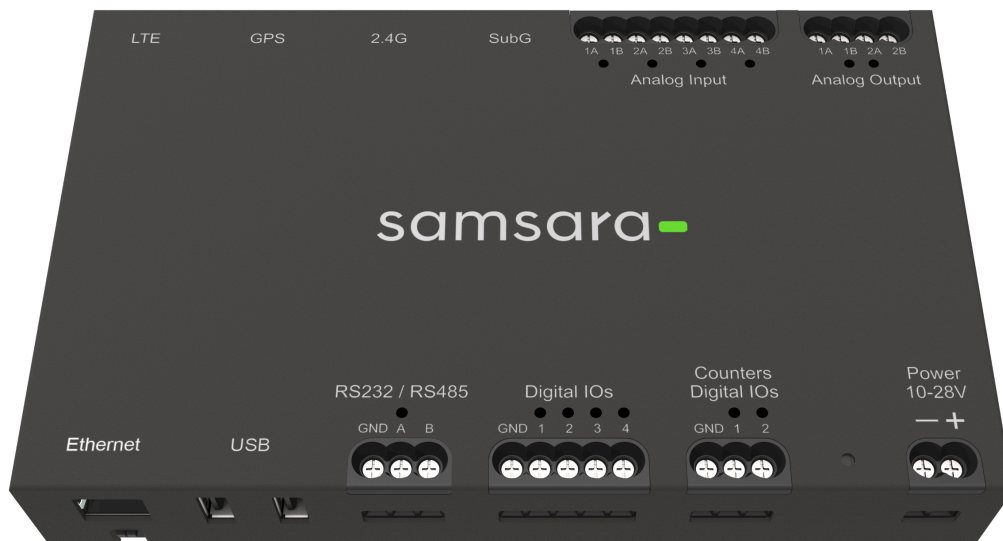


# Industrial IOT Gateway Family Datasheet

## IG-SERIES DATASHEET



### OVERVIEW

IG-series Industrial Gateways combine cellular LTE connectivity and data logging with a wireless, real-time sensor platform and traditional RTU I/O into a single device designed for remote, robust industrial data collection across distributed environments.

Included and automatically provisioned cellular connectivity enables deployment in minutes instead of days or weeks, and built-in I/O, digital connectivity (e.g. Modbus, Ethernet, DNP3) allow the real-time collection and logging of data which previously has been too costly or difficult to monitor.

### HIGHLIGHTS

- Wirelessly streams sensor data in real-time
- Cellular connectivity included: no extra SIM cards, no carrier contracts, and no data fees
- Secured with 256-bit AES encryption
- Affordable and Easy to install and operate at any scale - zero configuration and automatic discovery of nearby sensors and cloud connectivity

# Technical Specifications

## Enclosure

Dimensions	180mm x 118mm x 32mm (7.09in x 4.65in x 1.26in)
Weight	725g
Operating temperature	-40° to 80°C
Backup Battery	10 minutes (approx, 430 mAh)
Mounting	Tool-less DIN rail mounting
Hazardous Locations	Certified for Class I, Division 2, Groups A, B, C, D

## Power

Rated Voltage	10-28 Vdc
Maximum Power draw without analog outputs	10.8W @ 12V
Maximum Power draw with analog outputs	20W @ 12V

## Internet Connectivity

Cellular	4G LTE cellular connectivity, with 3G fallback where LTE coverage is unavailable.  LTE: quad band 2/4/5/12. 3G: dual band 2/5. Operating area: United States, Canada, Mexico
Wifi	WiFi 802.11 b/g/n
Data Security	All Internet connectivity secured via SSL with 256-bit AES encryption (the encryption standard for sensitive data including military and financial applications)

## Communications

<b>Serial Port</b>	RS485: Up to 20Mbps, 2-wire, half-duplex RS232: Up to 1Mbps, 2-wire, full or half-duplex (ESD Protected)
<b>Serial Protocols</b>	Modbus slave/master
<b>Ethernet</b>	8-pin modular RJ45 jack, 10/100 Mbps (10/100 Base-T), transformer-isolated
<b>USB Host</b>	USB 2.0 compatible "A"-type receptacle

## Digital and Analog Inputs/Outputs

<b>Analog Inputs</b>	4, Isolated channels with 0-12 V or 0-24 mA <ul style="list-style-type: none"> <li>- Resolution: 14-bit ADC</li> <li>- Accuracy: 0.1% FSR at 25C</li> <li>- ESD/ EFT/Surge protected</li> <li>- Input Resistance @ 24mA: 300 ohm</li> </ul>
<b>Analog Outputs</b>	2, Isolated channels with 0-12 V or 0-24 mA <ul style="list-style-type: none"> <li>- Resolution: 16-bit</li> <li>- Accuracy up to +/-0.2% FSR at 25C</li> <li>- ESD/EFT/Surge protected</li> <li>- Settling Time: 5us</li> <li>- Load Range: 1000 ohm (12V) - 600 ohm (20mA)</li> </ul>
<b>Digital Inputs/Outputs</b>	6, User-configurable as inputs or outputs (open-drain) <ul style="list-style-type: none"> <li>- ESD/ EFT/Surge protected</li> </ul> As Input, <ul style="list-style-type: none"> <li>- Dry-contact (internally sourced 3.3V @ 1mA)</li> <li>- Wet-contact (0-30V)</li> </ul> As Output, <ul style="list-style-type: none"> <li>- Sinking MOSFET output, rated 30V, 0.5A</li> </ul>
<b>Counter Inputs</b>	2, Counter Input (0-30V) <ul style="list-style-type: none"> <li>- Up to 10Hz (dry-contact)</li> <li>- Up to 10kHz (wet-contact)</li> </ul>

## Data Transmission and Storage

<b>Real-time connectivity</b>	Streams sensor data to the Samsara Cloud in real time
<b>Built-in storage for offline logging</b>	Sensor data stored in built-in flash memory when Internet connectivity is unavailable

## Wireless Sensors

<b>Connectivity</b>	Proprietary low-energy wireless sensor connectivity (2.4 GHz and 915 MHz)
<b>Compatibility</b>	Works with Samsara wireless sensors
<b>Range</b>	2.4GHz: 30m (line of sight) 915 MHz: 500m (line of sight)