contigo

Installation Guide
Contigo 6150

Commercial Vehicle Productivity and Security

The Contigo 6150 is a high-performance beacon designed for commercial productivity and security. It is ideally suited to installations in delivery and service fleets as well as public safety, mass transportation, utility, and off-road or construction vehicles.

Security features include unauthorized vehicle movement and relocation alerts, as well as a means of connecting optional auxiliary sensors anywhere within the vehicle.

For additional installation information please refer to the Installation Best Practices document available through the Resource Center in your Dealer Portal.

Kit Contents

› GPS Beacon device with SIM
› Combined GPS/GSM antenna
› Wiring harness

Tools and Supplies Required

› Wire cutters, wire strippers
› Voltmeter (multimeter)
› Soldering iron, solder
› Electrical tape
› Plastic cable ties
› Screw drivers, mounting screws
› Wrenches, sockets
› Caulking/Sealant for external mounting
› Drill for through-hole mounting

1. Install Antenna

The Contigo 6150 comes with a combined GPS/GSM antenna module. It is to be installed in a location where the GPS performance will be optimum. There is a choice of three antenna types (see below) which are available in either adhesive mount (for internal applications), magnetic or screw/post mount (for external applications).

Determine the best location for the GPS Antenna

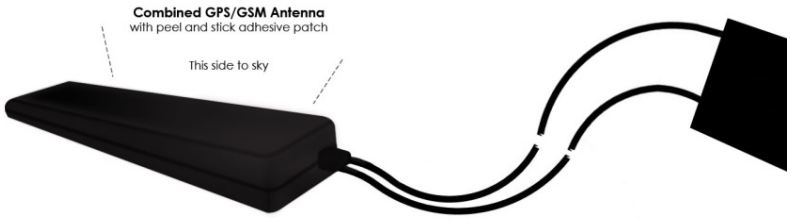
The top side of the antenna module should have a clear signal path to as much of the sky as possible. Supported antenna types include:

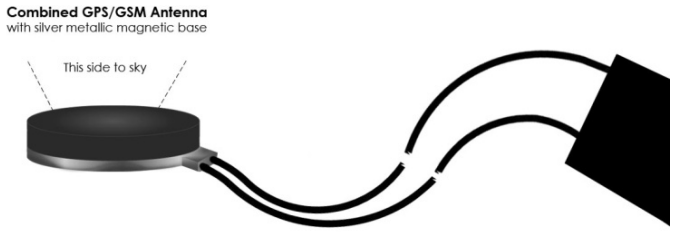
- ARC VLPA™ Wedge Mobile Antenna
  - Size: 4.5 inch (114mm) length; 1.4 in (69mm) width; 0.63 in (13mm) depth;
  - Black plastic housing with peel-and-stick adhesive patch
- AU-5S
  - Size: 2.54 in (64.5mm) Diameter; 0.54 in (13.6mm) depth;
  - Black plastic with silver magnetic metal base.
- AU-5C
  - Size: 2.54 in (64.5mm) Diameter; 0.77 in (19.5mm) depth (excluding screw post)
  - Black plastic with silver metal base and rubber weather-seal gasket
  - Screw post mount for drill-through applications

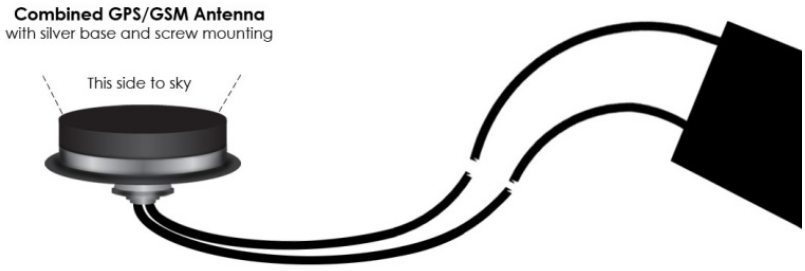
contigo

- If the installation is not required to be covert, an ideal location is underneath the front windshield glass.
- For covert installations, an ideal location is under the dashboard, as high and close to the front windshield as possible (see diagrams).
- If installing in a car, the antenna can usually be mounted under the rear window or in the trunk, under the rear deck, as close to the rear window as possible.
- For best performance, the black plastic housing of the antenna should face the sky through the area of least signal blockage.

- Signals will penetrate upholstery, carpet, plastic dashboards, etc., but not metal panels or brackets.
- Signals will penetrate window glass but not metallic tinted windows or painted edges of windows.
- Radio antenna or defrost wires embedded in glass may degrade signals.







2. Beacon Installation Position

- Determine beacon installation position but do not fasten it in place until all wiring is complete.
- Determine the best location for the beacon – a strong flat surface that can be drilled to accommodate the mounting holes is ideal. Any spot where the beacon can be fastened in place with plastic cable ties is suitable.
- Under a seat is often a suitable location for beacon installation. Be sure it is not close to any heat sources or areas that experience moisture or vibration. The beacon is not waterproof or weatherproof and should always be installed in the passenger compartment of the vehicle.
- Visibility of the indicator LEDs will be useful for testing and troubleshooting.

3. Connect Power & Ignition Sense

The 6150 power harness has one wire bundle containing 6 wires. The bundle contains the 9-30V constant Power (red), Ground (black), and Ignition Sense (yellow) wires. The input/output (I/O) wires are as follows: Input 1 (gray), Input 2 (purple) and Output (Blue).

