



**FCC prescanned Wireless Module**  
915 MHz, 152.34 kbit/sec.

**DESCRIPTION**

The Wi.232DTS-R™ module combines a state-of-the art low power wireless transceiver with a powerful multipoint-to-multipoint protocol controller to form a transparent wireless communication solution capable of replacing wires in almost any RS-232/422/485 application. With a 111 dB link budget and very low power operation modes, the Wi.232DTS-R™ module is excellent for AMR, RFID, Home Automation, and any other application requiring long range (<1500ft. , line of sight) and long battery life.

The module is designed to be totally transparent. No special addressing or formatting of data is required. Data is validated using an internally generated CRC-16 and encoded using a proprietary algorithm. Multiple modules can operate on the same channel because of the built-in carrier-sense-multiple-access (CSMA) protocol.

The transceiver operates in two modes; low power and DTS. In low-power mode, transmitter output power is 0 dBm and the maximum RF data is 76.8 kbit/sec. In DTS mode, the output power is +12 dBm and the maximum RF data rate is 152.34 kbit/sec.

In DTS mode, the Wi.232DTS-R™ module is an excellent alternative to expensive and power-hungry frequency hopping modules. With 115 dBm link margin at the highest data rate, the Wi.232DTS-R™ will work farther and faster than any module in its class. Because DTS does not require frequency hopping, synchronization is very fast, allowing long duty cycles and very good battery power performance.

**APPLICATIONS**

- Automated Meter Reading (AMR)
- Oil and Gas detection sensing
- Robotic and Industrial Controls
- Cable replacement
- Medical

**CERTIFIED ANTENNAS**

- ANT-915-04A (Helical straight RPSMA connector)
- ANT-915-02A (1/4 wave whip RPSMA connector)
- ANT-915-07A (Helical right angle RPSMA connector)
- ANT-915-06A (1/2 wave dipole RPSMA connector)

**FCC CERTIFIED Wi.232DTS BASE STATION**

Wi.232USB-DTS (Modular approved base station)

**FEATURES**

1. Digital Transmission System (DTS) protocol
2. No RF PCB layout necessary
3. Very small form factor .8" X .935" X .08"
4. Transparent and Networking modes
5. FCC Prescanned
6. Pick and Place compatible package
7. 2.7 V - 3.6 V power supply
8. 25 mW TX power

**SPECIFICATIONS**

1. Frequency Band: 902 to 928 MHz
2. DTS Mode
  - a. 32 Channels
  - b. 100 kbps Max RF Data Rate (effective)\*
  - c. +12 dBm TX Power\*\*
  - d. -104 dBm Max RX Sensitivity\*\*\*
3. LP Mode
  - a. 84 Channels
  - b. 19.2 kbps Max RF Data Rate (effective)\*
  - c. -3 dBm TX Power\*\*
  - d. -106 dBm Max RX Sensitivity\*\*\*
4. Power
  - a. VDD: 2.7 V to 3.6 V
  - b. TX IDD- LP Mode: 28 mA
  - c. TX IDD- DTS Mode: 57 mA @ +12 dBm
  - d. RX IDD: 20 mA\*\*
  - e. Sleep/ Standby: 35 µA/ 850 µA
5. Operating temperature: -40 degrees C to 85 degrees C
6. FCC prescanned

\*Single packet with overhead  
\*\*50 ohm load, VDD= 3.3 V  
\*\*\*measured @ 2400 baud

**ORDERING INFORMATION**

Wi.232DTS-R	Embedded Radio Module
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