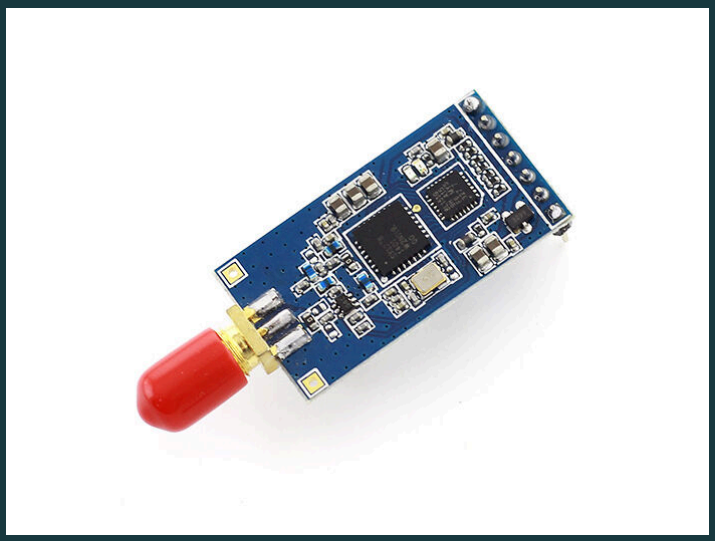
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INDUSTRIAL PRODUCT DATASHEET

420-450MHz Ultra low power data radio module

WT-800T: Ultra low power 420-450MHz LoRa data radio module with 20dBm power, -148dBm sensitivity, and transparent serial link for long-range IoT and industrial applications.

SKU	UPDATED	PRICE
317010009	2024-08-09 02:02:38	$19.50(Excl. VAT)



Overview



The WT-800T is a 420-450MHz ultra low power LoRa spread spectrum data radio module providing transparent half-duplex serial communication with up to 20dBm transmit power and -148dBm sensitivity for 3-5km range. It supports flexible parameter configuration, multiple wake modes, error correction, and frequency hopping, making it suitable for industrial automation, smart metering, and sensor networks.

Key Features

Description
WT-800T is a high performance, low power, long-range wireless data micro-power RF transceiver module, internal automatic spreading calculation and preamble CRC error correction processing, without changing the user’s any data and protocols, using a half-duplex transparent transport mechanism to achieve wireless communicate function.

The RF chip of Module is based on spread spectrum frequency hopping technology, the stability, anti-interference ability and receive sensitivity are beyond existing GFSK module. Configured of Low-power high-speed ST processor, data processing capacity, the operation speed are improved.

Users can configure our PC software, or by microcontroller commands, according to the actual demand, flexible configuration module working frequency, baud rate / parity, spreading factor, spread spectrum bandwidth and other parameters, simple operation, easy to use .

Features

Ø Based on LoRa TM spread spectrum modulation techniques.

Ø Half-duplex communications, serial data transparent transmission.

Ø 420~450MHz, Free application band, the other band can be customized.

Ø Produce without debugging, 3.4-5.5V voltage range, can be customized 3.0-3.6V.

Ø Micro-power transmission, standard + 20dBm output, seven adjustable levels.

Ø Receiving sensitivity up to -148dBm, the maximum transmit power + 20dBm.

Ø High-efficiency forward error correction coding techniques and frequency hopping mechanism, enhance the anti-interference ability and reduce the error rate.

Ø Supports serial wake, ready to send and receive data, no periodic wake-up time.

Ø Support air wake, AUX signal can be given via the module, Wake user device.

Ø CAD detection LoRaTM signal, to prevent accidental wake.

Ø Can work through the command switch module supports serial wake up, ready to send and receive data, no periodic wake-up time.

Ø Flexibility to set the module parameters via software or microcontroller commands.

Ø Small size, easy for embedded installation, TTL level signals

Ø Built-in watchdog to ensure long-term reliable and stable operation。

Ø Effective communication distance up to 3 to 5 km in the open field.

