Spectrum D3.1 eMTA

DOCSIS 3.1 Advanced Voice Modem

Quick Installation Guide

SAFETY NOTICES

Device Grounding: Install the cable modem to include grounding the coaxial cable to the earth as close as practical to the building entrance per ANSI/NFPA 70 and the National Electrical Code (NEC, in particular, Section 820.93, Grounding of the Outer Conductive Shield of a Coaxial Cable). The device is designed for IT power systems with phase-to-phase voltage at 120V.

This unit requires a 100-240V, 50-60Hz power adapter. The power adapter must be keyed for proper polarization, and must be fully inserted to contact the back of the power connector port to ensure snug connection. Use only the supplied power adapter.

Disconnecting the Device: If the cable modem becomes damaged or encounters some other abnormality, disconnect the power adapter from the AC wall outlet immediately.

Temperature and Altitude: Install the device in a location not to exceed the maximum operating temperature of 104˚F (40˚C). Maximum operating altitude is 5000 m (16,404 ft.).

PREPARING FOR INSTALLATION

Verify package contents, RF cable connectors, and power outlet. ✓Unpack the box and confirm the following components:

D3.1 eMTA

1 Ethernet Cable (RJ-45)

1 Power Adapter (use only this adapter)

✓Locate the RF (coaxial) cable connector on the wall. ✓Verify the power outlet is working and is wired correctly. Place your cable modem within a proper distance from the outlet.

BASIC MODEM INFORMATION

Example of Cable RF MAC Address	00:71:CC:8E:54:C7
Firmware Version	14.1.2xxx
Compatibility	DOCSIS 3.1/3.0/2.0/1.0 certified Ethernet 10/100/1000 Mbps
Local Web User Interface Access	http://192.168.100.1
Modem Web Page Login (web user interface)	Login: technician Password: C0nf1gur3Ubee#

UNDERSTANDING DEVICE CONNECTIONS

REAR PANEL:

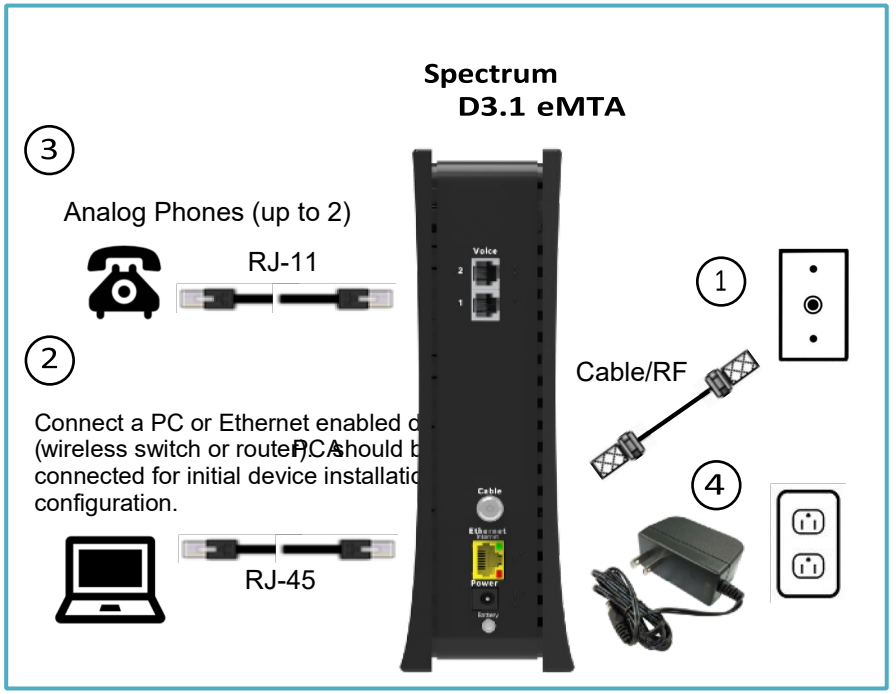
Ethernet (Internet): Connect to an Ethernet-enabled device such as a computer, gaming console or a wireless access point (LAN switch, router) using an RJ45 Ethernet cable.

Voice 1-2: Use to connect analog telephones to the device. Telephone service must be enabled by your service provider.

Cable: Use to connect to the coaxial cable from your Internet service provider.

