

UM-103 DataSheet

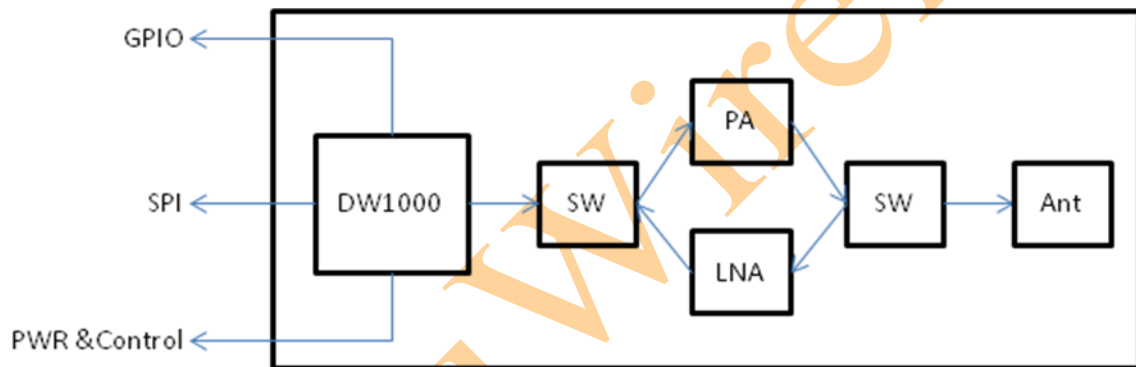
Main Feature

- 802.15.4a UWB wireless RF module
- -21dBm/MHz
- High Sensitivity
- onboard ceramic antenna
- SPI Interface

Application

- Distance Measurement (Tag & Anchor)
- Location based on distance measurement(Tag & Anchor)
- Location based on TDoA(Tag & Anchor)

