

Laird Connectivity

Bluetooth Line Card



Laird Connectivity's Bluetooth product portfolio is designed to expedite time to market with the minimum development time required. Our Classic Bluetooth and Bluetooth Low Energy modules are agency-approved and offer feature-rich firmware in an assortment of data rates, ranges (power), and configurations. Our highly reliable Bluetooth modules are easily integrated and can be readily customized by our local support teams to meet your precise requirements.

	BLUETOOTH LOW ENERGY				DUAL-MODE BLUETOOTH			CLASSIC BT
	BL654 Series (includes USB adapter)	BL652 Series	BL651 Series	SaBLE-x-R2	BT850/BT860 Series	BT851	BT900 Series (includes USB adapter)	BT7x0 Series
Chipset	Nordic nRF52840	Nordic nRF52832	Nordic nRF52810	TI CC2640 R2	Cypress CYW20704 A2	Cypress CYW20704 A2	QCA CSR8811	QCA CSRBC04
Wireless Standards	BT 5 + NFC + Thread	BT 5 + NFC	BT 5	BT 5	Dual-Mode BT v4.2	Dual-Mode BT v4.2	Dual-Mode BT v4.0	BT v2.0 and v2.1
Range	Up to 1000 m	Up to 100 m	Up to 100 m	Up to 100 m	Up to 100 m	Up to 100 m	Up to 100 m	Up to 1 km
Type	Surface Mount Module with onboard MCU (ARM Cortex M4F, 1Mbit/256k)	Surface Mount Module with onboard MCU (ARM Cortex M4F, 512k/64k)	Surface Mount Module with onboard MCU (ARM Cortex M4, 192k/24k)	Surface Mount Module with onboard MCU (ARM Cortex M3)	Surface Mount Modules with HCI	USB Adapter	Surface Mount Module with onboard MCU (ARM Cortex M3)	SMT Module
Size	15 x 10 x 2.2 mm (module) 18.4 x 50.7 x 11 (USB)	14 x 10 x 2.1 mm	14 x 10 x 2.1 mm	11.6 x 17.9 x 2.4 mm	8.5 x 12.9 x 2.2 (module)	8.5 x 12.9 x 2.2 (module) 16 x 43 x 11 (USB)	12.5 x 19 x 2.5 mm (module) 50.7 x 18.4 x 11 mm (USB)	15.3 x 28.7 x 2.5 mm
Antenna Options	Internal Antenna OR External via IPEX MHF4	Internal Antenna OR External via IPEX MHF4	Internal Antenna OR External via IPEX MHF4	Internal Antenna OR External via U.FL	Internal Antenna OR External via trace pad	Internal Antenna	Internal Antenna OR External via U.FL	Internal Antenna OR External via U.FL
Data / Control	UART, GPIO, ADC, PWM, PDM, FREQ output, I ² S, I ² C, SPI	UART, GPIO, ADC, PWM, FREQ output, I ² C, SPI	UART, GPIO, I2C, SPI, ADC, PWM	UART, SPI, I2C, PWM, ADC	USB, HCI BT (850) UART, HCI BT (860)	USB, HCI	UART, GPIO, SPI, I ² C, ADC	UART/GPIO
Transmit Power	-40 to +8 dBm	-40 to +4 dBm	-40 to +4 dBm	-46 to +5 dBm	Up to +8 dBm	Up to +8 dBm	-20 to +8 dBm	Up to +18 dBm
Receiver Sensitivity	-103 to -95 dBm	-96 dBm typical	-93 to -96 dBm	-96 dBm at 0.1% BER	-94 dBm	-94 dBm	-90 dBm typical	Better than -87 dBm
Temp Range (Storage)	-40°C to 85°C (-40°F to 185°F)	-40°C to 85°C (-40°F to 185°F)	-40°C to 85°C (-40°F to 185°F)	-40°C to 85°C (-40°F to 185°F)	-40°C to 85°C (-40°F to 185°F)	-40°C to 85°C (-40°F to 185°F)	-40°C to 85°C (-40°F to 185°F)	-40°C to 85°C (-40°F to 185°F)
Software/Firmware	smartBASIC in Hosted or Hostless mode, OR use Nordic SDK	smartBASIC in Hosted or Hostless mode, OR use Nordic SDK	Nordic SDK or Zephyr RTOS	Programmable via Serial-to-BLE API or TI SDK	Any external BT software stack via HCI	Any external BT software stack via HCI	Hostless or hosted mode with smartBASIC app environment	Programmable via AT Command Set
Profiles Supported	Any custom services via smartBASIC/Nordic SDK	Any custom services via smartBASIC/Nordic SDK	Any services available via Nordic/Zephyr	Any supported by the TI SDK	Any supported by chosen BT stack	Any supported by chosen BT stack	SPP, HID, Any custom BLE Service via smartBASIC	SPP, HID
Additional Features	BLE Mesh	NFC	ANT and proprietary 2.4 GHz	LSR Developer Tool Suite application	Support for Searan Dotstack	Support for Searan Dotstack	Simultaneous Classic BT and BLE Connections	Ultra long range with Class 1 output power
Certifications	FCC, IC, ETSI, Giteki, RCM, Bluetooth SIG	FCC, IC, ETSI, Giteki, KCC, RCM, Bluetooth SIG	FCC, IC, ETSI, Giteki, RCM, Bluetooth SIG	FCC, IC, ETSI, Giteki, RCM, Bluetooth SIG	FCC, IC, ETSI, Giteki, Bluetooth SIG	FCC, IC, ETSI, Giteki, Bluetooth SIG	FCC, IC, ETSI, Giteki, Bluetooth SIG	FCC, IC, ETSI, Bluetooth SIG

Modules not shown at actual size.

To learn more, visit connectivity.lairdtech.com/bluetooth
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