

# 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 <i>Bluetooth</i> 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)
Bluetooth 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

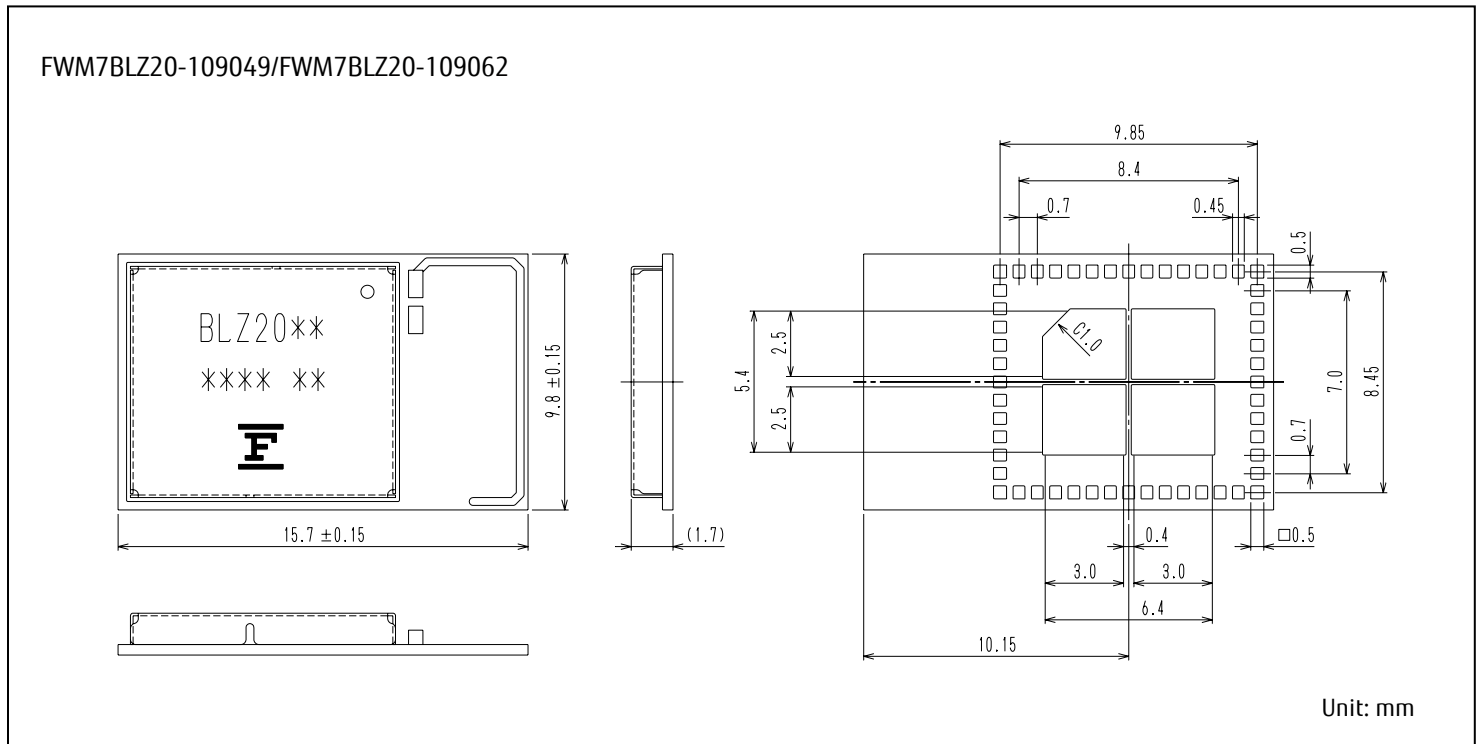
Note: *Bluetooth* SIG registration is required to use this module's QDID.

#### Evaluation kit

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

■ Dimensions



Note: The *Bluetooth*® word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. and any use of such marks by Fujitsu Component is under license. Other trademarks and trade names are those of their respective owners.

**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/

**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/

**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/

**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: fcal@fcal.fujitsu.com  
 www.fujitsu.com/sg/products/  
 devices/components/

**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/

**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: fcal@fcal.fujitsu.com  
 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/

**Copyright**

All trademarks or registered trademarks are the property of their respective owners. Fujitsu Components America or its affiliates do not warrant that the content of datasheet is error free. In a continuing effort to improve our products Fujitsu Components America, Inc. or its affiliates reserve the right to change specifications/datasheets without prior notice. Copyright ©2017 Fujitsu Components America, Inc. All rights reserved. Revised February 28, 2017