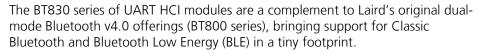


## **BT830 Series**

## Bluetooth v4.0 Class 1 UART HCI Modules



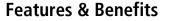
Leveraging the market-leading CSR 8811 chipset, the BT830 series provides exceptionally low power consumption with outstanding range. Supporting the latest Bluetooth v4.0 Specification with EDR (Enhanced Data Rate), the Laird BT830 series enables OEMs to accelerate their development time for leveraging either Classic Bluetooth or Bluetooth Low Energy (BLE) into their operating system-based devices.

The BT830 has a footprint as small as 8.5 x 13 mm, yet output power at 7 dBm. This makes these modules ideal for applications where designers need both performance and minimum size. For maximum flexibility in systems integration, the modules are designed to support a UART interface plus GPIO and additionally I<sup>2</sup>S and PCM audio interfaces.

These modules present an HCI interface and have native support for Windows CE/Mobile and Linux Bluetooth software stacks. All BT830 series devices are fully qualified by the Bluetooth SIG as a Hardware Controller Subsystem. 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.

The BT830 series is engineered to provide excellent RF performance with options for an integrated antenna or for an external antenna via a trace pin. Additionally, the modules have on-board band pass filters to further reduce the regulatory and testing requirements for OEMs, ensuring a hassle-free development cycle.

A fully featured, low-cost developer's kit is available for prototyping, debug, and integration testing of the BT830 series modules and further reduces risk and time in development cycles.





- Bluetooth v4.0 Dual Mode
  - Classic Bluetooth
  - Bluetooth Low Energy
- Compact Footprint
- Class 1 output 7 dBm
- UART, GPIO, I2S, and PCM
- Industrial Temperature Range
- Bluetooth SIG approvals
- FCC, IC, and CE approvals

## **Application Areas**

- AIDC products
- 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.



BT830-ST



BT830-SA

global solutions: local support,

USA: +1.800.492.2320 Europe: +44.1628.858.940 Asia: +852.2923.0610

wirelessinfo@lairdtech.com www.lairdtech.com/bluetooth

Support Portal:

http://ews-support.lairdtech.com

CATEGORIES	FEATURE	IMPLEMENTATION	
Wireless Specification	Bluetooth®	V4.0 Dual Mode	
	Frequency	2.402 - 2.480 GHz	
	Max. Transmit Power	Class 1	
		+7 dBm from antenna	
		+7 dBm from trace pin	
	Receive Sensitivity	-89 dBm	
	Range	Circa 100 meters	
	Data Rates	Up to 3 Mbps (over the air)	
Host Interface	UART	TX, RX, CTS, RTS	
	GPIO	6 configurable lines	
Operational Modes	HCI	Host Controller Interface over UART	
Coexistence	802.11 (Wi-Fi)	3 wire CSR schemes supported	
		(Unity-3 and Unity-3e)	
Supply Voltage	Supply	1.8V – 3.6V	
Power Consumption	Current	Idle Mode ~ 4.3 mA (Master; ACL link; No Traffic)	
		File Transfer ~7.1 mA (Master; ACL Link; Traffic)	
Antenna Option	Internal	Multilayer ceramic (BT830-SA)	
	External	SMT Pad (BT830-ST)	
Physical	Dimensions	8.5 x 13 x 1.6 mm (BT830-SA and BT830-ST)	
Environmental	Operating	-30°C to +85°C	
	Storage	-40°C to +85°C	
Miscellaneous	Lead Free	Lead-free and RoHS compliant	
	Warranty	Five-Year Limited Lifetime	
Approvals	Bluetooth®	Hardware Controller Subsystem	
	FCC / IC / CE	All BT830 series	

## **Ordering Information**

BT830-SA	BTv4.0 Dual Mode UART HCI Module (Integrated Antenna)		
BT830-ST	BTv4.0 Dual Mode UART HCI Module (SMT Pad for External Antenna)		
DVK-BT830-SA	Development Kit for BT830-SA Module		
DVK-BT830-ST	Development Kit for BT830-ST Module		

Version	Date	Changes	Approved By
1.0	20 Nov 15	Initial Release	Jonathan Kaye