Hardware Installation Manual

AudioCodes Session Border Controller Series

Mediant 9000 SBC

Mediant 9080 / 9030 / 9000 Rev. B

Version 7.2 and later

audiocodes

Notice

Date Published: November-20-2022

WEEE EU Directive

Pursuant to the WEEE EU Directive, electronic and electrical waste must not be disposed of with unsorted waste. Please contact your local recycling authority for disposal of this product.

Customer Support

Customer technical support and services are provided by AudioCodes or by an authorized AudioCodes Service Partner. For more information on how to buy technical support for AudioCodes products and for contact information, please visit our website at https://www.audiocodes.com/services-support/maintenance-and-support.

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Notes and Warnings

For safety, environment and regulatory information, refer to the printed document “Safety, Compliance and Warranty Information” included in the products packaging.

The device is an INDOOR unit and thus, must be installed ONLY indoors. In addition, Ethernet port interface cabling must be routed only indoors and must not exit the


building.


Installation of this device must be in a weather protected location of maximum ambient temperature of 35°C.


This device must be installed only in a restricted access location.


Service of the device must be made only by qualified service personnel.


AC powered units must be connected only to a grounded AC mains power socket.


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 over-current protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.


Caution Laser: This device contains a Class 1 LED/Laser emitting device, as defined by 21CFR 1040 and IEC825. Do not stare directly into the beam or into fiber optic terminations as this can damage your eyesight.


Caution Electrical Shock: Do not attempt to open or disassemble this device. The device carries high voltage. Contact with internal components may cause electrical shock and bodily harm.


For all service and maintenance issues, contact AudioCodes technical support (see Customer Support above).


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.)

Related Documentation

Document Name
SBC-Gateway Release Notes for Latest Release (LR) Versions 7.4

Document Name
SBC-Gateway Release Notes for Long Term Support (LTS) Versions 7.4
Mediant 9000 Series SBC User's Manual

Document Revision Record

LTRT	Description
41655	Initial document release for Version 7.2.
41557	Management names of Ethernet ports added.
41658	AC power cable warning (Japanese).
41661	SFP network cabling.
41662	SFP configurations; Replacing Copper NIC with Fiber Network Card (new section); Returning to an Arbitrary Snapshot (updated).
41663	Logo updated; note added to Returning to an Arbitrary Snapshot.
41664	Updates for HPE ProLiant DL360 Gen10 Server.
41666	Default IP address.
41667	Mediant 9030 (and Mediant 9080) added.
41668	LED descriptions for 366FLR, 366T, and PE310G4SPI9LA.
41671	Typo (FLR ports).
41672	Note re fiber support removed in Chapter 5, Fiber Network Card Support.
41673	Added for Version 7.2 and later.
41675	Specifications updated; supported fiber configurations updated.
41676	URL fixed in section Replacing Copper NIC with Fiber Network Card.
41677	Spec. for Mediant 9080 Rev. B disk updated (SATA).
41679	Supported SFP network cards updated.
41700	Product configurations added.

Table of Contents

1 Introduction

This document describes the hardware of AudioCodes' carrier-grade Mediant 9000 SBC series and basic deployment.

This document describes the Mediant 9000 series that is based on HPE ProLiant DL360 Gen10.

To identify the type of Mediant 9000 model, run the following CLI command, as shown in the examples below:

- **Mediant 9080 Rev. B:**

  show system hardware

  ```
  CPU: Intel(R) Xeon(R) Gold 6226R CPU @ 2.90GHz, total 64 cores, avx supported
  Memory: 98304 MB
  Chassis: ProLiant DL360 Gen10
  ```

- **Mediant 9080 Rev. A / Mediant 9000 Rev. B:**

  show system hardware

  ```
  CPU: Intel(R) Xeon(R) Gold 6126 CPU @ 2.60GHz, total 48 cores, avx supported
  Memory: 98304 MB
  Chassis: ProLiant DL360 Gen10
  ```

- **Mediant 9030:**

  show system hardware

  ```
  CPU: Intel(R) Xeon(R) Silver 4110 CPU @ 2.1GHz, total 32 cores, avx supported
  Memory: 32768 MB
  Chassis: ProLiant DL360 Gen10
  ```

2 Product Configurations

The following configurations are available for the Mediant 9080 / 9030 Session Border Controller product.

Table 2-1: AudioCodes Mediant 9080 / 9030 Session Border Controller Product Configurations

Product Configuration	Description
Mediant 9030	
M9K30/AC	Mediant 9030 Session Border Controller (SBC)
M9K30/AC/R	HA-pair of Mediant 9030 Session Border Controllers (SBC)
M9K30/DC	Mediant 9030 Session Border Controller (SBC), DC power
M9K30/DC/R	HA-pair of Mediant 9030 Session Border Controllers (SBC), DC power
M9K30/AC/4/10GLR	Mediant 9030 Session Border Controller (SBC) with 4 fiber 10GbE-LR interfaces
M9K30/AC/4/10GLR/R	HA-pair of Mediant 9030 Session Border Controllers (SBC) with 4 fiber 10GbE-LR interfaces
M9K30/AC/4/10GSR	Mediant 9030 Session Border Controller (SBC) with 4 fiber 10GbE-SR interfaces
M9K30/AC/4/10GSR/R	HA-pair of Mediant 9030 Session Border Controllers (SBC) with 4 fiber 10GbE-SR interfaces
M9K30/DC/4/10GLR	Mediant 9030 Session Border Controller (SBC) with 4 fiber 10GbE-LR interfaces, DC power
M9K30/DC/4/10GLR/R	HA-pair of Mediant 9030 Session Border Controllers (SBC) with 4 fiber 10GbE-LR interfaces, DC power
M9K30/DC/4/10GSR	Mediant 9030 Session Border Controller (SBC) with 4 fiber 10GbE-SR interfaces, DC power
M9K30/DC/4/10GSR/R	HA-pair of Mediant 9030 Session Border Controllers (SBC) with 4 fiber 10GbE-SR interfaces, DC power
Mediant 9080	
M9K80/AC	Mediant 9080 Session Border Controller (SBC)

Product Configuration	Description
M9K80/AC/R	HA-pair of Mediant 9080 Session Border Controllers (SBC)
M9K80/DC	Mediant 9080 Session Border Controller (SBC), DC power
M9K80/DC/R	HA-pair of Mediant 9080 Session Border Controllers (SBC), DC power
M9K80/AC/4/10GLR	Mediant 9080 Session Border Controller (SBC) with 4 fiber 10GbE-LR interfaces
M9K80/AC/4/10GLR/R	HA-pair of Mediant 9080 Session Border Controllers (SBC) with 4 fiber 10GbE-LR interfaces
M9K80/AC/4/10GSR	Mediant 9080 Session Border Controller (SBC) with 4 fiber 10GbE-SR interfaces
M9K80/AC/4/10GSR/R	HA-pair of Mediant 9080 Session Border Controllers (SBC) with 4 fiber 10GbE-SR interfaces
M9K80/DC/4/10GLR	Mediant 9080 Session Border Controller (SBC) with 4 fiber 10GbE-LR interfaces, DC power
M9K80/DC/4/10GLR/R	HA-pair of Mediant 9080 Session Border Controllers (SBC) with 4 fiber 10GbE-LR interfaces, DC power
M9K80/DC/4/10GSR	Mediant 9080 Session Border Controller (SBC) with 4 fiber 10GbE-SR interfaces, DC power
M9K80/DC/4/10GSR/R	HA-pair of Mediant 9080 Session Border Controllers (SBC) with 4 fiber 10GbE-SR interfaces, DC power

3 Specifications

The following table lists the device's specifications.

