Geoforce AT4-ATK-3W-LTEM-ATT Equipment Tracker Installation Guide

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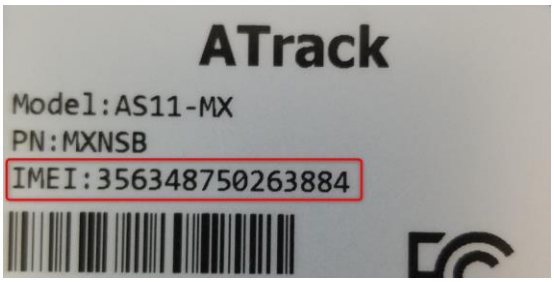
Step 1: Prepare for the Installation

Be sure you have received all the components you need and review complete installation guide before performing the installation
This must include:

1. *The Geoforce Standard Equipment Tracker (AT4) device.*
2. *1.2 Meter 8- Pin Power & I/O Cable (9V~32V DC input)*
3. *Two fuses holders and two 3 AMP fuses*
4. *Consider device mounting options and accessories required*

Step 2: Record the Asset and AT4 Serial Numbers



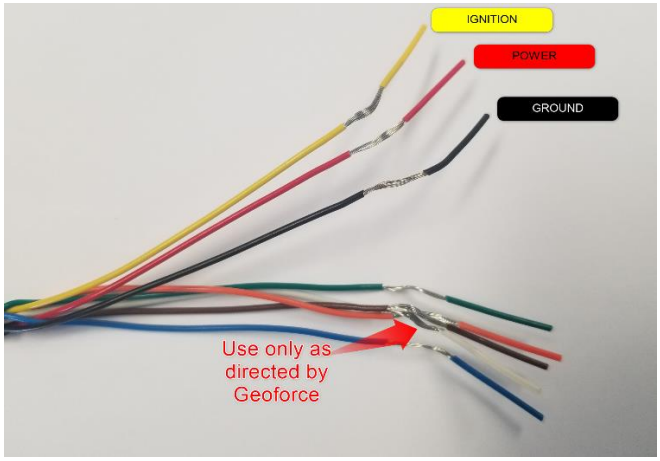
1. Record AT4's IMEI serial number (IMEI) located on the label on the bottom side of the device.
2. Record the asset serial number (on which the AT4 was installed).
3. Send this information to your Geoforce account administrator.

Step 3: Plan the Installation

Before drilling any holes or running any wires, decide where the AT4 will be located. Select a location that allows for a **clear, unobstructed view of the sky** and ensure the AT4 is not installed in a location that will exceed its environmental specifications as this will void the warranty. The AT4 should be accessible post-installation as it may be necessary to view the LEDs for troubleshooting.

Verify Power, Ground and Ignition

Use a multi-meter to check each power source (power, ground and ignition) to ensure that proper signaling exists. Employ standard commercial wiring methods such as solder and heat-shrink tubing, add-A-line Fuse taps to create a permanent installation. Wire nuts are **not** approved.



Yellow Wire

This ignition input wire **MUST** be connected to the asset's ignition circuit or another switch circuit, such that power to the Yellow wire is only available when the ignition is on. This wire **MUST** be fuse protected to not allow more than 3 amps.

Red Wire

This power input wire must be connected to the asset battery or a constant (un-switched) 9V ~ 32V DC input. This wire **MUST** be fuse protected to not allow more than 3 amps.

Black Wire

This ground wire must be connected to battery negative or chassis ground.

