

# AirgainConnect® AC-HPUE™ Installation Guide



## Safety Warnings

- **SEVERE DAMAGE WARNING.** The AC-HPUE must be powered by the Ethernet Injector (AC-EI) or an ISO 7637-2 compliant power conditioner when connected to a DC power source. Direct connection to the vehicle's battery or electrical system is prohibited and can significantly damage the AC-HPUE – damage resulting from improper power supply is NOT covered by the warranty.
- **HOT.** Do not touch the antenna-modem while operating. Power it off and allow it to cool down for 30 minutes to a safe temperature after use before touching it.
- **MAINTAIN A SAFE DISTANCE.** Stay 20 cm (8 inches) or more away from the antenna modem during normal operation.
- **FUSE.** Use an inline 5A slow blow fuse for over-current protection.
- **GROUND.** Never connect the black ground wire directly to the battery terminal.

## FCC RF Radiation Exposure Statement

To comply with the FCC RF exposure compliance requirements, this device and its antenna must not be co-located or operating in conjunction with any other antenna or transmitter. This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm between the antenna and the nearest person during normal use. Furthermore, the FCC Consumer Guide provides the following information regarding exposure the RF fields from vehicle-mounted antennas:

“Vehicle-mounted antennas used for wireless communications normally operate at a power level of three watts or less. These wireless antennas are typically mounted on the roof, trunk or rear window of a car or truck.”

Studies show that, in order to be exposed to RF levels that approach the safety limits adopted by the FCC, it would be necessary to remain very close to a vehicle-mounted wireless antenna for a significant amount of time. Studies have also shown that the metal body of the vehicle can effectively shield occupants. Proper installation of a vehicle-mounted antenna to maximize this shielding effect is a good way to minimize exposure. Some companies recommend that antennas be installed either in the center of the roof or center of the trunk of a vehicle. In response to concerns expressed over the commonly used rear-window mounted wireless antennas, a minimum separation distance of 1-2 feet has been suggested as a way to minimize exposure to vehicle occupants.

From data gathered to date, properly installed, vehicle-mounted, personal wireless antennas using up to three watts of power result in maximum exposure levels in or near the vehicle that are typically well below the FCC's safety limits, assuming that the transmitting antenna is 6 inches or more from vehicle occupants.”

For more information on consumer issues, visit the FCC's Consumer Help Center at [www.fcc.gov/consumers](http://www.fcc.gov/consumers).

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## 1. Installation Tools

### AC-HPUE Mounting

- Electric drill/driver
- 1 inch metal hole saw
- Torx Screwdriver: 2mm hex

### Ethernet Injector Mounting

- Multimeter
- Fasteners
- (Optional) Metal file or heavy sandpaper

## 2. Electrostatic Discharge Protection

- The Ethernet Injector and the internal components of the AC-HPUE are ESD sensitive.
- Please take precautions handling the Ethernet Injector at all times and when handling the AC-HPUE while the SIM door is removed.
- It is recommended that work is completed on an anti-static workstation and that the technician is grounded using an anti-static wrist strap.



### 3. Prior to Installation

- Perform a bench power up and pair with the deployment router
  - It is much easier to troubleshoot on a bench prior to installation
  - It is highly recommended to connect the AirgainConnect to any router it may be deployed with and verify the configuration
  - Ensure a proper data connection to a device directly connected to the Ethernet port on the Ethernet Injector
- Verify the gasket is correct for the vehicle/location
  - The AirgainConnect can be paired with multiple mounting gaskets for specific vehicle types.
  - Ensure that the supplied gasket supports the deployment vehicle
- Determine the mounting location on the specific vehicle
  - Ensure that the roof location is at least 18 inches away from other antennas
- Verify that the mounting location of the Ethernet Injector is within 3 feet of a grounding point such as the vehicle chassis

## 4. Installing the AC-HPUE

An installation video can be found here: [AirgainConnect® AC-HPUE™ Installation Video on Vimeo](#)

### Installation:

- Drill a 1 in (2.54 cm) diameter hole where the center of the antenna-modem housing will be located on the vehicle. Verify the hole will not interfere with headliner mounted accessories, such as dome lighting.



