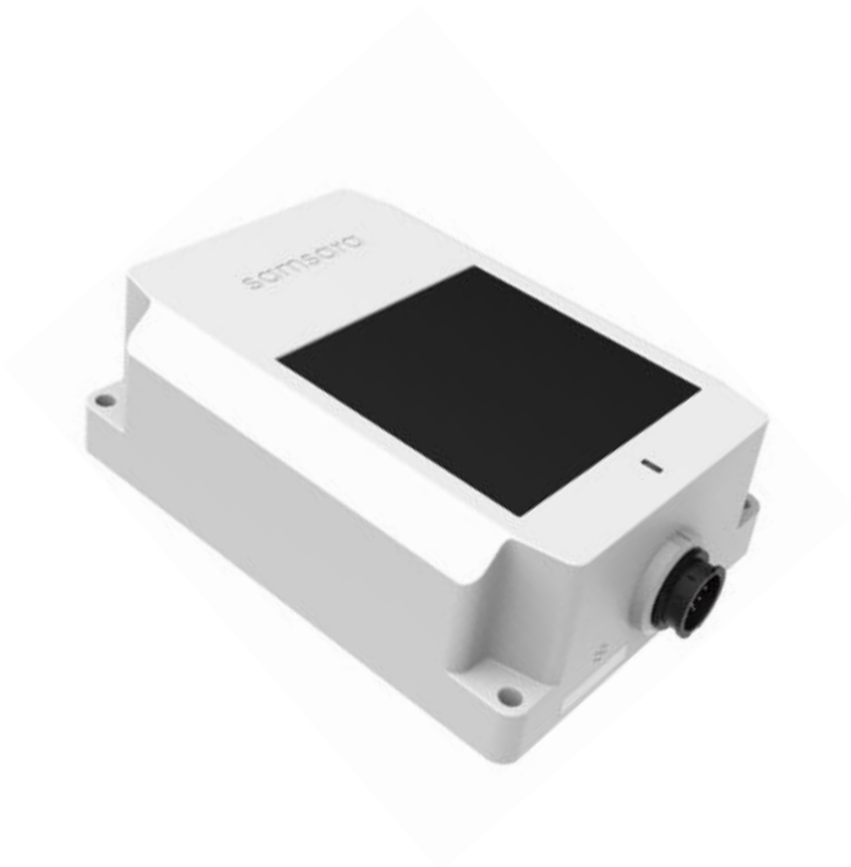


Asset IoT Gateway

AG24 DATASHEET



OVERVIEW

The AG24 Asset IoT Gateway is ideal for monitoring dry-van and refrigerated trailers, heavy equipment, and high-value mobile assets. It features a waterproof and ruggedized enclosure, a variety of sensor and interface accessories, and multiple built-in power options.

The AG24 enables improved operating efficiency, asset theft recovery, and streamlined regulatory compliance. It is part of Samsara's complete sensor system that combines asset tracking, fleet management, safety, and compliance solutions in a single platform.

PRODUCT HIGHLIGHTS

- A flexible solution for semi-trailers (including reefers), heavy equipment, and mobile assets
- Real-time GPS location and sensor data with live updates
- Two way reefer control
- High-capacity battery with solar recharging for unpowered applications
- Ruggedized, weatherproof enclosure with flexible data inputs
- Easy-to-use wireless accessory sensors

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	Refrigerated Assets	Powered Assets
Asset Type	<ul style="list-style-type: none">• Dry van trailers	<ul style="list-style-type: none">• Thermo King trailers• Carrier trailers	<ul style="list-style-type: none">• Construction equipment (backhoes, bulldozers, cranes, etc)• Forklifts• Remote generators

Technical Specifications

Cellular Data Connectivity

Cellular Data	<p>4G LTE cellular connectivity, with 3G fallback where LTE coverage is unavailable.</p> <p>LTE: quad band 2/4/5/12. 3G: dual band 2/5. Operating area: United States, Canada, Mexico</p>
Offline Storage	<p>Built-in flash memory logs data when Internet connectivity is unavailable.</p>
Secure Communications	<p>All Internet connectivity secured via SSL with 256-bit AES encryption (military-grade).</p>

