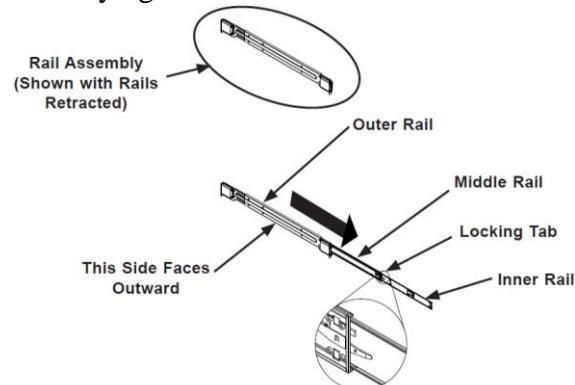


Rack Mounting Instructions

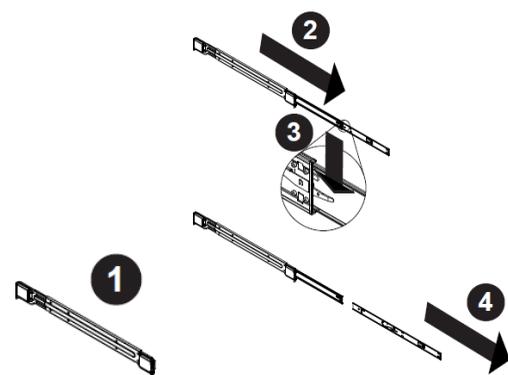
This section provides information on installing the CENS NVR chassis into a rack unit. There are a variety of rack units on the market, which may mean the assembly procedures will differ slightly. You should also refer to the installation instructions that came with the rack unit you are using.

NOTE: This rail will fit a rack between 26" and 33.5" deep.

Identifying the Sections of the Rack Rails



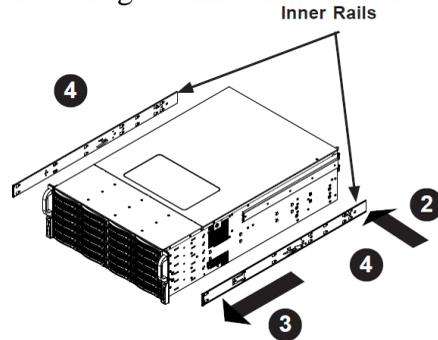
The chassis package includes two rail assemblies in the rack mounting kit. Each assembly consists of three sections: An inner chassis rail which secures directly to the chassis, an outer rail that secures to the rack, and a middle rail which extends from the outer rail. These assemblies are specifically designed for the left and right side of the chassis.



Releasing the Inner Rail

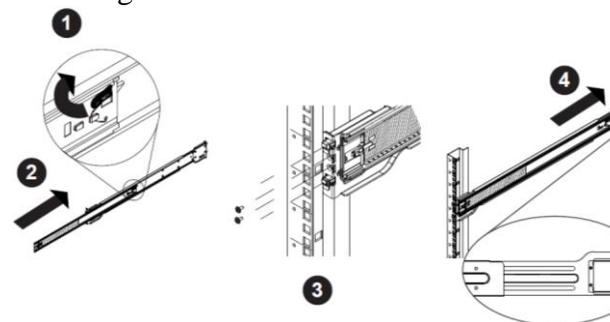
1. Identify the left and right outer rail assemblies as described above.
2. Pull the inner rail out of the outer rail until it is fully extended as illustrated above.
3. Press the locking tab down to release the inner rail.
4. Pull the inner rail all the way out.
5. Repeat steps 1-3 for the second outer rail.

Installing the Inner Rails on the Chassis



1. Confirm that the left and right inner rails have been correctly identified.
2. Place the inner rail firmly against the side of the chassis, aligning the hooks on the side of the chassis with the holes in the inner rail.
3. Slide the inner rail forward toward the front of the chassis until the rail clicks into the locked position, which secures the inner rail to the chassis.
4. Secure the inner rail to the chassis with the screws provided.
5. Repeat steps 1 through 4 above for the other inner rail.