- Clean the mounting surface with the provided alcohol wipe to remove dust, dirt, and oil. Allow surface to dry



- Insert the cables through the hole.



- Removing the backing on the bottom of the housing exposing the adhesive pad to permanently mount the AC-HPUE to the vehicle roof. DO NOT remove the backing if temporarily mounting to a magnetic or suction mount.



- Position the housing and adhere it to the vehicle using firm hand pressure.



- Place the plastic thermal washer on the threaded lug and then install the nut on the threaded lug. Tighten the nut two turns after contact to inside surface. Attach the

## Wi-Fi and GNSS cables to the vehicle router Wi-Fi and GPS ports



### Notes:

- The Installer may encounter various obstacles with individual vehicle designs that may require different placement, routing of cables or drilling of holes to complete the mounting procedure.
- Mount the housing on the roof of the vehicle
- The housing must be mounted horizontally, parallel to the ground (not mounted on a vertical surface).
- The housing must be mounted to a flat, clean dry surface. Avoid mounting the housing near panel seams or rivets so the foam pad can seal properly.
- The housing should be installed with a minimum distance of 18 inches from existing antennas, light bars or obstacles protruding from the roof or trunk lid of the vehicle.
- The antenna must be mounted at least 18 inches away from any other communication antenna to maintain specified performance and limit interference to other in-vehicle communication systems.
- When routing cables, do not pull on the connectors. Pulling directly on connectors may cause damage and loss of the signal at the radio receiver, GPS, or modem.
- When mounting, make sure that the surface temperature where the housing is to be mounted is between 85°F to 100°F (30°C to 38°C). Cooler surface temperatures may cause improper adhesion to the surface.

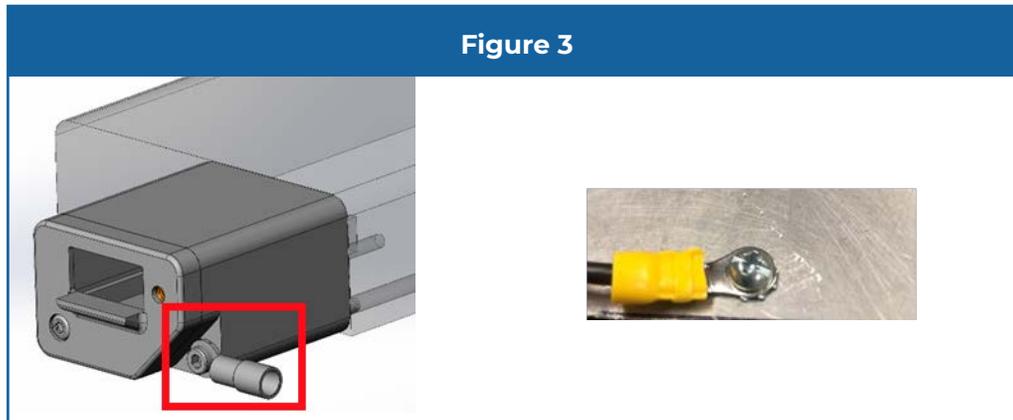
## 5. Installing the Ethernet Injector

1. Record the Serial Number and Password from the back of the Ethernet Injector along with a unique identifier for the vehicle. Save for your records.

