module, 1x GbE uplink port

NOTE 1: Operating Temperature: depends on the actual air flow through the ShMM slot. Numbers based on Advantech Netarium™ series
NOTE 2: Two main SKUs are available – one basic SKU provisioning PICMG3.0 compliant shelf management functions, the other SKU contains an x86-based module to provide advanced system management functions
NOTE 3: Contact your regional Advantech NCG representative for detailed information, including other system memory and SSD configurations.