

INSIGHT DLP DIRECTOR 1000 & 2000 Appliance Hardware Installation Guide

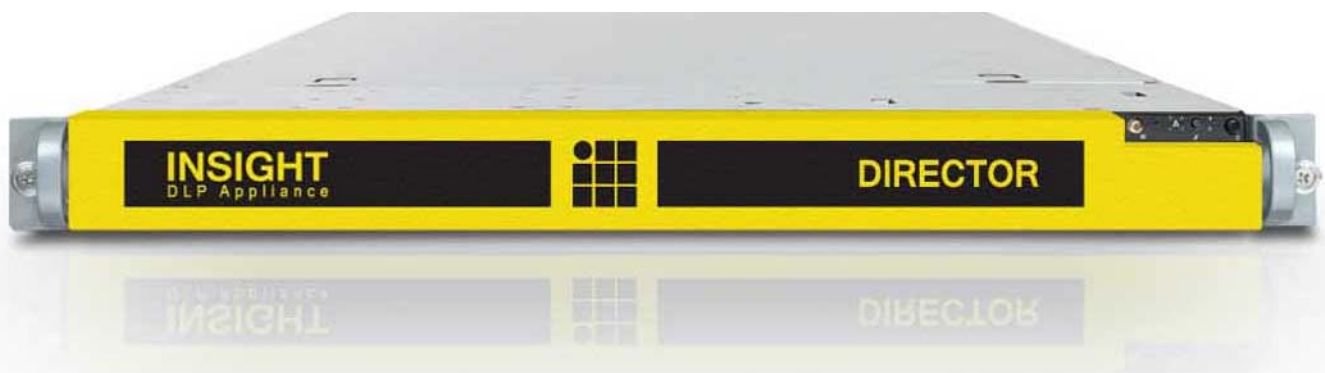


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1. Safety Notice and Warnings

FCC Notice

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

No Telecommunications Network Voltage (TNV)-connected PCBs shall be installed.

CAN ICES-3 (A)/NMB-3(A)

CE Mark Warning

This is a Class A product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

VCCI Warning

This is a product of VCCI Class A Compliance.

この装置は、クラスA情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。

VCCI-A

Environmental Warning

Perchlorate Material - special handling may apply.

See www.dtsc.ca.gov/hazardouswaste/perchlorate.

This notice is required by California Code of Regulations, Title 22, Division 4.5, Chapter 33: Best Management Practices for Perchlorate Materials. This product/part includes a battery that contains perchlorate material.

2. Ratings

AC input voltage: 100 - 240V (auto-range)

Input frequency range: 50-60 Hz

Rated input current: 100 - 127V ~/7.0A Max
200 - 240V ~/3.5A Max

3. Electrical and General Safety Guidelines



CAUTION

This appliance is intended for installation in restricted areas only. Initial setup and maintenance should be performed by qualified personnel.



CAUTION

Power down the appliance following the operating system's proper power down procedure using the front panel I/O power button. Unplug the AC power cord(s) before servicing.



CAUTION

To avoid electrical shock, check the power cords as follows:

- This product is to be installed in Restricted Access Location only.
- Use the exact type of power cords required.
- Use power cord(s) that came with safety certifications.
- Power cord(s) must comply with AC voltage requirements in your region.
- The power cord plug cap must have an electrical current rating that is at least 125% of the electrical current rating of this product.
- The power cord plug cap that plugs into the AC receptacle on the power supply must be an IEC 320, sheet C13, type female connector.
- Plug the power cord(s) into a socket that is properly grounded before turning on the power.



CAUTION

Required operating conditions for the appliance are -

- Temperature: 10 to 35°C.
- Humidity, non-condensing: 8 to 90%.



CAUTION

CLASS 1 LASER PRODUCT

APPAREIL À LASER DE CLASSE 1



CAUTION

Risk of explosion if the battery is installed upside down or is replaced by an incorrect type. Dispose of used batteries according to the instructions.



DISPOSING OF BATTERY BACKUP UNITS - IF APPLICABLE **WARNING**

If the BBU is damaged in any way, toxic chemicals may be released.

