

AST2050 Application

1. IPMI OS Drivers and Open Source Software

AST2050 firmware is full compliant with IPMI 2.0 specification. So users could use standard IPMI driver comes from operation system distribution.

1.1 Windows IPMI Driver

AST2050 supports Intel reference driver, you can get it from

<http://www.intel.com/design/servers/ipmi/tools.htm>.

From Windows Server 2003 R2, Microsoft also provide in box IPMI driver. You can use it also.

1.2 Open IPMI Driver on Linux

AST2050 supports the Open IPMI driver in Linux Kernel. Use the following commands to load ipmi drivers.

```
"modprobe ipmi_devintf"
```

```
"modprobe ipmi_si"
```

If you use old version Linux Kernel, you need to replace module "ipmi_si" with "ipmi_kcs"

Note that TYAN motherboard BIOS encodes IPMI Base IO address at 0xCA2 in its DMI table IPMI entry, any generic OS IPMI drivers should have no problem to support it.

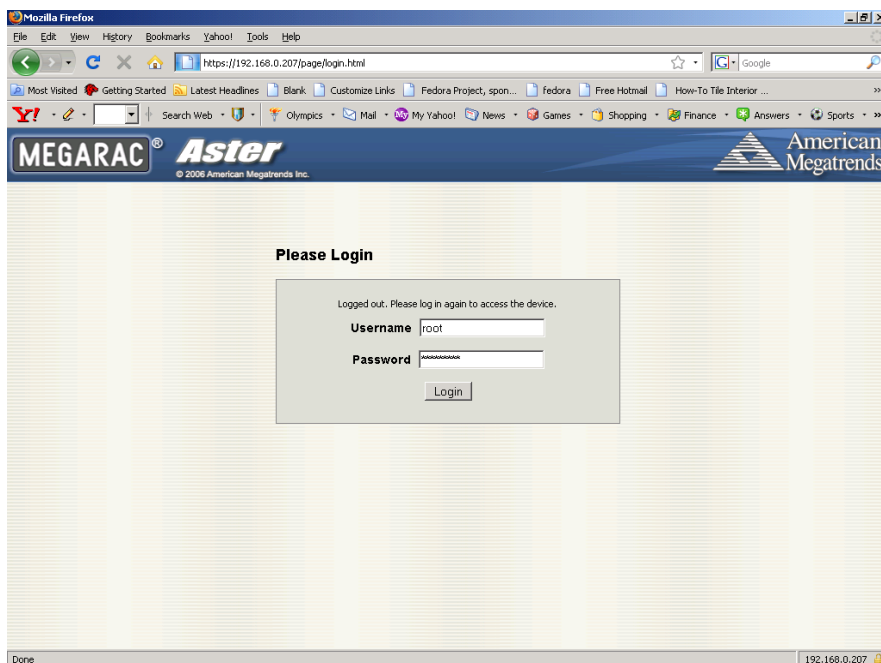
1.3 IPMITool and Other Open Source Software

AST2050 supports open source software IPMITool, you can also use other ones like OpenIPMI, IPMI Util. Note that for IPMITool SOL session, user needs to use BIOS setup menu to configure "Remote Serial Console Redirect" to use COMA, and set baud rate to 38.4K, 8 bits, no parity, and Xon/Xoff handshaking.

2. ASTER GUI

2.1 ASTER GUI Overview

The AST2050 has a user-friendly Graphics User Interface (GUI) called the **Aster GUI**. It is designed to be easy to use. It has a low learning curve because it uses a standard Internet browser. You can expect to be up and running in less than five minutes.



You will be prompted to enter a user name and password. The default user name and password are as follows:

Field	Default
Username	root
Password	superuser

NOTE:

The default user name and password are in lower-case characters.

When you log in using the root user name and password, you have full administrative powers. It is advised that once you log in, you change the root password.

2.2 System Information

This page shows system power on status and firmware revision and its release date.

The screenshot shows a Mozilla Firefox browser window with the address bar displaying `https://192.168.0.207/index.html`. The page features a blue header with the MEGARAC Aster logo and the text "© 2006 American Megatrends Inc.". Below the header is a navigation bar with links: System Information, Server Health, Configuration, Remote Control, Maintenance, and Languages. A "HELP" link is also present. The main content area is titled "System Information" and contains a sub-section "Summary" with the following details:

- Device Power Status : On
- Firmware Revision : 0.1.28014
- AuxFirmwareRevision : 28014
- Build Time : Jul 16 2008 10:34:27

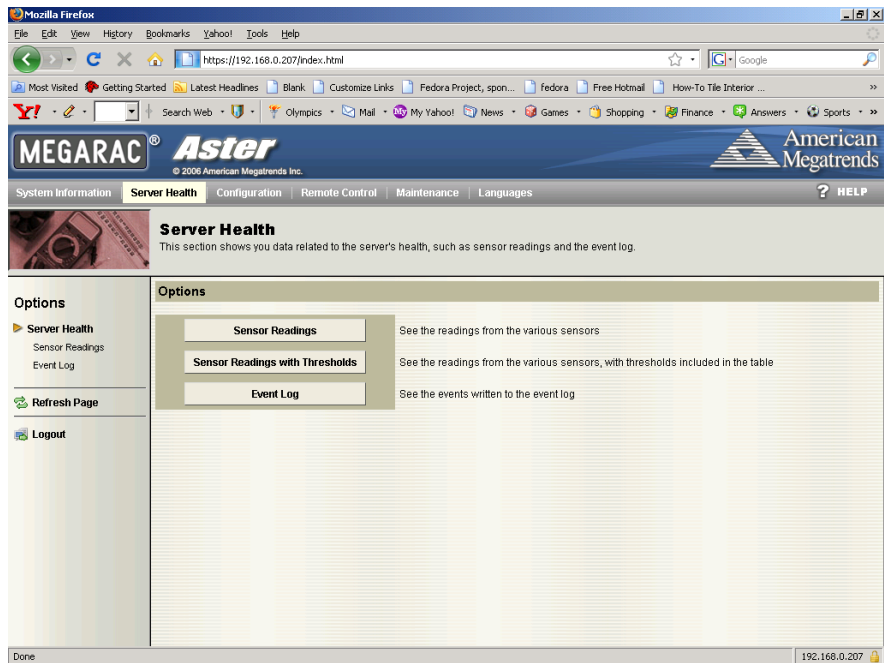
On the left side of the page, there is a sidebar with the following options:

- Options
- System Information
- List FRU
- Refresh Page
- Logout

The status bar at the bottom of the browser window shows "Done" and the IP address "192.168.0.207".

