

FCL Components Wireless Modules

Wirepas Mesh 2.4GHz Module

FWM7BLZ022W/P/T

Overview

Surface mount module with incorporated Wirepas Mesh 2.4GHz network.

RoHS compliant

Features

- Surface mount module with small footprint (7.5 x 7.9 x 1.7 mm) with Wirepas Mesh 2.4GHz function
- Output power is enhanced to +8dBm, which may enable to extend transmit range.
- Host interface: USB (for FWM7BLZ22W) and UART
- Low power consumption (1.7 to 3.6V, main power at normal voltage mode)
- Sink, anchor, tag are available:
 - FWM7BLZ22W: Sink (routing tree root node) for gateway. Controlled by host CPU using Dual-MCU API via USB or UART
 - FWM7BLZ22P: Anchor for positioning application. Manageable by host CPU via UART or works as standalone.
 - FWM7BLZ22T: Tag for positioning application. Manageable by host CPU via UART or works as standalone.
- Communicate in an Industrial Scientific Medical (ISM) band.
- GPIO pins (20 pins) of nRF52833 are assigned to this module



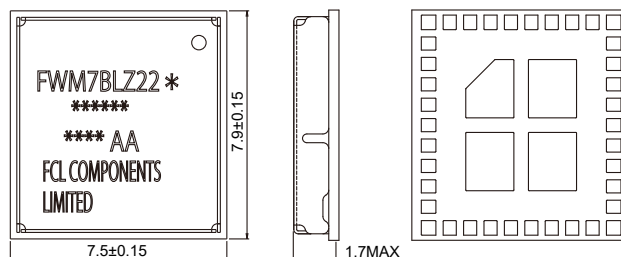
Applications

Asset management, sensor network, smart buildings, smart factory, smart city, etc.

FWM7BLZ22 series

■ Dimensions

FWM7BLZ22



Unit: mm

■ Specifications

Item		Specification	
Type	Mesh unit (Sink)	Mesh unit (Anchor)	Mesh unit (Tag)
Part number	FWM7BLZ22W	FWM7BLZ22P	FWM7BLZ22T
Mesh technology	Wirepas Mesh 2.4GHz		
Transmit power	+8dBm max.		
RX sensitivity	-96 dBm		
Host interface	USB, UART	UART*1	
Antenna	Not embedded		
IC	Nordic Semiconductor nRF52833		
Carrier frequency	2,400 MHz to 2,483.5 MHz		
Modulation	GFSK		
Symbol rate	1Mbps		
Modulation index			
Number of channels	40 channels		
Channel spacing	2 MHz		
Chrystal oscillators	Embedded		
Power supply	Main	1.7 to 3.6V (Normal voltage mode) / 2.5 to 5.5V (High voltage mode)*2	
	USB VBUS	4.35 to 5.5V	
Operating temperature	-40°C to +85°C		
Dimensions / weight	7.5 x 7.9 x 1.7 mm / Approx. 0.17g		
Mounting method	Surface mount (SMT)		
Certifications	Radio Act Japan (with FCL Components' designated anenna)		

Notes: *1: USB is planned
 *2: Depending on circuit configuration

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