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.

Laird™ CONNECTIVITY

Bluetooth Low Energy / Dual-Mode Bluetooth

Modules shown are not actual size.

	BL654 Series (includes USB adapter)	BL654PA Series	BL653 Series	BL652 Series	BL651 Series	SaBLE-x-R2	BT850/BT860 Series (includes USB adapter)	BT900 Series (includes USB adapter)
Chipset	Nordic nRF52840	Nordic nRF52840	Nordic nRF52833	Nordic nRF52832	Nordic nRF52810	TI CC2640 R2	Cypress CYW20704 A2	QCA CSR8811
Wireless Standards	BT 5 + NFC + Thread	BT 5 + NFC + Thread	BT 5.1 + NFC + Thread	BT 5 + NFC	BT 5	BT 5	Dual-Mode BT 5	Dual-Mode BT v4.0
Type	SMT with onboard MCU (ARM Cortex M4F, 1MB/256k)	SMT with onboard MCU (ARM Cortex M4F, 1MB/256k)	SMT with onboard MCU (ARM Cortex M4F, 512KB/128KB)	SMT with onboard MCU (ARM Cortex M4F, 512k/64k)	SMT with onboard MCU (ARM Cortex M4, 192k/24k)	SMT with onboard MCU (ARM Cortex M3)	SMT with HCI Interface	SMT with onboard MCU (ARM Cortex M3)
Size	15 x 10 x 2.2 mm (module) 18.4 x 50.7 x 11 (USB)	22 x 10 x 2.2 mm	15 x 10 x 2.2 mm	14 x 10 x 2.1 mm	14 x 10 x 2.1 mm	11.6 x 17.9 2.4 mm	8.5 x 12.9 x 2.2 mm (module)	12.5 x 19 x 2.5 mm (module) 50.7 x 18.4 x 11 mm (USB)
Antenna Options	Internal Antenna OR External via IPEX MHF4	Internal Antenna OR External via IPEX MHF4	Internal Antenna OR External via trace pin	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 OR External via U.FL
Data/Control	USB, UART, GPIO, ADC, PWM, PDM, FREQ output, I²S, I²C, SPI	UART, GPIO, ADC, PWM, PDM, FREQ output, I2S, I2C, SPI, QSPI	UART, GPIO, ADC, PWM, PDM, FREQ output, I2C, SPI, NFC, USB	UART, GPIO, ADC, PWM, FREQ output, I²C, SPI	UART, GPIO, I2C, SPI, ADC, PWM	UART, SPI, I2C, PWM, ADC	USB, HCI (BT850) UART, HCI (BT860)	UART, GPIO, SPI, I²C, ADC
Transmit Power	-40 to +8 dBm	+18 dBm (maximum), configurable down to -26 dBm. (+14 dBm in LE CODED PHY mode)	- 40 to +8 dBm	-40 to +4 dBm	-40 to +4 dBm	-46 to +5 dBm	Up to +8 dBm	-20 to +8 dBm
Receiver Sensitivity	-103 to -95 dBm	-98.5 to -107 dBm	-103 to -95 dBm	-96 dBm typical	-93 to -96 dBm	-96 dBm at 0.1% BER	-94 dBm	-90 dBm typical
Temp Range	-40°C to +85°C	-40° to +85° C	-40°C to +105°C	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C	-40°C to +85°C
Software/Firmware	AT Command Set smartBASIC OR use Nordic SDK, Zephyr	AT Command Set smartBASIC OR use Nordic SDK, Zephyr	AT Command Set smartBASIC OR use Nordic SDK, Zephyr	AT Command Set smartBASIC OR use Nordic SDK, Zephyr	Nordic SDK or Zephyr RTOS	Programmable via TI SDK	Any external BT software stack via HCI	Hostless or hosted mode with smartBASIC app environment
Profiles Supported	Any custom services via smartBASIC/ Nordic SDK/Zephyr	Any custom services via smartBASIC/ Nordic SDK/Zephyr	Any custom services via smartBASIC/ Nordic SDK/Zephyr	Any custom services via smartBASIC/ Nordic SDK/Zephyr	Any services available via Nordic/Zephyr	Any supported by the TI SDK	Any supported by chosen BT stack	SPP. HID, any custom BLE Service via smartBASIC
Additional Features	BLE Mesh Packaged USB Adapters	BLE Mesh Ultra Long Range	BLE Mesh Extended Temp Range	NFC	ANT and proprietary 2.4 GHz	Developer Tool Suite Application	Support for Searan Dotstack. Packaged USB Adapters	Simultaneous Classic BT and BLE Connections. Packaged USB Adapters
Certifications	FCC, IC, ETSI, Giteki, RCM, Bluetooth SIG	FCC, IC, RCM, KCC, Bluetooth SIG	FCC, IC, CE, MIC, 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, KCC (BT850 only), MIC (BT850/860 only), RCM, Bluetooth SIG	FCC, IC, ETSI, Giteki, Bluetooth SIG