

# Central Mode BLE Module Featuring *smartBASIC*

## BL620 Series Datasheet

**Note:** For complete hardware integration information, refer to the [BL600 Datasheet](#).  
The BL620 uses hardware identical to the BL600.

The BL620 module is designed to enable OEMs to add single-mode Bluetooth Low Energy (BLE) to small, portable, power-conscious devices. The BL620 is enabled with Laird's *smartBASIC*, an event-driven programming language that enables OEMs to make their BLE product development quicker and simpler, significantly reducing time to market. *smartBASIC* enables customers to develop a complete embedded application inside the compact BL620 hardware, connecting to a wide array of external sensors via its I2C, SPI, UART, ADC or GPIO interfaces.

This document should be read in conjunction with the *smartBASIC* Core and Extensions user guides.

### IMPORTANT!

**THE BL620 USES THE IDENTICAL HARDWARE AS THE BL600** but it has a new firmware that supports Central mode connectivity.

For more detailed BL620 hardware and functionality information, refer to one of the following BL600 hardware documents available from the BL600 or BL620 product pages' Documentation tab.

- BL600 Datasheet (Hardware Integration Guide) - Version 2.1 and later
- User Guide - BL600-DVK (Board Revision 4 or Below) - Version 2.4 and later
- User Guide - BL600-DVK (Board Revision 5) - Version 1.0 and later

For BL620 firmware abilities, quick start guides and application notes, see the BL620 product page or the Laird support site:

- **Product Page:** <http://www.lairdtech.com/products/bl620>
- **Laird Support Site:**
  - **BL620:** [https://ews-support.lairdtech.com/?b\\_id=5402](https://ews-support.lairdtech.com/?b_id=5402)
  - **BL620-US:** [https://ews-support.lairdtech.com/?b\\_id=5405](https://ews-support.lairdtech.com/?b_id=5405)

**Note:** The BL620 module supports a JTAG upgrade but has no capability to upgrade via UART currently.

### BL620 REGULATORY INFORMATION

Because it uses the same hardware as the BL600 series, all regulatory certifications for the BL620 (including FCC, IC, and CE) fall under the BL600's certifications. The only exception to this is the BL620-US.

Model	US/FCC	CANADA/IC
BL620-SA	PI4BL600	1931B-BL600
BL620-SC	PI4BL600	1931B-BL600
BL620-ST	PI4BL600T	1931B-BL600T
BL620-US	SQG-BL620US	3147A-BL620US

**Note:** The BL620 does not currently have MIC approvals.

Design Name	Owner	Declaration ID	Link to listing on the SIG website
BL620	Laird	D023117	<a href="https://www.bluetooth.org/tpg/QLI_viewQDL.cfm?qid=23117">https://www.bluetooth.org/tpg/QLI_viewQDL.cfm?qid=23117</a>

### ORDERING INFORMATION

BL620-SA-0x	Single Mode BLE Module featuring <i>smartBASIC</i> (internal antenna)
BL620-SC-0x	Single Mode BLE Module featuring <i>smartBASIC</i> (IPEX MHF4 antenna connector)
BL620-ST-0x	Single Mode BLE Module featuring <i>smartBASIC</i> (trace pin)
BL620-US-0x	Packaged BL620 USB Dongle
DVK-BL600-SA/ ST/SC-0x	Development kit for each BL620 series module **Use standard DVK-BL600 and upgrade the firmware. Note that the BL620 module supports a JTAG upgrade but has no capability to upgrade via UART.