Wireless Module
Bluetooth® low energy Module
Overview

May 28, 2019 Version 2.0

TAIYO YUDEN Bluetooth® low energy Module Line-Up

nRF52 Bluetooth® low energy Module

nRF52840 Module

EYSKBN UWB-WX
TY's Application Embedded
High-end

EYSKBN ZWB
RAM256kB
SoftDevice S140
High-end

nRF52832 Module

EYSHCN ZWZ
RAM 64kB
SoftDevice S132
Big

EYSHJN ZWZ
RAM 64kB
SoftDevice S132
Small

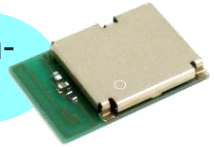
EYSHSN ZWZ
RAM 64kB
SoftDevice S132
Ultra-small*1

nRF52810 Module

EYSLCN ZWW
RAM 24kB
SoftDevice S112
Big

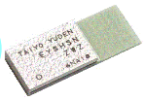
EYSLSN ZWW
RAM 24kB
SoftDevice S112
Ultra-small*2

High-end



Embedded antenna
Int. 32kHz X'tal
Int. LC for DC/DC
10.0 x 15.4 x 2.0mm

Ultra-small



Embedded antenna
Ext. 32kHz X'tal
Ext. LC for DC/DC
*1: 3.25 x 8.55 x 0.85mm
*2: 3.25 x 8.55 x 1.00mm

Small

Embedded antenna
Ext. 32kHz X'tal
Ext. LC for DC/DC
5.1 x 11.3 x 1.3mm

Big

Embedded antenna
Int. 32kHz X'tal
Int. LC for DC/DC
9.6 x 12.9 x 2.0mm

TAIYO YUDEN Bluetooth® low energy Module Line-Up

nRF51x22 Bluetooth® low energy Module

Big
Embedded antenna
Int. 32kHz X'tal
Int. LC for DC/DC
9.6 x 12.9 x 2.0 mm

Small
Embedded antenna
Ext. 32kHz X'tal
Ext. LC for DC/DC
5.1 x 11.3 x 1.3 mm

EYSGCN Series

- Basic
  - **EYSGCN ZXX**: RAM 16kB; SoftDevice S110
  - **EYSGCN ZWY**: RAM 32kB; SoftDevice S120
- Application Embedded
  - **EYSGCN AWY-VX**: TY's App; BT 4.2; UART Control
  - **EYSGCN AWY-WX**: TY's App; BT 4.1; UART Control

EYSGJN Series / EYAGJN Series

- Basic
  - **EYAGJN ZXX**: RAM 32kB; ANT + BLE; SoftDevice S310
  - **EYSGJN ZXX**: RAM 16kB; SoftDevice S110
  - **EYSGJN ZWY**: RAM 32kB; SoftDevice S120
- Application Embedded
  - **EYSGJN AWY-VX**: TY's App; BT 4.2; UART Control
  - **EYSGJN AWY-WX**: TY's App; BT4.1; UART Control

Latest Documents for Bluetooth® low energy Module

EYSKBNZWB	http://www.yuden.co.jp/or/product/category/module/EYSKBNZWB.html
EYSHSNZWZ	http://www.yuden.co.jp/or/product/category/module/EYSHSNZWZ.html
EYSHCNZWZ	http://www.yuden.co.jp/or/product/category/module/EYSHCNZWZ.html
EYSHJNZWZ	http://www.yuden.co.jp/or/product/category/module/EYSHJNZWZ.html
EYSLSNZWW	http://www.yuden.co.jp/or/product/category/module/EYSLSNZWW.html
EYSLCNZWW	http://www.yuden.co.jp/or/product/category/module/EYSLCNZWW.html
EYSGCNZXX	http://www.yuden.co.jp/or/product/category/module/EYSGCNZXX.html
EYSGCNZWY	http://www.yuden.co.jp/or/product/category/module/EYSGCNZWY.html
EYSGJNZXX	http://www.yuden.co.jp/or/product/category/module/EYSGJNZXX.html
EYSGJNZWY	http://www.yuden.co.jp/or/product/category/module/EYSGJNZWY.html
EYAGJNZXX	http://www.yuden.co.jp/or/product/category/module/EYAGJNZXX.html
EYSKBNUWB-WX	http://www.yuden.co.jp/or/product/category/module/EYSKBNUWB-WX.html
EYSGCNAWY-VX	http://www.yuden.co.jp/or/product/category/module/EYSGCNAWY-VX.html
EYSGJNAWY-VX	http://www.yuden.co.jp/or/product/category/module/EYSGJNAWY-VX.html
EYSGCNAWY-WX	http://www.yuden.co.jp/or/product/category/module/EYSGCNAWY-WX.html
EYSGJNAWY-WX	http://www.yuden.co.jp/or/product/category/module/EYSGJNAWY-WX.html

-The documents for the evaluation board and evaluation kit are also available on the above page.

- The Japanese documents are available on the following page.
  http://www.yuden.co.jp/jp/product/category/module/lineup.html#Bluetooth

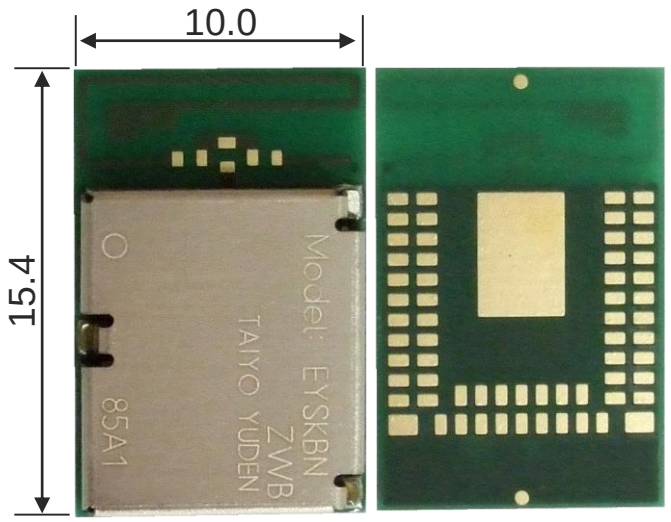
Bluetooth® 5.0 low energy Module: EYSKBNZWB

Features

- Frequency: 2402 to 2480 MHz with +8dBm Output power
- Single power supply: 1.7 – 5.5V
- Single Mode Bluetooth 5.0 / 802.15.4 (e.g. Thread, Zigbee)
- Bluetooth 5 data rate support: 2M / 1M / 500k / 125kbps
- Chip: nRF52840 (Nordic)
- Integrated System/Sleep Clock, 2 x LC for DC/DC
- Integrated high performance PCB antenna
- ARM® Cortex M4F 32bit processor and 1MB Flash & 256kB RAM
- ARM® TrustZone® Cryptocell 310 cryptographic accelerator
- Interface: USB, NFC-A, SPI, UART, I2C, I2S, PDM and 12bit ADC
- Outline: 10.0 x 15.4 x 2.0 mm
- Operating Temperature range: -40 to 85 deg-C
- Bluetooth and Japan, FCC, IC qualified
- ETSI EN 300 328 v2.1.1 Conducted Test Report Available
- RoHS compliant / Complete Lead Free

Outline

Unit: mm

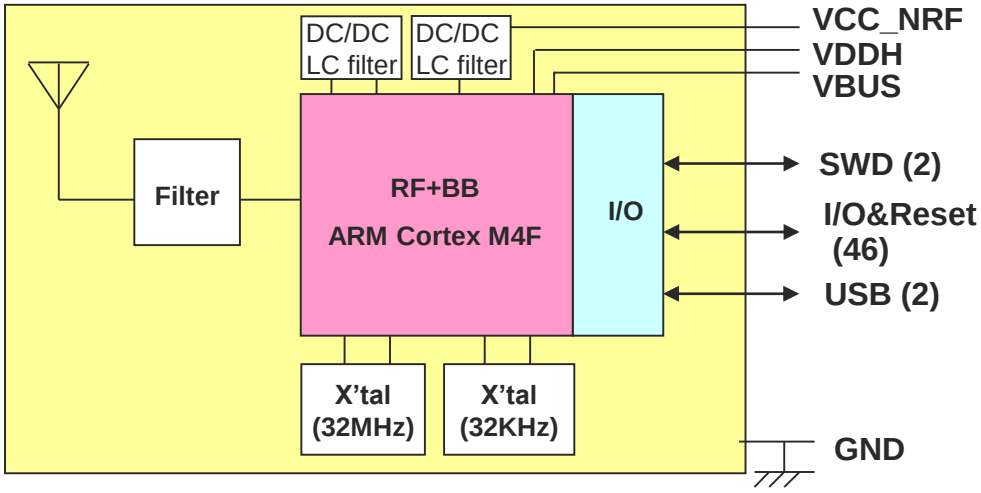


Top View　　Bottom View

Applications

- Advanced wearables
  - Connected watches
  - Advanced personal fitness devices
  - Wearables with wireless payment
  - Connected health
  - Virtual/Augmented reality applications
- Internet of Things
  - Smart home sensors and controllers
  - Industrial IoT sensors and controllers
- Interactive entertainment devices

