Model:UT-930

Zigbee 2.4G RS-232/485/422 Wireless Data Transmission Converter

Datasheet

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1. Overview

UT-930-ZIGBEE wireless communication module is a advanced ZIGBEE module, which integrates RF transceiver and microprocessor conforming to ZIGBEE protocol standard, it has the advantages and characteristics of long communication distance, strong anti-interference ability and flexible networking; it can realize transparent transmission of data between devices from one point to multiple points and multiple points to multiple points; it can build star and MESH type mesh network structure.

UT-930-ZIGBEE communication module realizes the transparent transmission of RS232/485/422 data from serial port, and can realize the network communication between multiple points in addition to the general point-to-point data communication function.

UT-930-ZIGBEE communication module is divided into central coordinator, router and terminal node, these three types of devices have different network functions, the central coordinator is the central node of the network, responsible for the network initiation organization, network maintenance and management functions; the router is responsible for data relay forwarding, the terminal node only for this node data transmission and reception. The three types of devices - central coordinator, router and terminal node - are identical in terms of hardware structure, only the device parameters are configured differently.
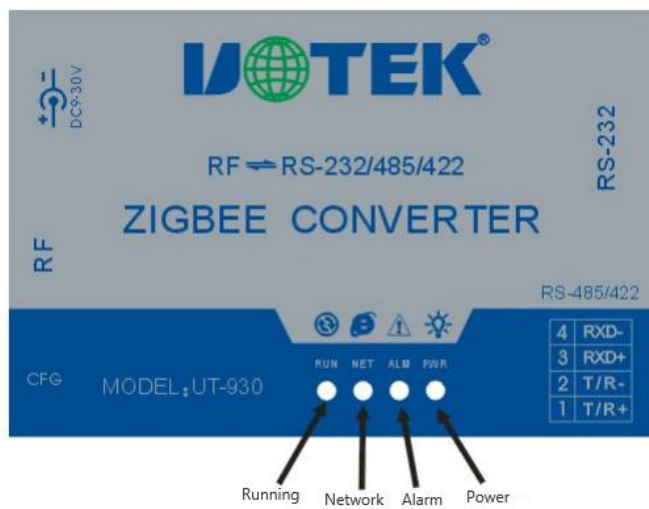
2. Main functions, features

● RS232/485/422 interface and wireless Z-BEE interconversion, through wireless ZIGBEE for network communication
● With relay routing
● Maximum transmission distance 2000m
● Strong anti-interference capability with 2.4G DSSS spread spectrum technology
● Broadcast send or target address send mode selectable
● Flexible node type: central node, routing node, terminal node can be set arbitrarily
● 16 channels selectable, 65535 network IDs can be set arbitrarily

3. Technical Parameters

● Data interface: RS232/422/485 SMA female antenna interface
● Carrier frequency: 2.4GHz ISM global free band, frequency range between 2400M-2485M
● Modulation method: DSSS direct sequence spread spectrum
● Wireless channels: 16
● Channel detection: CSMA/CA
● Network topology: star, tree, chain, mesh network
● Single network capacity: 65535 nodes
● Sending mode: broadcast sending or target address sending
● Transmission rate: 1200-115.2Kbps settable
● Operating power supply: DC9V-30V 150mA (max)
● Transmission distance: Wireless 2.4GHz carrier wave 2000m(empty distance)
　　RS-232 5m (1200bps-115200bps)
　　RS-485/422 1200 M (1200bps-115200bps)

- Receiving sensitivity: -105dbm
- Transmitting power: 25dbm
- Antenna connection: 5dbm SMA male glue stick antenna
- Protection level: power interface, RS232/422/485 interface with 2KA lightning protection
- Size: 197mm×65mm×26mm (without antenna)
- Weight: 120 g
- Operating environment: -40 ~ 85℃, relative humidity: 5 ~ 95%)