The material in the battery pack contains heavy metals that can contaminate the environment.

Federal, state, and local regulations prohibit the disposal of rechargeable batteries in public landfills.

Be sure to recycle the old battery packs properly. Comply with all applicable battery disposal and hazardous material handling laws and regulations in the country or other jurisdiction where you are using the BBU.

3. Electrical and General Safety Guidelines (continued)



WARNING

There is danger of an explosion if the battery is incorrectly replaced. Replace it only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.



WARNING

Disconnect the power supply at the circuit breaker before accessing any components. Turning off the system power supply switch does not reduce the risk of electrical shock from the power supply terminal block.



CAUTION

- To prevent the unit from overheating, never install the appliance in an enclosed area that is not properly ventilated or cooled. For proper airflow, keep the front and back sides of the appliance clear of obstructions and away from the exhaust of other equipment.
- Be aware of the locations of the power switches on the chassis and in the room, so you can disconnect the power supply if an accident occurs.
- Take extra precautionary measures when working with high voltage components. Do not work alone.
- Before removing or installing main system components, be sure to disconnect the power first. Turn off the system before you disconnect the power supply.
- Use only one hand when working with powered-on electrical equipment to avoid possible electrical shock.
- Use rubber mats specifically designed as electrical insulators when working with computer systems.
- The power supply or power cord must include a grounding plug and must be plugged into grounded outlets.



CAUTION

Electric Static Discharge (ESD) can damage electronic components. To prevent damage to your system board, it is important to handle it very carefully. The following measures can prevent ESD damage to critical components.

- Use a grounded wrist strap designed to prevent static discharge.
- Keep all components and printed circuit boards (PCBs) in their antistatic bags until ready for use.
- Touch a grounded metal object before removing the board from the antistatic bag.
- Do not let components or PCBs come into contact with your clothing, which may retain a charge even if you are wearing a wrist strap.
- Handle a board by its edges only; do not touch its components, peripheral chips, memory modules or contacts.
- When handling chips or modules, avoid touching their pins.
- Put the motherboard and peripherals back into their antistatic bags when not in use.
- For grounding purposes, make sure your computer chassis provides excellent conductivity between the power supply, the case, the mounting fasteners and the motherboard.

4. Site Preparation

Setup location, rack and appliance precautions

- **Elevated Operating Ambient Temperature** - If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient. Therefore, consideration should be given to installing the equipment in an environment compatible with the maximum ambient temperature (T_{ma}) specified by the manufacturer.

Always keep the rack's front door and all panels and components on the appliances closed when not servicing to maintain proper cooling.

- **Reduced Air Flow** - Installation of the equipment in a rack should be such that the amount of air flow required for safe operation of the equipment is not compromised. Leave enough clearance, approximately 25 inches in the front, and 30 inches in the back of the rack to enable you to access appliance components and allow for sufficient air flow.

- **Mechanical Loading** - Mounting of the equipment in the rack should be such that a hazardous condition is not achieved due to uneven mechanical loading.

ALL RACKS MUST BE MOUNTED SECURELY. Ensure that all leveling jacks or stabilizers are properly attached to the rack. If installing multiple appliances in a rack, make sure the overall loading for each branch circuit does not exceed the rated capacity.

Do not slide more than one appliance out from the rack at a time. Extending more than one appliance at a time may result in the rack becoming unstable. Install your appliance in the lower part of the rack because of its weight and also for ease in accessing appliance components.

- **Circuit Overloading** - Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of the circuits might have on overcurrent protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.
- **Reliable Earthing** - Reliable earthing of rack-mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit (e.g. use of power strips).

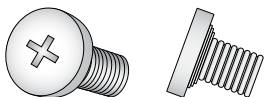
Install near appropriate AC outlets, and Ethernet hubs or individual jacks. Be sure to install an AC Power Disconnect for the entire rack assembly. The Power Disconnect must be clearly marked. Ground the rack assembly properly to avoid electrical shock.

5. Unpacking the Appliance

Make sure the ship kit includes the correct installation hardware shown below:

- Eight Phillips flat head screws
- Two power cords

NOTE: Use the hardware supplied with your specific rack if different from the hardware supplied in this kit.