Table 3-1: Specifications

Product	HW Revision	CPU	Memory	Disk	Chassis
Mediant 9030	Rev. A	2 x 8 Cores 2.1 GHz 11-MB Cache	32 GB DDR4-2666/PC4-21300	Mechanical hard drive 1-TB SATA	■ Chassis type: 1RU ■ Network (max. total 12 ports): ✓ 1-GbE (copper): 4-12 ports ✓ 1 GbE (SFP): 4-8 ports ✓ 10 GbE (SFP+): 4-8 ports ■ Installation interfaces: VGA monitor and keyboard, remote access through iLO
Mediant 9000	Rev. B	2 x 12 Cores 2.6 GHz 19.25-MB Cache	96 GB DDR4-2666/PC4-21300	Mechanical hard drive 600-GB SAS	
Mediant 9080	Rev. A	2 x 12 Cores 2.6 GHz 19.25-MB Cache	96 GB DDR4-2666/PC4-21300	Mechanical hard drive 600-GB SAS	
	Rev. B	2 x 16 Cores 2.9 GHz 22-MB Cache	96 GB DDR4-2933/PC4-23400	Mechanical hard drive 600-GB SAS or 1-TB SATA	

For installation instructions of the Mediant 9000 (Gen 8) model, refer to *LTRT-41674 Mediant 9000 SBC Hardware Installation Manual Ver. 7.2 and later*.

4 Physical Description

This section provides a physical description of the device.

Physical Dimensions

The device's physical dimensions are listed in the following table.

Table 4-1: Physical Dimensions

Item	Description
Physical Dimension	4.29 x 43.46 x 70.7 cm (1.69 x 17.11 x 27.83 in)
Weight (approximate)	Between 13.04 kg (28.74 lb) and 16.27 kg (35.86 lb)
Environmental	Operational: 10 to 35°C (50° to 95°F)

Front Panel

The device features an 8-SFF (Small Form Factor) cage for standard internal storage hard drives. The device's front panel is shown in the figures below and described in the subsequent table.

Figure 4-1: Front Panel

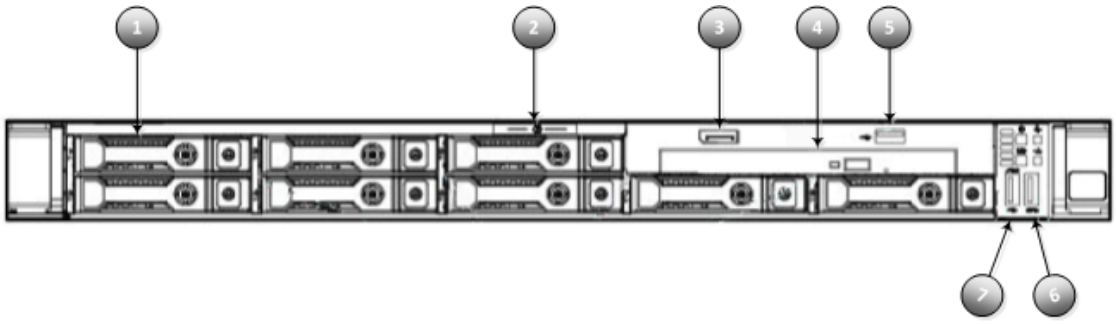


Table 4-2: Front Panel

Item #	Description
1	600-GB SAS drive or 1-TB SATA drive
2	Serial label pull tab
3	Display port
4	DVD-RW and Display port & USB 2.0 port Kit (DVD-RW is currently not operational). Re-installation of the SBC application can be performed using the iLO console virtual media.

Item #	Description
5	USB 2.0 port
6	USB 3.0 port
7	iLO Service port

Front Panel LEDs

The front panel LEDs are shown in the following figure and described in the subsequent table.

Figure 4-2: Front Panel LEDs

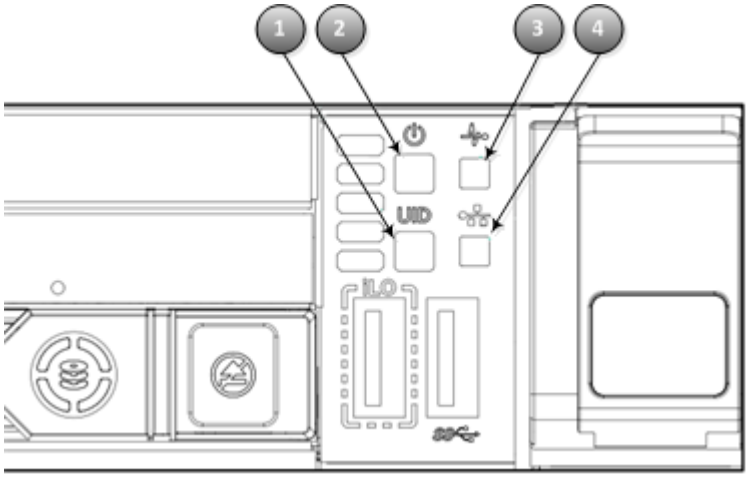


Table 4-3: Front-Panel LEDs

Item #	Description	Status
1	UID LED/button*	■ Solid blue = activated. ■ Flashing blue = Remote management or firmware upgrade in progress. ✓ 1 Hz = Remote management or firmware upgrade in ✓ progress ✓ 4 Hz = iLO manual reboot sequence initiated ✓ 8 Hz = iLO manual reboot sequence in progress ■ Off = deactivated.
2	Power On/Standby button/LED and system power LED*	■ Solid green = System on ■ Flashing green = Performing power on

Item #	Description	Status
		sequence ■ Solid amber = System in standby ■ Off = No power present**
3	Health LED*	■ Solid green = Normal ■ Flashing green = iLO is rebooting ■ Flashing amber = System degraded ■ Flashing red = System critical†
4	NIC status LED*	■ Solid green = Link to network ■ Flashing green = Network active ■ Off = No network activity

*When all four LEDs described in this table flash simultaneously, a power fault has occurred.

**Facility power is not present, power cord is not attached, no power supplies are installed, power supply failure has occurred, or the power button cable is disconnected.

†If the health LED indicates a degraded or critical state, review the system IML or use iLO to review the system health status.

Rear Panel

The rear panel is displayed in the following figure and described in the subsequent table.

