DATASHEET

Sierra Wireless FX30

FX30 BENEFITS

- **Highly Programmable:** Enables secure Linux-based embedded application environment to build efficient IoT systems.

- **Small & Rugged:** Purpose-built to fit into machines and infrastructure equipment, and meet harsh industrial environmental requirements.

- **Scalable:** Reach global Cat-M and NB-IoT market with a single product, and scale to LTE Cat-1 and 3G with full hardware and software compatibility.

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

- **Managed:** Keep deployments up-to-date with free firmware-over-the-air (FOTA) services. Manage entire fleets of FX30 efficiently through one single connectivity and device management platform.

- **Accelerate your data-driven transformation:** Octave securely integrates the FX30 into an all-in-one edge-to-cloud solution for connecting industrial assets.

Ruggedized, Industry-Certified, Legato® Secure Application Framework

SETTING A NEW STANDARD FOR IOT EMBEDDED PLATFORMS

The FX30 is the industry's smallest, most rugged programmable 4G LPWA, 4G Cat-1 cellular gateway. Providing an integrated, secure embedded application environment, tightly integrated with the cloud, the FX30 enables swift, scalable and global deployments of IoT applications for any connected machine or infrastructure.

PROGRAMMABLE

The FX30 integrates the Legato® Open Source Linux Platform that simplifies application-level development with a secure application framework, maintained Linux distribution, and feature-rich development environment. Legato enables efficient C-level programming, making FX30 the core component for distributed IoT systems. Legato features an application sandbox that provides a secure environment to run and control multiple applications. With security and connectivity built in, Legato's robust APIs enable users to connect to any cloud or network, and allow developers to focus on building the value-add IoT applications.

Legato offers an Eclipse-based integrated development environment (IDE), providing an extensible and familiar toolset with built-in API awareness. With multi-language support, Legato allows developers to code in their preferred language, and provides a robust suite of diagnostic tools, to enable local and remote debugging, troubleshooting, monitoring and profiling.

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.

Singel 3 | B-2550 Kontich | Belgium | Tel. +32 (0)3 458 30 33 | info@alcom.be | www.alcom.be
Rivium 1e straat 52 | 2909 LE Capelle aan den Ijssel | The Netherlands | Tel. +31 (0)10 288 25 00 | info@alcom.nl | www.alcom.nl

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.

The FX30 has 4G Cat-1 and 4G Cat-M/NB1 with 3G/2G fall-back to support worldwide deployments.

With Octave, the FX30 automatically connects with automation equipment through Modbus and CANopen protocols.

LOW POWER

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.

MANAGED

Entire fleets of FX30's are efficiently monitored, managed and controlled remotely through a single connectivity and device management platform. It offers a wide range of IoT application enabled features such as device-to-cloud communications, data storage, alerting, web services and analytics.

Free, unlimited firmware-over-the-air (FOTA) upgrades are available for the lifetime of FX30 to keep connectivity optimized and secure.

SMART CONNECTIVITY

The FX30 fully supports Sierra Wireless' Smart Connectivity which makes it easy to maintain a secure and reliable connection to both fixed and mobile machines and assets anywhere in the world. The FX30 supports standard 2FF plastic SIM as well as future support for MFF2 embedded SIM, providing the ultimate flexibility for global deployments.

SECURE

With Octave, the FX30 lets you securely extract, orchestrate, and act on data from your edge asset to your cloud infrastructure. Octave provides best-in-class security measures out-of-the-box, including mutual authentication, encryption, network firewall, and adaptive threat management.

For more information please visit sierrawireless.com/FX30.

	FX30			FX30S	
	North America	**EMEA**	**Global**	**North America**	**Global**
	LTE	**LTE**	**LTE-M**	**LTE**	**LTE-M**
AIR INTERFACE	LTE Cat-1, UMTS/HSPA+,	LTE Cat-1, UMTS/HSPA+, EDGE/GSM/GPRS	LTE Cat-M1/NB1, EDGE/GSM/GPRS	LTE Cat-1, UMTS/HSPA+	LTE Cat-M1/NB1, EDGE/GSM/GPRS
FREQUENCY BANDS					
4G LTE	B2, B4, B5, B12, B13, B14, B25, B26, B66, B71	B1, B3, B7, B8, B20, B28	B1, B2, B3, B4, B5, B8, B12, B13, B17, B18, B19, B20, B26, B28	B2, B4, B5, B12, B13, B14, B25, B26, B66, B71	B1, B2, B3, B4, B5, B8, B12, B13, B17, B18, B19, B20, B26, B28
3G UMTS/HSPA+	B2, B4, B5	B1, B8	-	B2, B4, B5	-
2G EDGE/GSM/GPRS	-	900, 1800	850, 900, 1800, 1900	-	850, 900, 1800, 1900
APPROVALS					
Regulatory	FCC/IC, RoHs, REACH, Safety IEC60950-1, UL Listed, PTCRB	CE&RoHs, REACH, Safety IEC60950-1, UL Listed, GCF	FCC/IC, CE&RoHs, REACH, RCM, Safety IEC60950-1, UL Listed, GCF, PTCRB	FCC/IC, RoHs, REACH, Safety IEC60950-1, UL Listed, PTCRB	FCC/IC, CE&RoHs, REACH, RCM, Safety IEC60950-1, UL Listed, GCF, PTCRB
Telecom & Carrier	AT&T, Verizon, Sprint, T-Mobile	-	AT&T, Verizon	AT&T, Verizon, Sprint, T-Mobile	AT&T, Verizon
POWER VOLTAGE	DC 4.75V to 32V				
RADIO MODULE	WP7611-1	WP7607-1	WP7702	WP7611-1	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)				

COMMON FX30 SPECIFICATIONS

	Specification
INTERFACES	
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
Embedded SIM	MFF2 (optional)
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

	Specification
EMBEDDED SOFTWARE	
Application Framework	Legato® open source
Linux Distribution	Yocto, Long-term supported Linux Kernel
DRIVERS	USB driver for Linux, WIN7, WIN8
CLOUD SERVICES	Free unlimited Fota Upgrades, SIM and Managed Connectivity, Device and Embedded Apps Management, Application Enablement Platform
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.

sierrawireless.com/FX30

Singel 3 | B-2550 Kontich | Belgium | Tel. +32 (0)3 458 30 33 | info@alcom.be | www.alcom.be
Rivium 1e straat 52 | 2909 LE Capelle aan den Ijssel | The Netherlands | Tel. +31 (0)10 288 25 00 | info@alcom.nl | www.alcom.nl