

BT900 Series

Bluetooth v4.0 Dual Modules with *smartBASIC*

SMALL. SMART. SIMPLE



Laird's BT900 modules reduce engineering burden and design risk when integrating Bluetooth and Bluetooth Low Energy into any OEM device. A small form factor, optimized power schemes and *smartBASIC* language provide a secure, stable BT environment for any embedded design. Let Laird's innovative BT900 series and decades of expertise in Bluetooth module design speed your product to market.

- **Bluetooth v4.0 dual mode** (BT and BLE)
- Supports **SPP** + any **BLE Peripheral or Central roles**
- Supports **simultaneous BT and BLE** connections
- **Hostless operation** – No need for external MCU reducing overall BOM
- **Broad range of hardware interfaces:** UART, I2C, SPI, ADC, GPIO
- **Small footprint** (19mm x 12.5mm x 2.5 mm)
- ***smartBASIC*** powers rapid design and deployment

Features at a Glance



FLEXIBLE FOR ANY CHALLENGE: A COMPLETE SOLUTION

Cortex M3 microcontroller and *smartBASIC* create truly hostless operation and enable power/throughput flexibility and sleep mode control.



SPEED TO MARKET WITH *smartBASIC*

Easily write event-driven apps for any use case and run in the module. No toolchain required.



FULL, COMPREHENSIVE BLUETOOTH SOLUTION

The best of Bluetooth: Dual Mode, Simultaneous BT + BLE, and SPP + BLE Peripheral / Central Roles.



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



Logistics and Barcode Scanners



Point of Sale Terminals



Health and Medical Devices

BT900 – Bluetooth v4.0 Dual Modules with smartBASIC

Product Brief



Key Specifications

Category	Feature	Specification	
Wireless Specification	Bluetooth®	V4.0 – Dual-Mode	
	Frequency	2.402 - 2.480 GHz	
	Transmit Power	+ 8 dBm (maximum) Configurable down to -20 dBm	
	Receive Sensitivity	-90 dBm (typical)	
	Link Budget	98 dB	
	Raw Data Rates (Air)	3 Mbps (Classic BT – BR/EDR)	
Host Interface and Peripherals	UART Interface	TX, RX, CTS, RTS, DTR, DSR, DCD, RI can be implemented in smartBASIC-using General Purpose I/O Default 115200, N, 8, 1. From 1200 bps to 921,600 bps	
	Other	GPIO (18 maximum – configurable), I2C (1 configurable from GPIO) SPI (1 from GPIO), ADC (2 from GPIO), Wi-Fi / BT Coexistence (3 dedicated pins)	
Profiles	Bluetooth Low Energy	GATT Client & Peripheral – Any Custom Services	
	Classic Bluetooth	Serial Port Profile (SPP) – Up to 600 kbps	
Programmability	smartBASIC	On-board programming language similar to BASIC	
	smartBASIC application	Via UART or Over the Air	
Control Protocols		Any that can be implemented using smartBASIC vSP – Virtual Serial Port for BLE	
Maximum Connections	Classic Bluetooth	7 clients	
	Bluetooth Low Energy	5 clients	
FW upgrade	smartBASIC engine FW upgrade	Via UART	
Coexistence	802.11 (Wi-Fi)	3 wire CSR schemes supported (Unity-3;Unity-3e)	
Supply Voltage	Supply	1.8V – 3.6V	
Power Consumption	Current	Max Peak Current (@ +8dBm TX) – 85 mA Standby Doze (@ 4MHz) – 2.7 mA Deep Sleep – 233 uA (external signal wake up)	
	Physical	Dimensions	19 mm x 12.5 mm x 2.5 mm Pad Pitch 0.8 mm
	Environmental	Operating	-40°C to +85°C
Storage		-40°C to +85°C	
Miscellaneous	Lead Free	Lead-free and RoHS compliant	
	Development Kit	Development board and free software tools	
Development Tools	Utilities	Windows, Android, and iOS applications	
Software Tools	Bluetooth®	Complete Declaration ID	
Approvals	FCC / IC / CE / MIC	All BT900 Series	
Warranty		1-Year Warranty	

For full specifications on BT900 modules, please see the BT900 Datasheet (Hardware Integration Guide).

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/Giteki/RCM EMC Certification
- Wireless & Antenna Testing
- EMC Emissions Testing
- International Testing Services

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For documentation, software, sample apps and more visit:
<http://www.lairdtech.com/products/BT900-Series>