ASMB12-iKVM for Intel-based systems

Server Management Board User Guide

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Notices

Federal Communications Commission Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference, and
- This device must accept any interference received including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with manufacturer's instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

WARNING: The use of shielded cables for connection of the monitor to the graphics card is required to assure compliance with FCC regulations. Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Compliance Statement of Innovation, Science and Economic Development Canada (ISED)

This device complies with Innovation, Science and Economic Development Canada licence exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

CAN ICES(B)/NMB(B)

Déclaration de conformité de Innovation, Sciences et Développement économique Canada (ISED)

Le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

CAN ICES(B)/NMB(B)

REACH

Complying with the REACH (Registration, Evaluation, Authorization, and Restriction of Chemicals) regulatory framework, we published the chemical substances in our products at ASUS website at https://esg.asus.com/Compliance.htm.

ASUS Recycling/Takeback Services

ASUS recycling and takeback programs come from our commitment to the highest standards for protecting our environment. We believe in providing solutions for you to be able to responsibly recycle our products, batteries, other components as well as the packaging materials. Please go to https://esg.asus.com/en/Takeback.htm for detailed recycling information in different regions.

DO NOT throw the motherboard in municipal waste. This product has been designed to enable proper reuse of parts and recycling. This symbol of the crossed out wheeled bin indicates that the product (electrical and electronic equipment) should not be placed in municipal waste. Check local regulations for disposal of electronic products.

DO NOT throw the mercury-containing button cell battery in municipal waste. This symbol of the crossed out wheeled bin indicates that the battery should not be placed in municipal waste.

Safety information

Electrical safety

- To prevent electrical shock hazard, disconnect the power cable from the electrical outlet before relocating the server.
- When adding or removing devices to or from the server, ensure that the power cables for the devices are unplugged before the signal cables are connected. If possible, disconnect all power cables from the existing server before you add a device.
- Before connecting or removing signal cables from the server, ensure that all power cables are unplugged.
- Seek professional assistance before using an adapter or extension cord. These devices could interrupt the grounding circuit.
- Make sure that your power supply is set to the correct voltage in your area. If you are not sure about the voltage of the electrical outlet you are using, contact your local power company.
- If the power supply is broken, do not try to fix it by yourself. Contact a qualified service technician or your retailer.

Operation safety

- Before installing any component to the server, carefully read all the manuals that came with the package.
- Before using the product, make sure all cables are correctly connected and the power cables are not damaged. If you detect any damage, contact your dealer immediately.
- To avoid short circuits, keep paper clips, screws, and staples away from connectors, slots, sockets and circuitry.
- Avoid dust, humidity, and temperature extremes. Do not place the product in any area where it may become wet.
- Place the product on a stable surface.
- If you encounter technical problems with the product, contact a qualified service technician or your retailer.

About this guide

This user guide contains the information you need when installing and configuring the server management board.

How this guide is organized

This guide contains the following parts:

- **Chapter 1: Product Introduction**

  This chapter describes the server management board features and the new technologies it supports.

- **Chapter 2: Getting Started**

  This chapter provides instructions on how to install the board to the server system and install the utilities that the board supports.

- **Chapter 3: Web-based user interface**

  This chapter tells you how to use the web-based user interface that the server management board supports.

- **Appendix**

  The Appendix includes information on common problems that you may encounter when installing or using the server management board.

Where to find more information

Refer to the following sources for additional information and for product and software updates.

1. **ASUS websites**

   The ASUS website provides updated information for all ASUS hardware and software products. Visit https://www.asus.com for more information.

2. **Optional documentation**

   Your product package may include optional documentation, such as warranty flyers, that may have been added by your dealer. These documents are not part of the standard package.

Conventions used in this guide

To ensure that you perform certain tasks properly, take note of the following symbols used throughout this manual.

DANGER/WARNING: Information to prevent injury to yourself when trying to complete a task.

CAUTION: Information to prevent damage to the components when trying to complete a task.

IMPORTANT: Instructions that you MUST follow to complete a task.

NOTE: Tips and additional information to help you complete a task.

Typography

Bold text	Indicates a menu or an item to select.
Italics	Used to emphasize a word or a phrase.
<Key>	Keys enclosed in the less-than and greater-than sign means that you must press the enclosed key. Example: <Enter> means that you must press the Enter or Return key.
<Key1> + <Key2> + <Key3>	If you must press two or more keys simultaneously, the key names are linked with a plus sign (+). Example: <Ctrl> + <Alt> + <Del>
`Command`	Means that you must type the command exactly as shown, then supply the required item or value enclosed in brackets. Example: At the command prompt, type the command line: `format A:/S`

Specifications summary

Chipset	Aspeed 2600
Internal RAM	448 MB (System) 64 MB (Video)
Internal ROM	64 MB
Timers	32-bit Watchdog Timer
Main features	7th generation ASPEED Baseboard Management Controller Native PCIe support 2D Video Graphic Adapter with PCIe bus interface Remote presence (iKVM) Secure boot engine WebUI support Redfish support Security enhancements Remote update TLS 1.2 and 1.3 support
Form factor	21 mm x 21 mm

NOTE: Specifications are subject to change without notice.

1 Product Introduction

This chapter describes the server management board features and the new technologies it supports.

1.1 Welcome!

Thank you for buying an ASUS ASMB12-iKVM server management board!

The ASUS ASMB12-iKVM is an Intelligent Platform Management Interface (IPMI) 2.0-compliant board that allows you to monitor, control, and manage a remote server from the local or central server in your local area network (LAN). With ASMB12-iKVM in your server motherboard, you can completely and efficiently monitor your server in real time. The solution allows you to reduce IT management costs and increase the productivity.

Before you start installing the server management board, check the items in your package with the list below.

1.2 Package contents

Check your server management board package for the following items.

- User guide

NOTE: If any of the above items is damaged or missing, contact your retailer.

1.3 Features

1. IPMI 2.0

- System interface (KCS)
- LAN interface (supports RMCP+)
- Intelligent Platform Management Bus (IPMB)
- Serial Over LAN (SOL)
- Universal Series Bus (USB)
- IPMI Serial Interface
- Field Replaceable Unit (FRU)
- IPMI Sensor
- IPMI Event Log
- Platform Event Trap (PET)
- Email Alert
- Internet Protocol version 6 (IPv6)
- Data Center Manageability Interface (DCMI)
- Power Control
- FW Maintenance
- BMC Syslog & Audit

- Remote syslog
- Backup-Restore BMC Configuration
- BIOS Configuration
- BIOS Update
- ASUS Thermal Radar

2. KVM Support

- HML5Viewer Support
- Capture BSOD as JPEG
- Physical Keyboard Language Selection support
- Keyboard LED sync with Client Keyboard LED status
- Keyboard LED sync with Host Keyboard LED status

3. Remote Media Support

- Remote CD/DVD Device support
- Remote Hard disk server support
- Remote Media multiple image redirection
- Multiple Remote Media CD redirection
- Multiple Remote Media Hard disk redirection

4. **Web support**
    - HTML5-based WebUI support
    - Dashboard
    - TLS 1.2 and 1.3 support
    - Sensor
        - Sensor Detail
        - Sensor Threshold Setting
    - System Inventory
    - FRU Information
    - Log & Report
        - IPMI Event Log
        - System Log
        - Audit Log
        - Video Log
    - Settings
        - Captured BSOD
        - Date & Time
        - External User Service
        - KVM Mouse
        - Log Setting
        - Manage Licenses
        - Media Redirection
        - Network
        - PAM Order Setting
        - Platform Event Filter (PEF)
        - Services
        - Simple Mail Transfer Protocol (SMTP)
        - Secure Sockets Layer (SSL)
        - System Firewall
        - User Management
        - Video Recording

    - Web Server Instances
    - FAN Control (ASUS Thermal Radar)
    - PSU Cold Redundancy
- Remote Control
    - iKVM
    - HTML5 based SOL
- Image Redirection
- Power Control
- Locator LED
- Maintenance

5. Network Support

- IPv4 support
- IPv6 support
- Bonding support
- Fully Qualified Domain Name (FQDN) support
- Network Time Protocol (NTP) Server support
- Advanced IP Routing
- Set default Network to DHCP
- Dynamic DNS support
- Ethernet Over USB support
- System Firewall support
- Timezone Configuration support
- NCSI support
- Active Directory Authentication support
- LDAP Authentication support
- PAM Reorder support
- Radius Authentication support
- SNMP support
- SNMP Trap v2c/v3 Alert at Runtime
    - CPU, Memory Warning
    - Temperature, Fan and PSU

1.4 System requirements

Before you install the server management board, check if the remote server system meets the following requirements:

- ASUS server system with Baseboard Management Controller (BMC) connector
- LAN (RJ-45) port for server management
- Firefox (Windows and Linux), Chrome (Windows and Linux), Edge-Chromium Version (Windows), Safari (macOS)

NOTE: Refer to the **LAN ports for server management** section for more information on LAN port requirements.

