

MegaRAC® M300V

Remote Management Daughter Card for OPMA Based Servers



The MegaRAC M300V is a full featured OPMA-compliant service processor daughter card based on the MegaRAC MG 9091 (Verbena II) System on Chip. The card allows for complete KVM remote management, with text and graphical redirection, in a 2.50' x 2.75' form factor.

OEMs can easily integrate M300V in their server designs to help their customers prevent data loss and recover from down time from anywhere in the world.

Data Sheet

05 02 2008

HIGHLIGHTS

- > Highly Integrated System on Chip (SoC)
 - 200 MIPS 32-bit ARM CPU with MMU, 16K-I Cache, 16-D Cache CPU
 - SDRAM / Static Memory Controller
 - Video Processor: Up to 1280 X 1024 Capture Engine / 5-5-5 RGB DVO Input
- > AAVICA-IIA Compression Engine
 - Ethernet: 10/100 Ethernet MAC
 - USB: 1x USB 2.0 Device Controller and PHY
 - Encryption Engine: DES / Triple-DES / AES
 - Integrated LPC Interface
- > Remote Power Control: Reset/On/Off
- > Text/Graphics KVM-over-IP at any Power State
- > Monitor and Manage all Environmental Sensors
- > Notify System Administrators with Alert:
- > SNMP and Email Notification
- > On-board Web-based Interface
- > Remote OS installation

Tier-1 OEMs have utilized AMI's successful MegaRAC line of PCI-based service processors for almost a decade. The new M300V implements AMI's extensive IPMI and KVM/IP technology in a management card solution compatible with all Intel and AMD-type motherboards with OPMA connector. By implementing well-defined standard interfaces, M300V is easily integrated in server projects, which yields reduced costs and time to market.

The Open Platform Management Architecture (OPMA) is a public industry standard promoted by Advanced Micro Devices defining the connector interface between card-based management subsystem and motherboard.

MegaRAC M300V is based on AMI's MegaRAC MG9091 (Verbena II) highly integrated System on Chip (SoC), which provides both Serial over LAN and KVM over LAN capability, as well as a 10/100 Base-T LAN connection for dedicated management LAN.

Serial over LAN allows for remote operation of the server via a terminal interface, connected via an RS232 link.

KVM over LAN enables total control of system resources from a remote location, including Keyboard, Video & Mouse

for full graphics and text redirection.

MegaRAC Verbena II features video capture of up to 1280 x 1024, applying AMI's unique, patent-pending AAVICA-II compression engine, which uses intelligent algorithms to significantly reduce network traffic and provide high-performance graphical redirection. The engine interfaces with the server's DVO video interface and USB bus.

M300V implements removable media redirection for CDROM or DVD-ROM and floppy at the same time. This powerful feature enables remote installation of the operating system or application software.

M300V incorporates a unique methodology for extending the systems' manageability through a Platform Development Kit (PDK). The PDK gives OEMs the ability to build a policy-based provisioning component and user interface. The user interface can be customized and enriched with AMI MegaRAC® Studio, a graphical environment for creating the user interface and logic for AMI embedded management devices, utilized by developers to implement user interface screens and generate related 'JavaScript' code for cross browser and cross platform support.



MegaRAC® M300V

Remote Management Daughter Card for OPMA Based Servers

Features

Key Features

2.5" by 2.75" Daughter card with OPMA connector
MG 9091 System on Chip
Memory: 16MB Flash ROM, 32MB SDRAM (PC100)
Serial port - UART
USB 2.0 for Mass Storage/Keyboard/Mouse
(Composite Device)
Integrated Watchdog Timer
IPMB support (I2C based)
Power Consumption: 3.3V - 800mA

AMI MG9091 Controller

Highly Integrated System on Chip (SoC)
200 MIPS 32-bit ARM CPU with MMU, 16K-I
Cache, 16-D Cache CPU
SDRAM Controller / Static Memory Controller
and Flash
Video Processor
Up to 1280 X 1024 Capture Engine
5-5-5 RGB DVO Input
AAVICA-IIA Compression Engine
16Mbyte Frame Buffer SDRAM
Ethernet: 10/100 Ethernet MAC
USB: 1xUSB 2.0 Device Controller and PHY
Encryption Engine
DES / Triple-DES / AES Encryption / Decryption
compliant with NIST Standard
AES 128/192/256-bit Keys
Peripherals
5x I2C Controllers and 2x UARTs
RTC, Timer, Watchdog Timer and Interrupt
Controller
4x PWMs and 8x Tach Inputs
22 Dedicated GPIOs, 26 Shared GPIOs
200 KSPS, 8-channel ADC, 10-bit Resolution ADC
Integrated LPC Interface
3X KCS Interface
Port 80H Snoop Support
BT Interface with 512 FIFO
Bus master Support
484 Pin BGA 23x23 mm Package

KVM/IP (Console Redirection)

High performance redirection, up to 35 frames
per second
Dynamic selection of 1 bit, 4bit Gray, 7/8/16 bit
color
Resolution support:
- 1280 X 1024
- 1024 X 768
- 800 X 600
- 640 X 480
Low network bandwidth requirement
Auto session timeout for security

Media Redirection

Simultaneous floppy and CD/DVD redirection
USB 2.0 based CD/DVD redirection with up to
18x CD speed
Support for USB key and USB hard disk
Auto session timeout for security

Virtual Presence and Front Panel Redirection

Customizable GUI for the front panel
Provides virtual reality of the remote server man-
agement
LCD/LED status display
Floppy, CD/DVD tray control
"At-a-glance" snapshot of the server screen

IPMI 2.0 Based Management

Manages the IPMI 2.0 based BMC present in the
server
Runs the virtual BMC stack for BMC-less systems
and presents as a full IPMI 2.0 compliant BMC
Customizable sensor management Event Log
Log full and partial full events
Front panel status (LCD/LED)
Sensor readings
Event log full alerts

Web Based User Interface

Cross browser/Cross platform support
Customizable GUI
Added security with SSL (HTTPS)

Sophisticated User Management

Multiple user permission level
Many user profiles
Web based configuration of the user profiles
LDAP Client Support
Direct LDAP support from the device
Windows Active Directory and Open-LDAP support
Client application to extend the LDAP schema easily

SMASH and CLP support

IPMI 2.0 boot option support
Telnet based SOL
Power control of the server
Fully compliant with the DMTF specification

Side-Band and Dedicated NIC

Dedicated NIC support

Security

SSL (Secured Socket Layer)
Encryption (Blowfish)
Authentication (MD5 hash)
SHA
SNMP v3 (DES)

Multilanguage Support

Full Unicode support
Multiple language support for multiple clients
simultaneously

Web Based Configuration

Full configuration using Web UI
Personality migration
Fail-safe firmware upgrade

OEM Tools

AMI-PMCP for customizing the sensors
MegaRAC Studio for customizing the GUI
Platform Development Kit



American Megatrends Inc.

5555 Oakbrook Parkway, Suite 200, Norcross,
GA 30093 | t: 770.246.8600

Sales & Product Information
sales@ami.com | t: 800.828.9264

Technical Support
support@ami.com | t: 770.246.8645

www.ami.com