








Explore the next sense



Acconeer XM122 IoT Module - Product Brief

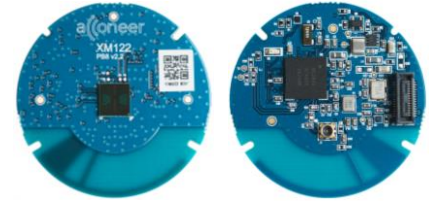
September 2019

XM122 Product Offering

Product	Description	Planned Release	Comment
XM122 	IoT Module	Released	IoT module including Nordic nRF52840 SoC and A111 sensor
XB122 	Evaluation Board	Released	Evaluation board for XM122 IoT module. Connect SWDIO (enable SW flash & debug). Support for Exploration tool.
IoT beacon accessories – Planned release Q1 2020			
XA122 	Battery PCB	Q1 2020	PCB board with coin cell battery holder (connected to XM122 via PCB micro connector)
H122 	Housing (IP67)	Q1 2020	IP67 housing Including wall mounting bracket. Support exchangeable lids (L122-1,L122-2,L122-3)
L122-1 	Flat lid	Q1 2020	Flat lid to H122
L122-2 	FZP lens	Q1 2020	Lid including FZP lens to H122
L122-3 	HPL lens	Q1 2020	Lid including HPL lens to H122

XM122 IoT module – Product brief

PROPRIETARY AND CONFIDENTIAL



Overview

- A111 60GHz PCR sensor with BT v5 support
- 32-bit ARM® Cortex™ M4 MCU (Nordic nRF52840) 64 MHz
- Formfactor: 33 mm diameter
- 256KB SRAM and 1MB Flash. Support for FOTA.
- Support for coin cell battery
 - Note: Switched power regulator supported to generate operating 1.8V
- Temp sensor (MCU internal) & EEPROM (MCU internal)
- Internal 2.4 GHz antenna and support for external
- Optimized on low power consumption
- Operating temperature: -40°C to 85°C

Software configurations

- Delivered with bootloader enabling customer to download Aconeer RSS software including SDK for stand-alone usage.

Connectivity:

- BT v5, NFC (optional)

Usable Ext. I/F provided by B2B connector

- SPI, UART, I2C, GPIO and Reset
- SWD & JTAG trace for SW flash and debug
- VIO to enable dedicated 1.8V/3.0V single power supply

IoT Applications

- Distance measurement
- Tank level measurement
- Waste bin level measurement
- Parking space occupancy
- Presence detection
- *Speed Detection (to be supported)*

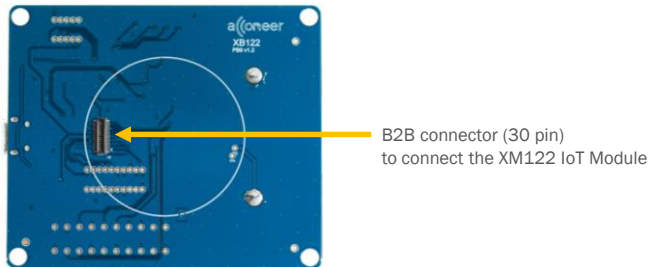
Note: nRF52840 have full protocol support for BT v5, BT mesh, Thread, Zigbee, 802.15.4, ANT and 2.4 GHz proprietary stacks.

XB122 Breakout board

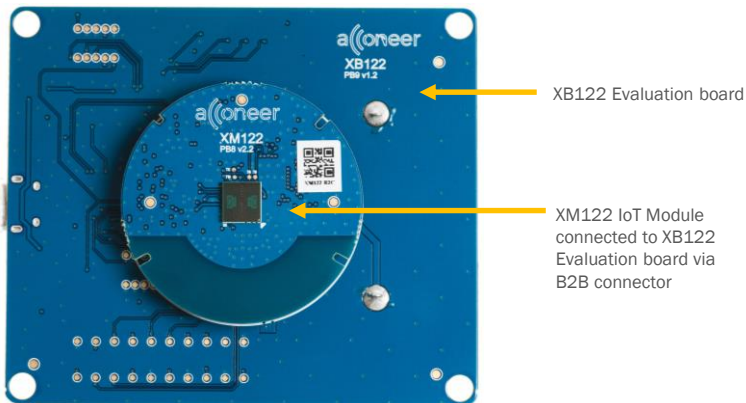
Overview

- XB122 breakout board for the XM122 IoT module.
- Designed for the purpose of flashing, debugging and easy access to all interfaces provided by the XM122 module.
- Support for UART communication over USB.
- 3.0V power supply via coin cell battery (CR2477) or USB supply.

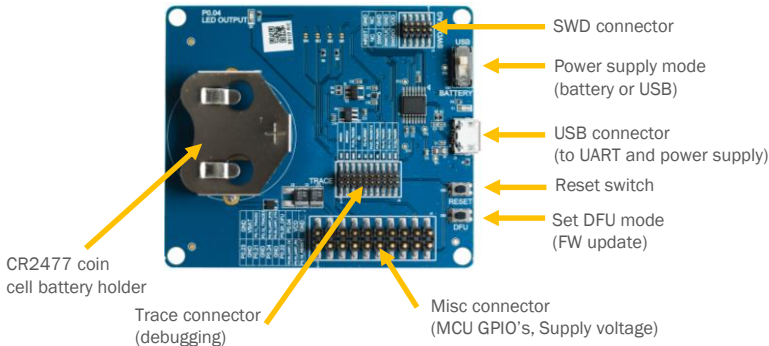
XB122 Breakout board - Top view



XM122 IoT module + XB122 Breakout board - Top view



XB122 Breakout board - Bottom view



XM122 IoT module - Estimated lifetime

Theoretical estimates given with BLE four second advertisement configuration

- Measurement once per second: ~214 days
- Measurement every ten seconds: ~1289 days
- Measurement once per minute: ~3790 days⁽¹⁾

Note: given estimates based on operating temperature intervall of 5°C to 50°C

⁽¹⁾Note: Coin cell battery life time ~10 years

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