

# HP ProLiant ML150 System Monitor User Guide



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# Introduction



HP ProLiant ML150 System Monitor (MSM) is a browser-based management software that provides remote administration and monitoring of server components as well as some of the critical server health functions. It consists of two major parts:

- **MSM Server** is the data engine of MSM. It monitors the hardware and performs all the management actions. MSM Server must be installed on the HP ProLiant ML150 server. Once installed, the engine will be automatically loaded upon server booting.
- **MSM Console** is a browser-based program providing GUI for users at the client PC. Install MSM Console on a client system running Microsoft Windows 2000, Windows Server 2003, or Windows XP that can access the HP ProLiant ML150 server using the TCP/IP network.

## MSM Features

MSM contains the following features:

- **Authentication**  
MSM Server Agent authenticates the user to log in MSM Server Agent and verifies corresponding privileges.  
  
When logging in, please specify the server name (or IP address; **localhost** is shown for a local system), user name and password, domain (empty if no domain).
- **Remote Browsing**  
You can use MSM Console to remotely browse the sensor readings from the console.
- **Remote Power Control**  
MSM Console can turn off, turn on, or reboot the monitored server through the MSM Server Agent.
- **Sensor Reading Auto Refresh**  
In MSM Console, clicking the **Monitor** indicator turns on and off the auto refresh function.  
  
The refresh rate can be modified in the **General** tab of the General Settings panel.
- **Scope**  
In MSM Console, you can view the sensor readings, and set the threshold and alert settings in the Scope panel.
- **Sensor Threshold Setting**  
In MSM Console, you can set the sensor threshold setting to lower or upper in the Scope panel.
- **Alert and Error Action**  
MSM Server Agent supports the alert and error action on the host server, such as email, power-off and reboot, when the sensor reading is abnormal. You can configure the settings in the Scope panel.
- **Alert History Log**  
All alert (email, reboot and power-off) history can be logged in MSM Server Agent.

- **Sensor Reading Log**  
Sensor readings can be logged in the specified file in MSM Console, and the log frequency equals to the refresh rate.
- **Operating Environment Computation (OEC)**  
MSM Console monitors and calculates the host sensor readings at the specified time. You can configure MSM to automatically adjust the corresponding threshold. For the detailed instructions, refer to the Auto Tab section of “Configuring MSM” on page 12.
- **Floating Mini Window**  
In MSM Console, the mini window will automatically scroll the sensor readings.  
  
Right-clicking the left of the mini window allows you to access the MSM menu. To move the mini window, click and hold the left of the mini window.
- **MSM Console Icon**  
Right-click the MSM Console icon  to access the MSM menu. When the window is minimized, click MSM Console icon  to restore the MSM window.
- **Auto Fan Control**  
The Auto Fan Control function allows the system to automatically adjust the fan speed to high, medium or low according to the system’s temperature. Enabling this function can reduce noises and power consumption when the system runs in full speed.

# Installing MSM

## Installing MSM Server on the Server

1. Insert the *HP Startup CD-ROM* in the CD-ROM drive of the HP ProLiant ML150 server running Microsoft Windows 2000 or Windows Server 2003. The Startup CD-ROM should start automatically.

**NOTE:** If the server does not auto-start the **Startup** menu, start it by opening startup.htm, found at the root level of the Startup CD-ROM.

2. Click **MSM (ML150 System Monitor)** on the screen.
3. Click **Click here to install MSM Server** on the screen to install MSM Server engine on the HP ProLiant ML150 server.

After the installation, you can click **Control Panel > Administrative Tools > Services > MSMDDataEngine** to see if the installation is successful.

Once installed, MSM Server will be automatically loaded after the HP ProLiant ML150 server boots.

## Installing MSM Console on a Client PC

1. Insert the *HP Startup CD-ROM* in the CD-ROM drive of a PC running Microsoft Windows and having access to the HP ProLiant ML150 server using the TCP/IP network. The Startup CD-ROM should start automatically.

