

# Vehicle IoT Gateway

## VG34/VG34-EU DATASHEET



### OVERVIEW

The VG34 Vehicle IoT Gateway is an advanced sensor platform for fleets, providing operators with real-time location and analytics, sensor data, WiFi hotspot connectivity, and ELD-ready hours of service logging.

Designed for simple and hidden installation in a wide variety of vehicles, the VG34 offers a broad array of business-relevant fleet management features in an integrated, easy-to-use solution.

### HIGHLIGHTS

- High-precision GPS with real-time visibility
- Extensible platform works with Samsara wireless sensors, camera modules, Driver ID, and WiFi devices
- Includes high-speed 4G LTE WiFi hotspot
- Compatible with light, medium, and heavy duty vehicles
- Part of a complete hardware + software solution to enhance efficiency, safety, customer service, and compliance

## Data Sources

<b>CAN Bus / Diagnostics Interface</b>	<b>Light/Medium Vehicles</b> J1962 / OBD-II  <b>Heavy Vehicles</b> J1939 (type 1 and 2) J1708 (non-diagnostic, power only) FMS
<b>Location</b>	Advanced positioning system simultaneously reads from multiple independent satellite systems including GPS and GLONASS global navigation satellite systems. Internal antenna for discreet installation. Optional external antenna available for non-standard mounting configurations. Industry leading -162 dBm sensitivity with 1 second time-to-fix (hot start).
<b>Wireless Sensors</b>	Compatible with EM-series wireless temperature monitors, Driver ID tokens, and IM-series industrial input modules. Automatic discovery (easy installation).
<b>Auxiliary Inputs</b>	2 × digital inputs monitor specialized equipment (e.g. snow plow up/down, power takeoff on/off, etc.). Maximum voltage 30V, Vil 1.2V, Vih 2V.  1 × digital output, reserved for future use via software update.

## Wireless Connectivity

<b>Cellular Data</b>	4G LTE cellular connectivity, with 3G fallback where LTE coverage is unavailable.  VG34: LTE B2/4/5/12, 3G B2/5 VG34-EU: LTE B1/3/7/8/20, 3G B1/8, 2G B3/8
<b>WiFi Hotspot</b>	Integrated WiFi hotspot (802.11g/n, 2.4Ghz) provides high-speed WiFi data to in-cab tablets, smartphones, laptops, and other WiFi-compatible devices.
<b>Data Security</b>	All Internet connectivity secured via SSL with 256-bit AES encryption (military-grade).
<b>Offline Storage</b>	Built-in flash memory logs data when Internet connectivity is unavailable.

## Wireless Connectivity (continued)

<b>Secure Communication</b>	All Internet connectivity secured via SSL with 256-bit AES encryption (military-grade).
<b>Secure Connections</b>	2.4GHz Proprietary Low-Power Data Control

## Power

<b>Power Consumption</b>	Vehicle on: 1.8W typical power draw Vehicle off: 396mW sleep mode
<b>Input Power</b>	12V and 24V vehicles via diagnostic port connection or direct wiring harness.
<b>Backup Battery</b>	Battery-powered tamper detection sends alert (via Samsara Cloud) if gateway is unplugged or power is interrupted.

## Enclosure

<b>Dimensions</b>	117 x 72 x 26 mm (4.6 x 2.7 x 1.0 inches)
<b>Weight</b>	118g
<b>Operating Temperature</b>	-40° to 85°C

## Software Features

<b>Samsara Cloud</b>	Connects to Samsara Cloud to provide real-time location visibility, dispatch, reporting, and alerts
<b>Samsara Driver App</b>	Hours of Service (working hours) logging; compliant with ELD mandate (USA)  Paper-free maintenance logs and driver vehicle inspections (DVIR)  Integrated communication with dispatchers
<b>Tachograph Integration</b>	Remote download and archive of fleet data (driver card and vehicle data) for compliance and analysis purposes.