Block Diagram



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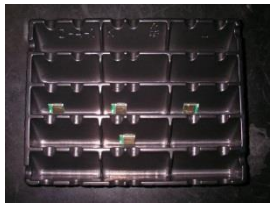
TAIYO YUDEN

Bluetooth® low energy Module Sample, Evaluation Board / Kit

EYSKBNZWB (Module)

Module samples



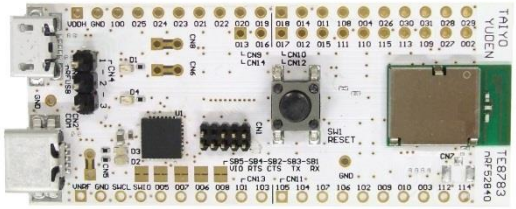
or

Tray

Tape

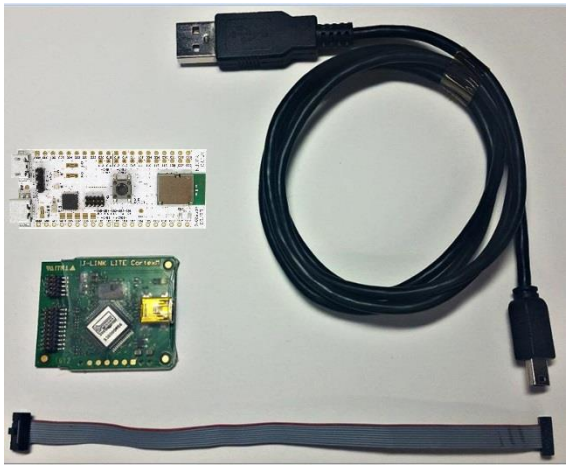
EBSKBNZWB (EV-B)

Evaluation board



EKSKBNZWB (EV-K)

Evaluation kit



SEGGER J-Link LITE Attached

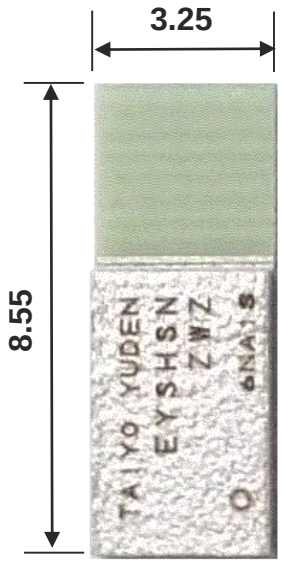
2Mbps Bluetooth® 5.0 low energy Module: EYSHSNZWZ

Features

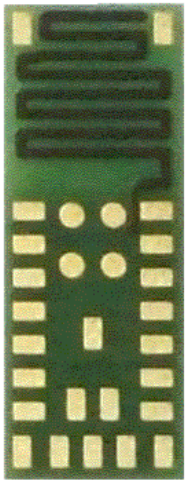
- Frequency: 2402 to 2480 MHz with +4dBm Output power
- Single power supply: 1.7– 3.6V
- Single Mode Bluetooth low energy (ANT™ Available)
- Chip: nRF52832 (Nordic) with Bluetooth low energy 2Mbps mode
- Integrated System Clock
- ARM Cortex M4F 32bit processor
- 512kB Flash and 64kB RAM
- Interface: SPI, UART, I2C, I2S, PDM and 12bit ADC
- Support NFC-A Type-2 for Touch-to-Pair
- Integrated high performance PCB antenna
- Outline: 3.25 x 8.55 x 0.85mm MAX
- Operating Temperature range: -40 to 85 deg-C
- Bluetooth and Japan, FCC, IC qualified
- ETSI EN 300 328 v2.1.1 Conducted Test Report Available
- RoHS compliant / Complete Lead Free

Outline

Unit: mm



Top View

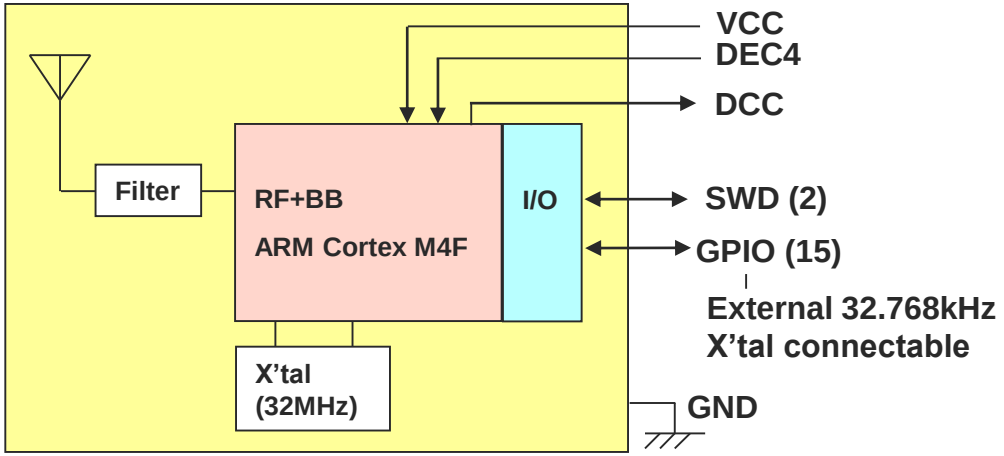


Bottom View

Applications

- Smart wristband
- Smart glasses
- Remote control ring
- Smart pen
- Heart rate monitor
- pressure monitor
- Blood glucose meter
- Thermometer
- Mobile accessories

Block Diagram



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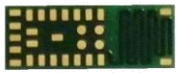
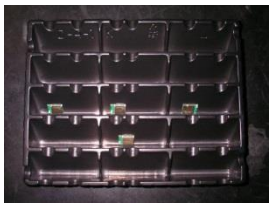
Bluetooth® low energy Module Sample, Evaluation Board / Kit

EYSHSNZWZ (Module)

Module samples

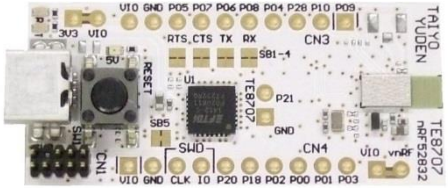



or

Tray Tape

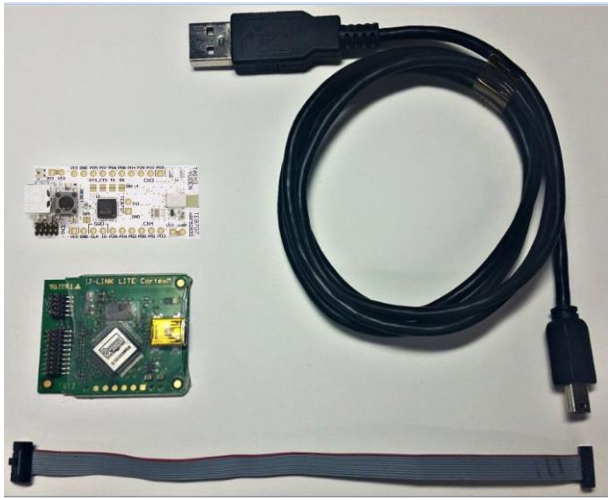
EBSHSNZWZ (EV-B)

Evaluation board



EKSHSNZWZ (EV-K)

Evaluation kit



SEGGER J-Link LITE Attached

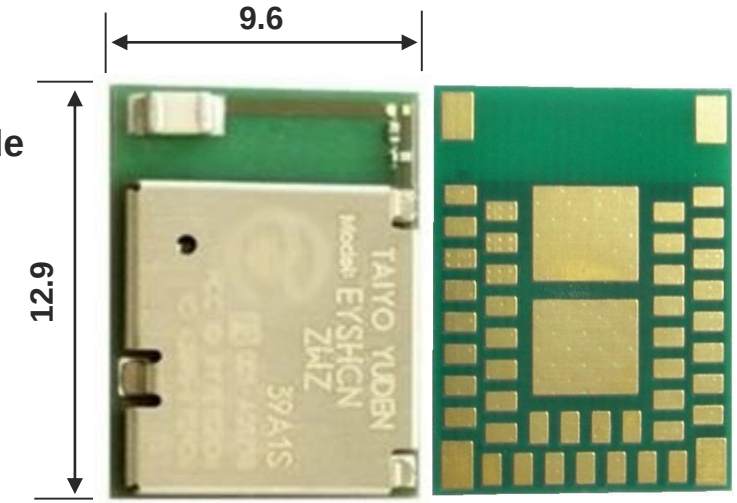
2Mbps Bluetooth® 5.0 low energy Module: EYSHCNZWZ

Features

- Frequency: 2402 to 2480 MHz with +4dBm Output power
- Single power supply: 1.7 – 3.6V
- Single Mode Bluetooth low energy (ANT™ Available)
- Chip: nRF52832 (Nordic) with Bluetooth low energy 2Mbps mode
- Integrated System/Sleep Clock, LC for DC/DC
- Integrated high performance ceramic chip antenna
- ARM Cortex M4F 32bit processor
- 512kB Flash and 64kB RAM
- Interface: SPI, UART, I2C, I2S, PDM and 12bit ADC
- Support NFC-A Type-2 for Touch-to-Pair
- Outline: 9.6 x 12.9 x 2.0 mm with 1mm pad pitch
- Operating Temperature range: -40 to 85 deg-C
- Bluetooth and Japan, FCC, IC qualified
- ETSI EN 300 328 v2.1.1 Conducted Test Report Available
- RoHS compliant / Complete Lead Free

