ASMB10-iKVM

Server Management Board

User Guide

E20716
Revised Edition V2
August 2022

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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.

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-003(B)/NMB-003(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-003(B)/NMB-003(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 http://csr.asus.com/english/REACH.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 http://csr.asus.com/english/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: Hardware Information**

  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 shows the location of the LAN ports for server management and BMC connector on server motherboards. This section also presents 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 on ASUS hardware and software products. Refer to the ASUS contact 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 DOS prompt, type the command line: `format A:/S`

ASMB10-iKVM specifications summary

Chipset	Aspeed 2600
Internal RAM	448 MB for system 64 MB for video
Internal ROM	64 MB
Timers	32-bit Watchdog Timer
Main features	The 7th Generation of ASPEED Base Board Management Controller Native PCIe support 2D Video Graphic Adapter with PCIe bus interface Remote presence (iKVM) Secure boot engine
Form factor	21 nm x 21 nm

*** 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 ASMB10-iKVM server management board!

The ASUS ASMB10-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 ASMB10-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

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 Serial 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)
- IPMI command to read BIOS Post Code
- Platform Environment Control Interface (PECI) over IPMI
- Intel SPS (Server Platform Services) 4.0 Compliance
- Intel Node Manager
- Power Control
- FW Maintenance
- BMC Syslog & Audit
- Remote syslog
- SOLSSH
- Backup-Restore BMC Configuration
- BIOS Configuration
- BIOS Update
- ASUS Thermal Radar
- BMC Secured Boot

2. KVM Support

- JViewer support
- HML5Viewer Support
- Jviewer Standalone Application
- 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
   - Sensor
   - Sensor Detail
   - Sensor Threshold Setting
   - System Inventory
   - FRU Information
   - Log & Report
   - IPMI Log
   - System Log
   - Audit Log
   - Video Log
   - Setting
   - Date & Time
   - Active Directory
   - Lightweight Directory Access Protocol (LDAP)
   - Radius
   - KVM Mouse
   - Log
   - Media Redirection
   - Network
   - Network Bond
   - Domain Name Server (DNS)
   - Network Controller Sideband Interface (NC-SI)
   - 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)
- Remote Control
- iKVM
- HTML5 based SOL
- Image Redirection
- Power Control
- Maintenance
- Configuration Backup & Restore
- Firmware Update
- Restore Factory Defaults
- Sign Out
- REST based API Support

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 alerting at run time
  - CPU, Memory warning
  - Temperature, Fan and PSU

6. Device Support

- I2C Device Support
- KCS Device Support
- ADC Device Support
- eSPI Device Support

- GPIO Device Support
- Host SPI Flash Device Support
- NCSI Device Support
- Netmon Device Support
- PECI Device Support
- PWMTACH Device Support
- BMC Reset Driver Support
- Snoop Device Support
- UART Route Support
- USB Device Support
- Video Device Support
- Watchdog Device Support

**** Specifications are subject to change without notice.**

1.4 System requirements

Before you install the ASMB10-iKVM board, check if the remote server system meets the following requirements:

- ASUS server motherboard 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 (MAC)

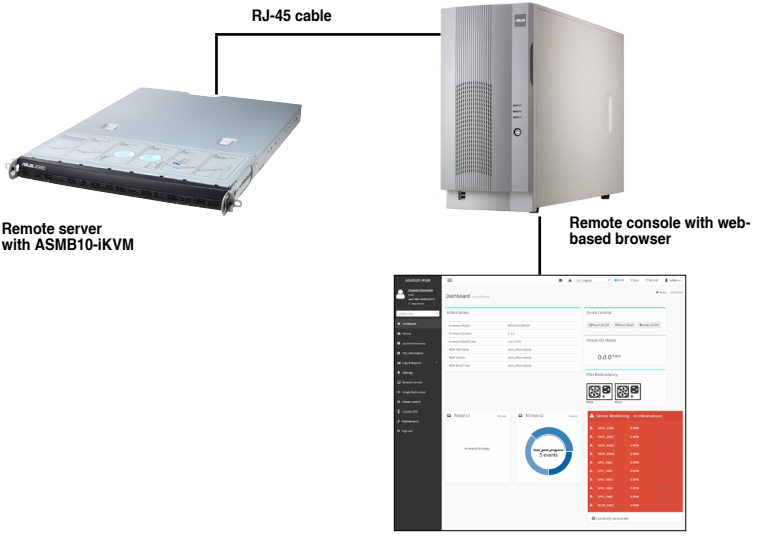
* Visit www.asus.com for an updated list of server motherboards that support the ASMB10-iKVM.

** See the Appendix for details.

1.5 Network setup

The ASMB10-iKVM server management board installed on the remote server connects to a local/central server via direct LAN connection or through a network hub. Below are the supported server management configurations.

Direct LAN connection



LAN connection through a network hub

2 Hardware Information

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.

- 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:

1. Insert the LAN cable plug to the LAN port for server management.

Refer to the Appendix for the location of 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.

Every time after the AC power is re-plugged, you have to wait for about 120 seconds for the system power up.

2.3 Firmware update and IP configuration

You need to update the ASMB10-iKVM firmware and configure IP source before you start using the ASMB10-iKVM board.

2.3.1 Firmware update

To update the firmware in DOS:

Ensure you are connected to the Internet.

1. Launch your browser and visit the ASUS ASMB10 website, then navigate to **Support** > **Driver & Utility** > **BIOS & FIRMWARE**, and download the latest firmware image file.
2. Unzip the downloaded .zip file then launch the FLASH2.BAT file in DOS to begin the ASMB10 firmware update.

2.4 BIOS configuration

You need to adjust the settings in the BIOS setup of the remote server for correct configuration and connection to the central server.

- Update the remote server BIOS file following the instructions in the motherboard/ system user guide. Visit the ASUS website (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

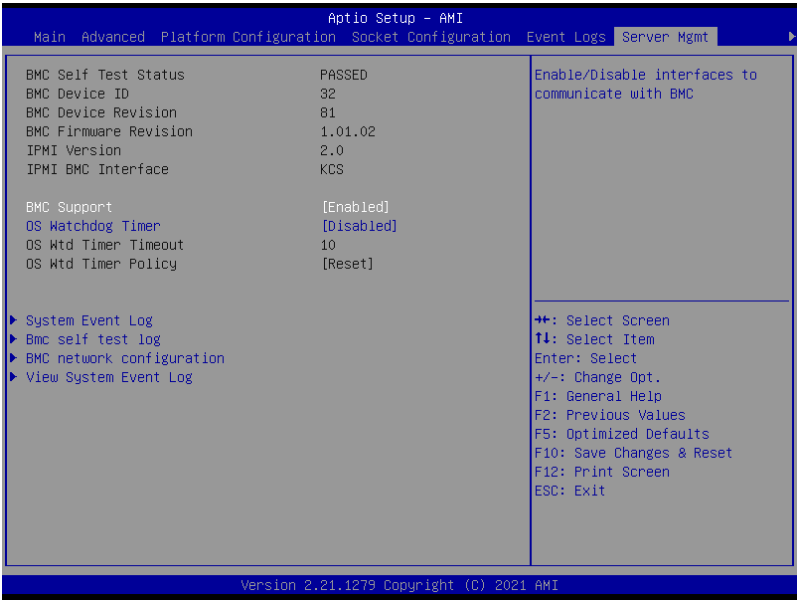
To configure the BMC in the BIOS:

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.

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 Intel Management Software after the OS loads.
Configuration options: [Disabled] [Enabled]

The following items is configurable only when the **OS Watchdog Timer** is set to **[Enabled]**.

OS Wtd Timer Timeout

Allows you to configure the length fo the OS Boot Watchdog Timer.
Configuration options: [5 minutes] [10 minutes] [15 minutes] [20 minutes]

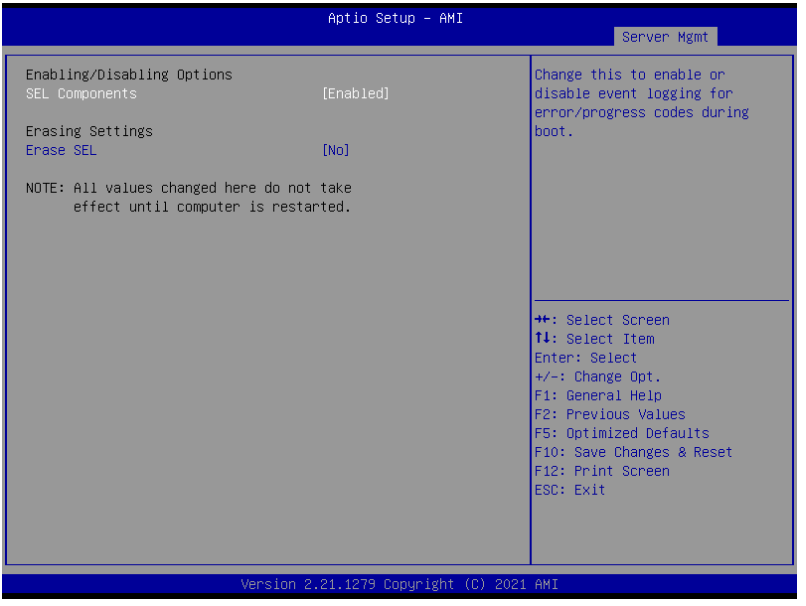
OS Wtd Timer Policy

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]

2.5.1 System Event Log

Allows you to change the SEL event log configuration.

All values changed here do not take effect until computer is restarted.



SEL Components

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

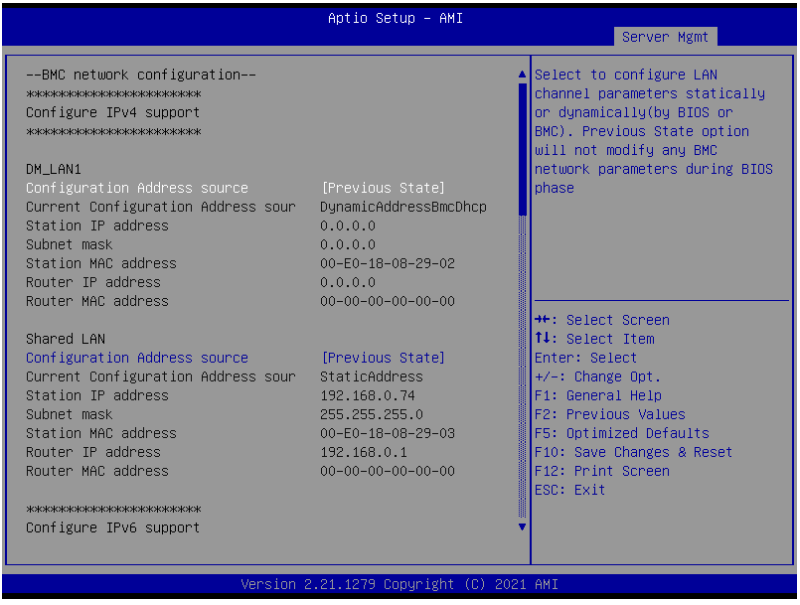
The following item is available only when **SEL Components** is set to **[Enabled]**.

Erase SEL

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

2.5.2 BMC network configuration

Allows you to set the BMC LAN parameter settings.



Configure IPV4 support

DM_LAN1 / 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: [Previous State] [Static] [DynamicBmcDhcp]

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_LAN1 / Shared LAN

IPV6 support

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

The following items appear 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: [Previous State] [Static] [DynamicBmcDhcp]

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: [Previous State] [Static] [DynamicBmcDhcp]

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

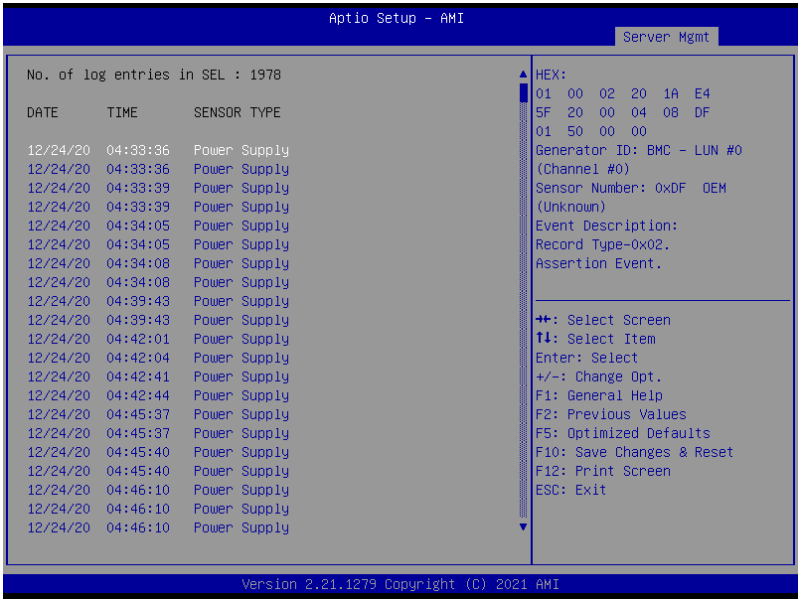
Allows you to set the IPV6 router prefix length (maximum of IPV6 Router Prefix Length is 128).

