

Smart-Reach AC Mobile Installation Guide

The Smart-Reach AC Mobile wireless bridge links the recorder to the wireless network.

Package Contents (typical)

The contents of a typical installation package are shown below. The actual contents of your installation package may vary.



Smart-Reach AC Mobile wireless bridge
(080-1043)



Red Ethernet patch cable
(085-1071)



Mobile antenna
(085-1054)

- Dual-band (2.4 GHz and 5 GHz)
- Antenna connector harness (3-wire)

Location Requirements

Find an appropriate location for the installation of the Smart-Reach AC Mobile and the antenna that meets these requirements:

- The antenna should be installed on the top of the bus, in a location that has best visibility to the access point antenna, typically in the middle of the roof on the front of the bus.
- The antenna must be installed within 6 feet of the Smart-Reach AC Mobile.
- The Smart-Reach AC Mobile must be installed in a dry location, minimum clearance is required, and the status lights must be visible (for details, see *Installing the Smart-Reach AC Mobile* on page 3).

Power Requirements

Important: The following procedures apply when connecting to a recorder that supports the Power over Ethernet (PoE) 802.3af standard (48V) such as the Seon HX/NX16. **Installation for a recorder without 802.3af PoE support requires an 802.3af PoE injector and a control relay (for details, please see the Appendix to this guide).**