**NOTE:** If the PC does not auto-start the **Startup** menu, start it by opening startup.htm, found at the root level of the Startup CD-ROM.

2. Click **MSM(ML150 System Monitor)** on the screen.
3. Click **Click here to install MSM Console** on the screen to install MSM Console to the PC.


Once installed, you can start MSM Console on the PC by clicking **Start > Programs > ML150 System Monitor Console > ML150 System Monitor Console**. The login window appears for you to log in MSM and perform remote management.

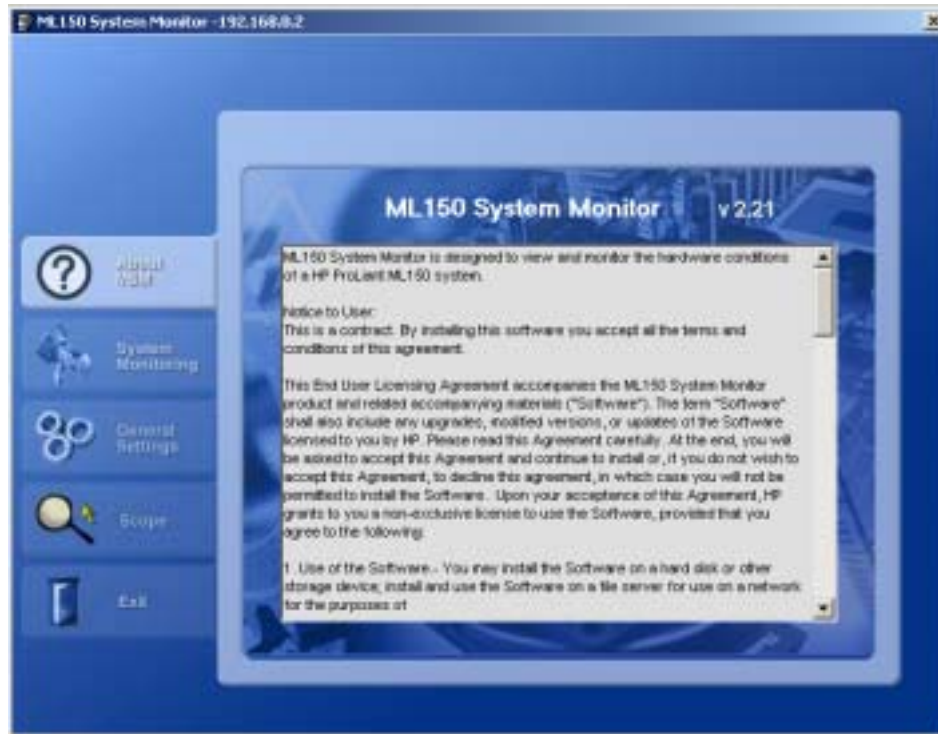
## Starting MSM




When you log in MSM, there are several items for setup:

- **Server Name or IP**  
Enter the name or IP of the server to be monitored.
- **Server Status**  
The login status or warning message will be displayed when you use this login console.
- **User login**  
Select an identity to log in MSM Console.
- **Log On**  
Log in MSM Console to monitor the system you select.
- **Cancel**  
Exit the login console.
- **Wake Up**  
Wake up the system you select when it is in the Power-off or Standby status.

Click the **Log On** button to start MSM Console after selecting the correct information. The MSM window will appear displaying the license agreement of MSM. The MSM Console icon  also appears on the taskbar.




A mini window **CPU1 Fan: Low (RPM)** appears displaying the reading values of the system's fan, voltage and temperature one at a time.

**NOTE:** You can disable or enable the mini window by right-clicking the MSM Console icon  on the taskbar and then selecting **Disable MiniWin** or **Enable MiniWin** from the pop-up menu.


## Changing the Server

You can change the server to be monitored without having to exit MSM.

