

Murata Type2AB module is designed as Ultra-small, high quality and lower power consumption UWB module.

Ideally suited for small, battery operated IoT devices and applications.



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### Features

#### **Main Features**

- Support Channels : Band 5 & 9
- UWB Chip set : Qorvo DW3110/3120
- FCC/IC/TELEC Reference Certified
- Hostless module Integrated Nordic IC / nRF52840 which also have Blutooth Low Energy function for waking up UWB and updating FW.
- Integrated 3-Axis sensor for saving battery
- Reference clock for UWB and MCU are embedded

#### Contribute to customer product

- Smallest/highly integrated UWB module available in the market
- 75% less square area than CoB solution
- Frequency, Tx power and Antenna delay are calibrated for each device
- Support Multi Antenna design and evaluation

# **Product Information**

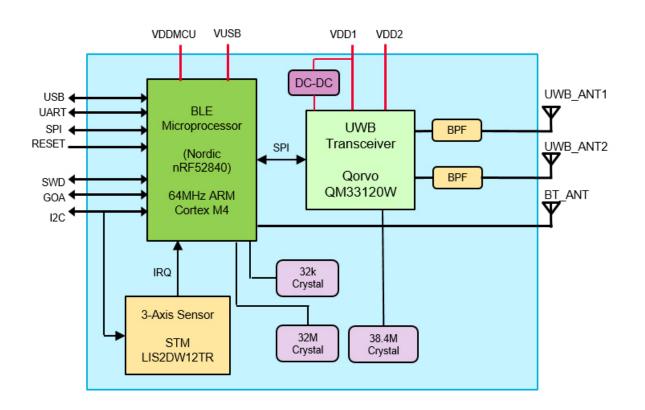
| Item                           | explanation  |
|--------------------------------|--|
| Part Number                    | LBUA5QJ2AB-828   |
| Product Type                   | Module   |
| Product Status                 | In Production  |
| Grade                          | Consumer   |
| Frequency                      | UWB Ch 5 & 9 + Bluetooth LE 2.4GHz   |
| Frequency MHz (min) UWB        | 6250   |
| Frequency MHz (max) UWB        | 8250   |
| Chipset                        | Qorvo DW3110/3120     Nordic nRF52840  |
| CPU Core                       | ARM Cortex-M4  |
| Flash / RAM                    | 1MB / 256KB  |
| Antenna                        | External   |
| RF Conn/ Antenna               | Not Included   |
| Sleep Clock                    | Internal X'tal (32.768kHz)   |
| System Clock                   | Internal X'tal (32MHz and 38.4MHz)   |
| Operating Temperature Range    | -40 to 85  |
| Operating Temperature °C (min) | -40  |
| Operating Temperature °C (max) | 85   |
| Mounting Type                  | SMT  |
| Package                        | LGA  |
| Dimension                      | 10.5 × 8.3 × 1.44(max)mm   |
| Supply Voltage (Vdc)           | <ul> <li>3.0V for VDD1,VDD2 and VDDMCU</li> <li>5.0V for VUSB1.8V</li> </ul> |
| Supply Voltage min             | <ul> <li>2.5V for VDD1,VDD2 and VDDMCU</li> <li>4.35V for VUSB</li> </ul>    |
| Supply Voltage max             | <ul> <li>3.6V for VDD1,VDD2 and VDDMCU</li> <li>5.5V for VUSB</li> </ul>     |
| Bluetooth                      | 5.2  |
| Power Class                    | Class 1  |
| Technology                     | UWB + Bluetooth Low energy   |
| Host Interface                 | USB,UART,SPI, I2C  |
| FCC/IC/MIC(Japan) Certified    | Yes  |

| ltem        | explanation |
|-------------|-------------|
| ETSI report | Yes         |
| 1509001     | Yes         |

### **Datasheet and Documentations**

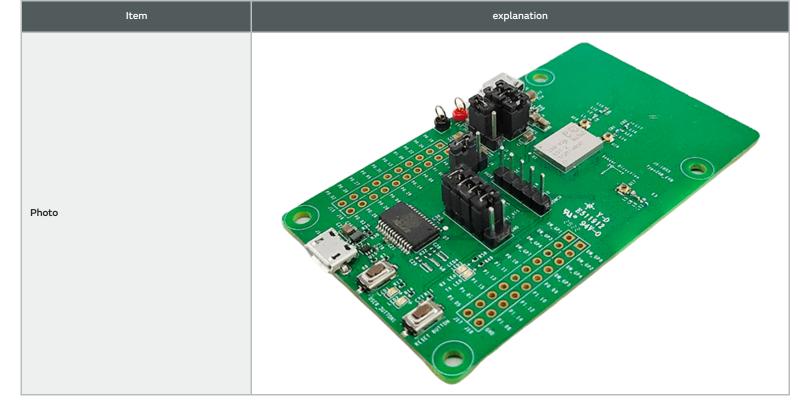
Please contact our sales or send your inquiry <u>here</u> for the latest datasheet and other related documentations.

# **Block Diagram**



### **Evalutation Kit**

| Item        | explanation  |
|-------------|--|
| Product P/N | LBUA5QJ2AB-828EVB  |
| Conent      | muRata UWB/Bluetooth Low Energy module Type2AB evaluation board.<br>To connect Type-C USB terminal on the board to PC via USB interface, It's powered and serial port is avairable.<br>Customer can evaluate RF performance to enter the AT command via serial terminal. If customer re-program<br>the demo-FW into the module, also can evaluate simple TWR and PDoA functions. |



Please contact our sales or send your inquiry <u>here</u>.

On the <u>Qorvo Based UWB Modules/Type2AB Document Site, Forum (my Murata\*)</u> [], you can find detailed documents including datasheets and design guides. Feel free to visit the website for this supplementary information and additional documents. If it is your first time using this website, please refer to the <u>Access Guide (Documents on How to Register)</u> ].

#### Go to my Murata\*

\*The registration number that comes with the evaluation kit will be needed to access the website.

\*my Murata : A free site that only a registered user can log into and view. When using this website, you will need to agree to the User Policy 📮 and create an account.

#### Sign up for Murata Newsletter

Murata Newsletter provides a wide range of information once or twice a month, including the latest product information and events.

