Powered Asset Gateway

AG53 Datasheet

OVERVIEW

The AG53 Powered Asset Gateway is ideal for monitoring dry-van trailers, heavy equipment, and high-value mobile assets. It features a waterproof and ruggedized enclosure, a variety of wireless sensor accessories, and a robust backup battery.

The AG53 enables improved operating efficiency, asset theft recovery, and streamlined regulatory compliance. It is part of Samsara's Connected Operations Cloud, enabling you to capture data that helps you run your operations more efficiently, safely, and sustainably.

PRODUCT HIGHLIGHTS

- A flexible solution for trailers and reefers, heavy equipment, and other powered assets
- Real-time GPS location and sensor data with live updates
- High-capacity lithium-ion battery for backup application
- Ruggedized, weatherproof enclosure with flexible data inputs

DESIGNED FOR RAPID RETURN ON INVESTMENT

- Monitor and increase asset utilization
- Optimize asset pool inventory and location
- Recover lost or stolen assets
- Reduce inventory management and yard-walk time
- Lower temperature-related loss claims
- Simplify regulatory compliance

TYPICAL APPLICATIONS

	Trailers	Powered Assets
Asset Type	• Dry van trailers • Specialty trailers for liquid and chemical transport • Agriculture trailers	• Construction equipment (backhoes, bulldozers, cranes, etc.) • Forklifts

Technical Specifications

CELLULAR DATA CONNECTIVITY

Cellular Data	LTE Cat M1 Operating area: United States, Canada, Mexico, EU (countries with LTE-M)
Offline Storage	Built-in flash memory to store data when Internet connectivity is unavailable.
Secure Communications	All Internet connectivity secured via HTTPS with TLS encryption

LOCATION TRACKING

GPS	Advanced positioning system simultaneously reads from multiple independent satellite systems including GPS. Internal antenna for discreet installation.
Real-time tracking	Powered deployments feature real-time location updates with live map view

POWER

* Typical battery lifetimes provided. Actual battery life is affected by extreme cold, cellular signal strength, and accessory sensor utilization

Sources	Designed for use with external power, intermittent external power, or battery backup applications (via internal lithium-ion battery)
External Power	9-36V DC Power draw: 200 uW (sleep) to 5,000 mW (peak)
Lithium-Ion Battery	3 Ah internal battery capacity Lasts about 12 months (2 check-ins per day) when fully charged See Deployment Configurations section of this datasheet for application-specific battery life. For questions about the safe use of lithium-ion battery powered devices, please consult your company's safety department.
Charging	Average unit will require 10 hours of charge for full battery charge

Technical Specifications (cont'd)

ENCLOSURE

Material	UV-stabilized polycarbonate
Dimensions	123 x 82 x 35 mm
Weight	150 g
Operating temperature	Operation: -40° to 60°C externally powered, -20° to 60°C discharging on battery, 0ºC to 45ºC charging
IP rating	IP67 (weatherproof and water resistant up to 1m submerged) IP69k (highest grade resistance to high pressure and high temperature washdown)

SAMSARA CLOUD SOFTWARE FEATURES

Features	Map-based location tracking Real-time alerts (SMS, email) Operational reports: Utilization, inventory, dormancy, detention, billing, equipment, trip history, and time on site FSMA-compliant temperature reports Reefer monitoring and control interface Developer APIs

DATA INTERFACES

Interfaces	CAN Bus (500kbps, 250kbps)

Deployment Configurations

Power Cable	**Powered asset cable harnesses**
Check-in Rate	Powered: Live Unpowered: Every 6 hours Unpowered check-in rate is user configurable
Battery Life	12 months (2 check-ins a day) on full charge

Cables & Accessories

CABLES (one per gateway required)

CBL-AG-BOPEN	An open wire cable used to connect across any powered equipment to pull engine diagnostics over CAN

Regulations

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)

IC Radiation Exposure Statement:

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

IC Déclaration d'exposition aux radiations:

Cet équipement est conforme Canada limites d'exposition aux radiations dans un environnement non contrôlé. Cet équipement doit être installé et utilisé à distance minimum de 20cm entre le radiateur et votre corps.

Regulations (cont'd)

FEDERAL COMMUNICATION COMMISSION INTERFERENCE STATEMENT

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 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.

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.

FCC 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.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Installation Statement:

This device requires professional installation and must be installed by a trained person.