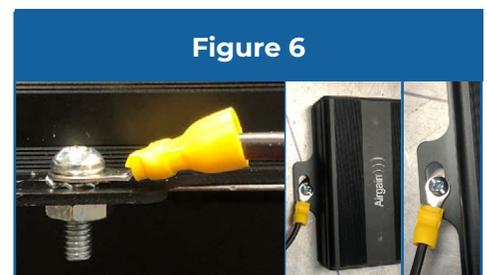
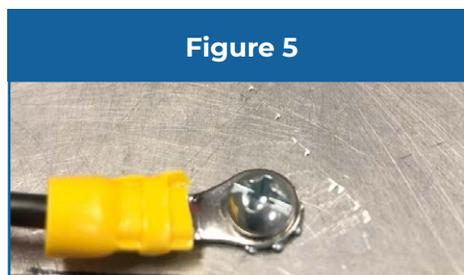
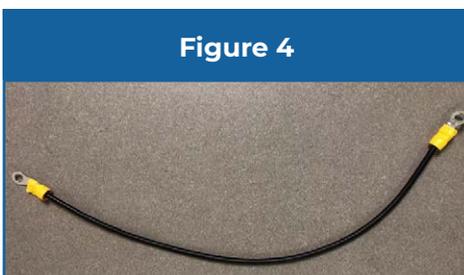
\*The serial number is required for software upgrades.

\*The password is required to access the configuration interface of the Ethernet Injector.

2. Locate a spot in the vehicle where the Ethernet Injector can be securely mounted. The Ethernet Injector is an ESD and EMI sensitive device. Placement is important for proper operation.
  - a. Do not mount on other electronics
  - b. Do not mount on carpet
  - c. Do not use velcro
3. Orient the Ethernet Injector so that the status LED can be viewed post installation
4. Follow either of the 2 recommended grounding methods
  - a. Method #1: Grounding via the supplied ground wire (**Figure 3**)
    1. Use the provided grounding wire or an equivalent with terminated connectors matching assembly requirements; 14AWG or thicker gauge and a max length of 2 feet. Confirm that the grounding wire is attached to the screw in the Signal Conditioner.
    2. If needed, add the grounding wire by removing the screw then sliding on the loop terminal
    3. Locate a grounding point inside the vehicle within reach of the grounding wire
    4. Secure the loose end of the grounding wire to the vehicle chassis
    5. Use the supplied screws to secure the Ethernet Injector through the mounting tabs



- b. Method #2: Grounding via the Ethernet Injector mounting tabs
1. Mount AC-EI on a sturdy surface. Preferably a metallic surface with good electrical connection to chassis ground.
  2. Use the provided grounding cable or an equivalent with terminated connectors matching assembly requirements; 14AWG or thicker gauge and a max length of 2 feet. **(Figure 4)**
  3. Locate a grounding point inside the vehicle within reach of the grounding wire
  4. Secure the loose end of the grounding wire to the vehicle chassis **(Figure 5)**
  5. Secure the Ethernet Injector to the grounded surface using stainless steel bolts passed through mounting tabs. Use a tooth locking washer to penetrate the chassis coating. **(Figure 6)**
    - a. Alternately, scuff the protective coating on a mounting tab on the Ethernet Injector using a metal file or heavy sandpaper. Avoid power tools due to the possibility of ESD.



5. Verify that the Ethernet Injector case is now grounded using a multimeter. Set the multimeter to the continuity test setting (**Figure 7**)
  - a. Set multimeter to continuity test
  - b. Unplug the 4-pin power cable from the Ethernet Injector
  - c. Follow directions for setting your specific multimeter ([e.g., How to Test for Continuity with a Digital Multimeter | Fluke](#))
  - d. Place one lead on
    1. Any of the Ethernet Injector chassis screws or
    2. The scuffed surface of the Ethernet Injector tab
  - e. Place the other lead on the vehicle chassis near the grounding point
  - f. If the test does not pass:
    1. Check the grounding connections at all points
    2. Ensure that the mounting fasteners are made from a conductive material
    3. Ensure that the connection point to the vehicle chassis is conductive (no rust, paint, etc)
    4. If grounding method #2 is used then ensure the mounting tab is sufficiently scuffed



6. Use an inline 5A slow blow fuse for over-current protection.
7. Connect the following (**Figure 8**):
  - a. Red wire to +12VDC that is always-on, even when the ignition is off
  - b. Black wire to ground (not directly to the vehicle battery)

- c. Orange wire to the vehicle ignition or accessory circuit. For applications where the device is always on (non-vehicular applications), connect the orange ignition sense wire to the red +12VDC wire.
- d. Never connect the black ground wire directly to the battery terminal