1.4.1 Supported models

This server management board supports the following server systems:

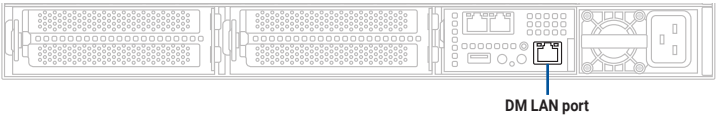
- RS700-E12 series
- RS720-E12 series
- ESC8000-E12 series
- XA NB3I-E12 series

NOTE: Visit www.asus.com for an updated list of supported server systems.

1.4.2 LAN ports for server management

ASUS server systems that support ASMB12-iKVM come with a Dedicated Management LAN (DM LAN) port for server management. The DM LAN port is used to connect the remote server to a local/central server via a direct LAN connection or through a network hub.

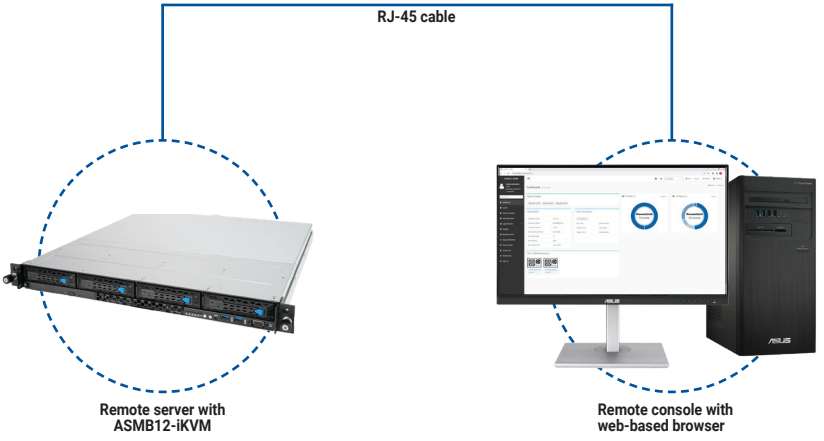
NOTE: Refer to the user guide for your server motherboard or system for the location of the DM LAN port.



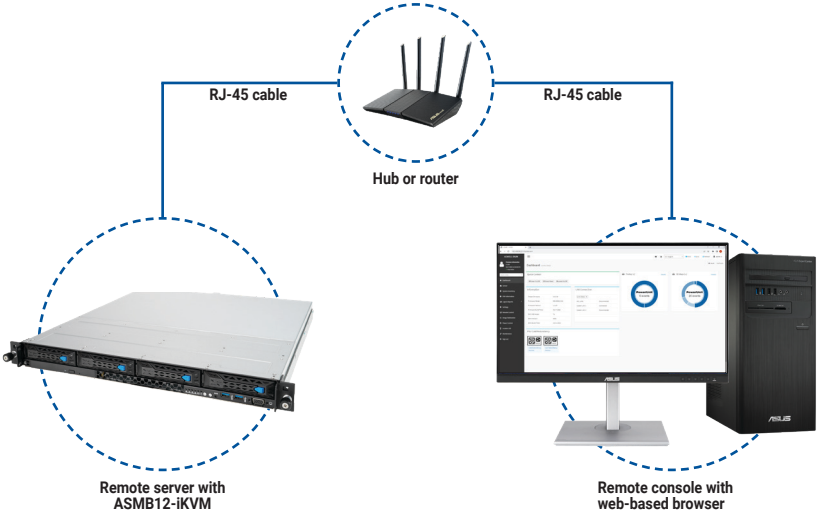
1.5 Network setup

The server management board on the remote server connects to a local/central server via a direct LAN connection or through a network hub. The supported server management configurations are listed below.

Direct LAN connection



LAN connection through a network hub



Getting Started

2

This chapter provides instructions on how to install the board to the server system and install the utilities that the board supports.

2.1 Before you proceed

Take note of the following precautions before you install the server management board to the remote server system.

WARNING:

- Unplug the server system power cord from the wall socket before touching any component.
- Use a grounded wrist strap or touch a safely grounded object or to a metal object, such as the power supply case, before handling components to avoid damaging them due to static electricity.
- Hold components by the edges to avoid touching the ICs on them.
- Whenever you uninstall any component, place it on a grounded antistatic pad or in the bag that came with the component.
- Before you install or remove any component, ensure that the power supply is switched off or the power cord is detached from the power supply. Failure to do so may cause severe damage to the motherboard, peripherals, and/or components.

2.2 Hardware installation

To set up the server system for server management:

NOTE:

- Refer to the **LAN ports for server management** section of the **Product Introduction** chapter for more information on the location of the LAN port for server management.
- The system will need up to 120 seconds to power up for the first time if the AC power cable is unplugged.

1. Insert the LAN cable plug into the LAN port for server management.
2. For direct LAN configuration, connect the other end of the LAN cable to the local/central server LAN port.

   For connection to a network hub or router, connect the other end of the LAN cable to the network hub or router.
3. Ensure the VGA, USB, PS/2 cables are connected, then connect the power plug to a grounded wall socket.

2.3 Firmware update and IP configuration

Follow the below steps to update the firmware and configure the IP source before using the server management board for the first time.

NOTE:

- An internet connection is required to complete the firmware update.
- Supported options are **-p** to preserve configuration options or **-f** to force boot.
- On Windows, the AMI driver must be installed for USB-LAN support.

2.3.1 Updating the firmware on Linux

1. Navigate to the tools folder, then run the update script.

   To update the firmware remotely:

   ```
   ./FWUpdate_Linux.sh [IP address] [username] [password] [options]
   ```

   To update the firmware locally:

   ```
   ./FWUpdate_Linux.sh -local [username] [password] [options]
   ```

2. If prompted, type Y to perform a full firmware upgrade.

2.3.2 Updating the firmware on Windows

1. Navigate to the tools folder, then run the update script.

   To update the firmware remotely:

   ```
   ./FWUpdate_Win.bat [IP address] [username] [password] [options]
   ```

   To update the firmware locally:

   ```
   ./FWUpdate_Win.bat -local [username] [password] [options]
   ```

2. If prompted, type Y to perform a full firmware upgrade.

2.4 BIOS configuration

Follow the below steps to configure the BIOS before connecting to the server management board.

NOTE:

- Update the remote server BIOS file following the instructions in the motherboard/system user guide. Visit www.asus.com to download the latest BIOS file for the motherboard.
- The BIOS setup screens shown in this section are for reference purposes only, and may not exactly match what you see on your screen.

2.4.1 Running the BIOS BMC configuration

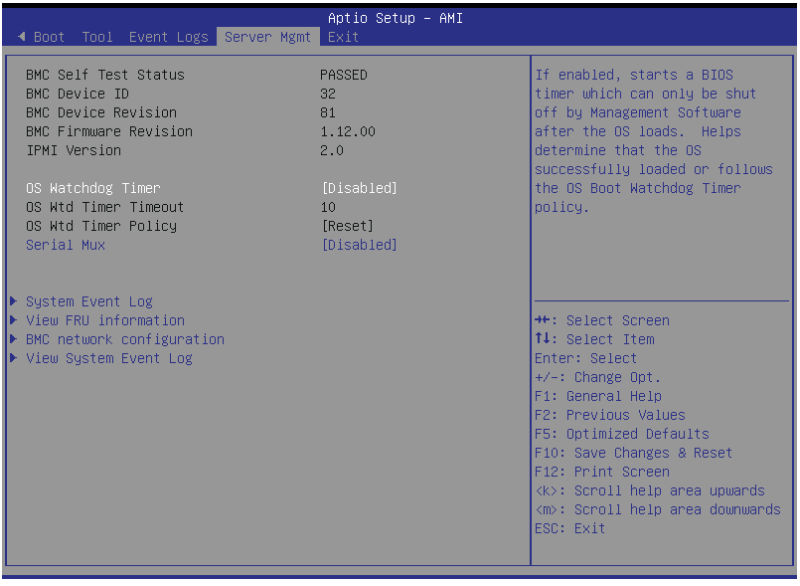
To configure the BMC in the BIOS:

1. Restart the remote server, then press <Del> during POST to enter the BIOS setup.
2. Go to the **Server Mgmt** menu, then select the **BMC network configuration** sub-menu. Use this sub-menu to configure the BMC settings.
3. When finished, press <F10> to save your changes and exit the BIOS setup.

2.5 Server Mgmt menu

The Server Management menu displays the server management status and allows you to change the settings.

NOTE: Not all BIOS items are mentioned in this section as they may vary between system models. Only the BMC related items are mentioned.



OS Watchdog Timer

This item allows you to start a BIOS timer which can only be shut off by Management Software after the OS loads.
Configuration options: [Disabled] [Enabled]

NOTE: The following items are available only when **OS Watchdog Timer** is set to **[Enabled]**.

OS Wtd Timer Timeout

Allows you to configure the length of the OS Boot Watchdog Timer in minutes.

