



## Sierra Wireless® WP Series Embedded Modules

### ULTRA-LOW POWER DOMAIN

Ideal for remote solar or battery-powered applications, the WP Series integrated power management feature can reduce power consumption by 200x compared to previous modules, enabling new use-cases for cellular. For example:

- Devices that only need to transmit data once a day can now run on a single battery for up to 3 years\*
- Devices that only need to transmit data once a week can now run on a single battery for 10 years\*

\*based on sending 100kb of data, powered by a standard consumer-grade battery, operating on a 2G network.

22mm



23mm

## Expect more, do more with the next-gen WP

Sierra Wireless® AirPrime® WP Series provides an integrated device-to-cloud architecture enabling IoT developers to build a Linux-based product on a single module and seamlessly send valuable user and product data to the cloud. Offering an application processor running the open source Legato® platform, GNSS receiver, and cellular modem with an ultra-low power domain, WP modules reduce system complexity and get you to market faster.

### SIMPLIFY SYSTEM DEVELOPMENT WITH A DEVICE-TO-CLOUD ARCHITECTURE

- All the key hardware components of your connected product in a compact form factor to save board space and reduce total BOM (bill of materials)
- Integrated Legato platform that maintains your Linux distribution and includes an application framework, development tools, and community support
- Integrated AirVantage® cloud services make it easy to access product and user data into your backend enterprise applications.

### FUTURE-PROOF YOUR PRODUCT DESIGNS

- CF3® (common flexible form factor) module design provides worldwide coverage on 2G, 3G, 4G, and LPWA networks, is compatible with HL Series of modules, and capable of supporting new wireless technologies
- The professionally maintained open source Legato platform for IoT enables you to reuse software components and applications in future designs with no vendor lock-in
- AirVantage cloud services with big data storage grows with your deployments and can power future revenue-generating services as your business evolves

### KEEP YOUR PRODUCTS DEPLOYED FOR YEARS IN THE FIELD

- New ultra-low power domain can reduce power consumption by 200x opening new use-cases for cellular where 100% connectivity to the network is not required
- Application sandbox within the Legato platform hosts your proprietary software and provides a secure place for 3rd party applications to enable future services for your customers
- Unlimited FOTA (firmware over-the-air) powered by AirVantage maintains optimized connectivity as networks evolve and keeps your data transmission protected as new security threats arise

