



Satellite Tracking and Monitoring Solutions



Commercial Installation Guide

J1939

Contact **gplink** at +1.252.504.5113 at least **24 hours**
prior to scheduled installation for activation of units.
(48 hours on weekends)

www.gplink.com

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I. Introduction and Purpose

The purpose of this document is to guide a successful installation of the **gplink**[®] vessel monitoring system. The **gplink** vessel monitoring system protects your vessel while underway or at the dock by monitoring engines and diagnostic codes - all while tracking the precise location of a boat anywhere in the world. **gplink** utilizes dual-band technology with GSM communications and optional Iridium satellite systems for location tracking, monitoring, emergency notification and communication. The success of the **gplink** vessel monitoring system relies on proper installation of the Monitoring Tracking Modules (MTM) and antennas.

I.1 Safety

As with any electronic installation, all electrical safety precautions should be observed while working around open panels. Proper caution should be used to prevent DC systems from an arc or short, causing an open flame or fire. Ensure AC power is isolated from open DC panels, and when working around batteries, proper personal skin and eye protection should be worn. In addition, extreme care should be exercised when making any penetrations through bulkheads, walls, etc. so as not to damage exterior surfaces, fuel tanks, wiring, etc. that may be on the other side of the wall.

I.2 Tools Required Parts

1.2.1 Phillips head screwdriver and drill for mounting MTMs.

1.2.2 Cable ties and/or adel clamps for cable management.

1.2.3 Deutsch Plugs, Y-connectors and crimpers for tapping into the J1939 dataline.

I.3 Replacement Parts

If replacement parts are required for any reason please contact **gplink** for assistance in getting replacements.



2. System Overview

2.1 *gplink* Monitoring Tracking Modules (MTM)

The *gplink* MTMs collect information from the engine control module (ECM), GPS and any other attached sensors and then decodes it before transmitting via satellite or GSM/cell to *gplink*. Once received the data generates alerts and can be viewed via the vessels secured *gplink* website.



2.1.1 *Master and Secondary*

For twin engine configurations the MTMs are utilized in a primary and secondary pair. The primary will have the antenna connections and be plugged into the port engine and the secondary will monitor the starboard with a jumper connection between the two. In vessels that have more than two engines the second primary MTM is installed as a complete install including all applicable antennas, harnesses and a second secondary in the case of a four engine install. There is no connection between the two primary MTMs and all instructions should be followed treating it as a separate install.

2.2 Antennas

Depending on the application, several different antenna options are available.

2.2.1 *GSM/GPS “Pancake” antenna*

This is the basic module used for tracking and data uplink. It is designed for use in vessels where hull design and materials allow for an interior mounted antenna.

2.2.2 *Iridium satellite “Pancake” antenna*

The Iridium antenna adds uplink capability when operating outside of GSM range such as offshore or remote locations. Like the pancake antenna, it is also designed for use in vessels where hull design and materials allow for an interior mounted antenna.

2.2.3 *External dual-band “Dome” antenna*

This is the external version of the pancake antenna for external mounting.

2.2.4 *External tri-band “Dome” antenna*

The tri-band antenna adds Iridium capability to the dual-band dome providing all three antennas in one externally mountable unit.

Dome antenna



Pancake antenna



2.3 Parts included in basic kit

Part #	Description	Quantity
MTM (Port) GWD018	Port Monitoring Tracking Module	1
MTM (Starboard) SLV001	Starboard Monitoring Tracking Module	1
HN0771	Port Four-Wire Harness	1
HN0775	Starboard Two-Wire Harness	1
HN0770	Port J19 Three-Wire Harness	1
HN0776	Starboard J19 Three-Wire Harness	1
HN0774	Four-Wire Plug Assembly Interconnector, Primary to Secondary	1

Antenna Options

PPI041 I-ANT-GSMIRDGPS-EXT-DOME	External Tri-band Antenna Iridium/GSM/GPS	1
PPI051 I-ANT-GSMGPS-EXT-DOME	External Tri-band Antenna GSM/GPS	1
AN0037	Pancake Antenna GSM/GPS	1
AN0048	Pancake Antenna Iridium Satellite	1



3. Installing *gplink*

The following describes the basics of a standard installation. Keep in mind that every vessel is different and some variations on these instructions may need to be implemented depending on the situation and hardware present. It is the responsibility of the installing tech to make sure that proper steps are taken to ensure a safe and functional install. If there are any questions, please contact **gplink** at +1.252.504.5113.