Outline

Unit: mm

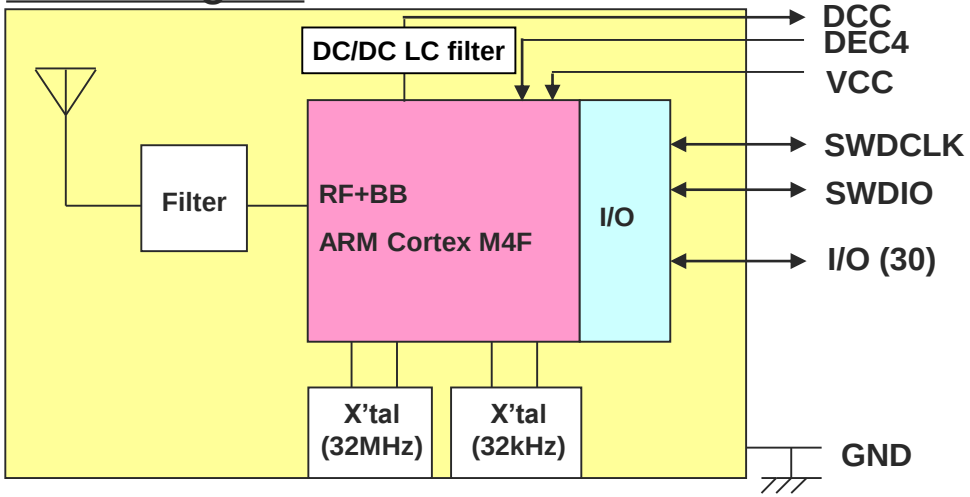


Top View　　Bottom View

Applications

- Cycle computer
- Heart rate monitor
- Blood pressure monitor
- Blood glucose meter
- Weighing machine
- Thermometer
- Mobile accessories
- Sports and fitness sensors
- Remote controllers / Toys

Block Diagram



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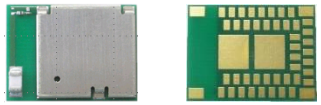
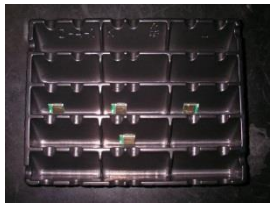
Bluetooth® low energy Module Sample, Evaluation Board / Kit

EYSHCNZWZ (Module)

■ Module samples



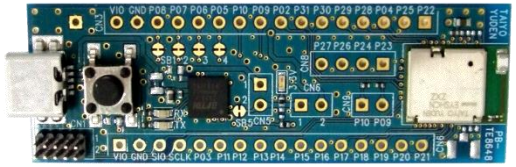


or

Tray Tape

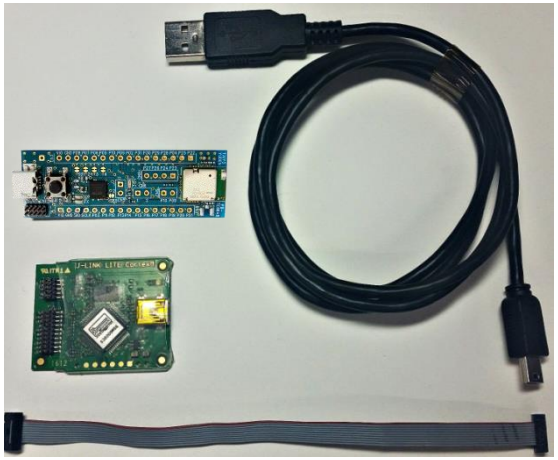
EBSHCNZWZ (EV-B)

■ Evaluation board



EKSHCNZWZ (EV-K)

■ Evaluation kit

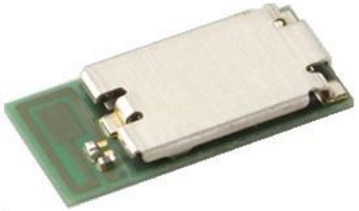


SEGGER J-Link LITE Attached

2Mbps Bluetooth® 5.0 low energy Module: EYSHJNZWZ

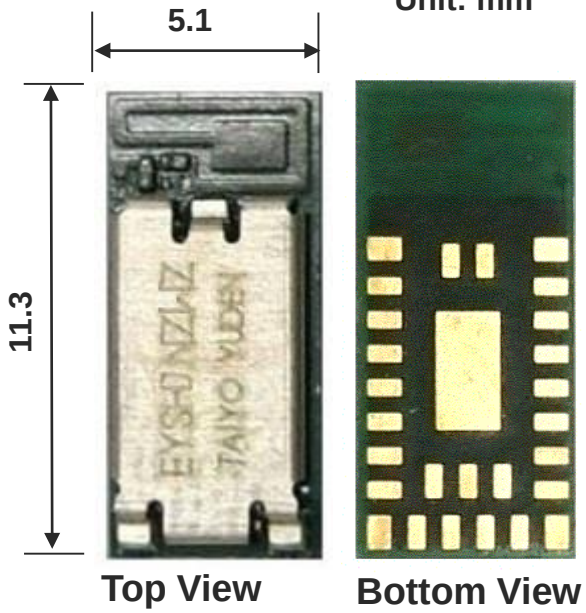
Features

- Frequency: 2402 to 2480 MHz with +4dBm Output power
- Single power supply: 1.7– 3.6V
- Single Mode Bluetooth low energy (ANT™ Available)
- Chip: nRF52832 (Nordic) with Bluetooth low energy 2Mbps mode
- Integrated System Clock
- ARM Cortex M4F 32bit processor
- 512kB Flash and 64kB RAM
- Interface: SPI, UART, I2C, I2S, PDM and 12bit ADC
- Support NFC-A Type-2 for Touch-to-Pair
- Integrated high performance pattern antenna
- Outline: 5.1 x 11.3 x 1.3mm MAX
- Operating Temperature range: -40 to 85 deg-C
- Bluetooth and Japan, FCC, IC qualified
- ETSI EN 300 328 v2.1.1 Conducted Test Report Available
- RoHS compliant / Complete Lead Free



Outline

Unit: mm

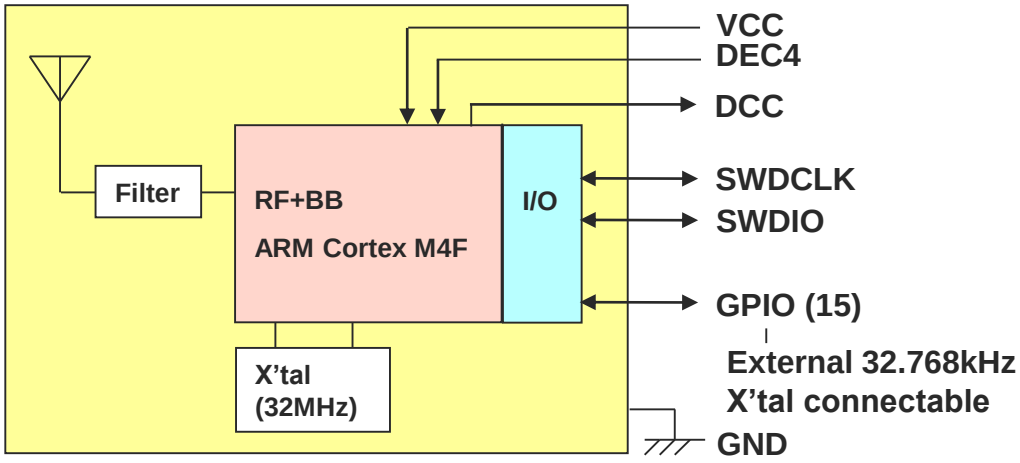


Top View　　Bottom View

Applications

- Cycle computer
- Heart rate monitor
- Blood pressure monitor
- Blood glucose meter
- Weighing machine
- Thermometer
- Mobile accessories
- Sports and fitness sensors
- Remote controllers / Toys

Block Diagram



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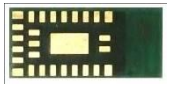
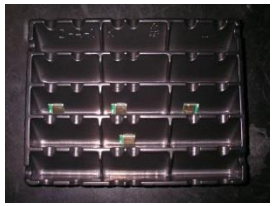
Bluetooth® low energy Module Sample, Evaluation Board / Kit

EYSHJNZWZ (Module)