Location Tracking

GPS	<p>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).</p>
Real-time tracking	<p>Powered deployments feature real-time location updates (up-to-the-second, with live map view)</p>

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 self-powered applications (via internal battery and built-in solar panel)
External Power	12-30V DC Power draw: 90 uW (sleep) to 900 mW (peak)
Battery	12.5 Ah internal battery capacity From 5 years (2 check-ins/day, no accessory sensors) to 2 months (12 check-ins per day, with accessory sensors). See Deployment Configurations section of this datasheet for application-specific battery life.
Solar Charging	Built-in solar panel maintains battery charge indefinitely with up to 12 checkins per day (vertical or upward-facing mounting, outdoors, North America south of 57° latitude).

2-way Reefer Unit Integration

Reefer control functions	Monitor set point Change set point Monitor battery voltage Monitor fuel level (requires reefer fuel sensor) Remote on / off Monitor alarms Read engine hours
Reefer models supported	Thermo King SR2*, SR3, SR4, T-80 Carrier APX

*SR2 functionality does not include remote on/off

Enclosure

Material	Gateway: UV-stabilized polycarbonate Mounting plate: Powder-coated and corrosion-resistant stainless steel
Dimensions	105 x 152 x 47.5 mm (4.1 x 6.0 x 1.9 inches)
Weight	510 g
Operating temperature	Operation: -40° to 80°C Battery charge: 0° to 50°C
IP rating	IP 67 (weatherproof and water resistant up to 1m submerged)

Data Interfaces

Interfaces	CAN Bus (500kbps, 250 kbps) Digital inputs (2x). Maximum voltage 30V, Vil 1.2V, Vih 2V Digital output (1x)* RS232, RS485 serial inputs* Analog sensor inputs (4-20mA, 0-5V, requires Samsara Input Module) *Requires additional software, contact Samsara for availability information
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Samsara Cloud Software Features

Software Features	Map-based location tracking with live updates Real-time alerts (SMS, email) Operational reports: Utilization, inventory, and time on site FSMA-compliant temperature reports Reefer monitoring and control interface Developer APIs
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Deployment Configurations

Power Cable	7-way trailer cable harness	Refrigerated trailer cable harness	Powered asset cable harness
Check-in Rate	Powered: live Unhooked/off: every 2 hours	Powered: Live Reefer: Live control Sensors: every 2 hours	Powered/On: Live Unpowered/Off: every 2 hours
Battery Life	3 months (solar: indefinitely)	3 months (solar: indefinitely)	3 months (solar: indefinitely)

Ordering Information

Gateway

HW-AG24	Samsara Asset IoT Gateway (requires license and accessory harness)
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Accessory Cables (one per gateway required)

CBL-AG-A7WY	Dry-van trailer cable harness for AG24 with 7-way power connection
CBL-AG-ARFR	Refrigerated trailer cable harness for AG24 with 2-way reefer interface and 7-way power connection
CBL-AG-APWR	Powered asset cable harness for AG24 with power and aux inputs (for engine hours)

LIC-AG2-ENT	Enterprise license for AG24 gateway, includes hosted software, cellular connectivity, ongoing software upgrades, maintenance, and support.
LIC-AG2T-EXPRESS	Express subscription for trailers, includes AG24 gateway, trailer cable harness rental, hosted software, cellular connectivity, ongoing software upgrades, maintenance, and support. Supports up to 40 units, additional limits apply.
LIC-AG2R-EXPRESS	Express subscription for refrigerated trailers, includes AG24 gateway, power cable harness rental, hosted software, cellular connectivity, ongoing software upgrades, maintenance, and support. Supports up to 40 units, additional limits apply.
LIC-AG2P-EXPRESS	Express subscription for powered assets, includes AG24 gateway, power cable harness rental, hosted software, cellular connectivity, ongoing software upgrades, maintenance, and support.

Accessories (optional)



EM21 Wireless Temperature & Humidity Sensor



ACC-DM11 Wireless Door Sensor



ACC-CARGO Wireless Cargo Sensor

ACC-DM11	Wireless door sensor for swing and roll-up doors.
ACC-CARGO	Wireless cargo sensor
HW-EM21	Wireless environmental monitor with temperature and humidity sensors (requires license)
HW-EM22	Wireless environmental monitor with external food-grade temperature probe