Sierra Wireless  
WP SERIES EMBEDDED MODULES

	WP7502	WP7504	WP7504-1	WP8548
<b>Target Region</b>	EMEA	Americas	Americas	Global
<b>4G LTE</b>				
<b>Category</b>	Cat-3	Cat-3	Cat-3	
<b>Frequency Bands</b>	B1, B3, B7, B8, B20	B2, B4, B5, B12, B17, B25, B26	B2, B4, B5, B12, B17, B25, B26	
<b>3G</b>				
<b>Technology supported</b>	HSPA+, UMTS	HSPA+, UMTS	HSPA+, UMTS	HSPA+, UMTS
<b>Frequency Bands</b>	B1, B8	B2, B4, B5	B2, B4, B5	B1, B2, B5, B6, B8, B19
<b>Technology supported</b>		EVDO		
<b>Frequency Bands</b>		BC0, BC1, BC10		
<b>2G</b>				
<b>Technology supported</b>	EDGE, GSM, GPRS	CDMA		EDGE, GSM, GPRS
<b>Frequency Bands</b>	900, 1800	BC0, BC1, BC10		850, 900, 1800, 1900
<b>DATA SPEED</b>				
<b>Peak Download Rate</b>	100 Mbps	100 Mbps	100 Mbps	42 Mbps
<b>Peak Upload Rate</b>	50 Mbps	50 Mbps	50 Mbps	5.76 Mbps
<b>LOCATION SERVICES</b>				
<b>Satellite Systems (Optional)</b>	GPS, Galileo, Glonass	GPS, Galileo, Glonass	GPS, Galileo, Glonass	GPS, Galileo, Glonass
<b>CORES</b>				
<b>Application Core</b>	ARM® Cortex™- A5 (550MHz)	ARM® Cortex™- A5 (550MHz)	ARM® Cortex™- A5 (550MHz)	ARM® Cortex™- A5 (550MHz)
<b>Telecom Core</b>	Dual QDSP6 (600MHz)	Dual QDSP6 (600MHz)	Dual QDSP6 (600MHz)	Dual QDSP6 (600MHz)
<b>EMBEDDED SOFTWARE</b>				
<b>Pre-certified Firmware</b>	✓	✓	✓	✓
<b>APPLICATION FRAMEWORK</b>				
<b>Embedded Platform</b>	Legato® open source	Legato® open source	Legato® open source	Legato® open source
<b>Linux Distribution</b>	Yocto, Long-term supported Linux Kernel (LTSI)	Yocto, Long-term supported Linux Kernel (LTSI)	Yocto, Long-term supported Linux Kernel (LTSI)	Yocto, Long-term supported Linux Kernel (LTSI)
<b>AUDIO CODECS</b>				
<b>Digital audio</b>	✓	✓	✓	✓
<b>PCM/12S</b>	✓	✓	✓	✓
<b>Codec: HR, FR, EFR, AMR</b>	✓	✓	✓	✓
<b>Echo cancellation &amp; noise reduction</b>	✓	✓	✓	✓
<b>DTMF</b>	✓	✓	✓	✓
<b>USB DRIVERS</b>				
<b>Windows® 7 and 8</b>	✓	✓	✓	✓
<b>Linux Driver</b>	✓	✓	✓	✓
<b>INTERFACES</b>				
<b>UART</b>	2	2	2	2
<b>USB</b>	1	1	1	1
<b>I2C</b>	1	1	1	1
<b>ADC</b>	4	4	4	4
<b>GPIO</b>	20	20	20	20
<b>Tx ON Indicator</b>	1	1	1	1
<b>SIM Interface 1.8V/3V</b>	2	2	2	2
<b>HARDWARE</b>				
<b>CF3™ Form Factor (LGA)</b>	✓	✓	✓	✓
<b>Snap-in socket option</b>	✓	✓	✓	✓
<b>Dimensions</b>	22x23x4.4mm	22x23x4.4mm	22x23x4.4mm	22x23x4.4mm
<b>Antenna: Diversity</b>	✓	✓	✓	
<b>Antenna: MIMO</b>	✓	✓	✓	
<b>TEMPERATURE RANGE</b>				
<b>Industrial Grade</b>	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C
<b>APPROVALS</b>				
<b>Regulatory</b>	CE, GCF	PTCRB, FCC, GCF, IC	PTCRB, FCC, GCF, IC	CE, FCC, PTCRB, GCF, IC, JRF/JPA, NCC
<b>Carrier</b>		AT&T, Sprint, T-Mobile	AT&T, Sprint, T-Mobile	AT&T
<b>CLOUD SERVICES</b>				
<b>Free Unlimited FOTA upgrades</b>	✓	✓	✓	✓
<b>Device Management option</b>	✓	✓	✓	✓
<b>Application Enablement option</b>	✓	✓	✓	✓
<b>Connectivity Management option</b>	✓	✓	✓	✓

