

Technical Description

The brief circuit description is listed as below:

- 1) M1 acts as MCU (SSV7241) consist 2.4GHz Module Circuit (WT24DK2015).
- 2) Y1 is 16MHz crystal oscillator providing clock for U2.
- 3) U1 acts as DC-DC step-up controller (LC3030C).
- 4) U2 acts as low power IMU (BMI160).
- 5) U3 acts as Voltage Regulator (LC1218).
- 6) U4 acts as Microcontroller (M058LN LQFP48).

Antenna Type: Internal antenna

Antenna Gain: 0dBi

Nominal rated field strength: 91.2dB μ V/m at 3m

Maximum allowed field strength of production tolerance: +/- 3dB



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WT24DK2015

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WT24DK2015 Specification

1. General Description

The WT24DK2015A is a 2.4GHz ISM band RF transceiver module consists of SSV7241 transceiver, 16MHz crystal in a small board size.

In normal applications, WT24DK2015A module is connected to a low cost microcontroller. This module has high transmission data rate, low current consumption and simple control interface is easy to apply to the wireless products.

2. Features

- 2.4 GHz ISM band operation
- 250kbps, 1Mbps, and 2Mbps air rate
- Continuous TX mode, no re-lock between packets required*
- Programmable status monitor: dedicated RX/FIFO monitor mode*
- 1.9 to 3.6V supply range
- Automatic packet processing
- Advanced RSSI recording mode*
- Up to 6 data pipes for 1 RX to multiple TXs

WT24DK2015 series including three kinds of models:

models	WT24DK2015A
appearance	
characteristics	Stamp hole &. DIP crystal oscillator

Pin Assignment	
1	GND
2	VCC
3	CE
4	SS
5	CLK
6	MOSI
7	MISO
8	IRQ

models	WT24DK2015B
appearance	
characteristics	Gold finger &. DIP crystal oscillator

Pin Assignment	
1	CE
2	SS
3	CLK
4	MISO
5	VCC
6	GND
7	IRQ
8	MOSI



models	WT24DK2015C
appearance	
characteristics	Stamp hole &. SMD crystal oscillator

Pin Assignment	
1	GND
2	VCC
3	CE
4	SS
5	CLK
6	MOSI
7	MISO
8	IRQ

Note:

If it is on the PCB, PCB need blank where module crystals foot enough location, Because the crystal oscillator welding feet have outstanding.

3. Electrical Characteristics

	MIN	TYP	MAX	单位
VDD	-0.3		3.6	V
VDD_IO Supply Voltage	-0.3		5.25	V
Operating Temp.	-20		85	°C
Storage Temp.	-40		125	°C
VDD Supply voltages	1.9		3.6	V
Power-down Current		9		uA
Standby Current		47		uA
Operating Frequency Range	2400		2484	MHz
TX DC current, 0 dBm output power		20.5		mA
RX DC current consumption		26.6		mA

4. Applications

- Wireless PC peripherals
- Wireless keyboards and mice
- Wireless gamepads
- Wireless audio
- VOIP & wireless headsets
- Remote controls
- Home automation
- Toys
- Consumer electronics
- Personal health and entertainment products