FULLY PROGRAMMABLE. LOW POWER. DRIVEN BY *SMART*BASIC.

BL600 Series modules from Laird Technologies make it easy to add single-mode Bluetooth Low Energy (BLE), or Bluetooth Smart™, to small, portable, power-conscious devices, including those powered by AAA or coin cell batteries. The fully approved, programmable modules feature Laird's innovative, event-driven *smart*BASIC programming language, which significantly simplifies BLE integration.

- **Bluetooth Smart (BLE v4.0)**
- **Onboard Microcontroller –** Nordic nRF51822 for hostless operation
- **Tiny footprint** (19mm x 12.5mm x 2.5 mm)
- ***smart*BASIC** powers rapid design and deployment
- **Proximity-based secure pairing** – Laird's unique Whisper Mode prevents unauthorized pairing by requiring devices be nearby to pair
- **Large sample application library** – Sample applications help jump start your development

Features at a Glance

TRULY HOSTLESS OPERATION FOR AUTOMATED USE CASES
Award-winning Nordic nRF51822 microcontroller and *smart*BASIC make an ideal pair for sensor applications.

SPEED TO MARKET WITH *smart*BASIC
Easily write event-driven apps for any use case and run in the module. No toolchain required.

PROXIMITY PAIRING TO SCREEN OUT INTRUDERS
Laird's Whisper Mode requires devices be in close proximity, making it harder for intruders to connect.

GLOBAL APPROVALS – MAKE YOURSELF AT HOME
Carries several modular FCC, IC, CE, MIC and Bluetooth SIG approvals.

PERSONAL SUPPORT FROM DESIGN TO MANUFACTURE
Support works onsite with Laird engineering to speed your design to market.

Application Areas

Health and Medical Devices

Enterprise Internet of Things Sensors and Connected Devices

Beacons and Local Messaging

BL600 Series – Bluetooth v4.0 Single-Mode Modules with *smart*BASIC
Product Brief

Key Specifications

Category	Feature	Specification
Wireless Specification	Bluetooth®	V4.0 – Single-Mode
	Frequency	2.402 - 2.480 GHz
	Max Transmit Power	4dBm
	Receive Sensitivity	-91dBm (typical)
	Whisper Mode	Down to -55dBm (Transmit)
	Link Budget	95 dB (@ 1 Mbps)
	Raw Data Rates	1 Mbps (over the air)
Host Interfaces	Total	28 lines – multi function
	UART	TX, RX, CTS, RTS. DTR, DSR, DCD, RI can be implemented in *smart*BASIC. Default 9600, N, 8, 1. From 1,200 to 1,000,000bps
	Other	GPIO (Up to 28 lines), SPI (3), I2C (2), ADC (6 plus ADC reference)
Profiles		Blood Pressure, Heart Rate, Health Thermometer/ Proximity & Find Me/ Custom Services
Services		Generic Access, Battery Service, Device Information Service, Heart Rate Service, Health Thermometer Service, Immediate Alert Service, Link Loss Service, Tx Power Service, Blood Pressure Service
Control Protocols		Any that can be implemented using *smart*BASIC
Encryption	AES	128 bit using CCM encryption
Supply Voltage	Supply	1.8V – 3.6V – internal LDO 2.1V – 3.6V – internal DCDC converter
Power Consumption	Current	'System Idle' – 3.5 uA 'Transmit' – 10.5 mA @ 0 dBm
Physical	Dimensions	19mm x 12.5mm x 3mm
Environmental	Operating Temp.	-40°C to +85° C
	Storage Temp.	-40°C to +85°C
Miscellaneous	Lead Free	Lead-free and RoHS compliant
	Warranty	1-Year Warranty
Development Tools	Development Kit	Development board and free Software Tools
Approvals	Bluetooth®	End Product Listing (EPL)
	FCC / IC / CE / MIC	All BL600 Series

For full specifications on BL600 modules, please see the BL600 Datasheet (Hardware Integration Guide).

Ordering Information

BL600-SA-0x	Single Mode BLE Module featuring smartBASIC (internal antenna)
BL600-SC-0x	Single Mode BLE Module featuring smartBASIC (IPEX MHF4 antenna connector)
BL600-ST-0x	Single Mode BLE Module featuring smartBASIC (trace pin)
BL600-SA-32	Single Mode BLE Module Nordic QFAC (256K/32K)
DVK-BL600-SA / ST / SC-0x	Development Kit for each BL600 series module above

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 & technical expertise

LSR
a Laird Business

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- RF Hardware & Antenna Design
- Software/Firmware Development
- Mobile App / Cloud Development
- Industrial Design
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