Module samples

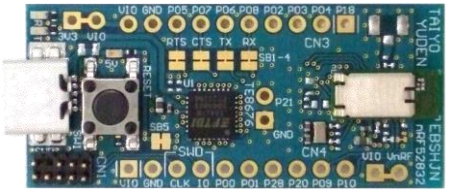



or

Tray Tape

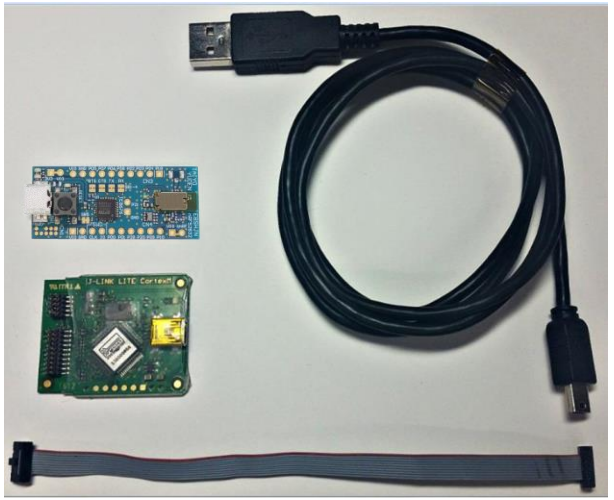
EBSHJNZWZ (EV-B)

Evaluation board



EKSHJNZWZ (EV-K)

Evaluation kit

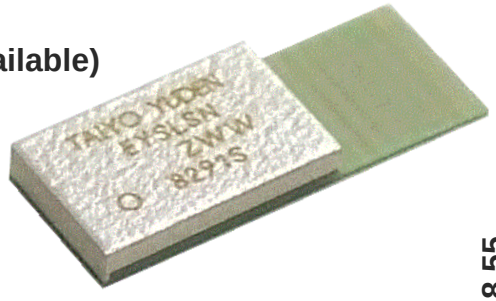


SEGGER J-Link LITE Attached

2Mbps Bluetooth® 5.0 low energy Module: EYSLSNZWW

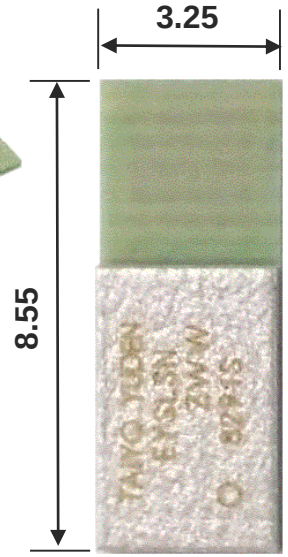
Features

- Frequency: 2402 to 2480 MHz with +4dBm Output power
- Single power supply: 1.7– 3.6V
- Single Mode Bluetooth low energy (ANT™ Available)
- Bluetooth 5.0 low energy 2Mbps mode
- Chip: nRF52810 (Nordic)
- Integrated System Clock
- ARM Cortex M4 32bit processor
- 192kB Flash and 24kB RAM
- Interface: SPI, UART, I2C, PDM and 12bit ADC
- Integrated high performance PCB antenna
- Outline: 3.25 x 8.55 x 1.00mm MAX
- Operating Temperature range: -40 to 85 deg-C
- Bluetooth and Japan, FCC, IC qualified
- ETSI EN 300 328 v2.1.1 Conducted Test Report Available
- RoHS compliant / Complete Lead Free

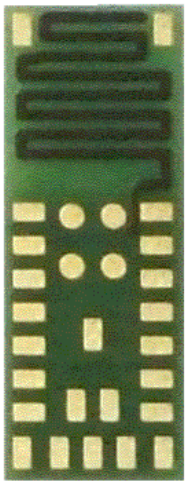


Outline

Unit: mm



Top View

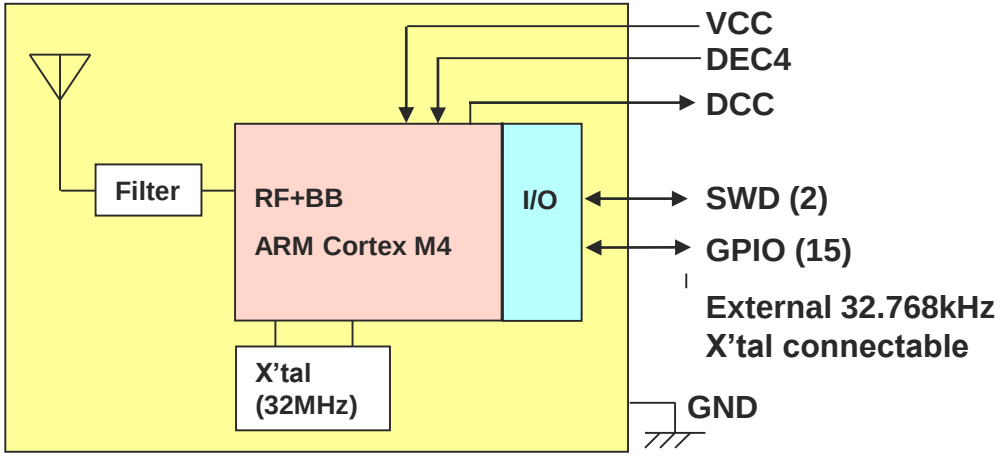


Bottom View

Applications

- Smart wristband
- Smart glasses
- Remote control ring
- Smart pen
- Heart rate monitor
- pressure monitor
- Blood glucose meter
- Thermometer
- Mobile accessories

Block Diagram



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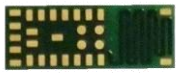
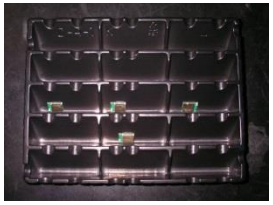
Bluetooth® low energy Module Sample, Evaluation Board / Kit

EYSLSNZWW (Module)

Module samples




or

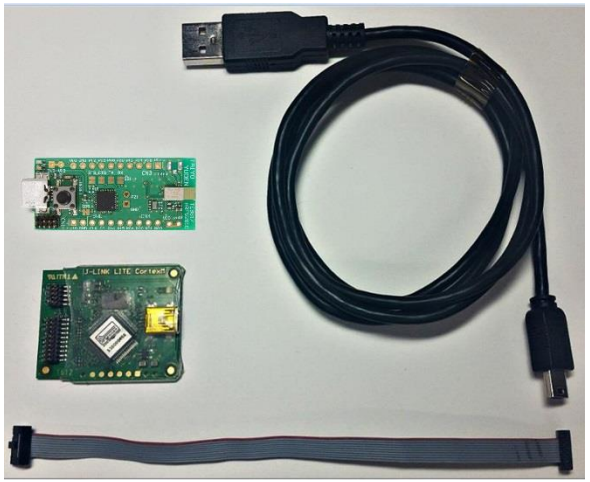
Tray Tape

EBSLSNZWW (EV-B)

Evaluation board

EKSLSNZWW (EV-K)

Evaluation kit



SEGGER J-Link LITE Attached

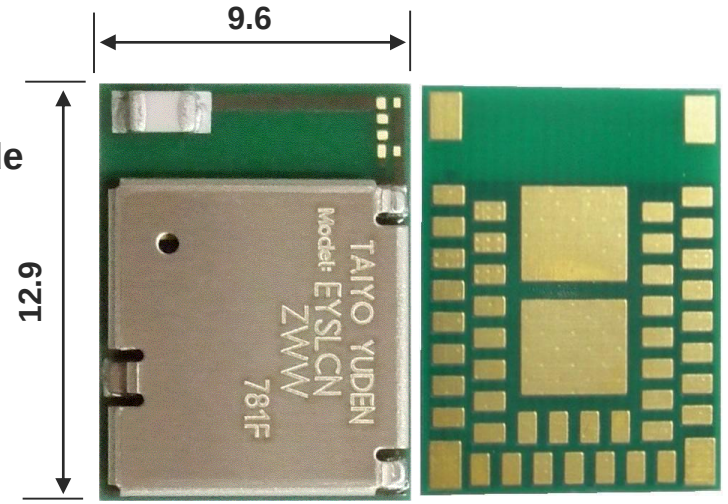
2Mbps Bluetooth® 5.0 low energy Module: EYSLCNZWW

Features

- Frequency: 2402 to 2480 MHz with +4dBm Output power
- Single power supply: 1.7 – 3.6V
- Single Mode Bluetooth low energy (ANT™ Available)
- Chip: nRF52810 (Nordic) with Bluetooth low energy 2Mbps mode
- Integrated System/Sleep Clock, LC for DC/DC
- Integrated high performance ceramic chip antenna
- ARM Cortex M4 32bit processor
- 192kB Flash and 24kB RAM
- Interface: SPI, UART, I2C, PDM and 12bit ADC
- Outline: 9.6 x 12.9 x 2.0 mm with 1mm pad pitch
- Operating Temperature range: -40 to 85 deg-C
- Bluetooth and Japan, FCC, IC qualified
- ETSI EN 300 328 v2.1.1 Conducted Test Report Available
- RoHS compliant / Complete Lead Free