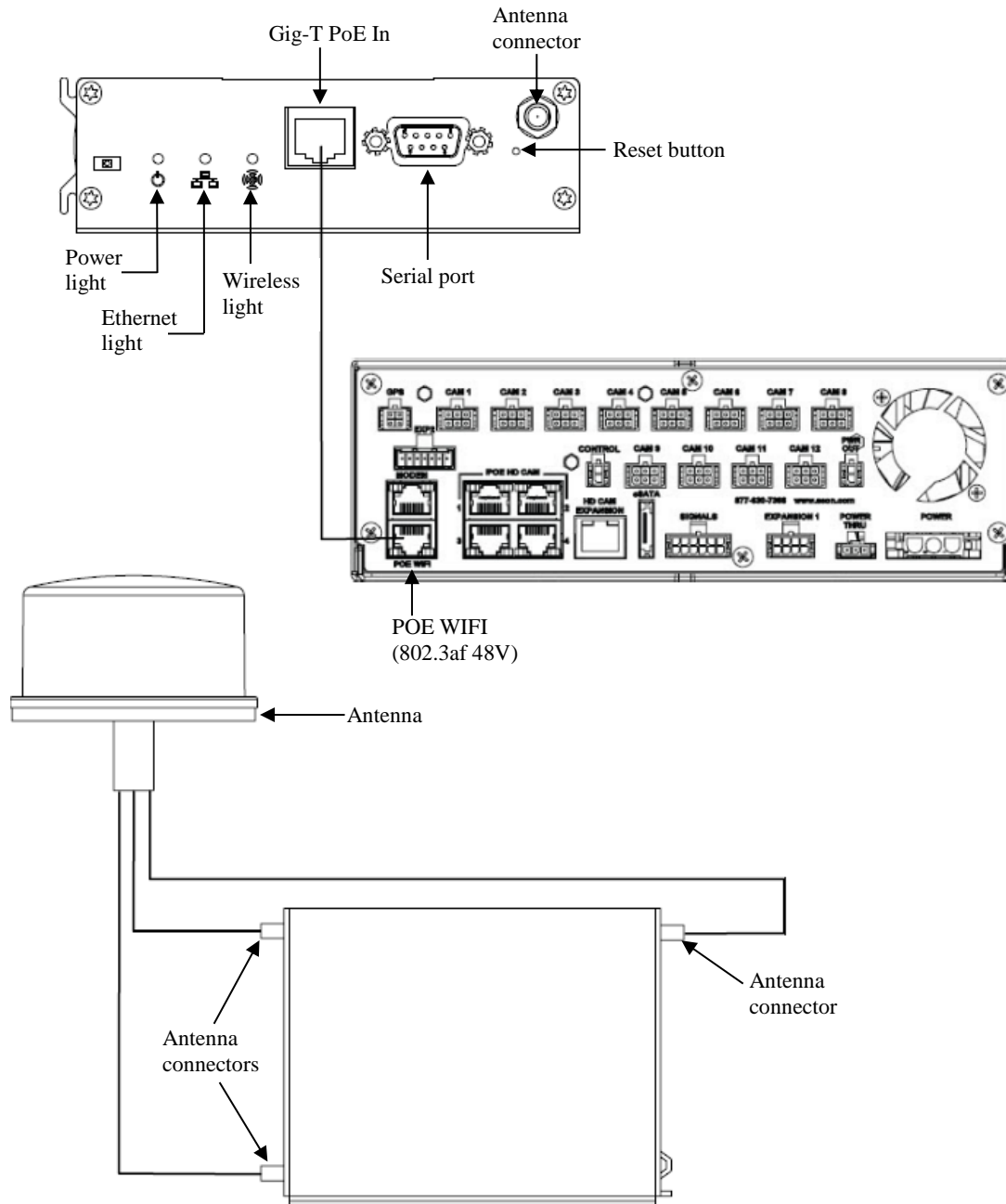
Antenna Requirements

Attaching the antenna to the vehicle requires one person outside and one inside. For more information, see the product documentation included with the supplied antenna:

- MP Antenna Dual Band 3×3 Antenna (085-1054)

Installation

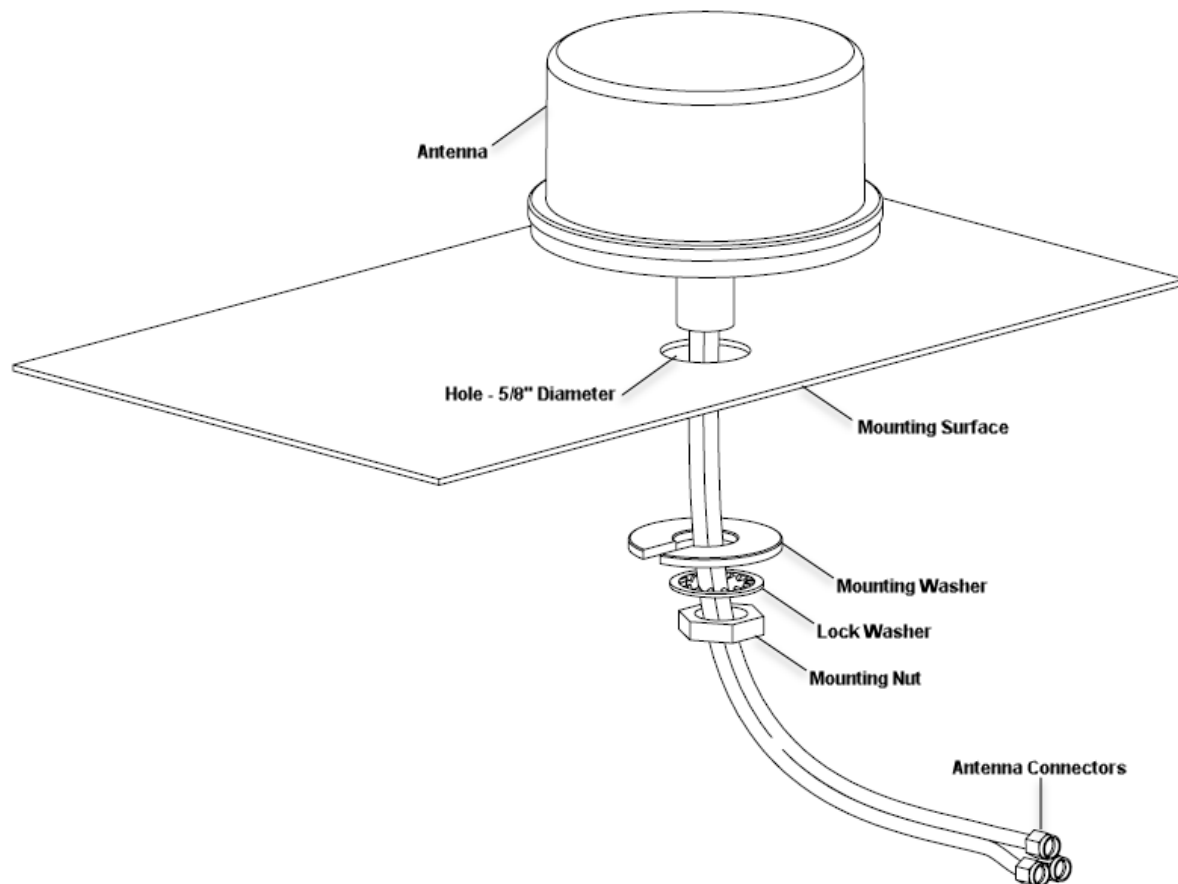
General Installation Diagram (for recorders with 802.3af 48V PoE support)