IPV6 Router1 Prefix Value Lan1/2

Allows you to change the IPV6 router prefix value.

2.5.3 View System Event Log

Allows you to view all the events in the BMC event logs. It will take a maximum of 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

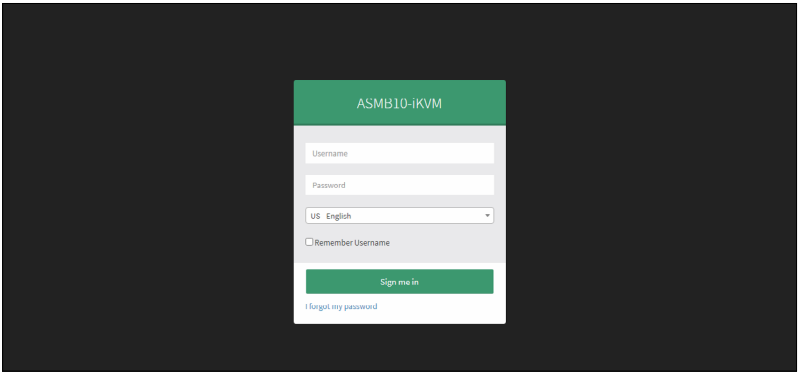
The web-based user interface allows you to easily monitor the remote server's hardware information including temperatures, fan rotations, voltages, and power. This application also lets you instantly power on/off or reset the remote server.

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 **DMLAN1** 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 in 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). Then click Login.

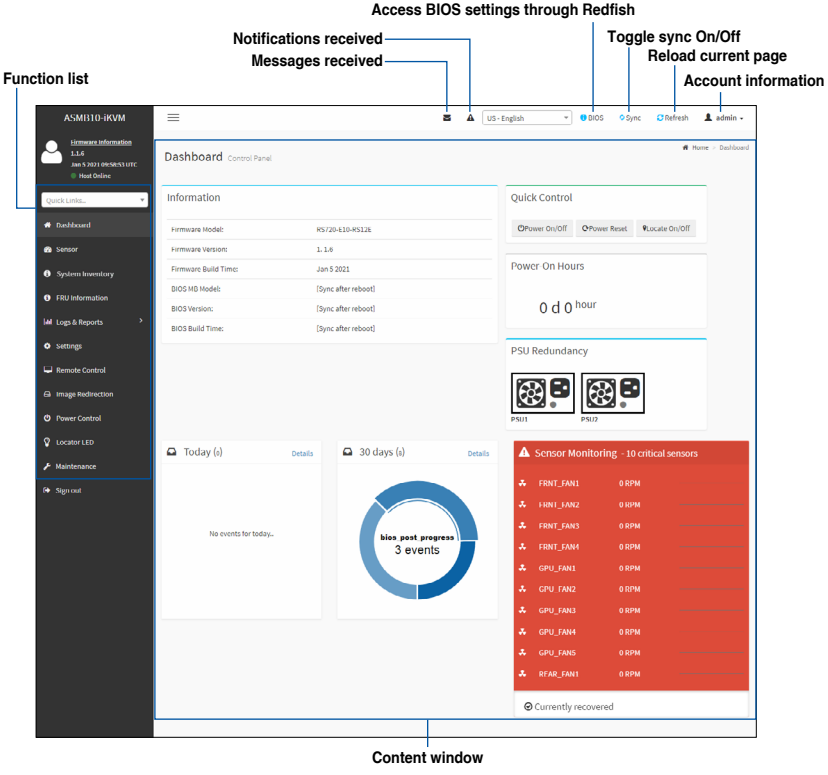


4. You will be prompted to change your password after logging in for the first time. Please ensure that you change the password to a new password.

Make sure to change the password for both username **admin** and **Administrator** for security sake.

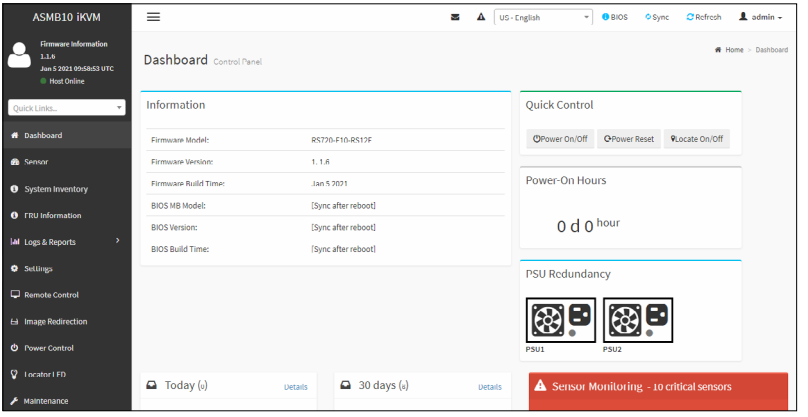
3.1.2 Using the utility

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



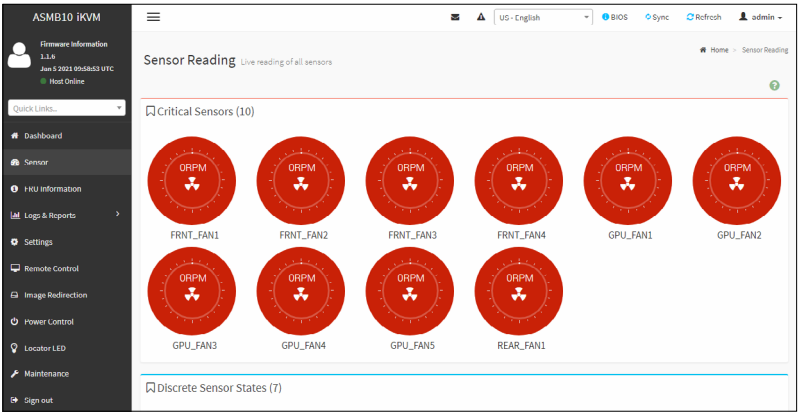
3.2 Dashboard

The dashboard gives you a quick overview for 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.



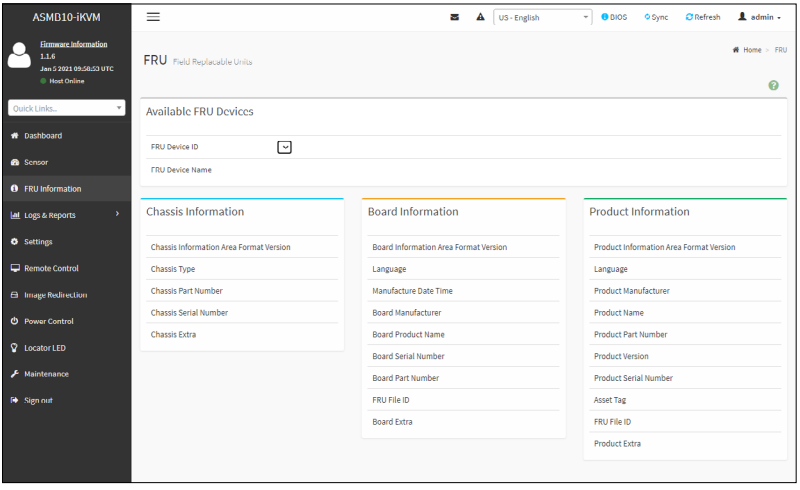
3.3 Sensor

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



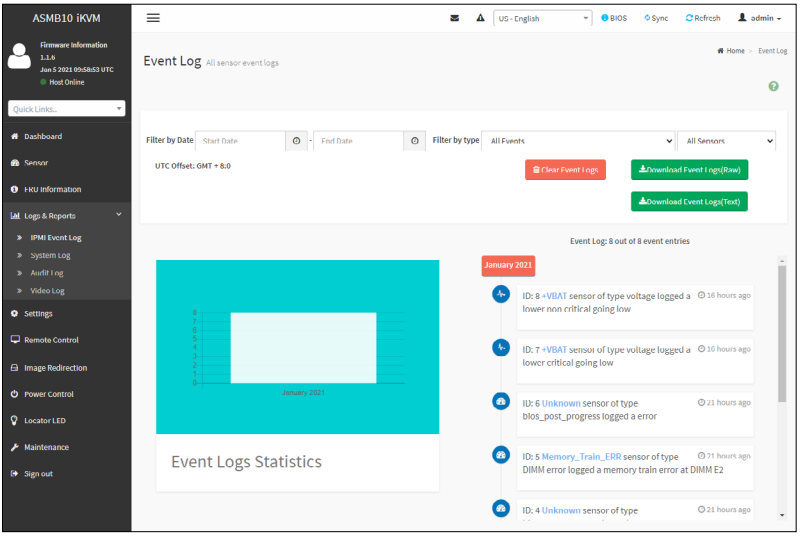
3.4 FRU Information

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.



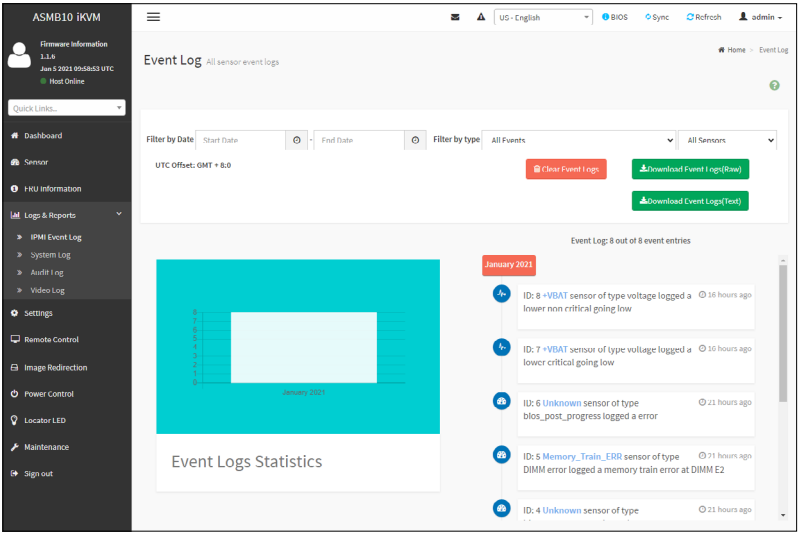
3.5 Logs & Reports

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



3.5.1 IPMI Event Log

This page displays the list of events incurred by different sensors on this device. Click on a record to see the details of that entry. You can click the **Download Event Logs** button to download the logs.



To view the Event Log on a selected time period

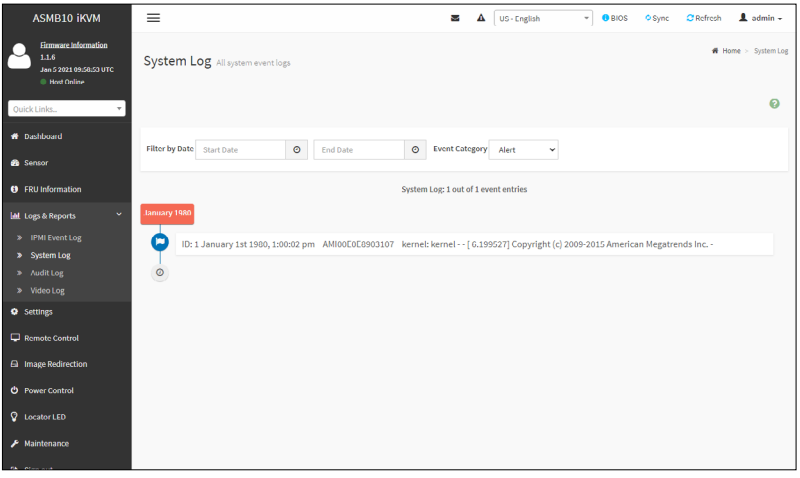
1. From the **Filter By Date** field, select the time period by selecting the **Start Date** and the **End Date** from the calender.
2. From the **Filter By Type** field, select the type of event and sensor name to view the events of the selected event type for that sensor.