Outline

Unit: mm

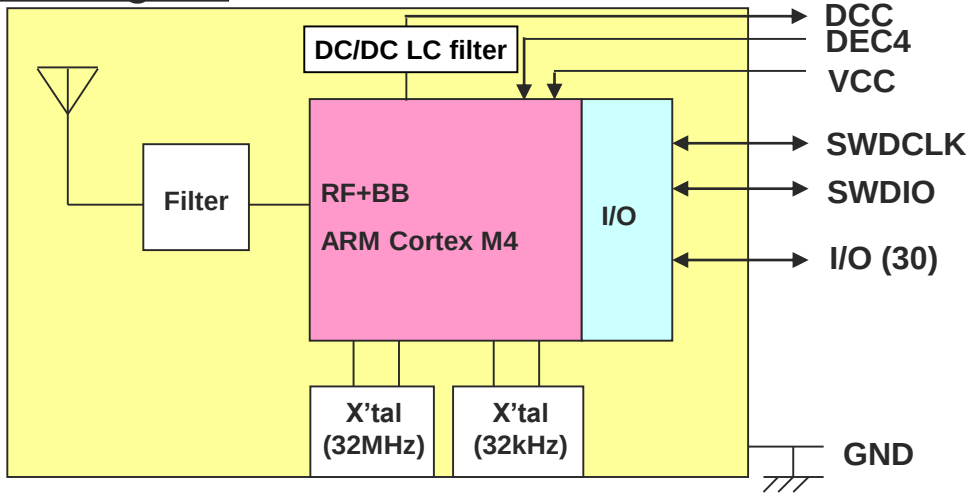


Top View　　Bottom View

Applications

- Beacon
- Heart rate monitor
- Blood pressure monitor
- Blood glucose meter
- Weighing machine
- Thermometer
- Mobile accessories
- Sports and fitness sensors
- Remote controllers / Toys

Block Diagram



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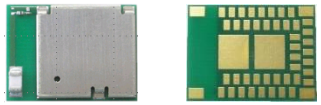
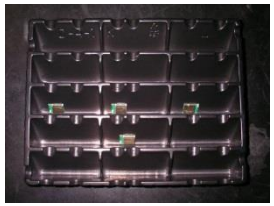
Bluetooth® low energy Module Sample, Evaluation Board / Kit

EYSLCNZWW (Module)

■ Module samples





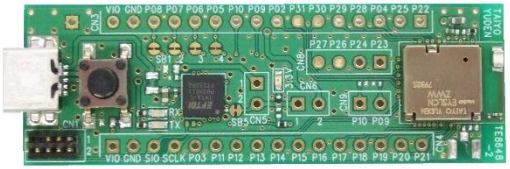
or

Tray

Tape

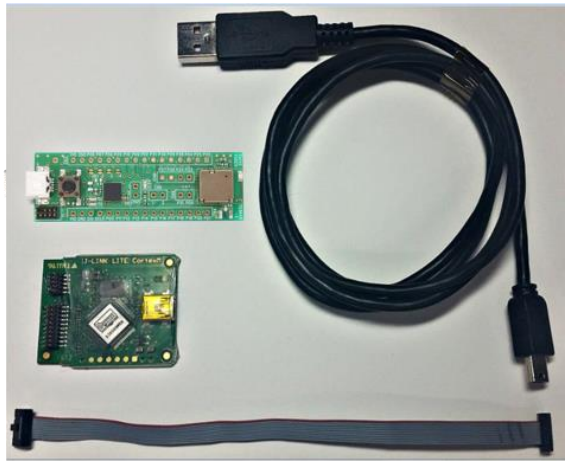
EBSLCNZWW (EV-B)

■ Evaluation board



EKSLCNZWW (EV-K)

■ Evaluation kit



SEGGER J-Link LITE Attached

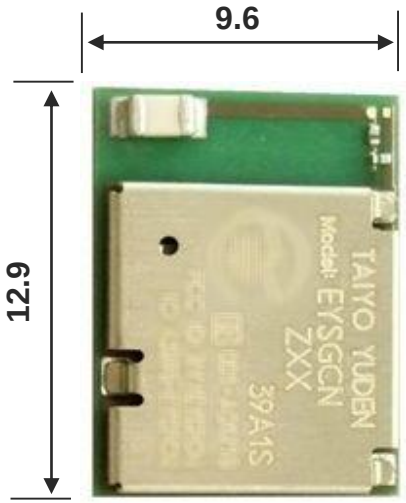
Bluetooth® low energy Module: EYSGCNZXX

Features

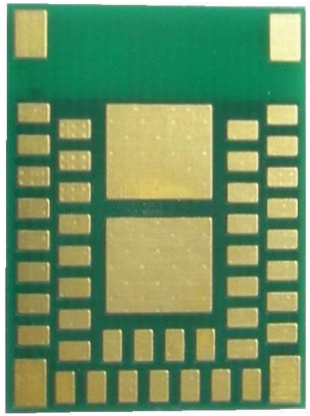
- Frequency: 2402 to 2480 MHz
- Output power: +4dBm typ.
- Single power supply: 1.8 – 3.6V
- Single Mode Bluetooth low energy Slave
- Chip: nRF51822 Rev.3 (Nordic)
- Integrated System/Sleep Clock
- Integrated high performance ceramic chip antenna
- ARM Cortex M0 32bit processor
- 256kB Flash and 16kB RAM
- Interface: SPI, UART, I2C and 8/9/10bit ADC
- Outline: 9.6 x 12.9 x 2.0 mm with 1mm pad pitch
- Operating Temperature range: -40 to 85 deg-C
- Bluetooth and Japan, FCC, IC qualified
- ETSI EN 300 328 v2.1.1 Conducted Test Report Available
- RoHS compliant / Complete Lead Free

Outline

Unit: mm



Top View

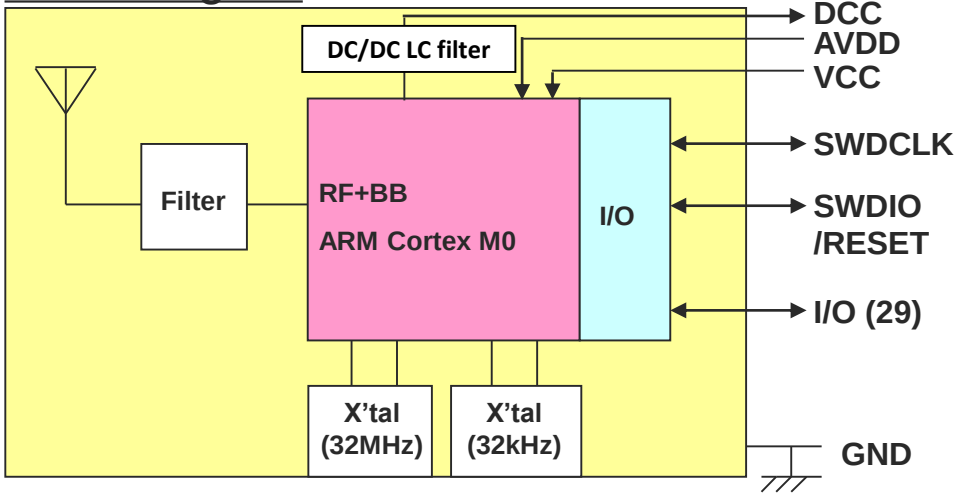


Bottom View

Applications

- Cycle computer
- Heart rate monitor
- Blood pressure monitor
- Blood glucose meter
- Weighing machine
- Thermometer
- Mobile accessories
- Sports and fitness sensors
- Remote controllers / Toys

Block Diagram



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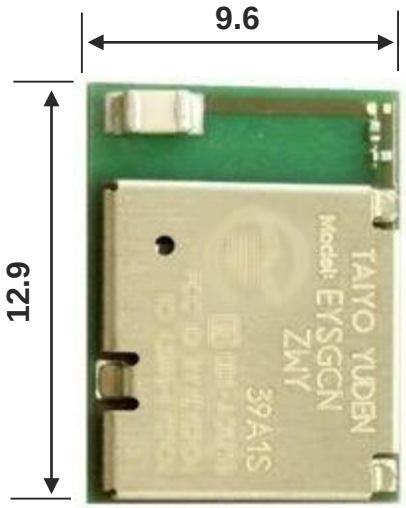
Bluetooth® low energy Module: EYSGCNZWY

Features

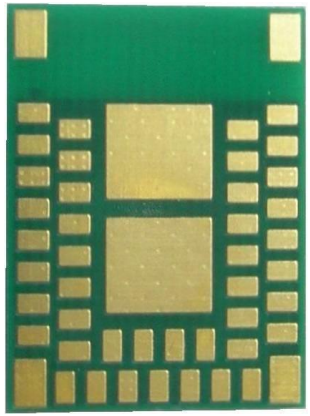
- Frequency: 2402 to 2480 MHz
- Output power: +4dBm typ.
- Single power supply: 1.8 – 3.6V
- Single Mode Bluetooth low energy Slave / Master
- Chip: nRF51822 Rev.3 (Nordic)
- Integrated System/Sleep Clock
- Integrated high performance ceramic chip antenna
- ARM Cortex M0 32bit processor
- 256kB Flash and 32kB RAM
- Interface: SPI, UART, I2C and 8/9/10bit ADC
- Outline: 9.6 x 12.9 x 2.0 mm with 1mm pad pitch
- Operating Temperature range: -25 to 85 deg-C
- Bluetooth and Japan, FCC, IC qualified
- ETSI EN 300 328 v2.1.1 Conducted Test Report Available
- RoHS compliant / Complete Lead Free