Specification

ELECTRICAL SPECIFICATIONS：

Mod: LoRaTM Spread spectrum

Frequency range: 420~450MHz (Other bands can be customized)

Transmit power： 20dBm

Reception sensitivity: -148dBm

Serial rate： 1200bps～57600bps (default 9600bps)

Interface verification: 8E1/8O1/8N1（Optional）

Operating Voltage: 3.5V～5.5V（3.0V～3.6V can be customized） (output +20dBm)

Emission current: 100mA (Transmit power +20dBm)

Receiving current: ≤16mA

Low current mode: ≤41uA

Sleep mode: ≤4.5uA

Client wake-up time: Right now

Air wake-up time: ≤2S

Working temperature: -40℃～+80℃ (industrial level)

Working humidity: 10%～90% Relative humidity, without condensation

Application：

Smart home, intelligent transportation, sensor networks;

Industrial automation, modernization of agriculture, intelligent building;

Water, electricity, gas and heating meter automatic meter reading system;

Water conservancy, oil, mines, weather and other device information collection;

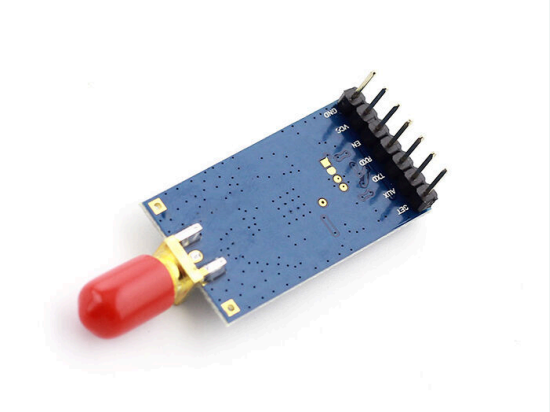
Street lighting control, network monitoring, wind and solar systems;

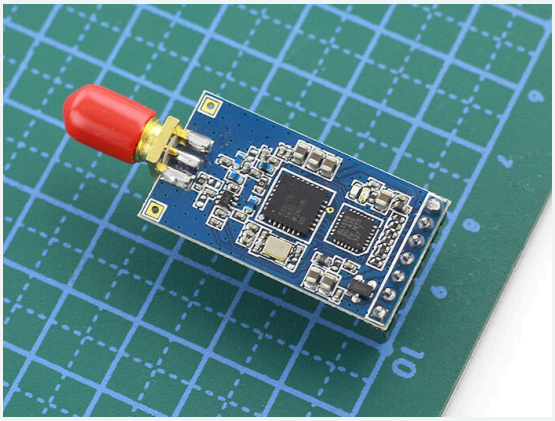
Industrial equipment, wireless data transmission and industrial environmental monitoring;

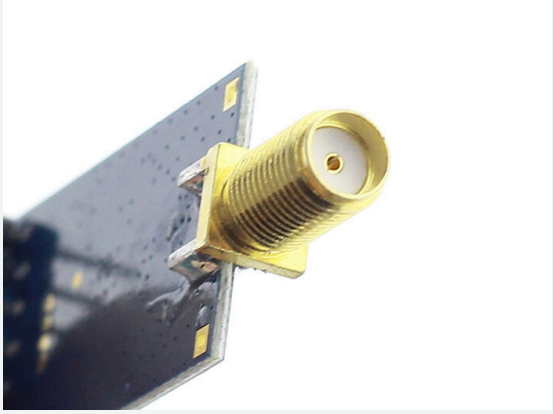
In all cases require additional wireless instead of wired communications.

Technical Details
Technical details

Product Gallery







Specification

Dimensions	0mm x0mm x0mm
Weight	G.W 15g
Battery	Exclude

Compliance & Logistics

HSCODE	8517703000
ROHS	1

Resource Links

- https://www.seeedstudio.com/420-450MHz-Ultra-low-power-data-radio-module-p-2209.html

Seeed Technology Co.,Ltd.
9F, Building G3, International E City,
Zhongshanyuan Road, Nanshan, Shenzhen, China

Tel: +86 0755-80695676
Web: www.seeed.cc
Shop: www.seeedstudio.com