Installing the WLAN Antenna

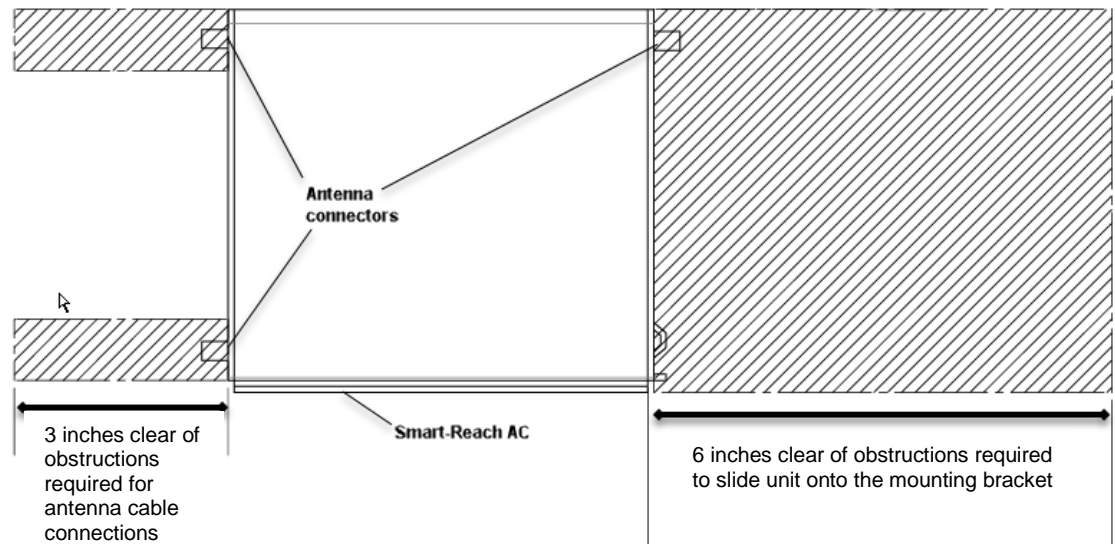
1. Drill a 3/4" hole on a flat surface of the vehicle.
2. Remove any drill burrs from the edge of the hole.
3. Refer to the following diagram for installation details:

Do not overtighten the nut: when tight, apply another half-turn (at most).

