

# BT86x Series

## Bluetooth v4.2 Class I UART HCI Modules



BT860-SA



BT860-ST

The BT86x series of UART HCI modules leverage the **Cypress CYW20704 A2** chipset to provide exceptionally low power consumption with outstanding range for OEMs needing both **Classic Bluetooth** and **Bluetooth Low Energy** support. The **Bluetooth v4.2** core specification shortens your development time and provides enhanced throughput, security and privacy.

The BT860 modules are ideal when designers need both performance and minimum size. For maximum flexibility in integration, they support a **host UART** interface, **I<sup>2</sup>S** and **PCM** audio interfaces, **GPIO**, and Cypress' **GCI coexistence (2-Wire)**. The modules provide excellent RF performance and identical footprint options for integrated antenna or an external antenna via a trace pin.

These modules present a Bluetooth standard HCI interface with support for **Linux / Android** and **Embedded** Bluetooth software stacks for operating system backed devices. Additionally, Laird has partnered with [Searan](#) for support of their ultra small, flexible 'dotstack' platform for embedded Cortex M3 and M4 implementations.

- **Bluetooth v4.2 – Dual Mode** – BR / EDR / LE
  - Classic Bluetooth
  - Bluetooth Low Energy (BLE)
- **Compact Footprint** – As small as 8.5x13 mm
- **Class 1 Output** – up to 8 dBm
- **UART** Host interface
- **GPIO, GCI, I<sup>2</sup>S** and **PCM**
- **Industrial Operating Temp:** -30° to +85°C
- **Bluetooth SIG approved** – Hardware Controller Subsystem
- **International regulatory approvals** – FCC, IC, CE, RCM, & Japan approvals
- **Broad BT Stack Support** – Linux, Android, Embedded
- **Fully-Featured Development Kit** – Low cost kit for prototyping/debugging/integration testing to speed development time

### Features at a Glance



#### OUTSTANDING RF PERFORMANCE IN A TINY FOOTPRINT

Class I +8dBm output power in an 8.5 x 13 mm package means no need to compromise one for the other



#### EVEN MORE WAYS TO DEVELOP

Wide array of Operating System support, as well as embedded MCU support for Searan's flexible DotStack platform give you even more design choices



#### BROAD CERTIFICATION AND INTERNATIONAL APPROVALS

Certifications and approvals for FCC (USA), IC (Canada), ETSI (Europe), Giteki (Japan), RCM (AUS/NZ), Bluetooth SIG



#### PERSONAL SUPPORT FROM DESIGN TO MANUFACTURE

Industry-recognized integration and support organization dedicated to reducing your time to market

### Application Areas



AIDC Products / Barcode Scanners



Industrial Cable Replacement



IoT Platforms



Medical Devices



Automotive Diagnostics

# BT85x Series – Bluetooth 4.2 Class 1 UART HCI Modules and Adapter

Product Brief



## SHARED SPECIFICATIONS

CATEGORIES	FEATURE	IMPLEMENTATION
<b>Wireless Specification</b>	Bluetooth®	V4.2 Dual Mode – BR / EDR / LE
	Frequency	2.402 – 2.480 GHz
	Max. Transmit Power	Class 1 +8 dBm from antenna +8 dBm from trace pin
	Receive Sensitivity	-94 dBm
	Range	Circa 100 meters
	Data Rates	Up to 3 Mbps (over the air)
	<b>Host Interface</b>	UART
<b>Operational Modes</b>	HCI	Host Controller Interface over UART
<b>Coexistence</b>	802.11 (Wi-Fi)	2-wire Cypress Global Coexistence Interface (GCI)
<b>Supply Voltage</b>	Supply	3.0V – 3.6V (BT860-SA and BT860-ST)
<b>Power Consumption</b>	Current	Tx Max. < 55 mA Sleep < 120 us
	<b>Antenna Option</b>	Internal
	External	SMT Pad (BT860-ST)
<b>Physical</b>	Dimensions	8.5 x 13 x 2.2 mm (BT860-SA) 8.5 x 13 x 1.9 mm (BT860-ST)
	<b>Environmental</b>	Operating
	Storage	-40° to +85°C
<b>Miscellaneous</b>	Lead Free	Lead-free and RoHS compliant
	Warranty	One-Year Warranty
<b>Approvals</b>	Bluetooth®	Hardware Controller Subsystem
	FCC / IC / CE / RCM / Giteki	All BT86x series

## ORDERING INFORMATION

<b>BT860-SA</b>	BT V4.2 Dual Mode UART HCI Module (Integrated Antenna)
<b>BT860-ST</b>	BT V4.2 Dual Mode UART HCI Module (SMT Pad for External Antenna)
<b>DVK-BT860-SA</b>	Development Kit for BT860-SA Module
<b>DVK-BT860-ST</b>	Development Kit for BT860-ST Module

## 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

To learn more about LSR visit:  
[www.lsr.com](http://www.lsr.com)