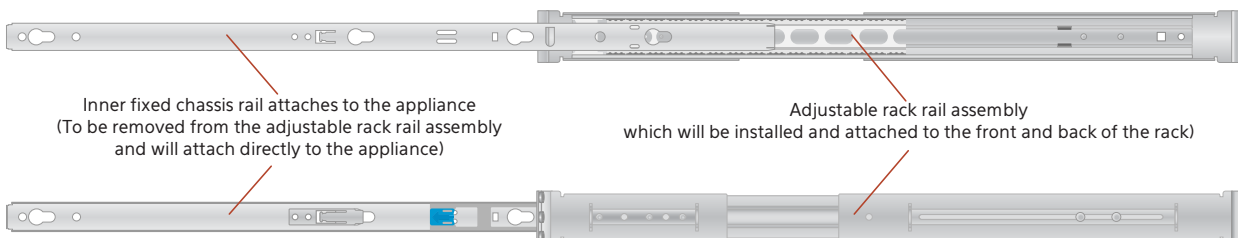
Eight Phillips
flat head screws



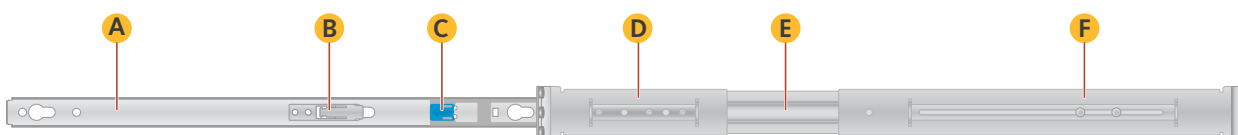
Two power cords

- A pair of 4-post rack sliding chassis rail and rack assemblies

Complete chassis and adjustable rack rail assembly (inside view)



Complete chassis and adjustable rack rail assembly (outside view)



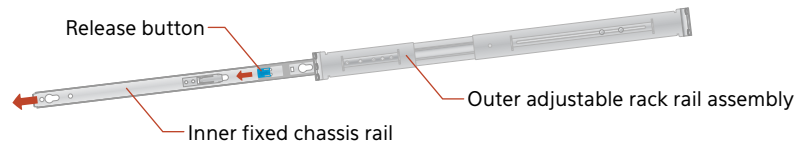
- A** Inner fixed chassis rail
- B** Chassis rail locking pin
- C** Chassis rail release button
- D** Adjustable rack rail, front bracket
- E** Adjustable rack rail, center sliding rail
- F** Adjustable rack rail, rear bracket

6. Prepare and Assemble the Rack Rails

Step 1

Mounting Hardware Assembly

- Separate the inner fixed chassis rails from the outer adjustable rack rail assemblies.
- Pull each inner fixed chassis rail out as far as possible.
- Depress the release button and slide the inner rail completely out.
- Put these rails aside for later installation on the appliance.