Power: Use to connect to the power adapter. Plug the other end into the wall power outlet.

UNDERSTANDING DEVICE CONNECTIONS • INSTALLATION DIAGRAM (Cont.)



FRONT PANEL:

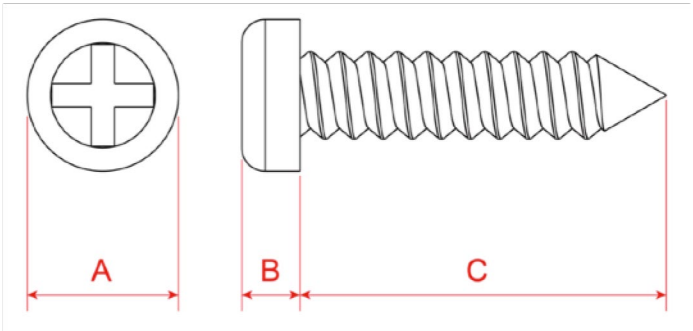
Reset: Use to reset the device settings. When the Reset button icon, and the surrounding ring are illuminated, press and hold the button for **4** seconds to initiate a power cycle. If the lights are not lit, the device can be factory reset. Press and hold the button for **10** seconds to reset the device to factory default settings. Note: When the button and ring are lit, a power cycle must be performed prior to performing a factory reset.

INSTALLING THE MODEM

1. Connect the coaxial cable (not supplied) to the Cable connector on the rear panel of the modem and connect the other end to the cable wall outlet. Do not bend or over tighten the cables, as this may strain the connector and cause damage. To connect a modem and a television to the same wall outlet, you must use a cable line splitter (not included).
2. Connect the Ethernet cable (supplied) to a Ethernet port on the back panel of the modem and connect the other end to the Ethernet port of a PC. Use a Category 5e or Category 6 Ethernet cable with RJ-45 connectors to ensure Gigabit Ethernet speeds (if the computer supports it).
3. Connect an RJ-11 phone cable (not supplied) to the Voice 1 or 2 port on the modem (when provisioned for voice service as specified by the service provider), and connect the other end to the phone port of the telephone. If voice service is not provisioned through the service provider, telephone service is not available.
4. Connect the power adapter (supplied) to the Power port on the modem. Connect the other end to a power outlet.

Label	Size in Millimeters (mm)
A	9.5 +/- 0.2
B	3.7 +/- 0.1
C	34.5 +/- 0.2

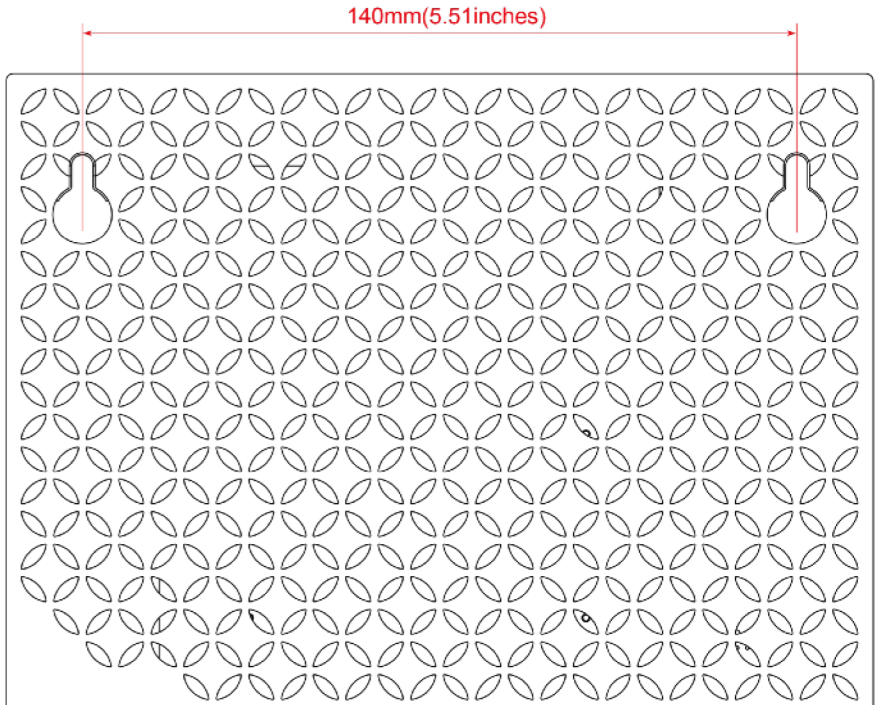
- **DEVICE WALL MOUNT INSTRUCTIONS**



You can mount the Spectrum D3.1 eMTA on a wall using the 2 mounting brackets on the side of the device. Two round or pan head screws are recommended. See the figure below for measurements.