2.3 Server Health

This page contains options to show motherboard sensor readings and events. SDR, Sensor reading, Sensor events (System event log), and PEF (Platform event filters) are implemented in compliant with ipmi2.0 specification.



2.3.1 Sensor Reading

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System Information Server Health Configuration Remote Control Maintenance Languages

HELP



Server Health
This section shows you data related to the server's health, such as sensor readings and the event log.

Options

Server Health

Sensor Readings

Event Log

Refresh Page

Logout

Sensor Readings

This page displays system sensor information, including readings and status. You can toggle viewing the thresholds for the sensors by pressing the Show Thresholds button below.

Select a sensor type category:

All Sensors

Sensor Readings: 6 sensors

Name	Status	Reading
GPIO5	Lower Non-Critical Lower Critical	-128 degrees C
GPIO10	Lower Non-Critical Lower Critical	-128 degrees C
GPIO21	Lower Non-Critical Lower Critical	-128 degrees C
GPIO37	Lower Non-Critical Lower Critical	-128 degrees C
GPIO43	Lower Non-Critical Lower Critical	-128 degrees C
GPIO49	Lower Non-Critical Lower Critical	-128 degrees C

Refresh

Show Thresholds

Done192.168.0.207

2.3.2 Sensor Reading with Thresholds

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System Information **Server Health** Configuration Remote Control Maintenance Languages ? HELP

Server Health

This section shows you data related to the server's health, such as sensor readings and the event log.

Options

- Server Health
 - Sensor Readings**
 - Event Log

Refresh Page

Logout

Sensor Readings

This page displays system sensor information, including readings and status. You can toggle viewing the thresholds for the sensors by pressing the Show Thresholds button below.

Select a sensor type category:
All Sensors

Sensor Readings: 6 sensors

Name	Status	Reading	Low NR	Low CT	Low NC	High NC	High CT	High NR
GPI05	Lower Non-Critical Lower Critical	-128 degrees C	-128 degrees C	3 degrees C	8 degrees C	42 degrees C	47 degrees C	127 degrees C
GPI010	Lower Non-Critical Lower Critical	-128 degrees C	-128 degrees C	3 degrees C	8 degrees C	42 degrees C	47 degrees C	127 degrees C
GPI021	Lower Non-Critical Lower Critical	-128 degrees C	-128 degrees C	3 degrees C	8 degrees C	42 degrees C	47 degrees C	127 degrees C
GPI037	Lower Non-Critical Lower Critical	-128 degrees C	-128 degrees C	3 degrees C	8 degrees C	42 degrees C	47 degrees C	127 degrees C
GPI043	Lower Non-Critical Lower Critical	-128 degrees C	-128 degrees C	3 degrees C	8 degrees C	42 degrees C	47 degrees C	127 degrees C
GPI049	Lower Non-Critical Lower Critical	-128 degrees C	-128 degrees C	3 degrees C	8 degrees C	42 degrees C	47 degrees C	127 degrees C

Refresh **Hide Thresholds**

Done 192.168.0.207

2.3.3 Event Log

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System Information **Server Health** Configuration Remote Control Maintenance Languages ? HELP

Server Health
This section shows you data related to the server's health, such as sensor readings and the event log.

Options

- Server Health
 - Sensor Readings
 - Event Log**
- Refresh Page
- Logout

Event Log

Below is a table of the events from the system's event log. You can choose a category from the pull-down box to filter the events, and also sort them by clicking on a column header.

Select an event log category:
Sensor-Specific Events

Event Log: 60 event entries

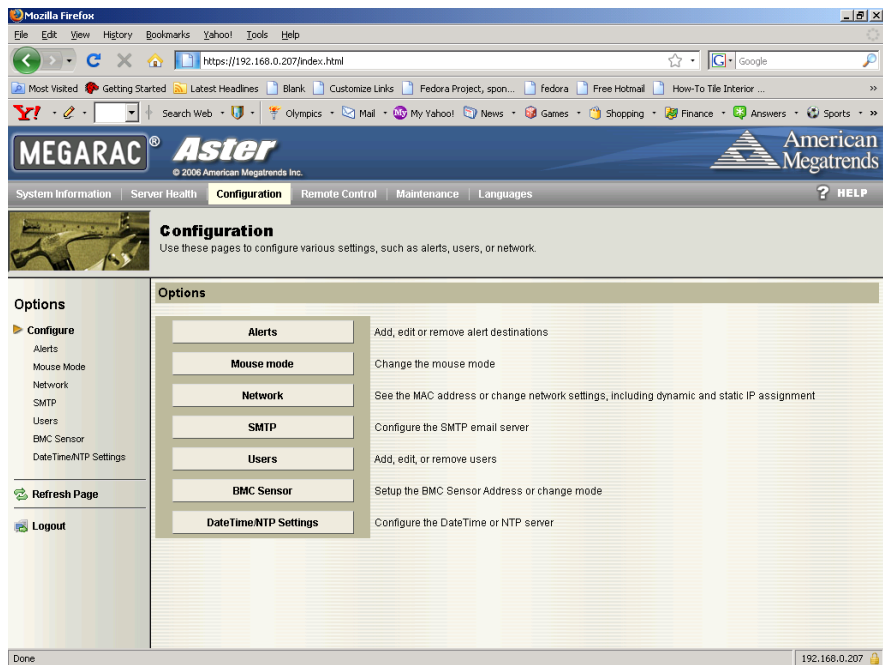
Event ID /	Time Stamp /	Sensor Name /	Sensor Type /	Description /
13	12/31/2006 16:00:02	GPIO5	Temperature	[0] - Asserted
14	12/31/2006 16:00:02	GPIO5	Temperature	[2] - Asserted
15	12/31/2006 16:00:02	GPIO10	Temperature	[0] - Asserted
16	12/31/2006 16:00:02	GPIO10	Temperature	[2] - Asserted
17	12/31/2006 16:00:02	GPIO21	Temperature	[0] - Asserted
18	12/31/2006 16:00:02	GPIO21	Temperature	[2] - Asserted
19	12/31/2006 16:00:02	GPIO37	Temperature	[0] - Asserted
20	12/31/2006 16:00:02	GPIO37	Temperature	[2] - Asserted
21	12/31/2006 16:00:02	GPIO43	Temperature	[0] - Asserted
22	12/31/2006 16:00:02	GPIO43	Temperature	[2] - Asserted

