



## BT740 Series

### Enhanced Class 1 Bluetooth v2.1 Module



Every BT740 series Bluetooth® module from Laird Technologies is designed to add robust, long-range Bluetooth data connectivity to any device. Based on the market-leading Cambridge Silicon Radio (CSR) BC04 chipset, BT740 modules provide exceptionally low power consumption with outstanding Class 1 range via 18 dBm of transmit power. The modules support the latest Bluetooth Version 2.1 specification, including Secure Simple Pairing, which improves security and enhances the ease of use for end customers. A broad range of Bluetooth profiles such as Serial Port Profile (SPP) and other vital features make BT740 modules superior to other Bluetooth modules.

With a compact footprint of 15.29 x 28.71 mm, the modules deliver maximum range with a minimum size. Another integration advantage is the inclusion of a complete Bluetooth protocol stack with support for multi-point connections and numerous Bluetooth profiles, including Serial Port Profile (SPP), Human Interface Device profile (HID), and Health Device Profile (HDP). BT740 modules are fully qualified as a Bluetooth End Products, enabling designers to integrate the modules in devices without the need for further Bluetooth Qualification.

An integrated AT command processor interfaces to the host system over a serial port using an extensive range of AT commands. The AT command set abstracts the Bluetooth protocol from the host application, saving many months of programming and integration time. It provides extremely short integration times for data oriented Bluetooth applications.

Included firmware provides programming support for multi-point applications that use up to seven simultaneous data connections to and from the robust BT740 module. A low-cost developer's kit makes it easy for an OEM to integrate the module and guarantees the fastest route to prototype and then mass production.

#### Features & Benefits

- Bluetooth v2.1
- External or Internal Antennas
- Comprehensive AT command set
- Bluetooth EPL
- Compact Footprint
- Class 1 output - 18dBm
- UART interfaces with GPIO & ADC
- Industrial Temperature range
- Multipoint Capabilities with up to 7 simultaneous connections

#### Application Areas

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

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Full detailed product documentation is available at:-

<http://www.lairdtech.com/Products/Embedded-Wireless-Solutions/Bluetooth-Radio-Modules/BT700-Series/BT740/>

The details contained within the document are subject to change.



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## Enhanced Class 1 Bluetooth v2.1 Module

CATEGORIES	FEATURE	IMPLEMENTATION
Wireless Specification	Bluetooth®	V2.1
	Frequency	2.402 - 2.480 GHz
	Max Transmit Power	Class 1 18dBm from antenna
	Receive Sensitivity	Better than -87dBm
	Range	Up to 1000m
	Data Rates	Up to 2.1Mbps (over the air)
	UART Data Transfer Rate	Circa 350kbps
Host Interface	UART	TX, RX, DCD, RI, DTR, DSR, CTS, RTS Default 9600, n,8, 1 From 1,200 to 921,600bps
	GPIO	8 configurable lines
	ADC	2 lines, 8 bit resolution
Profiles	SPP	Serial Port Profile
	HID	Human Interface Device
	HDP	Health Device Profile
Control Protocols		AT Command Set - 1 connection Multi-Point API - 7 simultaneous connections
Supply Voltage	Supply	3.3 – 5.0V
	I/O	3.3V
Power Consumption	Current	Idle Mode – 1.25mA Transmit (Max Data) – 35mA
Antenna Options	Internal	Multilayer ceramic - BT740-SA
	External	Connection via u.FL - BT740-SC
Physical	Dimensions	15.29 mm x 28.71 mm x 3 mm
Environmental	Operating	-40C to +85C
Miscellaneous	Lead Free	Lead-free and RoHS compliant
	Warranty	1 Year
Development Tools	Development Kit	Development board and Software Tools
Approvals	Bluetooth®	End Product Listing (EPL)
	FCC / IC / CE	All BT740 Series

### Ordering Information

BT740-SA	Enhanced Class 1 Bluetooth v2.1 Module (internal antenna)
BT740-SC	Enhanced Class 1 Bluetooth v2.1 Module ( u.FL connector)
DVK- BT740-SA	Development Kit (internal antenna)
DVK- BT740-SC	Development Kit (u.FL connector)

LWS-DS-BT740-0713

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