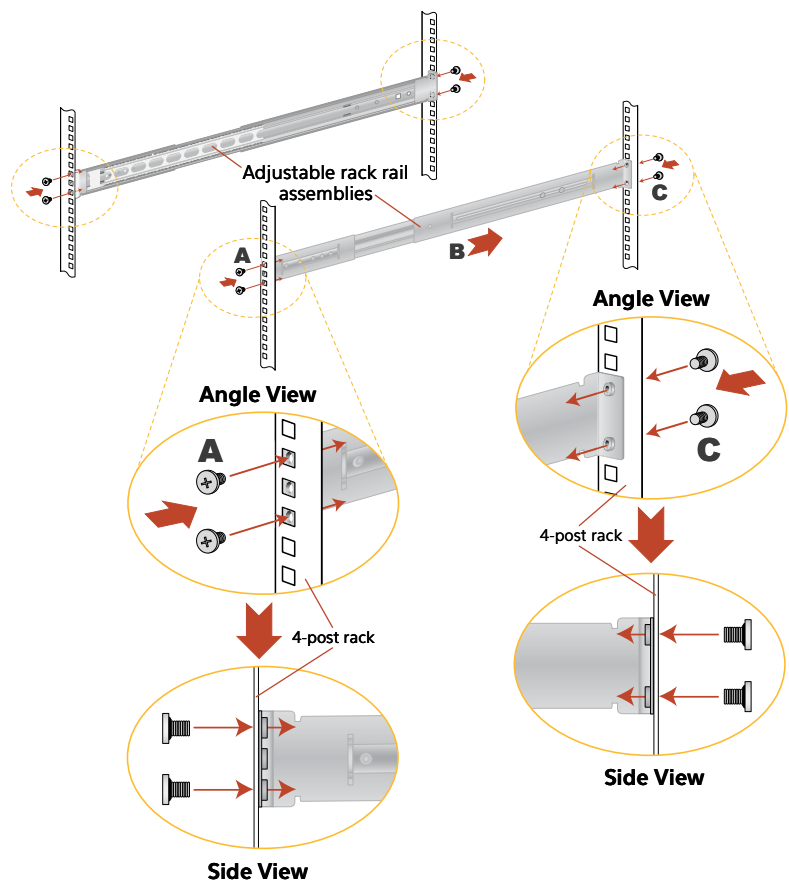
Step 2

Rack Rail Assembly

- In the front, align the front bracket of the adjustable rack rail assembly with three holes in the rack. The rack rail assembly will attach to the rack behind the holes in the front. Insert and tighten two of the flat head screws in the top and bottom holes as shown in the illustration on the right. The center hole will remain empty for later use to secure the appliance in the rack.
- Slide the rack rail assembly back to attach the rear bracket to the rear of the rack.
- In the rear, insert and tighten two of the flat head screws through the top and bottom holes of the rear bracket to the rear of the rack. The rear bracket will attach to the rack behind the post with the holes.

Repeat steps **A**, **B** and **C** to install the other rack rail assembly on the other side of the rack.

NOTE: Make sure the rail assemblies are aligned in the rack not only in the front and back but also on the left and right sides to allow proper appliance installation.

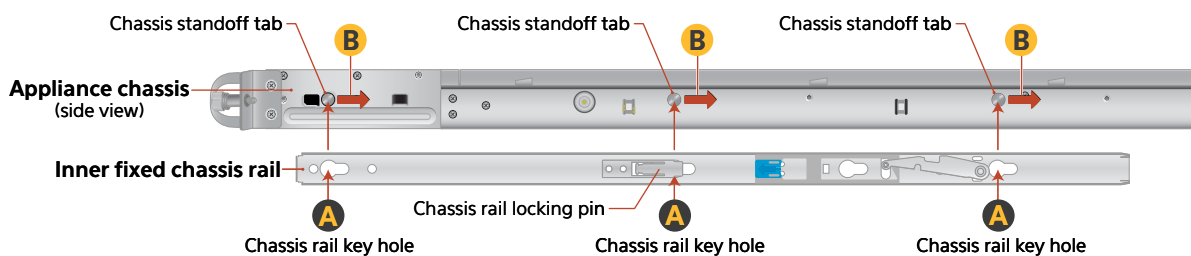


NOTE: Use the hardware supplied with your specific rack if different from the hardware supplied in this kit.

7. Rail Installation on the Appliance

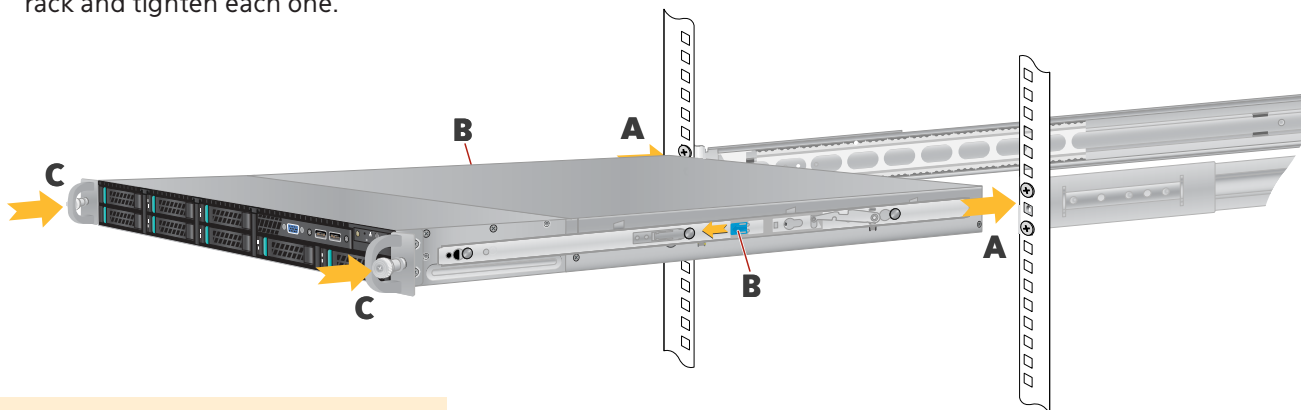
Locate the fixed chassis rails that were put aside in Step 1 on page 8