Other Wires

All Wires come prepared for installation, To ensure no electrical contact or short occurs you will need to **CUT** the **Orange**, **Green**, **White** and **Brown** bare wire leads before powering up the unit

Unit Placement

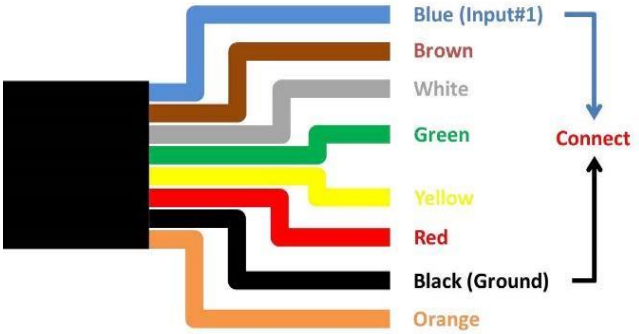
The Geoforce AT4 uses an IP68-rated sealed enclosure with Internal GPS and cellular antennas. To optimize the quality of the GPS location service, the unit should have a **clear view of the sky.** Ideally, nothing should block the unit beyond 5

degrees above the horizon. Directly on top of the asset is the best location. The AT4 is not designed for covert installations and cannot be mounted inside a metal housing or engine compartment. Doing so will severely impair the AT4's performance. The wiring harness should be used at the length provided. **DO NOT CUT OR SHORTEN IT.** Instead, coil any excess cable taking care not to crimp or flatten the cable as this will negatively affect the AT4's performance.

Mounting Guidelines

The AT4 **MUST be rigidly affixed** to a flat, solid surface on the asset. Avoid attaching it to plastic panels. Attach the AT4 to the solid body of the asset using screws or bolts, 3M VHB adhesive tape or cable ties. If you anticipate that personnel may interfere with the AT4 after installation, use a fastener such as tamper resistant Torx or hex bolts and locking nuts to secure the AT4. Also consider protecting the wiring harness by routing it through a chassis member or covering it with a sheet metal channel. Using rubber grommets, MS21919 clamps, or a sealing gland to buffer the wiring harness when it passes through steel components is strongly recommended to prevent short circuits or damage to the harness.

Step 4: Installation



1. Make sure the asset is outside with a **clear view of the sky.**
2. Securely connect the 8- Pin wire harness connector to the the AT4
3. Activate internal battery by connecting the **Blue wire/ Input #1 to the Black wire/ Ground for 3 seconds,** and the LEDs will start blinking, once this occurs **CUT** the Bare wire lead on the **Blue** Wire to prevent future short circuit
4. Solder and heat shrink the fuse holder with 3 Amp Fuse to the **Yellow wire** and connect the fuse holder with 3 Amp Fuse to the Ignition source
5. Connect the **Black wire** from power harness to the asset's ground source
6. Solder and heat shrink the fuse holder to the **Red wire** and connect the fuse holder the asset's power supply
7. Turn the ignition source **ON.**
8. Ensure the green and red LEDs are Steady. Green LED may remain flashing when installing indoors
9. **Wait 5 minutes** as the AT4 connects to the wireless network, provisions itself and obtains its configuration script.
10. Turn the asset ignition source **OFF.**

With power applied and ignition selected on, the status LEDs will show activity. Ideally, both the GPS (green) and Comm (Red) LEDs should be steady. If the **Green** LED is flashing the device is unable to get a GPS LOCK, If **Red** LED continues to Flash for more than 8 mins after powering up, this is an indicator the device is unable to connect to the network, please contact Geoforce Support

Internal Battery Notes:

Your AT4 arrives with a partially charged internal battery. The asset's power system must be able to deliver 9-35 VDC and requires a minimum voltage of 9v for four hours to completely charge the internal backup battery. If the asset's power system fails or the AT4 becomes disconnected before a full charge is reached, published battery life will not be realized. If operating the asset for this length of time is not possible due to fuel costs or other reasons, charge the unit with a bench power supply prior to installation.

When the AT4's backup battery is under 2.7V for 30 seconds, it will turn it off to prevent over-draining the backup battery and remain off until external power is restored or back up battery charged over 3V.

Suggested Mounting Accessories:

Sealing Gland
McMaster–Carr
P/N: 69915K54

Grommets, High-Temp, ¼" ID
McMaster-Carr
P/N: Various

Cable Clamps, ¼"
Aircraft Spruce & Specialty
P/N: MS21919DG4

Screws, Self-drilling, 10-16 x ¾"
McMaster--Carr
P/N: 90106A216