Sierra Wireless® FX30 Octave™ IoT Gateway

FX30 BENEFITS

- **Global & Scalable:** Pre-provisioned with SIM for global LTE connectivity. Pre-certified for global deployments.

- **Small & Rugged:** Purpose-built to fit into machines and infrastructure equipment; supports Modbus protocol and meets harsh industrial environmental requirements.

- **Highly Programmable:** Enables secure data collection, data orchestration, actions, and edge-to-cloud integration via the Octave solution.

- **Extensible:** Comprehensive built-in interfaces to connect easily to any system, plus flexible hardware expansion.

FX30

FX30S

Ruggedized, Industry-Certified IoT Gateway for Octave™ Solution

SETTING A NEW STANDARD FOR IOT EMBEDDED SOLUTIONS

The FX30 is the industry's smallest, most rugged programmable LTE cellular gateway. As part of an integrated, secure edge-to-cloud solution, the FX30 enables rapid, scalable, and global IoT deployments for any connected machine or infrastructure, with and without industrial protocols.

PROGRAMMABLE AND MANAGEABLE

The FX30 ships with Octave™, Sierra Wireless's edge-to-cloud solution solution for connecting industrial assets to the cloud. Octave helps industrial companies scale from proof of concept to commercial deployment more easily than ever by letting them securely extract and orchestrate data from industrial equipment to cloud infrastructure, all while efficiently managing their connected machines.

Integrating device modules and gateways, wireless connectivity, and cloud APIs, Octave ensures you have the data you need, exactly when you need it. Providing a simple JavaScript framework, it enables powerful combinations of data processing rules both in the cloud and at the resource-constrained edge. With a single pane of glass to monitor, control, update and maintain connected edge devices and assets—including the lifecycle of the devices themselves, as well as their SIM connectivity—Octave empowers industrial companies to act on the data that matters most to them.

The FX30 is also available with the Legato® Open Source Linux platform.

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INDUSTRIAL GRADE

The FX30 provides superior performance in harsh environments with its small, rugged aluminum form factor. It meets MIL-STD-810 standard for vibration and mechanical shock, and maintains operation in extended temperatures from -30°C to +75°C, making it the ideal embeddable solution for any industrial machine.

FX30 is pre-certified for large deployments, meeting a comprehensive range of regulatory and industry standards worldwide, including industrial protocols such as Modbus.

SCALABLE AND EXTENSIBLE

Offering unparalleled flexibility, the FX30 is available in both Ethernet and Serial variants, and supports an IoT Connector expansion slot to enable hardware extensions. The IoT Connector enables an unlimited range of sensors, and wired and wireless networks, such as Ethernet, Wi-Fi, Bluetooth, Zigbee, RS485, CANbus, Modbus.

The FX30 offers best-in-class low power consumption, consuming less than 1W in idle mode and 2mW in ultra-low power mode, making it ideal for solar and battery powered applications.

The FX30 Octave includes a SIM pre-provisioned for global connectivity, providing LTE Cat-M1/NB1 LPWA connectivity with 2G fallback.

For more information please visit sierrawireless.com/FX30.

SIERRA WIRELESS®

	FX30 LTE-M Global	FX30S LTE-M Global
AIR INTERFACE	LTE Cat-M1/NB1, EDGE, GSM, GPRS	
FREQUENCY BANDS		
4G LTE	B1, B2, B3, B4, B5, B8, B12, B13, B17, B18, B19, B20, B26, B28	
3G UMTS/HSPA+	–	
2G EDGE/GSM/GPRS	850, 900, 1800, 1900	
APPROVALS		
Regulatory	FCC/IC, CE&RoHs, REACH, RCM, Safety IEC60950-1, UL Listed, GCF, PTCRB, E-Mark	
Telecom & Carrier	Sierra Wireless	
POWER VOLTAGE	DC 4.75V to 32V	
POWER CONSUMPTION		
Ignition Off	400 μW	
Ultra Low Power Mode	2 mW	
Idle mode	1.2W	0.4W
4G LTE max	4.2W, burst 7.9W (USB at 110Mbps and Ethernet at 94Mbps)	3.2 W, burst 7.5W (USB at 110Mbps and Serial continuous)
RADIO MODULE	WP7702	
APPLICATION PROCESSOR		
Processor	ARM® Cortex™-A7	
Core frequency	1.3GHz	
RAM (reserved for app processor)	128MB	
Flash (reserved for app processor)	256MB (min 100,000 write cycles)	

INTERFACES	Specification
Ethernet	FX30 only: 10/100BASE-T RJ45
UART	FX30S only: Configurable RS232/RS485 Sub-D9
USB	USB V2.0 Micro-B connector
LEDs	1 signal LED, 1 user LED
I/Os	3 configurable I/Os
Audio	PCM (on IoT Connector)
Push button	For user app (GPIO)
SIM interface	2FF
Cellular Antenna	SMA
GNSS Antenna	SMA with active bias
HARDWARE EXTENSION	1xIoT Connector (1xUSB, 1xUART, 1xSPI, 1xI2C, 4xGPIO, 1xADC, 1xSDIO, 1xPCM)
MOUNTING OPTIONS	Bracket for screw/wall and DIN rail mounting
LOCATION SERVICES	A-GPS, GLONASS, GALILEO
CONTROL OPTIONS	AT Commands, Legato® shell, Legato® applications

EMBEDDED SOFTWARE	Specification
Application Framework	Octave solution or Legato® Open Source
Linux Distribution	Octave solution based on Legato® Open Source Linux platform
DRIVERS	USB driver for Linux, WIN7, WIN8
CLOUD SERVICES	Octave solution, FOTA Upgrades, Global Connectivity, Device and Embedded Apps Management
DIMENSIONS	75 x 60 x 32 mm excluding connectors; FX30: 82x60x32mm including connectors; FX30S: 86x60x32mm including connectors
WEIGHT	158g
ENVIRONMENTAL	
Operational Temperature (Class B)	-30°C to +75°C
Humidity	95% relative humidity over a temperature range of +20°C to +60°C
Vibration and Shock	Vibration spec: MIL-STD-810G, Method 514.6C, Category 4CWV (Composite Wheeled Vehicle); Mechanical shock spec: MIL-STD-810G, Method 516.6; Procedure I (Functional Shock)
ESD	8KV contact discharge, 15KV air discharge

About Sierra Wireless

Sierra Wireless (NASDAQ: SWIR) (TSX: SW) is the leading IoT solutions provider that combines devices, network and software to unlock value in the connected economy. Companies globally are adopting IoT to improve operational efficiency, create better customer experiences, improve their business models and create new revenue streams. Whether it's a solution to help a business securely connect edge devices to the cloud, or a software/API solution to help manage processes associated with billions of connected assets, or a platform to extract real-time data to make the best business decisions, Sierra Wireless will work with you to create the right industry-specific solution for your next IoT endeavor. Sierra Wireless has more than 1,300 employees globally and operates R&D centers in North America, Europe and Asia.

For more information, visit www.sierrawireless.com.

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