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

3.5.2 System Log

This page displays logs of system events for this device (if the options have been configured).

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



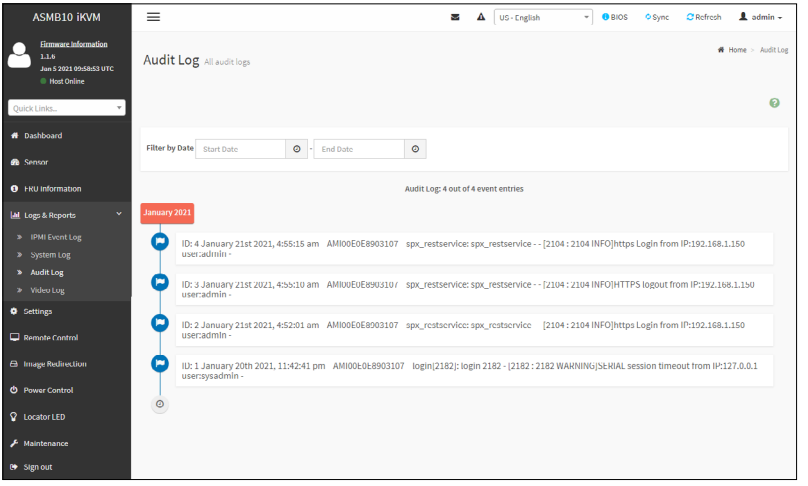
To view the System Log on a selected time period

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.

3.5.3 Audit Log

This page displays logs of audit events for this device (if the options have been configured).

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

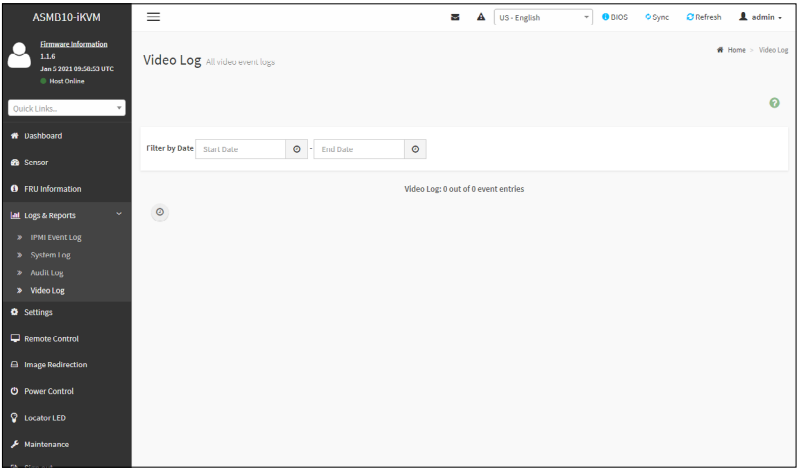


To view the Audit Log on a selected time period, from the **Filter By Date** field, select the time period by selecting the **Start Date** and the **End Date** from the calender.

3.5.4 Video Log

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

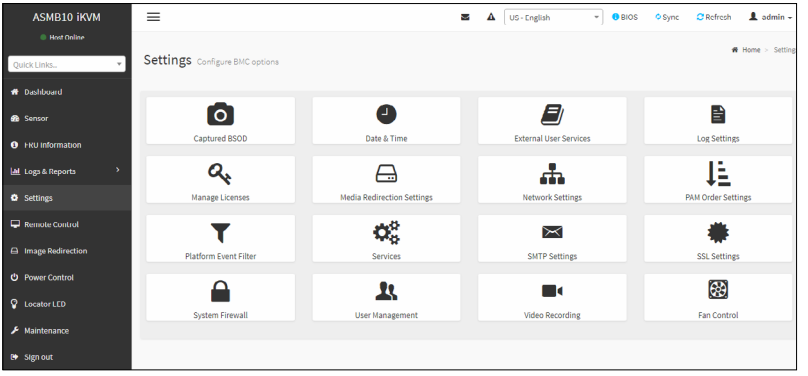
Logs have to be configured under **Settings** > **Log Settings** > **Advanced Log Settings** in order to display any entries.



To view the Video Log on 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 Settings

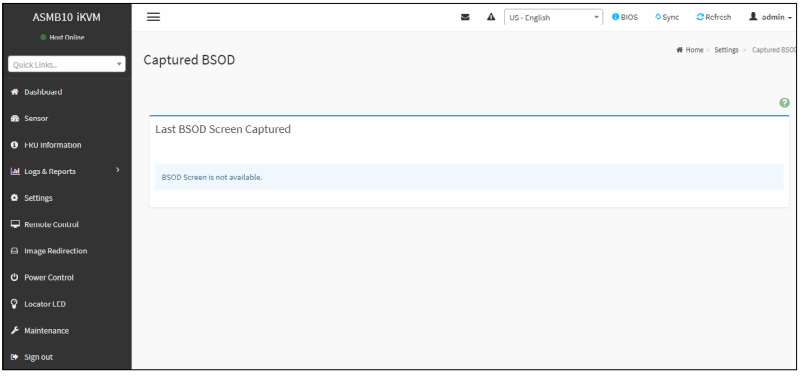
This page allows you to configure the BMC settings. Click on an item for more options.



3.6.1 Captured BSOD

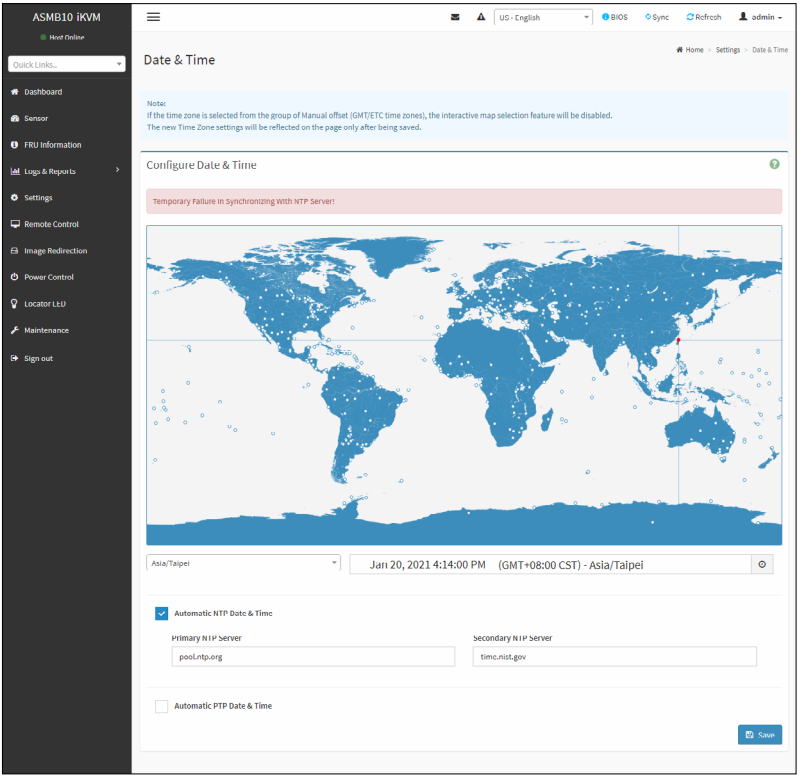
This page allows you to view a captured snapshot of the blue screen captured when the host system crashes since the last reboot.

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



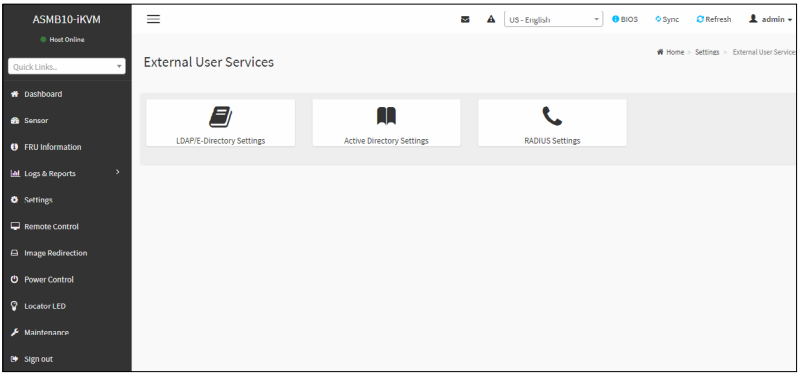
3.6.2 Date & Time

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



3.6.3 External User Services

This page allows you to set 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

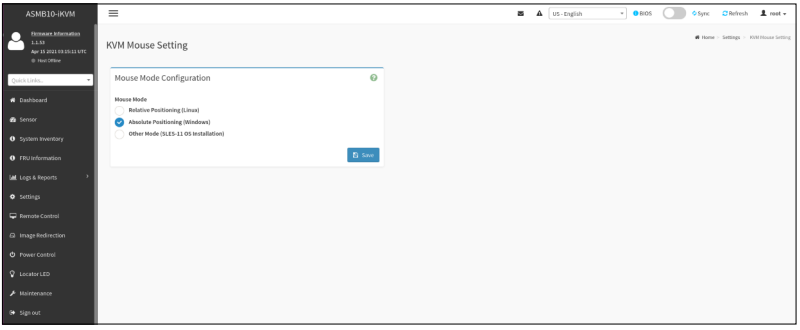
This page allows you to set the Active directory Settings. An active directory does a variety of function including the ability to provide the information on objects, helps organize these objects for easy retrieval and access, allows access by users and administrators, and allows the administrators to set security up 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.

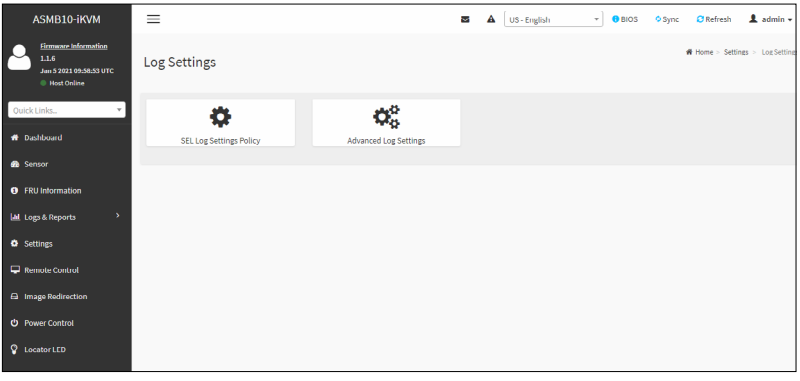
3.6.4 KVM Mouse Setting

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.



3.6.5 Log Settings

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



Log Settings Policy

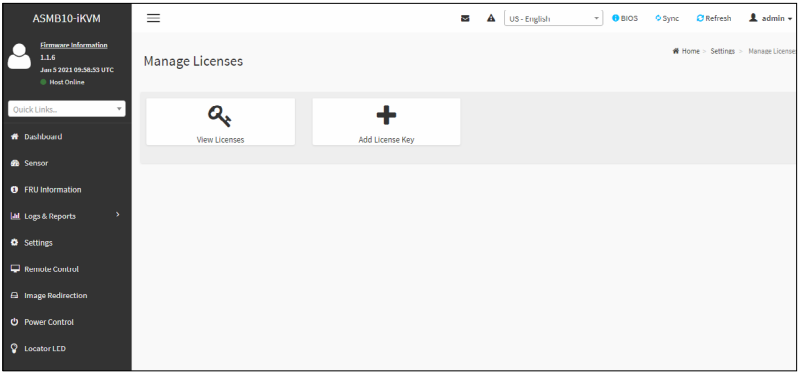
This page is used to configure the log policy for the event log

Advanced Log Settings

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

3.6.6 Manage Licenses

This page allows you to manage and view license information.