Outline

Unit: mm



Top View

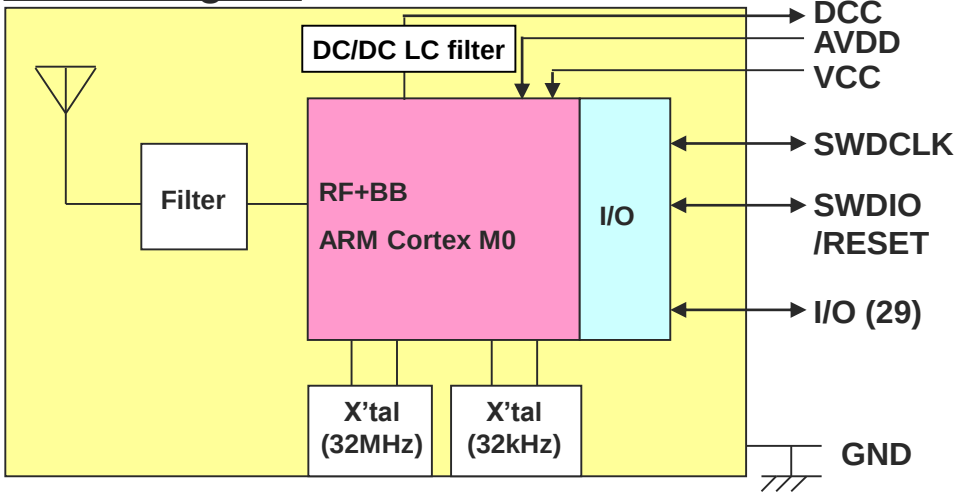


Bottom View

Applications

- Cycle computer
- Heart rate monitor
- Blood pressure monitor
- Blood glucose meter
- Weighing machine
- Thermometer
- Mobile accessories
- Sports and fitness sensors
- Remote controllers / Toys

Block Diagram



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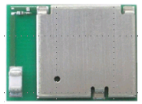
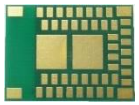
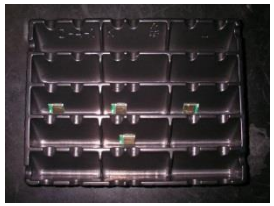
Bluetooth® low energy Module Sample, Evaluation Board / Kit

EYSGCNZXX, EYSGCNZWY (Module)

Module samples



or

Tray

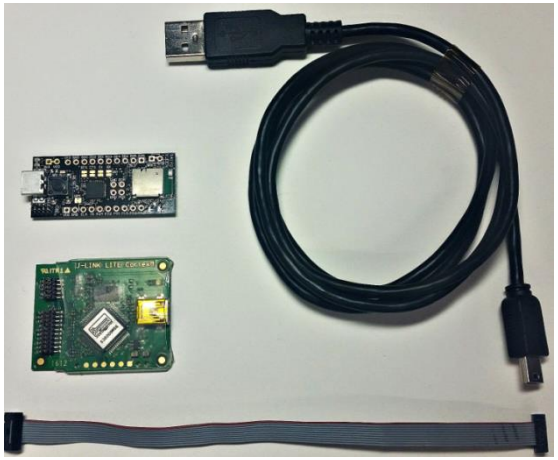
Tape

EBSGCNZWY (EV-B)

Evaluation board

EKSGCNZWY (EV-K)

Evaluation kit



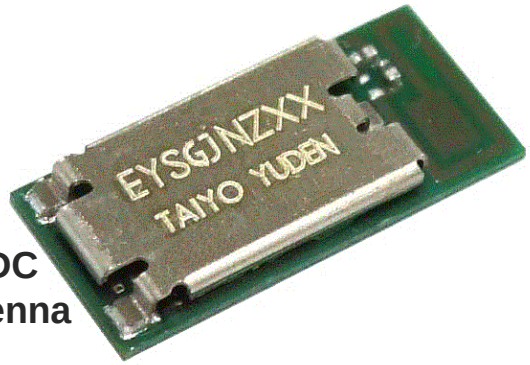
SEGGER J-Link LITE Attached

Bluetooth® low energy Module EYSGJNZXX

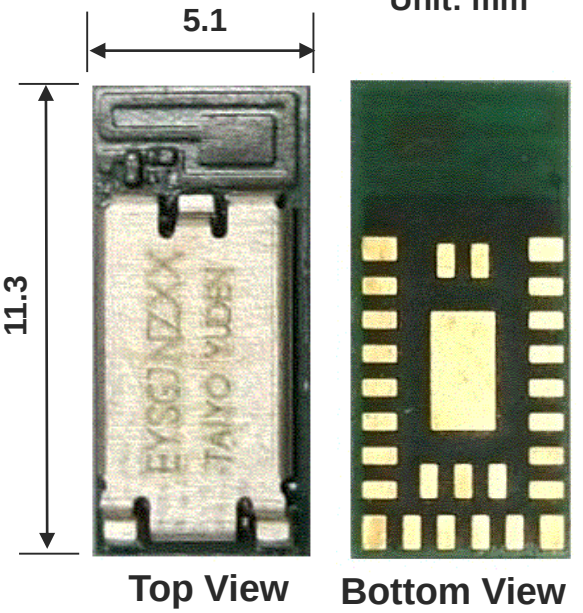
Features

- Frequency: 2402 to 2480 MHz
- Output power: +4dBm typ.
- Single power supply: 1.8 – 3.6V
- Single Mode Bluetooth low energy Slave
- Chip: nRF51822 Rev.3 (Nordic)
- Integrated System Clock
- ARM Cortex M0 32bit processor
- 256kB Flash and 16kB RAM
- Interface: SPI, UART, I2C and 8/9/10bit ADC
- Integrated high performance pattern antenna
- Outline: 5.1 x 11.3 x 1.3mm MAX
- Operating Temperature range: -40 to 85 deg-C
- Bluetooth and Japan, FCC, IC qualified
- ETSI EN 300 328 v2.1.1 Conducted Test Report Available
- RoHS compliant / Complete Lead Free

Outline



Unit: mm

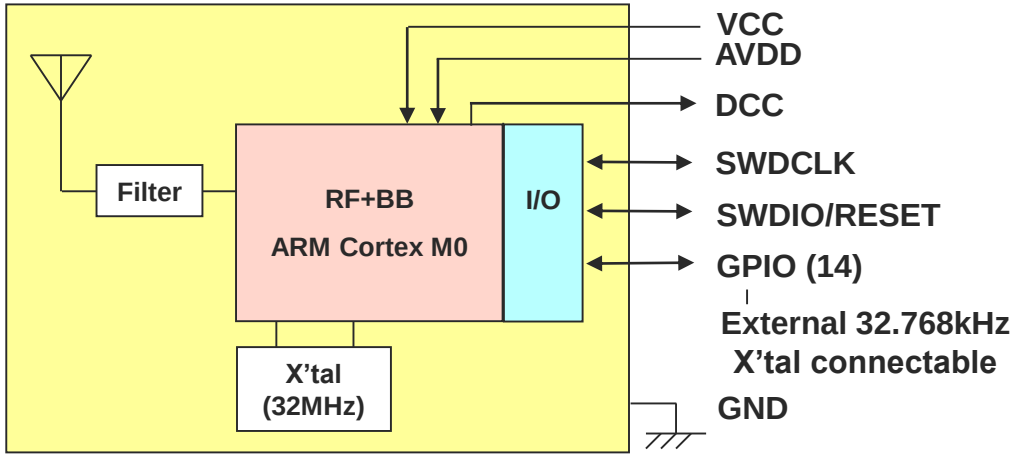


Top View Bottom View

Applications

- Cycle computer
- Heart rate monitor
- Blood pressure monitor
- Blood glucose meter
- Weighing machine
- Thermometer
- Mobile accessories
- Sports and fitness sensors
- Remote controllers / Toys

Block Diagram



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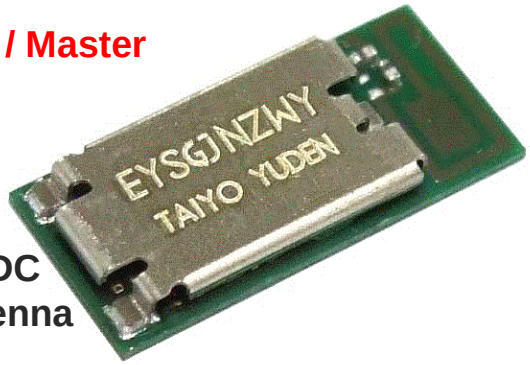
Bluetooth® low energy Module EYSGJNZWY