# Ordering Information

## Gateway

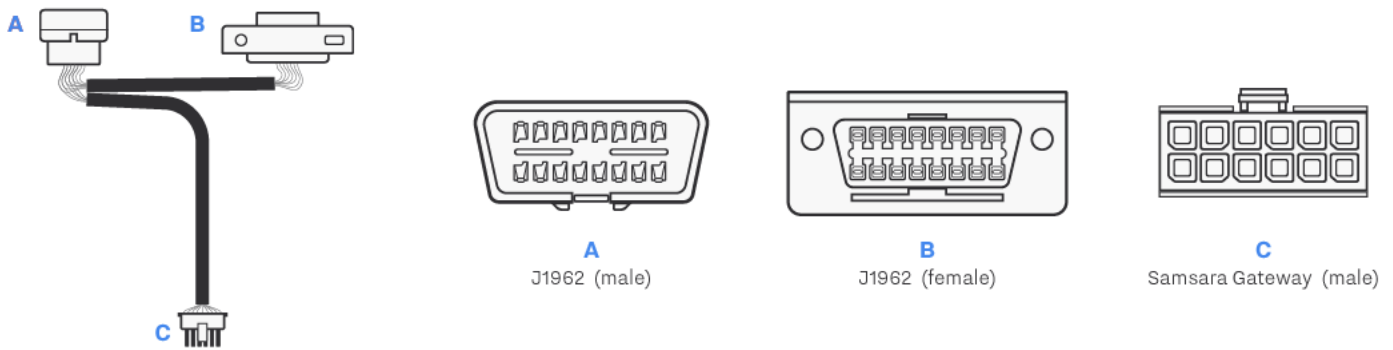
<p>HW-VG34 HW-VG34-EU</p>	<p>Samsara Vehicle IoT Gateway (requires license and accessory harness)</p>
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## License

<p>LIC-VG-1YR LIC-VG-3YR LIC-VG-5YR</p>	<p>License includes cellular data connectivity, cloud software, mobile apps, on-going firmware updates, maintenance, and support. Available in 1, 3, and 5-year terms.</p>
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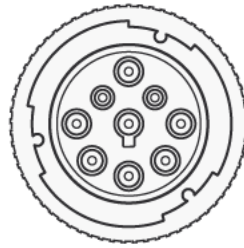
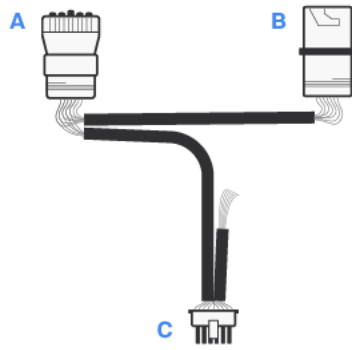
## Accessories

### Light Duty Vehicle Cable (OBD-II)

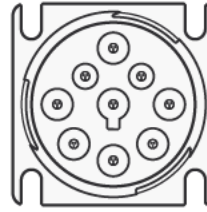


<p>ACC-BOBDII-Y1</p>	<p>OBD-II (J1962) to Samsara Gateway cable with type 1 Y-splitting bypass harness</p>
<p>ACC-BOBDII-Y2</p>	<p>OBD-II (J1962) to Samsara Gateway cable with type 2 Y-splitting bypass harness</p>
<p>ACC-BJ1939-VM</p>	<p>OBD-II (J1939) heavy duty diagnostic harness for Volvo/Mack</p>

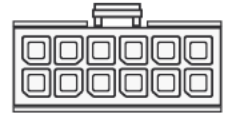
## Heavy Duty Vehicle Cable (OBD-II)



**A**  
J1939 (male)



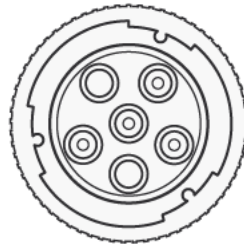
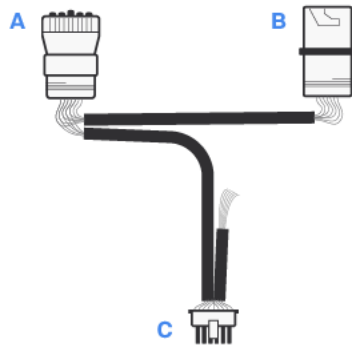
**B**  
J1939 (female)



