TW5470

TW5470 Bluetooth 5 (BLE) Low Energy Tranceiver 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
- Industial Temperature Specifiation
- 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℃ to +85℃
Storage Temperature. . . . .-40℃ to +85℃
Weatherproof .IP67
Shock. . . . . .Vertical axis 50G,other axis 30G
3 axis sweep – 15 min
Vibration . . . . .10-200 Hz log sweep 3G

Ordering Information:

33-5470-5-10-05   Bluetooth 5 (BLE) Low Energy tranceiver Antenna

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

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