

4G LTE Network Extender 3 for Enterprise - Installation Reference Guide



Cautions and Warnings

- **Caution:** The Network Extender emits radio frequency electromagnetic energy. To comply with FCC RF exposure compliance requirements, this device must be installed to provide a separation distance >20 cm from all persons during normal operation. For operation within the 5GHz frequency range, this device is restricted to indoor environments.
- **Warning:** Read and understand the installation instructions and all safety warnings before connecting the Network Extender to the power source. Failure to understand safety precautions may result in injury.
- **Warning:** Operate the Network Extender only with the power adapter supplied with the product.
- **Warning:** Do not cover the Network Extender or block the airflow to the device with any objects.
- **California Prop65 Warning:** The plastic and cords on this product contain phthalates, a chemical known to the State of California to cause cancer, birth defects and other reproductive harm. Wash hands after handling. For more information, please visit the following site: www.p65warnings.ca.gov

USA: Federal Communications Commission (FCC) statement

This device complies with FCC part 15 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, including interference that may cause undesired operation of the device.

FCC Warning:

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. Note: 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 or more 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.

This device meets the FCC and IC requirements for RF exposure in public or uncontrolled environments.

FCCID: 2AO38LTE2004-04

1. In-box Contents

The box contains the following components:

- Mounting Bracket with Hardware
- GPS Antenna and cable – 7.0m
- Ethernet cable – 2.0m
- Power supply (not plenum rated) with 2.0m cable
- Quick Reference Card

2. Prerequisites

Firewall

See the Network Extender User Guide for Enterprise Firewall settings.

Ethernet and Backhaul (B/H) Requirements

An internet connection of greater than 50mbps is recommended. For optimum performance regarding backhaul bandwidth requirements, please refer to the Network Extender User Guide.

GPS Signal

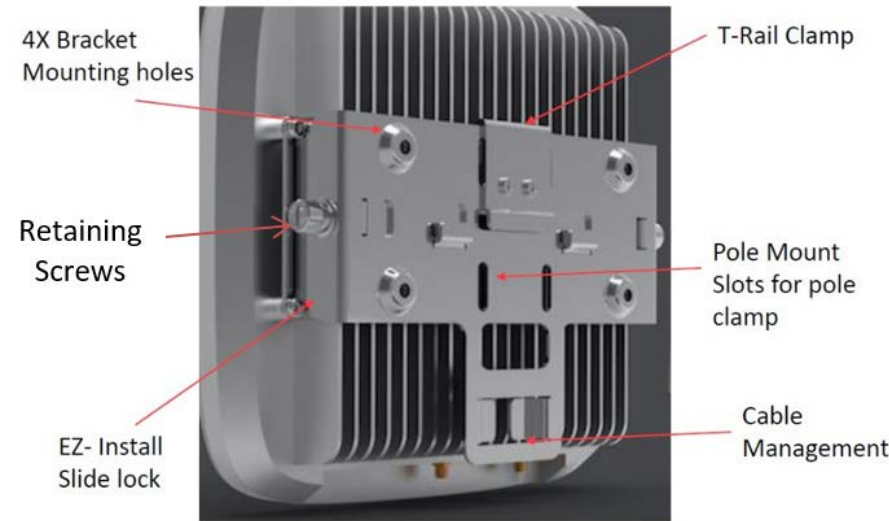
The Network Extender requires a strong GPS signal from the provided indoor GPS antenna. For installation other than with the provided GPS antenna, please refer to the Network Extender User Guide.

PoE Port (Optional)

When power is supplied through the PoE port, the PoE power source should meet Class 4 and Class 5 requirements (refer to the Network Extender User Guide for more information).

3. Mounting

The package contains screws and anchors for drywall mounting. Installation on alternate surfaces will require the purchase of the appropriate anchors and hardware.



Placement

- The Network Extender can be installed: vertically or horizontally on a wall, floor, or ceiling.
- Place the unit at least 10 feet away from products that generate electromagnetic radiation (e.g., microwave oven).
- Identify a location for the Network Extender, central to users, but no more than 21 feet from an exterior window or wall to allow for a strong GPS signal.
- Identify a power source for the Network Extender.

Procedure

1. Determine the mounting location and verify that no wires, pipes, etc., are directly behind or in the wall at the point of mounting.
2. Use the wall mounting bracket to act as a template to mark anchor holes on the wall.
3. Drill holes into drywall and push in the supplied plastic drywall anchors.
4. Align the mounting bracket with the wall anchors and attach using the supplied screws.
5. Slide the Network Extender with mounting bracket into the wall mounting bracket.
6. Fasten retaining screws (Phillips #2) on the side of the bracket.

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4. Connection Overview



Port Name	Function
GPS	To connect GPS antenna and receive GPS signal.
INT/EXT	To select antenna INT (Internal)/EXT (External).
Reset	Factory Reset.
1PPS	Reserved for future use.
LMT	Local Monitoring Terminal Port. To manage setting and display device status.
PoE/WAN	To connect to a Power over Ethernet (PoE) or Wide Area Network (WAN) Port.
Power	To connect Power Supply (12V DC).