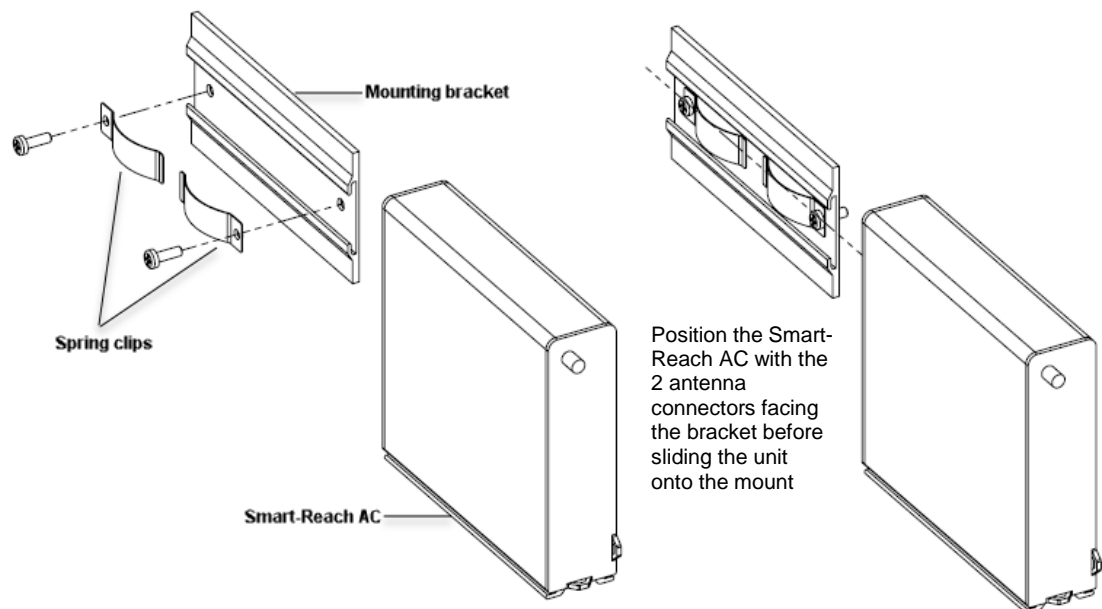


Installing the Smart-Reach AC Mobile

1. Find a mounting location and choose an orientation for the Smart Reach AC Mobile that meet the following requirements:
 - a. The status lights (Power, Wireless, and Ethernet) on the front of the Smart-Reach AC Mobile will be visible when the unit is mounted.
 - b. A minimum of 6 inches clearance is available to slide the Smart-Reach AC Mobile onto the bracket, and 3 inches clearance for the antenna cables/connectors:



2. Insert the two #8 x 3/4 screws through the spring clips and secure the bracket to the mounting surface:
 - a. The mounting bracket may be installed on either a vertical or horizontal surface. *Vertical mounting must adhere to the following diagram:*

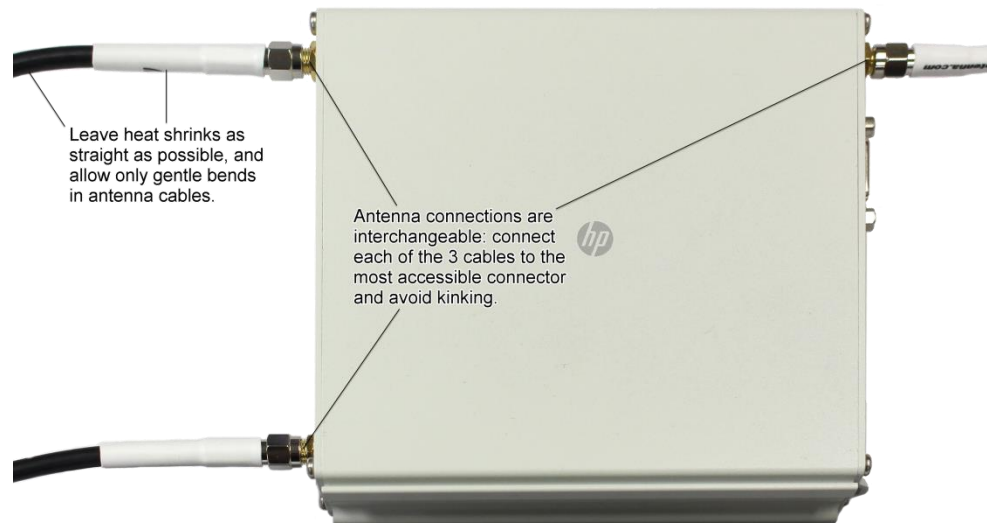


3. Slide the Smart-Reach AC Mobile onto the bracket until it snaps into place, held by the spring clips.
4. Follow the General Installation Diagram on page 2 to make connections:
 - a. Connect the red Ethernet patch cable from the DVRs **PoE WiFi** output to the Smart-Reach AC Mobile's **Gig-T PoE In** (PoE) port. **Important: if the recorder does not support the Power over Ethernet (PoE) 802.3af standard (48V), do not perform step 4(a) – instead, follow the instructions in the Appendix to this document.**

- b. Connect the three antenna cables to the antenna connectors on the Smart-Reach AC:



Do not kink antenna cables or allow stress on the connectors.
Loop excess cable (do not “dogbone”)






Configuring the System

The Smart-Reach AC Mobile comes pre-configured for your network. The following DVR settings must be configured properly:

1. The network settings must be configured as instructed by Seon.
2. The power off delay time should be set long enough to allow video to be downloaded after the bus ignition is turned off (typically two hours).




Powering On the System

1. Park the vehicle in a location that is line-of-sight from the base antenna.
2. Turn on the vehicle ignition.
 - When the DVR is powered on, the Power light  on the Smart-Reach AC Mobile should flash for a short period of time, then stay lit.
 - During startup, the Ethernet light  flashes, indicating a proper Ethernet connection with the DVR.
 - After the DVR starts up, the Ethernet light on the DVR turns on. If the Ethernet light doesn't flash or turn on, check the Ethernet connection between the DVR and the Smart-Reach AC Mobile.
 - If the Smart-Reach AC Base is already installed, the Wireless light  flashes occasionally, indicating a connection to the wireless network. For more information, see the Smart-Reach AC Base *Antenna Connection Guide* (700-1083).