Sierra Wireless  
WP SERIES EMBEDDED MODULES

	WP7601	WP7601-1	WP7603	WP7603-1
<b>Target Region</b>	Americas	Americas	Americas	Americas
<b>4G LTE</b>				
<b>Category</b>	Cat-4	Cat-1	Cat-4	Cat-1
<b>Frequency Bands</b>	B4, B13	B4, B13	B2, B4, B5, B12	B2, B4, B5, B12
<b>3G</b>				
<b>Technology supported</b>			HSPA+, UMTS	HSPA+, UMTS
<b>Frequency Bands</b>			B2, B4, B5	B2, B4, B5
<b>DATA SPEED</b>				
<b>Peak Download Rate</b>	150 Mbps	10 Mbps	150 Mbps	10 Mbps
<b>Peak Upload Rate</b>	50 Mbps	5 Mbps	50 Mbps	50 Mbps
<b>LOCATION SERVICES</b>				
<b>Satellite Systems (Optional)</b>	GPS, Galileo, Glonass, Beidou	GPS, Galileo, Glonass, Beidou	GPS, Galileo, Glonass, Beidou	GPS, Galileo, Glonass, Beidou
<b>CORES</b>				
<b>Application Core</b>	ARM® Cortex™- A7 (1.3GHz)	ARM® Cortex™- A7 (1.3GHz)	ARM® Cortex™- A7 (1.3GHz)	ARM® Cortex™- A7 (1.3GHz)
<b>Telecom Core</b>	Dual QDSP6 (600MHz)	Dual QDSP6 (600MHz)	Dual QDSP6 (600MHz)	Dual QDSP6 (600MHz)
<b>EMBEDDED SOFTWARE</b>				
<b>Secure Boot</b>	✓	✓	✓	✓
<b>Pre-certified Firmware</b>	✓	✓	✓	✓
<b>APPLICATION FRAMEWORK</b>				
<b>Embedded Platform</b>	Legato® open source	Legato® open source	Legato® open source	Legato® open source
<b>Linux Distribution</b>	Yocto, Long-term supported Linux Kernel (LTSI)	Yocto, Long-term supported Linux Kernel (LTSI)	Yocto, Long-term supported Linux Kernel (LTSI)	Yocto, Long-term supported Linux Kernel (LTSI)
<b>AUDIO CODECS</b>				
<b>Digital audio</b>	✓	✓	✓	✓
<b>PCM/12S</b>	✓	✓	✓	✓
<b>Codec: HR, FR, EFR, AMR</b>	✓	✓	✓	✓
<b>Echo cancellation &amp; noise reduction</b>	✓	✓	✓	✓
<b>DTMF</b>	✓	✓	✓	✓
<b>USB DRIVERS</b>				
<b>Windows® 7 and 8</b>	✓	✓	✓	✓
<b>Linux</b>	✓	✓	✓	✓
<b>INTERFACES</b>				
<b>UART</b>	2	2	2	2
<b>USB</b>	1	1	1	1
<b>I2C</b>	1	1	1	1
<b>ADC</b>	4	4	4	4
<b>GPIO</b>	18	18	18	18
<b>Tx ON Indicator</b>	1	1	1	1
<b>SIM Interface 1.8V/3V</b>	1	1	1	1
<b>HARDWARE</b>				
<b>CF3™ Form Factor (LGA)</b>	✓	✓	✓	✓
<b>Snap-in socket option</b>	✓	✓	✓	✓
<b>Dimensions</b>	22x23x2.5mm	22x23x2.5mm	22x23x2.5mm	22x23x2.5mm
<b>Antenna: Diversity</b>	✓	✓	✓	✓
<b>Antenna: MIMO</b>	✓	✓	✓	✓
<b>TEMPERATURE RANGE</b>				
<b>Industrial Grade</b>	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C
<b>APPROVALS</b>				
<b>Regulatory</b>	FCC, IC	FCC, IC	FCC, IC	FCC, IC
<b>Carrier</b>	Verizon	Verizon	AT&T, T-Mobile	AT&T, T-Mobile
<b>APPROVALS</b>				
<b>Optional Ready-to-Connect Sierra Wireless embedded SIM</b>	✓	✓	✓	✓
<b>CLOUD SERVICES</b>				
<b>Free Unlimited FOTA upgrades</b>	✓	✓	✓	✓
<b>Device Management option</b>	✓	✓	✓	✓
<b>Application Enablement option</b>	✓	✓	✓	✓
<b>Connectivity Management option</b>	✓	✓	✓	✓