View Licenses

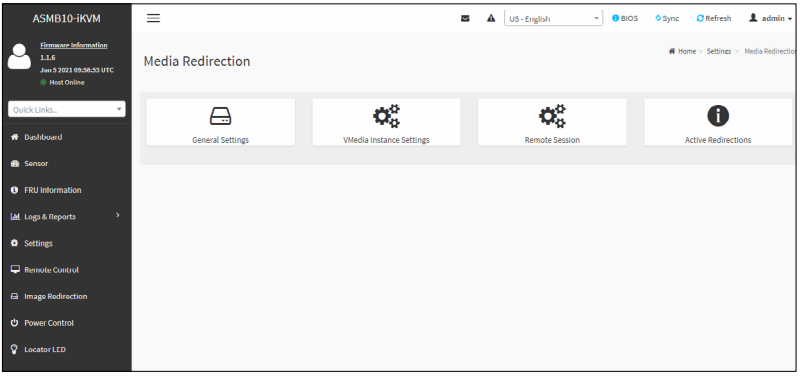
This page allows you to view Licenses already added as well as the number of days the license is still valid for.

Add License Key

This page allows you to add License keys.

3.6.7 Media Redirection Settings

This page allows you to set the media redirection settings.



General Settings

This page allows you to enable or disable Local Media support, check or uncheck the checkbox respectively.

VMedia Instance Settings

This page allows you to configure settings for media devices.

Remote Session

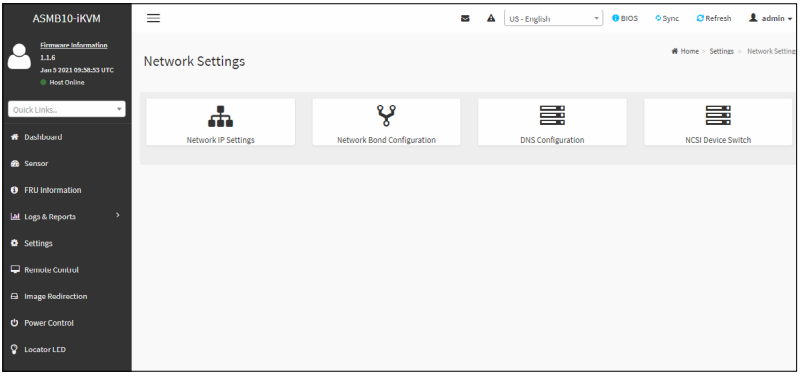
This page allows you to change the settings for the remote session.

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.

3.6.8 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.

DNS Configuration

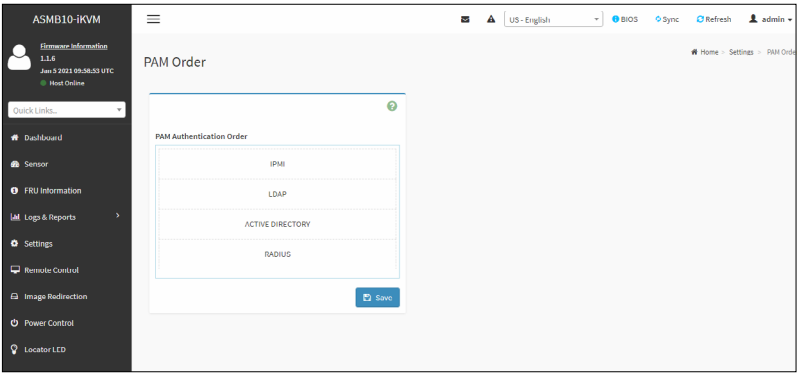
This page allows you to manage DNS settings of the device.

NCSI Device Switch

This page allows you to select whether to use OCP or the On Board LAN for NCSI if both exist on the host system.

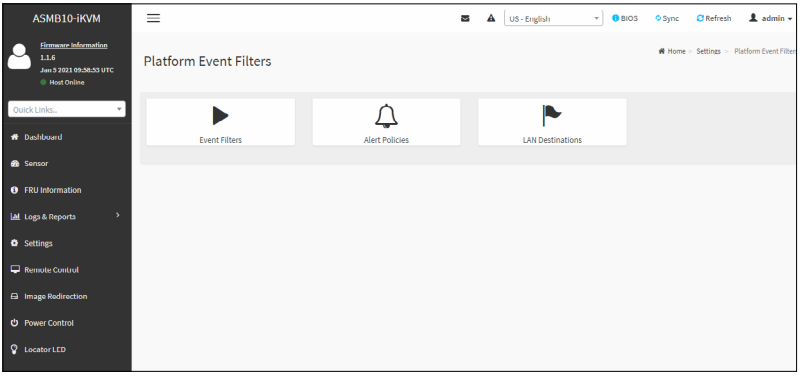
3.6.9 PAM Order Settings

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, and you can drag and drop the PAM modules to reorganize their positions in the sequence.



3.6.10 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 entry on this page. By default,15 event filter entries are configured among the 40 available slots.

Alert Policies

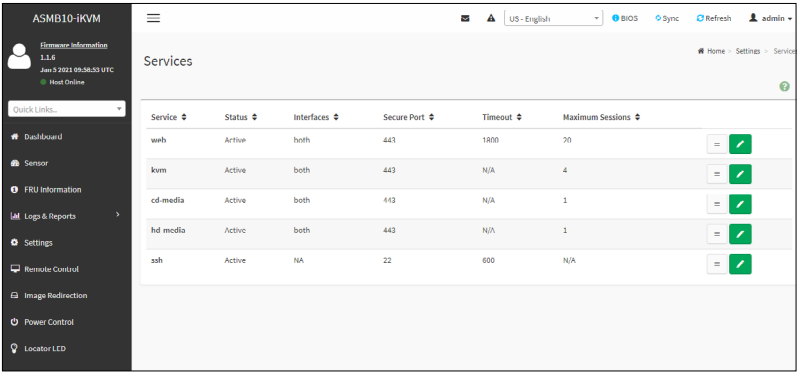
This page shows all configured Alert policies and available slots. You can modify or add new alert policy entry from on this page. A maximum of 60 slots are available.

LAN Destinations

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

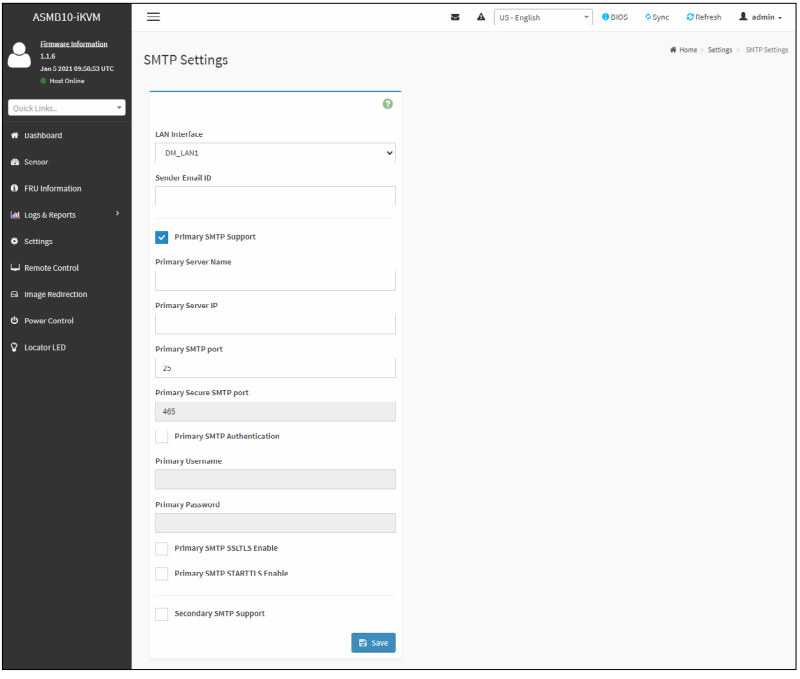
3.6.11 Services

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



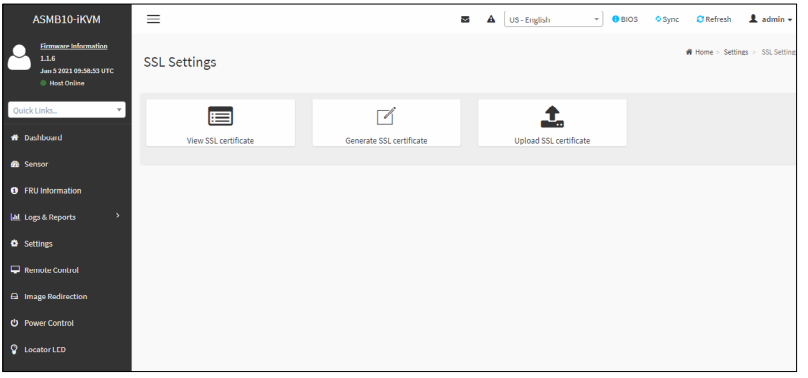
3.6.12 SMTP Settings

The SMTP page allows you to configure SMTP mail server.



3.6.13 SSL Settings

The **Secure Socket Layer** protocol was created by Netscape to ensure secure transactions between web servers and browsers. The protocol uses a third party, a **Certificate Authority (CA)**, to identify one end or both end of the transactions.



View SSL Certificate

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

Generate SSL Certificate

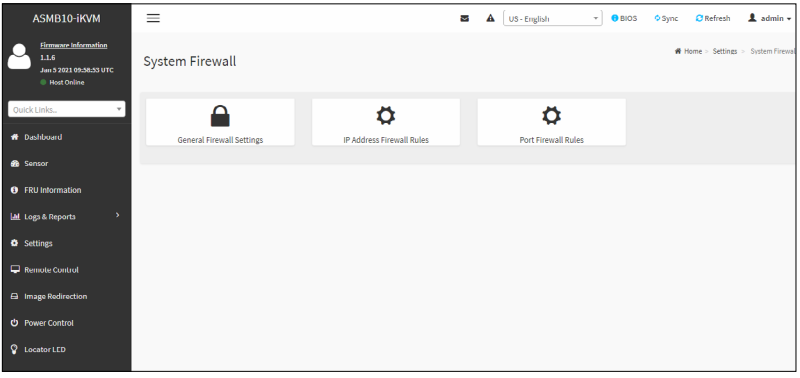
This page allows you to create an SSL certificate.

Upload SSL Certificate

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

3.6.14 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 Firewall Rules

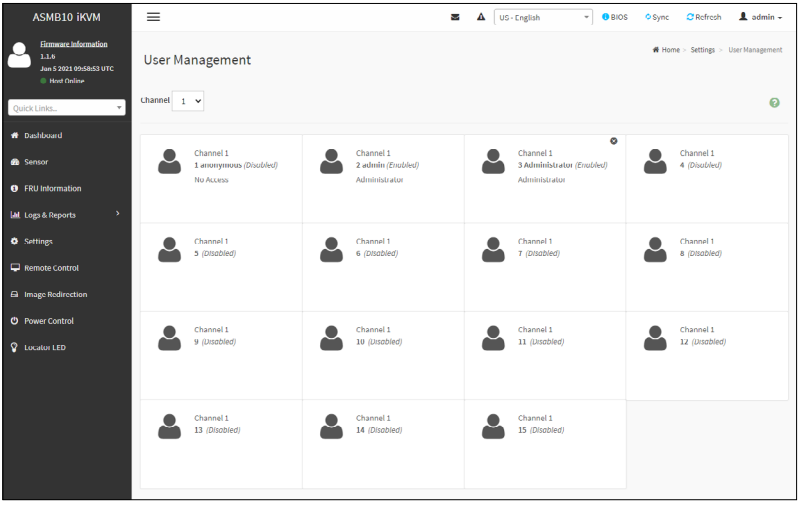
This page allows you to create and manage existing firewall settings based on IP.

Port Firewall Rules

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

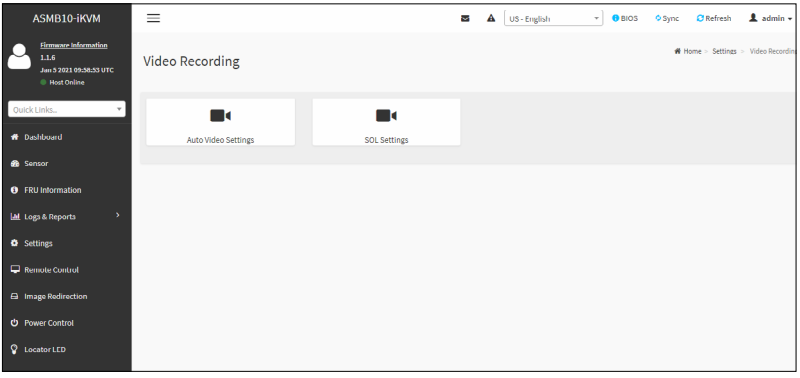
3.6.15 User Management

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 the existing users.



