SIERRA WIRELESS®

Sierra Wireless® FX30 Programmable IoT Gateway

FX30 BENEFITS

- **Global & Scalable:** Reach the global 3G/2G market with a single product, and scale to LTE with full hardware and software compatibility.

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

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

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

- **Managed:** Free unlimited firmware-over-the-air (FOTA) services using AirVantage® IoT Platform.

- **Accelerate time to market:** AirVantage IoT application enablement allows device-to-cloud solutions to be deployed in record time.

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 3G/4G LTE 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.

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 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 3G operates on six 3G bands, with fallback on four 2G bands, enabling worldwide deployments with a single product. The FX30 4G LTE is available in two variants, supporting EMEA and North America.

MANAGEABLE

Entire fleets of FX30s can be monitored, managed and controlled remotely through AirVantage® IoT Platform.

AirVantage integrates seamlessly with FX30 to also offer a wide range of IoT application enablement features such as device-to-cloud communications, data storage, alerting, web services and analytics. AirVantage's advanced device and connectivity management services enable efficient system operations for large fleets of FX30s.

Free, unlimited firmware-over-the-air (FOTA) upgrades, powered by Sierra Wireless' AirVantage® IoT Cloud, are available for the lifetime of FX30 to keep connectivity optimized and secure.

SIM & CONNECTIVITY

The FX30 supports standard 2FF plastic SIM as well as optional MFF2 embedded SIM, providing the ultimate flexibility for global deployments.

The FX30 fully supports Sierra Wireless' multi-operator SmartSIM to deliver best in class coverage and superior data service quality. Future releases of the FX30 will also support the GSMA eUICC specification for remote provisioning allowing subscriptions to be remotely updated over-the-air.

For more information please visit sierrawireless.com/FX30.

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Sierra Wireless
FX30 PROGRAMMABLE IoT GATEWAY

	FX30 (Ethernet Variant)	FX30S (Serial Variant)	FX30 LTE Cat 1 Americas VZN (Ethernet Variant)	FX30 LTE Cat 1 Americas AT&T (Ethernet Variant)
AIR INTERFACE	HSPA+ / EDGE / GSM / GPRS	HSPA+ / EDGE / GSM / GPRS	LTE Cat 1	LTE Cat 1 3G UMTS/HSPA+
FREQUENCY BANDS				
4G LTE	-	-	Cat 1: B4 / B13	Cat 1: B2 / B4 / B5 / B12
3G UMTS/HSPA+	B1 / B2 / B5 / B6 / B8 / B19	B1 / B2 / B5 / B6 / B8 /B19	-	B2 / B4 / B5
2G EDGE/GSM/GPRS	850 / 900 / 1800 / 1900	850 / 900 / 1800 / 1900	-	
APPROVALS				
Regulatory	FCC/IC, CE&RoHs, REACH, RCM, Safety IEC60950-1, UL Listed, E-Mark, GCF, PTCRB		FCC/IC, Safety IEC60950-1, UL Listed, PTCRB	FCC/IC, Safety IEC60950-1, UL Listed, PTCRB
Telecom & Carrier	AT&T (planned)		Verizon	AT&T, T-Mobile
POWER VOLTAGE	DC 4.75V to 32V			
POWER CONSUMPTION				
Ignition Off	400 µW (65µW at 5V)	-	-	-
Ultra Low Power Mode	2 mW	-	-	-
Idle mode	<1W	-	-	-
GSM/GPRS max	2.6W, GSM burst 7.2W (USB at 70Mbps and Ethernet at 55 Mbps)	-	-	-
WCDMA/HSDPA/HSUPA max	3.3W (USB at 70Mbps and Ethernet at 55 Mbps)	-	-	-
RADIO MODULE	WP8548-G		WP7601-1	WP7603-1
CPU PERFORMANCES				
Processor	ARM® Cortex™-A5		ARM® Cortex™-A7	
Core frequency	550MHz		1.3GHz	
AUDIO	PCM (on IoT Connector)			
INTERFACES				
Ethernet	10/100 Base-T RJ45	-	10/100 Base-T RJ45	10/100 Base-T RJ45
UART	-	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			
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			
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	(TBD)	(TBD)	(TBD)
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 is building the Internet of Things with intelligent wireless solutions that empower organizations to innovate in the connected world. We offer the industry's most comprehensive portfolio of 2G, 3G, and 4G embedded modules and gateways, seamlessly integrated with our secure cloud and connectivity services. OEMs and enterprises worldwide trust our innovative solutions to get their connected products and services to market faster.

For more information, visit www.sierrawireless.com.

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