Sierra Wireless AirPrime™ Wireless Embedded Modules SL Series

Future–Proof your Connected Devices

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

Available in form factor compatible EDGE, HSDPA, HSPA+ and EV-DO Rev A versions, the AirPrime SL Series offers 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.

AirPrime SL Series modules are ideal for mobile consumer, transportation, energy, industrial, security, sales & payment, networking, field service and healthcare solutions.

AIRPRIME SL6087

Elected "Best 2G Module" by the GSM Association in 2010, the AirPrime SL6087 quad-band EDGE module natively supports the complete Sierra Wireless Embedded Application Framework. It includes an embedded TCP/IP stack, and is certified for use in any geographical market. The AirPrime SL6087 is available with Embedded SIM as an option, and supports Management Services.

AIRPRIME SL808X

The AirPrime SL808x offers dual-band HSDPA connectivity (up to 3.6 Mbps downlink) and quad-band GSM/GPRS/EDGE network access. It offers worldwide coverage with 3 different dual-band versions: 850/900 MHz, 900/2100 MHz, and 850/2100 MHz. It is available with Embedded SIM as an option.

AIRPRIME SL809X

The AirPrime SL809x is one of the smallest high-speed HSPA+ modules in the industry, featuring voice, antenna diversity, and GPS support. It offers tri-band (850/1900/2100 MHz) or dual-band (900/2100 MHz) HSPA+ connectivity with data speeds up to 14.4 Mbps on the downlink and 5.7 Mbps on the uplink, as well as quad-band GSM/GPRS/EDGE.
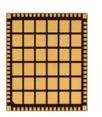
AIRPRIME SL501X

The AirPrime SL501x is a dual-band (800/1900 MHz) EV-DO Rev A module. It offers data speeds up to 3.1Mbps on the downlink and up to 1.8Mbps on the uplink, and supports GPS. The AirPrime SL501x comes in two variants: The SL5010 supports voice and data, while the SL5011 is a data only module.

KEY FEATURES AND BENEFITS

- Easy upgrade path to new network technologies
- Make a single product design for multiple geographical markets
- Extended temperature range for industrial environments
- Compact and cost effective 25 x 30 mm standard JEDEC package
- Reliable LGA mounting technology for robustness, excellent heat dissipation and optimized thickness

Sierra Wireless AirPrime™
Wireless Embedded Modules
SL Series

	SL6087	SL808X	SL809X	SL501X
AIR INTERFACE				
	EDGE	HSDPA	HSPA+	EV-DO Rev A
DATA SPEED				
Peak download rate	237 Kbps	3.6 Mbps	14.4 Mbps	3.1 Mbps
Peak upload rate	237 Kbps	384 Kbps	5.7 Mbps	1.8 Mbps
FREQUENCY BANDS				
GSM/GPRS/EDGE	850/900/1800/1900 MHz	850/900/1800/1900 MHz	850/900/1800/1900 MHz	
WCDMA		SL8080/81: 850/1900 MHz SL8082/83: 900/2100 MHz SL8084/85: 850/2100 MHz	SL8090: 850/1900/2100 MHz SL8092: 900/2100 MHz	
EV-DO Rev A				800/1900 MHz
APPROVALS				
Regulatory	R&TTE, CE, GCF-CC, FCC, PTCRB, China RTE	SL8080/81: FCC, IC, GCF-CC, PTCRB SL8082/83: R&TTE, CE, GCF-CC SL8084/85: FCC, IC, CE, GCF-CC, PTCRB,	FCC, IC, CE, GCF-CC, PTCRB,	FCC,
Carrier	AT&T	SL8080/81: AT&T SL8084/85: Telstra	AT&T, Telstra	Verizon, Sprint (targets)
POWER				
Alarm (leakage only)	17 µA*	35 µA*	<50 µA*	
Standby and Idle (Sleep)	1.9 mA	<2 mA	<2 mA	3.5mA
GSM/GPRS max	1.9A peak @3.7V 450mA average	2.2A peak @3.6V (+32dBm) 900mA average	2.2A peak @3.6V (+32dBm) 800mA average	
EVDO REV A max				1000mA
HSxPA max	775mA @ 3.6V (+23dBm)	1A @ 3.6V (+23dBm)	1A @ 3.6V (+23dBm)	
CPU PERFORMANCE				
Processor	ARM946 / DSP	ARM926EJS / QDSP4	ARM1136JS	ARM926EJS
Core frequency	26-104 MHz	184 MHz / 92 MHz	300MHz	192MHz
User MIPS Available	Up to 87	n/a	n/a	n/a
IO voltage	1V8-2V8	1V8	1V8	1V8
AUDIO				
Analog Audio	1x micro in/1x speaker out	1x micro in/1x speaker out		
Digital Audio	PCM	PCM	PCM (SL8090/92)	PCM (SL5010)
Codec	FR, EFR, HR, AMR	FR, EFR, HR, AMR, QCELP-13K	FR, EFR, HR, AMR	FR, EFR, HR (SL5010)
Quality	VDA2A	VDA2A	VDA2A	VDA2A
Echo cancellation & Noise reduction	✓	✓	✓	✓
DTMF	✓	✓	✓	✓
INTERFACES				
UART	1 x 4-Wire and 1 x 8-Wire	1x 4-Wire or 8-wire	1x 4-Wire or 8-wire	1 x 4-Wire
USB	1 x USB 2.0 Full Speed	1 x USB 2.0 High Speed	1 x USB 2.0 High Speed	1 x USB 2.0 High Speed
SPI	1 x 4-Wire	1 x 4-Wire	1 x 4-Wire	
I2C	1			
ADC	2			2
GPIO	Up to 26	Up to 3	Up to 3	Up to 5
RTC	1			
Timers (HW, SW, Capture)	1			
Interrupts Pins	2			
Flash LED Output	1	1	1	1
PWM (Buzzer)	1	1	1	1
Tx Burst indicator	1		1	
SIM interface	1.8/3V	1.8/3V	1.8/3V	1.8V/3V
LOCATION SOLUTION				
	AirPrime XM0110 GPS module and Location Library	gpsOne	gpsOneXTRA	gpsOne
EMBEDDED SIM				
	✓	✓		
MANAGEMENT SERVICES				
	✓			
CONTROL OPTIONS				
	AT commands, C/C++ language	AT commands, CnS	AT commands, CnS	AT commands, CnS
EMBEDDED APPLICATION FRAMEWORK				
	Open AT® OS	-	-	
TCP/IP				
	TCP/UDP/FTP/HTTP/SMTP/ POP3/SNMP/SSL	TCP/UDP	TCP/UDP	TCP/UDP
DRIVERS				
	Windows Mobile/CE, Windows XP/Vista	Windows Mobile/CE, Windows XP/Vista, Windows 7, Linux	Windows Mobile/CE, Windows XP/Vista, Windows 7, Linux	Windows Mobile/CE, Windows XP/Vista, Windows 7, Linux
DEVICE DIMENSIONS				
	25 x 30 x 2.65 mm	25 x 30 x 2.35 mm	25 x 30 x 2.35 mm	25 x 30 x 2.35 mm
TEMPERATURE RANGE				
	-40°C to +85°C	-40°C to +85°C**	-40°C to +85°C**	-40°C to +85°C

* Power mode in Alarm Mode can be reduced to less than 1µA with external design. Contact Sierra Wireless for more information.
** Supported by SL8080/82/84/90/92
Some features may be available in a future release. Contact Sierra Wireless for more information.

SIERRA WIRELESS™

AirPrime™