3.6.16 Video Recording

This page allows you to customize the video recording settings.



Auto Video Settings

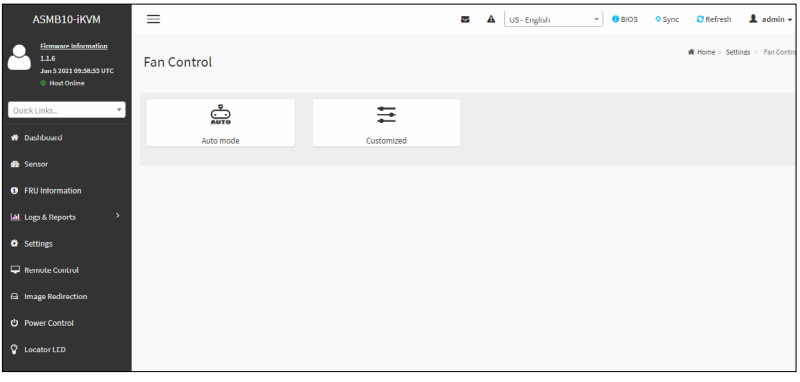
This page allows you to configure the events that will trigger the auto video recording function of the KVM server and display the list of available recorded video files on the BMC.

Sol Settings

The Java SOL page allows you to launch the Java SOL application.

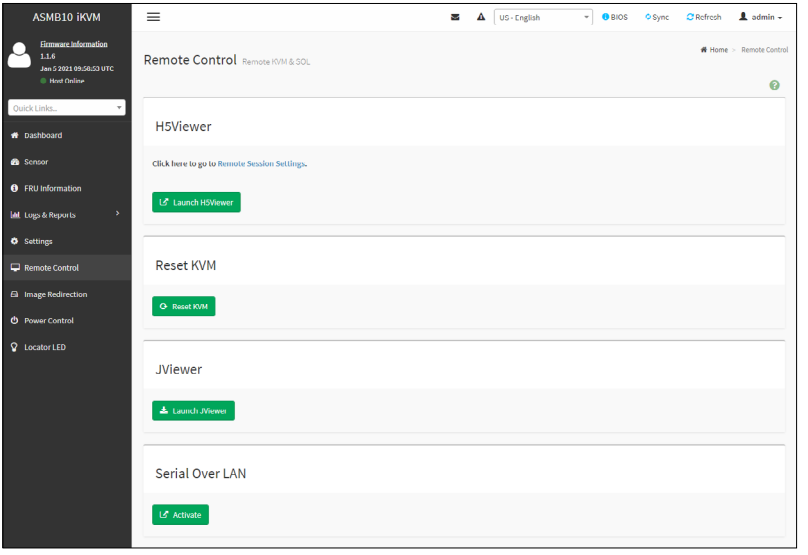
3.6.17 Fan Control

This page allows you to set the fan control configurations.



3.7 Remote Control

This menu allows you to perform remote operations on the server. Click **Launch H5Viewer** to start the remote KVM.



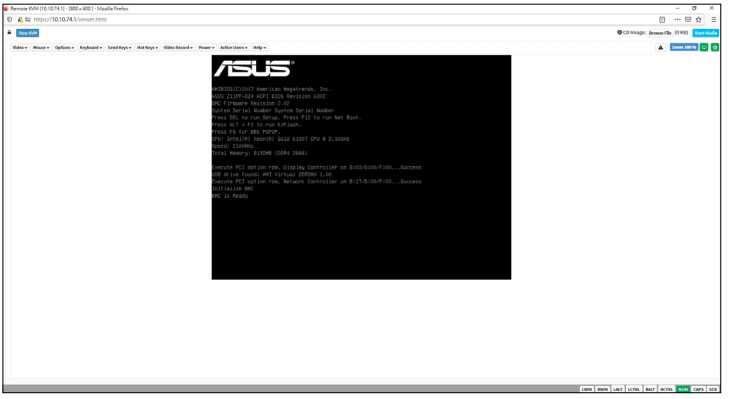
You should install JRE on the remote console first before launching JViewer. You can download JRE from **https://openjdk.java.net/**.

3.7.1 Console Redirection

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 diskette and Hard disk/USB thumb drives as if they were connected directly to the server. Click **Start KVM** to start the redirection session.

- When launching the KVM, pop-up block should be disabled. For Internet explorer, enable the download file options from the settings.
- The KVM is defaulted to start on launch when you launch via the H5Viewer.

Remote KVM interface



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:** If you turn this option ON, the display will be back in the server screen.
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 client 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

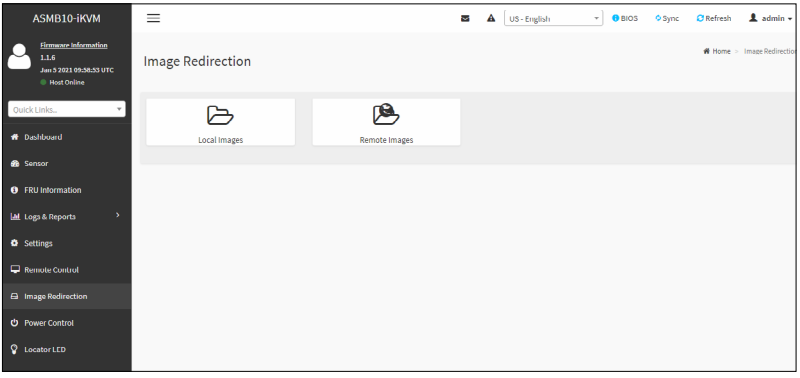
This menu will display the help menu.

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 Image Redirection

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



Local Images

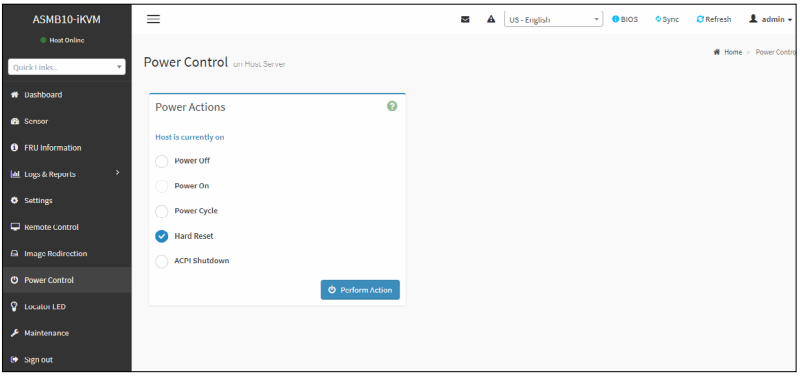
This page allows you to select a local media to emulate to host as media through BMC.

Remote Media

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

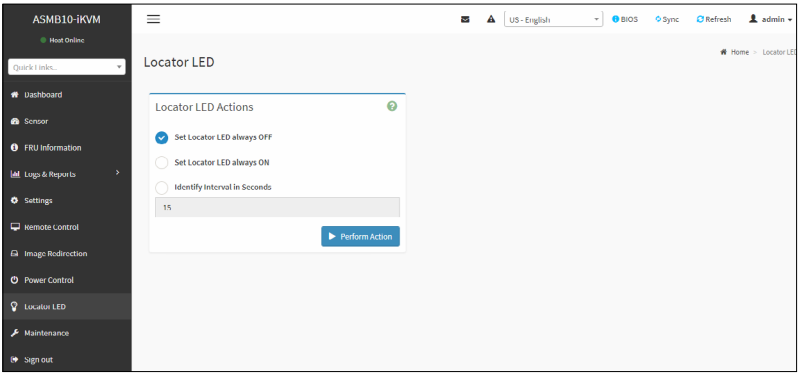
3.9 Power Control

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



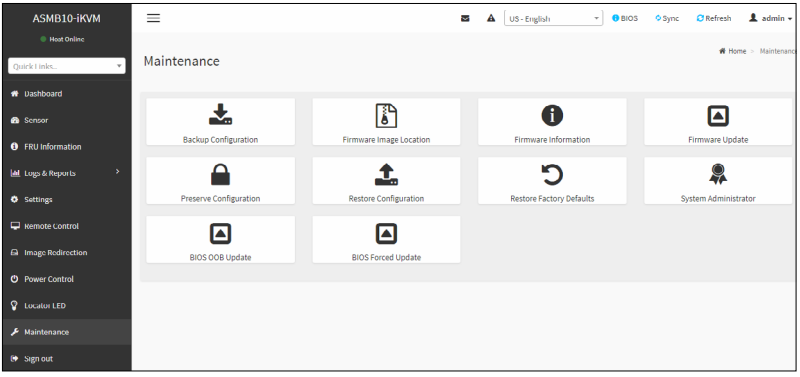
3.10 Locator LED

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.



3.11 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 in while performing the Restore Configuration.

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 the other configuration items will be restored to their default values. If none are selected, all the configuration items will be restored to their default values, essentially restoring the device configuration to its factory defaults.

System Administrator

This page allows you to change the System Administrator settings.

BIOS OOB Update

This page allows you to upload a BIOS file and activate the local media, which will mount the BIOS file into the virtual local storage after host reset. After resetting, the host will detect that a BIOS update is available and search the virtual storage for the BIOS file and perform the BIOS update.

The valid BIOS firmware you upload should be a .cap file.

BIOS Forced Update

This page allows you to select a BIOS image file and force the BIOS update of the current device through BMC.

Valid BIOS firmware you upload should be a .cap file.

Appendix

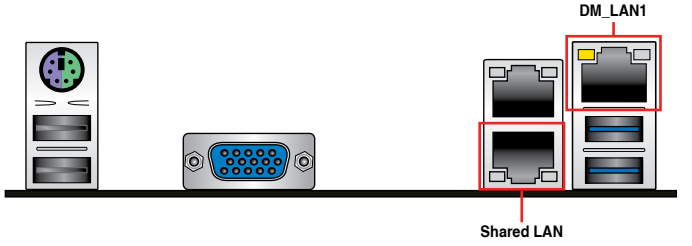
The Appendix shows the location of the LAN ports for server management and BMC connector on server motherboards. This section also presents common problems that you may encounter when installing or using the server management board.

A.1 LAN ports for server management

The ASUS server motherboards that support ASMB10-iKVM comes with at least three (3) LAN (RJ-45) ports: one for network connection and others for server management.

For easy identification, the LAN ports for server management are Shared LAN and DM_LAN1 ports. You must use the Shared LAN and DM_LAN1 ports for server management to connect the remote server to the local/central host (direct LAN connection) or to the network hub or router.

Refer to the illustration below to identify the Shared LAN and DM_LAN1 ports for server management on some server motherboards.



Refer to your motherboard's user guide for the location of Shared LAN and DM_LAN1 ports.

A.2 Troubleshooting

This troubleshooting guide provides answers to some common problems that you may encounter while installing and/or using ASUS ASMB10-iKVM. These problems require simple troubleshooting that you can perform by yourself. Contact the Technical Support if you encounter problems not mentioned in this section.

Problem	Solution
The local/central server cannot connect to the ASMB10-iKVM 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 xx.xx.xx.xx” (remote server ip) on local/central server and make sure remote server could reply the ping request. 3. Check if the IP source is set to [DHCP]. When set to [DHCP], you’ll not be able to configure the IP address.
All the SEL (System Event Log) cannot be displayed	The maximum SEL number is 3639 events.
The date/time shown in SEL (System Event Log) screen is incorrect	Refer to section 6.6.2 to check if the time zone is set up correctly.
ASMB10-iKVM has network connection problems in Firewall environment	Ask MIS to add the following port numbers in Firewall: 623 (IPMI) (TCP & UDP) 443 (HTTPs) (TCP) 443 (iKVM) (TCP) 443 (virtual CDROM & HD) (TCP) 161 (SNMP) (UDP)
The Java redirection screen cannot be displayed normally	Click **Refresh Page** button to refresh the redirection screen.

The ASMB JAVA console only works with the onboard VGA. Other add-on video cards may not properly display the ASMB JAVA console.