Figure 4-3: Rear Panel - – Mediant 9080 / Mediant 9000 Rev. B

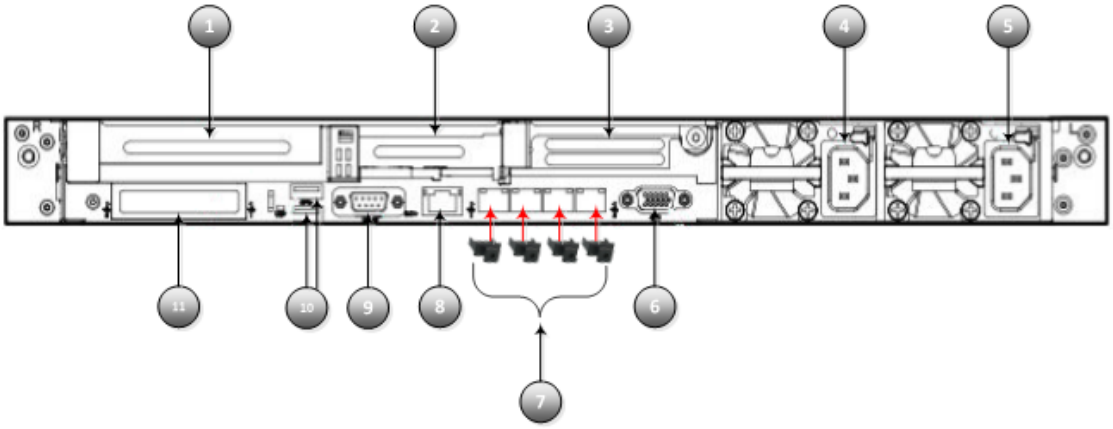


Figure 4-4: Rear Panel – Mediant 9030

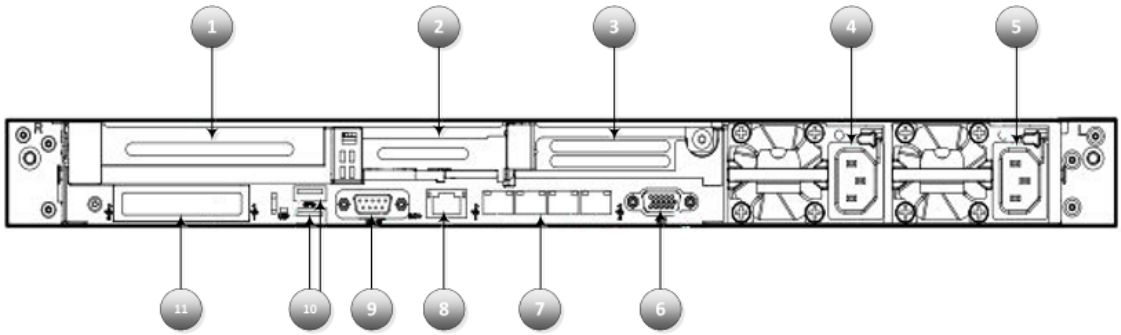


Table 4-4: Rear Panel

Item #	Description	
	Mediant 9080 / Mediant 9000 Rev. B	**Mediant 9030**
1	Slot 1: Quad 1-GbE copper ports	Slot 1: Quad 1-GbE copper ports or Quad 10-GbE SFP+ ports
2	Slot 2: Quad 1-GbE copper ports or Quad 10-GbE SFP+ ports	Slot 2: Not used
3	Slot 3: Not used	
4	Power supply 2 (PS2)	
5	Power supply 1 (PS1)	
6	Video port	
7	Unsupported NIC ports (dust covered)	Quad 1-GbE copper ports **Note:** These ports can be used only for signaling (SIP), OAMP, and HA Maintenance.
8	iLO Management Port	
9	Serial port	
10	USB 3.0 ports	
11	On-board FLR Quad 1-GbE copper ports	

Rear Panel LEDs

The rear panel LEDs are shown in the following figure and described in the subsequent table.

Figure 4-5: Rear Panel LEDs

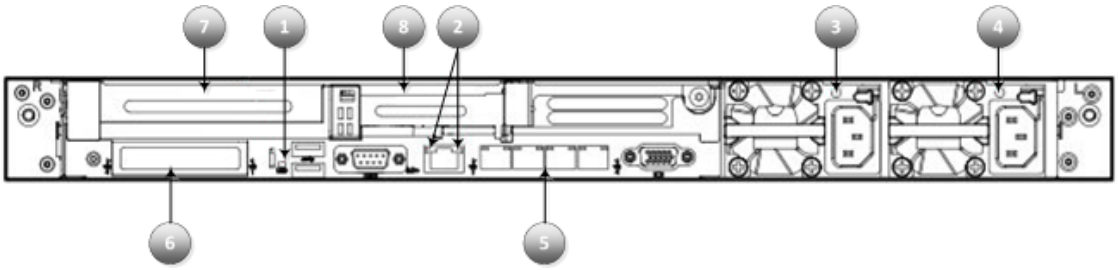
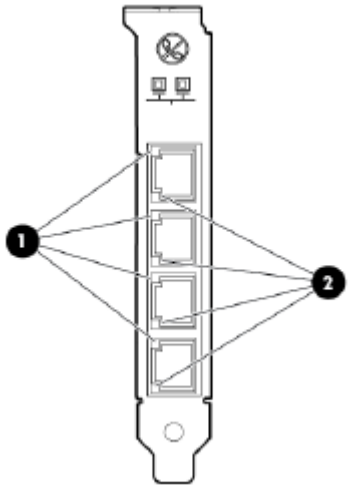


Table 4-5: Rear Panel LEDs

Item #	Description	Status
1	UID LED	■ Solid blue = Identification is activated ■ Flashing blue = System is being managed remotely ■ Off = Identification is deactivated
2	iLO 5/standard	■ (Right LED) NIC activity status: ✓ Solid green = Activity exists. ✓ Flashing green = Activity exists. ✓ Off = No activity exists ■ (Left LED) NIC link status: ✓ Solid green = Link exists. ✓ Off = No link exists.
3	Power supply 2 LED	■ Solid green = Normal ■ Off = One or more of the following conditions exists: ✓ AC power unavailable ✓ Power supply failed ✓ Power supply in standby mode ✓ Power supply exceeded current limit.
4	Power supply 1 LED	■ Solid green = Normal ■ Off = One or more of the following conditions exists: ✓ AC power unavailable ✓ Power supply failed ✓ Power supply in standby mode ✓ Power supply exceeded current limit

Item #	Description	Status
5	Quad 1-GbE copper ports	■ (Right LED) NIC activity status: ✓ Solid green = Activity exists. ✓ Flashing green = Activity exists. ✓ Off = No activity exists ■ (Left LED) NIC link status: ✓ Solid green = Link exists. ✓ Off = No link exists Note: Applicable only to Mediant 9030.
6	366FLR	■ Right LED - activity: ✓ Off = No network activity on the link ✓ Flashing green = Network activity on the link at up to 1 Gb/s ■ Left LED - link: ✓ Off = No link (adapter not receiving power or the cable connection is faulty) ✓ On green = Link established at 10/100/1000 Mb/s
7	366T	Two LEDs per port:  ■ LED 1 - activity: ✓ Off = No network activity on the link ✓ Flashing green = Network activity on the link at up to 1 Gb/s

Item #	Description	Status
		■ LED 2 - link: ✓ Off = No link (adapter not receiving power or the cable connection is faulty) or link established at 10 Mb/s ✓ On green = Link established at 100 Mb/s ✓ On amber = Link established at 1 Gb/s
8	366T or PE310G4SPI9LA	■ 366T – see above. ■ PE310G4SPI9LA - two LEDs per port: ✓ Upper LED - link speed: • On blue = 10G link • On yellow = 1G link ✓ Lower LED - link/act: • Solid green on = link • Blinks green on = activity

5 Deploying the Device

This chapter describes how to deploy the device. The following sections are described:

- Deploying the Rail Kit
- Connecting to Power and Replacing Power Supply
- Connecting Display and Keyboard
- Connecting Device to IP Network for 1-GbE Copper
- Connecting Device to IP Network with SFP
- Viewing Network Port Status

Deploying the Rail Kit

For instructions for deploying the rail system, refer to the printed instructions "Quick Deploy Rail System Installation Instructions" included in the Rail Systems packaging.