5. GPS Installation

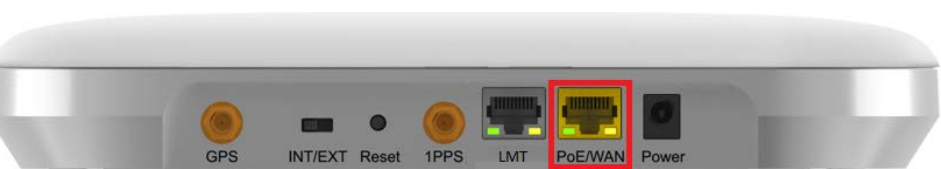
Connect the (external) GPS antenna cable (indoor use only) to the GPS port of the Network Extender. Ensure the GPS antenna is near a window with a view of the open sky.



Note: The GPS antenna must stay connected to the Network Extender at all times for operation. The initial GPS fix can take up to 60 minutes.

6. Ethernet and Power Connections

Attach the supplied Ethernet cable from your router or modem LAN port to the Network Extender PoE/WAN port for network connectivity.



Plug in the Power Supply and insert the power cable into the Network Extender Power port. Twist the power plug to lock it in place.

Automatic startup and hardware initialization will begin.

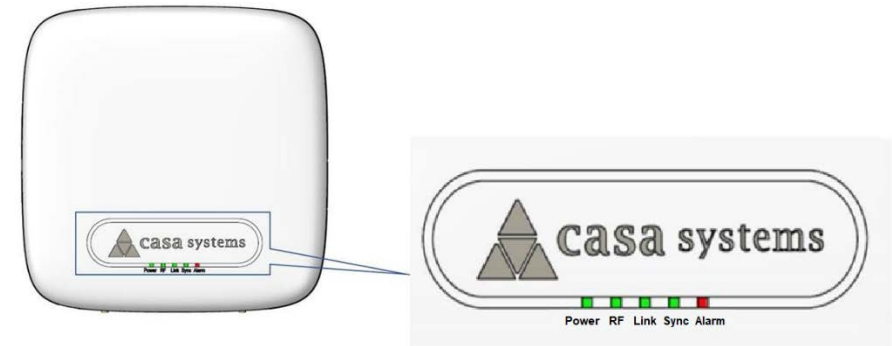
POWER ON

At startup, the Network Extender will conduct a self-configuration. This will take between 30 - 60 minutes the first time the Network Extender turns on.

7. Automated Startup

The sequence of LEDs during a normal service operation are as follows: Power LED ON -> Sync LED ON -> Link LED ON -> RF LED ON

Upon successful setup, the Power, RF, and Sync LEDs should be solid green. The Alarm LED should be off.



Note: If the LEDs fail to turn green after one hour or if there is a critical system alarm, consult the troubleshooting section in the User Guide.

LED	Color	Description
Power		OFF: Power not detected. ON: All the power rails are present. Flashing: Unit booting or firmware upgrading.
Sync		OFF: Synchronization not established. ON: Synchronization acquired. Flashing: Synchronization lost.
RF		OFF: Radio activity disabled. ON: Radio activity enabled, unit is transmitting or receiving. Flashing: Radio loading.
Link		OFF: Ethernet link down. ON: Ethernet link up.
Alarm		OFF: No alarm detected. Flashing: System critical alarm.

8. Configuration and Support

Refer to the Network Extender User Guide for more details on Configuration and Support.

No GPS Signal

The Sync LED off and Alarm LED fix red indicates no GPS signal. Check the About Network Extender page in the Advanced Settings web interface, on the tabs for “Status and Alerts” or “GPS” to see the status of the GPS constellation.

Is my wireless device connected to the Network Extender?
Using the Advanced Settings web interface, sign in and the Connected Devices panel for indication of connected users.

Accessing Advanced Settings: To access advanced settings, sign into the web interface by following the steps below:

1. Use the supplied Ethernet cable to connect a laptop to the LMT port on the Network Extender.
2. Change the TCP/IPv4 settings of the laptop to the following: IP Address (172.31.1.2), Subnet Mask (255.255.255.252).
3. Open a web browser on the connected laptop, and enter the IP address <https://172.31.1.1>
4. Sign in using “admin”, the default administrator password is: **VzWNetExtender3@ + last six digits of the MAC**. The MAC ID can be found on the label on the side of the Network Extender.

Cannot reach Network Extender GUI or locked out of device.
Press the RESET button for 10 seconds to reset the system to factory default settings.

Where to go for help.

For complete installation and operational information, please see the online 4G LTE Network Extender for Enterprise User Guide at: <https://www.verizon.com/support/4g-lte-network-extender-enterprise-basics/>

Call Customer Care Toll Free at 800-922-0204 or *611 from your Verizon Wireless mobile phone.