3.1 Location

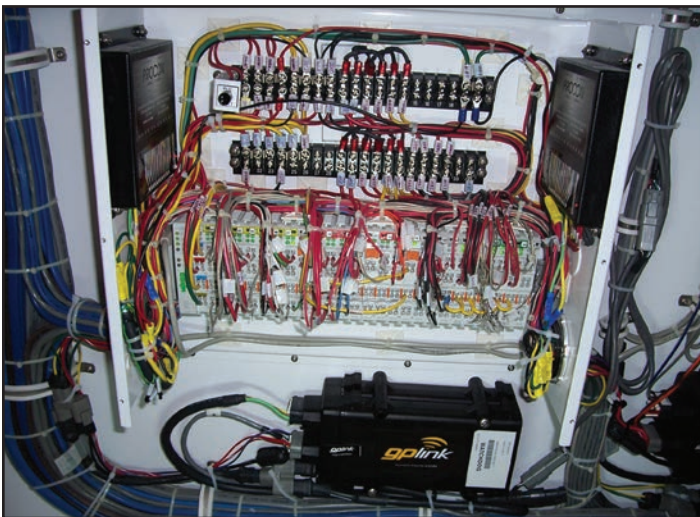
Locate a suitable mounting location for the MTMs and antennas. The MTMs will need easy access to the J1939 dataline and power from each respective engine and should be securely mounted to a bulkhead or other hard point. Antenna mounting will depend on the type of antenna being used but all will need to have cable runs back to the primary MTM. Location of **gplink** MTM's should also allow easy access for removal of end connector plugs after installation for diagnostic purposes.

3.1.1 Loose fit

It is recommended to perform a loose fit of the MTMs and antennas as well as performing a signal test with the included blue 2-inch gauge before any drilling or mounting.

3.2 Power

The system is powered via an uninterrupted 12/24VDC source. **(This means unswitched power source installed straight to battery if necessary with the fuse that is provided).** Each MTM must receive power from the same source as it's respective engine (not a backup system.) This includes the grounding. **If the system is not installed by these instructions, gplink will not be liable for any damage to other vessel electronics.** Before installation make sure that the selected power source will not be turned off when the vessel is at the dock and has a 5A fuse. Once a proper source is located, run a power line to the MTMs mounting location and secure it with proper cable management equipment.



3.3 Connecting to J1939

The J1939 dataline consists of several Y-connectors strung together with a resistor cap on both ends of the chain. Each J1939 device will use one Y-connector. To connect the MTM into the dataline a Y-connector will need to be added near the MTM mounting location and the MTM's J1939 harness into the Y-connector. If there are any questions or concerns about how to tap into the J1939 datalines contact the engine manufacture or **gplink** for assistance. After connecting the **gplink** J1939 harness to the dataline, run the cable to the MTM mounting locating and secure it with proper cable management equipment.



3.4 Antennas

The internal and external antennas each have different installation requirements.

3.4.1 Internal antennas

Internal antennas must be mounted in a horizontal position with the logo facing up. Try to find a mounting location with the least amount of material between the top of the antenna and open sky. Keep in mind that fiberglass doesn't usually block a signal, but materials such as carbon fiber, steel, aluminum, copper, etc. will. In addition, try to find a location that is as far as possible from other equipment or large cable runs. After mounting the antennas run the cables to the MTM primary mounting location and secure them with proper cable management equipment.

3.4.2 External antennas

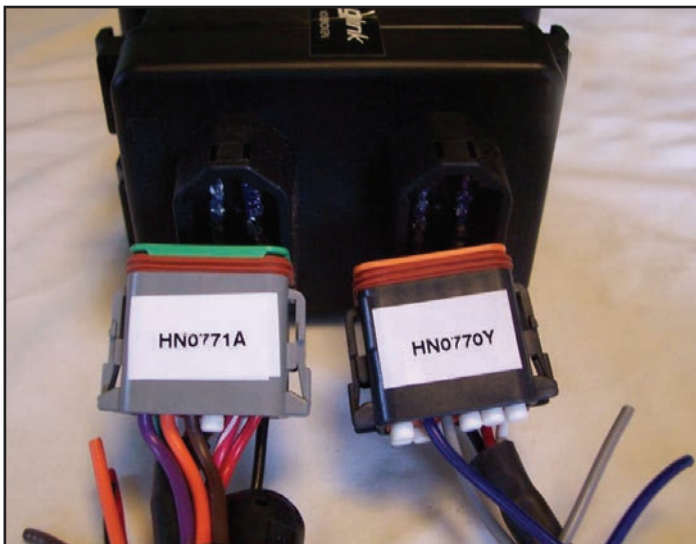
Due to variations in installations **gplink** does not include a mount for the dome antennas. A mounting pole or bracket that matches the vessel's configuration and decor can be purchased from a local marine supply store. Be sure to follow the proper installation procedure for the selected mount ensuring that any through hull cable runs are properly sealed. After mounting the antennas, run the cables to the MTM mounting location and secure them with proper cable management equipment.

