

TRW-Di9028 902MHz~928Hz RF MODULE

WENSHING Electronics will release [TRW-Di9028](#) (LPWA) narrowband wireless communication module series in October 2021.

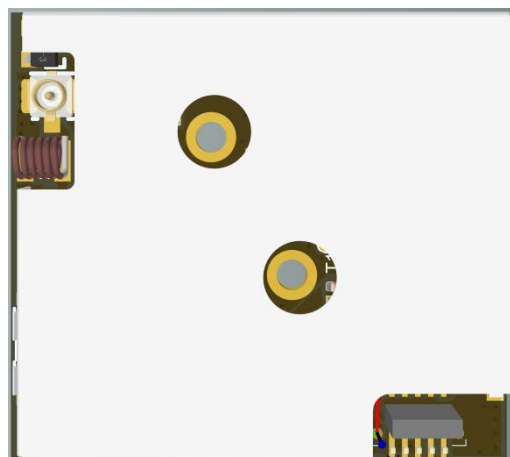
The [TRW-Di9028](#) long-distance wireless data transmission module is based on IoT long-distance applications. The module complies with the high-power FCC PART 90.205 33dBm specification. High receiving sensitivity.

The communication for dozens of kilometers is unimpeded, and it is widely used in the IoT field.

[TRW-Di9028](#) has maximum power of 32.5dBm and high sensitivity of -130dBm. It provides multi-frequency communication. It has built-in ARM 32bit MCU frame. It is extremely simple in design and application. It can be changed from wired to wireless communication with simple UART communication commands. Built-in Crystal oscillator (TCXO), high stability, fine adjustment of transmit power, 0.2dBm resolution, and small size.

Application

- Remote control aircraft
- Autonomous cars
- Advertising signs communications
- Agricultural automatic irrigation
- Digital walkie-talkie
- Wireless fire protection
- Street light
- Remote control crane
- Apartment door phone
- PLC
- Equipment communication



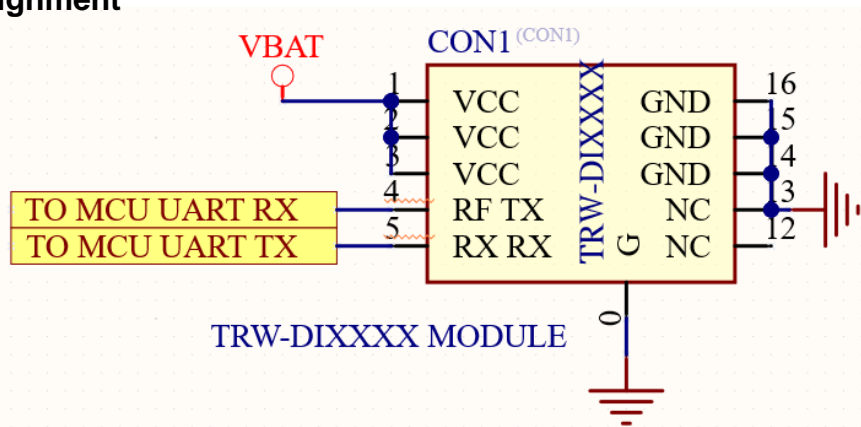
Features

- Transmit power 32.5dBm
- The lowest 12.5KHz frequency bandwidth
- Receiving sensitivity -130dBm
- Automatic frequency control AFC
- Signal strength detection AGC
- Received signal strength read RSSI
- Built-in Crystal oscillator (TCXO)
- 400MHz~1GHz
- Power output can be adjusted to 0.2dBm resolution
- Temperature detection
- Frequency hopping
- Low working voltage 4~5.5V
- Ultra small size 27*03*3.9mm
- UART communication
- GFSK
- IEEE802.15.4g Mode

Model: TRW-Di9028

Parameter	Specification			Unit	Condition
	Min.	Typ.	Max.		
Frequency Range	902		928	MHz	
Received Sensitivity	-130			dBm	500bps
Transmitted Power			32.5	dBm	Power is approaching 2W
Data Rate	0.1		300	Kbps	2GFSK
Adjacent Channel (±12.5 KHz)		60		dBm	
Supply Voltage, VDD	4		5.5	V	DC
TX Current			1300	mA	
RX Current		33		mA	
Power down Current			0.1	uA	Power down mode
Power up Time	50			ms	Disable to enable time
Operating Temperature	-40		+80	°C	

Pin Assignment



Pin	Name	I/O	Description
1	VDD	Power	Power Supply 4~5.5V
2	VDD	Power	Power Supply 4~5.5V
3	VDD	Power	Power Supply 4~5.5V
4	UART TX		TTL UART 3~3.3V
5	UART RX		TTL UART 2.2~3.3V
12	NC		
13	GND	Ground	Ground
14	GND	Ground	Ground
15	GND	Ground	Ground
16	GND	Ground	Ground