Installing the Outer Rails on the Rack

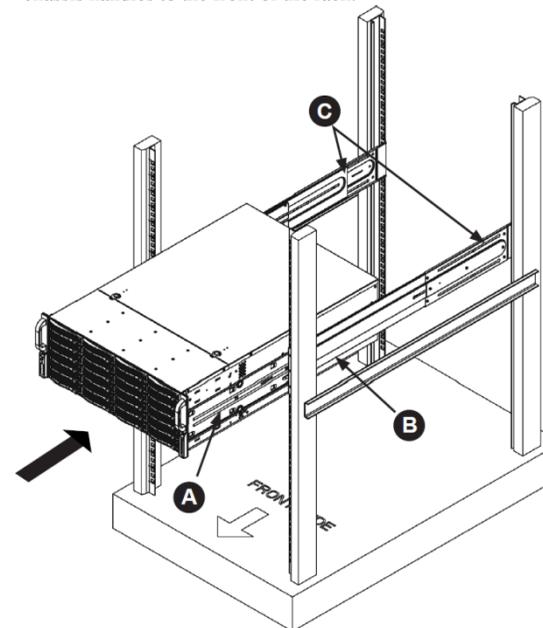


1. Press upward on the locking tab at the rear end of the middle rail.
2. Push the middle rail back into the outer rail.
3. Hang the hooks of the front of the outer rail onto the slots on the front of the rack. If necessary, use screws to secure the outer rails to the rack, as illustrated above.
4. Pull out the rear of the outer rail, adjusting the length until it fits within the posts of the rack.
5. Hang the hooks of the rear portion of the outer rail onto the slots on the rear of the rack. If necessary, use screws to secure the rear of the outer rail to the rear of the rack.
6. Repeat steps 1-5 for the remaining outer rail.

Installing the Chassis to a Rack

1. Confirm that the inner rails are properly installed on the chassis.
2. Confirm that the outer rails are correctly installed on the rack.

3. Pull the middle rail out from the front of the outer rail and make sure that the ball-bearing shuttle is at the front locking position of the middle rail.
4. Align the chassis inner rails with the front of the middle rails.
5. Slide the inner rails on the chassis into the middle rails, keeping the pressure even on both sides, until the locking tab of the inner rail clicks into the front of the middle rail, locking the chassis into the fully extended position.
6. Depress the locking tabs of both sides at the same time and push the chassis all the way into the rear of the rack.
7. If necessary for security purposes, use screws to secure the chassis handles to the front of the rack.



Rail Screws

The accessory box includes all the screws needed to install the chassis in a rack. This section lists and describes the most common screws used. The chassis may not require all the parts listed.

Item	Qty	Description
1	4	M4 x 4mm (0.157) Flat Head Screw
2	22	M4 x 4mm (0.157) Round Head Screw
3	8	M5 x 12mm (0.472) Flat Head Screw
4	8	Washer for M5 Flat Head Screw



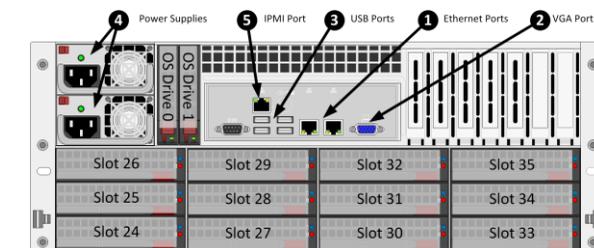
Cabling Instructions

This section provides information on cabling the CENS NVR before beginning operation.

Cabling the CENS NVR

Connect cables to the CENS NVR in the following order.

1. Connect a CAT 6 Ethernet cable to one or both Gigabit Ethernet ports (Ethernet cables are not provided). Some CENS NVR systems may have additional optional Gigabit Ethernet ports.
2. Connect a monitor cable or KVM monitor adapter to the VGA port (monitor cable or KVM adapter is not provided).
3. Connect a USB keyboard cable and mouse cable or KVM keyboard/mouse adapter to the keyboard and mouse ports (keyboard cable, mouse cable or KVM adapter is not provided).
4. Connect two power supply cables to the two power supplies. To ensure power redundancy use different power circuits. Power supply cables are provided with the ArcGIS Data Appliance.
5. Connect a CAT6 Ethernet cable to the IPMI port (Ethernet cable is not provided.)



