



Gateway III



Overview

The Fybr Gateway is a compact, microprocessor-controlled device that creates a bridge between a wide range of edge devices and the Fybr Engine. Data from Fybr enabled edge devices travel through our gateways to the Internet, where it is processed and delivered as useful insights to users – from drivers to managers to technicians. Gateways use a proprietary 900 MHz radio protocol for 2-way data exchange with sensors, while internet connections are handled by a choice of cellular modem, wifi, or ethernet

Adaptability

Fybr Gateways offer multiple power options, all with battery backup: 120/240 volt line power, external solar panel or power over ethernet. All Fybr Gateway devices also feature state-of-the-art 360° coverage, built-in fault detection, and measure just 3" by 6.5" by 3" in size. A USB and internal hardware expansion ports are included to facilitate additional modules or functionality.

Features

Flexible power options to accommodate virtually any installation location. Line power, POE or externally mounted solar panels – all with battery backup of up to 6 days.

Auxiliary battery power provided by 7.2 volt battery pack keeps communications up and running reliably, without power interruptions.

USB/Internal expansion ports allows addition of new technology and functionality over time, without installation of new devices.

Battery fault detection ensures sensor data is rerouted to alternate devices when necessary, and alerts technicians of service needs.

Remote firmware upgrades executed with wirelessly delivered data patches, to optimize speed and minimize use of battery power.

Failsafe data relays, with message confirmation and automatic switchover to alternate gateways when needed.

Sleep and wake modes reserve power, using it only when sensing vehicles or sending/receiving network data.

Compatible hardware pairs well with Fybr's end-to-end platform and can also be integrated with other systems/components.

Rugged industrial design from the inside out, with technology and housing designed for performance in extreme conditions.

Functional Specifications

modulation	<ul style="list-style-type: none"> • Frequency hopping spread spectrum - FSK Modulation • LORA direct sequence spread spectrum
communication bit rate	max. 40 kbps
frequency band	902 to 928 MHz (ISM unlicensed band)
frequency channels	50
antenna type	externally mounted patch antenna (omni or directional)
output power	max. +20 dBm
receive sensitivity	-106 dBm
network connectivity	cellular, wifi, ethernet
cellular connectivity	CDMA, 3G,4G, LTE, other



Power, Operating & Physical Specifications

power source	line, solar, or POE + battery backup
backup power	serviceable 7.2v low temp Li-ion battery
standby power duration	up to 6 days
dimensions	3" x 6.5" x 3" (7.6 cm x 16.5 cm x 7.62cm)
weight	2.3lbs / 1.1kg
mounting	universal mouting hardware
operating temperatures	-40°C to +85°C
solar panel wattage	35W- 60W (site dependant)

Compliance

EMC	<ul style="list-style-type: none"> • FCC*: 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. • IC*: This device complies with Industry Canada licence-exempt RSS standard(s). 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. <p style="text-align: right;">*Pending</p>
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