

# Trimble Gateway Alpha Install Guide



# Install Overview



- The Trimble Gateway device includes internal Cellular, WiFi, and GPS antennas.
  - Mount the module in or on the dash with a clear view of the sky unobstructed by metals, with the top pointing to the sky.
  - Attach the module securely using the screws provided, strong two-sided tape, or plastic ties.
  - Be sure the module is clear of driver activities and potential environmental hazards.
- Connect to the vehicle Power and Engine Data using the cables and adapters noted in the following pages.
  - The main cable includes an RP1226 connector for most late-model vehicles.
  - Adapters are available to connect at the diagnostic port if needed, as well as a 2-pin cable for in-dash installations.
- The optional white Ignition lead is available if needed, but most vehicles will boot normally using the J1939 Engine Data signal.
- The display will power from the three-pin Power/Ignition/Ground connector, while all Display communications take place over WiFi.

# Vehicle-Specific Install Guides

- The page below includes install guides and videos covering most Makes and Models.
- No Trimble Gateway-specific guides exist at this time, but the guides can be used as references, as the vehicle connection points are the same.
  - See the PCG tab for diagnostic port and RP1226 installs.
  - See the PMG tab for 2-pin installs.
- <https://transportation.trimble.com/installations/>

# Additional Install Notes

- Trimble Gateway supports power inputs from 12 or 24 volt vehicles (6-36 volt functional range).
- Trimble Gateway includes internal antennas, but an external antenna is also available if needed.
  - Part H-055-0519
  - The module will automatically detect an external antenna and switch to it.
- Trimble Gateway will automatically adjust to the baud rate of the vehicle J1939, whether 250k or 500k.

