Sierra Wireless AirPrime™ Intelligent Embedded Modules WS Series

Lean GPRS Modules for Industrial M2M

The Sierra Wireless AirPrime™ WS Series of intelligent embedded modules provides entry-level cellular products which add wireless voice and data connectivity to your product and provide WWAN connectivity in a highly compact form-factor.

The AirPrime WS Series products pack all the radio, processing, memory and software you need for your product to perform into a sleek 25 x 25 mm package.

The AirPrime WS Series modules are designed with a castellation form factor so that they can be easily placed within your products. This design means it is:

- Easy to solder on SMT lines, automatically or manually
- Easy to visually inspect (no X-ray machines required)
- Easy to correct unsoldered points at end of line inspection (without reflow)
- Easy to service in the field (removal can be done on-site without specific tools)

AIRPRIME WISMO218

The AirPrime WISMO218 module is a dual-band 900/1800 GSM modem supporting multiple bearers (GSM, CSD, SMS, Fax, GPRS) and multiple codecs (HR, FR, EFR, AMR).

AIRPRIME WISMO228

The AirPrime WISMO228 module delivers the same features as WISMO218 in an identical package, and adds quad-band 850/900/1800/1900 GSM connectivity as well as an embedded TCP/IP stack.

KEY BENEFITS:

- Value optimized GPRS modem
- Easy to use, easy to build
- Castellation package
- Produced on an ISO/TS 16949–certified manufacturing site
- IPR included

SIERRA WIRELESS™ | AirPrime™

Sierra Wireless Software Suite

Get Your Wireless Module Up and Running In Less Than 5 Minutes

The Sierra Wireless Discovery Tool is a simple and intuitive tool for Windows® environments that enables ultra-fast configuration of modules and easy access to basic modem features. The user interface enables you to access these features while simultaneously displaying the AT commands that you need during product development.

The Discovery Tool allows you to discover and configure your AirPrime WS Series module and perform a range of standard operations such as sending an SMS or setting up a GPRS connection to the Internet. The tool is Sierra Wireless exclusive and free of charge for our customers.

KEY FEATURES	
USABILITY FEATURES	
Easy	Runs in Java on Microsoft® Windows®, intuitive and trouble-free
Fast	Get your module up and running in less than 5 minutes
Smart	Full graphical interface provides rapid access to the most used modem features with inline help and mouse-over assistance for events and their AT commands
OPERATIONAL FEATURES	
Network	Retrieve band operation, network status, quality and carrier/operator name
Device	Retrieve device parameters such as model, serial number, IMEI, IMSI, firmware version
Audio	Retrieve/set echo cancellation, speaker/microphone selection, level control
Calls	Initiate voice (with phonebook), CSD data, GPRS data calls
Messaging	Retrieve/set SMSC and send/receive SMS
Watch	An AT "spy" window for each function group and AT "console" provide total bi-directional control of AT commands, allowing you to "use and learn" your chosen device

Sierra Wireless Professional Services

Sierra Wireless offers extensive professional services, including:

- **Product Design**
  Customer design review
  Customer product certification

- **Product Build**
  IMEI implementation (Sierra Wireless, customer or inactive IMEI)
  Tailored delivery
  Tailored product configuration

- **After Sales**
  Intelligent embedded module reconfiguration
  Out-of-warranty repair
  Extended warranty

Why Sierra Wireless

Sierra Wireless has been in the wireless data and applications business for more than 16 years. We have a proven record of delivering well-designed, highly reliable products, backed by worldwide field and call center support. Our business partners depend on us for a broad portfolio of leading-edge wireless products and solutions that help them extend the reach of their networks. Find out how our products can help you. For more information, visit **www.sierrawireless.com**.

KEY BENEFITS:

- Greater solution stability and performance

- Fewer deployment problems, delays and added expenses

- Reduces time-consuming redesign

- Device design optimized for integration of Sierra Wireless products

AirPrime

Sierra Wireless AirPrime™
Intelligent Embedded Modules
WS Series

	WISMO218	WISMO228
AIR INTERFACE		
	GSM/GPRS	GSM/GPRS
FREQUENCY BANDS		
	900/1800 MHz	850/900/1800/1900 MHz
APPROVALS		
	CE, GCG, China RTE, R&TTE	CE, GCF, China RTE, R&TTE, PTCRB, AT&T, FCC, IC
POWER		
Alarm	50 µA	50 µA
GSM Idle	1.3mA	1.22mA
GSM/GPRS max	369mA 2Tx/3Rx, PCL5 (GPRS Class 10)	366mA 2Tx/3Rx, PCL5 (GPRS Class 10)
CPU PERFORMANCES		
Processor	ARM926 / DSP	ARM926 / DSP
Core frequency	156 MHz	156 MHz
User MIPS available	n/a	n/a
IO voltage	3.2 to 4.8 V	3.2 to 4.8 V
AUDIO		
Analog audio	1 x speaker out -1 x micro in	1 x speaker out -1 x micro in
Digital audio	-	-
Codec	HR, FR, EFR, AMR	HR, FR, EFR, AMR
Quality	n/a	n/a
Echo Cancellation & noise reduction	✓	✓
DTMF	-	-
INTERFACES		
UART	✓	✓
USB	-	-
SPI	✓	✓
I2C	-	-
ADC	✓	✓
DAC	-	-
GPIO	Up to 11	Up to 11
RTC	✓	✓
Timers (HW, SW, Capture)	-	-
Interrupts pins	✓	✓
Flash LED output	✓	✓
PWM (Buzzer)	✓	✓
Keyboard interface	-	-
SIM interface	1.8V/3V	1.8V/3V
CONTROL OPTIONS		
	AT commands	AT commands
DRIVERS		
Windows® Mobile	✓	✓
Windows® CE	✓	✓
Windows®XP	✓	✓
Windows® 7	✓	✓
Windows® Vista	✓	✓
Mac OS	n/a	n/a
DEVICE DIMENSIONS		
	25 x 25 x 2.8 mm	25 x 25 x 2.8 mm
OPERATIONAL TEMPERATURE		
	Class A -30°C to +75°C	Class A -30°C to +75°C
	Class B -40°C to +85°C (Operating)	Class B -40°C to +85°C (Operating)
	Storage -40°C to +85°C	Storage -40°C to +85°C