Clear Event Log

Done 192.168.0.207

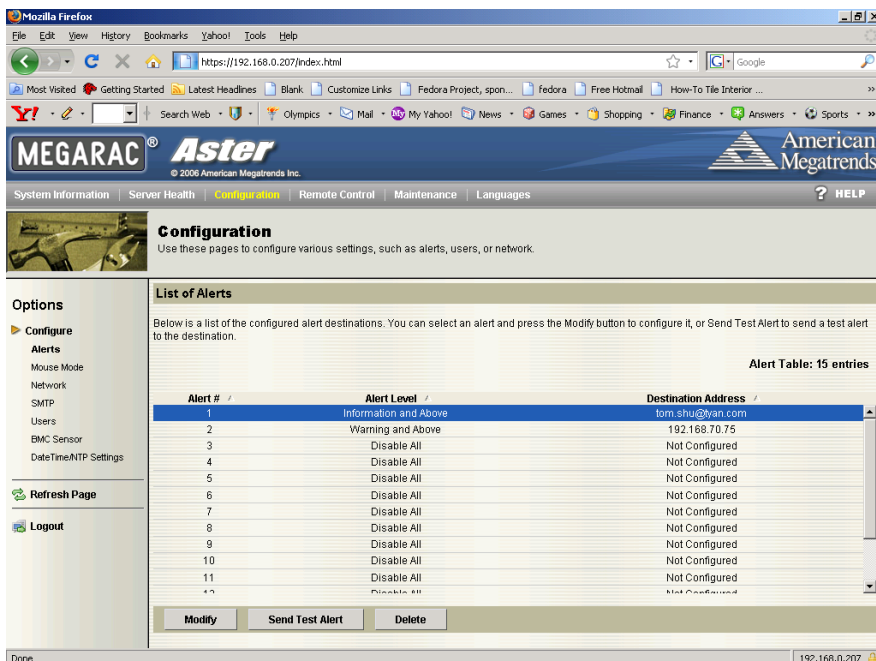
2.4 Configuration

This page contains options to configure Alerts, Mouse mode, Network, SMTP, Users, and Date Time NTP Settings.



2.4.1 Alerts

This page lists configured alert destinations, use modify button to configure it, or send a test alert to the destination.



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System Information Server Health **Configuration** Remote Control Maintenance Languages ? HELP

Configuration
Use these pages to configure various settings, such as alerts, users, or network.

Options
Configure
Alerts
Mouse Mode
Network
SMTP
Users
BMC Sensor
DateTime/NTP Settings
Refresh Page
Logout

List of Alerts
Below is a list of the configured alert destinations. You can select an alert and press the Modify button to configure it, or Send Test Alert to send a test alert to the destination.

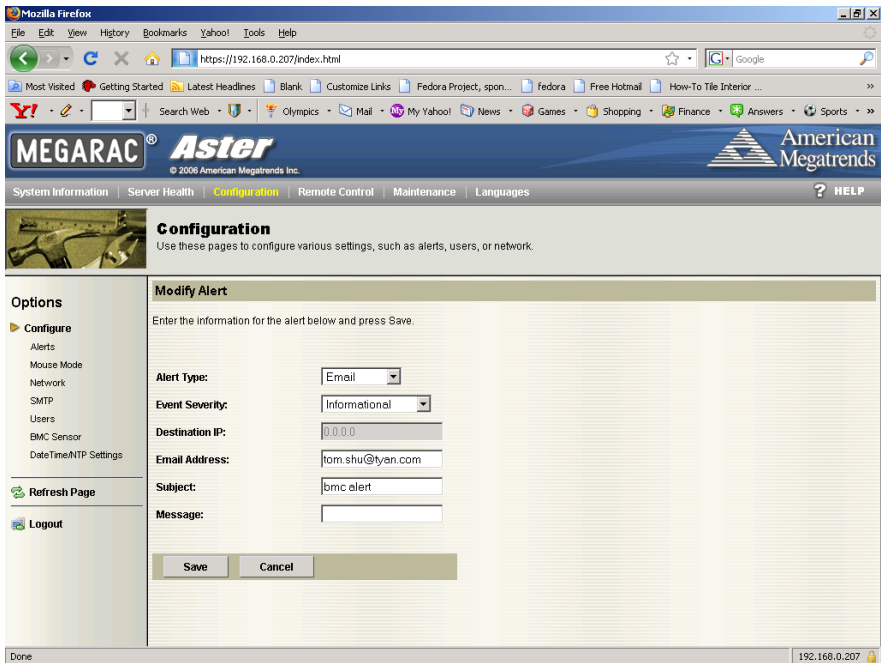
Alert Table: 15 entries

Alert #	Alert Level	Destination Address
1	Information and Above	tom.shu@yan.com
2	Warning and Above	192.168.70.75
3	Disable All	Not Configured
4	Disable All	Not Configured
5	Disable All	Not Configured
6	Disable All	Not Configured
7	Disable All	Not Configured
8	Disable All	Not Configured
9	Disable All	Not Configured
10	Disable All	Not Configured
11	Disable All	Not Configured
12	Disable All	Not Configured

Modify Send Test Alert Delete

Done 192.168.0.207

This Modify Alert page contains drop down menu's and fields to configure alert types (email, SNMP traps), event severity, destination IP/Email address, and subject etc.

