

TW5470

TW5470 Bluetooth 5 (BLE) Low Energy Transceiver Antenna

Overview

The TW5470 is a stand-alone Bluetooth 5 Low Energy transceiver with integrated antenna. It is designed for use in professional grade applications such as mobile asset tracking, building automation systems, smart buildings, industrial sensor networks, or as a fixed location beacon requiring persisted power.

The TW5470 BLE transceiver antenna embeds the state-of-the-art Nordic Semiconductor nRF52840 as the system core offering long range with low power consumption.

The TW5470 BLE 5 transceiver system is delivered with the u-Blox u-connectXpress software pre-installed, providing support for u-Blox Bluetooth low energy Serial Port Service, GATT client and server, beacons, NFC™, and simultaneous peripheral and central roles. u-connectXpress provides support for a host to easily configure connectivity using AT commands.

The TW5470 BLE 5 transceiver provides top grade security, thanks to secure boot, which ensures the module only boots up with original u-Blox u-connectXpress software.

The TW5470 core electronics are fit into a compact IP67 industrial enclosure with an integrated magnetic mount.

The TW5470 BLE 5 transceiver power and serial communications are supported via a lightweight 5M cable with RJ12 termination for plug and play integration into host processing platforms.



Features

- Bluetooth v5.0 (Bluetooth Low Energy)
- AT Command Interface
- GATT Server and Client
- BLE Serial Port Service (SPS)
- Extended Data Mode (AT + data)
- Bluetooth Mesh
- Secure Boot
- Power Save Modes
- Long Range - up to 1400M
- Integrated Magnetic Mount
- IP67 Rugged Enclosure
- 5M Cable with RJ12 termination
- Industrial Temperature Specification
- RS232 Serial Interface

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Specifications

Radio/Antenna	
Bluetooth	v5.0 (Bluetooth Low Energy)
Maximum Range	1400 m*
Max. conducted output power	8 dBm
Conducted sensitivity	-94 dBm (1 Mbit/s)
	-100 dBm (125 Kbit/s)
Antenna Architecture	PIFA (metal)
	May be operated over a ground plane surface
Command Mode	AT Command (u-connect)
BLE Features	BLE Serial Port Service
	GATT Client and Server
	Beacon mode
	Simultaneous peripheral and central roles.
BLE Connections	Central Mode (7 concurrent)
	Peripheral Mode (6 concurrent)
	Simultaneous Mode (8 in total)
	(max: 7 central/4 peripheral)

Interface	
Pwr, Gnd, Standby	
Tx, RX	RS232
Throughput	780 Kbits/s
Connector	RJ12 (5 conductor)

Mechanical	
Dimensions	38mm x 38mm dia. x 14.3mm H
Weight	65g
Mounting Method	Magnetic or Adhesive
Cable Length	5 m with RJ12 termination
Enclosure	Industrial grade fixed mount weatherproof IP69K

Electrical	
Voltage Range	3.3-5 VDC
Current	25 mW nominal (@ 3V3)

Environmental	
Operating Temperature	-40°C to +85°C
Storage Temperature	-40°C to +85°C
Weatherproof	IP67
Shock	Vertical axis 50G, other axis 30G 3 axis sweep – 15 min
Vibration	10-200 Hz log sweep 3G

Ordering Information:

33-5470-0 Bluetooth 5 (BLE) Low Energy transceiver Antenna

Please refer to the Ordering Guide for the current and complete list of available products.



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