Notes:

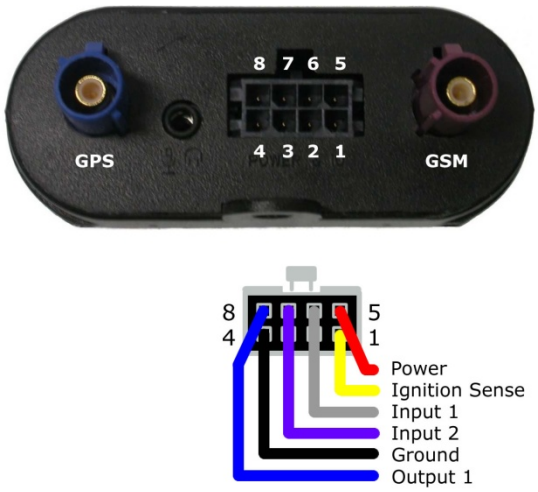
- Connect the wiring harness to all the vehicle's connection points before attaching the harness to the beacon.
- If wiring harness wires need to be extended, use the same gauge wire and solder the extension wire on, then insulate with heat shrink tubing or electrical tape.
- Ensure that no wires are routed near heat sources.

Power Connection Instructions

- Connect the black (ground) wire to battery negative or the vehicle chassis – this wire MUST be connected first, before the power or ignition sense wires. Be sure the grounding screw is not painted or coated with an insulating material.
- With the vehicle's ignition turned off, use a voltmeter to assist in finding a suitable, constant 9-30V power connection point – directly to the vehicle's battery may be best.

Ignition Sense Connection

- The ignition sense connection is mandatory. **Failure to install the ignition sense correctly will result in erroneous data being reported from the beacon.**
- Find a source of 9-30V that is switched on and off with the ignition key. This connection should produce 9-30V when the vehicle ignition is ON and 0 Volts when the vehicle ignition is OFF. Connect the yellow (ignition sense) wire to this point. Voltage transitions must occur instantly. Gradual or stepped transitions from one voltage to another may not be detected.
- Ensure that any wires in the wiring harness that are not to be connected do not come in contact with power, ground, or any other voltage. Insulate them with electrical tape.



Function	Pin #	Wire Color	Specification
Ground	4	Black	0V
9-30V Power	5	Red	+9VDC to +30VDC
Ignition Sense	1	Yellow	+9VDC to +30VDC
Aux Input 1 (optional)	6	Gray	Opened: 9-30VDC or open circuit Closed: Grounded
Aux Input 2 (optional)	7	Purple	Opened: 9-30VDC or open circuit Closed: Grounded
Output 1 (optional)	8	Blue	Open Collector Sinks 250mA to 1.5A max

Important Notices

The 6150 is designated to operate from 9 to 30 Volts DC. The user is responsible for ensuring the voltage supplied to the 6150 remains in this voltage range to include transient voltage spikes and load dump voltages. Failure to comply may damage the 6150.

Failure to install the ignition sense correctly will result in erroneous data being reported from the beacon. This may result in false or incorrect reporting of vehicle starts, stops, ignition on and off,

4. Auxiliary Input and Output

Auxiliary Input

- The auxiliary input can be used to detect and report the opening and/or closing of a circuit. An auxiliary input circuit is considered to be closed when either the Input 1 (grey wire) or Input 2 (purple wire) is connected to a vehicle ground source. The auxiliary input circuit is considered to be open when either Input 1 or Input 2 is connected to an open circuit or a 9-30V power source. When using auxiliary inputs to measure the state of vehicle circuits, it is recommended that you use a relay to control the input signal to the device.

Output

- Output can be used to remotely control vehicle functions such as door lock/unlock and ignition disable/enable.
- There is one output available. This output can be configured via the web portal to interactively toggle an external circuit between open and closed states, or to pulse the circuit to the closed state for either one or five seconds, then automatically open the circuit. To close an external circuit, the 6150 output acts as a ground source (or what is referred to as a current sink) to the external circuit. To open an external circuit, the 6150 output will be open. Since the 6150 output can draw a maximum current of 1.5A, it is recommended that you use the output to control a relay and use the relay to manage the external circuit.

---

5. Connect and Mount Beacon

- Connect the two antenna cables to the beacon using the corresponding coaxial connectors.
- Attach the wiring harness to the beacon and ensure that the retaining clip snaps in place.
- Affix the beacon securely to the vehicle using the mounting holes found in the tabs at either end of the beacon.
- If a suitable panel for affixing the supplied mounting plate is not available, fastening the beacon to a bracket or wire bundle with plastic cable ties is also adequate.
- Secure any loose or extra lengths of wire.
- Ensure that the SIM latch covering the SIM socket is in the locked position

6. Test

› For the first test, the vehicle should be outdoors in an open area where GPS signals can be readily received.

› Watch the indicator LED on the beacon for the first few minutes after all power and antennas have been connected. It indicates the following status:

LED	Functions
PWR GPS	Steady: Unit is powered on. Off: Unit is powered off or in Standby mode.
USR1	Steady: Connected to GSM/GPRS network. Flashing: Attempting to connect to GSM/GPRS network. Off: Cannot connect to GSM/GPRS network.
USR2	Steady: GPS acquired. Off: Attempting to acquire GPS.

NOTE

It may take 15 to 20 minutes, usually much less, for the wireless network and the GPS receiver to synchronize the first time the beacon is powered up.

› Perform an end-to-end system test by locating the beacon via the user portal