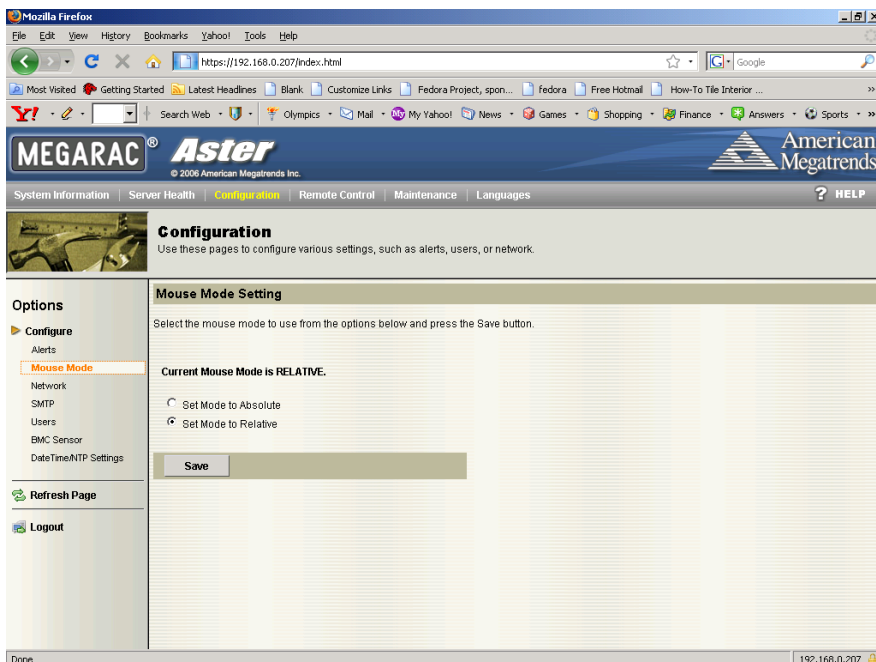


2.4.2 Mouse Mode

This configuration depends on the OS installed on Local Host. Note, it's OS on local host with AST2050, not the remote console.

Most modern Windows versions(2000/XP/2003/Vista/2008) and Mac OS X, use the Absolute Mode.

Relative mode is used by most Linux distributions (SuSE, RHEL) and older operating system like Windows 95/98.



2.4.3 Network

Use this page to view and configure network settings.

The screenshot shows a Mozilla Firefox browser window with the address bar displaying `https://192.168.0.207/index.html`. The browser's toolbar includes menus for File, Edit, View, History, Bookmarks, Yahoo!, Tools, and Help. Below the toolbar is a search bar with the Google logo and a search button. The main content area displays the Aster configuration interface. At the top, there is a banner for MEGARAC and Aster, with the text "© 2006 American Megatrends Inc." and a logo for American Megatrends. Below the banner is a navigation bar with links for System Information, Server Health, Configuration (highlighted), Remote Control, Maintenance, and Languages. A "HELP" link is also present. The main heading is "Configuration" with a subheading "Network Settings". Below this, a message states: "You can view and modify the network settings on this page. Select whether to obtain an IP address automatically or manually configure one." The form contains the following fields: "MAC Address" (displaying 00:E0:81:B2:5D:90), "IP Address" (displaying 192.168.0.207), "Subnet Mask" (displaying 255.255.255.0), and "Default Gateway" (displaying 192.168.0.1). There are radio buttons for "Obtain an IP address automatically (use DHCP)" and "Use the following IP address", with the latter being selected. A "Save" button is located at the bottom of the form. On the left side of the configuration page, there is a sidebar with "Options" and a "Configure" button. Below this, there are links for Alerts, Mouse Mode, Network, SMTP, Users, BMC Sensor, and DateTime/NTP Settings. At the bottom of the sidebar, there are links for "Refresh Page" and "Logout". The status bar at the bottom of the browser window shows "Done" and the IP address "192.168.0.207".

Options

- Configure
- Alerts
- Mouse Mode
- Network**
- SMTP
- Users
- BMC Sensor
- DateTime/NTP Settings

Refresh Page

Logout

Network Settings

You can view and modify the network settings on this page. Select whether to obtain an IP address automatically or manually configure one.

MAC Address

☐ Obtain an IP address automatically (use DHCP)

☒ Use the following IP address

IP Address

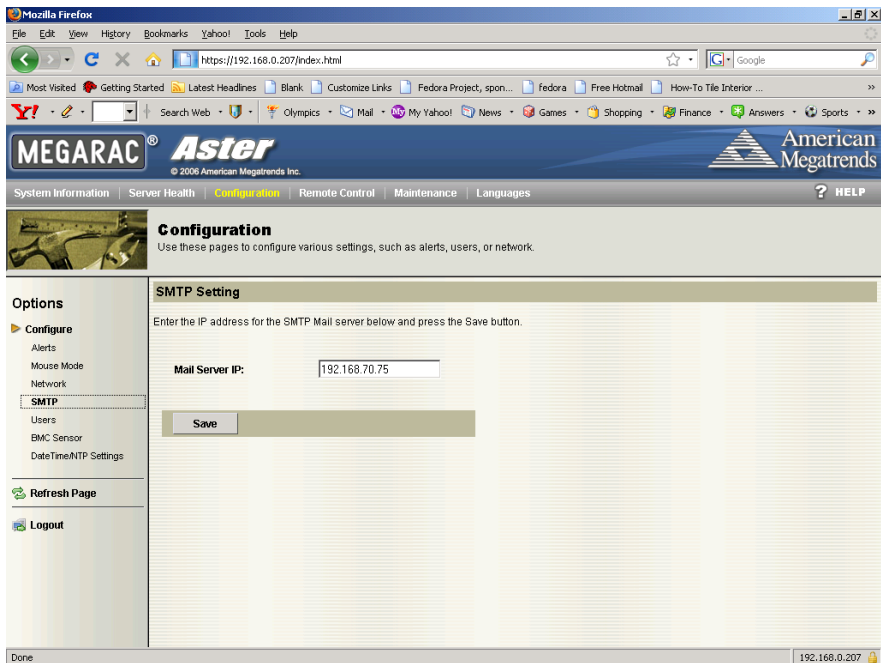
Subnet Mask

Default Gateway

Save

2.4.4 SMTP

For email alert, Enter and Save the SMTP mail server IP in this page.



2.4.5 Users

Use this page to add, modify, and delete users. You may select “modify user” and then change each user’s name, password, and privileges.

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System Information | Server Health | **Configuration** | Remote Control | Maintenance | Languages ? **HELP**

Configuration
Use these pages to configure various settings, such as alerts, users, or network.

Options
▶ **Configure**
Alerts
Mouse Mode
Network
SMTP
Users
BMC Sensor
Date/Time/NTP Settings

Refresh Page

Logout

User List

The list below shows the current list of configured users. If you would like to delete or modify a user, select their name in the list and press Delete User or Modify User. To add a new user, select an unconfigured slot and press Add User.