**Figure 8**

J1  
MOLEX 430250400

WIRING MAP			
PIN	COLOR	FUNCTION	TO
J1.1	RED	12VDC	LW1
J1.2	BLACK	GND	LW2
J1.3	ORANGE	IGN SENSE	LW3
J1.4	BLUE	USB INPUT	J2.1

Connections to a Cradlepoint IBR900 Router

Connections to a Sierra Wireless MC90 Router

Ethernet 5  
WAN

**8. Connect USB data cable and 2-pin power cable from the roof-top antenna-modem housing to the ethernet injector (Figure 9)**

**Figure 9**

View	Item	Description
Rear	Power In	Connects to vehicle power, ground, ignition sense, and router USB sleep sense
Rear	Ethernet LAN connector	Connects to the router WAN port
Front	Power out	Connects power to the modem housing
Front	Modem	Connects LTE data over USB to the modem
Front	Status indicator	Displays operational status
Front	Reset switch	Press to reset the ethernet injector

9. Ensure power has been terminated to vehicle power system as reviewed in step 7 of this installation guide before terminating 4 Pin power cable to ethernet injector
  - a. Route the cables securely through the vehicle with enough slack so that they will not be accidently tugged when placing and removing items in the vehicle trunk
10. Connect the Ethernet cable from the Ethernet Injector to either the vehicle router WAN port or directly to user equipment requiring Internet connectivity (e.g., laptop)
11. If your model of AirgainConnect includes Wi-Fi and GNSS then attach those coax cables to the appropriate vehicle router ports.
12. The multi-color LED on the ethernet injector indicates operational status. After at least 1 minute, the LED should turn solid green (**Figure 10**)

Figure 10		
State	Indicator Color	Description
Power off & sleeping	<b>Off</b>	<b>The LED is off</b> when the power is off, or the device is sleeping
Booting up	<b>Blue</b>	<b>Solid blue</b> while booting up
No SIM card	<b>Red</b>	<b>Solid red</b> after bootup when there is no valid SIM card
No signal	<b>Red/Green/Blue</b>	<b>Blinking red</b> after bootup when there is no cellular coverage signal, followed by blinking green, followed by reboot solid blue
No USB connection	<b>Red</b>	<b>Blinking red</b> after bootup when there is no connection to the antenna-modem
Connecting	<b>Green blink</b>	<b>Blinking green</b> while connecting to the cellular network
Connected	<b>Green</b>	<b>Solid green</b> when connected to the cellular network

## 6. Vehicle Router Configuration

AC-HPUE provides high performance LTE coverage compared to a conventional modem in the vehicle router and therefore should be the primary LTE connection. Below are two examples of how to set the router WAN port as the primary LTE connection.

### Cradlepoint IBR900/IBR1700/R1900 Configuration

- Select the Connection Manager tab
- Click on the Ethernet-WAN up/down arrow icon.
- Drag and drop the icon to the top to make Ethernet-WAN the primary mobile network connection.
- Click on the internal modem up/down arrow icon.
- Drag and drop the internal modem icon to just below the Ethernet-WAN to make it the backup mobile network connection.

The screenshot shows the 'CONNECTION MANAGER' interface. On the left is a navigation menu with 'CONNECTION MANAGER', 'STATUS', 'IDENTITIES', and 'NETWORKING'. The main area displays a table of network profiles:

	Profile Name	Conditions
	Ethernet-wan	type is Ethernet + uid is wan
	Ethernet WAN (VID: 1)	(Connected)
	Modem-b8ccc984	type is Modem + tech is LTE/3G
	Internal 600M (SIM1 - AT&T)	(Connecting)

- Check the WAN port setting and confirm it is set to DHCP. The router will get an IP address from the Ethernet Injector via DHCP. The IP address from the mobile network will be passed through to the router.

## Sierra Wireless MG90 Configuration

To configure the WAN port (Ethernet 5) a higher priority than the internal modem, do the following steps:

1.