4. Hardware Definition

RS232 Pin Assignment

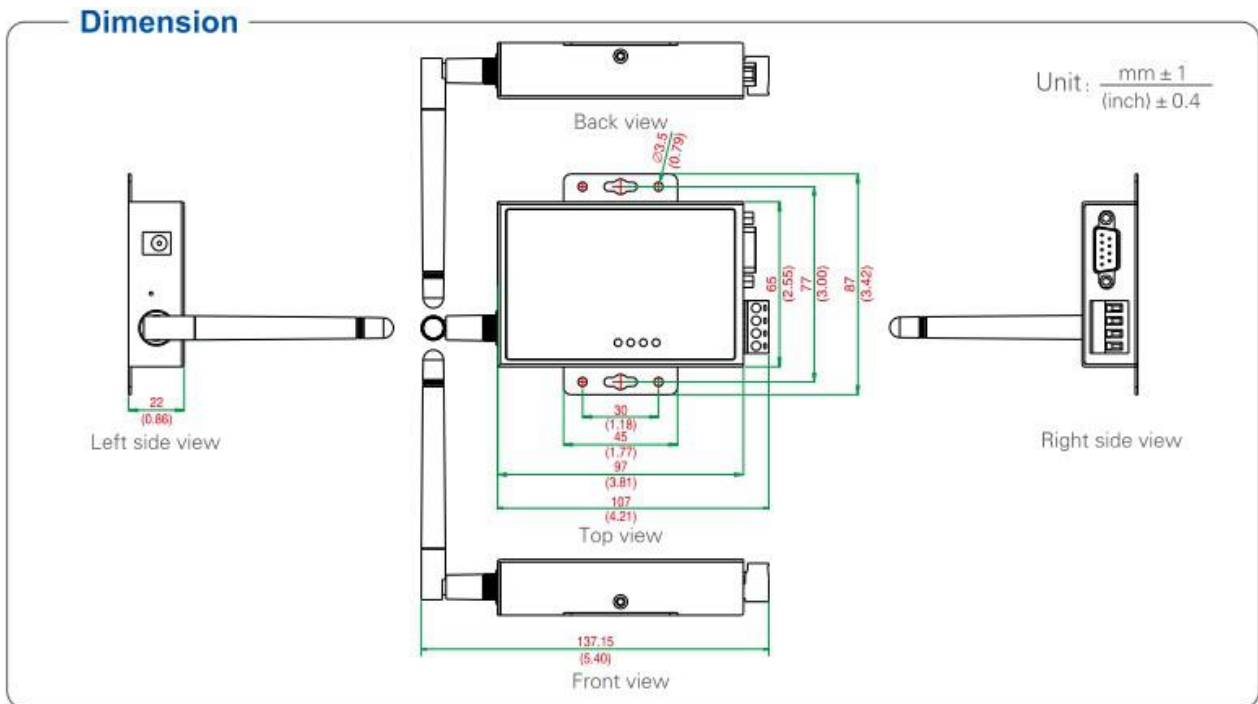| DB9 male (PIN)	Interface signal
2	SIN(RXD)
3	SOUT(TXD)
5	GND
1,4,6,7,8,9	/

RS485/422 output signal and terminal pin assignment

Wiring Post	Output signal	RS-422 Full-duplex wiring	RS-485 half-duplex wiring
1	T/R+	Send(A+)	RS-485(A+)
2	T/R-	Send(B-)	RS-485(B-)
3	RXD+	Receive(A+)	/
4	RXD-	Receive(B-)	/

5. Product View (Appearance)

6. Structure Dimensions

7.Ordering Information

Model	Signal/Port			Port qty		Protection	Baudrate	Environment			Power	
	ZIGBEE	RS-232	RS485/422					Temperature		Humidity		
	SMA	DB9 male	Terminal block	2.4G	RS-232/485/422	RS-232/485/422		-10/70℃	-40/85℃	5-95%	Port-Powered	External Power
UT-930	✓	✓	✓	1	1	2KA Lightning protection	1,200bps~115.2kbps		✓	✓		9~30VDC

Accessories: Power adapter, antenna, and serial cable.

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