- Mount the inner fixed chassis rails to each side of the appliance. Slide the chassis rail key hole cut outs **A** through the chassis standoff tabs **B** on the side of the appliance as shown below. Slide the chassis rail toward the back of the appliance. The chassis rail locking pin will secure the rail in place.



8. Installing the Appliance in the Rack

- Align the inner fixed chassis rails on the appliance with the assembled rack rail components previously installed in the rack. Carefully slide the appliance into these rails until you hear the rails click into place.
- Slide the chassis rail release button forward to release the chassis rail. Push the appliance all the way into the rack.
- Secure the unit in the rack by pressing the thumb screws on either side of the appliance into the holes in rack and tighten each one.



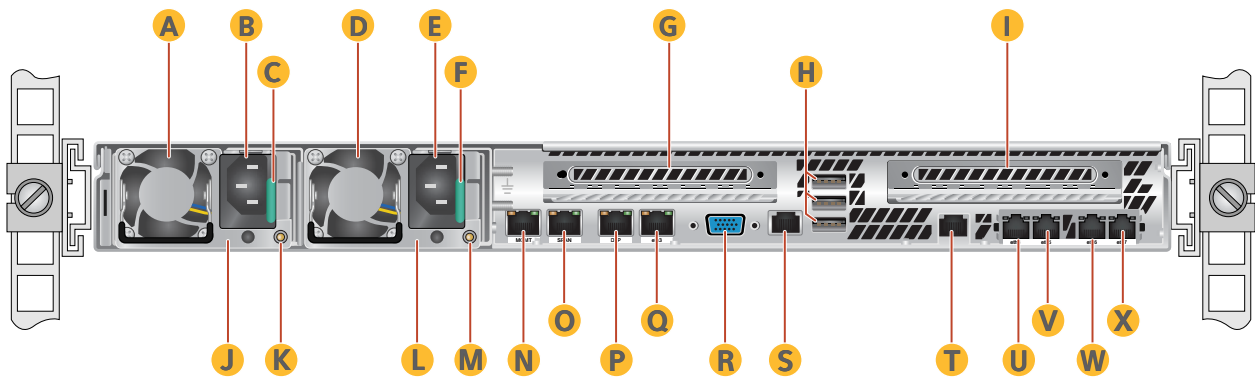
NOTE: When removing the appliance from the rack, you will need to pull the chassis release button forward in order to release the appliance from the rack. Carefully slide it out supporting the unit on both sides at all times.

9. Rear Panel Connections



CAUTION

Slide rail/mounted equipment is not to be used as a shelf or a work space.



A	Power Supply Module #1 Fan
B	Power Supply Module #1 AC Receptacle
C	Power Supply Module #1 Lock
D	Power Supply Module #2 Fan
E	Power Supply Module #2 AC Receptacle
F	Power Supply Module #2 Lock
G	PCIe x8 Connector
H	Three USB Ports
I	PCI Card Expansion Port
J	Power Supply Module #1
K	Power Supply Module #1 System Status LED
L	Power Supply Module #2
M	Power Supply Module #2 System Status LED
N	MGMT Port
O	SPAN Port
P	DLP Port
Q	eth3 Port
R	Video Port
S	Serial Port
T	IPMI Port
U	eth4 Port
V	eth5 Port
W	eth6 Port
X	eth7 Port