Right-click the MSM Console icon  on the taskbar and then select **Change Server** from the pop-up menu. The login window appears for you to re-log in MSM and start monitoring this server.

## Exiting MSM

To exit MSM, do one of the following:

- Click the **Exit** panel in the MSM window.
- Right-click the MSM Console icon  on the taskbar and then select **Exit ML150 System Monitor** from the pop-up menu.

# Using MSM

## Indicators

There are three indicators and a LED on the upper right corner of the MSM window. The indicators display the status of **WatchDog**, **OEC**, and **Monitor** with the on/off indication below. The LED displays the status of the system monitoring.

### Starting Auto Refresh of Sensor Readings

Click **off** below **Monitor**. The LED turns from red to green indicating that auto refresh of the sensor readings has been enabled.

To turn off the auto refresh function, click **on** below **Monitor**.

**NOTE:** If you press the **Refresh** button on the System Monitoring panel once without turning on the **Monitor** indicator, the sensor readings will be refreshed only once.

### Starting Auto Reset of Threshold Values

Click **off** below **OEC**. A message appears to confirm that OEC is starting. When the **OEC** indicator is turned on, the **Monitor** indicator will be turned on as well.

**NOTE:** You need to first set the OEC duration in the **Auto** tab of the General Settings panel before turning on the auto reset of threshold values. Refer to the later section for details.

To turn off the auto reset function, click **on** below **OEC**. The **Monitor** indicator will be turned off as well.

### Starting Watch Dog

If the sever hangs, Watch Dog allows the server to reboot automatically as the hardware counter timer reaches the timeout value. To enable Watch Dog, click **off** below **WatchDog**.

**NOTE:** You can set the Watch Dog timeout value in the **General** tab of the General Settings panel. Refer to the later section for details.




## Configuring MSM

You can configure the MSM settings by using the System Monitoring, General Settings, and Scope panels.

### System Monitoring

To access the System Monitoring panel, do one of the following:

- Click the **System Monitoring** panel in the MSM window.
- Right-click the MSM Console icon  on the taskbar and then select **System Monitor** from the pop-up menu.

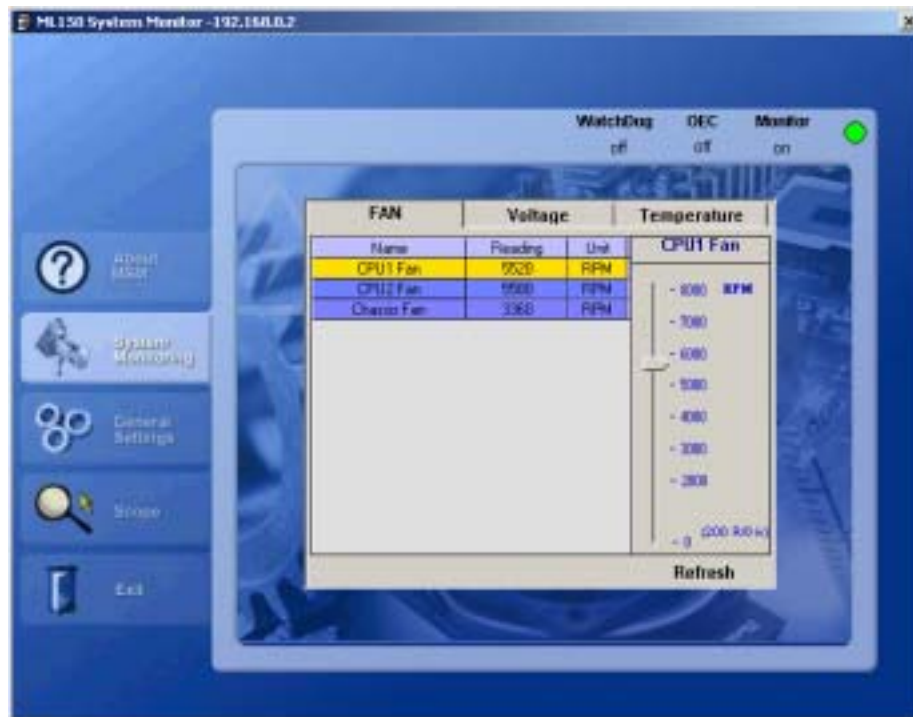
In this panel, you can monitor all reading values of sensors about the fan, voltage and temperature of the system.

