



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



# BL600 Series

## Single-Mode BT v4.0 Module with *smartBASIC*

FULLY PROGRAMMABLE. LOW POWER. DRIVEN BY SMARTBASIC.



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 *smartBASIC* 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)
- **smartBASIC** 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 *smartBASIC* make an ideal pair for sensor applications.



#### SPEED TO MARKET WITH *smartBASIC*

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

## Key Specifications

Category	Feature	Specification
<b>Wireless Specification</b>	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)
<b>Host Interfaces</b>	Total	28 lines – multi function
	UART	TX, RX, CTS, RTS. DTR, DSR, DCD, RI can be implemented in smartBASIC. 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)
<b>Profiles</b>		Blood Pressure, Heart Rate, Health Thermometer/ Proximity & Find Me/ Custom Services
<b>Services</b>		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
<b>Control Protocols</b>		Any that can be implemented using smartBASIC
<b>Encryption</b>	AES	128 bit using CCM encryption
<b>Supply Voltage</b>	Supply	1.8V – 3.6V – internal LDO
		2.1V – 3.6V – internal DCDC converter
<b>Power Consumption</b>	Current	'System Idle' – 3.5 uA
		'Transmit' – 10.5 mA @ 0 dBm
<b>Physical</b>	Dimensions	19mm x 12.5mm x 3mm
<b>Environmental</b>	Operating Temp.	-40°C to +85° C
	Storage Temp.	-40°C to +85°C
<b>Miscellaneous</b>	Lead Free	Lead-free and RoHS compliant
	Warranty	1-Year Warranty
<b>Development Tools</b>	Development Kit	Development board and free Software Tools
<b>Approvals</b>	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



### Design Services

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



### EMC Testing & Certification

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

CS-Sales@lairdtech.com  
262.375.4400  
www.lsr.com