Note: VoLTE supported as a firmware upgrade

Sierra Wireless  
WP SERIES EMBEDDED MODULES

	WP7607	WP7607-1	WP7608	WP7608-1	WP7609
<b>Target Region</b>	EMEA	EMEA	India/China	India/China	Australia
<b>4G LTE</b>					
<b>Category</b>	Cat-4	Cat-1	Cat-4	Cat-1	Cat-4
<b>Frequency Bands</b>	B1, B3, B7, B8, B20, B28	B1, B3, B7, B8, B20, B28	B1, B3, B5, B8, B40, B41*	B1, B3, B5, B8, B40, B41*	B1, B3, B5, B7, B8, B28
<b>3G</b>					
<b>Technology supported</b>	HSPA+, UMTS	HSPA+, UMTS	HSPA+, UMTS	HSPA+, UMTS	HSPA+, UMTS
<b>Frequency Bands</b>	B1, B8	B1, B8	B1, B8	B1, B8	B1, B5, B8
<b>2G</b>					
<b>Technology supported</b>	EDGE, GSM, GPRS	EDGE, GSM, GPRS	EDGE, GSM, GPRS	EDGE, GSM, GPRS	
<b>Frequency Bands</b>	900, 1800	900, 1800	900, 1800	900, 1800	
<b>DATA SPEED</b>					
<b>Peak Download Rate</b>	150 Mbps	10 Mbps	150 Mbps	10 Mbps	150 Mbps
<b>Peak Upload Rate</b>	50 Mbps	5 Mbps	50 Mbps	5 Mbps	50 Mbps
<b>LOCATION SERVICES</b>					
<b>Satellite Systems (Optional)</b>	GPS, Galileo, Glonass, Beidou	GPS, Galileo, Glonass, Beidou	GPS, Galileo, Glonass, Beidou	GPS, Galileo, Glonass, Beidou	GPS, Galileo, Glonass, Beidou
<b>CORES</b>					
<b>Application Core</b>	ARM® Cortex™- A7 (1.3GHz)	ARM® Cortex™- A7 (1.3GHz)	ARM® Cortex™- A7 (1.3GHz)	ARM® Cortex™- A7 (1.3GHz)	ARM® Cortex™- A7 (1.3GHz)
<b>Telecom Core</b>	Dual QDSP6 (600MHz)	Dual QDSP6 (600MHz)	Dual QDSP6 (600MHz)	Dual QDSP6 (600MHz)	Dual QDSP6 (600MHz)
<b>EMBEDDED SOFTWARE</b>					
<b>Secure Boot</b>	✓	✓	✓	✓	✓
<b>Pre-certified Firmware</b>	✓	✓	✓	✓	✓
<b>APPLICATION FRAMEWORK</b>					
<b>Embedded Platform</b>	Legato® open source	Legato® open source	Legato® open source	Legato® open source	Legato® open source
<b>Linux Distribution</b>	Yocto, Long-term supported Linux Kernel (LTSI)	Yocto, Long-term supported Linux Kernel (LTSI)	Yocto, Long-term supported Linux Kernel (LTSI)	Yocto, Long-term supported Linux Kernel (LTSI)	Yocto, Long-term supported Linux Kernel (LTSI)
<b>AUDIO CODECS</b>					
<b>Digital audio</b>	✓	✓	✓	✓	✓
<b>PCM/12S</b>	✓	✓	✓	✓	✓
<b>Codec: HR, FR, EFR, AMR</b>	✓	✓	✓	✓	✓
<b>Echo cancellation &amp; noise reduction</b>	✓	✓	✓	✓	✓
<b>DTMF</b>	✓	✓	✓	✓	✓
<b>USB DRIVERS</b>					
<b>Windows® 7 and 8</b>	✓	✓	✓	✓	✓
<b>Linux</b>	✓	✓	✓	✓	✓
<b>INTERFACES</b>					
<b>UART</b>	2	2	2	2	2
<b>USB</b>	1	1	1	1	1
<b>I2C</b>	1	1	1	1	1
<b>ADC</b>	4	4	4	4	4
<b>GPIO</b>	18	18	18	18	18
<b>Tx ON Indicator</b>	1	1	1	1	1
<b>SIM Interface 1.8V/3V</b>	1	1	1	1	1
<b>HARDWARE</b>					
<b>CF3™ Form Factor (LGA)</b>	✓	✓	✓	✓	✓
<b>Snap-in socket option</b>	✓	✓	✓	✓	✓
<b>Dimensions</b>	22x23x2.5mm	22x23x2.5mm	22x23x2.5mm	22x23x2.5mm	22x23x2.5mm
<b>Antenna: Diversity</b>	✓	✓	✓	✓	✓
<b>Antenna: MIMO</b>	✓	✓	✓	✓	✓
<b>TEMPERATURE RANGE</b>					
<b>Industrial Grade</b>	-40°C to +85°C	-40°C to +85°C	-40°C / +85°C	-40°C / +85°C	-40°C to +85°C
<b>APPROVALS</b>					
<b>Regulatory</b>	GCF	GCF	CCC, GCF	CCC, GCF	GCF, RCM
<b>Carrier</b>					Telstra, Optus, Vodafone
<b>CONNECTIVITY</b>					
<b>Optional Ready-to-Connect Sierra Wireless embedded SIM</b>	✓	✓	✓	✓	✓
<b>CLOUD SERVICES</b>					
<b>Free Unlimited FOTA upgrades</b>	✓	✓	✓	✓	✓
<b>Device Management option</b>	✓	✓	✓	✓	✓
<b>Application Enablement option</b>	✓	✓	✓	✓	✓
<b>Connectivity Management option</b>	✓	✓	✓	✓	✓

\*B41 supported frequency range: (2535–2655 MHz)  
Note: VoLTE supported as a firmware upgrade

