BT900 Series

Bluetooth v4.0 Dual Modules with *smart*BASIC

Laird CONNECTIVITY

SMALL. SMART. SIMPLE

Laird Connectivity'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 *smart*BASIC 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** (Bluetooth and Bluetooth LE)
- Supports **SPP** + any **Bluetooth LE Peripheral or Central roles**
- Supports **simultaneous Bluetooth and Bluetooth LE** connections
- **Hostless operation** – No need for external MCU reducing overall BOM
- **Broad range of hardware interfaces**: UART, I2C, SPI, ADC, GPIO
- **Small footprint** (19 mm x 12.5 mm x 2.5 mm)
- ***smart*BASIC** powers rapid design and deployment

Features at a Glance

FLEXIBLE FOR ANY CHALLENGE: A COMPLETE SOLUTION
Cortex M3 microcontroller and *smart*BASIC create truly hostless operation and enable power/throughput flexibility and sleep mode control.

SPEED TO MARKET WITH *smart*BASIC
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 Bluetooth + Bluetooth LE, and SPP + Bluetooth LE Peripheral/Central roles

GLOBAL APPROVALS – MAKE YOURSELF AT HOME
Carries several modular FCC, ISED, EU, UKCA, MIC, and Bluetooth SIG approvals

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

Application Areas

- Logistics and Barcode Scanners
- Point of Sale Terminals
- Health and Medical Devices

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For documentation, software, sample apps and more visit:
https://www.lairdconnect.com/wireless-modules/bluetooth-modules/bluetooth-42-and-40-modules/bt900-series-bluetooth-module

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 Bluetooth – BR/EDR)
Host Interface and Peripherals	UART Interface	TX, RX, CTS, RTS. DTR, DSR, DCD, RI can be implemented in *smart*BASIC-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 / Bluetooth Coexistence (3 dedicated pins)
Profiles	Bluetooth Low Energy	GATT client and peripheral – Any custom services
	Classic Bluetooth	Serial Port Profile (SPP) – Up to 600 kbps
Programmability	*smart*BASIC	On-board programming language similar to BASIC
	*smart*BASIC application	Via UART or Over the Air
Control Protocols		Any that can be implemented using *smart*BASIC vSP – Virtual Serial Port for BLE
Maximum Connections	Classic Bluetooth	7 clients
	Bluetooth Low Energy	5 clients
FW upgrade	*smart*BASIC 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 (@ +8 dBm TX) – 85 mA
		Standby Doze (@ 4 MHz) – 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/ISED/EU/UKCA/MIC	All BT900 Series
Warranty		One-year warranty

For full specifications on BT900 modules, please see the BT900 Datasheet.