

TRW-Di4050 400MHz~450MHz RF MODULE

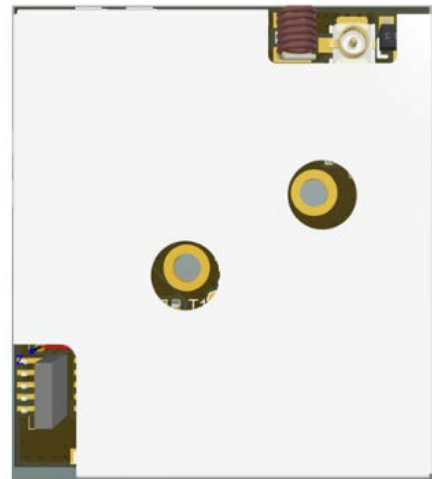
WENSHING Electronics will release **TRW-Di4050** (LPWA) narrowband wireless communication module series in October 2021.

TRW-Di4050 (LPWA) narrowband wireless communication module series in October 2021. The **TRW-Di4050** 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-Di4050 has maximum power of 29dBm and high sensitivity of -127dBm. 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 29dBm
- The lowest 12.5KHz frequency bandwidth
- Receiving sensitivity -127dBm
- 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*30*3.9mm
- UART communication
- GFSK
- IEEE802.15.4g Mode

TRW-Di4050-X List

Model	Frequency Range
TRW-Di4050-1	400 MHz ~450MHz
TRW-Di4050-2	450MHz~470MHz
TRW-Di4050-3	890MHz~960MHz

Model: TRW-Di4050-1

Parameter	Specification			Unit	Condition
	Min.	Typ.	Max.		
Frequency Range	400		450	MHz	
Received Sensitivity		-127		dBm	500bps
Transmitted Power		29.5		dBm	Power is approaching 1W
Data Rate	0.1		300	Kbps	2GFSK
Adjacent Channel(± 12.5 KHz)		62		dBm	
Supply Voltage, VDD	4		5.5	V	DC
TX Current			500	mA	
RX Current		30		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