Rack Mount Safety Instructions: When installing the chassis in a rack, implement the following safety instructions:

- Elevated Operating 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 temperature. Therefore, consideration should be given to installing the equipment in an environment compatible with the maximum ambient temperature (T_A) of 35°C (95°F).
- Reduced Air Flow: Installation of the equipment in a rack should be such that the amount of air flow required for safe operation on the equipment is not compromised.
- Mechanical Loading: Mounting of the equipment in the rack should be such that a hazardous condition is not achieved due to uneven mechanical loading.

- Two people are required to mount the device in the 19-inch rack.
- When attaching the chassis to the rack, it is mandatory to connect it using both the front-mounting brackets and the rear-mounting brackets (supplied).

Connecting to Power and Replacing Power Supply

This section lists the various warnings, cautions and notes regarding connecting to the power supply and replacing power supply units.

To reduce the risk of electric shock or energy hazards:

- This equipment must be installed by trained service personnel, as defined by the NEC and IEC 60950-1, Second Edition, the standard for Safety of Information Technology Equipment.
- Connect the equipment to a reliably grounded Secondary circuit source. A Secondary circuit has no direct connection to a Primary circuit and derives its power from a transformer, converter, or equivalent isolation device.
- The branch circuit overcurrent protection for DC power supply must be rated 27 A.

If the DC connection exists between the earthed conductor of the DC supply circuit and the earthing conductor at the server equipment, the following conditions must be met:

- This equipment must be connected directly to the DC supply system earthing electrode conductor or to a bonding jumper from an earthing terminal bar or bus to which the DC supply system earthing electrode conductor is connected.
- This equipment must be located in the same immediate area (such as adjacent cabinets) as any other equipment that has a connection between the earthed conductor of the same DC supply circuit and the earthing conductor, and also the point of earthing of the DC system. The DC system should be earthed elsewhere.
- The DC supply source is to be located within the same premises as the equipment.
- Switching or disconnecting devices must not be in the earthed circuit conductor between the DC source and the point of connection of the earthing electrode conductor.

- Both Power Supply modules (1 and 2) must be connected. Ensure that you connect each one to a different AC power supply source. Two Power Supplies provide 1+1 power load-sharing and redundancy. The AC power sockets are located on the device's rear panel.
- The two AC power sources must have the same ground potential.
- The device must be connected (by service personnel) to a socket-outlet with a protective earthing connection.
- Use only a certified 3-conductor power cord, supplied with the unit.

To reduce the risk of personal injury from hot surfaces, allow the power supply or power supply blank to cool before touching it.

For DC power supply, use only the ring terminals provided with the power supply for customer-built power connections. Be sure no wire protrudes from the bottom of the ring terminal barrels.

Make sure that you connect the DC power feed cable to the power source in the correct polarity. The cable's two wires are color-coded and numbered to indicate

polarity:
- Black Wire (1): negative (-) polarity
- Red Wire (2): positive (+) polarity

The device must be connected (by service personnel) to a socket-outlet with a protective earthing connection

- Before extracting the Power Supply module, disconnect the power cord from the module.
- Before extracting the Power Supply module (after you have disconnected the power cord), wait at least three seconds for the capacitors to discharge.

The DC power cord is not supplied. For information, refer to HPE's documentation, Section Related Options: -48VDC Power Cables.

When connecting both Power Supply modules, the two AC power sources must have the same ground potential.

For DC power supply, the minimum nominal thread diameter of a pillar or stud type terminal must be 3.5 mm (0.138 in); the diameter of a screw type terminal must be 4.0 mm (0.157 in).

The DC power supply uses two power ring tongues and one ground ring tongue. They are not interchangeable

Connecting Display and Keyboard

To perform initial configuration, display and keyboard are required.

- Connect the display to the 15-pin HD D-Sub (HD-15) VGA port.
- Connect the keyboard to the USB port.

Connecting Device to IP Network for 1-GbE Copper

This section shows how to connect the device to the IP network using the copper 1-GbE ports.

Intra-building connections of the device require the use of shielded cables grounded at both ends.

The intra-building ports of the equipment are suitable for connection to intra-building or unexposed wiring or cabling only. The intra-building ports of the equipment must not be metallically connected to interfaces that connect to the Outside Plant (OSP) or its wiring. These interfaces are designed for use as intra-building interfaces only (Type 2 or Type 4 ports, as described in GR-1089–CORE, Issue 4) and requires isolation from the exposed OSP cabling. The addition of primary protectors is not sufficient protection to connect these interfaces metallically to OSP wiring

The device's management interface uses special string names to represent the Ethernet ports, as shown in the following figure:

Figure 5-1: Management Name per Physical Ethernet Port – Mediant 9080 / Mediant 9000 Rev. B