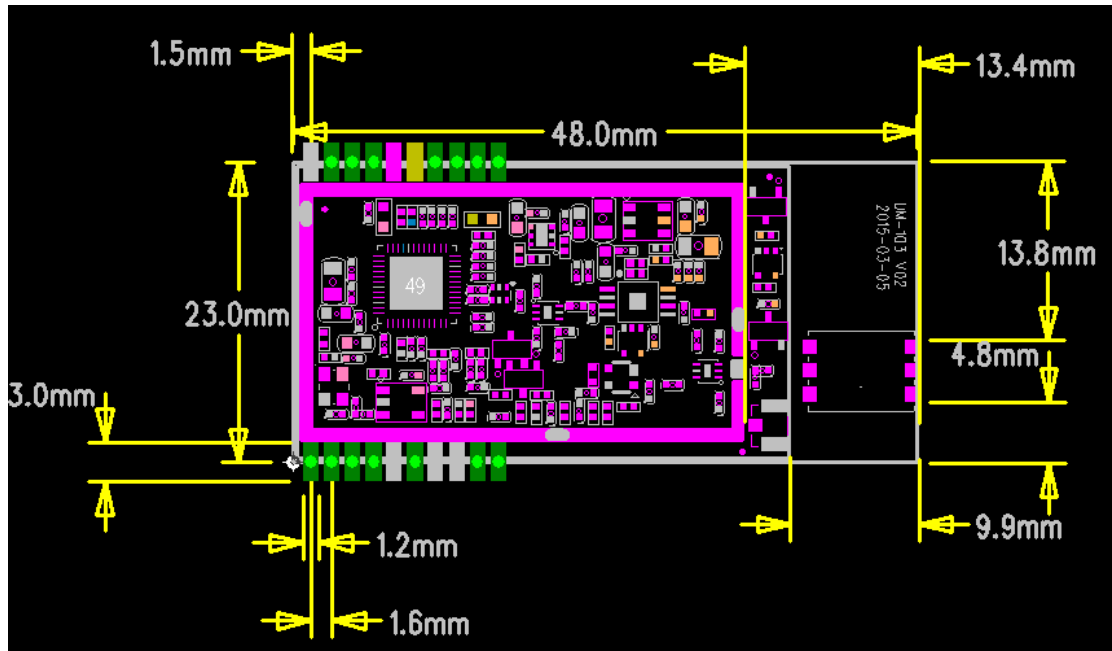
Product Layout



Picture

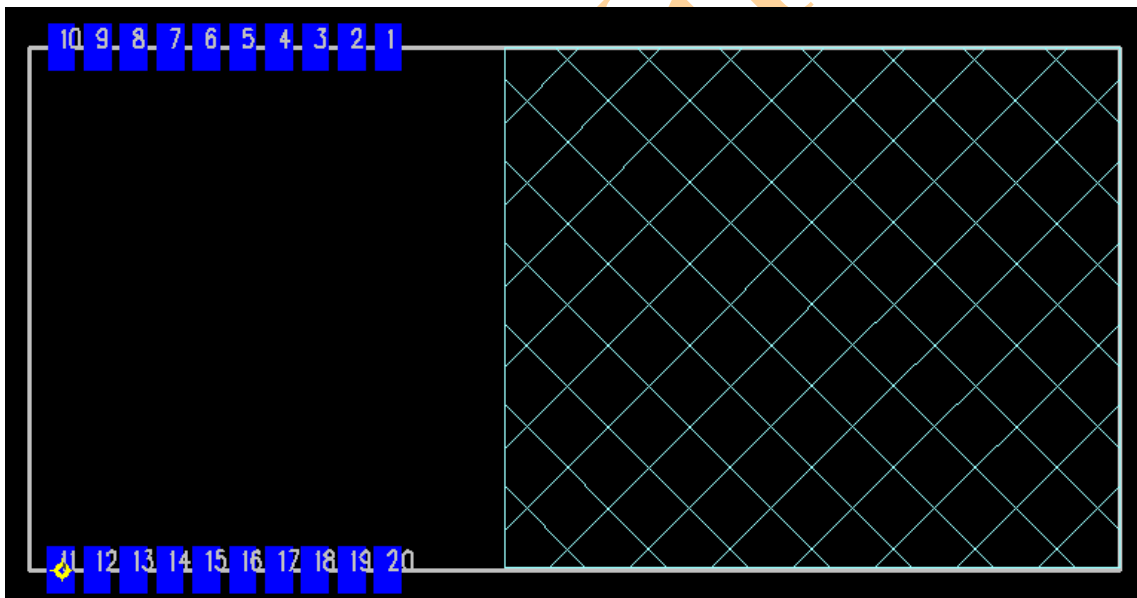


Detailed Size



NOTE: Must Make it empty in the main board appeal to antenna of UM-103

Pin define



NO.	Description	NOTE
1	Exton	Comply with DW1000 definition
2	Wakeup	Comply with DW1000 definition
3	Reset	Comply with DW1000 definition
4	Sync	Comply with DW1000 definition

5	Vdd5V	5V input , optional
6	Vdd3V3	3.3V input
7	GPIO0	to DW-1000 38pin, comply with DW1000 definition
8	GPIO1	to DW-1000 37pin comply with DW1000 definition
9	GPIO2	to DW-1000 36pin, comply with DW1000 definition
10	GND	ground
11	SPI_CS	SPI chip select
12	MOSI	SPI data line MOSI
13	MISO	SPI data line MISO
14	SPICK	SPI clock
15	GND	ground
16	SPI_IRQn	break off
18	GND	ground
19	LNA_EN	LNA enable , low level effective
20	PA_EN	PA enable, high level effective

Product Spec.

Item	Description.
Summary	
Description	802.15.4a UWB wireless UWB module
Standard	802.15.4a UWB
Interface	SPI GPIO PWR & Control
Power	DC 3.3V DC 5V optional
Instantaneous power	< 1 w

RF Spec	
Frequency	3.25GHz ~4.75GHz
Data rate	110 kbps
	850 Kbps
	6.8 Mbps
output power (25 °C)	-21dBm/MHz

Software Spec	
Working Mode	TAG
	Anchor
Location Mode	ToF
	TDOA
Distance	>100m (LOS)
Distance Precision	< 5cm

Physic Specifications	
Size(L*W*H mm)	48mm*23mm*4mm
Weight(g)	4.5g

Environment Specification	
Temperature	Working : -20°C~65°C Storage .: -30°C ~ 75°C
Humidity	Working : 0% ~90% NO Coagulation Storage: 0% ~90% NO Coagulation
RoHs	Compatible

Antenna Spec.