Drive Handling Instructions

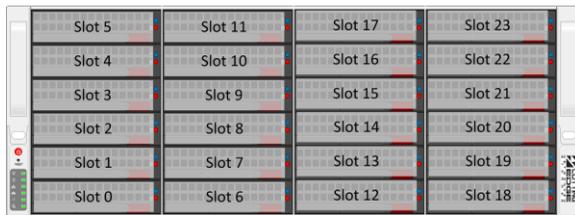
This section provides information on the hard drives installed in the CENS NVR and proper handling of those drives.

Storage Hard Drives

The hard disk drives (Drive 0 – Drive 35), or HDDs, store the data. The hard drives are mounted in drive carriers to simplify their installation and removal from the CENS NVR. These carriers also help promote proper airflow for the drive bays. For this reason, even empty carriers without drives installed must remain in the chassis.

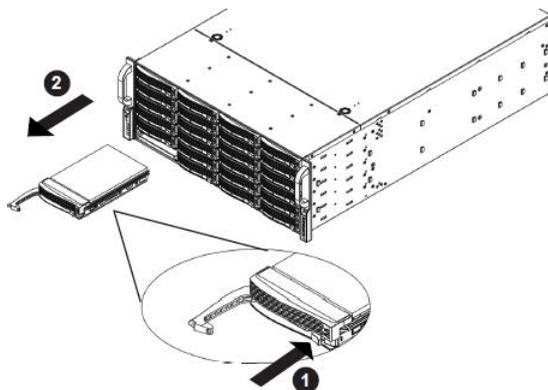
IMPORTANT: Regardless of how many hard drives are installed, all drive carriers must remain in the drive bays to maintain proper airflow.

There are two 2.5 inch hot swap drive slots on the rear of the system. These drives contain the system operating system. Additional disk drives to occupy any unoccupied drive slots may be purchased from Cutting Edge Networked Storage. Installing non-Cutting Edge drives in unoccupied drive slots will end the hardware warranty CENS NVR.



Removing Hard Drive Carriers

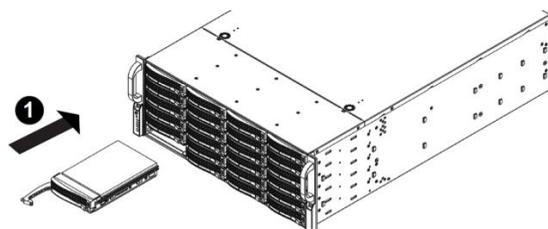
1. Press the release button on the drive carrier. This extends the drive carrier handle.
2. Use the handle to pull the drive carrier out of the chassis.



NOTE: Your CENS NVR HDDs have RAID redundancy to ensure data availability in case of an HDD failure and support hot-plug capability of the hard drives. Replacement HDDs with carriers will ship directly from Cutting Edge Networked Storage. Do not remove any hard drives while the unit is powered on without express instruction from a Technical Support Engineer.

Replacing Hard Drive Carriers

1. Replace the drive tray into the chassis. Make sure to press the drive carrier handle closed until it clicks in place.



Power Supply Instructions

This section provides information on the power supply installed in the CENS NVR and proper handling of the power supply modules.

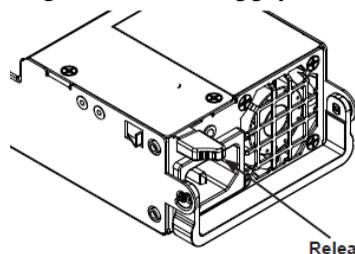
Power Supplies

The CENS NVR has a 1280 watt high-efficiency Platinum Level redundant power supply consisting of two power modules. Each power supply module has an auto-switching capability, which enables it to automatically sense and operate at a 100V - 240V input voltage.