OS Wtd Timer Policy

This item allows you to configure the how the system should respond if the OS Boot Watch Timer expires.
Configuration options: [Do Nothing] [Reset] [Power Down] [Power Cycle]

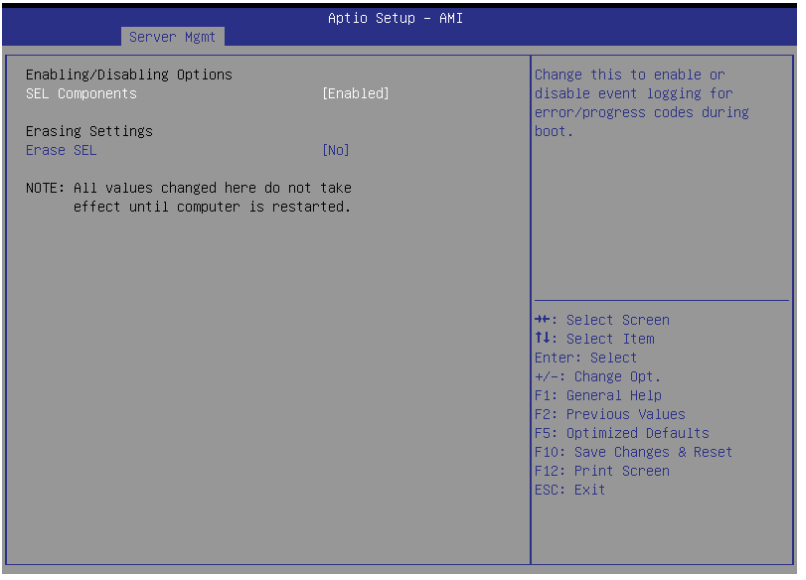
Serial Mux

Allows you to enable or disable serial mux configuration.
Configuration options: [Enabled] [Disabled]

2.5.1 System Event Log

Allows you to change the SEL event log configuration.

NOTE: The values changed here do not take effect until the server is restarted.



SEL Components

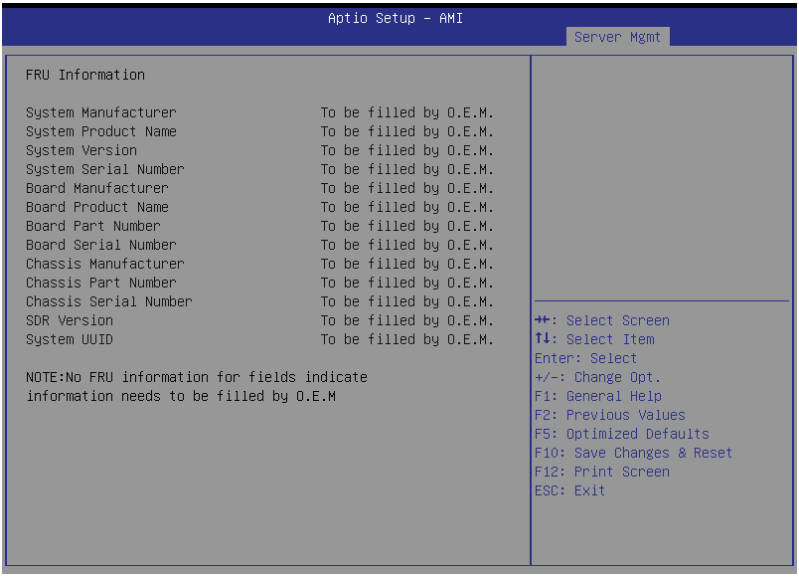
Allows you to enable or disable logging for error/progress codes during boot.
Configuration options: [Enabled] [Disabled]

Erase SEL

Allows you to choose options for erasing SEL.
Configuration options: [No] [Yes, On next reset] [Yes, On every reset]

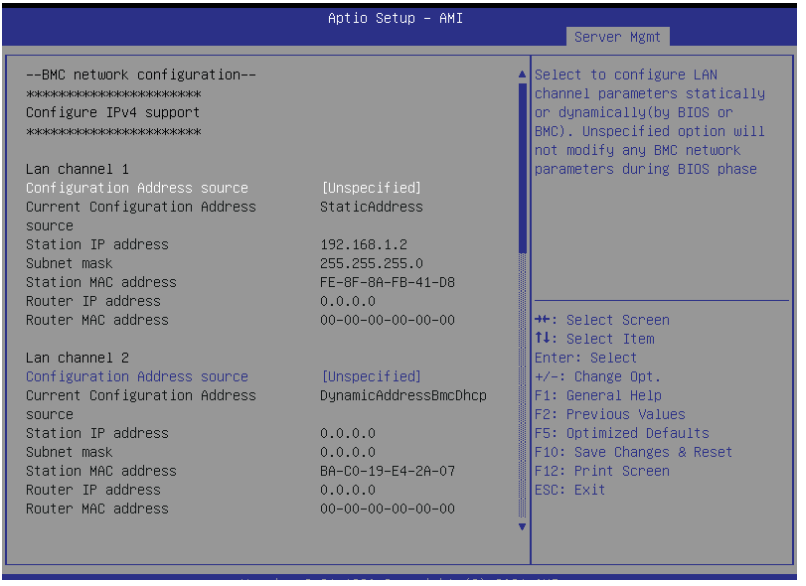
2.5.2 View FRU Information

Allows you to view FRU-related information.



2.5.3 BMC network configuration

Allows you to set the BMC LAN parameter settings.



Configure IPV4 support

DM_LAN / Shared LAN

Configuration Address source

Allows you to set the LAN channel parameters statically or dynamically (by BIOS or by BMC). [Previous State] option will not modify any BMC network parameters during BIOS phase. Configuration options: [Unspecified] [Static] [DynamicBmcDhcp]

NOTE: The following items are available only when **Configuration Address Source** is set to **[Static]**.

Station IP address

Allows you to set the station IP address.

Subnet mask

Allows you to set the subnet mask. We recommend that you use the same Subnet Mask you have specified on the operating system network for the used network card.

Router IP Address

Allows you to set the router IP address.

Router MAC Address

Allows you to set the router MAC address.

Configure IPV6 support

DM_LAN / Shared LAN

IPV6 support

Allows you to enable or disable IPV6 support.
Configuration options: [Enabled] [Disabled]

NOTE: The following items are available only when **IPv6 Support** is set to **[Enabled]**.

Configuration Address source

Allows you to set the LAN channel parameters statically or dynamically (by BIOS or by BMC). [Previous State] option will not modify any BMC network parameters during BIOS phase.
Configuration options: [Unspecified] [Static] [DynamicBmcDhcp]

NOTE: The following items are available only when **Configuration Address Source** is set to **[Static]**.

Station IPV6 address

Allows you to set the station IPV6 address.

Prefix Length

Allows you to set the prefix length (maximum of Prefix Length is 128).

Configuration Router LAN1/2 Address

Allows you to set the LAN channel parameters statically or dynamically (by BIOS or by BMC). Unspecified option will not modify any BMC network parameters during BIOS phase.
Configuration options: [Unspecified] [Static] [DynamicBmcDhcp]

NOTE: The following items are available only when **Configuration Router LAN1/2 Address** is set to **[Static]**.

IPV6 Router1 IP Address

Allows you to set the IPV6 Router1 IP address.

IPV6 Router1 Prefix Length Lan1/2

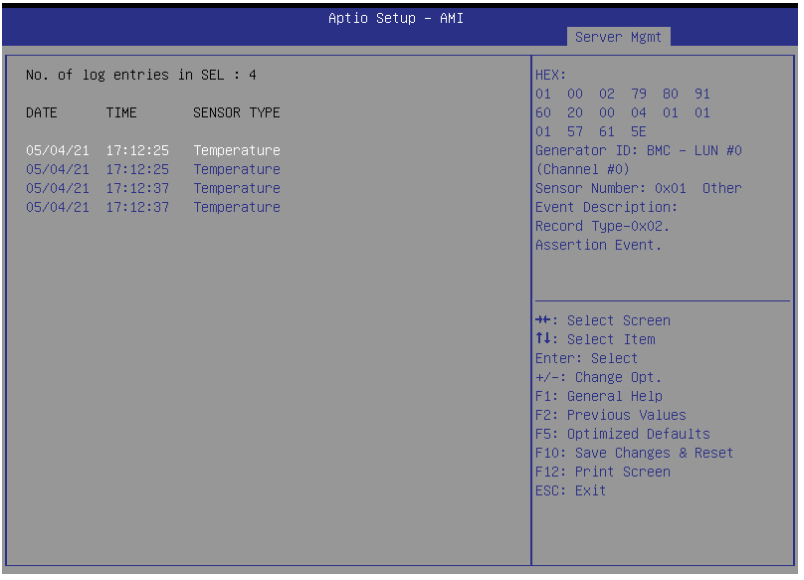
Allows you to set the IPV6 router prefix length (maximum of IPV6 Router Prefix Length is 128).

IPV6 Router1 Prefix Value Lan1/2

Allows you to change the IPV6 router prefix value.

2.5.4 View System Event Log

Allows you to view all the events in the BMC event logs. It may take up to 15 seconds to read all the BMC SEL records.