Friendly Name	Device Type	Enabled	Actions
Panel Ethernet 5	Device Built-in Ethernet Port	<input checked="" type="checkbox"/>	<a href="#">Configure Policies</a> <a href="#">Networking Rules</a>
Sierra Wireless EM75XX @ MiniCard USB3 CA (Cellular A)	Sierra Wireless EM75XX	<input checked="" type="checkbox"/>	<a href="#">Configure Policies</a> <a href="#">Networking Rules</a>
WLE900VX 802.11AC @ MiniCard PCIe WiFi A	WLE900VX 802.11AC	<input checked="" type="checkbox"/>	<a href="#">Configure Policies</a> <a href="#">Networking Rules</a>

2.

Enabled	Policy	Actions
<input checked="" type="checkbox"/>	Dynamic Priority Policy	<a href="#">Configure</a>
<input type="checkbox"/>	Geographical Regions Policy	<a href="#">Configure</a>

3.

Enable this policy  
 Priority Score:   
 Enable Dynamic Priority  
 Link Down Penalty:   
 Recovery Period (Seconds):

[Save](#) [Cancel](#)

To configure the internal modem priority, do the following:

1.

Friendly Name	Device Type	Enabled	Actions
Panel Ethernet 5	Device Built-in Ethernet Port	<input checked="" type="checkbox"/>	<a href="#">Configure Policies</a> <a href="#">Networking Rules</a>
Sierra Wireless EM75XX @ MiniCard USB3 CA (Cellular A)	Sierra Wireless EM75XX	<input checked="" type="checkbox"/>	<a href="#">Configure Policies</a> <a href="#">Networking Rules</a>
WLE900VX 802.11AC @ MiniCard PCIe WiFi A	WLE900VX 802.11AC	<input checked="" type="checkbox"/>	<a href="#">Configure Policies</a> <a href="#">Networking Rules</a>

2.

Enabled	Policy	Actions
<input checked="" type="checkbox"/>	Dynamic Priority Policy	<a href="#">Configure</a>
<input type="checkbox"/>	Geographical Regions Policy	<a href="#">Configure</a>

3.

Enable this policy

Priority Score

Enable Dynamic Priority

Link Down Penalty

Recovery Period (Seconds)

[Save](#) [Cancel](#)

Check the link status. In this example, the WAN port and the internal modem are both up. The traffic will be routed over the WAN port only which is represented by it being highlighted at the top of the status list.

Self-Update:  Period:  Update Show Extended Status:

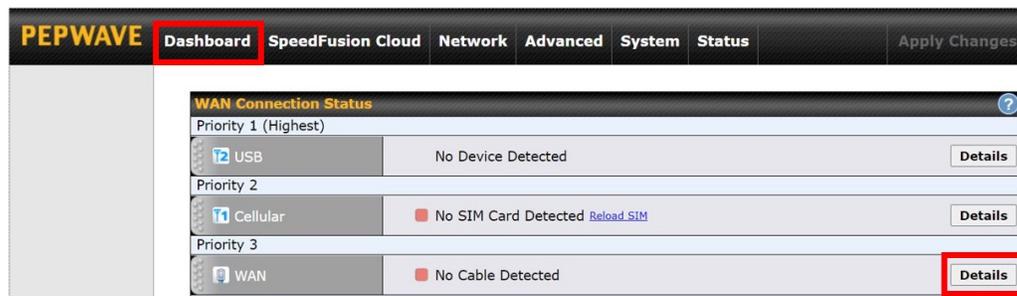
Status	Score	Friendly Name	Up Time	Type
UP	1200	Panel Ethernet 5	0d 00h 09m 33s	Ethernet
UP	1100	Sierra Wireless EM75XX @ MiniCard USB3 CA (Cellular A)	0d 00h 03m 16s	Cellular
DOWN	-	WLE900VX 802.11AC @ MiniCard PCIe WiFi A	Not Connected	WiFi

## 7. MTU Size

Most router WAN ports, regardless of interface type, are set to a maximum transmission unit (MTU) default size of 1500 bytes, which is larger than cellular networks can handle without fragmentation. Some payloads will fail in the IP network if fragmented. Others will suffer delay due to fragmentation in the network.