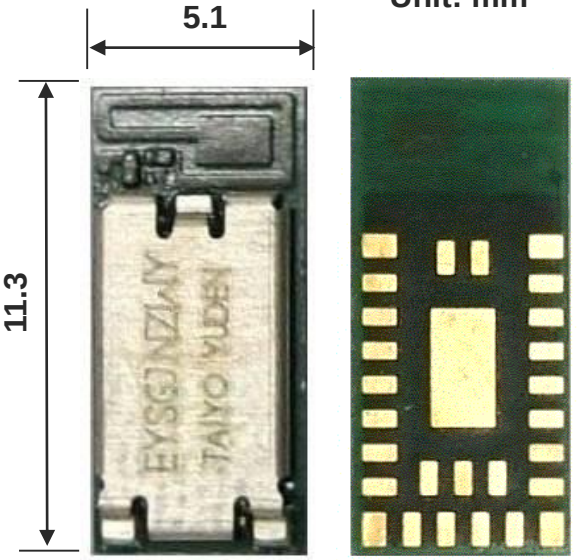
Features

- Frequency: 2402 to 2480 MHz
- Output power: +4dBm typ.
- Single power supply: 1.8 – 3.6V
- Single Mode Bluetooth low energy Slave / Master
- Chip: nRF51822 Rev3 (Nordic)
- Integrated System Clock
- ARM Cortex M0 32bit processor
- 256kB Flash and 32kB RAM
- Interface: SPI, UART, I2C and 8/9/10bit ADC
- Integrated high performance pattern antenna
- Outline: 5.1 x 11.3 x 1.3mm MAX
- Operating Temperature range: -25 to 85 deg-C
- Bluetooth and Japan, FCC, IC qualified
- ETSI EN 300 328 v2.1.1 Conducted Test Report Available
- RoHS compliant / Complete Lead Free



Outline

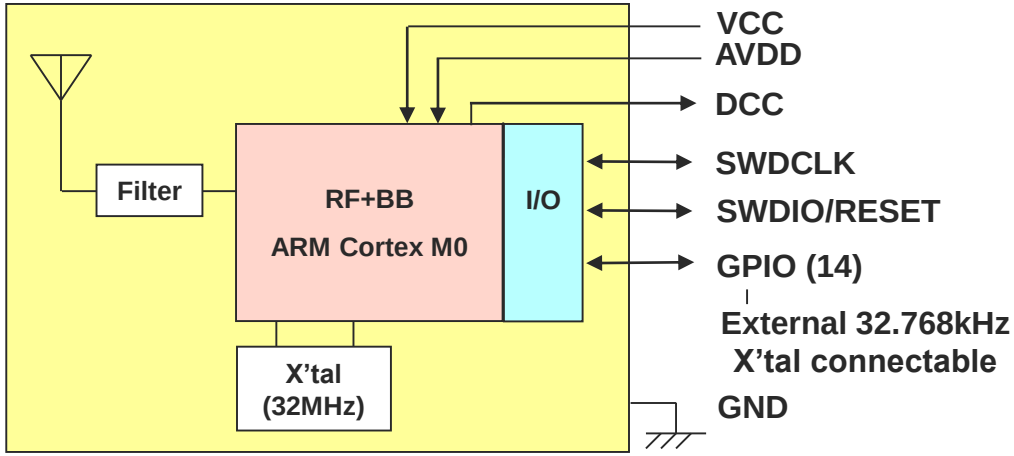
Unit: mm



Applications

- Cycle computer
- Heart rate monitor
- Blood pressure monitor
- Blood glucose meter
- Weighing machine
- Thermometer
- Mobile accessories
- Sports and fitness sensors
- Remote controllers / Toys

Block Diagram



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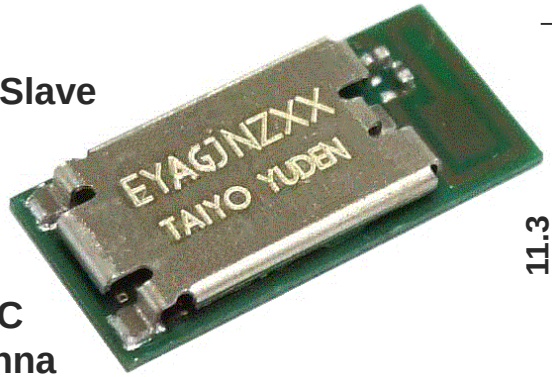
ANT + Bluetooth® low energy Module EYAGJNZXX

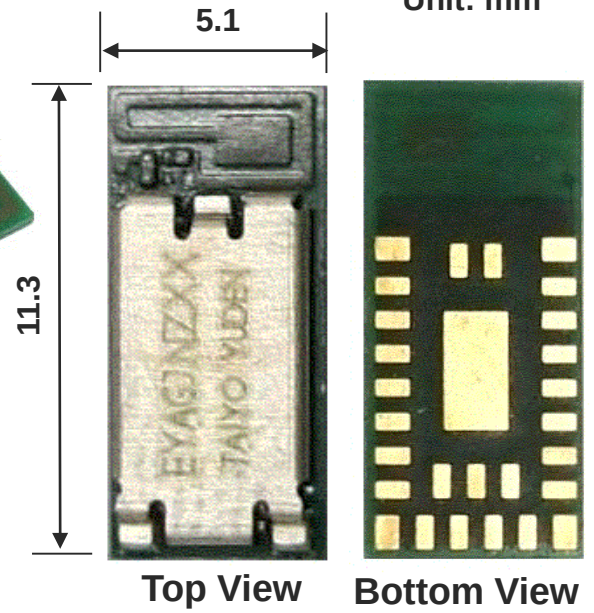
Features

- Frequency: 2402 to 2480 MHz
- Output power: +4dBm typ.
- Single power supply: 1.8 – 3.6V
- ANT + Single Mode Bluetooth low energy Slave
- Chip: nRF51422 Rev 3 (Nordic)
- Integrated System Clock
- ARM Cortex M0 32bit processor
- 256kB Flash and 32kB RAM
- Interface: SPI, UART, I2C and 8/9/10bit ADC
- Integrated high performance pattern antenna
- Outline: 5.1 x 11.3 x 1.3mm MAX
- Operating Temperature range: -25 to 85 deg-C
- Bluetooth and Japan, FCC, IC qualified
- ETSI EN 300 328 v2.1.1 Conducted Test Report Available
- RoHS compliant / Complete Lead Free

Outline



Unit: mm

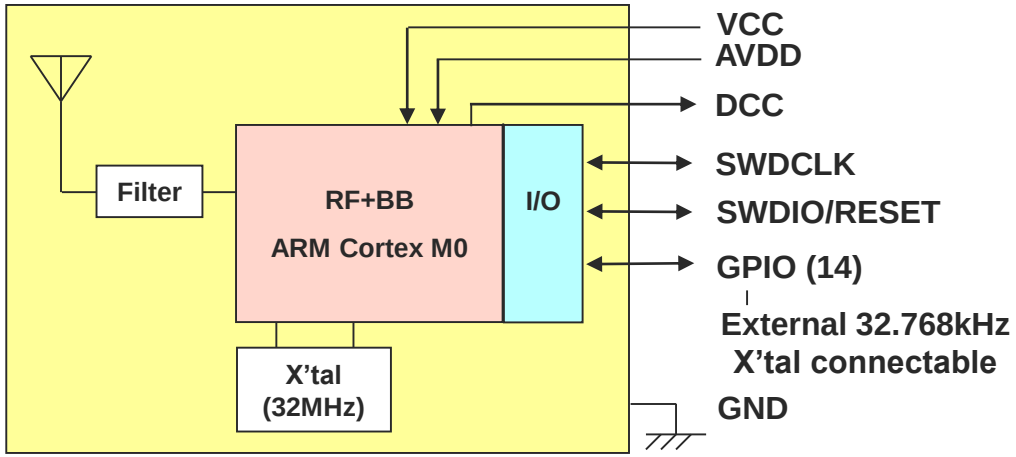


Top View Bottom View

Applications

- Cycle computer
- Heart rate monitor
- Blood pressure monitor
- Blood glucose meter
- Weighing machine
- Thermometer
- Mobile accessories
- Sports and fitness sensors
- Remote controllers / Toys

Block Diagram



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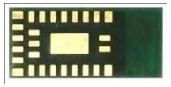
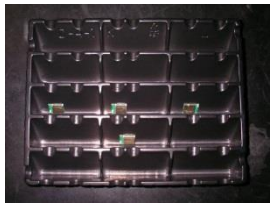
Bluetooth® low energy Module Sample, Evaluation Board / Kit

EYSGJNZXX, EYSGJNZWY, EYAGJNZXX (Module)

Module samples





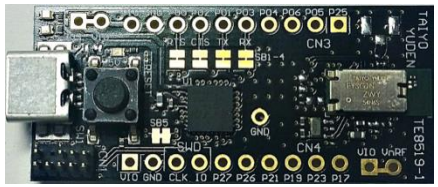
or

Tray

Tape

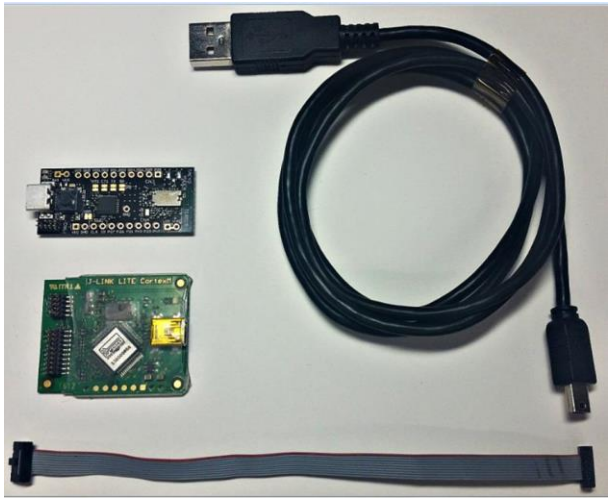
EBSGJNZWY, EBAGJNZXX (EV-B)