3

Web-based User Interface

This chapter tells you how to use the web-based user interface that the server management board supports.

3.1 Web-based user interface

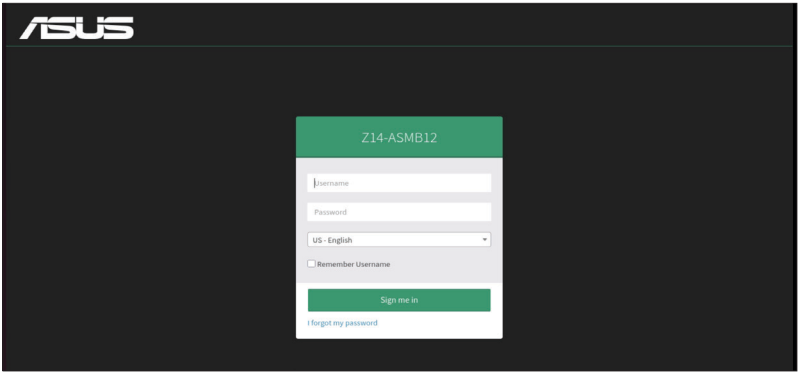
The web-based user interface allows you to easily monitor the remote server's hardware information including temperatures, fan rotations, voltages, and power. This application also lets you instantly power on, power off, or reset the remote server.

To enter the Web-based user interface:

1. Enter the BIOS Setup during POST.
2. Go to the **Server Mgmt Menu** > **BMC network configuration**, then under **Configure IPv4 Support**, find **DM_LAN** and set **Configuration Address source** to **[Static]**.
3. Enter the **Station IP address**, and **Subnet mask**.
4. Press <F10> to save your changes and exit the BIOS Setup.

3.1.1 Logging into the utility

1. Ensure that the LAN cable of the computer is connected to the LAN port of the remote server.
2. Open the web browser and type in the same IP address as the one in the remote server.
3. The below screen appears. There are two sets of user name and password you may use to login. You may either use the username (admin) and password (admin), or use the username (Administrator) and password (superuser). Click **Sign me in** after the username and password is entered.

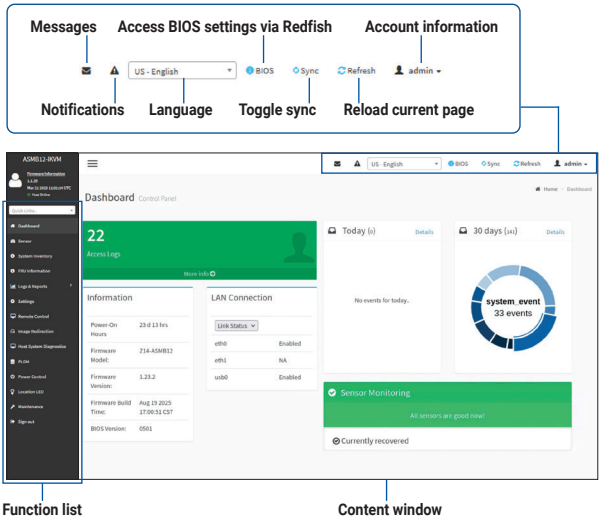


4. You will be prompted to change your password after logging in for the first time. Please ensure that you change the password to a new password.

IMPORTANT: Make sure to change the password for both **admin** and **Administrator** for security purposes.

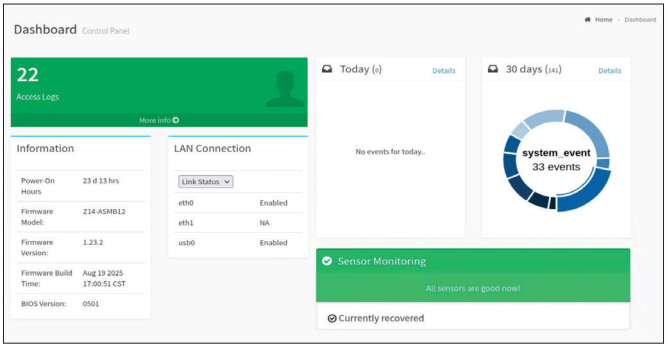
3.1.2 Using the utility

The web-based graphics user interface displays when you successfully log into the utility. Click on a function from the list on the left hand side to start using its specific functions.



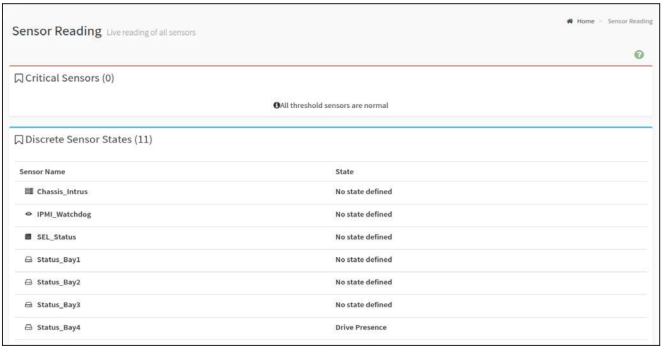
3.2 Dashboard

The dashboard gives you a quick overview of all the system status, sensors, messages, and logs. Click or hover your mouse over an item to see more details. Scroll down to view more items.



3.3 Sensor

The Sensor Readings page displays live readings for all the available sensors with details like Sensor Name, Status, Current Reading and Behavior. This page will automatically refresh itself with data from the database. Please note that there may be some delays when retrieving live data. Scroll down to view more items.

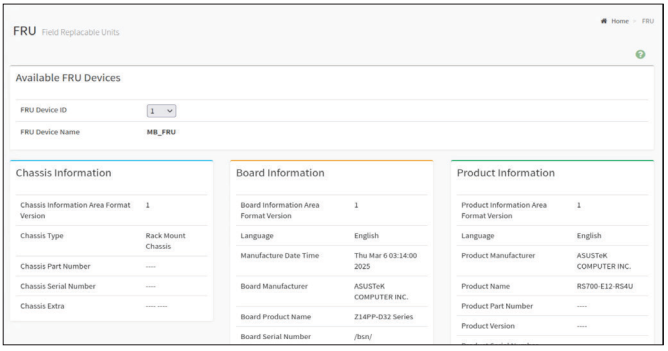


3.4 System Inventory

This page displays information about the components installed in the system.

3.5 FRU Information

This page displays the BMC's FRU device information. The FRU page shows Basic Information, Chassis Information, Board Information, and Product Information of the FRU device. Scroll down to view more items.

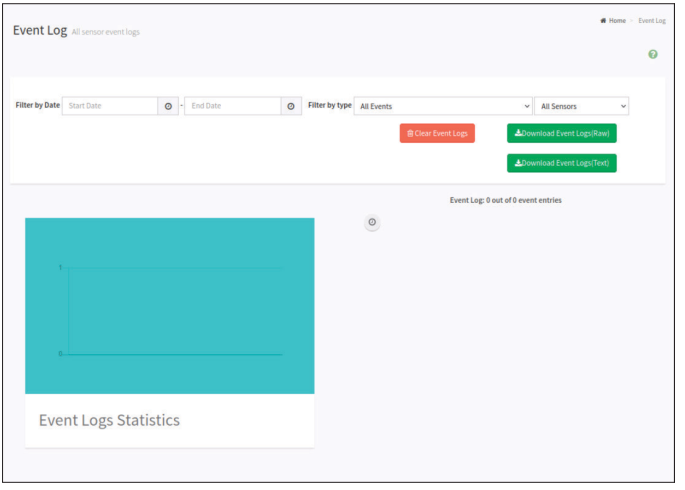


3.6 Logs & Reports

This menu contains the IPMI Event Log, System Log, Audit Log, and Video Log.

3.6.1 IPMI Event Log

This page displays platform event entries based on the IPMI specification, including threshold and discrete events primarily from sensor data. Click on a record to see the details of that entry. Click **Download Event Logs** to download the logs.



To view the Event Log for a selected time period

1. From the **Filter By Date** field, select the time period by selecting the **Start Date** and the **End Date** from the calender.
2. From the **Filter By Type** field, select the type of event and sensor name to view the events of the selected event type for that sensor.

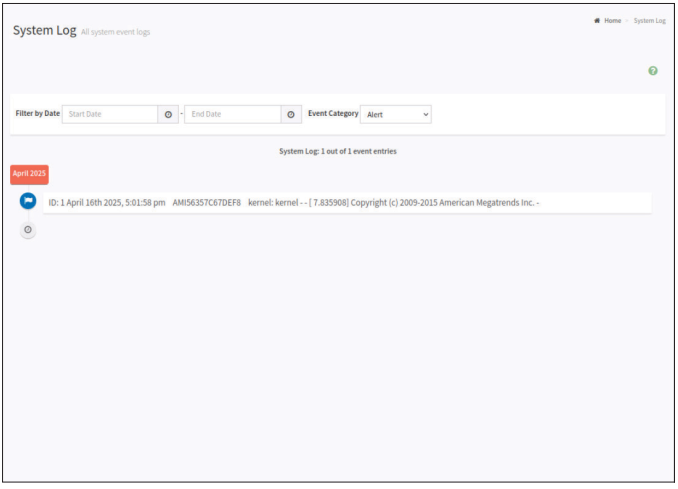
NOTE: To clear all events from the list, click the **Clear Event Logs** button.