Power Supply Status LED

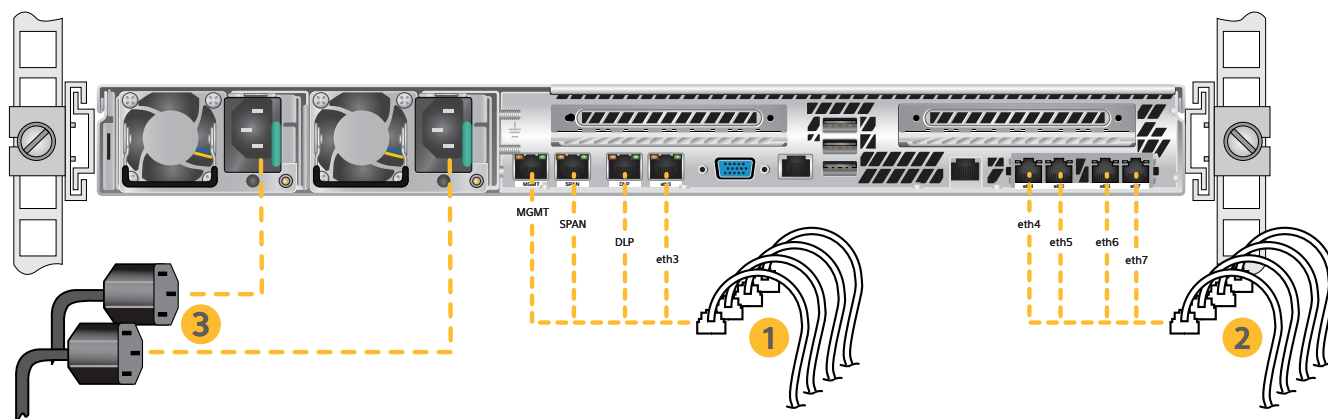
There is a single bi-color Power Good LED on each power supply module to indicate power supply status. The LED operation is defined in the following table.



Power Supply Condition	LED State
Output ON and OK	GREEN
No AC power to both power supplies	OFF
AC present / only 12 VSB on (PS off) or PS in cold redundant state	1Hz Blinking GREEN
AC cord unplugged or AC power lost; with a second power supply in parallel still with AC input power	AMBER
Power supply warning events where the power supply continues to operate; high temp, high power, high current, slow fan	1Hz Blinking AMBER
Power supply critical event causing a shutdown; failure, OCP, OVP, fan fail	AMBER
Power supply FW updating	2Hz Blinking GREEN

In normal operation the Power Good LED on Power Supply Module 1 will be SOLID GREEN and the LED on Power Supply Module 2 will BLINK GREEN (redundant standby), if the system is powered down both LEDs will BLINK GREEN.

9. Rear Panel Connections (continued)



Step 1: Connect the Ethernet cables.

Step 2: Connect any other required cables.

Step 3: Connect the power cords.

Step 4: Proceed to Section 10, Front Panel Operation on page 12.

NOTE: The server offers redundant, hot-swap capability. The connections to AC mains should be made in a manner appropriate to local code and consistent with customer power distribution with or without redundant sources.