A.3 Sensor Table

Memory ECC

Sensor No.	Sensor Name	Sensor Type	Sensor Type code	Sensor Value or Event Type	Event Data 3
0xD1(209)	CPU1_ECC1	Memory ECC Sensor	0x0C	Discrete(0x6F) 0x01: Correctable ECC 0x02: Uncorrectable ECC 0x40: Presence detected	0x00: DIMM_A1, 0x01: DIMM_A2, 0x02: DIMM_A3, 0x03: DIMM_A4, 0x04: DIMM_B1, 0x05:DIMM_B2, 0x06: DIMM_B3, 0x07: DIMM_B4, 0x08: DIMM_C1, 0x09: DIMM_C2, 0x0A: DIMM_C3, 0x0B: DIMM_C4, 0x0C: DIMM_D1, 0x0D: DIMM_D2, 0x0E: DIMM_D3, 0x0F: DMM_D4, 0x10: DIMM_E1, 0x11: DIMM_E2, 0x12: DIMM_E3, 0x13: DIMM_E4, 0x14: DIMM_F1, 0x15: DIMM_F2, 0x16: DIMM_F3, 0x17: DIMM_F4, 0x18: DIMM_G1, 0x19: DIMM_G2, 0x1A: DIMM_G3, 0x1B: DIMM_G4, 0x1C: DIMM_H1, 0x1D: DIMM_H2, 0x1E: DIMM_H3, 0x1F: DIMM_H4, 0x20: DIMM_I1, 0x21: DIMM_I2, 0x22: DIMM_I3, 0x23: DIMM_I4, 0x24: DIMM_J1, 0x25: DIMM_J2, 0x26: DIMM_J3, 0x27: DIMM_J4, 0x28: DIMM_K1, 0x29: DIMM_K2, 0x2A: DIMM_K3, 0x2B: DIMM_K4, 0x2C: DIMM_L1, 0x2D: DIMM_L2, 0x2E: DIMM_L3, 0x2F: DIMM_L4, 0x30: DIMM_M1, 0x31: DIMM_M2, 0x32: DIMM_M3, 0x33: DIMM_M4, 0x34: DIMM_N1, 0x35: DIMM_N2, 0x36: DIMM_N3, 0x37: DIMM_N4, 0x38: DIMM_O1, 0x39: DIMM_O2, 0x3A: DIMM_O3, 0x3B: DIMM_O4, 0x3C: DIMM_P1, 0x3C: DIMM_P2, 0x3E: DIMM_P3, 0x3F: DIMM_P4
0xD2(210)	CPU2_ECC2	Memory ECC Sensor	0x0C	Discrete(0x6F) 0x01: Correctable ECC 0x02: Uncorrectable ECC 0x40: Presence detected	0x00: DIMM_A1, 0x01: DIMM_A2, 0x02: DIMM_A3, 0x03: DIMM_A4, 0x04: DIMM_B1, 0x05:DIMM_B2, 0x06: DIMM_B3, 0x07: DIMM_B4, 0x08: DIMM_C1, 0x09: DIMM_C2, 0x0A: DIMM_C3, 0x0B: DIMM_C4, 0x0C: DIMM_D1, 0x0D: DIMM_D2, 0x0E: DIMM_D3, 0x0F: DMM_D4, 0x10: DIMM_E1, 0x11: DIMM_E2, 0x12: DIMM_E3, 0x13: DIMM_E4, 0x14: DIMM_F1, 0x15: DIMM_F2, 0x16: DIMM_F3, 0x17: DIMM_F4, 0x18: DIMM_G1, 0x19: DIMM_G2, 0x1A: DIMM_G3, 0x1B: DIMM_G4, 0x1C: DIMM_H1, 0x1D: DIMM_H2, 0x1E: DIMM_H3, 0x1F: DIMM_H4, 0x20: DIMM_I1, 0x21: DIMM_I2, 0x22: DIMM_I3, 0x23: DIMM_I4, 0x24: DIMM_J1, 0x25: DIMM_J2, 0x26: DIMM_J3, 0x27: DIMM_J4, 0x28: DIMM_K1, 0x29: DIMM_K2, 0x2A: DIMM_K3, 0x2B: DIMM_K4, 0x2C: DIMM_L1, 0x2D: DIMM_L2, 0x2E: DIMM_L3, 0x2F: DIMM_L4, 0x30: DIMM_M1, 0x31: DIMM_M2, 0x32: DIMM_M3, 0x33: DIMM_M4, 0x34: DIMM_N1, 0x35: DIMM_N2, 0x36: DIMM_N3, 0x37: DIMM_N4, 0x38: DIMM_O1, 0x39: DIMM_O2, 0x3A: DIMM_O3, 0x3B: DIMM_O4, 0x3C: DIMM_P1, 0x3C: DIMM_P2, 0x3E: DIMM_P3, 0x3F: DIMM_P4

(continued on the next page)

Sensor No.	Sensor Name	Sensor Type	Sensor Type code	Sensor Value or Event Type	Event Data 3
0xD3(211)	CPU3_ECC3	Memory ECC Sensor	0x0C	Discrete(0x6F) 0x01: Correctable ECC 0x02: Uncorrectable ECC 0x40: Presence detected	0x00: DIMM_A1, 0x01: DIMM_A2, 0x02: DIMM_A3, 0x03: DIMM_A4, 0x04: DIMM_B1, 0x05:DIMM_B2, 0x06: DIMM_B3, 0x07: DIMM_B4, 0x08: DIMM_C1, 0x09: DIMM_C2, 0x0A: DIMM_C3, 0x0B: DIMM_C4, 0x0C: DIMM_D1, 0x0D: DIMM_D2, 0x0E: DIMM_D3, 0x0F: DMM_D4, 0x10: DIMM_E1, 0x11: DIMM_E2, 0x12: DIMM_E3, 0x13: DIMM_E4, 0x14: DIMM_F1, 0x15: DIMM_F2, 0x16: DIMM_F3, 0x17: DIMM_F4, 0x18: DIMM_G1, 0x19: DIMM_G2, 0x1A: DIMM_G3, 0x1B: DIMM_G4, 0x1C: DIMM_H1, 0x1D: DIMM_H2, 0x1E: DIMM_H3, 0x1F: DIMM_H4, 0x20: DIMM_I1, 0x21: DIMM_I2, 0x22: DIMM_I3, 0x23: DIMM_I4, 0x24: DIMM_J1, 0x25: DIMM_J2, 0x26: DIMM_J3, 0x27: DIMM_J4, 0x28: DIMM_K1, 0x29: DIMM_K2, 0x2A: DIMM_K3, 0x2B: DIMM_K4, 0x2C: DIMM_L1, 0x2D: DIMM_L2, 0x2E: DIMM_L3, 0x2F: DIMM_L4, 0x30: DIMM_M1, 0x31: DIMM_M2, 0x32: DIMM_M3, 0x33: DIMM_M4, 0x34: DIMM_N1, 0x35: DIMM_N2, 0x36: DIMM_N3, 0x37: DIMM_N4, 0x38: DIMM_O1, 0x39: DIMM_O2, 0x3A: DIMM_O3, 0x3B: DIMM_O4, 0x3C: DIMM_P1, 0x3C: DIMM_P2, 0x3E: DIMM_P3, 0x3F: DIMM_P4
0xD4(212)	CPU4_ECC4	Memory ECC Sensor	0x0C	Discrete(0x6F) 0x01: Correctable ECC 0x02: Uncorrectable ECC 0x40: Presence detected	0x00: DIMM_A1, 0x01: DIMM_A2, 0x02: DIMM_A3, 0x03: DIMM_A4, 0x04: DIMM_B1, 0x05:DIMM_B2, 0x06: DIMM_B3, 0x07: DIMM_B4, 0x08: DIMM_C1, 0x09: DIMM_C2, 0x0A: DIMM_C3, 0x0B: DIMM_C4, 0x0C: DIMM_D1, 0x0D: DIMM_D2, 0x0E: DIMM_D3, 0x0F: DMM_D4, 0x10: DIMM_E1, 0x11: DIMM_E2, 0x12: DIMM_E3, 0x13: DIMM_E4, 0x14: DIMM_F1, 0x15: DIMM_F2, 0x16: DIMM_F3, 0x17: DIMM_F4, 0x18: DIMM_G1, 0x19: DIMM_G2, 0x1A: DIMM_G3, 0x1B: DIMM_G4, 0x1C: DIMM_H1, 0x1D: DIMM_H2, 0x1E: DIMM_H3, 0x1F: DIMM_H4, 0x20: DIMM_I1, 0x21: DIMM_I2, 0x22: DIMM_I3, 0x23: DIMM_I4, 0x24: DIMM_J1, 0x25: DIMM_J2, 0x26: DIMM_J3, 0x27: DIMM_J4, 0x28: DIMM_K1, 0x29: DIMM_K2, 0x2A: DIMM_K3, 0x2B: DIMM_K4, 0x2C: DIMM_L1, 0x2D: DIMM_L2, 0x2E: DIMM_L3, 0x2F: DIMM_L4, 0x30: DIMM_M1, 0x31: DIMM_M2, 0x32: DIMM_M3, 0x33: DIMM_M4, 0x34: DIMM_N1, 0x35: DIMM_N2, 0x36: DIMM_N3, 0x37: DIMM_N4, 0x38: DIMM_O1, 0x39: DIMM_O2, 0x3A: DIMM_O3, 0x3B: DIMM_O4, 0x3C: DIMM_P1, 0x3C: DIMM_P2, 0x3E: DIMM_P3, 0x3F: DIMM_P4

Memory Error

Sensor No.	Sensor Name	Sensor Type	Sensor Type code	Sensor Value or Event Type	Event Data 3
0xDB	Memory_ Train_Err	Memory ECC Sensor	0x0C	Discrete(0x6F) 0x01: Memory Train Error 0x00: Normal	0x00: DIMM_A1, 0x01: DIMM_A2, 0x02: DIMM_A3, 0x03: DIMM_A4, 0x04: DIMM_B1, 0x05:DIMM_B2, 0x06: DIMM_B3, 0x07: DIMM_B4, 0x08: DIMM_C1, 0x09: DIMM_C2, 0x0A: DIMM_C3, 0x0B: DIMM_C4, 0x0C: DIMM_D1, 0x0D: DIMM_D2, 0x0E: DIMM_D3, 0x0F: DMM_D4, 0x10: DIMM_E1, 0x11: DIMM_E2, 0x12: DIMM_E3, 0x13: DIMM_E4, 0x14: DIMM_F1, 0x15: DIMM_F2, 0x16: DIMM_F3, 0x17: DIMM_F4, 0x18: DIMM_G1, 0x19: DIMM_G2, 0x1A: DIMM_G3, 0x1B: DIMM_G4, 0x1C: DIMM_H1, 0x1D: DIMM_H2, 0x1E: DIMM_H3, 0x1F: DIMM_H4, 0x20: DIMM_I1, 0x21: DIMM_I2, 0x22: DIMM_I3, 0x23: DIMM_I4, 0x24: DIMM_J1, 0x25: DIMM_J2, 0x26: DIMM_J3, 0x27: DIMM_J4, 0x28: DIMM_K1, 0x29: DIMM_K2, 0x2A: DIMM_K3, 0x2B: DIMM_K4, 0x2C: DIMM_L1, 0x2D: DIMM_L2, 0x2E: DIMM_L3, 0x2F: DIMM_L4, 0x30: DIMM_M1, 0x31: DIMM_M2, 0x32: DIMM_M3, 0x33: DIMM_M4, 0x34: DIMM_N1, 0x35: DIMM_N2, 0x36: DIMM_N3, 0x37: DIMM_N4, 0x38: DIMM_O1, 0x39: DIMM_O2, 0x3A: DIMM_O3, 0x3B: DIMM_O4, 0x3C: DIMM_P1, 0x3C: DIMM_P2, 0x3E: DIMM_P3, 0x3F: DIMM_P4

