Sierra Wireless AirPrime™ Intelligent Embedded Modules SL Series

Future-proof your connected devices

The Sierra Wireless AirPrime™ SL Series intelligent embedded modules offer the scalability, flexibility and reliability you need to take your connected devices into the future.

Currently available in footprint compatible EDGE and HSDPA versions, the AirPrime SL Series modules offer an easy upgrade path to next-generation network technologies.

The standard 25 x 30 mm LGA (Land Grid Array) form factor enables fully automated surface-mount manufacturing, guaranteeing the technology excellence required for high-volume production.

The AirPrime SL Series is compatible with Sierra Wireless AirVantage™ Management Services, enabling the remote monitoring and upgrade connected devices in the field.

AirPrime SL Series modules are ideal for mobile consumer, transportation, energy, sales & payment, networking, and field management & logistics solutions.

AIRPRIME SL6087

The AirPrime SL6087 features quad-band (850/900/1800/1900 MHz) EDGE connectivity and an extended temperature range (-40°C to +85°C). It is programmable with Lua scripting and C/C++, and natively supports Internet, Security and Companion GPS Plug-Ins. It is certified for use in any geographical market.

The SL6087 is available with Sierra Wireless' embedded SIM solution which removes the plastic from a conventional SIM card and embeds the silicon die inside the smart embedded modem, offering the following benefits:

- Resistance to extreme temperatures, vibration and humidity
- Subscription portability and security
- Reduced size
- Simplified logistics
- Same warranty as the smart embedded modem itself

AIRPRIME SL808X

The AirPrime SL8080 (850/1900 MHz), AirPrime SL8081 (900/2100 MHz) and AirPrime SL8082 (850/2100 MHz) offer high-speed dual-band UMTS/HSDPA connectivity (up to 3.6 Mbps downlink) and quad-band GSM/GPRS/EDGE network access in the same standard 25 x 30 mm LGA form factor and with the same extended temperature range (-40°C to +85°C) as the AirPrime SL6087.

KEY BENEFITS:
- Easy upgrade path to new network technologies
- Investment protection with remote monitoring and upgrade
- Supports efficient and reliable high volume production requirements
- Manufacturing technology excellence
- Supports industrial requirements with extended temperature and embedded SIM
- Compatible with standard 25 x 30 mm LGA form factor

SIERRA WIRELESS™ | AirPrime™

Sierra Wireless Software Suite

A full set of control options for AirPrime SL6087

The AirPrime SL6087 can be used as a simple modem controlled via AT commands, or you can use it to host your standard ANSI C/C++ application and reduce product costs and simplify development

The Sierra Wireless **Open AT® OS** is the only operating system which natively provides wireless services (voice call, data call, SMS...). It features

- Real time (latency time to external interruptions or timers < 600 µs)
- Pre-emptive multitasking (up to 64 tasks)
- A native API in ANSI C
- Event driven programming

The AirPrime SL6087 module is also delivered with the full **set of Plug-Ins for Open AT® OS**, that add:

- TCP/IP and Internet
- Security
- Lua scripting language
- Companion GPS

To facilitate your application development, Sierra Wireless offers an **integrated development environment built on Eclipse™**, which manages all the development steps of your project. Key features include:

- A familiar environment for many developers
- Fully integrates all Sierra Wireless tools as plug-ins
- Integrated documentation
- Automatic update checker with pop-up notification
- Windows® and Linux compliance
- Available source code
- Software redistribution

Sierra Wireless Watcher™ Connection Management Software for AirPrime SL808x

The AirPrime SL8080, SL8081 and SL8082 intelligent embedded modules support Sierra Wireless Watcher, a configurable connection management software with many advanced network and modem debug capabilities.

Watcher can be installed in a matter of minutes and features a simple and intuitive user interface.

Watcher is architected to fit the needs of OEMs and operators in different markets. It is available in multiple languages, it can have OEM and/or operator branding applied, and the user interface skin can be customized.

Watcher comes with the AirCard® Updates capability which delivers driver, Watcher, or firmware updates directly to the user as approved by the OEM and the operator.

Sierra Wireless Services

AirPrime™ 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

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 which 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.