3.6.2 System Log

This page displays system event logs, including system-level daemon and service logs.

NOTE:

- Logs have to be configured under **Settings** > **Log Settings** > **Advanced Log Settings** in order to display any entries.
- This page logs events from the embedded Linux OS on the BMC device, not the host system OS.



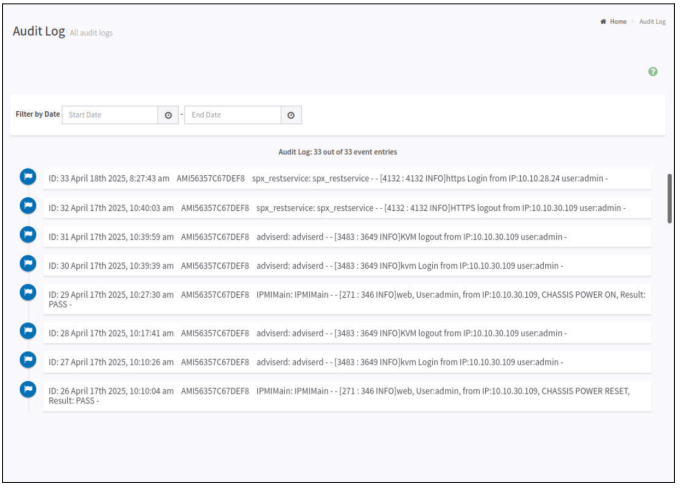
To view the System Log for a selected time period

1. From the **Filter By Date** field, select the time period by selecting the **Start Date** and the **End Date** from the calender.
2. From the **Event Category** field, select the type of event to view the events of the selected event type.

3.6.3 Audit Log

This page displays audit event logs for this device, including user login, logout, WebUI interface interactions through HTTP/HTTPS sessions.

NOTE: Logs have to be configured under **Settings** > **Log Settings** > **Advanced Log Settings** in order to display any entries.

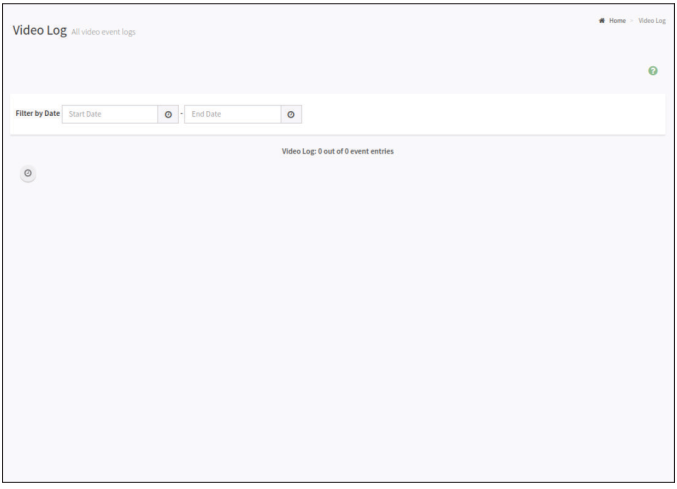


To view the Audit Log for a selected time period, from the **Filter By Date** field, select the time period by selecting the **Start Date** and the **End Date** from the calender.

3.6.4 Video Log

This page displays available recorded video log files (if the options have been configured).

NOTE: Logs have to be configured under **Settings** > **Log Settings** > **Advanced Log Settings** in order to display any entries.

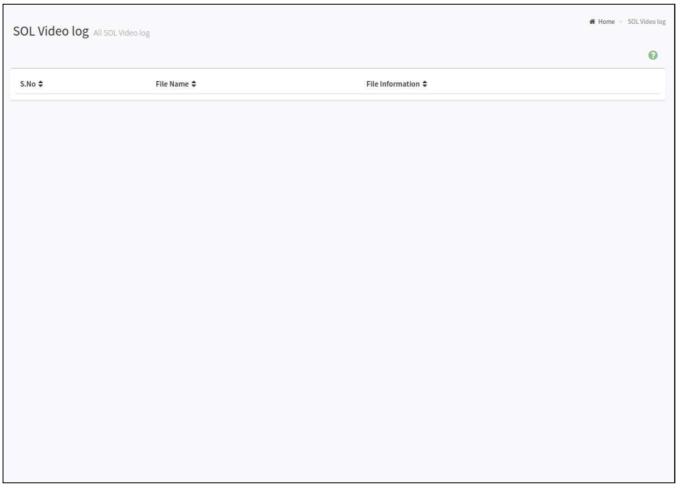


To view the Video Log for a selected time period, from the **Filter By Date** field, select the time period by selecting the **Start Date** and the **End Date** from the calender.

3.6.5 SOL Video Log

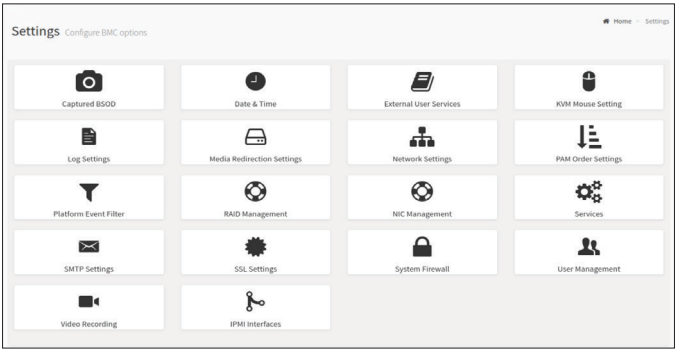
This page displays captured SOL session output, typically shown as raw serial console redirection logs (if the options have been configured).

NOTE: Logs have to be configured under **Settings** > **Log Settings** > **Advanced Log Settings** in order to display any entries.



3.7 Settings

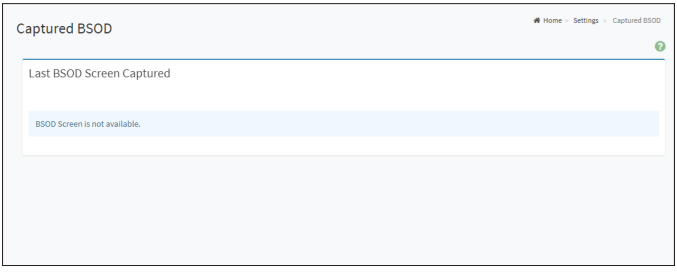
This page allows you to configure the BMC settings. Click on an item for more options.



3.7.1 Captured BSOD

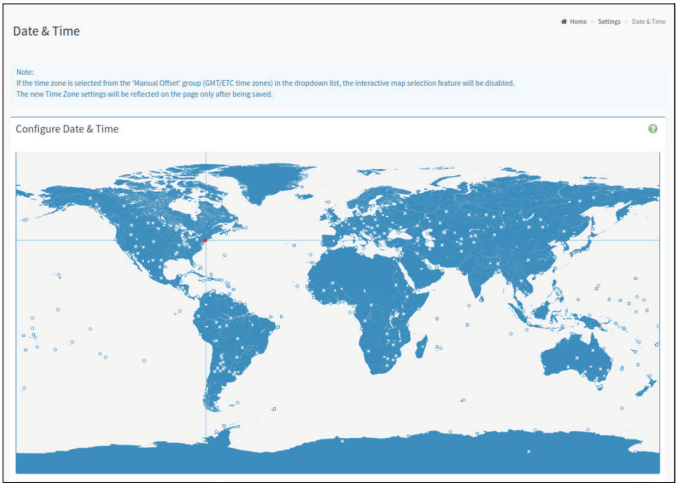
This page allows you to view a captured snapshot of the blue screen captured if the host system has crashed since the last reboot.

NOTE: The KVM service should be enabled to display the captured BSOD. Configure this at **Settings** > **Services** > **KVM**.



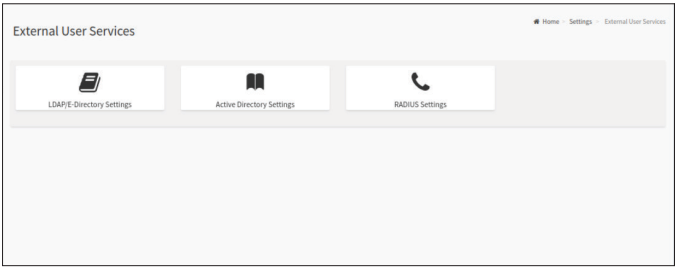
3.7.2 Date & Time

This page allows you to set the date and time on the BMC.



3.7.3 External User Services

This page allows you to configure the LDAP/E-directory settings, Active Directory settings, and RADIUS settings.



