

FUJITSU Component Wireless Modules

Bluetooth® Version 4.2 (low energy)

(Blank Version & Central/Peripheral)

FWM7BLZ20-1090xx

Overview

Compact *Bluetooth* Low energy module with high performance processor, half the power consumption than its predecessor and double the transmission distance.



Features

- *Bluetooth* specification Version 4.2 (LE single mode) compliant
- Based on Nordic Semiconductor nRF52832 (ARM Cortex-M4F, 512KB flash, and 64KB RAM embedded)
- Complete *Bluetooth* protocol stack provided by Nordic Semiconductor
- External interface: 30 GPIO pins for NFC, SPI, TWI, UART, and ADC
- Out-of-Band pairing by use of NFC-A Tag interface



FWM7BLZ20-109049

Item	Specifications	
Part number	FWM7BLZ20-1090xx	
Antenna	Pattern antenna	
Softdevice	S132 (ver. 3.0.0 or later)	
<i>Bluetooth</i> technology	Conforms to <i>Bluetooth</i> Core Specification Version 4.2 (single mode low energy radio)	
RAM	64KB	
Transmit power	+4 dBm max.	
Receiver sensitivity	-94 dBm typical	
Interface	NFC (via external antenna), UART, SPI, GPIO, SWDCLK, SWIDO, nRESET, TWI, ADC	
Crystal oscillator	Embedded	
Operating temperature	-40°C to +85°C	
Operating voltage	1.7 ~ 3.6VDC	
Power consumption	Tx mode	LDO mode: 11.6 mA typical (at 0dBm), DC/DC mode: 5.3mA typical (at 0dBm)
	Rx mode	LDO mode: 11.7 mA typical DC/DC mode: 5.4mA typical
Number of GPIO	30	
Dimensions	15.7 x 9.3 x 1.7 mm	
Mounting method	Surface mount (SMD)	
Certifications	Bluetooth qualification (QDID) / Radio Act (Japan) / FCC / IC / CE	

Note: *Bluetooth* SIG registration is required to use this module's QDID.

Evaluation kit

Part number	Details
FWM7BLZ20-EB2-KIT-2	Evaluation kit
Contains:	
- MBH-FUJ12-E1 (USB cable is included)	Evaluation board
- FWM7BLZ20-DAU2-EB2	Module mounted on daughter board

Part number	Softdevice version
FWM7BLZ20-109049	S132 ver. 3.0.0
FWM7BLZ20-109062	S132 ver. 3.1.0

Technical drawing of the BLZ20** connector, showing front, side, and top views with dimensions.

Front View: The connector has a rectangular body with a width of 15.7 ± 0.15 and a height of 9.8 ± 0.15 . The top surface features the text "BLZ20**", "**** **", and a stylized "F" logo. A small circular feature is located near the top right corner. The right side shows a raised edge with a small notch.

Side View: The side view shows a profile with a total height of (1.7) . The top edge is slightly rounded.

Top View: The top view shows a rectangular footprint with a width of 10.15 and a depth of 8.45 . The central area is divided into a grid of 16 square positions (4x4). The dimensions for the grid are as follows:

- Overall width: 10.15
- Overall depth: 8.45
- Grid width (excluding side margins): 8.4
- Grid depth (excluding top and bottom margins): 7.0
- Side margin (left and right): 0.7
- Top margin: 0.5
- Bottom margin: 0.7
- Grid cell width: 2.5
- Grid cell depth: 2.5
- Grid cell corner radius: $R0.4$
- Grid cell spacing (horizontal): 0.4
- Grid cell spacing (vertical): 0.4
- Grid cell spacing (diagonal): 0.5

Contact

Japan

FUJITSU COMPONENT LIMITED
Shinagawa Seaside Park Tower
12-4, Higashi-shinagawa 4-chome,
Tokyo 140 0002, Japan
Tel: (81-3) 3450-1682
Fax: (81-3) 3474-2385
Email: fcl-contact@cs.jp.fujitsu.com
Web: www.fujitsu.com/jp/group/fcl/en/

North and South America

FUJITSU COMPONENTS AMERICA, INC.
2290 North First Street, Suite 212
San Jose, CA 95131 U.S.A.
Tel: (1-408) 745-4900
Fax: (1-408) 745-4970
Email: components@us.fujitsu.com
Web: <http://us.fujitsu.com/components/>

Europe

FUJITSU COMPONENTS EUROPE B.V.
Diamantlaan 25
2132 WV Hoofddorp
Netherlands
Tel: (31-23) 5560910
Fax: (31-23) 5560950
Email: info@fceu.fujitsu.com
Web: emea.fujitsu.com/components/

Asia Pacific

FUJITSU COMPONENTS ASIA, Ltd.
102E Pasir Panjang Road
#01-01 Citilink Warehouse Complex,
Singapore 118529
Tel: (65) 6375-8560 / Fax: (65) 6273-3021
Email: fcsl@fcsl.fujitsu.com
[www.fujitsu.com/sg/products/devices/
components/](http://www.fujitsu.com/sg/products/devices/components/)

China

FUJITSU ELECTRONIC COMPONENTS
(SHANGHAI) CO., LTD.
Unit 4306, InterContinental Center
100 Yu Tong Road, Shanghai 200070, China
Tel: (86 21) 3253 0998 /Fax: (86 21) 3253 0997
Email: fcal@fcal.fujitsu.com
[www.fujitsu.com/sg/products/devices/
components/](http://www.fujitsu.com/sg/products/devices/components/)

Hong Kong

FUJITSU COMPONENTS HONG KONG Co., Ltd.
Room 06, 28/F, Greenfield Tower, Concordia
Plaza, No.1 Science Museum Road,
Tsim Sha Tsui East, Kowloon, Hong Kong
Tel: (852) 2881 8495 Fax: (852) 2894 9512
Email: fcal@fcal.fujitsu.com
[www.fujitsu.com.sg/products/devices/
components/](http://www.fujitsu.com.sg/products/devices/components/)

Korea

FUJITSU COMPONENTS KOREA, LTD.
Alpha Tower #403,
645 Sampyeong-dong,
Bundang-gu, Seongnam-si,
Gyeonggi-do, 13524 Korea
Tel: (82 31) 708-7108
Fax: (82 31) 709-7108
Email: fcak@fcak.fujitsu.com
[www.fujitsu.com/sq/products/
devices/components/](http://www.fujitsu.com/sq/products/devices/components/)

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