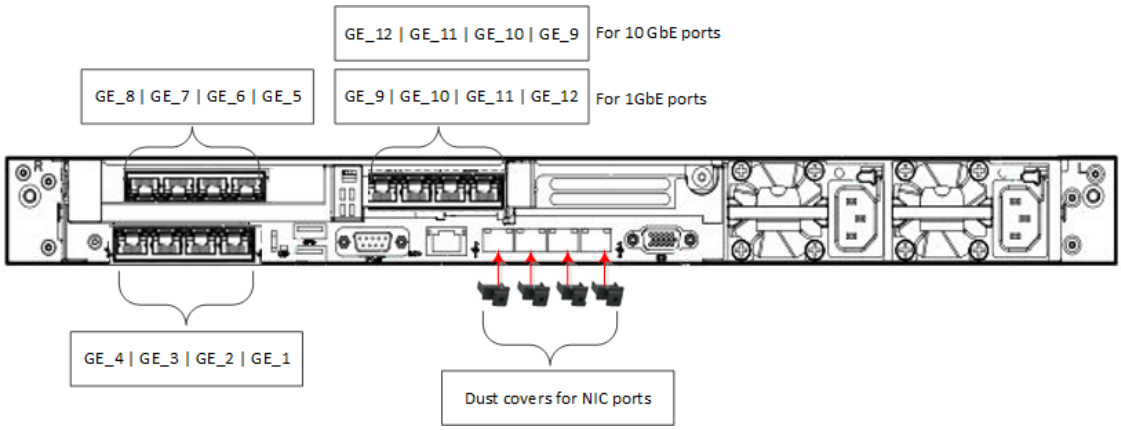
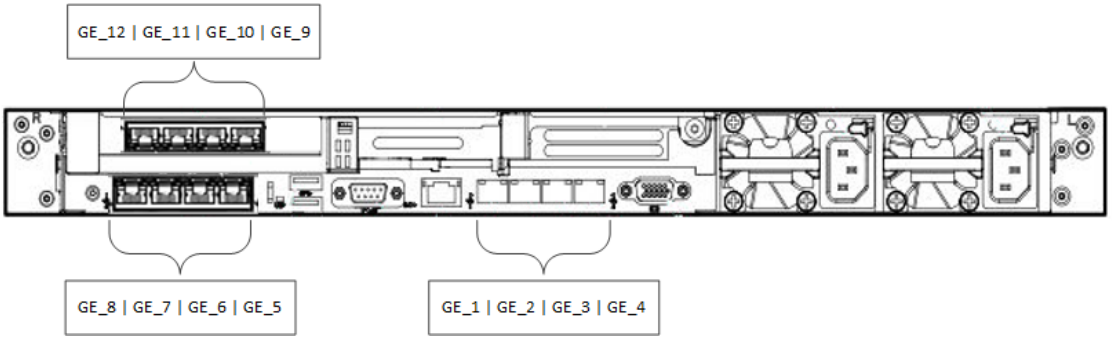


Figure 5-2: Management Name per Physical Ethernet Port – Mediant 9030



- **Mediant 9080 / Mediant 9000 Rev. B:** The figure represents a configuration with 12x1GbE ports. If the device is configured with 10GbE ports (GE_9 until GE_12), then the correct port order is as follows: GE_12 | GE_11 | GE_10 | GE_9.
- **Mediant 9030:** GE_1, GE_2, GE_3, and GE_4 ports can be used only for signaling (SIP), OAMP, and HA Maintenance. These ports must not be used for media traffic.

➢ **To connect the device to the IP network:**

- Use an Ethernet cable to connect an RJ-45 network port on the server's rear panel to the LAN.

Figure 5-3: Connecting the Device to the IP Network - Mediant 9080 / Mediant 9000 Rev. B

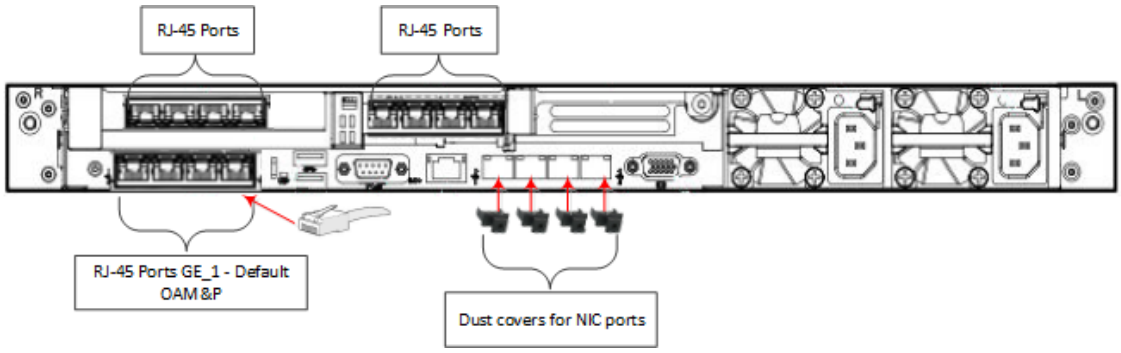
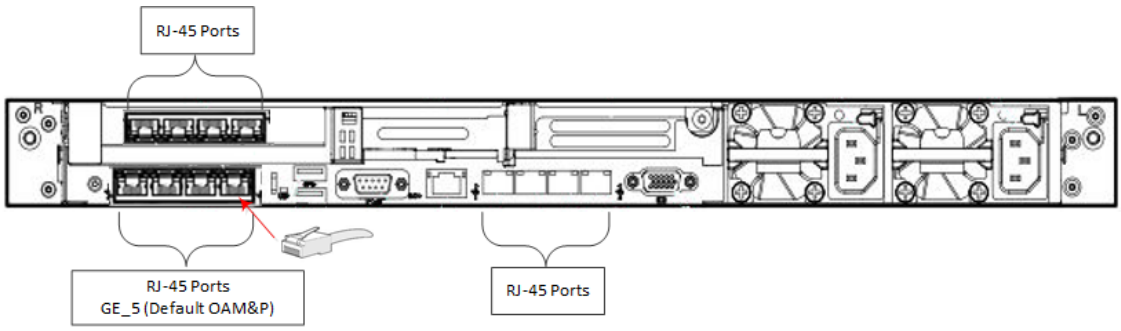


Figure 5-4: Connecting the Device to the IP Network - Mediant 9030



- The port used for OAM&P depends on the Mediant 9000 series product:
  - ✓ **Mediant 9080 / Mediant 9000 Rev. B:** Port GE_1
  - ✓ **Mediant 9030:** Port GE_5
- The HP iLO port is not used for management of the SBC application; it's used only for hardware management and monitoring. For more information, refer to HPE's documentation.

Connecting Device to IP Network with SFP

The following procedure describes how to cable the device to the network, using the 1.25 Gbps optical Small Form-Factor Pluggable (SFP) transceiver modules.

Caution Laser: This device contains a Class 1 LED/Laser emitting device, as defined by 21CFR 1040 and IEC825. Do not stare directly into the beam or into fiber optic terminations as this can damage your eyesight.

Care in Handling Fiber Optic Cabling:

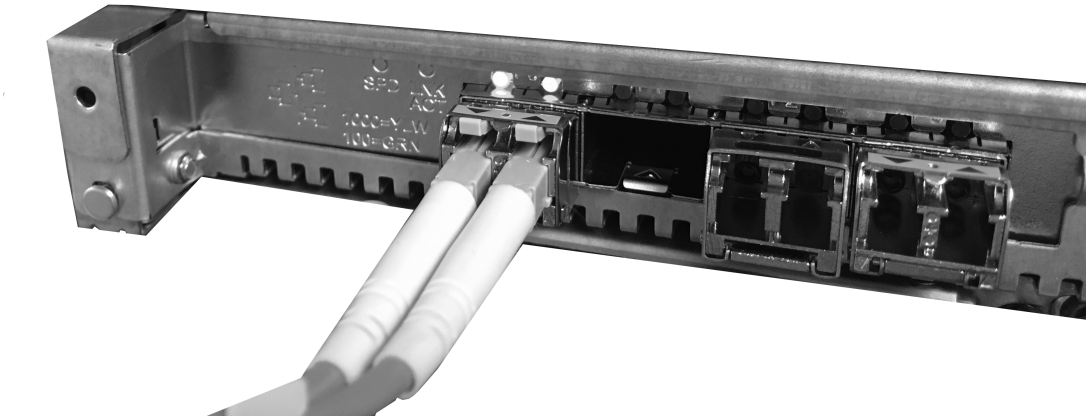
1. Excessive bending of the Fiber Optic Cable can cause distortion and signal losses.
2. Ensure the minimum bending radius recommended by the Fiber Optic Cable supplier.