Always set the MTU size in the router to 1342 to avoid IP network performance issues. An example of where to set it on the Peplink BR1 ENT router is shown below.

On the Dashboard, click on the USB or WAN (the one to which the AC-HPUE is connected) Details button.



Then under Physical Interface Settings, select custom and set the value to 1342

## 8. Connect Directly to a Router via USB

The AC-HPUE antenna-modem can be connected directly to a router if the router supports USB modems. This allows the router's ethernet WAN port to be used for other purposes, such as a satellite uplink or fiber backhaul.

### Peplink Pepwave Max BR1 ENT

The Pepwave Max BR1 ENT and other Peplink routers that support USB modems can be directly connected to the AC-HPUE. However, the AC-HPUE still requires the Ethernet Injector to provide power conditioning to the HPUE modem when used in vehicle installations.

The Max BR1 ENT software version which supports the AC-HPUE modem via USB is 8.1.0s038 build 4965. This build also supports the HD4 model. The firmware can be found [here](#).

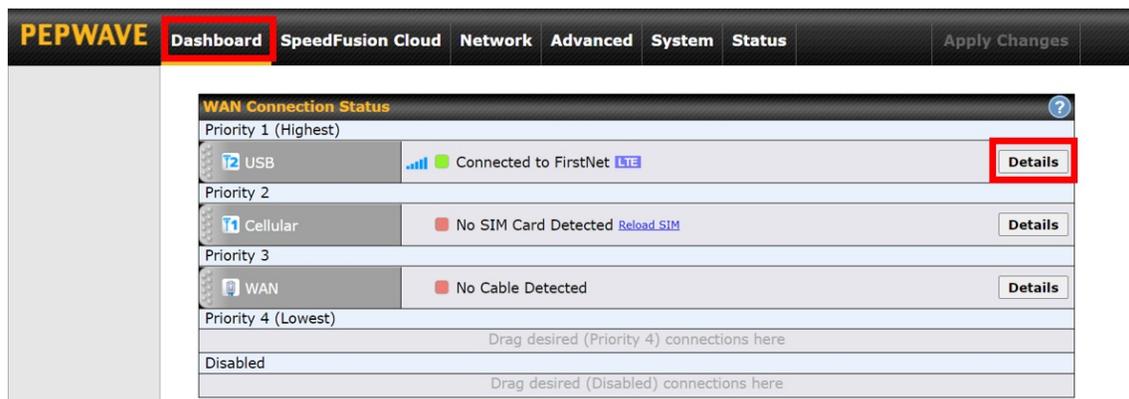
For other Pepwave router models, please see this post in the Peplink support forum to find or request the appropriate firmware version.

Follow the steps below to connect the router USB interface.

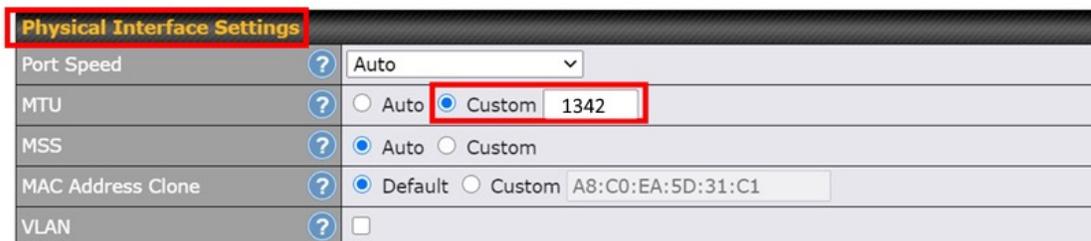
- While the **power source is off**, connect the antenna-modem power cable to the ethernet injector.
- Connect the ethernet injector power input connections as described in Section 5 above.
- Connect the antenna-modem USB cable to a USB port on the router

**\WARNING! The power to the AC-HPUE modem must be off when connecting or disconnecting the USB cable from any device.**

- Connect the antenna-modem USB cable to a USB port on the router.
- Turn on the power and ignition sense input to the ethernet injector. Allow the antenna-modem 60 seconds to boot up.
- Set the router's USB port MTU size to 1342.
- On the Dashboard, click on the USB or WAN (the one to which the AC-HPUE is connected) Details button.