Number of configured users: 3

UserID /	User Name /	Network Privilege /
1	anonymous	No Access
2	root	Administrator
3	smidc	Administrator
4	~	Administrator
5	~	~
6	~	~
7	~	~
8	~	~
9	~	~
10	~	~

Add User **Modify User** **Delete User**

Done 192.168.0.207

2.4.6 Date Time/NTP Settings

Select options to set date/time.

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System Information | Server Health | **Configuration** | Remote Control | Maintenance | Languages ? **HELP**

Configuration

Use these pages to configure various settings, such as alerts, users, or network.

Date/Time and NTP Server Setting

Here you can setting Date/Time and NTP server

Time Zone

☐ **User specified time**

Date / / (mm / dd / yyyy)

Time : : (hh : mm : ss)

☐ **Synchronize with NTP server**

Primary Time Server

Secondary Time Server

The NTP Server configuration will be cleared if IP auto configuration is configured to either BOOTP or DHCP in the Network settings and the DHCP/BOOTP server is not providing the NTP server information.

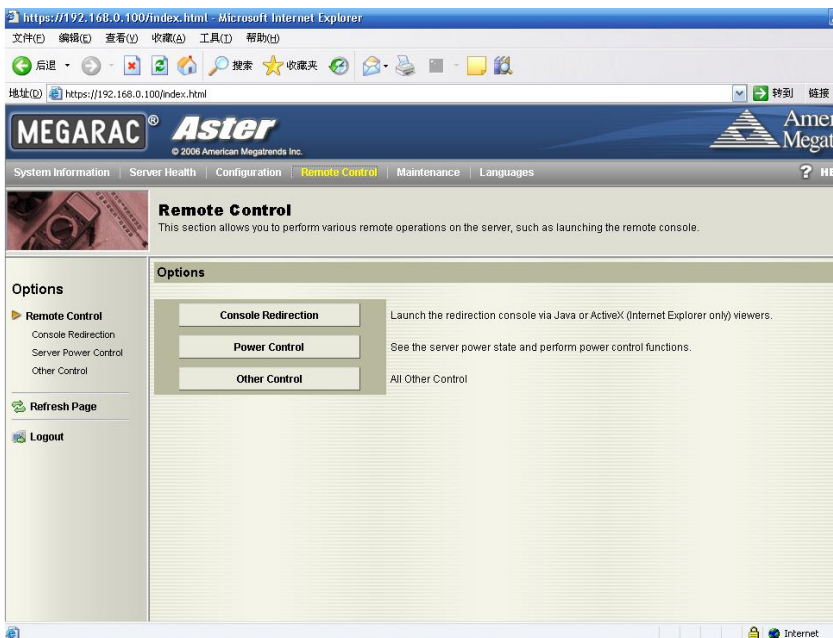
Options

- Configure**
 - Alerts
 - Mouse Mode
 - Network
 - SMTP
 - Users
 - BMC Sensor
 - Date/Time/NTP Settings**
- Refresh Page**
- Logout**

Done 192.168.0.207

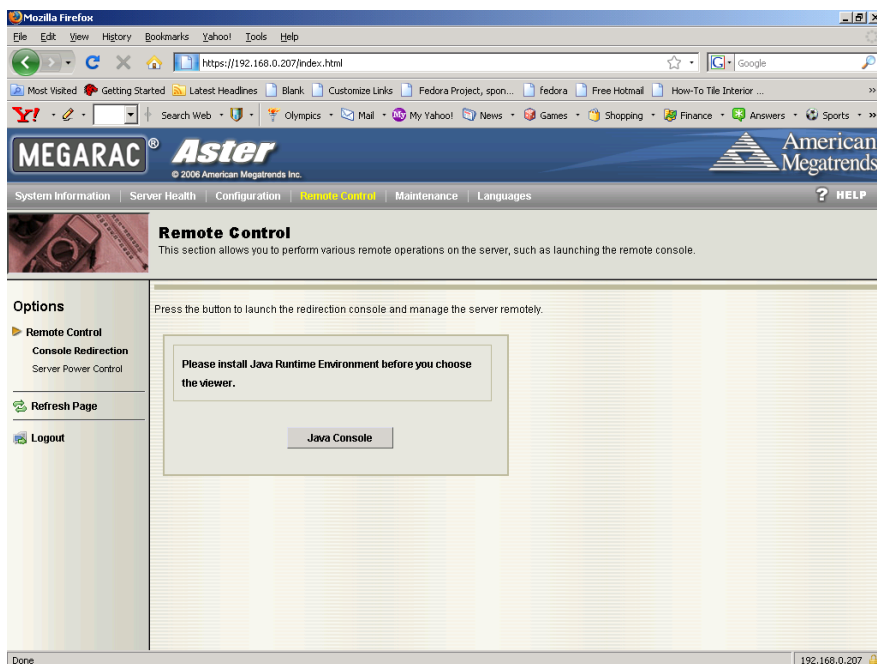
2.5 Remote Control

This page allows user to perform various remote operations such as “Console Redirection” , “Power Control” and “ Other Control”.