Testing the Wireless Network

The Smart-Reach AC Mobile is pre-configured to operate with your wireless network. If the bridge fails to connect, ensure the Wi-Fi infrastructure is up-and-running. For details on troubleshooting the wireless network, visit the Seon Community at community.seon.com.

Status lights on the Smart Reach AC Mobile provide the following information:

Light	State	Description
Power 	On	Smart-Reach AC Mobile is fully operational.
	Flashing	Smart-Reach AC Mobile is starting up. If the power light continues to flash after several minutes, the firmware has failed to load. Reset or power cycle the Smart-Reach AC Mobile. If this condition persists, contact Seon Customer Service at service@seon.com .
	Off	Smart-Reach AC Mobile has no power.
Ethernet 	On	Illuminates for a short time when the link is established.
	Flashing	Ethernet port is transmitting or receiving data.
	Off	Ethernet port is not connected or there is no activity.
Wireless 	Blinking rapidly	Smart-Reach AC Mobile is searching for an access point.
	Flashing	Wireless port is transmitting or receiving data.

FCC Information to the User

This equipment has been tested and found to comply with the limits for a digital device (FCC ID RTPMRLBB1301). 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. If not installed and used in accordance with the instructions, it may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment causes 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 the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experience radio/TV technician for help.

Warranty

For full warranty information, go to <http://www.seon.com/documents/Seon-Warranty.pdf>.

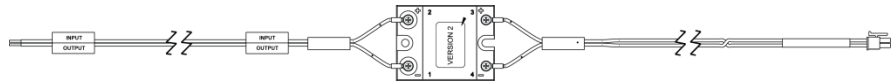
Appendix – Installing the PoE Injector with Control Relay

This Appendix provides the procedure for installing the Smart Reach AC Mobile bridge with recorders that do not support the Power over Ethernet (PoE) 802.3af standard (48V). To power the bridge, these installations require an 802.3af PoE injector and a control relay.

The installation package (typical) should include the PoE Injector and harness:



PoE Injector
(085-1059)



Harness with Relay
(060-1038)

In addition, a **3A Fuse Kit** (020-1047) and **3-ft (.9m) Ethernet Cable** (085-0082) are supplied.

Location Requirements

In addition to the Smart Reach AC Mobile requirements listed on the first page of this guide:

- Find the appropriate location for the installation of the PoE Injector and the Relay within the range of the cables provided and in line with the recorder and device locations (see the Installation Diagram on the next page).
- Do not install the POE Injector in a location where the unit is exposed to moisture or unintended handling.
- Route the wiring and cables away from sharp edges that might damage the cable insulation. Avoid sharp bends in cables.

Mount the PoE Injector

- Use 4 x No. 8 screws appropriate for the mounting surface to secure the device. Allow clearance for cables.

Mount the Relay

- Use 2 x No. 8 screws appropriate for the mounting surface. Note: the Control harness (2x1 Microfit from the relay to the recorder's **Control/CTRL** port) is only 2ft (.6m).

Wire the System

1. Connect the 25-ft. (7.6m) red Ethernet patch cable (085-1071) from the PoE Injector's **DATA IN** port to an available Ethernet/LAN port on the recorder.
2. Connect the 3-ft. (.9m) grey Ethernet patch cable (085-0082) from the PoE Injector's **DATA + PoE OUT** port to the Smart Reach AC Bridge's **Gig-T PoE In** port.
3. Connect the 2x1 Microfit on the Relay harness to the recorder's **Control/CTRL** port.
4. Wire the PoE Injector's **VIN-** terminal to the vehicle's battery negative/ground.
5. Wire the Relay power harness **OUTPUT** wire to the PoE Injector's **VIN+** terminal.

6. Wire the Relay power harness **INPUT** wire to the 3A fuse/holder.
7. Wire the other side of the fuse/holder to an unswitched power source (9 to 36 VDC, capable of supplying an additional 3A).

Installation Diagram with PoE Injector and Relay