- Enter the MTU size of 1342 in the Custom field.



## 9. Custom APN

For the end users that have an account with a custom APN, the APN can be configured by following the steps below..

- Under “Network” click on “Interfaces”

The screenshot shows the Airgain web interface. On the left is a dark blue sidebar with navigation links: Status, System, Network (selected), Interfaces, Diagnostics, and Logout. The main content area is titled 'Interfaces' and 'Global network options'. It displays two interface configurations:

- LAN (br-lan):** Protocol: Static address, Uptime: 0h 42m 54s, MAC: 34:BA:9A:7C:5B:3B, RX: 9.55 MB (16126 Pkts.), TX: 19.25 MB (25209 Pkts.), IPv4: 192.168.113.1/24, IPv6: 2600:380:fea2:935f::1/64, IPv6: fdb3:9dda:d0::1/60. Buttons: Restart, Stop, Edit, Delete.
- WWAN (wwan0):** Protocol: ModemManager, Uptime: 0h 42m 26s, RX: 18.11 MB (23270 Pkts.), TX: 9.34 MB (17802 Pkts.), IPv4: 10.237.223.202, IPv6: 2600:380:fea2:935f:396b:5b41:2bc9:4273, IPv6-PD: 2600:380:fea2:935f::. Buttons: Restart, Stop, Edit, Delete.

At the bottom of the interface, there is an 'Add new interface...' button and a 'Save & Apply' dropdown menu with 'Save' and 'Reset' options.

- In the “WWAN” section, click on “Edit”

- Enter your APN in the APN input box then click “Save”

- Click on “Save and Apply”
- You will see the WWAN section display a new IPv4 address. This is the static public IP address assigned by your carrier for your device.

## 10. Setting Bridge Mode

You may want to set the Ethernet Injector to bridge mode after configuring a custom APN. To do so, click on “System” in the left menu then “EI Configuration”

The screenshot displays the Airgain web interface. On the left, a dark blue sidebar contains a menu with the following items: Status, System (highlighted), Router Password, EI Configuration, Flash Firmware, Reboot, Network, and Logout. The main content area is white and shows the 'EI Configuration' page. At the top, it displays 'Cloud Status (11/11/2021, 1:28:06 PM)' and a 'Connected' status button. Below this, there are three main sections: 'EI Logging' with three dropdown menus (Logging Enabled, Push to Cloud, Show in Local UI), 'NAT or Bridge Mode' with a dropdown menu (EI Mode) and a text input field (LAN IP Address), and 'Vehicle Configuration' with a dropdown menu (Shutdown Period). The 'EI Mode' dropdown is currently set to 'NAT Mode'.

- Scroll down to find the “NAT or Bridge Modem” section
- Select “Bridge mode” from the dropdown menu
- Click “Save and Apply”

## 11. Static IP Address

If you use static IP addresses with a subnet, contact your carrier representative and provide the IMEI and ICCID information found on the modem status page. This information is also on the cable label of the AC-HPUE. They may also request your phone number associated with this SIM ICCID – that can be retrieved from your carrier account. The static IP address will be pushed over the air by your carrier to the modem and stored in the SIM card.

Log into your Ethernet Injector. Navigate to Network --> Interfaces --> WWAN --> Edit --> Enter custom or static IP APN in the APN field. Set any other authentication parameters if provided by carrier (SIM pin, PAP, CHAP, etc.)