Click the **Refresh** button on the lower right corner for the current readings.

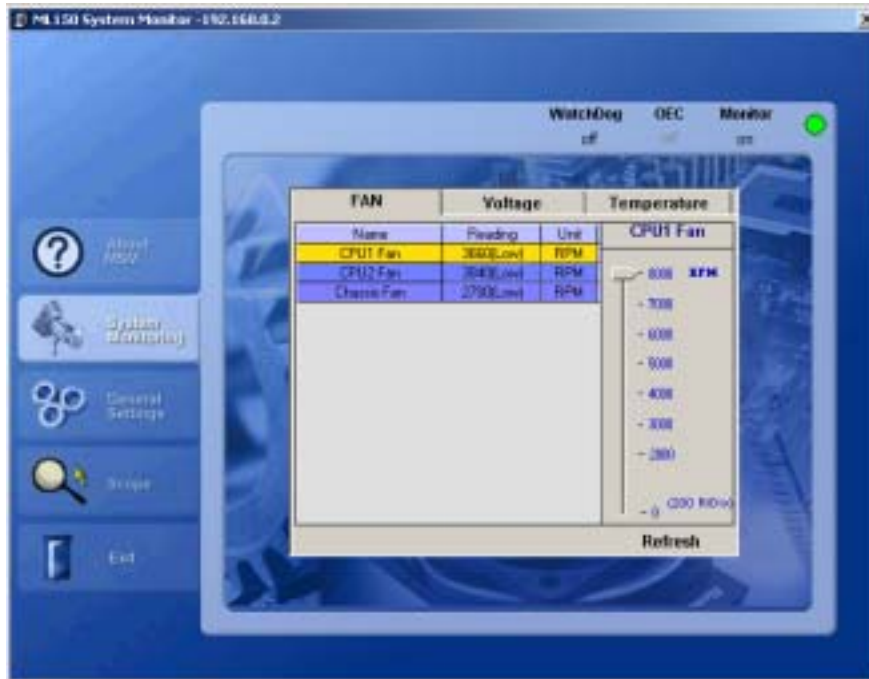
### Fan Tab

The **FAN** tab displays the rpm information about CPU1 Fan, CPU2 Fan, and Chassis Fan.

- When the Auto Fan Control function is disabled:



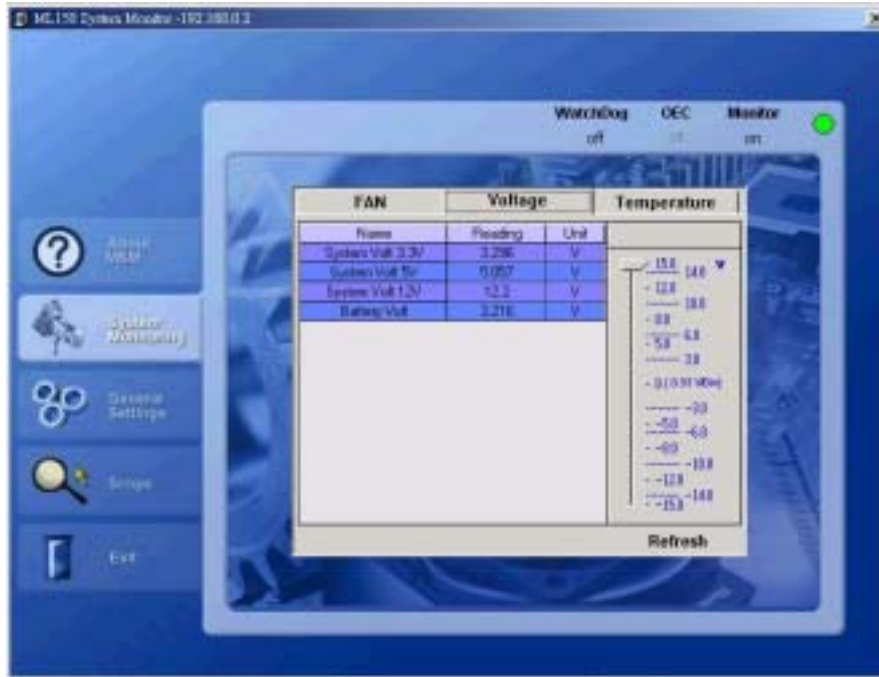
- When the Auto Fan Control function is enabled:



**NOTE:** You can enable/disable the Auto Fan Control function in the **Auto** tab of the General Settings panel. Refer to the later section for details.

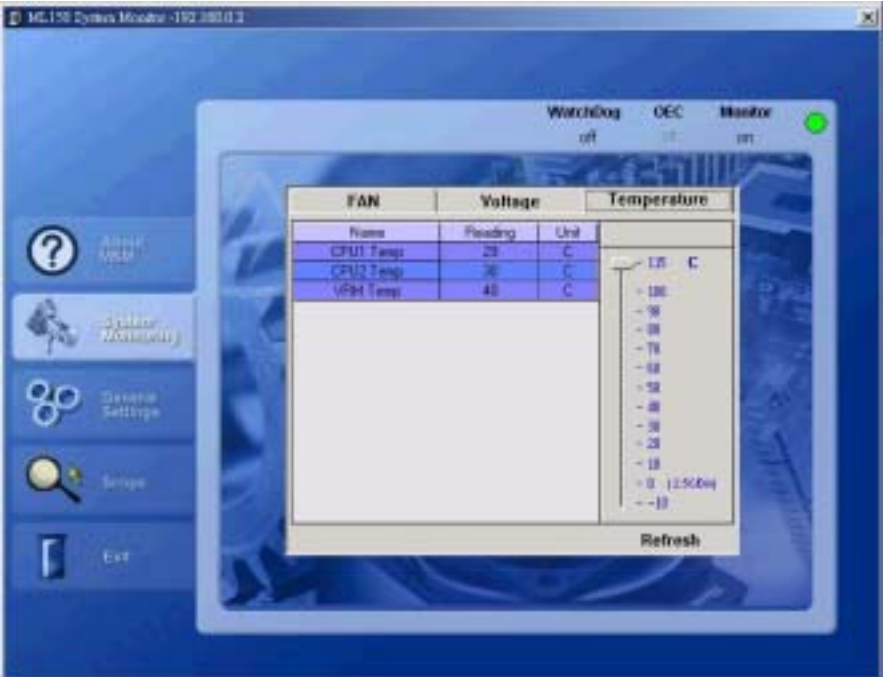
### Voltage Tab

The **Voltage** tab displays the information on System 3.3V/5V/12V and Battery Volt.




### Temperature Tab

The **Temperature** tab displays the temperature information on CPU1, CPU2, and VRM.



## General Settings

To access the System Monitoring panel, do one of the following:

- Click the **General Settings** panel in the MSM window.
- Right-click the MSM Console icon  on the taskbar and then select **General Setting** from the pop-up menu.

After changing the settings, click the **Apply** button on the lower right corner for the change to take effect.

### General Tab



- **MONITOR PERIOD**  
sets the period for refreshing MSM Console.
- **WATCH DOG**  
sets the Watch Dog timeout value. If the server hangs, it will reboot automatically as the hardware counter timer reaches the timeout value.
- **SYSTEM**  
displays the system information and events about the monitored server.