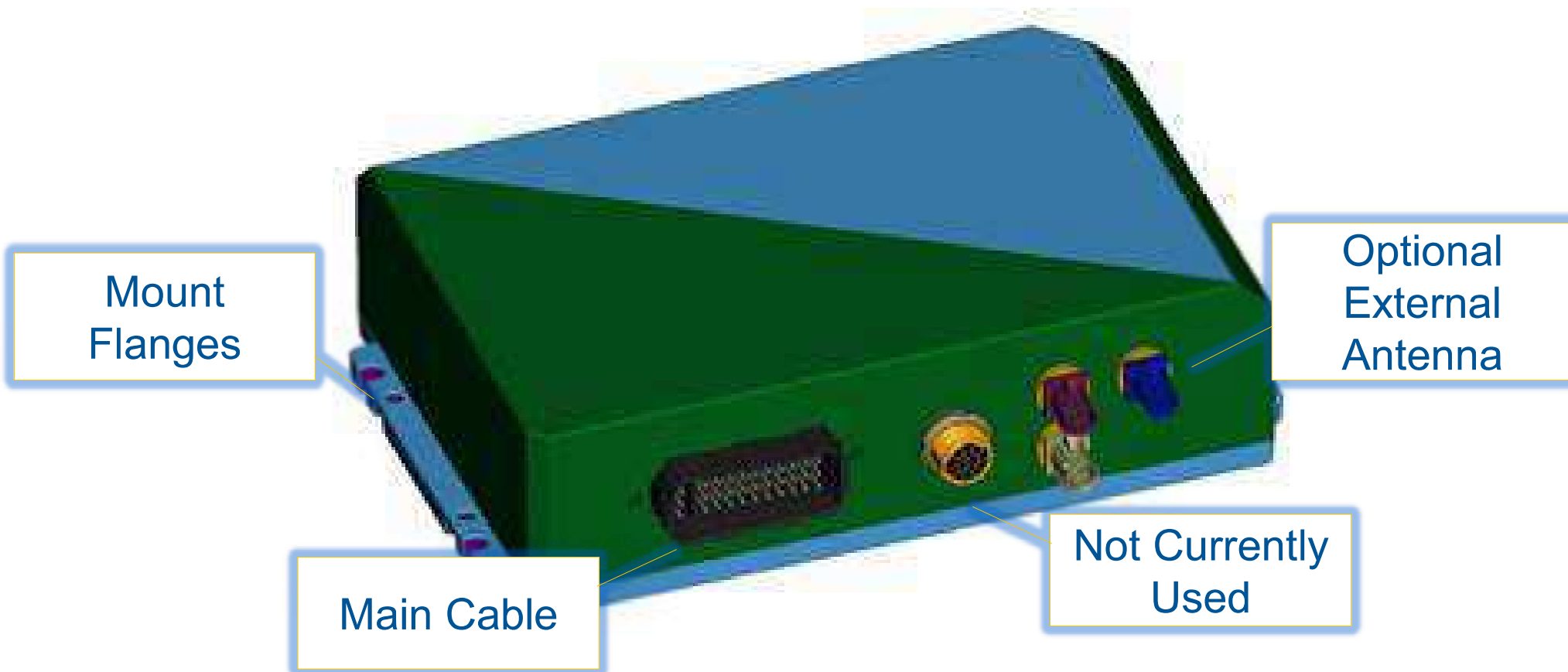
# Standard Kit M-010-0728

- Trimble Gateway Module E-006-0638
- L-016-0728 Trimble Gateway RP1226 Main Cable
  - Trimble Gateway 44-Pin Head.
  - RP1226 for Power/Engine Data Connection to newer trucks or adapters for older vehicles.
  - Power/Ignition/Ground Connector for Displays.
  - Two RS232 Connections.
  - Two discrete inputs.
- H-048-0526 #8 x  $\frac{3}{4}$ " Mounting Screws

# Adapters and Accessories

- M-010-0741 9-Pin Kit
  - L-016-0737 – RP1226 to 9-Pin Adapter
  - Connection to any approved 9-Pin Diagnostic Port
- M-010-0743 Volvo/Mack Kit
  - L-016-0737 – RP1226 to Volvo/Mack OBD-style Adapter
  - Connection to Volvo/Mack diagnostic port on pre-2018 Volvo/Mack trucks with Volvo/Mack engine
- L-016-0727 Trimble Gateway/PMG Adapter
  - Connects a Trimble Gateway device to an existing PMG Main Cable, replacing the PMG
- L-016-0734 Trimble Gateway/PMG Dual Adapter
  - A “Y” connector to plug both a Trimble Gateway and a PMG into an existing PMG Main Cable

# Trimble Gateway Box



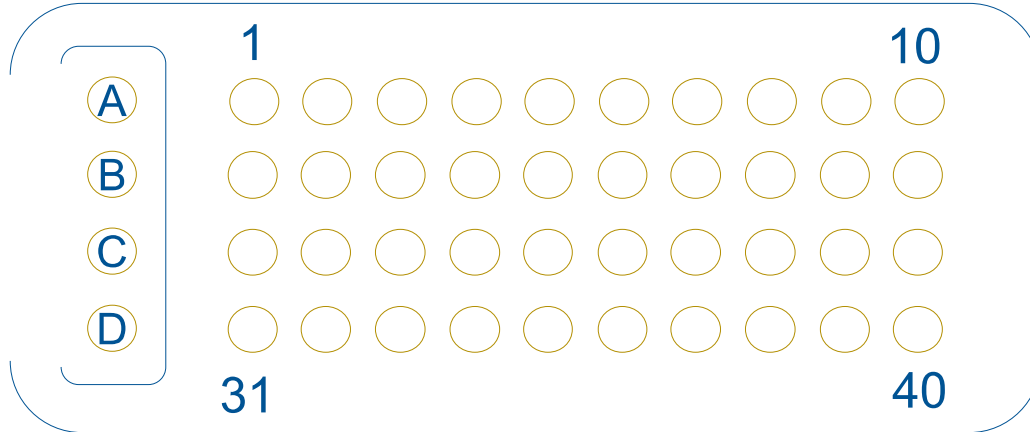
# LED Indicators



- LED1
  - Solid Red = ON and Charging
  - Off = Powered Off
- LED2
  - Solid Green = Cell Connected
  - Off = No Cell Connection
- LED3
  - Rapid Blue Flash = Engine Data Connected
  - Off = No Engine Data
- LED4
  - Solid Amber = GPS Fixed
  - Blinking Amber = No GPS Fix



# Main Cable Pin-out



Pin	
A and B	Input Power
C and D	Ground
31	Ignition Sense
6	J1708 High
7	J1708 Low
36	J1939 High
35	J1939 Low

## **Federal Communication Commission Interference Statement**

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. 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 and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause 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 of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

### **FCC Caution:**

- Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.
- This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

**This device meets all the other requirements specified in Part 15E, Section 15.407 of the FCC Rules.**

### **Radiation Exposure Statement:**

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

## Industry Canada statement

This device complies with ISED's licence-exempt RSSs. Operation is subject to the following two conditions:

- 1) this device may not cause interference, and
- 2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

- 1) l'appareil ne doit pas produire de brouillage, et
- 2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

### **CAN ICES-3(B)/ NMB-3(B)**

This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter, except tested built-in radios.