3. Incoming optic cabling from the network infrastructure can originate from the top of the rack or from another shelf within the rack. Preserve the minimum-bending ratio indicated by the cable manufacturer.
4. To ensure full high-availability capabilities, the configuration of the interface to the IP backbone must include certain redundant features from which two separate fiber optic cables are entering the device.

➢ **To connect to the network using SFP:**

1. Remove the protective dust plug from the SFP transceiver module.
2. Connect a cable with LX-type or SX-type plugs to the SFP transceivers:

Figure 5-5: Cabling Network using SFP



Viewing Network Port Status

Use the CLI command `show network physical-port` to view network port status (up/down) and MAC address:

```
# show network physical-port

Port Num  Port Name  MAC Address  Speed Duplexity  Link Status  Native VLAN
Driver Info
--------  ---------  -----------  ----- ---------  -----------  -----------  -----------
1           GE_1       f4:ce:46:a5:3f:98                  UP         1    igb rx-zc
2           GE_2       f4:ce:46:a5:3f:99                  DOWN       1    igb rx-zc
3           GE_3       f4:ce:46:a5:3f:9a                  DOWN       1    igb rx-zc
4           GE_4       f4:ce:46:a5:3f:9b                  DOWN       1    igb rx-zc
5           GE_5       f4:ce:46:a5:4f:98                  DOWN       1    igb rx-zc
6           GE_6       f4:ce:46:a5:4f:99                  DOWN       1    igb rx-zc
7           GE_7       f4:ce:46:a5:4f:9a                  DOWN       1    igb rx-zc
8           GE_8       f4:ce:46:a5:4f:9b                  DOWN       1    igb rx-zc
9           GE_9       f4:ce:46:a5:a4:40                  DOWN       1    igb rx-zc
10          GE_10      f4:ce:46:a5:a4:41                  DOWN       1    igb rx-zc
```

```
11      GE_11     f4:ce:46:a5:a4:42      DOWN   1   igb rx-zc
12      GE_12     f4:ce:46:a5:a4:43      DOWN   1   igb rx-zc
```

- For 10G ports, the 'Driver Info' column displays "ixgbe" instead of "igb", but the port name remains the same (i.e., "GE_n").
- Mediant 9030: The driver info for GE_1 to GE_4 displays "tg3" (instead of "igb").

6 Fiber Network Card Support

This section describes the device's fiber network card support.

Supported Configurations

The network cards located in PCIe slots 1 and 2 (as shown in Rear Panel), can be replaced with SFP cards in any of the following supported configurations:

Table 6-1: Supported Configurations with SFP Network Cards

Slot 1	Slot 2	Total Network Ports (incl. On-board FLR ports)
Quad 1 GbE Copper	Quad SFP+ 10G with LR transceivers	8 x 1 GbE Copper + 4 x 10G SFP+ LR
Quad 1 GbE Copper	Quad SFP+ 10G with SR transceivers	8 x 1 GbE Copper + 4 x 10G SFP+ SR
Quad SFP+ 10G with LR transceivers	Quad SFP+ 10G with LR transceivers	4 x 1 GbE Copper + 8 x 10G SFP+ LR
Quad SFP+ 10G with SR transceivers	Quad SFP+ 10G with SR transceivers	4 x 1 GbE Copper + 8 x 10G SFP+ SR

Fiber Network cards must be ordered from AudioCodes.

Replacing Copper NIC with Fiber Network Card

If you want to replace the copper NIC with the Fiber Network Card, follow the below procedure.

➢ **To replace the copper NIC with Fiber Network Card:**

1. Power off the server and disconnect it from the power source.
2. Disconnect the network cables from the slots to be replaced (slot 2, or both 1 and 2).
3. Extract the PCI-e Riser cards, as described in HPE's documentation, Removing and replacing an expansion board.
4. If you are replacing one card only, replace the Copper GbE card in Slot 2 with the new fiber card. Otherwise, replace both cards.
5. Connect the optic cables as described in Section Connecting Device to IP Network with SFP.

6. Power on the server. When the device finishes loading, the new SFPs are labeled "GE_9" through to "GE_12" if a single card was replaced, or "GE_5" through to "GE_12" if both cards were replaced.

7 Initial Configuration

This chapter describes the procedures for the initial configuration of the device.

Reconfiguring Default IP Address to Match Customer Network Settings

The device is supplied with software preinstalled. By default, the device is assigned with a default IP address that will most likely be inaccessible from the customer's network.

Figure 7-1: Default IP Address

Parameter	Value
IP Address	192.168.0.2
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0

Reconfigure the IP address to connect to the Device's Web-based management tool (hereafter referred to as Web interface).

➢ **To reconfigure the IP address using CLI:**

1. Use the VGA monitor and keyboard to connect to the CLI management interface.
2. At the prompt, type the username (default is Admin - case sensitive):

```
Username: Admin
```

3. At the prompt, type the password (default is Admin - case sensitive):

```
Password: Admin
```

4. At the prompt, run the following command:

```
> enable
```

5. At the prompt, type the password again:

```
Password: Admin
```

6. At the prompt, type the following commands to access the network interface configuration:

```
# configure network
(config-network)# interface network-if 0
```

Use the Tab key to auto-complete partially entered commands.

7. At the prompt, type the following commands to configure the IP address, prefix length and default gateway:

```
(network-if-0)# ip-address 10.4.212.155
(network-if-0)# prefix-length 16
(network-if-0)# gateway 10.4.0.1
(network-if-0)# exit
```

8. At the prompt, type the following command to complete the network configuration:

```
(network-if-0)# exit
```

9. If the device is connected to the IP network that uses VLAN ID (for example, VLAN ID 10), type the following commands to configure it in the Ethernet Device table (otherwise skip to step 10):

```
(config-network)# interface network-dev 0
(network-dev-0)# vlan-id 10
(network-dev-0)# tagging tagged
(network-dev-0)# exit
```

10. At the prompt, type the following command to complete the configuration:

```
(network-dev-0)# exit
```

11. At the prompt, make sure that port #1 is connected (Link is UP) using the show network physical-port CLI command, as described in Section Viewing Network Port Status, Port #1 is mapped to network-if-0 by default.

12. At the prompt, type the following command to reset the product and activate the new configuration:

```
# reload now
```

After the device restarts, connect to its Web interface to continue provisioning. For more information, see the device's User's Manual.

Licensing the Device

The device is supplied with a pre-installed software and License Key. Use the pre-installed License Key to enable the call capacity and features that you ordered. To upgrade your License Key, refer to the device's User's Manual.

8 Installation and Upgrade Issues

This chapter describes installation and upgrade issues.

Installing an HA System

You can configure two devices to operate in a High Availability (HA) configuration. For more information on HA, refer to the device's User's Manual.

Upgrading

You can update the device's software, for example, to implement software fixes. For more information, refer to the device's User's Manual.

