

Model: UT-9921

(Product Name: LoRa to RS-232/485/422 Converter)

Datasheet

1. Brand and Manufacturer Information

Brand: UTEK Technology

Manufacturer:

Logo: 

2. Model and Version

Model: UT-9921

Version: VER:01

3. Major Functions & Features

- Bidirectional conversion between RS-232/485/422 interfaces and wireless LoRa, enabling network communication via wireless LoRa.
- Supports data broadcasting, data monitoring, point-to-point transmission, and transparent transmission.
- Maximum transmission distance of 5000 meters.
- Strong anti-interference capability, low power consumption.
- Sleep mode and transparent transmission mode switching.
- Star, tree, chain, and mesh network topologies.
- Multiple selectable channels, with the ability to modify wireless transmission parameters online, such as serial port baud rate, transmission frequency, air rate, and more.

4. Technical Parameters

- Data Interfaces: RS-232/422/485 SMA female antenna interface
- Frequency Range: 464-515 MHz
- Modulation Modes: LoRa direct-sequence spread spectrum technology and GFSK (Gaussian Frequency Shift Keying) transmission modes
- Wireless Channels: 255 selectable channels, each spaced 0.2MHz apart
- Network Topology: Star, tree, chain, mesh network
- Transmission Modes: Transparent transmission and point-to-point transmission
- Serial Port Baud Rate: Configurable from 1200 to 115.2Kbps
- Air Transmission Rate: 6 levels adjustable (0.3/1.2/2.4/4.8/9.6/19.2Kbps)
- Operating Power: DC9V-30V, 12V/50mA

- Transmission Distance: Wireless carrier 5000 meters (open space distance)
- Receiver Sensitivity: -142dBm
- Transmit Power: 22dBm, adjustable in multiple levels, 1dBm steps
- Antenna Connection: SMA male antenna/whip antenna
- Surge Protection: Power, differential mode 1KV, common mode 2KV (1.2/50uS)
- Signal, RS-485/422: differential mode 1KV, common mode 2KV (10/700uS)
- RS-232: 600W
- Electrostatic Protection: Contact discharge 6kV, air discharge 8kV
- Dimensions: 97mm×65mm×22mm (excluding antenna)
- Weight: 120g
- Operating Environment: -40 to 85°C, relative humidity 5% to 95%

5. Indicator Lights

Power Light	Red
TX Light	Green
RX Light	Yellow

6. Buttons

[Short press for 1 second to enter command mode](#)

[Long press for 5 seconds to restore factory settings](#)

7. Hardware Definitions and Initial Setup

RS-232 Pin Assignment

DB9 Male/Female (PIN)	RS-232 Interface Signals
2	Receive Data SIN (RXD)
3	Transmit Data SOUT (TXD)
5	Signal Ground GND
1,4,6,7,8,9	None

RS-585/RS-422 Output Signals and Connector Pin Assignment

Connector	Output Signals	RS-422 Full Duplex Wiring	RS-485 Half Duplex Wiring
1	T/R+	Transmit (A+)	RS-485 (A+)
2	T/R-	Transmit (B-)	RS-485 (B-)
3	RXD+	Receive (A+)	None
4	RXD-	Receive (B-)	None

8. Appearance



9. Accessories

Name	Quantity (Unit)
UT-9921	1PC
4-pin Connector	1PC
Rubber Rod Antenna	1PC
DB9 Female-to-Male Serial Cable	1PC
Power Adapter	1PC
Color Box	1PC
Pearl Cotton	1PC
User Manual	1PC
Certificate of Conformity	1PC
Warranty Card	1PC

10. Packaging Method and Outer Box Labeling



Packaging Box Dimensions: 280×160×65mm

Note: Production batch number and production date are subject to actual goods.

11. Storage and Transportation Requirements

Storage Temperature: -40°C to +85°C, Relative Humidity: 5% to 95%

12. Processing/Assembly/Installation Notes (Optional)

13. Test Methods for Typical Parameters (Optional)

14. Product Warranty and Services (Optional)