AIRVANTAGE // 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™ | AirPrime™

Sierra Wireless AirPrime™
Intelligent Embedded Modules
SL Series

	SL6087	SL8080	SL8081	SL8082
AIR INTERFACE				
	EDGE	HSDPA	HSDPA	HSDPA
FREQUENCY BANDS				
	GSM/GPRS/EDGE 850/900/1800/1900 MHz	GSM/GPRS/EDGE 850/900/1800/1900 MHz UMTS 850/1900 MHz	GSM/GPRS/EDGE 850/900/1800/1900 MHz UMTS 900/2100 MHz	GSM/GPRS/EDGE 850/900/1800/1900 MHz UMTS 850/2100 MHz
APPROVALS				
	R&TTE, CE, GCF-CC, FCC, PTCRB, China RTE	FCC, IC, GCF-CC, PTCRB, AT&T,	CE, GCF, T-Mobile	FCC, IC, CE, GCF-CC, PTCRB, A-Tick, Telstra
POWER				
Alarm (leakage only)	17 µA	<1mA	<1mA	<1mA
Standby and Idle (Sleep)	2,5 mA	<2.5 mA	<2.5 mA	<2.5 mA
GSM/GPRS max	400 mA max GPRS Class 10	2.2A peak @3.6V (+32dBm), 800mA average	2.2A peak @3.6V (+32dBm), 800mA average	2.2A peak @3.6V (+32dBm), 800mA average
EVDO REV A max				
HSxPA max		1A @ 3.6V (+23dBm)	1A @ 3.6V (+23dBm)	1A @ 3.6V (+23dBm)
CPU PERFORMANCE				
Processor	ARM946 / DSP	ARM926EJS / QDSP4	ARM926EJS / QDSP5	ARM926EJS / QDSP6
Core frequency	26-104 MHz	184 MHz / 92 MHz	184 MHz / 92 MHz	184 MHz / 92 MHz
User MIPS Available	Up to 87 MIPS	n/a	n/a	n/a
IO voltage	1V8-2V8	1V8	1V8	1V8
AUDIO				
	1x speaker out	1x speaker out	1x speaker out	1x speaker out
Analog Audio	1x micro in	1x micro in	1x micro in	1x micro in
Digital Audio	PCM	PCM	PCM	PCM
Codec	FR, EFR, HR, AMR	FR,EFR,HR,AMR,QCELP,13K	FR,EFR,HR,AMR,QCELP,13K	FR,EFR,HR,AMR,QCELP,13K
Quality	VDA2A	VDA2A	VDA2A	VDA2A
Echo Cancellation & ise reduction	✓	✓	✓	✓
DTMF	✓	✓	✓	✓
INTERFACES				
UART	1x 8-Wire | 1x 4-Wire	1x 4-Wire	1x 4-Wire	1x 4-Wire
USB	USB 2.0 Full Speed	USB 2.0 High Speed	USB 2.0 High Speed	USB 2.0 High Speed
SPI	1 x 4-Wire	1 x 4-Wire	1 x 4-Wire	1 x 4-Wire
I2C				
ADC	2			
DAC				
GPIO	Up to 26	Up to 3	Up to 3	Up to 3
RTC	1			
Timers (HW, SW, Capture)	1			
Interrupts Pins	2			
Flash LED Output	1	1	1	1
PWM (Buzzer)	1	1	1	1
Keyboard interface				
SIM interface	1.8V/3V	1.8/3V	1.8/3V	1.8/3V
ANTENNA DIVERSITY				
		No	No	No
LOCATION SOLUTION				
	C-GPS Plug-In	gpsOne	gpsOne	gpsOne
EMBEDDED SIM				
	✓			
CONTROL OPTIONS				
	AT commands, C/C++ language, Lua script	AT commands, Sierra API	AT commands, Sierra API	AT commands, Sierra API
OPERATING SYSTEM				
	Open AT	-	-	-
DRIVERS				
Windows® Mobile	✓	✓	✓	✓
Windows® CE	✓	✓	✓	✓
Windows® XP	✓	✓	✓	✓
Windows® 7	✓	✓	✓	✓
Windows® Vista	✓	✓	✓	✓
Mac OS				
Linux	✓	✓	✓	✓
DEVICE DIMENSIONS				
	25 x 30 x 2.65 mm	25 x 30 x 2.50 mm	25 x 30 x 2.50 mm	25 x 30 x 2.50 mm
OPERATIONAL TEMP.				
Normal (Class A)	-30°C to +75°C	-20°C to +60°C	-20°C to +60°C	-20°C to +60°C
Extended (Class B)	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C
AUTOMOTIVE QUALIFIED				
	✓			

SIERRA WIRELESS™

AirPrime™