LDAP/E-directory Settings

This page allows you to set the LDAP/E-directory Settings. The **Lightweight Directory Access Protocol (LDAP)** is an application protocol for querying and modifying data of directory services implemented in Internet Protocol (IP) networks. If you have an LDAP server configured on your network, you can use it as an easy way to add, manage and authenticate MegaRAC® card users. This is done by passing login requests to your LDAP Server. This means that there is no need to define an additional authentication mechanism when using the MegaRAC® card. Since your existing LDAP Server keeps an authentication centralized, you will always know who is accessing the network resources and can easily define the user or group-based policies to control access.

Active directory Settings

This page allows you to configure Active Directory Settings. An Active Directory enables a variety of functions including the ability to provide information about objects, organize these objects for easy retrieval and access, allow access by users and administrators, and allow the administrators to configure security settings for the directory.

RADIUS Settings

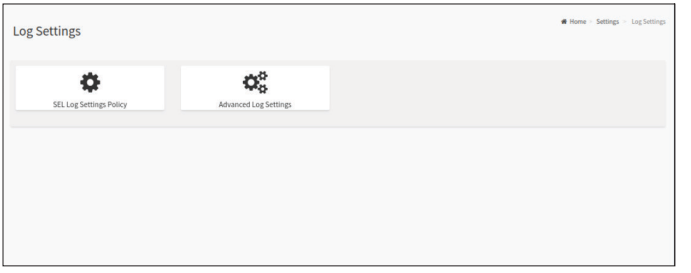
This page is used to enable or disable RADIUS authentication and enter the required information to access the RADIUS server.

3.7.4 KVM Mouse Setting

This page allows you to set the mouse mode. The Redirection Console handles mouse emulation from local window to remote screen using either of the three methods. Only the Administrator has the right to configure this option.

3.7.5 Log Settings

This page allows you to set the log policy for the event log.



SEL Log Settings Policy

This page is used to configure the log policy for the event log

Advanced Log Settings

This page allows you to set advanced settings for the event logs.

3.7.6 Media Redirection Settings

This page allows you to configure media redirection settings.

General Settings

This page allows you to enable or disable media support.

VMedia Instance Settings

This page allows you to configure settings for media devices.

Remote Session

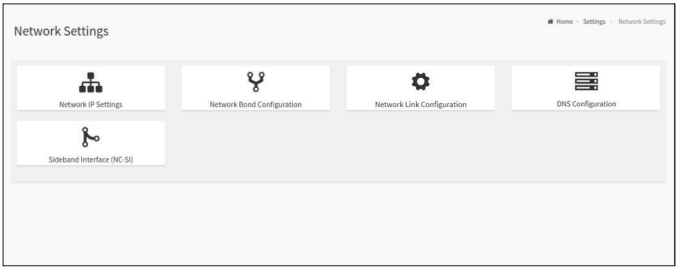
This page allows you to change the settings for the remote session.

Active Redirections

This page displays the list of media currently being redirected, and also displays the status and other basic information of each media item.

3.7.7 Network Settings

The Network Settings page allows you to configure the network settings.



Network IP Settings

This page allows you to manage LAN support for the interface.

Network Bond Configuration

This page allows you to enable network bonding for network interfaces.

Network Link Configuration

Select the network interface for link speed and duplex mode configuration.

DNS Configuration

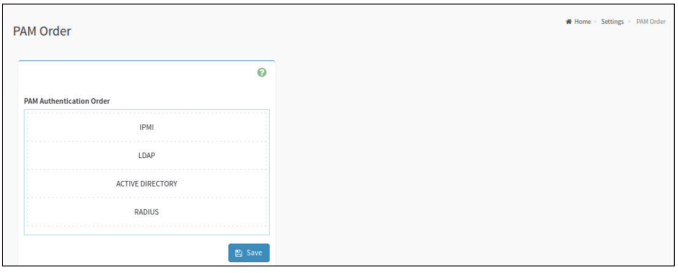
This page allows you to manage DNS settings of the device.

Sideband Interface (NC-SI)

This page allows you to manage sideband interface settings.

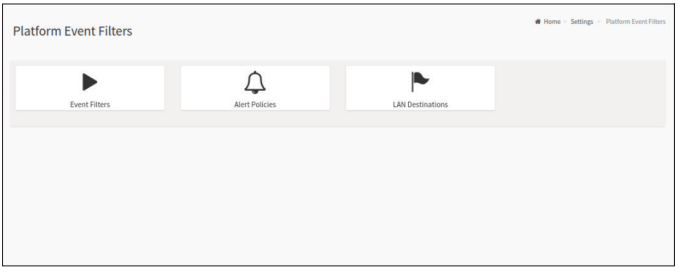
3.7.8 PAM Order Settings

This page allows you to configure the PAM order for user authentication into the BMC. The list of PAM modules supported in the BMC is displayed. Drag and drop the PAM modules to reorganize their positions in the sequence.



3.7.9 Platform Event Filters

Platform Event Filtering (PEF) provides a mechanism for configuring the BMC to take selected actions on event messages that it receives or has internally generated. These actions include operations such as system power-off, system reset, as well as triggering the generation of an alert. A PEF implementation is recommended to provide at least 16 entries in the event filter table. A subset of these entries should be pre-configured for common system failure events, such as over-temperature, power system failure, fan failure events, etc.



Event Filters

This page shows all configured Event filters and available slots. You can modify or add new event filter entries on this page. By default,15 event filter entries are configured out of a maximum of 40 slots.

Alert Policies

This page shows all configured Alert policies and available slots. You can modify or add new alert policy entries on this page. A maximum of 60 slots are available.

LAN Destinations

This page shows all configured LAN destinations and available slots. You can modify or add new LAN destination entries on this page. A maximum of 15 slots are available.

3.7.10 RAID Management

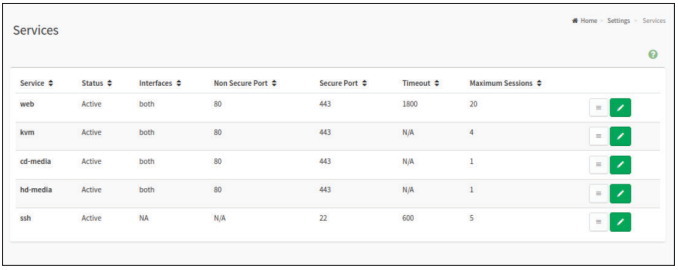
This page allows you to configure RAID settings.

3.7.11 NIC Management

This page allows you to configure NIC controller settings.

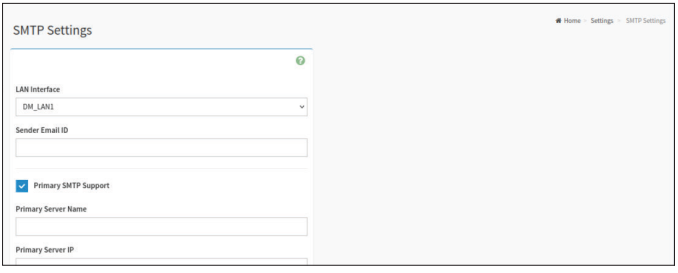
3.7.12 Services

This page lists services running on the BMC. It shows current status and other basic information about the services.



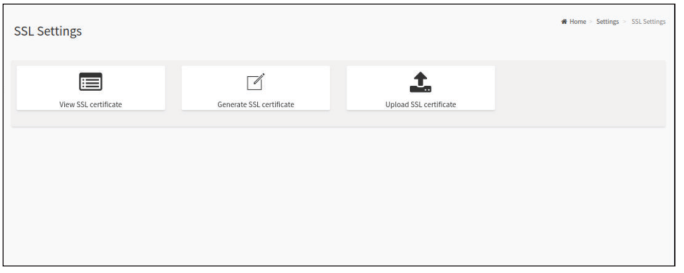
3.7.13 SMTP Settings

The SMTP page allows you to configure the SMTP mail server.



3.7.14 SSL Settings

The **Secure Sockets Layer** protocol ensures secure transactions between web servers and browsers. The protocol uses a third party, a **Certificate Authority (CA)**, to identify one or both ends of the transactions.



View SSL Certificate

This page displays the basic information about the uploaded SSL certificate.

Generate SSL Certificate

This page allows you to create an SSL certificate.

Upload SSL Certificate

This page allows you to upload a certificates and private keys.

3.7.15 System Firewall

This page allows you to create and manage firewalls on the BMC.

General Firewall Settings

This page allows you to create and manage existing general firewall settings.

IP Address Firewall Rules

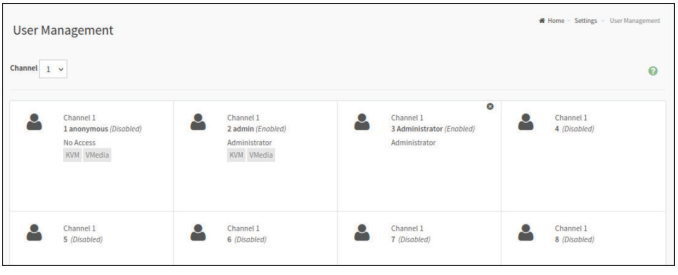
This page allows you to create and manage existing firewall settings based on IP address.