Power Supply Failure

If either of the two power supply modules were to fail, the other module will take the full load and allow the system to continue operation without interruption. The Power Failure LED on the control panel will flash and an audible alarm will sound until the failed unit has been replaced. Replacement power supply modules will ship directly from CENS. The power supply units have a hot-swap capability, meaning you can replace the failed unit without powering down the system.

Removing the Power Supply



1. Unplug the AC cord from the module to be replaced. Since your chassis includes a redundant power supply, you can leave the server running and remove only one power supply.
2. Push the release tab (on the back of the power supply) as illustrated.
3. Pull the power supply out using the handle provided.

Installing a New Power Supply

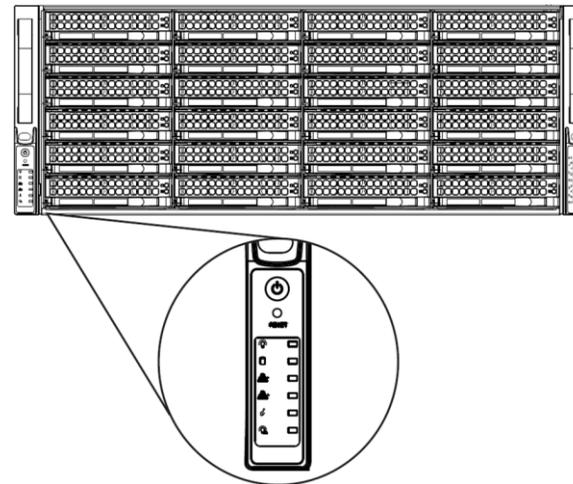
1. Replace the failed hot-swap unit with another identical power supply unit.
2. Push the new power supply unit into the power bay until you hear a click.
3. Secure the locking tab on the unit.
4. Finish by plugging the AC power cord back into the unit.

System Interface

This section provides information on the buttons and LED indicators located on the front of the CENS NVR chassis, their use and appropriate responses required.

CENS NVR Control Panel

There are several buttons and LEDs on the control panel of the ArcGIS Data Appliance that provide system and component status.



Control Panel Buttons

The CENS NVR includes two push buttons located on the control panel.



Power: The main power switch is used to apply or remove power from the power supply to the CENS NVR.



Reset: The reset button is used to manually reboot the CENS NVR.

Control Panel LEDs

The CENS NVR control panel has five LEDs. These LEDs provide critical information related to different parts of the storage system. This section explains what each LED indicates when illuminated and any action that may be required.



Overheat/Fan Fail: When this LED flashes, it indicates a fan failure. When continuously on (not flashing) it indicates an overheat condition, which may be caused by the ambient room temperature being too warm. This LED will remain flashing or on as long as the overheat condition exists.



NIC2: Indicates network activity on Gigabit Ethernet LAN2 when flashing.



NIC1: Indicates network activity on Gigabit Ethernet LAN1 when flashing.



HDD: Indicates SAS/SATA drive and/or DVD-ROM drive activity when flashing.



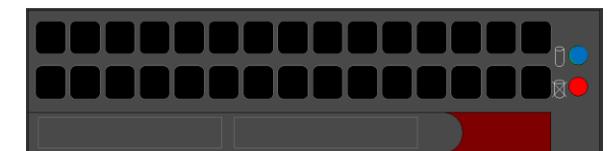
Power: Indicates power is being supplied to the system's power supply units. This LED should normally be illuminated when the system is operating.



Power Failure: When this LED flashes, it indicates a failure in the power supply.

Drive Carrier LEDs

The CENS NVR uses SAS hard disk drives mounted in drive carriers. Each SAS drive carrier has two LEDs.



Upper Blue LED: Solid on = Drive is present and available. Blinking = Drive is actively being accessed.

Lower Red LED: Solid on = Drive failure. Blinking = RAID activity.

When the red LED is blinking, it indicates that the system is either building, initializing or rebuilding RAID.

Power Supply LEDs

The ArcGIS Data Appliance includes two power supply modules. Each power supply module has a dual color LED.

State	Indication
Solid Green	System is powered on
Solid Amber	System is plugged in but powered off
LED Off	Power supply module not plugged in

