

# 60 Series Modules

802.11ac & 2x2 MU-MIMO Wi-Fi + Bluetooth Smart Ready v4.2

Laird™

Smart Technology. Delivered.™

## ROBUST, SECURE, & FUTURE-READY FOR YOUR APPLICATIONS



Powered by the powerful Marvell 88W8997 chipset, Laird's 60 Series Wi-Fi + Bluetooth modules achieve the best possible connectivity and performance in any RF environment. With industry-leading software, broad OS support\*, and multiple form factors, Laird's 60 Series offers flexibility to meet your needs. The 60 Series introduces 802.11ac, 2x2 MU-MIMO, Bluetooth 4.2 and Bluetooth 5 ready hardware on one low-power module, delivering future-ready cutting edge technology for your product. Building on the security and robustness inherited from Laird's expertise in its 40, 45, and 50 Series modules means ultra-high data rates, improved performance, and the most reliable wireless in crucial applications such as medical and industrial.

- **New Wireless Capabilities:** Advanced 802.11ac Wave 2, 2x2 MU-MIMO, Advanced Power Save, Optimized Internal BT/Wi-Fi Coexistence, Fast Roam
- **New Form Factors:** Extremely small 14mm x 13mm SiP module, and M.2 2230-E module
- **Bluetooth 4.2:** Enables Classic Bluetooth and Low Energy mode with latest security and throughput enhancements, all on Bluetooth 5 ready hardware
- **Pre-calibrated for performance:** Tuned in manufacturing

### Features at a Glance



#### BRING WI-FI + BLUETOOTH TO EVEN MORE DEVICES

60 Series modules are supported on Linux® and Android™\*



#### REDUCED POWER CONSUMPTION

28nm process technology results in significant power savings over competitive radios



#### CONNECT AT ULTRA-HIGH DATA RATES

With 802.11ac and 2x2 MU-MIMO, 60 Series can achieve data rates up to 866 Mbps



#### ALWAYS CONNECTED, EVEN IN THE HARSHTEST CONDITIONS

802.11r + CCKM\* support for rapid roaming and 2x2 MU-MIMO for improved performance and reliability



#### MULTIPLE FORM FACTORS TO SUIT DIVERSE NEEDS

Available as a SiP or M.2 (USB or SDIO) form factors



#### ROBUST SECURITY FOR ENTERPRISE DEMANDS

Full list of security standards and EAP types\*



#### BROAD CERTIFICATION AND INTERNATIONAL APPROVALS

Certifications and approvals for FCC (USA), IC (Canada), ETSI (Europe), KCC (Korea), Giteki (Japan), RCM (AUS/NZ)



#### PERSONAL SUPPORT FROM DESIGN TO MANUFACTURE

Industry-recognized integration and support organization dedicated to reducing your time to market

### 60 Series Product Family

Laird's 60 Series will be comprised of two classes of modules to give you flexibility in your wireless design:

#### Sterling 60

Professional grade connectivity with leading edge wireless technology

#### Summit 60

Most secure and robust wireless connectivity option for demanding Enterprise applications

\*Summit 60 only

### Application Areas



Connected Hospital/  
Medical Devices



IoT Bridging/  
Cable Replacement



Industrial/AIDC

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Hong Kong: +852 2923 0610

Interested in Laird's 60 Series modules?  
Contact us at [www.lairdtech.com/contact-us-60-series](http://www.lairdtech.com/contact-us-60-series)

# Laird 60 Series Dual-Band 802.11ac Wave 2 Wi-Fi + Bluetooth 4.2

Product Brief



## Configuration Options

### 60-SIPT

SiP Module

- Featured on each 60 Series variant
- SDIO, USB, & PCIE options
- 14mm x 13mm x 1.7mm



Small and customizable

### 60-2230C

USB or SDIO Module

- Popular low-profile M.2 form factor (2230 E-key)
- Choose from USB or SDIO interface options
- 22mm x 30mm x 3.3mm



Widely adopted form factor, easier integration

## Key Specifications

Category	Feature	Specification
Chipset	Silicon Technology	Marvell 88W8997 Chipset – Wi-Fi + Bluetooth combination module with optimized internal Wi-Fi/BT coexistence and latest-gen process technology for ultra-low power
Interfaces	Logical Interfaces	USB, SDIO, or PCIE (Wi-Fi), UART, SDIO, or USB (Bluetooth)
RF Performance	Antenna Options	Pin access (60-SIPT). 2x U. FL (60-2230C)
Environmental	Operating Temp/Humidity	-30°C to 85°C (-22°F to 185°F). 10 to 90% humidity (non-condensing)
Wi-Fi	Operating Frequency	2.4 GHz to 2.495, 5.15 GHz to 5.825 GHz (including DFS)
	Regulatory Domains	FCC, IC, ETSI, KCC, Giteki, RCM
	Wi-Fi Media	DSSS, CCK, OFDM
	Wi-Fi Media Access Protocol	Carrier sense multiple access with collision avoidance (CSMA/CA)
	Wi-Fi Standards	IEEE 802.11ac Wave 2, 802.11d, 802.11e, 802.11h, 802.11i, 802.11r
Bluetooth	Standards	Bluetooth v2.1 with EDR, Bluetooth 4.2 (Bluetooth Low Energy) ** Includes features anticipated in the Bluetooth 5.0 specification
Software	Operating Systems Supported	Linux 3.x.x kernel and newer, Android 4.1.2 (Jellybean) and newer*
Security	Standards	WEP, WPA, WPA2
	Encryption	WEP, TKIP, AES
	Supported EAP Types	EAP-FAST, EAP-TLS, EAP-TTLS, PEAP-GTC, PEAP-MSCHAPv2, PEAP-TLS, LEAP
Certifications	Applicable Certifications	<b>Wi-Fi Alliance</b> (pending)* 802.11a, 802.11b, 802.11g, 802.11n, 802.11ac Wave 2 WPA Enterprise, WPA2 Enterprise <b>Cisco Compatible Extensions (Version 4)</b> (pending)* <b>Bluetooth SIG Qualification</b> (pending)



For full specifications on 60 Series modules, please see the appropriate Datasheet.

## Did You Know?

LSR, a Laird Business, is a leader in Wireless Product Development, offering true end-to-end solutions through its array of services and technical expertise.



### Design Services

- RF Hardware and Antenna Design
- Software/Firmware Development
- Mobile App/Cloud Development
- Industrial Design
- Mechanical Engineering



### EMC Testing & Certification

- On-Site FCC/IC/CE/Giteki/RCM EMC Certification
- Wireless and Antenna Testing
- EMC Emissions Testing
- International Testing Services

To learn more about LSR visit:  
[www.lsr.com](http://www.lsr.com)

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