3.5 Connecting and mounting the MTMs

Before mounting the MTMs, it is recommended to connect all the cables to ensure proper reach.

3.5.1 Connecting antenna cables to primary MTM

The SMA ports on the top of the primary MTM are labeled J1, J2 and J3. Connect the GPS cable (blue or labeled GPS) to J1. Connect the GSM cable (yellow or labeled phone) to J2. Connect the satellite cable (white or labeled SAT) to J3. On installations without an Iridium satellite connection the J3 port will be capped.



3.5.2 Connecting J1939 harness to MTM

Plug the J1939 harness into the B port on the bottom of the MTM. This plug is keyed, so make sure it is inserted in the proper orientation and that both latches click into place.

3.5.3 Connecting power to the MTM

The power leads for the MTM are connected into the power harness. Connect these leads to the power cables using provided Posi-Lock Connectors or other suitable connection method. Plug the power harness into the A port on the bottom of the MTM. This plug is also keyed so make sure it is inserted in the proper orientation and that both latches click into place.

3.5.4 Connecting the jumper cable between the MTMs

The 4-pin connector originating from the power harness is the communication line between the primary and secondary MTMs as well as a diagnostic port. Connect each end of the supplied jumper cable to the 4-pin plug originating from the power harness on both the primary and secondary MTMs. Secure the jumper cable with proper cable management equipment in such a manner that the 4-pin plugs can be accessed in the future for diagnostic purposes with the included 2-inch blue gauge. The blue gauge should be left on the vessel and secured near the MTMs.

3.5.5 Mount the MTM

Once all cables are in place, securely mount the MTM using the supplied screws or with other suitable mounting hardware.

3.6 Initial data uplink and testing

Contact **gplink** at +1.252.504.5113 and a vessel monitor will walk you through the testing of the install. After the initial uplink the firmware will be checked and updated if needed. Depending on the speed of the uplink this may take some time. After all updates are in place the vessel monitor may ask for the engines to be started to verify that good data is being sent to **gplink**.

4. **gplink** Concierge & Technical Support

Phone: +1.252.504.5113

Email: concierge@gplink.com

There are a number of other **gplink** resources available to installers, dealers & owners.

Other **gplink** Resources

- Installation Guide (this document)
- Terms Of Service - www.gplink.com/terms-conditions/
- Privacy Policy - www.gplink.com
- Demonstration Video - www.gplink.com
- Operator's Manual - www.gplink.com
- Instructional Videos - www.gplink.com
- Help Library - help.gplink.com

4.1 Transferable Limited Warranty

During the first twenty four (24) months from date of original retail purchase (with a continuous subscription/activation status) if a **gplink** system that fails due to unit defect, the unit will be replaced at no charge to the owner, excluding the labor of uninstalling the failed unit and reinstallation of the replacement unit.

To submit a warranty claim, contact the **gplink** Service Center at +1.252.504.5113 or warranty@gplink.com. Our Concierge will review the problem with you in detail. If no solution is found, you will be given an authorization number to return the product, postage paid. Package the part(s) appropriately to prevent damage while in transit. Provide your name, address, daytime telephone number, sales receipt, and a brief description of the problem to:

gplink

1500 Sensation Weigh
Beaufort, NC 28516
U.S.A.

Removal, reinstallation expenses, or any damage to the **gplink** system resulting from natural disasters, misuse, neglect, accident, misapplication, improper installation, unauthorized repair or alteration are not covered by this warranty. Products returned to **gplink** that are not covered under this warranty will be repaired or replaced at our service rates or returned to you as-is, at your option. **gplink** expressly disclaims any liability for incidental or consequential damage caused by product defects. Some states do not allow the exclusion or limitation of consequential damages, so the above may not apply to you. The Warranty herein is lieu of any other expressed warranty of merchantability or fitness or any other obligation on the part of **gplink** or the retailer. All implied warranties are limited to the initial period, as stated above. Some states do not allow limitation on how long an implied warranty lasts, so the above limitation may not apply to you. This warranty gives you specific legal rights, and you also have other rights, which may vary from state to state.