The BT800 series of USB HCI modules and packaged dongle are Laird's first dual-mode Bluetooth v4.0 offerings, bringing support for Classic Bluetooth and Bluetooth Low Energy (BLE) in a tiny package.

Leveraging the market-leading CSR 8510 chipset, the BT800 series provides exceptionally low power consumption with outstanding range. Supporting the latest Bluetooth v4.0 Specification with EDR (Enhanced Data Rate), the Laird BT800 series enables OEMs to accelerate their development time for leveraging either Classic Bluetooth or Bluetooth Low Energy (BLE) into their operating system based devices.

BT800 – BTv4.0 USB HCI Module

The BT800 has a footprint as small as 8.5 x 13 mm, yet output power at 8 dBm. This makes these modules deal for applications where designers need both performance and minimum size. For maximum flexibility in systems integration, the modules are designed to support a full speed USB interface plus GPIO and additionally I2S and PCM audio interfaces.

These modules present an HCI interface and have native support for Windows and Linux Bluetooth software stacks. All BT800 series devices are fully qualified by the Bluetooth SIG. This also allows designers to integrate their existing pre-approved Bluetooth Host and Profile subsystem stacks to gain a Bluetooth END product approval for their products.

BT820 – Packaged BTv4.0 USB dongle

The BT800 series is engineered to provide excellent RF performance with an integrated antenna and additional band pass filters to further reduce the regulatory and testing requirements for OEMs, ensuring a hassle free development cycle. As an additional benefit of the BT800 series, Laird has implemented CSR's HID (Human Interface Device) Proxy Mode enabling out of the box HID connectivity for BLE pointing devices and / or BLE keyboard functionality, requiring zero host device software or configuration.

The BT820 is a packaged dongle version of the BT800 module that allows OEMs to plug the device into any Windows or Linux device that supports USB connectors and an inbuilt Bluetooth software stack in its operating system.

A fully featured, low-cost developer's kit is available for prototyping, debug and integration testing of the BT800 series modules and further reduces risk and time in development cycles.

global solutions: local support.

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Features & Benefits

- Bluetooth v4.0 - Dual Mode
  – Classic Bluetooth
  – Bluetooth Low Energy
- Compact Footprint
- Class 1 output - 8dBm
- USB, GPIO, I2S & PCM
- Industrial Temperature Range
- 64k EEPROM support for HID Proxy Mode
- Bluetooth SIG approvals
- FCC, IC, and CE approvals

Application Areas

- Medical devices
- ePOS terminals
- Barcode Scanners
- Industrial Cable Replacement
- M2M Connectivity
- Automotive Diagnostic Equipment

The details contained within this document are subject to change. Download the product specification from www.lairdtech.com/bluetooth for the most current specification.

CATEGORIES	FEATURE	IMPLEMENTATION
Wireless Specification	Bluetooth®	V4.0 Dual Mode
	Frequency	2.402 - 2.480 GHz
	Max Transmit Power	Class 1 +8dBm from antenna
	Receive Sensitivity	-89dBm
	Range	Circa 100 meters
	Data Rates	Up to 3 Mbps (over the air)
Host Interface	USB	Full Speed USB 2.0
	GPIO	4 configurable lines
Operational Modes	HCI	Host Controller Interface over USB
	HID Proxy Mode	Human Interface Device
Coexistence	802.11 (Wi-Fi)	2 and 3 wire CSR schemes supported (Unity-3;Unity-3e and Unity+)
Supply Voltage	Supply	1.7V – 3.6V
Power Consumption	Current	TX (Max) - <80mA Sleep: 200uA
Antenna Option	Internal	Multilayer ceramic
Physical	Dimensions	8.5 x 13 x 1.6 mm (BT800 - Module)
		9.3 x 13.05 x 2.3mm (BT810 – Carrier Board)
		16 x 43 x 11 (BT820 – Packaged USB dongle)
Environmental	Operating	-30C to +85C
	Storage	-40C to +85C
Miscellaneous	Lead Free	Lead-free and RoHS compliant
	Warranty	1 Year
Approvals	Bluetooth®	Approved
	FCC / IC / CE	All BT800 series

Ordering Information

BT800	BTv4.0 Dual Mode USB HCI Module
BT810	BTv4.0 Dual Mode USB HCI Module (Carrier Board)
BT820	BTv4.0 Dual Mode USB Dongle
DVK-BT800	Development Kit for BT800 Module

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

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