Cet appareil et son antenne ne doivent pas être situés ou fonctionner en conjonction avec une autre antenne ou un autre émetteur, exception faites des radios intégrées qui ont été testées.

The County Code Selection feature is disabled for products marketed in the US/ Canada.

La fonction de sélection de l'indicatif du pays est désactivée pour les produits commercialisés aux États-Unis et au Canada.

### **Radiation Exposure Statement:**

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

### **Déclaration d'exposition aux radiations:**

Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20cm de distance entre la source de rayonnement et votre corps.

**Caution:**

The local network device user guide should include specific instructions on the above restrictions, including:

- i. the device for operation in the band 5150–5250MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems;
- ii. for devices with detachable antenna(s), the maximum antenna gain permitted for devices in the bands 5250-5350MHz and 5470-5725MHz shall be such that the equipment still complies with the e.i.r.p. limit
- iii. for devices with detachable antenna(s), the maximum antenna gain permitted for devices in the band 5725-5850MHz shall be such that the equipment still complies with the e.i.r.p. limits as appropriate;

**Avertissement:**

Le guide d'utilisation des dispositifs pour réseaux locaux doit inclure des instructions précises sur les restrictions susmentionnées, notamment :

- i. les dispositifs fonctionnant dans la bande de 5150 à 5250MHz sont réservés uniquement pour une utilisation à l'intérieur afin de réduire les risques de brouillage préjudiciable aux systèmes de satellites mobiles utilisant les mêmes canaux
- ii. pour les dispositifs munis d'antennes amovibles, le gain maximal d'antenne permis pour les dispositifs utilisant les bandes de 5250 à 5350MHz et de 5470 à 5725MHz doit être conforme à la limite de la p.i.r.e;
- iii. pour les dispositifs munis d'antennes amovibles, le gain maximal d'antenne permis (pour les dispositifs utilisant la bande de 5725 à 5850MHz) doit être conforme à la limite de la p.i.r.e. spécifiée, selon le cas.

This radio transmitter (IC: 1756A-MA1BA1TE1 / Model: Trimble Gateway-MA1, Trimble Gateway-BA1, Trimble Gateway-TE1) has been approved by ISED to operate with the antenna type listed below with maximum permissible gain indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

Le présent émetteur radio (IC: 1756A-MA1BA1TE1 / Model: Trimble Gateway-MA1, Trimble Gateway-BA1, Trimble Gateway-TE1) a été approuvé par ISED pour fonctionner avec les types d'antenne énumérés ci-dessous et ayant un gain admissible maximal. Les types d'antenne non inclus dans cette liste, et dont le gain est supérieur au gain maximal indiqué, sont strictement interdits pour l'exploitation de l'émetteur.

### **Antenna Table**

<b>WLAN Antenna</b>						
Brand	Model	Antenna Type	Antenna Gain (dBi)			
			BT/WLAN 2.4 GHz	WLAN 5.15~5.35 GHz	WLAN 5.47~5.725 GHz	WLAN 5.725~5.85 GHz
TAOGLAS	FXP826.07.0120C	FPC Antenna	0.75	1.22	3.58	3.52

<b>WWAN Antenna</b>								
Ant.	Brand	Model	Antenna Type	Antenna Gain (dBi)				Remark
				WDM A II/ LTE 2	WCDMA IV/ LTE 4	WCDMA V	LTE 12	
1	TAOGLAS	PCS.06.A	SMD Antenna	3.58	3.82	0.53	-0.03	Internal, Main Antenna
2	TAOGLAS	PCS.06.B	SMD Antenna	3.81	4.04	0.75	0.06	Internal, Aux. Antenna
3	TAOGLAS	MA240.LBI.001	Adhesive Mount Combination Antenna	2.51	1.93	0.94	1.6	External, Main Antenna
4	TAOGLAS	MA240.LBI.001	Adhesive Mount Combination Antenna	1.77	1.2	1	1.2	External, Aux. Antenna
5	PACCAR	PP407031	Exterior-mount Antenna	3	3	3	3	External, Main Antenna