DT50 Overview

Product Overview

DT50-M Series of Serial to Wireless Networking Adapters

The DT50M series of serial to Wireless Networking adpaters provide an easy and cost effective way to connect to remote serial devices, create a wireless I/O node, and replace cables.

Depending on models the DT50M supports industry standard wireless technologies including Classic Bluetooth, Bluetooth LE 4.0, dual mode Classic, Bluetooth LE, Wi-fi 2.4Ghz and Wi-fi 5Ghz.

The wireless range is industrial which provides greater reliability and a range of up to 300 meters. The dual mode module also supports up to 7 slaves. The modules are self contained with an internal antenna and can be purchased with an optional external antenna to meet enclosure mounting and other specific requirements.

On the serial side the DT50 supports RS232, RS485 and optionally RS422 for use in multidrop environments and where longer cable runs are needed to serial devices. Serial communications support speeds up to 115.2K baud on Bluetooth LE models and 1.25M baud on Classic Bluetooth models, for fast data transmission over a wide range of applications.

The DT50 modules can optionally contain Digital I/O. The I/O can be actuated via Bluetooth or Wi-Fi communications making remote control and remote data collection applications possible. The modules can support up to 2 Digital input and 2 Digital outputs. The Digital I/O supports up to 100mA current and 5-40VDC. This is suitable for relay, pilot LED, and switch applications. Digital I/O can also be either sinking or sourcing.

Features:

- Bluetooth to Serial RS232/485, WiFi to Serial RS232/485
- Bluetooth v4.0, 4.2, 5.0, with Low Energy and Classic Bluetooth
- WiFi 2.4GHz, 5.0 Ghz*
- Long range Bluetooth (1000ft)
- Dual-mode (Bluetooth Smart Ready)
- Low Energy Serial Port Service
- Wireless Multidrop™ with simultaneous connections to both Bluetooth low energy and Classic Bluetooth devices
- Bluetooth/Wi-Fi remote I/O, 2 DI, 2DO
- Radio type approved for Europe, US, Japan and Canada
- External antenna option
- PC, Android, and iOS accessible

Applications

The DT50's Industrial Bluetooth communications makes it perfectly suited for Industrial applications, such as machine control and remote industrial data collection. The product can also be used to provide a remote Android tablet, cell phone or iPhone/iPad interface to remote equipment. Industrial switch gear, transfer switch, medical and diagnostic equipment, lab process equipment, weigh scales, vehicle remote I/O systems, farming equipment, and remote building control are all possible with the DT50 series.

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Technical Specifications

Module

- Operating Temperature: 0 Deg C to 70 Deg C.
- Input Voltage:
  Via DB9: 6 – 15 VDC.
  Via J7: 4.5 – 40 VDC
- Input Current: 100 mA max, 50 mA typ.
- RoHS compliant.

Bluetooth Dual Mode

- Bluetooth version: v4.2 low energy dual-mode (Bluetooth Smart Ready)
- Profiles: SPP, DUN, PAN, connectBlue Low Energy Serial Port Service
- Antenna range: 1000 ft external, 750 ft internal (Open Air)
- Max number of slaves: 7

Serial Channel

- Electrical: RS232 or RS485 (RS422 optional).
- Hardware flow control (RS232 – CTS, RTS)
- Configurable Baud Rate: 9600kbps—3,000,000kbps

Digital Outputs

- Channels: 2
- 100 mA Max
- Polarity: Sinking or Sourcing
  Voltage: 5 to 40 VDC.

Digital Inputs

- Channels: 2
- Polarity: Sinking or Sourcing
- Voltage: 5 to 40 VDC.

Wi-Fi 2.4GHz

- Range: 500ft External, 425ft Internal (Open Air)
- Wi-Fi IEEE 802.11 Standards: b/g/n
- Wi-Fi Throughput [Mbits/s]*: 13
- Wi-Fi output power EIRP [dBm]: 18
- Channel support: 1-11**

*User data throughput over RMII
**Depends on Region

Model Numbers

DT50-M111B	Wi-Fi 2.4GHz and Bluetooth 4.2 / with I/O, RS232/RS485/External Antenna
DT50-M110B	Wi-Fi 2.4GHz and Bluetooth 4.2 / with I/O, RS232/RS485/Internal Antenna
DT50-M011B	Wi-Fi 2.4GHz and Bluetooth 4.2 / RS232/RS485/External Antenna
DT50-M010B	Wi-Fi 2.4GHz and Bluetooth 4.2 / RS232/RS485/Internal Antenna

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