Reinstalling Software SBC from ISO Image

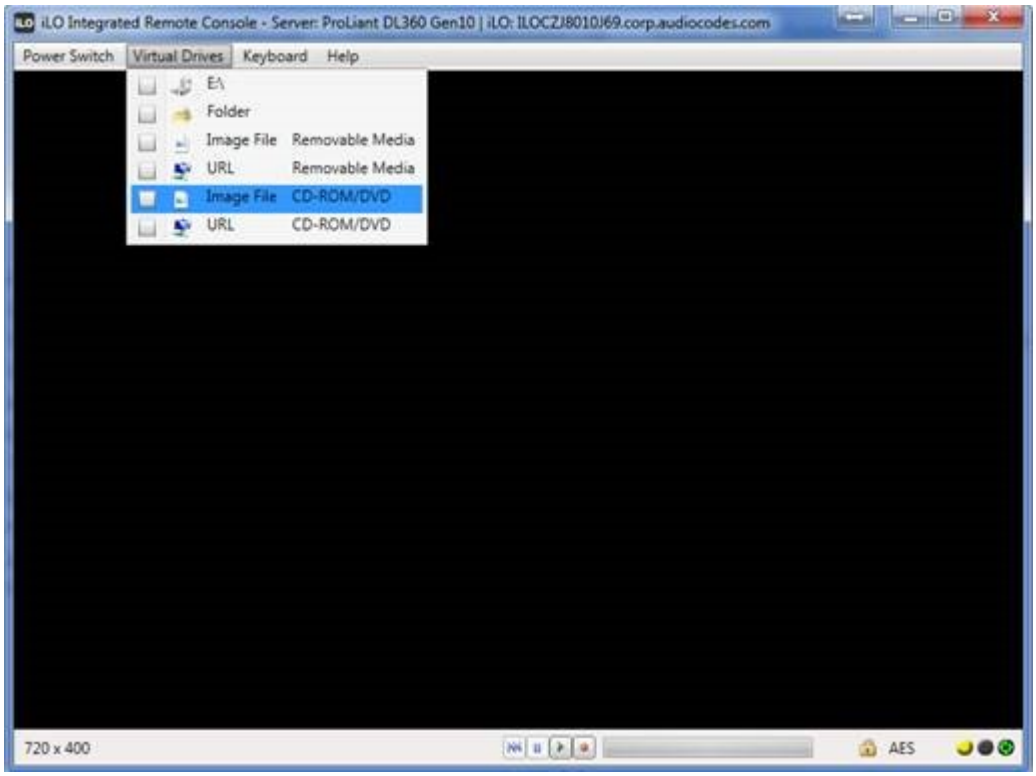
The device is pre-installed on the device's server. In case a clean installation of the device's software is required, you should download the latest installation image from the AudioCodes website and install the software from the ILO virtual drive.

- DVD-RW is currently not operational.
- A clean installation deletes any user configuration, data or snapshots that were previously resident on the device.

➢ **To install Mediant SE SBC:**

1. Download the latest ISO file containing the device's software from AudioCodes Website.
2. In the Remote Console menu, choose Virtual Drives > Image File (see following figure).
3. Browse to the device's software ISO file that you downloaded from AudioCodes website, and then click OK.

Figure 8-1: Mounting ISO Image from Remote Console



4. Reset the server from the Remote Console by using (for example) the 'Power Switch' button.

   The server boots from the Remote Console (see following figure) and the Mediant SE SBC Installation Menu is displayed (see figure below 'Installation Start Prompt').