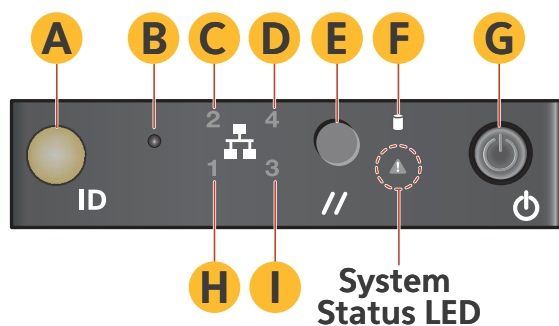
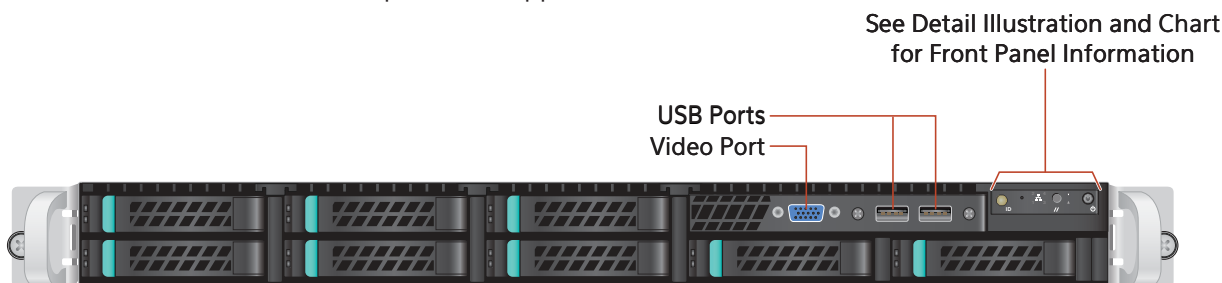


CAUTION

The power supply is only hot-swappable if you have a redundant system with two power supplies installed. If you only have one power supply installed, before removing or replacing the power supply, you must first take the server out of service, turn off all peripheral devices connected to the system, turn off the system by pressing the power button, and unplug the AC power cord from the system or wall outlet.

10. Front Panel Operation

Press the Power Button once to power the appliance on.



- A** System ID Button with Integrated LED
- B** NMI Button (recessed, tool required for use)
- C** SPAN Activity LED
- D** eth3 Activity LED
- E** System Cold Reset Button
- F** Hard Drive Activity LED
- G** Power Button with Integrated LED
- H** MGMT Activity LED
- I** DLP Activity LED

System Status LED

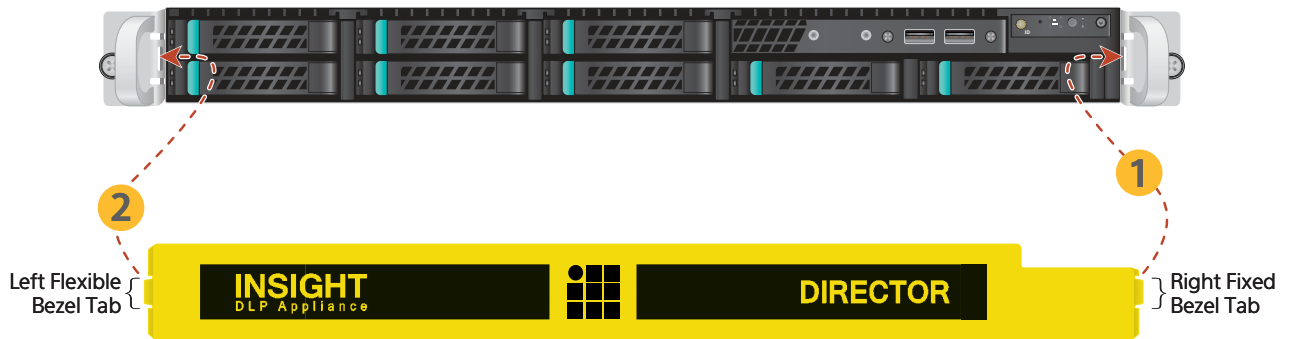
There is a bi-color (Green/Amber) LED on the Front Panel (shown on the left). The LED operation is defined in the following table.

LED Color	System State	Criticality
OFF	System is not operating	Not ready
GREEN	Solid - On	OK
GREEN	~1 Hz blinking	Degraded - system is operating in a degraded state although still functional, OR system is operating in a redundant state but with an impending failure warning
AMBER	~1 Hz blinking	Non-critical - system is operating in a degraded state with an impending failure warning, although still functioning
AMBER	Solid - On	Critical, non-recoverable - system is halted

11. Bezel Installation on the Appliance

Step 1: Align the bezel with the front of the appliance. Insert the top and bottom bezel tabs on the right side of the bezel into the handle on the right side of the appliance.

Step 2: Swing the left side of the bezel in toward the appliance. Press in on the bezel to engage the top and bottom bezel tabs on the left side of the bezel into the handle on the left side of the appliance.





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