

FCL Components Wireless Modules

Bluetooth® Version 5.2 Dual Mode Module

FWM7BTZ61

Overview

Compact Bluetooth Version 5.2 (dual mode) wireless radio modules compatible with both Bluetooth Low Energy and legacy Bluetooth Classic BR/EDR.



RoHS compliant

Features

- Compatible with both Bluetooth Low Energy and Bluetooth Classic technology
It is possible to transfer 2.4GHz ISM band data as Bluetooth version 2.1+EDR/3.0 by using the latest Bluetooth 5.2 certified radio module.
- Saving customers' development resources
Bluetooth Classic applications used to manage upper layer protocol stack and profile processing via the host system. This new module has an embedded upper layer protocol stack and profile processing unit that can be directly accessed from a host system with simple text based commands. This saves customers' time to develop complicated protocol stacks or profiles.
- "GATT Direct Access function"
This function accesses the GATT profile using simple commands via UART to enable communication with other manufacturers' Bluetooth modules. Bluetooth Low Energy communication uses this GATT profile, including Bluetooth Version 5.2 2Mbps improved speed.
- iOS devices connection
It can be connected to the Apple Authentication 3.0 Coprocessor (CP chip) to send and receive data with application software on iOS devices.*



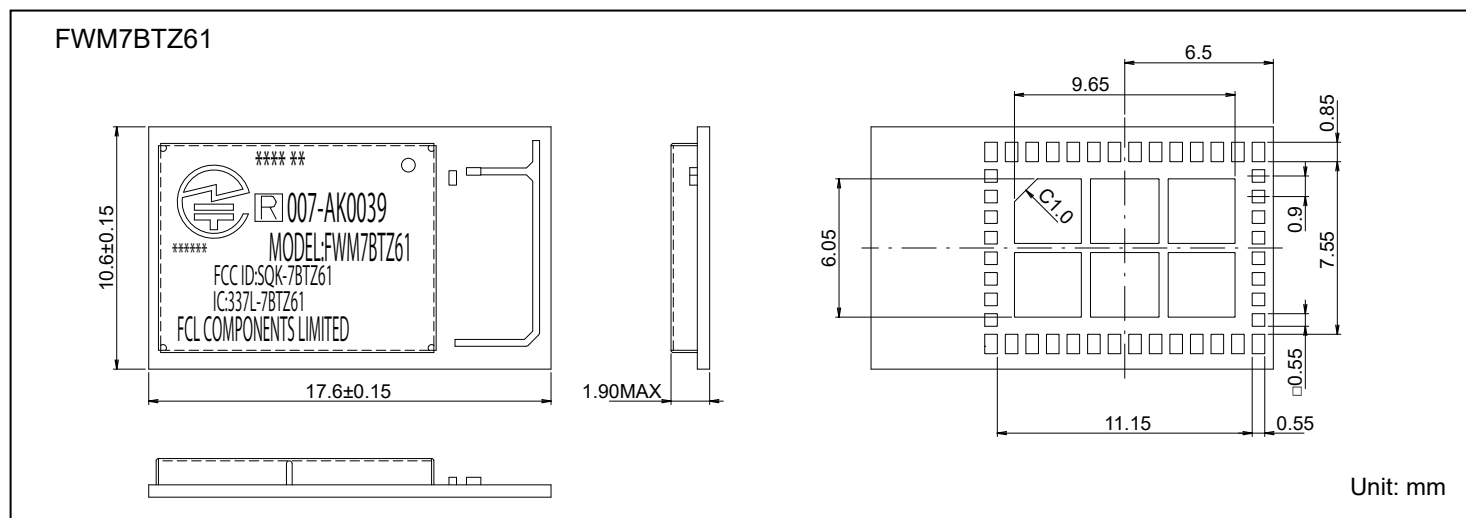
FWM7BTZ61

Note: * The CP chip must be implemented on the customer's equipment. To use the CP chip connection with this Bluetooth module, the customer needs to join the Apple, Inc. MFi License Program.

Applications

A system supporting legacy Bluetooth Classic communication with the latest Bluetooth Version 5.2 technology.

■ Dimensions



■ Specifications

Item		Specifications
Part number		FWM7BTZ61-xxxxx
Bluetooth technology		Conforms to Bluetooth Specification Version 5.2 Technology Dual Mode
Bluetooth (BR/EDR)	Modulation method	0.5BT Gaussian filter 2FSK Modulation index: 0.28 to 0.35 (Basic rate 1Mbps) $\pi/4$ -DQPSK (EDR 2Mbps) 8DPSK (EDR 3Mbps)
	Symbol rate	1Msps
	Data rate	1Mbps (basic rate), 2Mbps (EDR 2Mbps), 3Mbps (EDR 3Mbps)
	No of channels	79ch
	Channel interval	1MHz
	Output level	Power Class 2
Bluetooth low energy	Modulation method	GFSK
	Symbol rate	1Msps, 2Msps
	Data rate	1Mbps, 2Mbps
	No of channels	40ch
	Channel interval	2MHz
	Output level	+4dBm max.
Antenna		Integrated (Pattern antenna)
Supporting profile		SPP, iAP2, GATT
Carrier frequency band		2,400MHz to 2,483.5MHz
SoC		Infineon Technologies AG SoC CYW20819
Interface	Hardware	UART
	Software	FCL Components original command system
Crystal resonator		24MHz and 32.768kHz
Power supply voltage		1.71VDC to 3.3VDC
Operating temperature		-30°C to +85°C
Dimensions		17.6 x 10.6 x 1.9mm
Mounting method		Surface mount (SMT)
Certifications		Bluetooth qualification (QDID)*1, Radio Act Japan, FCC, ISED, CE

Note: *1: Bluetooth SIG registration is required to use modules QDID

■ Evaluation board

Part number	Details
FWM-FUJI3-E1	Evaluation board (USB cable is attached)
FWM7BTZ61-DAU-E1	Daughter board (FWM7BTZ61 × 1 is mounted)

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