To mount the device on a wall:

1. Install the 2 screws horizontally on the wall 140 mm (5.51 inches) apart.



Note: The screws should protrude from the wall so you can fit the device between the head of the screws and the wall. If you install the screws in drywall, use hollow wall anchors to ensure the unit does not pull away from the wall due to prolonged strain from the cable and power connectors.

2. Mount the device on the wall

NOTE to CATV SYSTEM INSTALLER:

This reminder is provided to call the CATV systems installer's attention to section 820-93 of the National Electric Code, which provides guidelines for proper grounding and in particular, specify that the Coaxial cable shield shall be connected to grounding system of the building, as close to the point of cable entry as practical.

LED BEHAVIOR

LED		COLOR	DESCRIPTION
Power	Status Light	**BLUE**	• Powering Up: **Flashing** between **On Blue** and **Off** • Normal Operation: **On Blue** • Network Access Denied: If receiving power, **On Blue**
	Illuminated Text	**WHITE**	• Powering Up and Fully Powered: **On White**
Online	Status Light	**BLUE / WHITE**	• Determining Connection: **Pulsing** between **On Blue** and **On White** • Device has entered DOCSIS 3.0 Bonded State: **On White** • Device has entered DOCSIS 3.1 Bonded State: **On Blue** • Determining Connection: **Pulsing** between **On Blue** and **On White**
	Illuminated Text	**WHITE**	• Determining Connection: **On White** • Connected: **On White**
Voice	Status Light	**BLUE**	• Voice Service Not Provisioned: **Off** • Voice Service Active: **On Blue** • Phone Cable Connected to Voice Port: **On Blue** • Phone Cable Not Connected to Voice Port: **On Blue** • Any Phone Off-Hook: **Pulsing** between **On Blue** and **Off** • Unable to Establish Phone Connection: **Off**
	Illuminated Text	**WHITE**	• Voice Service Active: **On White**

LED BEHAVIOR (Cont.)

LED		COLOR	DESCRIPTION
Battery *(NOTE: Battery is optional)*	Status Light	**BLUE / RED**	• Battery at 21% (of usable charge) or Higher: **On Blue** • Battery at 20% (of usable charge) or Lower: **On Red** • Battery at 10% (of usable charge) or Lower: **Flashing** between **On Red** and **Off** • No Battery Installed: **Off** • Battery Charging: **Pulsing** between **On Blue** and **Off**
	Illuminated Text	**WHITE**	• Battery Installed: **On White**
Reset	Button Icon Light	**WHITE**	• Device is in a State that Suggests a Power Cycle: **On White** • Device is NOT in a State that Suggests a Power Cycle: **Off**
	Ring	**RED**	• Device is waiting to be Power Cycled: **Pulsing** between **On Red** and **Off** • Device is NOT in a State that Suggests a Power Cycle: **Off**
	Illuminated Text	**WHITE**	• Device is in a State that Suggests a Power Cycle, or is waiting to be Power Cycled: **On White**
	Note: When the device is in a state that suggests a power cycle (the button icon and the surrounding ring are lit), a factory reset cannot be performed. The user must power cycle the device, then perform a factory reset.		

Ethernet	Status Lights	**GREEN / ORANGE**	• An Ethernet Device is Connected at 100 Mbps Speeds: **On Green** • An Ethernet Device is Connected at 1000 Mbps Speeds (Gigabit Ethernet): **On Orange** • An Ethernet Device is Connected at 10 Mbps Speeds: **Off** • Data is Being Passed Between the Spectrum D3.1 eMTA and the Connected Device: Flashing **Green** or **Orange**

FEDERAL COMMUNICATION COMMISSION INTERFERENCE STATEMENT

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, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution:

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.