MegaRAC®-SP|core2

Software Stack for Integrated Service Processor SoC

American Megatrends

HIGHLIGHTS

- Multiple SoC Support
  - AMI MG9091
  - Aspeed AST2000, AST2100
  - Renesas SH7756
  - ServerEngines PilotII
  - Vitesse VSC452
  - Winbond "Hermon"
- Provides Robust RAS (Reliability, Availability and Serviceability) Infrastructure
- Compliant with DMTF CIM Profiles
- CIM Object Manager (CIMOM)
- Virtual KVM and Virtual Media
- IPMI 2.0 Support
- SMASH/CLP Support
- WSMAN Support
- Web 2.0 Support
- Customize & Add IP with MegaRAC-DS

CUSTOMIZE, CREATE, ADD MANAGEABILITY: BUILD YOUR OWN IP

MEGARAC®

...a Generation Ahead

www.ami.com

The MegaRAC-SP Service Processor software stack provides sophisticated remote manageability of servers featuring a System-on-Chip Baseboard Management Controller. The firmware implements high-speed KVM redirection, virtual media for remote software installation and IPMI 2.0 based monitoring and management. MegaRAC SP highly portable firmware architecture is based on the DMTF Common Information Model (CIM) and supports the latest standards in manageability, such as SMASH/CLP and WSMAN.

MegaRAC-SP|core2 sophisticated management features enhance server Reliability, Availability and Serviceability (RAS), while providing a high degree of cross-platform manageability and portability.

Reliability and Availability are mainly achieved by proper instrumentation of sensor monitoring, alerting, event log management and remote power controls according to the Intelligent Platform Management Interface (IPMI) Specification. Serviceability implies the ability to access a system with full control of Keyboard, Video and Mouse.

Data Sheet
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The SP|core2 firmware is based on a Linux 2.6 core providing a robust networking stack, including TCP/IP, Telnet, SSH, SSL, Embedded Web Server, Firewall and LDAP. An efficient IPMI 2.0 stack implements system health monitoring (sensor, fan, voltage polling), remote power control, event logging and remote serial console (SoL).

Virtual KVM ensures full graphical console redirection over IP at any operational state of the server. AMI's compact, highly efficient KVM server does not waste any significant CPU cycles and supports all possible resolutions and color depth supported by the hardware engine.

The user can choose the KVM client either as an ActiveX solution or a Java web-start application. The client can be fully launched from the web interface using a browser – no special client software needs to be installed at the remote computer.

Virtual Media (vMedia) enables software installation from a remote location at any time, including in case of "bare-metal" hardware state. MegaRAC-SP|core2 redirects CD/DVD, HDD, Floppy or USB-Key based storage to the managed server by emulating a local storage. The vMedia server supports USB 2.0 (480MBits) for fast device redirection (up to 18X CDROM).

A web-based user interface utilizes any industry standard browser (IE or FireFox), does not require any special client software.

MegaRAC-SP|core2 supports SMASH/CLP from the Distributed Management Task Force (DMTF), a standard command line protocol (CLP) facilitating manageability across different platforms and vendors. AMI's SMASH/CLP engine allows OEMs to use the standard DMTF profiles or add new profiles for CLP.

The DMTF also introduced the Web Service Management (WSMAN), which defines standard web services such as security profiles, protocols and data exchange formats.

MegaRAC-SP|core2 architecture has been revamped to comply with DMTF's Common Information Model. A CIM Object Manager (CIMOM) provides a central repository for management structures and objects, which can be added, modified or extended by OEMs.

Web 2.0 APIs and RSS feeds enable developers to add cool features and web-based programmability.

MegaRAC®-SP|core2

Software Stack for Integrated Service Processor SoC

Features

Key Features

Supports multiple integrated SPs
- MegaRAC MG9091
- Aspeed AST1000
- Aspeed AST2000
- Renesas SH7756 BMC
- Vitesse VSC452
- Winbond "Hermon"

Power Control
Keyboard, Video & Mouse (KVM) Console Redirection
Text Console Redirection: Serial over Lan (SoL)
IPMI 2.0 support
Watchdog Timer
Firmware Firewall
Virtual Media for Mass Storage Redirection

System Interface Support

KCS , SMBus, LAN and USB

Media Redirection

Simultaneous floppy and CD/ DVD redirection
Efficient USB 2.0-based CD/DVD redirection, with typical speed greater than 12xCD (depending on the hardware)
Support for USB key

Virtual presence /Front panel redirection

(OEM feature only - Requires customization)
Customizable GUI for the front panel
Provides virtual reality of the remote server management
LCD/LED status display redirection
Floppy, CD/DVD tray control
"At-a-glance" snapshot of the server screen

IPMI 2.0 based management

BMC stack with a full IPMI 2.0 implementation
Customizable sensor management

Event Log and Alerting

Read Log events
Sensor readings
SNMP trap
SNMP MIB (requires customization)

Sophisticated User Management

IPMI based user management
Added security with SSL (HTTPS)
Multiple user permission level
Multiple user profiles

Active Directory/LDAP Client support

Direct LDAP support from the device
Windows Active Directory and Open-LDAP

Common Information Model (CIM)

CIM Object Manager (CIMOM)
True Object Manager with CIM class handling
Creating class, instance and working with the instances
Core support for all DMTF profiles
Extendible for additional OEM profiles

SMASH and CLP support

SSH based SOL
Power control of the server
Support for all DMTF Profiles
Complete command support
Customizable parser for easy update to future modifications in grammar
Dynamic target discovery
Firmware update
Role based authentication and authorization
Output filtering
Configurable profile-mapping. (CIM-Methods to SMASHCLP command mapping)
OEM command and target

WSMAN Support

Supports WSMAN as well as WS-CIM
Rich SDK capability for OEM extensions
Fully organically developed code as library
Can work with any web server
Currently supported web servers:
- GoAhead
- LIGHTTPD

HTTP and HTTPS support
Complete WSMAN support – Discovery, Enumeration, Get, Put, Subscribe and Eventing
Rich client library support (C, Java, JavaScript)

Web Interface Multilanguage support

Full Unicode support
Multiple language support for multiple clients simultaneously

Web based configuration

Full configuration using web UI
Fail-safe firmware upgrade

OEM Tools (sold separately)

MegaRAC Development Studio

WHAT OUR OEM CUSTOMERS HAVE TO SAY

"The MegaRAC-SP stack is much more robust and feature-rich than any other software stack we have evaluated in the market today."

"AMI has really built a strong architecture. This allows my engineers to add anything we need from a proprietary stance going forward with ease. AMI has placed themselves two to three years ahead of the competition with their MegaRAC-SP design."

"The MegaRAC-SP software stack allows OEMs to use features like SMASH-CLP, WSMAN, Virtual-KVM, Vitrual-Media and many more. This stack is very feature-dense but at the same time very quick to build, easy to manage and a pure delight to port across multiple platforms."

AMI CEO, S. Shankar:

"My team of core engineers has really designed a superb product that allows OEMs to hit the ground running with their project. AMI has more design wins than any of our competitors. We are truly excited to bring to market this proven technology. Strong of its ingenuity and workmanship, AMI stands behind its customers' success. Thank you for your interest in AMI's MegaRAC-SP Technology. We look forward to answering any questions you may have for us."

WITH SO MANY OEMS CHOOSING AMI, SHOULDN'T YOU ALSO TAKE A CLOSER LOOK?

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