PowerEdge MX7000 LED Control Panel

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SUMMARY

This technical white paper describes the features and capabilities provided by the control panels specifically the LED Options

There are 2 other left control panel options discussed in other technical whitepapers

MX7000 Chassis and Front Control Panels

PowerEdge MX7000 chassis comes with a left and right control panel that contains buttons, LEDs and ports that provide chassis power status, chassis power control, chassis component health status, system identify and chassis management connectivity.

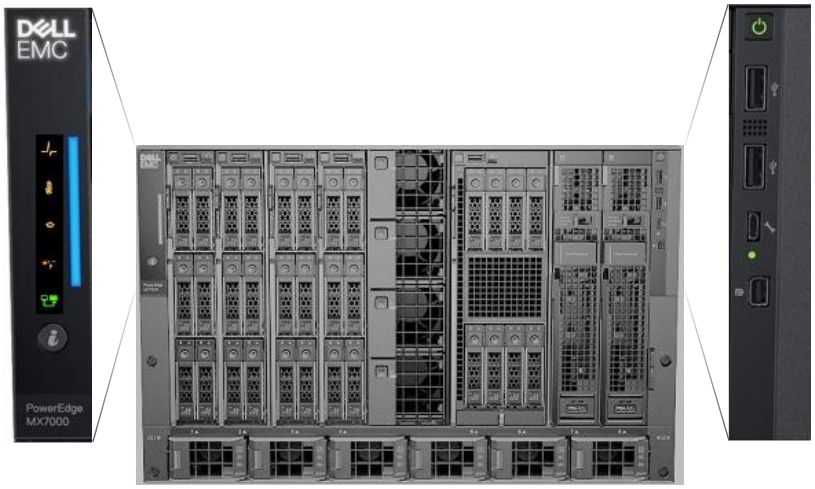


Figure 1 – PowerEdge MX7000 front control panels

Right Control Panel

Looking in front of the chassis, the right control panel contains the following button and ports.

1. The chassis power button
2. USB type-A port 1
3. USB type-A port 2
4. Micro-USB port
5. Mini DisplayPort

Figure 2 – Right Control Panel

1 Power Button

The power button on the right control panel provides chassis power status and chassis power control. When the LED of the power button is lit green, the chassis power state is ON. If not lit, the state is OFF.

Turning chassis power ON

If the chassis power state is OFF, pressing the power button will cause the chassis power to turn ON.

Turning chassis power OFF

If the chassis power state is ON, pressing the power button and releasing it after a second will cause the chassis power to turn OFF “gracefully”. If there are no sleds present or there are sleds present but none are in the power on state, then the chassis power is turned OFF immediately. Otherwise, there are sleds present and powered on:

a) Chassis power will turn OFF only when all sleds power state is off within one minute.
b) A sled power turns off if the running operating system shuts down into completion.
c) Otherwise, the sled power remains ON and the chassis power remains ON.

If the chassis power state is ON, pressing the power button and holding it pressed for at least 6 seconds before releasing will cause the chassis power to turn OFF “ungracefully”. The power is turned off from all chassis infrastructure include sleds that are present and powered on.

NOTE: Take caution when doing an “ungraceful” power OFF. Data that is actively being written to any storage device used within the chassis at the time of “ungraceful” power off may become corrupted.

Chassis power state transition is described in further detail in a separate whitepaper.

2. & 3. USB type-A port

There are two standard USB type-A ports present on the Right control panel. These ports are used for connecting keyboard & mouse used for the at-the-box KVM connectivity feature. The KVM feature is discussed in further detail in a separate whitepaper.

4. Micro-USB port

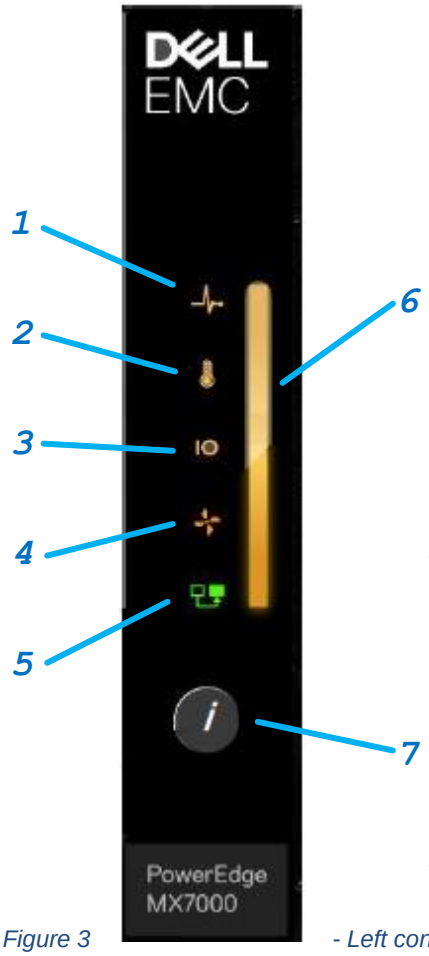
The micro-USB port is used to connect to the Chassis Management firmware. This port is currently not implemented and will be implemented in future release of the Management firmware.

5. Mini DisplayPort

The mini DisplayPort is used for connecting video used for the at-the-box KVM connectivity feature. The KVM feature is discussed in further detail in a separate whitepaper.

Left Control Panel Status - LED Version

Looking in front of the chassis, the left control panel contains the following button and LEDs.



1.Chassis health status LED

2.Ambient temperature health status LED

3.Rear I/O module health status LED

4.Fan health status LED

5.Stacking state LED

6.Status LED

7.System identify button

1. Chassis Health Status LED

The Chassis health status LED blinks AMBER color when the Chassis health state is degraded; otherwise the LED is OFF.

2. Ambient Temperature Health Status

The ambient temperature health status LED blinks AMBER color when a thermal fault exists for the chassis; otherwise the LED is OFF. A thermal fault may occur with excessive chassis ambient temperature, IOM thermal status, power supply thermal status and fan status.

3. Rear I/O Module Health Status LED

The rear I'O module health status LED blinks AMBER color when an I/O module fault exists; otherwise the LED is OFF

4. Fan Health Status LED

The fan health status LED Blinks AMBER Color when there is a failure or warning associated to the front and rear fans; otherwise the LED is OFF.

Figure 3 - Left control panel (Status LED Version)

5. Stacking State LED

The stacking state LED is currently not implemented and will be activated upon future release of the Management firmware

6. Status LED

The Status LED is used to present the overall health state of the chassis and also used for Chassis system identify.

a. When the overall health status is not healthy (a fault exist), Status LED blinks AMBER.
b. When system identify is enabled for the Chassis, Status LED blinks BLUE.
c. Otherwise, the overall health status is healthy and Status LED is lit solid BLUE.

7. System Identify Button

The System identify button is used to blink/un-blink the chassis and sled status LED. The blink color is BLUE. System identify feature is described in detail in a separate technical whitepaper.

Left Control Panel Status - LCD Version

The left control panel configuration can be the graphical LCD panel. The LCD panel is a graphical touch screen panel that provides enhanced at-the-box control panel capability. The LCD feature is described in further detail in a separate technical whitepaper.