# Sierra Wireless

## WP SERIES EMBEDDED MODULES

	WP7700	WP7702
<b>Target Region</b>	Global	Global
<b>4G LTE</b>		
<b>Category</b>	Cat-M1/NB1	Cat-M1/NB1
<b>Frequency Bands</b>	B1, B2, B3, B4, B5, B8, B12, B13, B17, B18, B19, B20, B26, B28	B1, B2, B3, B4, B5, B8, B12, B13, B17, B18, B19, B20, B26, B28
<b>2G</b>		
<b>Technology supported</b>		GSM, GPRS
<b>Frequency Bands</b>		900, 1800
<b>DATA SPEED</b>		
<b>Peak Download Rate</b>	Cat-M1: 300kbps   Cat-NB1: 27kbps	Cat-M1: 300kbps   Cat-NB1: 27kbps
<b>Peak Upload Rate</b>	Cat-M1: 375kbps   Cat-NB1: 65kbps	Cat-M1: 375kbps   Cat-NB1: 65kbps
<b>LOCATION SERVICES</b>		
<b>Satellite Systems (Optional)</b>	GPS, Galileo, Glonass, Beidou	GPS, Galileo, Glonass, Beidou
<b>CORES</b>	ARM® Cortex™- A7 (1.3GHz)	ARM® Cortex™- A7 (1.3GHz)
<b>Application Core</b>		
<b>Telecom Core</b>	Dual QDSP6 (600MHz)	Dual QDSP6 (600MHz)
<b>EMBEDDED SOFTWARE</b>		
<b>Secure Boot</b>	✓	✓
<b>Pre-certified Firmware</b>	✓	✓
<b>APPLICATION FRAMEWORK</b>		
<b>Embedded Platform</b>	Legato® open source	Legato® open source
<b>Linux Distribution</b>	Yocto, Long-term supported Linux Kernel (LTSI)	Yocto, Long-term supported Linux Kernel (LTSI)
<b>AUDIO CODECS</b>		
<b>Digital audio</b>	✓	✓
<b>PCM/12S</b>	✓	✓
<b>Codec: HR, FR, EFR, AMR</b>	✓	✓
<b>Echo cancellation &amp; noise reduction</b>	✓	✓
<b>DTMF</b>	✓	✓
<b>USB DRIVERS</b>		
<b>Windows® 7 and 8</b>	✓	✓
<b>Linux</b>	✓	✓
<b>INTERFACES</b>		
<b>UART</b>	2	2
<b>USB</b>	1	1
<b>I2C</b>	1	1
<b>ADC</b>	4	4
<b>GPIO</b>	18	18
<b>Tx ON Indicator</b>	1	1
<b>SIM Interface 1.8V/3V</b>	1	1
<b>SPI</b>	1	1
<b>HARDWARE</b>		
<b>CF3™ Form Factor (LGA)</b>	✓	✓
<b>Snap-in socket option</b>	✓	✓
<b>Dimensions</b>	22x23x2.5mm	22x23x2.5mm
<b>Antenna: Diversity</b>	✓	✓
<b>Antenna: MIMO</b>	✓	✓
<b>TEMPERATURE RANGE</b>		
<b>Industrial Grade</b>	-40°C to +85°C	-40°C to +85°C
<b>APPROVALS</b>		
<b>Regulatory</b>	PTCRB, FCC, GCF, IC	PTCRB, FCC, GCF, IC
<b>Carrier</b>	AT&T, Verizon, NTT, Telstra, KT, SKT	AT&T, Verizon, NTT, Telstra, KT, SKT
<b>CONNECTIVITY</b>		
<b>Optional Ready-to-Connect Sierra Wireless embedded SIM</b>	✓	✓
<b>CLOUD SERVICES</b>		
<b>Free Unlimited FOTA upgrades</b>	✓	✓
<b>Device Management option</b>	✓	✓
<b>Application Enablement option</b>	✓	✓
<b>Connectivity Management option</b>	✓	✓

Note: VoLTE supported as a firmware upgrade

### About Sierra Wireless

Sierra Wireless is building the Internet of Things with intelligent wireless solutions that empower organizations to innovate in the connected world. We offer the industry's most comprehensive portfolio of 2G, 3G, 4G, and LPWA embedded modules and gateways, seamlessly integrated with our secure cloud and connectivity services. OEMs and enterprises worldwide trust our innovative solutions to get their connected products and services to market faster. For more information, visit [www.sierrawireless.com](http://www.sierrawireless.com).

Sierra Wireless, the Sierra Wireless logo, AirPrime, and the red wave design are trademarks of Sierra Wireless. Other registered trademarks that appear on this brochure are the property of the respective owners. © 2017 Sierra Wireless, Inc. 2017.12.08