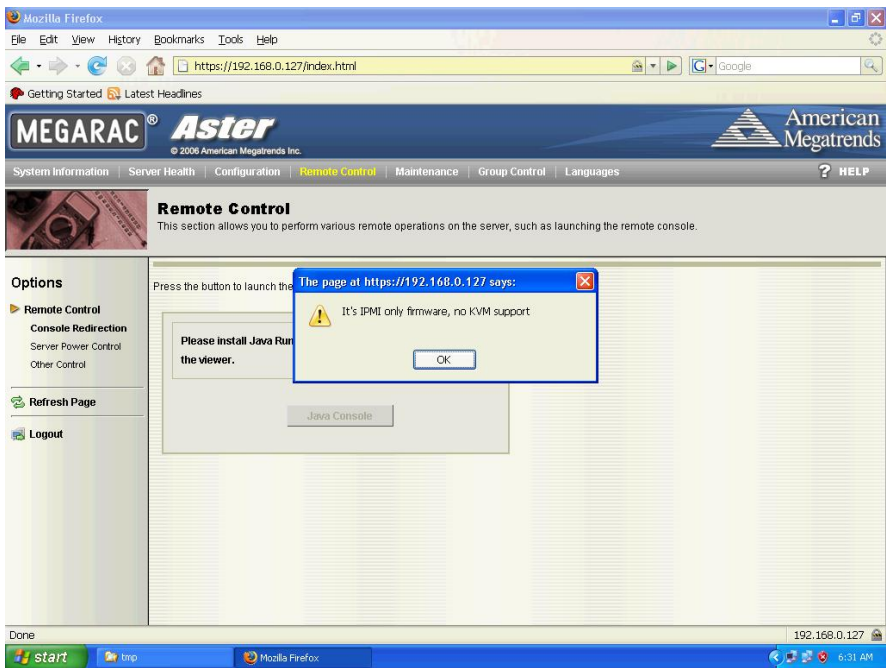


2.5.1 Remote Console Redirection

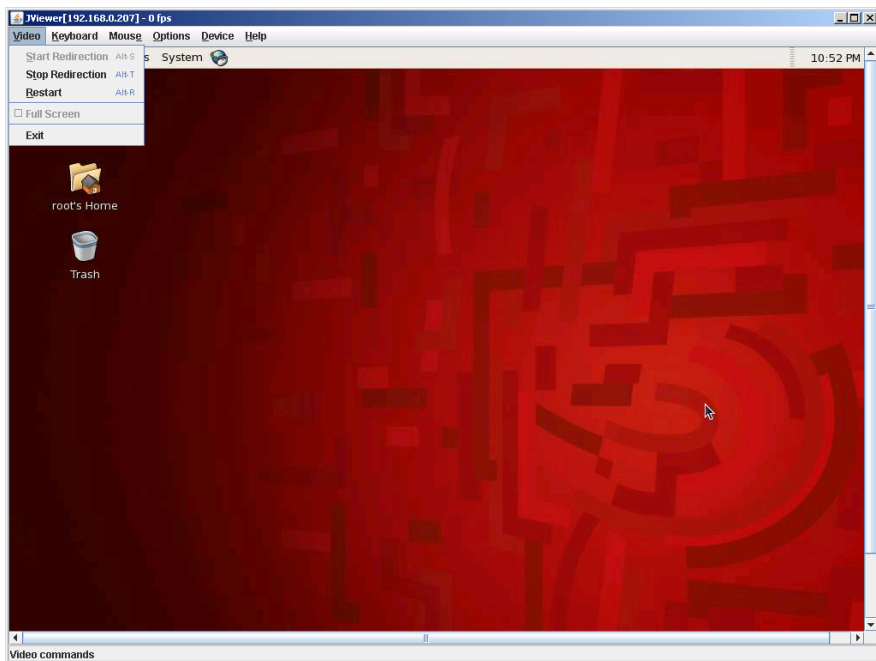
Press “Java Console” button to invoke JViewer to start KVM-over-IP session.



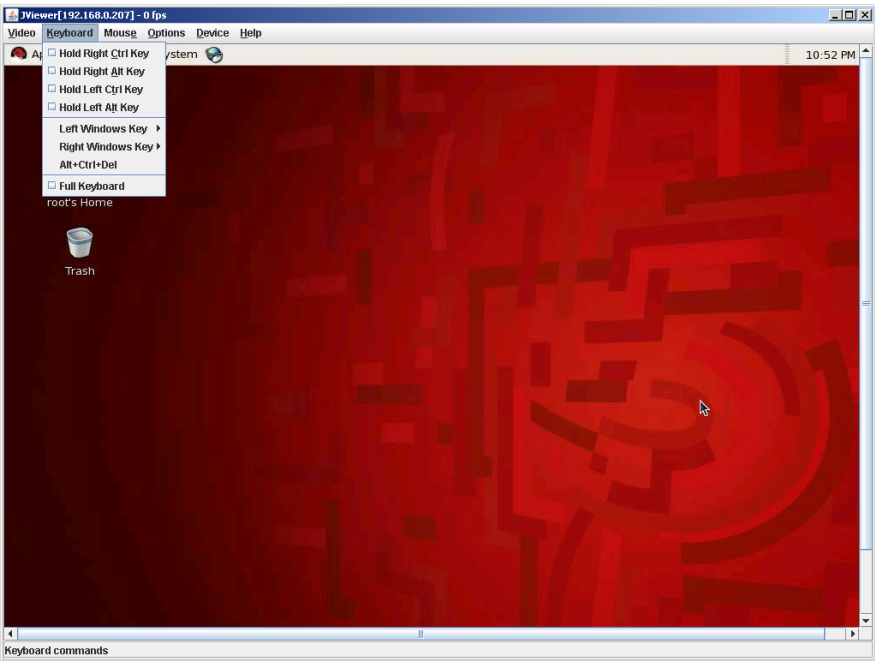
For IPMI only SKU, button “Java Console” will be grayed out and make sure users couldn’t use KVM-over-IP feature.



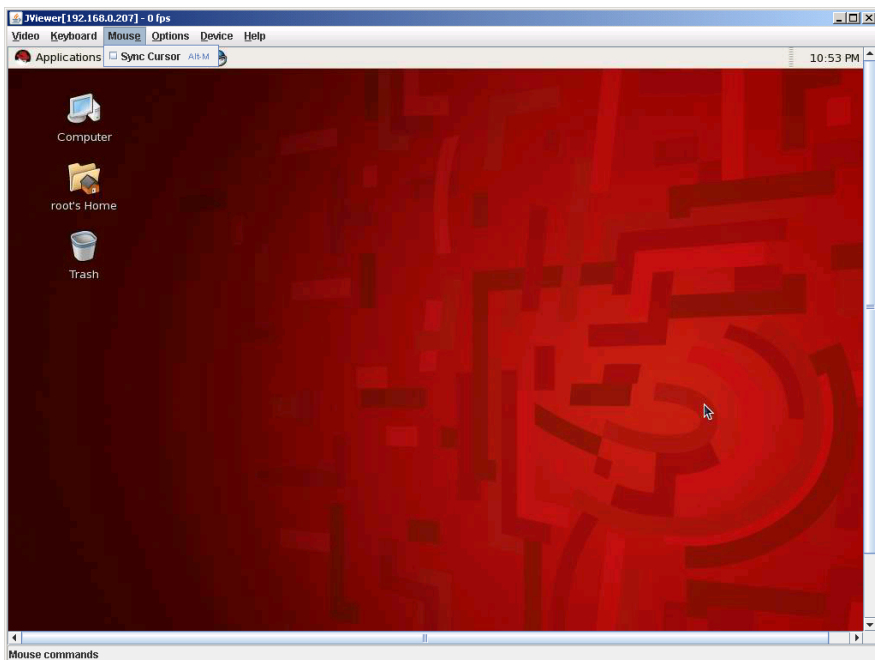
Use JViewer <Video> menu to stop/restart/exit console redirect session.