## 12. Troubleshooting

### No connectivity

- Is the Ethernet Injector LED lit? If not then there is a power problem.
  - Verify the wiring to the 12v source
  - Power cables connected properly
  - If using an external power supply, verify that the power supply was provided by Airgain
  - If using a cigarette lighter power source, check the CLA fuse
  - If none of the above result in the EI powering on, contact Airgain support
- Is the Ethernet Injector LED flashing red?
  - If you are using power supply other than the one provided by Airgain, check that the it is capable of providing 12V and at least 3 amps.
  - Do not use the 4 pin power cable from a router
  - Check that the SIM card is activated by your carrier. Contact your carrier sales consultant..
  - Verify that the USB cables are plugged into the correct ports (needs pictures)
  - Is your FW version older than 2.3.x? If so contact Airgain support
  - Power cycling the EI may restore the connection
  - If none of the above resolve the issue, contact Airgain support
- Is the Ethernet Injector LED solid red?
  - Open user interface, check the modem status, look for ICCID. If unknown, then there is a SIM card detection problem.
    - Only use the SIM card supplied with the AGC. It is industrial rated and the only approved card to be used with AGC
    - Reseat the SIM card, power cycle the AGC setup, check user interface again to see if ICCID is populated under modem status.
    - Contact Airgain support

- Check that the USB cable coming from the antenna-modem properly inserted into the EI. Make sure the cable is screwed down.
- If none of the above resolve the issue, contact Airgain support
- Is the Ethernet Injector LED flashing green?
  - The Antenna-modem is in the process of connecting to the network and receiving an IP address. If the blinking green does turn into a solid green within 180 seconds, then power cycle the EI.
  - If none of the above resolve the issue, contact Airgain support
- Is the LED green but still no data?
  - Check Ethernet cable in EI and verify that the other end is plugged into the WAN port not LAN port of the router.
  - Check that the router has power
  - Check status page for traffic, if the LED is green and there is traffic shown on the user interface page then the AGC is working properly. Check the other devices in your setup.

If your problems persist, please contact Airgain Support: [support@airgain.com](mailto:support@airgain.com)

The AC-HPUE is covered by a limited warranty which can be found here:

<https://airgain.com/airgainconnect-support/>

## Compliance

### Statement of FCC Compliance

The AC-HPUE includes FCC ID: 2AUZ8AW12HP.

The Ethernet Injector FCC ID is 2AXLQAW12EI.

FEDERAL COMMUNICATION COMMISSION INTERFERENCE STATEMENT: 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 for 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.

**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 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.

#### IMPORTANT NOTE

**FCC 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 antenna and your body. Under no circumstances should the AC-EI ethernet injector or AC-HPUE modem

be used in any areas (a) where blasting is in progress, (b) where explosive atmospheres may be present, or (c) that are near (i) medical or life support equipment, or (ii) any equipment which may be susceptible to any form of radio interference. In such areas, the AC-HPUE modem and AC-EI ethernet injector **MUST BE POWERED OFF AT ALL TIMES** (since the modem could otherwise transmit signals that might interfere with such equipment). In addition, under no circumstances should the AC-HPUE modem and AC-EI be used in any aircraft, regardless of whether the aircraft is on the ground or in flight. In any aircraft, the AC-HPUE modem **MUST BE POWERED OFF AT ALL TIMES** (since the modem could otherwise transmit signals that might interfere with various onboard systems on such aircraft).

Due to the nature of wireless communications, the transmission and reception of data by the AW12 modem can never be guaranteed, and it is possible that data communicated or transmitted wirelessly may be delayed, intercepted, corrupted, contain errors, or totally lost.

Warning: This product is only to be installed by qualified personnel.

## Terms of Use and Privacy

### Applicable Terms

By activating or using your AC-HPUE, you agree to be bound by the Airgain Terms of Use, User License, and other Legal Policies, all as posted at [Airgain.com](https://airgain.com). Please read these documents carefully.

## Trademark, and Patent

The AirgainConnect AC-HPUE is covered by one or more patents and pending applications. For a list of the patents covering this product please visit:

<https://airgain.com/product-support/patents/> . Airgain reserves all rights in its patents covering the products not exhausted by its purchase by the purchaser and infringement

of its patent rights is prohibited.

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