Sierra Wireless AirLink™ Intelligent Gateways and Routers Fastrack Xtend and GL Series

Programmable Gateways for M2M

The AirLink Fastrack Xtend and GL Series programmable gateways bring cellular connectivity and data services to any device. You can either connect existing non-wireless applications as an external retrofit, or create new wireless products.

Designed for M2M customers, these programmable gateways feature standard interfaces (USB or RS232) for use with a wide range of industrial equipment.

Supporting the Sierra Wireless Software Suite, these ready-to-use solutions can host your entire application software: Embed your C/C++ or Lua application software directly on your FXT or GL device to transform it into your own standalone product.

AirVantage Management Services provide remote management and monitoring of the FXT and GL Series. Managing your gateways with AirVantage also allows you to remotely upgrade the firmware to remain compatible with evolving networks.

AIRLINK FASTRACK XTEND GATEWAY

The AirLink Fastrack Xtend gateway provides a highly extendable platform for the creation of a wide range of M2M solutions, with versions supporting quad band (850/900/1850/1900) GSM/GPRS and EDGE, or tri-band (2100/850/1900) HSxPA.

It features a slot for adding expansion cards, enabling you to add extra functionalities of your choice. Use Sierra Wireless expansion cards or develop your own – available cards include additional IOs, USB and GPS.

AIRLINK GL SERIES CELLULAR MODEMS

Among the world's smallest ready-to-go cellular modems, the AirLink GL6100 (DB9) and AirLink GL6110 (USB) plug into any device and are ready to make the GSM/GPRS connection. They feature complete IP connectivity, from basic TCP/IP blocks to advanced internet services.

EMBEDDED SIM

All AirLink FXT Series and GL Series programmable gateways are available with an embedded SIM as an option.

Sierra Wireless's embedded SIM solution removes the plastic from a conventional SIM card and embeds the silicon die inside the programmable gateway, with the following benefits:

- Resistance to extreme temperatures, vibration and humidity
- Subscribers can choose their service provider and carrier
- Subscription portability and security
- Reduced size
- Simplified logistics
- Same warranty as the programmable gateway itself

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Embedded Software

Cellular Software for M2M

The Sierra Wireless Software Suite is a comprehensive embedded software platform designed and optimized for M2M (machine-to-machine) communication. The software suite lets you embed your application directly onto your intelligent embedded module.

This embedded software allows your AirLink FXT Series or GL Series programmable gateway to function in a number of different ways:

- **Simple modems:** controlled via AT commands by a main processor
- **Intelligent modems:** controlled via AT commands by a main processor, but also providing some additional customized services through a supplementary software application
- **Processors:** the gateway is the single processor and is hosting your standard ANSI C/C++ or Lua application as well as providing the wireless connectivity

The Sierra Wireless Software Suite is owned, developed and maintained by Sierra Wireless, allowing us to respond to your needs faster than companies relying on third-party software. The software suite includes:

- A pre-emptive multitasked event-based real-time operating system (Open AT® OS)
- An integrated development environment built on Eclipse™ to develop, compile, download, test and debug your application binary
- An extensive set of additional libraries (Plug-Ins) which offer supplementary services over the core Open AT® OS
- The firmware which manages the wireless communication (GSM/GPRS/EDGE/HSPA) and an AT commands interface in the programmable gateway
- A simple and intuitive Windows®-based discovery tool which enables ultra-fast configuration of your gateway as well as easy access to basic modem features
- PC drivers for Windows® XP/Vista (USB and CMUX)
- Embedded drivers for Windows® Mobile 5.x/6.x and Windows® CE 6.0 (RIL/MUX and USB)

Learning Center

Sierra Wireless provides a professional education program for developers using the Sierra Wireless Software Suite. Enrolling in one of our courses will spark your creativity and help you to speed development time. For companies wishing to enroll a few participants, we provide scheduled training course dates in Europe, North America and Asia on a regular basis. If you have larger needs or just want a dedicated tutoring session, we also offer on-site programs.

