

## MDBT42Q - nRF52832 based BLE module

SKU 317030213

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### Description

MDBT42Q is a BT 4.0, BT 4.1 and BT 4.2 stack (Bluetooth low energy or BLE) module designed based on Nordic nRF52832 SoC solution, which incorporates: GPIO, SPI, UART, I2C, I2S, PWM and ADC interfaces for connecting peripherals and sensors.

### Features

- Dual Transmission mode of BLE & 2.4 GHz RF upon customer preference.
- Long working distance: over 80 meters in open space
- Compact size with (L) 16 x (W) 10 x (H) 2.2 mm.
- Low power requirements, ultra-low peak, average and idle mode power consumption.
- Be compatible with a large installed base of mobile phones, tablets and computers.
- Fully coverage of BLE software stack. See 1.3 Profile & Service Information.
- BLE & RF transmission switching helps products fit all operation system and most hardware.

### Specification

- Multi-protocol 2.4GHz radio
- 32-bit ARM Cortex - M4F processor
- 512KB flash programmed memory and 64KB RAM
- Software stacks available as downloads
- Application development independent from protocol stack
- On-air compatible with nRF51, nRF24AP and nRF24L series
- Programmable output power from +4dBm to -20dBm
- RAM mapped FIFOs using EasyDMA
- Dynamic on-air payload length up to 256 bytes
- Flexible and configurable 32 pin GPIO
- Simple ON / OFF global power mode
- Full set of digital interface all with Easy DMA including:
  - 3 x Hardware SPI master ; 3 x Hardware SPI slave
  - 2 x two-wire master ; 2 x two-wire slave
  - 1 x UART (CTS / RTS)

PDM for digital microphone

I2S for audio

- 12-bit / 200KSPS ADC
- 128-bit AES ECB / CCM / AAR co-processor
- Low cost external crystal 32MHz  $\pm$  40ppm for Bluetooth ;  $\pm$  50ppm for ANT Plus
- Low power 32MHz crystal and RC oscillators
- Wide supply voltage range 1.7V to 3.6V
- On-chip DC/DC buck converter
- Individual power management for all peripherals
- Timer counter
  - 5 x 32-bit
  - 3 x 24-bit RTC
- NFC-A tag interface for OOB pairing
- Granted main regional certification such as FCC (USA), CE (Europe), IC (Canada), TELEC (Japan), KCC (Korea), SRRC (China), and NCC (Taiwan)
- RoHS and REACH compliant

## Application

IoT

- Home automation
- Sensor networks
- Building automation

Personal Area Networks

- Health / fitness sensor and monitor device
- Medical devices
- Key-fobs and wrist watches

Interactive entertainment devices

- Remote control
- Gaming controller

Beacons

A4WP wireless chargers and devices

Remote control toys

Computer peripherals and I/O devices

- Mouse
- Keyboard
- Multi-touch trackpad

## Part List

1 x MDBT42Q BLE module

## Documents

[Datasheet](#)

[FCC document](#)

[IC document](#)

[TELECOM document](#)

[KCC document](#)

[SRRC document](#)

[NCC document](#)

## Best-sellers



ESP-32S Wifi Bluetooth Co...



LinkIt Smart 7688 Duo



AI7688H



BLE Carbon

## Technical Details

Dimensions

60mm x 100mm x 2.2mm

Weight	G.W 2g
Battery	Exclude

## Questions and Answers

Have a question about this? Ask people who own it.

0

How is this module programmed for its applications? Is there a SDK or toolchain?

Peter Oruba on Nov 24,2016

Reply |  
upvote (0)

This is a third party Module. So, Please contact <http://www.raytac.com/contact.php>. for any technical support.

kavi on Nov 25,2016 12:54 PM

Reply | upvote (0)

You can use the firmware from Adafruit for it (Bluefruit52):[https://github.com/adafruit/Adafruit\\_nRF52\\_Arduino](https://github.com/adafruit/Adafruit_nRF52_Arduino)They base it on this firmware:<https://github.com/sandeepmistry/arduino-nRF51> use a JLink segger to program the module and after that I can reprogram it using the UART, I like the Adafruit solution since they let you program it right from the Arduino IDE and that makes life very easy. I can reprogram the name that one sees in scanning for devices though, but one can set the 'local name' and even things like peripheral information from within your Arduino sketch.

jakorten on Jun 12,2017 17:59 PM

Reply | upvote (0)

0

Is it possible to hand solder this module? It looks like it might be a bit of a challenge...

Matt Kroupa on May 31,2017

Reply |  
upvote (0)

It is possible but I use solder paste and it requires skills if you want to bake it on a normal PCB adding wires to it is doable using a normal soldering iron I guess.

jakorten on Jun 12,2017 18:00 PM

Reply |  
upvote (0)

0

The nRF52832 module supports ANT protocol through loading S212 ANT SoftDevice or S332 Concurrent ANT/Bluetooth® Low Energy (BLE) SoftDevice. Can these softdevices be loaded onto this module so that it supports ANT?

TStudwell on Nov 18,2016

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This is a third party Module. So, Please contacts to <http://www.raytac.com/contact.php>.

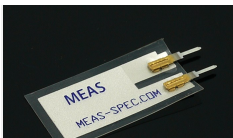
kavi on Nov 23,2016 17:28 PM

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## View History



G1&2" Water Flow Sensor



Piezo Vibration Sensor



G5&4" Water Flow Sensor



G3&4" Water Flow Sensor

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