Backplane HD

Sensor No.	Sensor Name	Sensor Type	Sensor Type Code	Sensor Value or Event Type
0xB2(178)	Backplane1 HD01	Drive Slot (Bay)	0x0D	0x00 : N/A 0x01 : Drive Presence 0x03 : Drive Fault 0x81 : Rebuild/Remap in progress
0xB3(179)	Backplane1 HD02	Drive Slot (Bay)	0x0D	0x00 : N/A 0x01 : Drive Presence 0x03 : Drive Fault 0x81 : Rebuild/Remap in progress
0xB4(180)	Backplane1 HD03	Drive Slot (Bay)	0x0D	0x00 : N/A 0x01 : Drive Presence 0x03 : Drive Fault 0x81 : Rebuild/Remap in progress
0xB5(181)	Backplane1 HD04	Drive Slot (Bay)	0x0D	0x00 : N/A 0x01 : Drive Presence 0x03 : Drive Fault 0x81 : Rebuild/Remap in progress
0xB6(182)	Backplane1 HD05	Drive Slot (Bay)	0x0D	0x00 : N/A 0x01 : Drive Presence 0x03 : Drive Fault 0x81 : Rebuild/Remap in progress
0xB7(183)	Backplane1 HD06	Drive Slot (Bay)	0x0D	0x00 : N/A 0x01 : Drive Presence 0x03 : Drive Fault 0x81 : Rebuild/Remap in progress
0xB8(184)	Backplane1 HD07	Drive Slot (Bay)	0x0D	0x00 : N/A 0x01 : Drive Presence 0x03 : Drive Fault 0x81 : Rebuild/Remap in progress
0xB9(185)	Backplane1 HD08	Drive Slot (Bay)	0x0D	0x00 : N/A 0x01 : Drive Presence 0x03 : Drive Fault 0x81 : Rebuild/Remap in progress
0xBA(186)	Backplane1 HD09	Drive Slot (Bay)	0x0D	0x00 : N/A 0x01 : Drive Presence 0x03 : Drive Fault 0x81 : Rebuild/Remap in progress
0xBB(187)	Backplane1 HD10	Drive Slot (Bay)	0x0D	0x00 : N/A 0x01 : Drive Presence 0x03 : Drive Fault 0x81 : Rebuild/Remap in progress
0xBC(188)	Backplane1 HD11	Drive Slot (Bay)	0x0D	0x00 : N/A 0x01 : Drive Presence 0x03 : Drive Fault 0x81 : Rebuild/Remap in progress
0xBD(189)	Backplane1 HD12	Drive Slot (Bay)	0x0D	0x00 : N/A 0x01 : Drive Presence 0x03 : Drive Fault 0x81 : Rebuild/Remap in progress
0xBE(190)	Backplane1 HD13	Drive Slot (Bay)	0x0D	0x00 : N/A 0x01 : Drive Presence 0x03 : Drive Fault 0x81 : Rebuild/Remap in progress
0xBF(191)	Backplane1 HD14	Drive Slot (Bay)	0x0D	0x00 : N/A 0x01 : Drive Presence 0x03 : Drive Fault 0x81 : Rebuild/Remap in progress
0xC0(192)	Backplane1 HD15	Drive Slot (Bay)	0x0D	0x00 : N/A 0x01 : Drive Presence 0x03 : Drive Fault 0x81 : Rebuild/Remap in progress
0xC1(193)	Backplane1 HD16	Drive Slot (Bay)	0x0D	0x00 : N/A 0x01 : Drive Presence 0x03 : Drive Fault 0x81 : Rebuild/Remap in progress

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Sensor No.	Sensor Name	Sensor Type	Sensor Type Code	Sensor Value or Event Type
0xC2(194)	Backplane1 HD17	Drive Slot (Bay)	0x0D	0x00 : N/A 0x01 : Drive Presence 0x03 : Drive Fault 0x81 : Rebuild/Remap in progress
0xC3(195)	Backplane1 HD18	Drive Slot (Bay)	0x0D	0x00 : N/A 0x01 : Drive Presence 0x03 : Drive Fault 0x81 : Rebuild/Remap in progress
0xC4(196)	Backplane1 HD19	Drive Slot (Bay)	0x0D	0x00 : N/A 0x01 : Drive Presence 0x03 : Drive Fault 0x81 : Rebuild/Remap in progress
0xC5(197)	Backplane1 HD20	Drive Slot (Bay)	0x0D	0x00 : N/A 0x01 : Drive Presence 0x03 : Drive Fault 0x81 : Rebuild/Remap in progress
0xC6(198)	Backplane1 HD21	Drive Slot (Bay)	0x0D	0x00 : N/A 0x01 : Drive Presence 0x03 : Drive Fault 0x81 : Rebuild/Remap in progress
0xC7(199)	Backplane1 HD22	Drive Slot (Bay)	0x0D	0x00 : N/A 0x01 : Drive Presence 0x03 : Drive Fault 0x81 : Rebuild/Remap in progress
0xC8(200)	Backplane1 HD23	Drive Slot (Bay)	0x0D	0x00 : N/A 0x01 : Drive Presence 0x03 : Drive Fault 0x81 : Rebuild/Remap in progress
0xC9(201)	Backplane1 HD24	Drive Slot (Bay)	0x0D	0x00 : N/A 0x01 : Drive Presence 0x03 : Drive Fault 0x81 : Rebuild/Remap in progress
0xCA(202)	Backplane2 HD01	Drive Slot (Bay)	0x0D	0x00 : N/A 0x01 : Drive Presence 0x03 : Drive Fault 0x81 : Rebuild/Remap in progress
0xCB(203)	Backplane2 HD02	Drive Slot (Bay)	0x0D	0x00 : N/A 0x01 : Drive Presence 0x03 : Drive Fault 0x81 : Rebuild/Remap in progress
0xCC(204)	Backplane2 HD03	Drive Slot (Bay)	0x0D	0x00 : N/A 0x01 : Drive Presence 0x03 : Drive Fault 0x81 : Rebuild/Remap in progress
0xCD(205)	Backplane2 HD04	Drive Slot (Bay)	0x0D	0x00 : N/A 0x01 : Drive Presence 0x03 : Drive Fault 0x81 : Rebuild/Remap in progress
0xCE(206)	Backplane2 HD05	Drive Slot (Bay)	0x0D	0x00 : N/A 0x01 : Drive Presence 0x03 : Drive Fault 0x81 : Rebuild/Remap in progress
0xCF(207)	Backplane2 HD06	Drive Slot (Bay)	0x0D	0x00 : N/A 0x01 : Drive Presence 0x03 : Drive Fault 0x81 : Rebuild/Remap in progress
0xD0(208)	Backplane2 HD07	Drive Slot (Bay)	0x0D	0x00 : N/A 0x01 : Drive Presence 0x03 : Drive Fault 0x81 : Rebuild/Remap in progress
0xD5(213)	Backplane2 HD08	Drive Slot (Bay)	0x0D	0x00 : N/A 0x01 : Drive Presence 0x03 : Drive Fault 0x81 : Rebuild/Remap in progress

Power Supply

Sensor No.	Sensor Name	Sensor Type	Sensor Type Code	Sensor Value or Event Type
0xDF(223)	PMBPower1	Power Supply	0x08	Threshold(0x01) Upper Non-Critical - going high Upper Critical - going high Lower Non-critical - going low Lower Critical - going low
0xE0(224)	PSU1 Over Temp	Temperature	0x01	Discrete(0x07) 0x01: Transition to OK 0x10: Transition to Non-Critical from more severe 0x40: Transition to Non-Recoverable
0xE1(225)	PSU1 AC Lost	Power Supply	0x08	Discrete(0x6F) 0x01: Presence Detected 0x08: Power Supply input lost (AC/DC)
0xE2(226)	PSU1 Slow FAN1	FAN	0x04	Discrete(0x07) 0x01: Transition to OK 0x10: Transition to Non-Critical from more severe 0x40: Transition to Non-Recoverable
0xE3(227)	PSU1 PWR Detect	Power Supply	0x08	Discrete(0x6F) 0x01: Presence Detected 0x02: Power Supply Failure Detected
0xE4(228)	PMBPower2	Power Supply	0x08	Threshold(0x01) Upper Non-Critical - going high Upper Critical - going high Lower Non-critical - going low Lower Critical - going low
0xE5(229)	PSU2 Over Temp	Temperature	0x01	Discrete(0x07) 0x01: Transition to OK 0x10: Transition to Non-Critical from more severe 0x40: Transition to Non-Recoverable
0xE6(230)	PSU2 AC Lost	Power Supply	0x08	Discrete(0x6F) 0x01: Presence Detected 0x08: Power Supply input lost (AC/DC)
0xE7(231)	PSU2 Slow FAN1	FAN	0x04	Discrete(0x07) 0x01: Transition to OK 0x10: Transition to Non-Critical from more severe 0x40: Transition to Non-Recoverable
0xE8(232)	PSU2 PWR Detect	Power Supply	0x08	Discrete(0x6F) 0x01: Presence Detected 0x02: Power Supply Failure Detected
0xE9(233)	PMBPower3	Power Supply	0x08	Threshold(0x01) Upper Non-Critical - going high Upper Critical - going high Lower Non-critical - going low Lower Critical - going low
0xEA(234)	PSU3 Over Temp	Temperature	0x01	Discrete(0x07) 0x01: Transition to OK 0x10: Transition to Non-Critical from more severe 0x40: Transition to Non-Recoverable
0xEB(235)	PSU3 AC Lost	0x08	Power Supply	Discrete(0x6F) 0x01: Presence Detected 0x08: Power Supply input lost (AC/DC)
0xEC(236)	PSU3 Slow FAN1	0x04	FAN	Discrete(0x07) 0x01: Transition to OK 0x10: Transition to Non-Critical from more severe 0x40: Transition to Non-Recoverable
0xED(237)	PSU3 PWR Detect	0x08	Power Supply	Discrete(0x6F) 0x01: Presence Detected 0x02: Power Supply Failure Detected
0xEE(238)	PMBPower4	0x08	Power Supply	Threshold(0x01) Upper Non-Critical - going high Upper Critical - going high Lower Non-critical - going low Lower Critical - going low

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Sensor No.	Sensor Name	Sensor Type	Sensor Type Code	Sensor Value or Event Type
0xEF(239)	PSU4 Over Temp	Temperature	0x01	Discrete(0x07) 0x01: Transition to OK 0x10: Transition to Non-Critical from more severe 0x40: Transition to Non-Recoverable
0xF0(240)	PSU4 AC Lost	Power Supply	0x08	Discrete(0x6F) 0x01: Presence Detected 0x08: Power Supply input lost (AC/DC)
0xF1(241)	PSU4 Slow FAN1	FAN	0x04	Discrete(0x07) 0x01: Transition to OK 0x10: Transition to Non-Critical from more severe 0x40: Transition to Non-Recoverable
0xF2(242)	PSU4 PWR Detect	Power Supply	0x08	Discrete(0x6F) 0x01: Presence Detected 0x02: Power Supply Failure Detected

Hardware Monitor

1. Temperature

Sensor No.	Sensor Name	Event	
		Assertion	Deassertion
0x01(1)	CPU1 Temperature	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x02(2)	CPU2 Temperature	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x03(3)	CPU3 Temperature	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x04(4)	CPU4 Temperature	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x05(5)	TR1 Temperature	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x06(6)	TR2 Temperature	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x07(7)	TR3 Temperature	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x08(8)	TR4 Temperature	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x09(9)	TR5 Temperature	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x0A(10)	DIMMA1_Temp	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x0B(11)	DIMMA2_Temp	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x0C(12)	DIMMB1_Temp	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x0D(13)	DIMMB2_Temp	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x0E(14)	DIMMC1_Temp	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x0F(15)	DIMMC2_Temp	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x10(16)	DIMMD1_Temp	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x11(17)	DIMMD2_Temp	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x12(18)	DIMME1_Temp	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x13(19)	DIMME2_Temp	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x14(20)	DIMMF1_Temp	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x15(21)	DIMMF2_Temp	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x16(22)	DIMMG1_Temp	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x17(23)	DIMMG2_Temp	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x18(24)	DIMMH1_Temp	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x19(25)	DIMMH2_Temp	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x1B(27)	DIMMI1_Temp	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high