AirVantage™ Management Services

Once you have deployed your wireless M2M solution in the field, you may need to regularly monitor and upgrade your devices. How do you do that in an easy, safe and cost-effective way?

The answer is AirVantage Management Services, a packaged device management solution that enables remote diagnosis and software upgrades which can save you considerable operating costs.

REMOTE DIAGNOSIS ENABLES YOU TO:

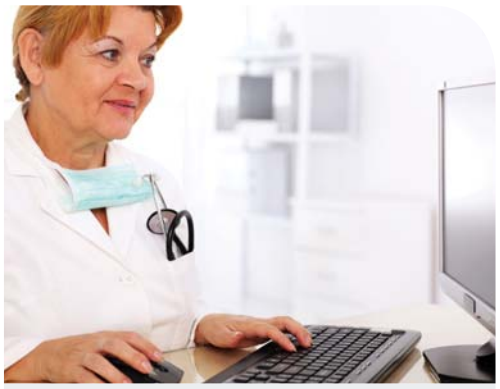
- Run sanity checks and configure your devices
- Monitor the wireless network quality
- Compile traffic reports for analysis

THE SOFTWARE UPGRADE SERVICE INCLUDES:

- Delta generation (download only the code that has changed, for faster downloads and reduced data volume)
- Upgrade for multiple devices
- Real-time campaign monitoring
- Reports

Easy to deploy, secure, scalable and carrier agnostic, AirVantage Management Services are based on industry standards: OMA-DM and full IP architecture.

These secure, easy-to-deploy and scalable device management services are powered by the AirVantage Services Platform, a comprehensive software-as-a-service M2M offering which allows you to quickly expand your M2M services, from device management to asset data management, subscription management and billing services.



KEY BENEFITS:

- Greater solution stability and performance
- Fewer deployment errors, delays and added expenses
- Less time-consuming redesign
- Safer design for the integration of any Sierra Wireless product

Sierra Wireless Professional Services

Sierra Wireless proposes an extensive professional services offering:

PRODUCT DESIGN

- Application code review
- Customer design review
- Customer product certification

PRODUCT BUILD

- IMEI implementation
- Tailored delivery
- Tailored product configuration

AFTER SALES

- Intelligent embedded module reconfiguration
- Out of warranty repair
- Extended warranty

Sierra Wireless AirLink™ Intelligent Gateways and Routers Fastrack Xtend and GL Series