## Alert Tab



- **E-MAIL**  
sets the e-mail address and mail server for receiving alert messages. The server agent can send multiple e-mails to the same SMTP server upon the system's alert.
- **ALERT HISTORY**  
Click **Retrieve File** to view all alert events and related information; click **Clear File** to delete all alert records.

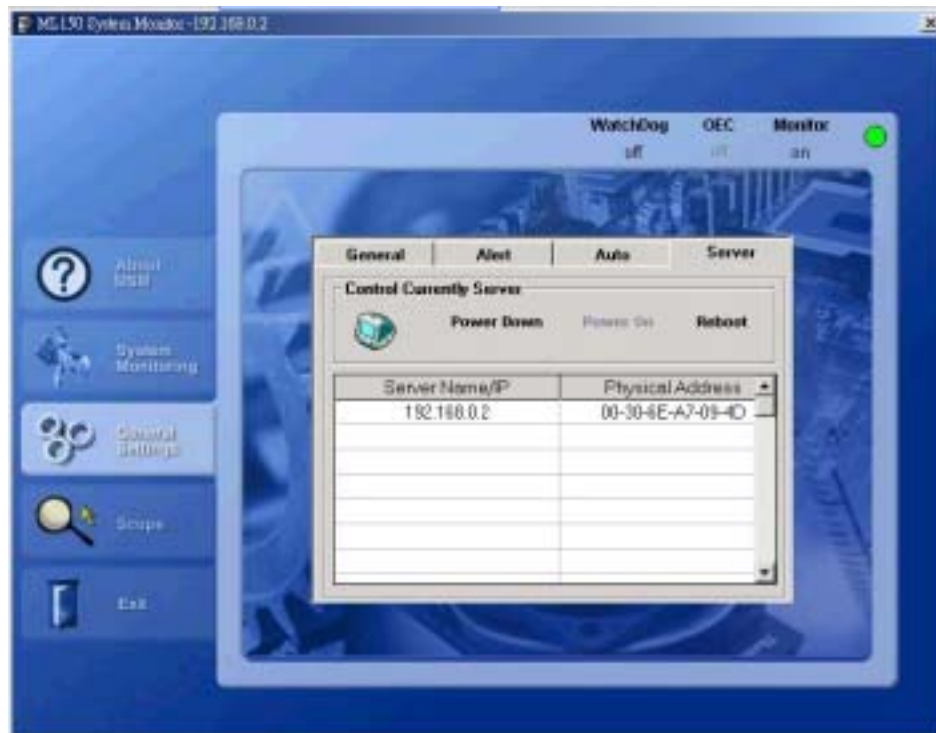
## Auto Tab



- **READING LOG**  
All reading values of sensors are recorded in the SystemMonitor text file when the **Enable Logging Function** item is enabled.
- **OEC**  
sets the OEC duration. To automatically reset the threshold values of all sensors, follow this procedure:
  - a. Enable the **Auto Set New Threshold** item.
  - b. Click the **Apply** button on the lower right corner.
  - c. Click **off** (to turn it into **on**) below the **OEC** indicator on the upper right corner of the MSM window.
- **PWM**  
Enable the **Auto Fan Control** item to start the Auto Fan Control function. This function allows the system to automatically adjust the fan speed to high, medium or low according to the system's temperature. Enabling this function can reduce noises and power consumption when the system runs in full speed.


## Server Tab

This tab allows you to remotely turn off, turn on, or reboot the monitored server through MSM Console.



## Scope

To access the System Monitoring panel, do one of the following:

- Click the **Scope** panel in the MSM window.
- Right-click the MSM Console icon  on the taskbar and then select **Scope** from the pop-up menu.

You can monitor the reading values and threshold values of appeared components, and set alert functions when the reading value is over the threshold value.

- The appeared components include VRM, CPU, FAN, Battery, and System Power.
- The alert functions include Beep, ReBoot, Shut Down, and Email.