Port Firewall Rules

This page allows you to create and manage existing firewall settings based on ports.

3.7.16 User Management

The User Management page allows you to view the current list of user slots for the server. You can add a new user and modify or delete existing users.



3.7.17 Video Recording

This page allows you to customize the video recording settings.

Auto Video Settings

This page allows you to configure the events that will trigger the auto video recording function of the KVM server and display the list of available recorded video files on the BMC.

SOL Settings

This page allows you to configure SOL trigger settings, SOL video settings, and other SOL configuration settings.

3.7.18 IPMI Interfaces

This page allows you to configure IPMI interfaces on the BMC.

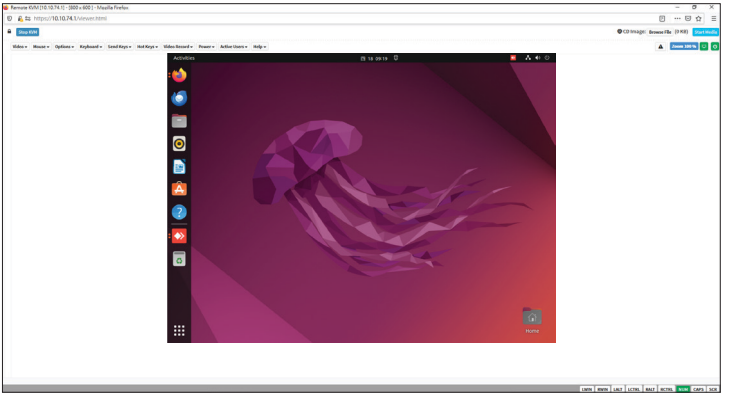
3.8 Remote Control

This menu allows you to perform remote operations on the server. To start remote KVM, click **Launch KVM**.

NOTE: Disable pop-up blockers in your web browser before launching remote KVM.

3.8.1 KVM

The remote console application, which is started using the WebGUI, allows you to control your server's operating system remotely, using the screen, mouse, and keyboard, and to redirect local CD/DVD, floppy diskettes and hard disk/USB thumb drives as if they were connected directly to the server.



Video

1. **Pause Video:** This option is used for pausing Console Redirection.
2. **Resume Video:** This option is used to resume the Console Redirection when the session is paused.
3. **Refresh Video:** This option can be used to update the display shown in the Console Redirection window.
4. **Host display:** This option allows you to enable or disable local video output on the remote system.
5. **Capture Screen:** This option allows you to screen capture the console redirection screen.

Mouse

1. **Show Client Cursor:** This menu item can be used to show or hide the local mouse cursor on the remote system.
2. **Mouse Mode:** This menu item allows you to select the mode or type of mouse support.

Options

1. **Block Privilege Request:** Allows you to block privilege requests.
2. **YUV:** Allows you to select the YUV.
3. **Quality:** Allows you to set the quality that ranges from 0 (Best Quality) to 7 (Worst Quality).

Keyboard

Keyboard Layout: This menu item allows you to select the keyboard layout.

Send Keys

1. **Hold Down**: These menu items can be used to act as holding down the corresponding key when in Console Redirection.
2. **Press and Release:** These menu items can be used to act as a press and release on the corresponding key when in Console Redirection.

Hot Keys

These menu items allow you to make use of hot keys.

Video Record

1. **Record Video**: This option allows you to start recording the console redirection screen.
2. **Stop Recording:** This option allows you to stop recording the console redirection screen.
3. **Record Settings:** This menu item allows you to configure the video recording settings.

Power

These menu items allow you to change the power settings. Click the desired option to execute the selected action.

Active Users

This menu will display the currently active users on the server.

Help

This menu will display the help menu.

Browse File

Click this button to add or modify a CD media, then click **Start Media** to start or stop the redirection of a physical DVD/CD-ROM drive and CD image types such as iso.

3.8.2 Serial over LAN (SOL)

Click **Activate** to start a Serial over LAN (SOL) session.

NOTE:

- Ensure that **COM2(SOL)** is enabled in the **Serial Port Console Redirection** section of the BIOS settings. Refer to the user guide for your motherboard or server for more information.
- Additional configuration may be required for full SOL functionality. Example configuration instructions are provided below for reference.

Configuring SOL

NOTE: These instructions are provided as an example and assume the operating system is Ubuntu 22.04 and the default serial port console redirection settings in the BIOS. For other Linux distributions, refer to the documentation included with the distribution.

1. Open a terminal window, then run the following command to check if SOL is enabled and in use for the serial console ttyS1.

```
dmesg | grep ttyS
[    0.583705] 00:03: ttyS0 at I/O 0x3f8 (irq = 4, base_baud = 115200) is a 16550A
[    0.607324] 00:04: ttyS1 at I/O 0x2f8 (irq = 3, base_baud = 115200) is a 16550A
```

2. Navigate to and open **/etc/default/grub**, then add “console=ttyS1,115200n8” to the GRUB_CMDLINE_LINUX_DEFAULT line.

```
# If you change this file, run 'update-grub' afterwards to update
# /boot/grub/grub.cfg
# For full documentation of the optins in this file, see:
#  info -f grub -n 'Simple configuration'

GRUB_DEFAULT=0
GRUB_TIMEOUT_STYLE=hidden
GRUB_TIMEOUT=0
GRUB_DISTRIBUTOR='lsb_release -i -s 2> /dev/null || echo Debian'
GRUB_CMDLINE_LINUX_DEFAULT="quiet splash console=ttyS1,115200n8"
GRUB_CMDLINE_LINUX=""
```

3. Run the following command to update the grub configuration file, then restart the remote server.

```
update-grub
Sourcing file '/etc/default/grub'
Sourcing file '/etc/default/grub.d/init-select.cfg'
Generating grub configuration file...
Found linux image: /boot/vmlinz-6.8.0.59-generic

...

Adding boot menu entry for UEFI Firmware Settings ...
Done
```

3.9 Image Redirection

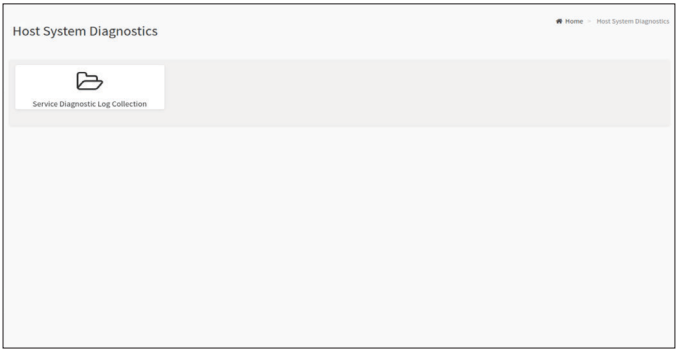
This menu allows you to emulate CD/DVD/Floppy/HDD Images as media drives to host.

Remote Media

This page allows you to select a remote media to emulate to host as media through BMC.

3.10 Host System Diagnostics

This page allows you to configure host system diagnostics settings.



3.11 PLDM

This page allows you to view PLDM-related information.

Sensor Reading

This page allows you to view live PLDM sensor readings for a selected PLDM device.

FRU Information

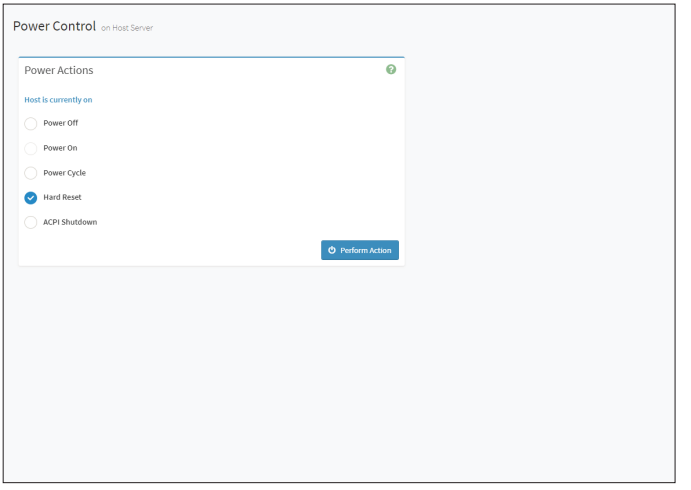
This page allows you to view FRU information for a selected PLDM device.

Event Log

This page allows you to view the PLDM event log.