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Sensor No.	Sensor Name	Event	
		Assertion	Deassertion
0x1C(28)	DIMMI2_Temp	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x1D(29)	DIMMJ1_Temp	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x1E(30)	DIMMJ2_Temp	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x1F(31)	DIMMK1_Temp	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x20(32)	DIMMK2_Temp	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x21(33)	DIMML1_Temp	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x22(34)	DIMML2_Temp	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x23(35)	DIMMM1_Temp	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x24(36)	DIMMM2_Temp	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x25(37)	DIMMN1_Temp	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x26(38)	DIMMN2_Temp	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x27(39)	DIMMO1_Temp	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x28(40)	DIMMO2_Temp	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x29(41)	DIMMP1_Temp	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x2A(42)	DIMMP2_Temp	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x2B(43)	DIMMQ1_Temp	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x2C(44)	DIMMQ2_Temp	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x2D(45)	DIMMR1_Temp	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x2E(46)	DIMMR2_Temp	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x2F(47)	DIMMS1_Temp	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x30(48)	DIMMS2_Temp	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x31(49)	DIMMT1_Temp	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x32(50)	DIMMT2_Temp	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x33(51)	TR6 Temperature	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x34(52)	TR7 Temperature	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x35(53)	TR8 Temperature	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x36(54)	TR9 Temperature	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x37(55)	TR10 Temperature	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high

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Sensor No.	Sensor Name	Event	
		Assertion	Deassertion
0x38(56)	TR11 Temperature	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x39(57)	TR12 Temperature	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x3A(58)	TR13 Temperature	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x3B(59)	TR14 Temperature	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x3C(60)	TR15 Temperature	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x3D(61)	TR16 Temperature	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x3E(62)	TR17 Temperature	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x3F(63)	TR18 Temperature	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x40(64)	TR19 Temperature	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x41(65)	TR20 Temperature	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x42(66)	TR21 Temperature	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x43(67)	Riser01 Temp	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x44(68)	Riser02 Temp	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x45(69)	PCH Temperature	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x46(70)	12V48V TR Temp	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x61(97)	Outlet1 Temp / CPU1_Inlet_Temp	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x62(98)	Outle2 Temp / CPU1_Outlet_Temp	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x63(99)	PCIE_Inlet_Temp	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high

2. Voltage

Sensor No.	Sensor Name	Event	
		Assertion	Deassertion
0x66(102)	+VCORE1 / PVCCIN_CPU1	Upper Non-critical - going high Upper Critical - going high Lower Non-critical - going low Lower Critical - going low	Upper Non-critical - going high Upper Critical - going high Lower Non-critical - going low Lower Critical - going low
0x67(103)	+VCORE2 / PVCCIN_CPU2	Upper Non-critical - going high Upper Critical - going high Lower Non-critical - going low Lower Critical - going low	Upper Non-critical - going high Upper Critical - going high Lower Non-critical - going low Lower Critical - going low
0x68(104)	+VDDQ_ABCD_CPU1	Upper Non-critical - going high Upper Critical - going high Lower Non-critical - going low Lower Critical - going low	Upper Non-critical - going high Upper Critical - going high Lower Non-critical - going low Lower Critical - going low
0x69(105)	+VDDQ_EFGH_CPU1	Upper Non-critical - going high Upper Critical - going high Lower Non-critical - going low Lower Critical - going low	Upper Non-critical - going high Upper Critical - going high Lower Non-critical - going low Lower Critical - going low

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Sensor No.	Sensor Name	Event	
		Assertion	Deassertion
0x6A(106)	+VDDQ_JKLM_CPU2	Upper Non-critical - going high Upper Critical - going high Lower Non-critical - going low Lower Critical - going low	Upper Non-critical - going high Upper Critical - going high Lower Non-critical - going low Lower Critical - going low
0x6B(107)	+VDDQ_NPRT_CPU2	Upper Non-critical - going high Upper Critical - going high Lower Non-critical - going low Lower Critical - going low	Upper Non-critical - going high Upper Critical - going high Lower Non-critical - going low Lower Critical - going low
0x6C(108)	+VDDIO_ABCD_CPU1	Upper Non-critical - going high Upper Critical - going high Lower Non-critical - going low Lower Critical - going low	Upper Non-critical - going high Upper Critical - going high Lower Non-critical - going low Lower Critical - going low
0x6D(109)	+VDDIO_EFGH_CPU1	Upper Non-critical - going high Upper Critical - going high Lower Non-critical - going low Lower Critical - going low	Upper Non-critical - going high Upper Critical - going high Lower Non-critical - going low Lower Critical - going low
0x6E(110)	+VDDIO_IJKL_CPU2	Upper Non-critical - going high Upper Critical - going high Lower Non-critical - going low Lower Critical - going low	Upper Non-critical - going high Upper Critical - going high Lower Non-critical - going low Lower Critical - going low
0x6F(111)	+VDDIO_MNOP_CPU2	Upper Non-critical - going high Upper Critical - going high Lower Non-critical - going low Lower Critical - going low	Upper Non-critical - going high Upper Critical - going high Lower Non-critical - going low Lower Critical - going low
0x70(112)	+VCCIO1	Upper Non-critical - going high Upper Critical - going high Lower Non-critical - going low Lower Critical - going low	Upper Non-critical - going high Upper Critical - going high Lower Non-critical - going low Lower Critical - going low
0x71(113)	+VCCIO2	Upper Non-critical - going high Upper Critical - going high Lower Non-critical - going low Lower Critical - going low	Upper Non-critical - going high Upper Critical - going high Lower Non-critical - going low Lower Critical - going low
0x72(114)	+VSOC1	Upper Non-critical - going high Upper Critical - going high Lower Non-critical - going low Lower Critical - going low	Upper Non-critical - going high Upper Critical - going high Lower Non-critical - going low Lower Critical - going low
0x73(115)	+VSOC2	Upper Non-critical - going high Upper Critical - going high Lower Non-critical - going low Lower Critical - going low	Upper Non-critical - going high Upper Critical - going high Lower Non-critical - going low Lower Critical - going low
0x74(116)	+12V	Upper Non-critical - going high Upper Critical - going high Lower Non-critical - going low Lower Critical - going low	Upper Non-critical - going high Upper Critical - going high Lower Non-critical - going low Lower Critical - going low
0x75(117)	+5V / +5V_1	Upper Non-critical - going high Upper Critical - going high Lower Non-critical - going low Lower Critical - going low	Upper Non-critical - going high Upper Critical - going high Lower Non-critical - going low Lower Critical - going low
0x76(118)	+3.3V	Upper Non-critical - going high Upper Critical - going high Lower Non-critical - going low Lower Critical - going low	Upper Non-critical - going high Upper Critical - going high Lower Non-critical - going low Lower Critical - going low
0x77(119)	+5VSB	Upper Non-critical - going high Upper Critical - going high Lower Non-critical - going low Lower Critical - going low	Upper Non-critical - going high Upper Critical - going high Lower Non-critical - going low Lower Critical - going low
0x78(120)	+3VSB / +3.3VSB	Upper Non-critical - going high Upper Critical - going high Lower Non-critical - going low Lower Critical - going low	Upper Non-critical - going high Upper Critical - going high Lower Non-critical - going low Lower Critical - going low
0x79(121)	VBAT / +VBAT	Upper Non-critical - going high Upper Critical - going high Lower Non-critical - going low Lower Critical - going low	Upper Non-critical - going high Upper Critical - going high Lower Non-critical - going low Lower Critical - going low

3. Fan

Sensor No.	Sensor Name	Event	
		Assertion	Deassertion
0x89(137)	CPU_FAN1	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x8A(138)	CPU_FAN2	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x8B(139)	FRNT_FAN1	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x8C(140)	FRNT_FAN2	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x8D(141)	FRNT_FAN3	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x8E(142)	FRNT_FAN4	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x8F(143)	FRNT_FAN5	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x90(144)	FRNT_FAN6	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x91(145)	FRNT_FAN7	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x92(146)	FRNT_FAN8	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x93(147)	FRNT_FAN9	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x94(148)	GPU_FAN1	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x95(149)	GPU_FAN2	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x96(150)	GPU_FAN3	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x97(151)	GPU_FAN4	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x98(152)	GPU_FAN5	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x99(153)	GPU_FAN6	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x9A(154)	SYS_FAN1	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x9B(155)	SYS_FAN2	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x9C(156)	SYS_FAN3	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x9D(157)	SYS_FAN4	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x9E(158)	REAR_FAN1	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0x9F(159)	REAR_FAN2	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0xA0(160)	BP_FAN1	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0xA1(161)	BP_FAN2	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0xA2(162)	LIQUID_PUMP1 / WC_PUMP1	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0xA3(163)	LIQUID_PUMP2 / WC_PUMP2	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high

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Sensor No.	Sensor Name	Event	
		Assertion	Deassertion
0xA4(164)	EXTGPU_FAN1	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0xA5(165)	EXTGPU_FAN2	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0xA6(166)	EXTGPU_FAN3	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0xA7(167)	EXTGPU_FAN4	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0xA8(168)	EXTGPU_FAN5	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0xA9(169)	NV_FAN1	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0xAA(170)	NV_FAN2	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0xAB(171)	SYS_FAN5	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high
0xAC(172)	SYS_FAN6	Upper Non-critical - going high Upper Critical - going high	Upper Non-critical - going high Upper Critical - going high

CPU CATERR

Sensor No.	Sensor Name	Sensor Type	Sensor Type Code	Sensor Value or Event Type
0xFD(253)	CPU_CATERR	Processor	0x08	Discrete(0x6F) 0x01: IERR 0x00: Normal

Intrusion

Sensor No.	Sensor Name	Sensor Type	Sensor Type Code	Sensor Value or Event Type
0xFC(252)	Chassis Intrusion	Physical Security (Chassis Intrusion)	0x05	0x01: Chassis Intrusion 0x00: Normal

Simplified EU Declaration of Conformity

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

Français AsusTek Computer Inc. déclare par la présente que cet appareil est conforme aux critères essentiels et autres clauses pertinentes des directives concernées. La déclaration de conformité de l'UE peut être téléchargée à partir du site Internet suivant : www.asus.com/support.

Deutsch ASUSTeK Computer Inc. erklärt hiermit, dass dieses Gerät mit den wesentlichen Anforderungen und anderen relevanten Bestimmungen der zugehörigen Richtlinien übereinstimmt. Der gesamte Text der EU-Konformitätserklärung ist verfügbar unter: www.asus.com/support

Italiano ASUSTeK Computer Inc. con la presente dichiara che questo dispositivo è conforme ai requisiti essenziali e alle altre disposizioni pertinenti con le direttive correlate. Il testo completo della dichiarazione di conformità UE è disponibile all'indirizzo: www.asus.com/support

Русский Компания ASUS заявляет, что это устройство соответствует основным требованиям и другим соответствующим условиям соответствующих директив. Подробную информацию, пожалуйста, смотрите на www.asus.com/support

Български С настоящото ASUSTeK Computer Inc. декларира, че това устройство е в съответствие със съществените изисквания и другите приложими постановления на свързаните директиви. Пълният текст на декларацията за съответствие на ЕС е достъпна на адрес: www.asus.com/support

Hrvatski ASUSTeK Computer Inc. ovim izjavljuje da je ovaj uređaj sukladan s bitnim zahtjevima i ostalim odgovarajućim odredbama vezanih direktiva. Cijeli tekst EU izjave o sukladnosti dostupan je na: www.asus.com/support

Čeština Společnost ASUSTeK Computer Inc. tímto prohlašuje, že toto zařízení splňuje základní požadavky a další příslušná ustanovení souvisejících směrnic. Plné znění prohlášení o shodě EU je k dispozici na adrese: www.asus.com/support

Dansk ASUSTeK Computer Inc. erklærer hermed, at denne enhed er i overensstemmelse med hovedkravene og andre relevante bestemmelser i de relaterede direktiver. Hele EU-overensstemmelseserklæringen kan findes på: www.asus.com/support

Nederlands ASUSTeK Computer Inc. verklaart hierbij dat dit apparaat voldoet aan de essentiële vereisten en andere relevante bepalingen van de verwante richtlijnen. De volledige tekst van de EU-verklaring van conformiteit is beschikbaar op: www.asus.com/support

Eesti Käesolevaga kinnitab ASUSTeK Computer Inc, et see seade vastab asjakohaste direktiivide oluliste nõuetele ja teistele asjassepuutuvatele sätetele. EL vastavusdeklaratsiooni täielik tekst on saadaval järgmisel aadressil: www.asus.com/support

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 The Radio Equipment Regulations 2017 (S.I. 2017/1206). Full text of UKCA declaration of conformity is available at https://www.asus.com/support/.

Service and Support

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