

# Sierra Wireless AirPrime<sup>®</sup> Embedded Modules HL Series

## Compact, Flexible, and Future Proof 2G, 3G, and 4G Essential Modules

Sierra Wireless AirPrime<sup>®</sup> HL embedded modules offer everything device manufacturers need to meet essential connectivity requirements for machine-to-machine (M2M) applications such as healthcare, point of sale terminals, fleet management, tracking, and consumer electronics. Key differentiators include a common form factor, small size, low-power consumption, enhanced RF performance, optional GNSS (GPS and GLONASS), and worldwide coverage.

### COMPACT: THE SMALLEST 2G TO 4G FORM FACTOR ON THE MARKET

The HL Series is the smallest module on the market sharing a common form factor across 2G, 3G, and 4G technologies. Now, with just one PCB design, device manufacturers can easily integrate voice and data connectivity and deploy in any region, on any wireless mobile network.

### FLEXIBLE: SOLDER DOWN OR CHOOSE THE SNAP-IN SOCKET TO SWITCH MODULES ANY TIME

The compact form factor offers the choice of soldering down the module for efficient high-volume production or, using a snap-in socket on the same solder pads for total flexibility in prototyping or smaller volume runs. The innovative snap-in socket allows device manufacturers to deploy or change modules at any point in the production and product life cycles.

### FUTURE PROOF: INTELLIGENT PIN-TO-PIN COMPATIBILITY TO SUPPORT EVOLVING TECHNOLOGIES

The core and extension pins on the common form factor enables forward and backward compatibility between the different 2G, 3G, and 4G module variants. This means that the mechanical pin location delivers the same function across the series. The optional custom pins allow for new features as technology evolves making it the most future proof module on the market.



### EASY TO INTEGRATE AND MANAGE

The HL Series can be managed remotely with AirVantage<sup>®</sup> Management Service, enabling device manufacturers to securely upgrade device firmware over-the-air. This can extend the life of your products and solutions by future-proofing remote assets, expanding service quality, and saving customers time and operating costs.

Essential



*The more we talked with Sierra Wireless, the more confident we became that they really understood what we needed to not only build and launch a new generation of outdoor lighting fixtures, but to also grow and evolve them over time.*

- Vasanth Philomin,  
General Manager  
Philips CityTouch



AirPrime<sup>®</sup>

# Sierra Wireless AirPrime<sup>®</sup> Embedded Modules HL Series

	HL75xx Series	HL8548	HL6528
<b>FORM FACTOR</b>	LGA	LGA	LGA
<b>AIR INTERFACE</b>	LTE & LTE/HSPA	GSM/GPRS/EDGE/HSD/PA/HSUPA	GSM/GPRS
<b>FREQUENCY BANDS</b>	HL7519: B2/B4/B13 HL7528: B1/B3/B5/B7 HL7548: B2/B4/B5/B17 HL7549: B3/B7/B28 HL7588: B2/B4/B5/B13/B17		
<b>LTE</b>			
<b>HSPA</b>	HL7588: B2/B5	B1/B2/B5/B6/B8	
<b>EDGE</b>		850/900/1800/1900	
<b>GSM/GPRS</b>		850/900/1800/1900	850/900/1800/1900
<b>APPROVALS</b>			
<b>Regulatory</b>	PTCRB, FCC, GCF, IC, KC Mark	CE, FCC, PTCRB, GCF, IC, Anatel, CCC	CE, FCC, PTCRB, GCF, IC, Anatel, CCC
<b>Carrier</b>	Depends on Models: AT&T, Verizon, Rogers, KT, SKT, LGU+...	AT&T, Vodafone, NTT...	Approved in many carriers over the world
<b>CURRENT CONSUMPTION</b>			
<b>Power Supply for Extended Battery Life</b>	2.8V supports	2.8V supports	2.8V supports
<b>Alarm (leakage only)</b>	110µA	40µA	35µA
<b>Standby and Idle (Sleep)</b>	LTE: 1.5 mA	1.2 mA	1 mA
<b>GSM/GPRS max</b>		360 mA	360 mA
<b>HSxPA max</b>	HL7588: 560 mA	560 mA	
<b>LTE max</b>	CAT 4: 750 mA		
<b>AUDIO</b>			
<b>Analog Audio</b>			✓
<b>Digital Audio</b>	✓ depends on the variants	✓	✓
<b>Codec</b>	depends on the variants	HR, FR, EFR, AMR	HR, FR, EFR, AMR
<b>Echo Cancellation &amp; Noise Reduction</b>	depends on the variants	✓	✓
<b>DTMF</b>	depends on the variants	✓	✓
<b>INTERFACES</b>			
<b>UART</b>	✓ 8 lines	✓ 8 lines	✓ 8 lines
<b>USB</b>	✓	✓	
<b>SPI</b>			✓
<b>ADC</b>	2	2	2
<b>GPIO</b>	8	8	8
<b>Flash LED Output</b>	✓	✓	
<b>PWM (Buzzer)</b>	1	1	2
<b>Tx Burst Indicator</b>	✓	✓	✓
<b>SIM interface 1.8V/3V</b>	✓	1 SIM DSDS support	2 SIM DSDS support
<b>LOCATION SOLUTION</b>		GPS & Glonass Sirf V	GPS & Glonass Sirf V
<b>CLOUD SERVICES</b>	FOTA through AVMS	FOTA through AVMS	FOTA through AVMS
<b>INTERNET SERVICES</b>	TCP+UDP+FTP+HTTP+HTTPS	TCP+UDP+FTP+HTTP+HTTPS	TCP+UDP+FTP+HTTP+HTTPS
<b>DRIVERS</b>	USB drivers for Linux, Android, Win CE, Win8	USB drivers for Linux, Android, Win CE, Win7, Win XP	RIL driver for Win CE & Linux
<b>DEVICE DIMENSIONS</b>	22x23x2.5 mm	22x23x2.5 mm	22x23x2.5 mm
<b>TEMPERATURE RANGE</b>	- 40°C / + 85°C	- 40°C / + 85°C	- 40°C / + 85°C

## About Sierra Wireless

Sierra Wireless is the global leader in machine-to-machine (M2M) devices and cloud services, delivering intelligent wireless solutions that simplify the connected world. Our solutions are **simple**, **scalable**, and **secure**, and enable customers to get their connected products and services to market faster.

For further company and product information, please visit [www.sierrawireless.com](http://www.sierrawireless.com).