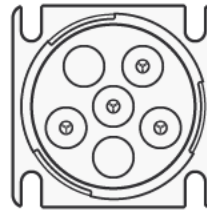
**C**  
Samsara Gateway (male)

**ACC-BJ1939-Y1**

OBD-II (J1939) to Samsara Gateway cable with type 1 y-splitting bypass harness and auxiliary (discrete voltage) inputs



**A**  
J1708 (male)



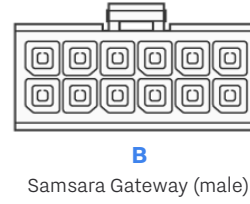
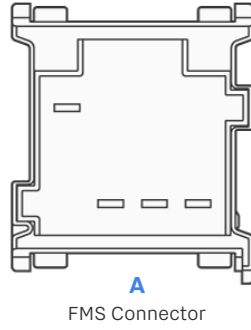
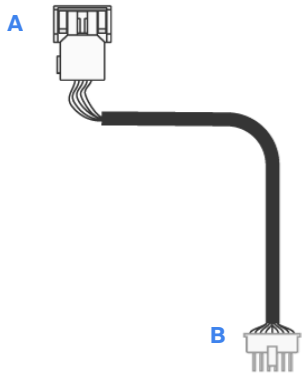
**B**  
J1708 (female)



**C**  
Samsara Gateway (male)

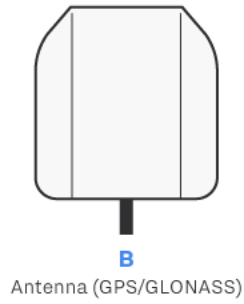
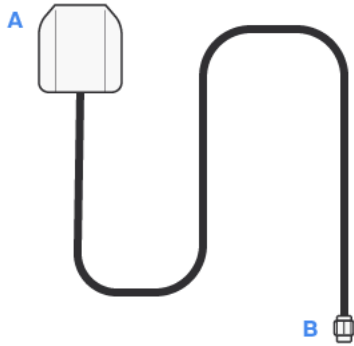
**ACC-BJ1708-Y1**

OBD-II (J1708) to Samsara Gateway cable with type 1 y-splitting bypass harness and auxiliary (discrete voltage) inputs



CBL-VG-AFMS	FMS heavy duty diagnostic harness for MAN, Daimler, Scania, DAF, Iveco, Volvo and Renault
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## External GPS Antenna



ACC-AGPS	SMA cable to external GPS antenna
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# Regulations

## **FCC Regulations**

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.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with radio frequency (RF) exposure limits adopted by the Federal Communications Commission for an uncontrolled environment. This equipment should operate with minimum distance 20 cm between the radiator & your body.

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 or more 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.



## IC Regulations

This device complies with Industry Canada'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."

This equipment complies with Innovation, Science and Economic Development Canada RF exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated to ensure a minimum of 20 cm spacing to any person at all times.

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

## RF Exposure Information (MPE)

This device meets the EU requirements and the International Commission on Non-Ionizing Radiation Protection (ICNIRP) on the limitation of exposure of the general public to electromagnetic fields by way of health protection. This equipment should be installed and operated to ensure a minimum of 20 cm spacing to any person at all times.

Frequency Band	Power
GSM 900	33 dBm
GSM 1800	30 dBm
UMTS Band 1	24 dBm
UMTS Band 8	24 dBm
LTE Band 1	23 dBm
LTE Band 3	23 dBm
LTE Band 7	23 dBm
LTE Band 8	23 dBm
LTE Band 20	23 dBm
LTE Band 28	23 dBm
WLAN 24 12-2472 MHz	18 dBm
2.4GHz Proprietary Low Power Data Protocol	9dBm

## Declaration of Conformity

Hereby, Samsara Networks declares that the radio equipment type VG34-EU is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address: [www.samsara.com/DoC.pdf](http://www.samsara.com/DoC.pdf). Note that the use of Samsara proprietary cables is mandatory for CE compliance requirements.

## **Waste Electrical and Electronic Equipment (WEEE)**



This symbol means that according to local laws and regulations your product and/or its battery shall be disposed of separately from household waste. When this product reaches its end of life, take it to a collection point designated by local authorities. Proper recycling of your product will protect human health and the environment.