



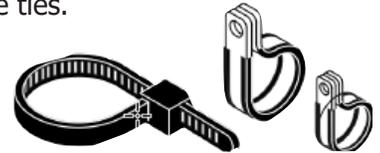
Installation Guide

STEP 1 - Determine Mounting Location

- **Proximity** - The GV628W Tracker Unit should be mounted near an external power source, or in the case of temperature tracking, within the reefer fairing.
- **View of the sky** - Since the GPS satellites beam location information to the device, it needs to have a view of the sky. The GPS signal can penetrate glass, plastic, and wood, but not metal. Here are some suggested locations:
 - > BEST - Behind a plastic barrier and or glass, shielded from the weather and hidden from view.
 - > GOOD - Mounted in an open area with direct access to the sky.
 - > FAIR - Hidden with an indirect view of the sky.
- **OPTIONAL Temperature Probe(s)** - A single probe will usually be located near the return air duct of the refrigeration system. The silver tip of the temperature probe is the sensor. It should be exposed directly to the air being monitored. Do not cover the sensor, or mount the sensor directly to an exterior wall. Excess wire should be coiled (DO NOT cut). Cables should be secured along the run with clamps or cable ties.

STEP 2 - Terminate Electrical Connections

We recommend soldering all electrical connections. If that is not possible, appropriate sized wire tap connectors (posi-tap.com) like the ones pictured here should be used. Do not jam wires between fuse and fuse holder.



- **Primary Device Wires** - There are five wires that need to be connected to an external power source - **RED, RED/GREEN, 2 BLACK, WHITE**.

- > **RED** is Main power which goes to a constant power connection with a voltage between +12V and +24V. (Blue wire on trailers, constant battery circuits on other applications)
- > **RED/GREEN** is backup power which goes to a constant power connection with a voltage between +12V and +24V. (Trailer Clearance or Parking Lights wire on Trailers, a different constant battery circuit in other applications). *If no alternate power is available, connect to the same source as RED Main wire.*
- > Two **BLACK** wires go to chassis ground [Battery(-)] using a ring connector or are tapped into an existing ground wire.
- > **WHITE** is for system run detection. For Reefers, connect to a circuit that is active only when the refrigeration system is in the RUN position. For Other Vehicles connect to a circuit that is on when the engine is running (Key ON). For non-powered Trailers, connect to a circuit that receives power when the tow vehicle is connected. This circuit should be between +12V and +24V when active, and +0V (or Open) when inactive (see the diagram on the next page).

Color	Description	Comment	Pin #
Red	PWR 1	Primary power input, 8-32V DC	1
Red/Grn	PWR 2	Secondary power input, 8-32V DC	2
Black	GND 1	Primary Ground (to vehicle's frame)	3
Black	GND 2	Secondary Ground	4
White	Ignition	Ignition input, positive trigger	5
Green	ADIN 1	Analog Input 0-32V	6
Red/White	3V Output	External Acc'y PWR (250mA Max)	7
Black/White	Ground	External Acc'y Ground	8
Gray	1-Wire	Temperature Sensor Input	9
NC	NC		10
Blue	I/O 1	Negative trigger input for normal use or open drain output 150mA maximum drive current	11
Yellow	I/O 2		12
Brown	I/O 3		13
Orange	I/O 4		14
Purple	EX RX	UART RXD TTL	15
Purple/White	EX TX	UART TXD TTL	16
Pink	RXD	UART RXD TTL	17
White/Black	TXD	UART TXD TTL	18

Description of GV628W Power Cable

Proper connection of the RED, BLACK, and WHITE wires is essential for the device to operate



GV628W

GPS Tracker
temperature

Installation Guide

STEP 3 - Test and Secure Device

As soon as the GV628W has been connected to power, the LED lights located in the white strip on the side of the device will begin to blink. The Power LED will appear first, followed by the GSM LED, and last, the GPS LED. If the device is being powered up for the first time, the GPS LED may take a number of minutes to appear. When testing, make sure the device is outside, away from buildings and trees with the Label pointing toward the sky or horizon. After the GPS LED displays a solid light, turn the refrigeration system ON. Check that the unit is reporting Temperature and RUN/Off properly by going to the nimbleGPS tracking website and running a Temperature History report. The default unit name will correspond to the last 5 or 6 digits of the IMEI displayed on the barcode label of the device. See the table below to determine the status of the GPS device and to help troubleshoot if it is not reporting.

Ign State	GPS	Notes	Source V	Duty Status	Probe Status	Probe A	Probe B	MDMID
█	OK	🔧	14.0	█	█	38.3	38.3	867162020040580
█	OK	🔧	14.7	█	█	38.3	37.4	867162020040580
█	OK	🔧	14.4	█	█	35.2	33.4	867162020040580

Once it is confirmed that the device is reporting properly, securely mount it in the location chosen in Step One with the label facing the sky or Open Outside Space. There are several recommended mounting methods. The best method is to screw or bolt it to a suitable surface. Another method is to use high quality nylon zip ties around the device within the grooves. Finally, you can place a piece of double-sided tape in the middle of the bottom of the device and dab silicone glue or 3M Marine 5200 adhesive to the four bottom corners of the device. The double-sided tape will serve to hold the device in place while the glue dries.

CAUTION - The use of excessive amounts of adhesive may make it impossible to remove the device from its mounting location. If the device has been glued to a substrate and needs to be removed later on, use small gage piano wire and a back and forth sawing motion to cut through the glue between the device and substrate.

LED	Device Status	LED Status
GSM	Device is searching CELL network	Fast Flashing ¹
	Device has registered to CELL network	Slow Flashing ²
	Device entered into sleep mode	OFF
	SIM card needs PIN code to unlock	ON
GPS	GPS chip is powered off	OFF
	GPS sends no data or data format error	Slow Flashing
	GPS chip is searching GPS info	Fast Flashing
	GPS chip has gotten GPS info	ON
PWR	No external power and internal battery voltage is lower than 3.46v	OFF
	No external power and internal battery voltage is below 3.6V	Slow Flashing
	External power in and internal battery is charging	Fast Flashing
	External power in and internal battery is fully charged	ON

The third option is to secure the device with a screw or bolt through the mounting tab at the top of the device. A zip tie can be placed around the bottom section for additional security.

If you have any questions or problems, call 877-872-2521, press option 2.

¹Fast flashing for CELL is about 100ms ON/800ms OFF. GPS & PWR is about 100ms ON/100ms OFF.
²Slow flashing for CELL is about 100ms ON/2sec OFF. GPS & PWR is about 600ms ON/600ms OFF.