	FX001	FX002	FX003	FX004	GL6100	GL6110
AIR INTERFACE						
	GSM/GPRS	EDGE	HSPxA	CDMA 1X RTT	GSM/GPRS	GSM/GPRS
FREQUENCY BANDS						
	850/900/1800/1900	850/900/1800/1900	850/900/1800/1900	CDMA 1XRTT/EV-DO REV A 800/1900 MHz	850/900/1800/1900	850/900/1800/1900
APPROVALS						
	R&TTE, CE, GCF, FCC, PTCRB, China RTE, AT&T	R&TTE, CE, GCF, FCC, PTCRB, China RTE, AT&T	R&TTE, CE, GCF, FCC, PTCRB, China RTE, AT&T	Verizon, Sprint	R&TTE, CE, GCF, FCC, PTCRB, China RTE, AT&T	R&TTE, CE, GCF, FCC, PTCRB, China RTE, AT&T
POWER						
Alarm	400uA	400uA	400uA	2mA	-	-
Standby and Idle	2,5mA	2,5mA	2,5mA	150mA	3mA	3mA
GSM/GPRS max	400mA max (GPRS class 10 33dBm)	400mA max (GPRS class 10 33dBm)	600mA max (GPRS class 10 33dBm)	650mA max T x Full power	400mA max (GPRS class 10 33dBm)	400mA max (GPRS class 10 33dBm)
HSxPA max			850mA max (HSPA max power)			
CPU PERFORMANCES						
Processor	ARM946 / DSP	ARM946 / DSP	ARM946 / DSP	n/a	ARM946 / DSP	ARM946 / DSP
Core frequency	26 MHz	104 MHz / (26 MHz)	130 MHz	n/a	104 MHz / (26 MHz)	104 MHz / (26 MHz)
User MIPS available	10 MIPS	87 MIPS	>100 MIPS	n/a	87 MIPS	87 MIPS
IO voltage	1.9v / 1.9v-2.8v	1.9v / 1.9v-2.8v			n/a	n/a
AUDIO						
Analog audio	1 x speaker out -1 x micro in	1 x speaker out -1 x micro in	1 x speaker out -1 x micro in	1 x speaker out -1 x micro in		
Digital audio	with expansion card	with expansion card	with expansion card	no		
Codec	HR, FR, EFR, AMR	HR, FR, EFR, AMR	HR, FR, EFR, AMR		HR, FR, EFR, AMR	HR, FR, EFR, AMR
Quality	VDA2A	VDA2A	VDA2A		VDA2A	VDA2A
Echo Cancellation & noise reduction	P(high)	P(high)	P(high)	P(high)	P(high)	P(high)
DTMF	P	P	P	P	P	P
INTERFACES						
UART	2 (1 on internal expansion connector)	2 (1 on internal expansion connector)	2 (1 on internal expansion connector)	1	1	
USB	1	1	1	1		1
ON OFF	✓	✓	✓			
Vref	2,6V-15V	2,6V-15V	2,6V-15V			
VCC output	4V	4V	4V	4V		
SPI	2 on internal expansion connector	2 on internal expansion connector	2 on internal expansion connector			
ADC	1 on internal expansion connector	1 on internal expansion connector	1 on internal expansion connector			
DAC	1 on internal expansion connector	1 on internal expansion connector	1 on internal expansion connector			
GPIO	2 (2,6V-15V) + 7 on internal expansion connector	2 (2,6V-15V) + 7 on internal expansion connector	2 (2,6V-15V) + 7 on internal expansion connector			
RTC	✓	✓	✓	✓		
Timers (HW, SW, Capture)	✓	✓	✓	✓	✓	✓
Interrupts pins	1 on internal expansion connector	1 on internal expansion connector	1 on internal expansion connector			
Flash LED output	Network	Network	Network	Network	Network	Network
SIM interface	SIM socket (1,8V/3V)	SIM socket (1,8V/3V)	SIM socket (1,8V/3V)		SIM socket (1,8V/3V)	SIM socket (1,8V/3V)
Expansion cards	✓	✓	✓			
Battery	Optional	Optional	Optional			
ANTENNA DIVERSITY						
			✓			
LOCATION SOLUTION						
	Expansion card	Expansion card	Expansion card	gpsOne		
EMBEDDED SIM						
	✓	✓	✓			
CONTROL OPTIONS						
	AT commands, C/C++ language, Lua Script	AT commands, C/C++ language, Lua Script	AT commands, C/C++ language, Lua Script	AT commands	AT commands, C/C++ language, Lua Script	AT commands, C/C++ language, Lua Script
OPERATING SYSTEM						
	Open AT	Open AT	Open AT			
MANAGEMENT SERVICES						
	✓	✓	✓		✓	✓
DRIVERS						
Windows® Mobile	✓	✓	✓		✓	✓
Windows® CE	✓	✓	✓		✓	✓
Windows®XP	✓	✓	✓		✓	✓
Windows® 7	✓	✓	✓		✓	✓
Windows® Vista	✓	✓	✓		✓	✓
Mac OS	✓	✓	✓		✓	✓
DEVICE DIMENSIONS						
	89 x 60 x 30 mm	89 x 60 x 30 mm	89 x 60 x 30 mm	89 x 60 x 30 mm	67 x 51,5 x 23,5 mm	67 x 51,5 x 23,5 mm
OPERATIONAL TEMPERATURE						
	-30°C to +75°C	-30°C to +75°C	-30°C to +75°C	-30°C to +75°C	-30°C to +75°C	-30°C to +75°C

*1 Multiplexed, *2 with performance deviations

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