Figure 8-2: HP ProLiant Server Booting

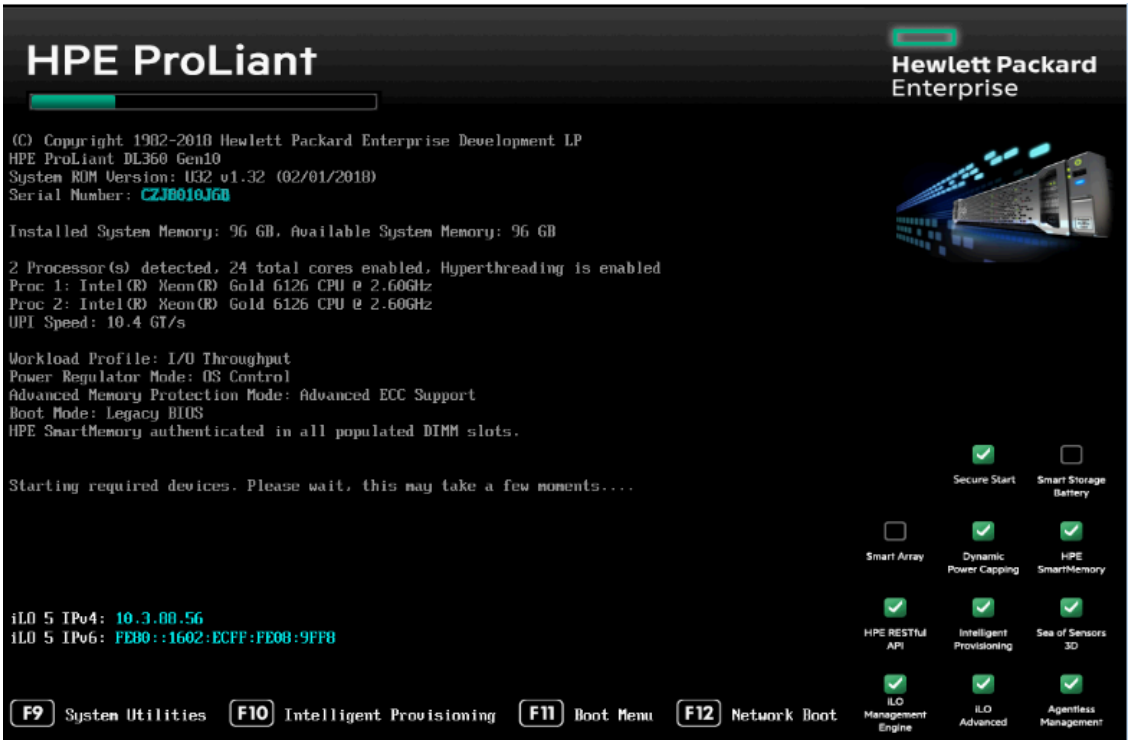
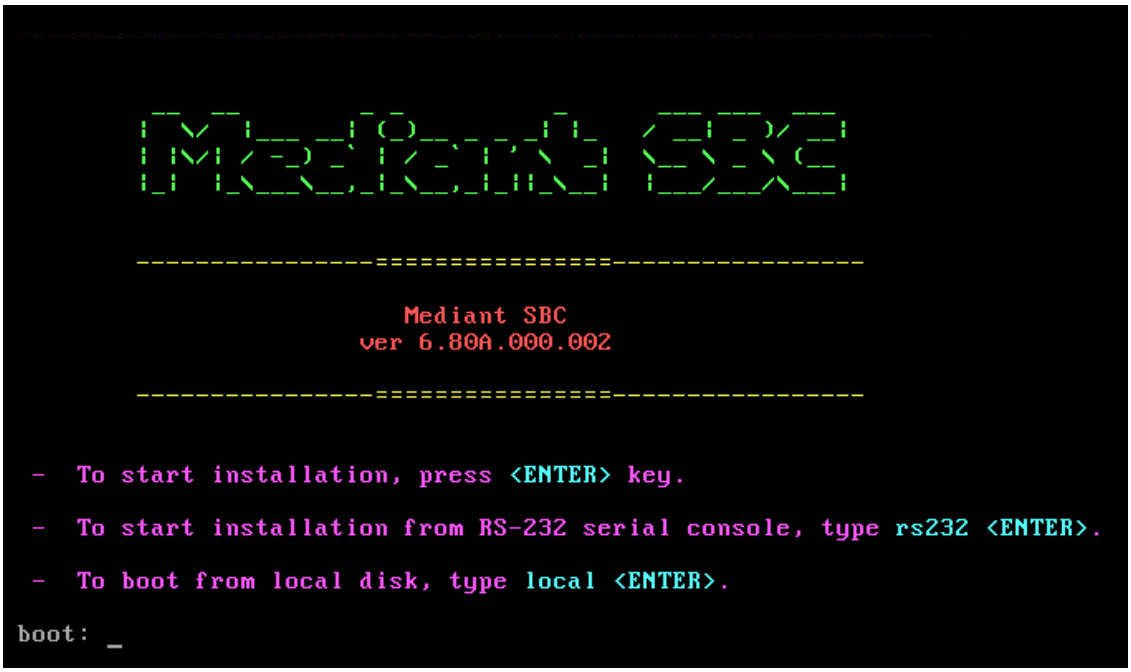
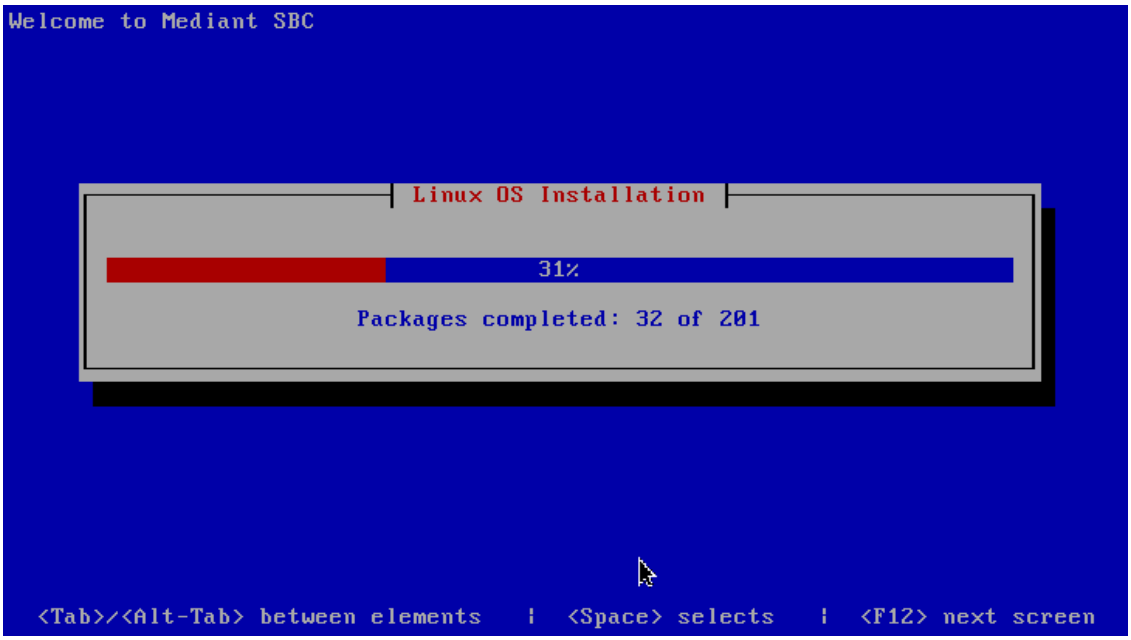


Figure 8-3: Installation Start Prompt



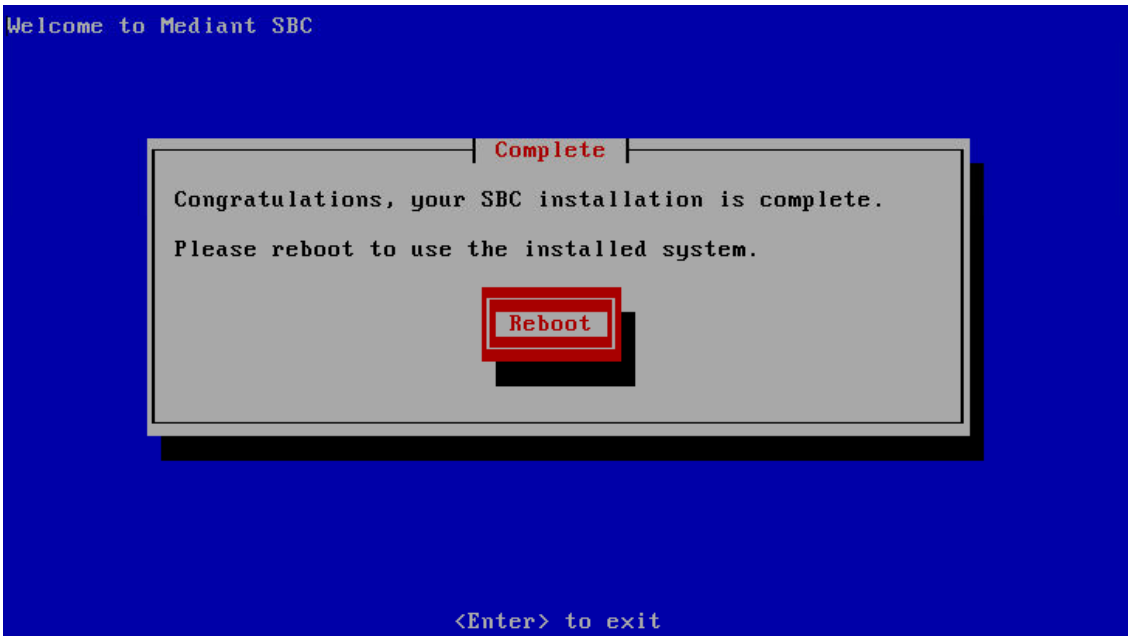
5. Press the ENTER key; installation commences from the ILO virtual drive; a bar shows installation progress.

Figure 8-4: Installation in Progress



6. Wait for the 'Complete' prompt, notifying you when installation is complete, to be displayed. Installation takes approximately 20 minutes.

Figure 8-5: Installation Complete



7. Disable the Virtual Drive that was selected before for ISO installation.
8. Press ENTER to reboot the server; after rebooting, the server boots from the local disk to the newly installed device software.

9 Rescue Options

The device features a System Snapshots mechanism that provides the capability of returning the system to a previous state. The mechanism may be used as a rescue option if a system malfunction occurs. For more information, refer to the device's User's Manual.

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Document #: LTRT-41700