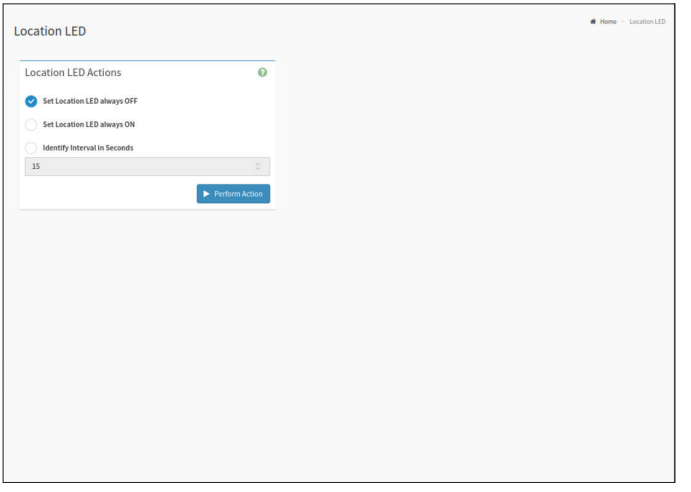
3.12 Power Control

The Power Control displays the current server power status and allows you to change the current settings. Select the desired option, then click **Perform Action** to execute the selected action.



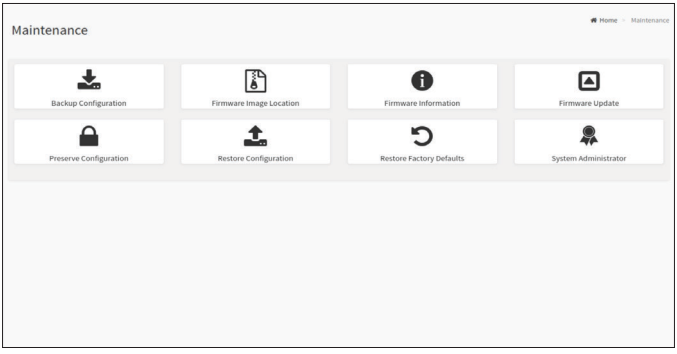
3.13 Locator LED

The Locator LED allows you to perform a chassis identify command control operation. Select the desired LED locator LED behavior, or select the **Identify Interval in Seconds** option and enter the amount of seconds, then click **Perform Action** to execute the selected action.



3.14 Maintenance

The Maintenance menu allows you to select specific configuration items to be preserved or to restore the default configuration for your device.



Backup Configuration

This page allows you to select specific configuration items to backup. Check the desired items and click **Download Config** to download the .bak file.

Firmware Image Location

This page allows you to select the image location type.

Firmware Information

This page displays the Build Date, Build Time, and Firmware Version of the active BMC image.

Firmware Update

This page allows you to update the firmware of the device remotely.

Preserve Configuration

This page allows you to select specific configuration items to be preserved when Restore Configuration is initiated.

Restore Configuration

This page allows you to select and upload a .bak file to restore the configuration settings.

Restore Factory Defaults

This page allows you to select configuration items that will be preserved while all other configuration items are restored to their default values. If none are selected, all the configuration items will be restored to their default values.

System Administrator

This page allows you to change the System Administrator settings.

Appendix

The Appendix includes information on common problems that you may encounter when installing or using the server management board.

Troubleshooting

NOTE: This troubleshooting guide provides answers to some common problems that you may encounter during installation or use. These problems require simple troubleshooting that you can perform by yourself. Contact Technical Support if you encounter problems not mentioned in this section.

Problem	Solution
The local/central server cannot connect to the server management board	1. Check if the LAN cable is connected to the LAN port. 2. Make sure that the IP address of both the remote and local/central servers are on the same subnet. (Refer to chapter 2 for details.) Try "ping xxx.xxx.xxx.xxx" (remote server IP) on the local/central server and ensure that a ping response is received. 3. Check if the IP source is set to [DHCP]. When set to [DHCP], the IP address cannot be manually configured.
All the SEL (System Event Log) cannot be displayed	The maximum number of SEL events is 3639 events.
The date/time shown in SEL (System Event Log) screen is incorrect	Refer to the **Date & Time** section to check if the time zone is set up correctly.
The server management board has network connection problems in a firewalled network environment	Ask your network administrator to add the following port numbers to the firewall settings: 623 (IPMI) (TCP & UDP) 443 (HTTPs) (TCP) 443 (iKVM) (TCP) 443 (Virtual CDROM & HD) (TCP) 161 (SNMP) (UDP)

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Suomi ASUSTeK Computer Inc. ilmoittaa täten, että tämä laite on asiaankuuluvien direktiivien olennaisten vaatimusten ja muiden tätä koskevien säädösten mukainen. EU-yhdenmukaisuusilmoituksen koko teksti on luettavissa osoitteessa: www.asus.com/support

Ελληνικά Με το παρόν, η AsusTek Computer Inc. δηλώνει ότι αυτή η συσκευή συμμορφώνεται με τις θεμελιώδεις απαιτήσεις και άλλες σχετικές διατάξεις των Οδηγιών της ΕΕ. Το πλήρες κείμενο της δήλωσης συμβατότητας είναι διαθέσιμο στη διεύθυνση: www.asus.com/support

Magyar Az ASUSTeK Computer Inc. ezennel kijelenti, hogy ez az eszköz megfelel a kapcsolódó Irányelvek lényeges követelményeinek és egyéb vonatkozó rendelkezéseinek. Az EU megfelelőségi nyilatkozat teljes szövege innen letölthető: www.asus.com/support

Latviski ASUSTeK Computer Inc. ar šo paziņo, ka šī ierīce atbilst saistīto Direktīvu būtiskajām prasībām un citiem citiem saistošajiem nosacījumiem. Pilns ES atbilstības paziņojuma teksts pieejams šeit: www.asus.com/support

Lietuvių „ASUSTeK Computer Inc.“ šiuo tvirtina, kad šis įrenginys atitinka pagrindinius reikalavimus ir kitas svarbias susijusių direktyvų nuostatas. Visą ES atitikties deklaracijos tekstą galima rasti: www.asus.com/support

Norsk ASUSTeK Computer Inc. erklærer herved at denne enheten er i samsvar med hovedsaklige krav og andre relevante forskrifter i relaterte direktiver. Fullstendig tekst for EU-samsvarserklæringen finnes på: www.asus.com/support

Polski Firma ASUSTeK Computer Inc. niniejszym oświadcza, że urządzenie to jest zgodne z zasadniczymi wymogami i innymi właściwymi postanowieniami powiązanych dyrektyw. Pełny tekst deklaracji zgodności UE jest dostępny pod adresem: www.asus.com/support

Português A ASUSTeK Computer Inc. declara que este dispositivo está em conformidade com os requisitos essenciais e outras disposições relevantes das Diretivas relacionadas. Texto integral da declaração da UE disponível em: www.asus.com/support

Română ASUSTeK Computer Inc. declară că acest dispozitiv se conformează cerinţelor esenţiale şi altor prevederi relevante ale directivelor conexe. Textul complet al declaraţiei de conformitate a Uniunii Europene se găseşte la: www.asus.com/support

Srpski ASUSTeK Computer Inc. ovim izjavljuje da je ovaj uređaj u saglasnosti sa osnovnim zahtevima i drugim relevantnim odredbama povezanih Direktiva. Pun tekst EU deklaracije o usaglašenosti je dostupan da adresi: www.asus.com/support

Slovensky Spoločnosť ASUSTeK Computer Inc. týmto vyhlasuje, že toto zariadenie vyhovuje základným požiadavkám a ostatým príslušným ustanoveniam príslušných smerníc. Celý text vyhlásenia o zhode pre štáty EÚ je dostupný na adrese: www.asus.com/support

Slovenščina ASUSTeK Computer Inc. izjavlja, da je ta naprava skladna z bistvenimi zahtevami in drugimi ustreznimi določbami povezanih direktiv. Celotno besedilo EU-izjave o skladnosti je na voljo na spletnem mestu: www.asus.com/support

Español Por la presente, ASUSTeK Computer Inc. declara que este dispositivo cumple los requisitos básicos y otras disposiciones pertinentes de las directivas relacionadas. El texto completo de la declaración de la UE de conformidad está disponible en: www.asus.com/support

Svenska ASUSTeK Computer Inc. förklarar härmed att denna enhet överensstämmer med de grundläggande kraven och andra relevanta föreskrifter i relaterade direktiv. Fulltext av EU-försäkran om överensstämmelse finns på: www.asus.com/support

Українська ASUSTeK Computer Inc. заявляє, що цей пристрій відповідає основним вимогам та іншим відповідним положенням відповідних Директив. Повний текст декларації відповідності стандартам ЄС доступний на: www.asus.com/support

Türkçe AsusTek Computer Inc., bu aygıtın temel gereksinimlerle ve ilişkili Yönergelerin diğer ilgili koşullarıyla uyumlu olduğunu beyan eder. AB uygunluk bildiriminin tam metni şu adreste bulunabilir: www.asus.com/support

Bosanski ASUSTeK Computer Inc. ovim izjavljuje da je ovaj uređaj usklađen sa bitnim zahtjevima i ostalim odgovarajućim odredbama vezanih direktiva. Cijeli tekst EU izjave o usklađenosti dostupan je na: www.asus.com/support

Simplified UKCA Declaration of Conformity

ASUSTeK Computer Inc. hereby declares that this device is in compliance with the essential requirements and other relevant provisions of related Regulations. Full text of UKCA declaration of conformity is available at: www.asus.com/support

Service and Support

Visit our multi-language website at https://www.asus.com/support.