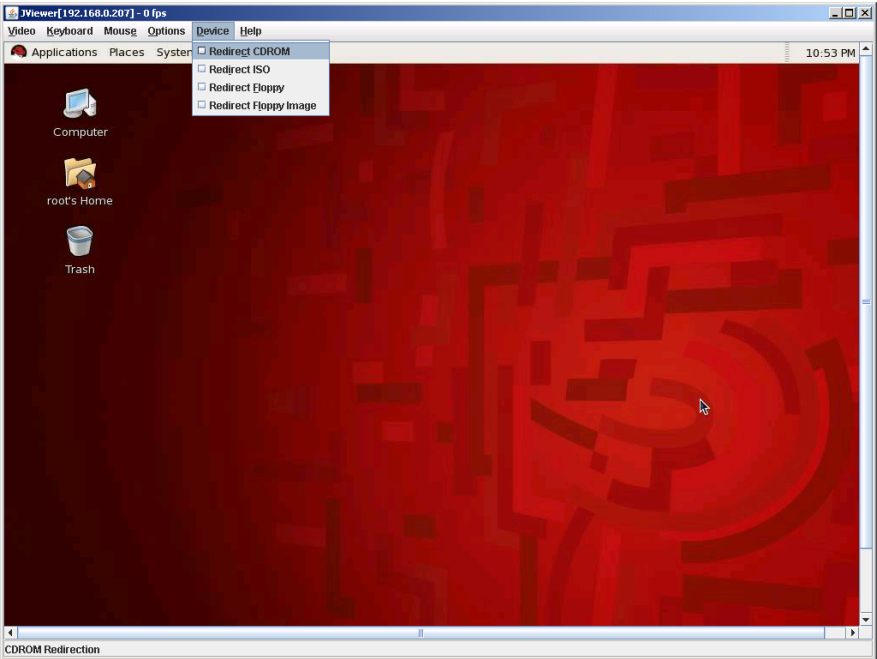
To avoid OS to intercept and interpret special key combinations, you may need to use this drop down menu to send special Key combinations to remote OS.



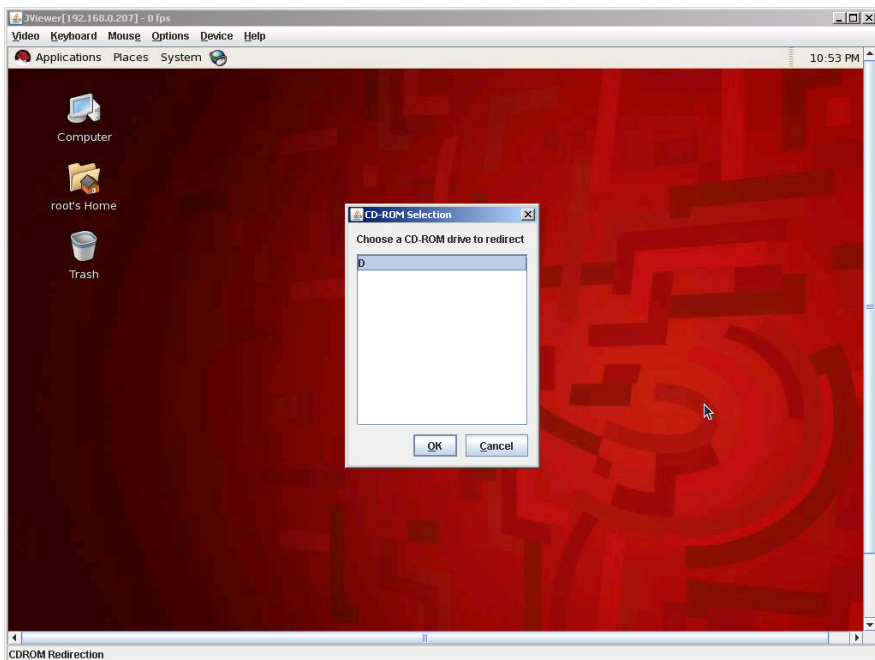
Select <Mouse sync > to allow mouse work correctly within the JViewer redirected remote screen (in sync with remote OS). Press <alt-M> to release “mouse sync” and return mouse control to local OS.



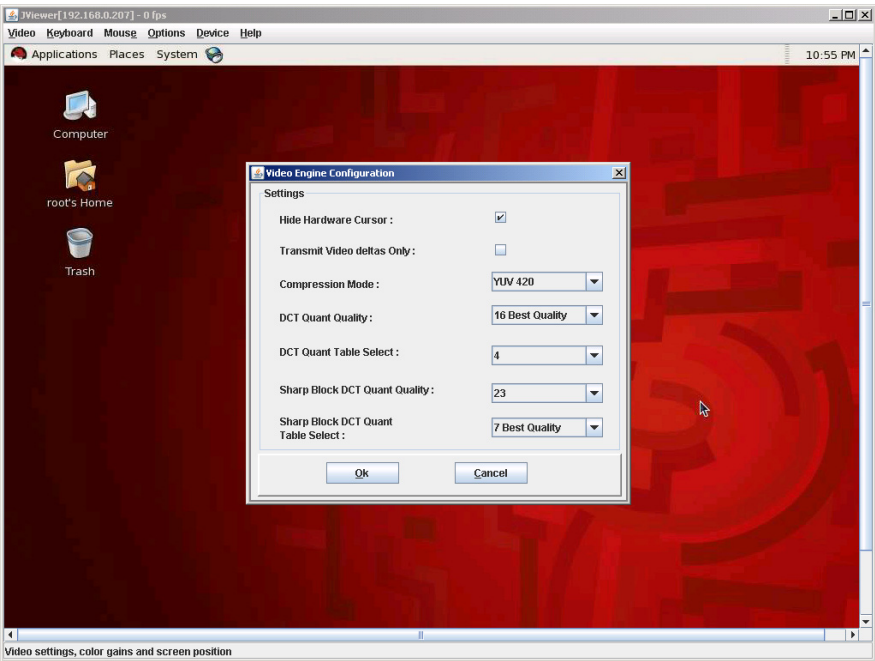
Remote CDROM /Floppy redirection selection.



