Troubleshooting

1.1 Troubleshooting Procedures

Use the following procedures to troubleshoot your system. If you have followed all of the procedures below but still problems, please contact us to apply RMA or more technical support.

Prepare

1. Check that the power connector is connected to your power supply.
2. Check that no short circuits exist between the motherboard and chassis.
3. Disconnect all cables from the motherboard, including those for the keyboard and mouse.
4. Remove all add-on cards.
5. Install a heatsink and connect the power to the motherboard. Make sure that the heatsink is fully seated. Check all jumper settings as well.

No Power

1. Check that no short circuits exist between the motherboard and the chassis.
2. Verify that all jumpers are set to their default positions, especially CMOS jumper..
3. Turn the power switch on and off to test the system.
4. The battery on your motherboard may be old. Check to verify that it still supplies ~3VDC. If it does not, replace it with a new one.

No Video

1. If the power is on but you have no video, remove all the add-on cards and cables to test.
2. Check the beep code, you may listen 5 beeps during POST, please check your display cable or graphics card is seat well.
   It may also relate to CPU, please try to replace CPU to test

DXE Beep Codes	
# of Beeps	Description
1	Invalid password
4	Some of the Architectural Protocols are not available
5	No Console Output Devices are found
5	No Console Input Devices are found
6	Flash update is failed
7	Reset protocol is not available
8	Platform PCI resource requirements cannot be met

3. It may also relate to DIMM, please refer to below "Memory Error" to debug DIMM
4. Clear CMOS to test.

Memory Errors

1. Confirm that the DIMM modules are properly and fully installed.
2. Confirm that you are using the correct memory. In addition, it is recommended that you use the same memory type and speed for all DIMMs in the system.
3. Check for bad DIMM modules or slots by swapping modules between slots and noting the results.
4. Check the beep code, you may listen 3 beeps during POST, please try to replace DIMM to test.

POST BIOS Beep Codes	
Number of Beeps	Description
1	Memory refresh timer error.
3	Base memory read/write test error
6	8042 Gate A20 test error (cannot switch to protected mode)
7	General exception error (processor exception interrupt error)
8	Display memory error (system video adapter)

Losing the BIOS Setup Configuration

1. Make sure that you are using a high quality power supply. A poor quality power supply may cause the system to lose the CMOS setup information.
2. The battery on your motherboard may be old. Check to verify that it still supplies ~3VDC. If it does not, replace it with a new one.
3. If the above steps do not fix the setup configuration problem, contact us to apply RMA.

System Level

A. If the system becomes unstable during or after OS installation, check the following:

1. Memory support: Make sure that the memory modules are supported by testing the modules using memtest86 or a similar utility.
2. HDD support: Make sure that all hard disk drives (HDDs) work properly. Replace the bad HDDs with good ones.
3. Heatsink: Check that the heatsink is installed properly
4. Adequate power supply: Make sure that the power supply provides adequate power to the system. Make sure that all power connectors are connected.
5. Proper software support: Make sure that the correct drivers are used.

B. If the system becomes unstable before or during OS installation, check the following:

1. Source of installation: Make sure that the devices used for installation are working properly, including boot devices such as CD/DVD and CD/DVD-ROM.
2. Cable connection: Check to make sure that all cables are connected and working properly.
3. Minimum configuration for troubleshooting: Remove all unnecessary components (starting with add-on cards first), and use the minimum configuration (but with a CPU and a memory module installed) to identify the trouble areas.
4. Identify bad components by isolating them: If necessary, remove a component in question from the chassis, and test it in isolation to make sure that it works properly. Replace a bad component with a good one.
5. Check and change one component at a time instead of changing several items at the same time. This will help isolate and identify the problem.
6. To find out if a component is good, swap this component with a new one to see if the system will work properly. If so, then the old component is bad. You can also install the component in question in another system. If the new system works, the component is good and the old system has problems.

## 1.2 Battery Removal and Installation

Battery Removal

To remove the battery, follow the steps below:

1. Power off your system and unplug your power cable.
2. Remove the battery cable at the BT1 connector on the board.
3. Remove the battery.

Battery Installation

1. Unplug the power cord.
2. Connect the battery cable into the battery connector (BT1) and push it down until you hear a click to ensure that the cable is securely locked.
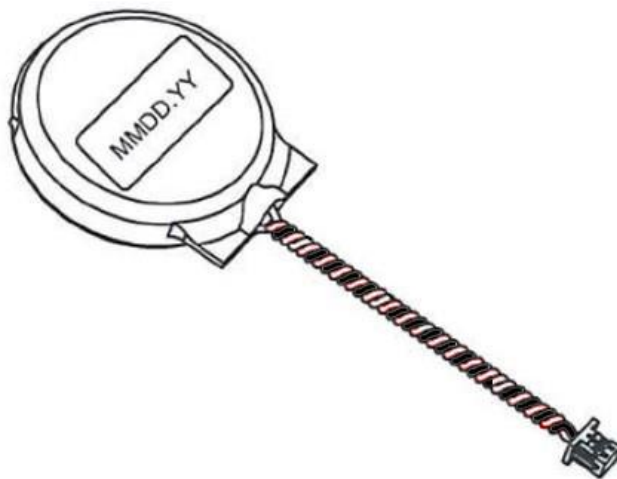
3. Use the foam tape on the back side of the battery to secure the battery to a flat surface on the bottom of the motherboard or proper location in the system. DO NOT place the battery on the heat sink.