Choose a local CDROM drive to redirect. Note that you need to configure “Boot order” on remote station (via remote station BIOS Setup, after select CDROM to redirect) before you can let the remote station to boot from the redirected CDROM .

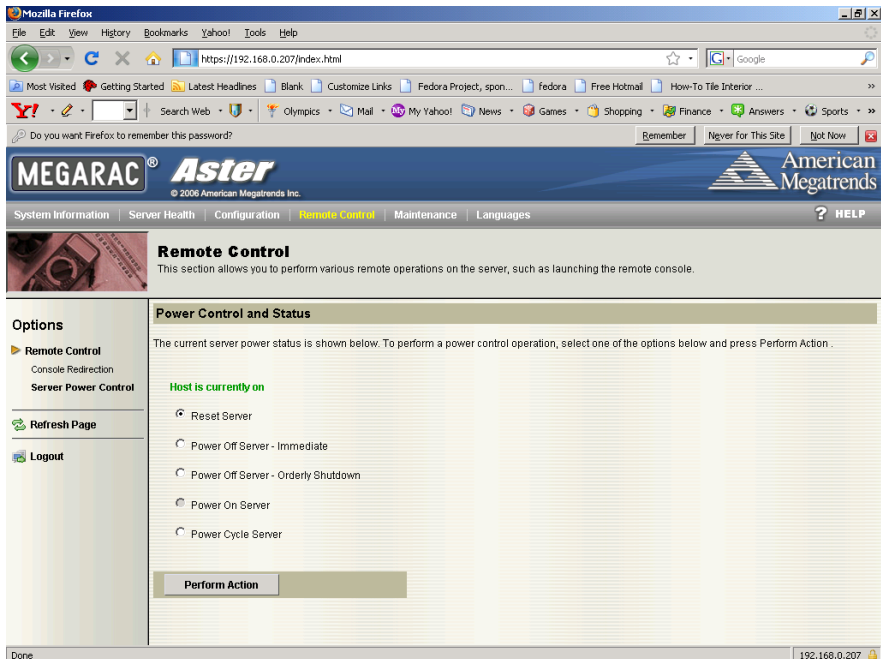


Select <Options> menu to configure KVM-over-IP Video engine.



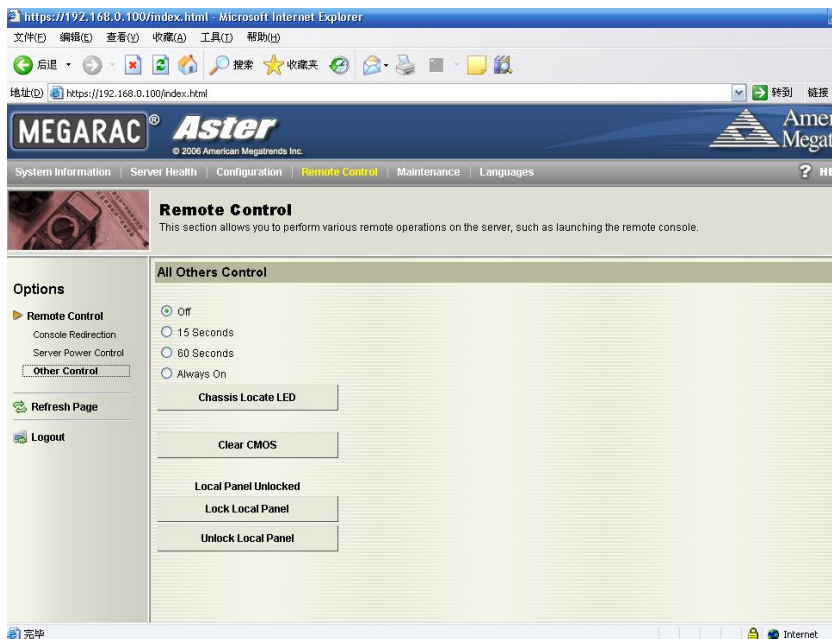
2.5.2 Remote Power Controls

Select options in this page to reset, power off, power on, or power cycle the remote station.



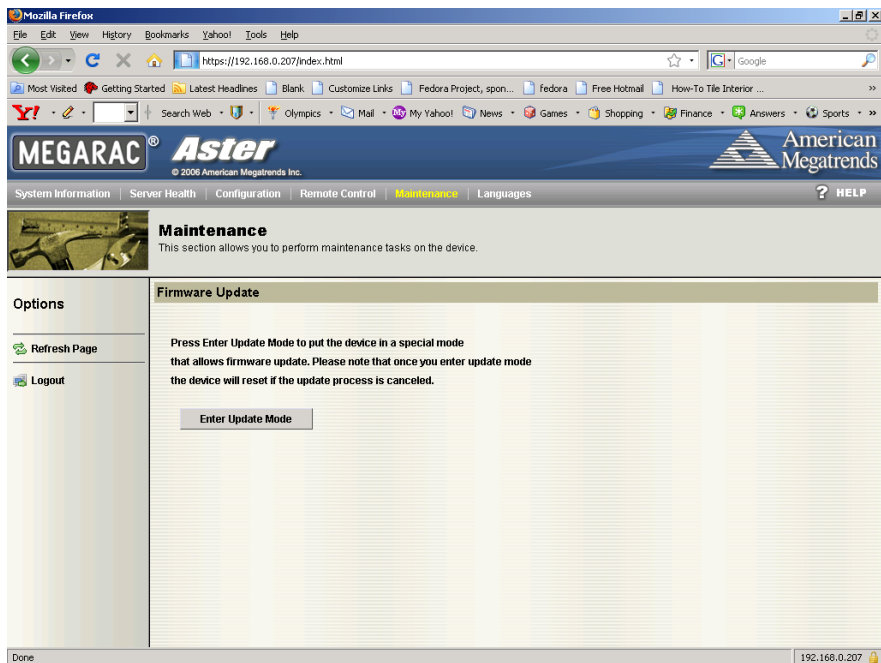
2.5.3 Other Controls

Select options in this page to chassis ID LED check, clear CMOS and local lock panel control the remote station.



2.6 Maintenance

Need to “Enter Update Mode” in order to flash new firmware.



Select firmware to upload and then press “update firmware” button to proceed firmware update.