Evaluation board



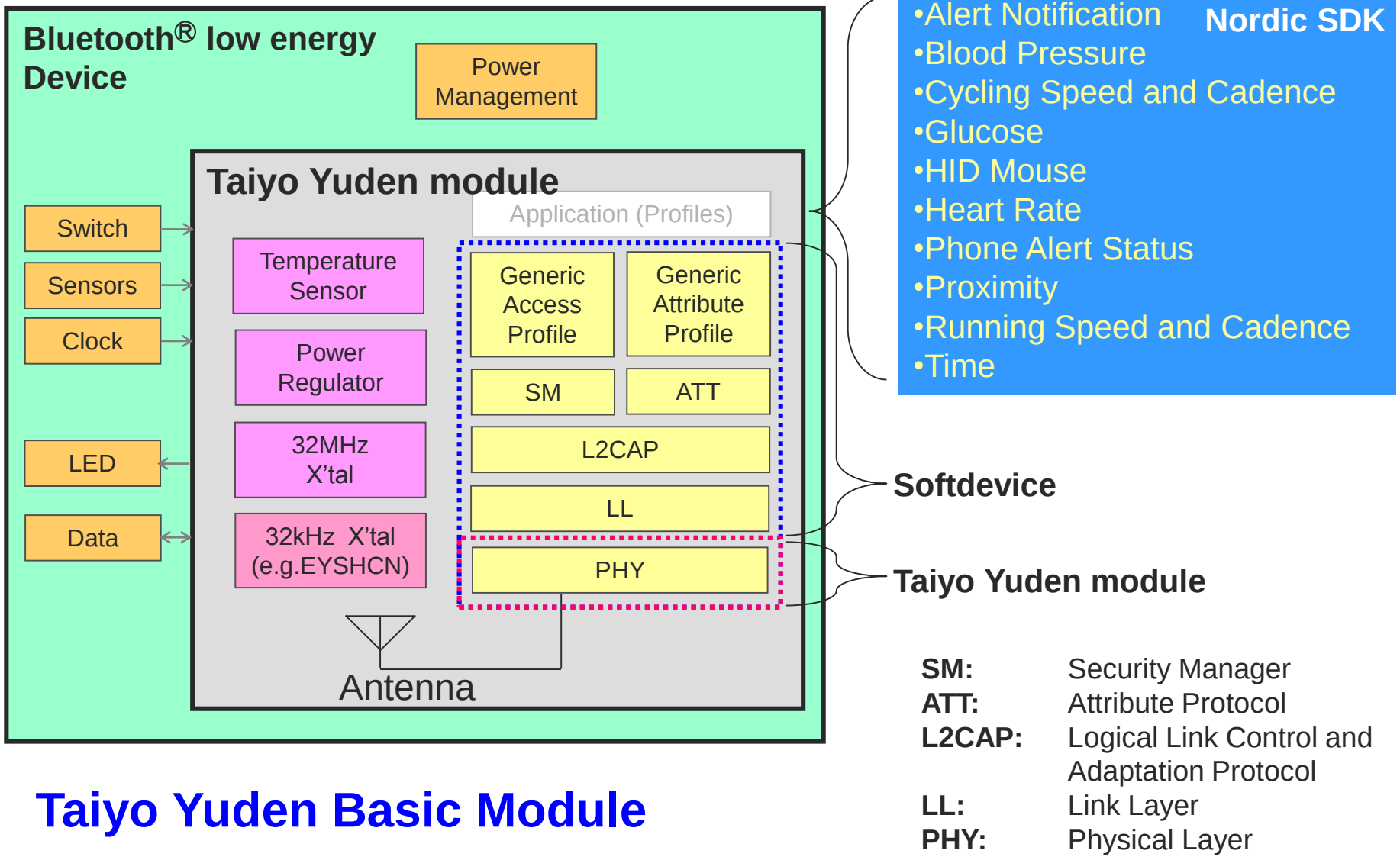
EKSGJNZWY, EKAGJNZXX (EV-K)

Evaluation kit



SEGGER J-Link LITE Attached

Application Layer image for **Basic Module**



Taiyo Yuden Basic Module

SM:	Security Manager
ATT:	Attribute Protocol
L2CAP:	Logical Link Control and Adaptation Protocol
LL:	Link Layer
PHY:	Physical Layer

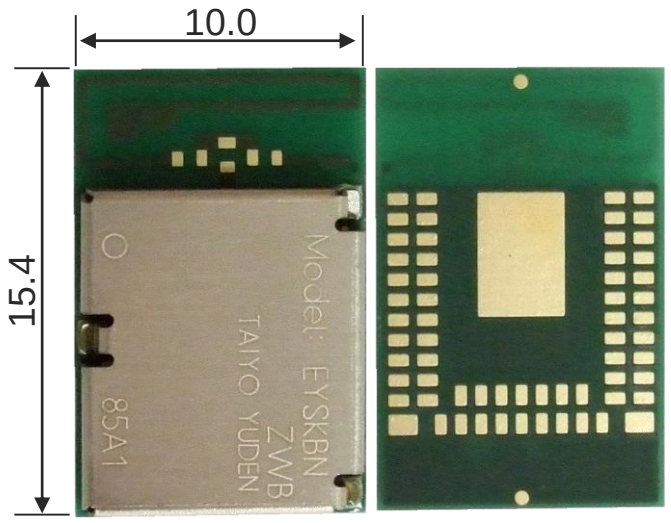
Bluetooth® 5.0 low energy Module: EYSKBNUWB-WX

Features

- Frequency: 2402 to 2480 MHz with +8dBm Output power
- Single power supply: 1.7 – 5.5V
- Single Mode Bluetooth 5.0 (Master / Slave)
- Bluetooth 5 data rate support: 2M / 1M / 125kbps
- Chip: nRF52840 (Nordic)
- Integrated System/Sleep Clock, 2 x LC for DC/DC
- Integrated high performance PCB antenna
- ARM® Cortex M4F 32bit processor and 1MB Flash & 256kB RAM
- Application Embedded by Taiyo Yuden
- Interface: UART, SPI, USB and ADC
- Outline: 10.0 x 15.4 x 2.0 mm
- Operating Temperature range: -40 to 85 deg-C
- Bluetooth and Japan, FCC, IC qualified
- ETSI EN 300 328 v2.1.1 Conducted Test Report Available
- RoHS compliant / Complete Lead Free

Outline

Unit: mm

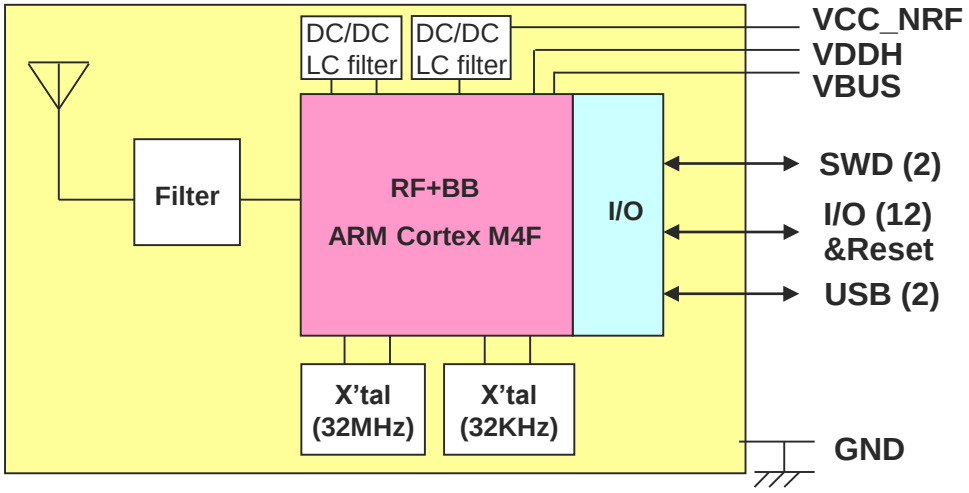


Top View Bottom View

Applications

- Advanced wearables
  - Connected watches
  - Advanced personal fitness devices
  - Wearables with wireless payment
  - Connected health
  - Virtual/Augmented reality applications
- Internet of Things
  - Smart home sensors and controllers
  - Industrial IoT sensors and controllers
- Interactive entertainment devices

Block Diagram



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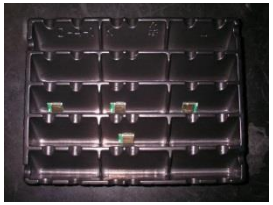
Bluetooth® low energy Module Sample, Evaluation Board / Kit

EYSKBNUWB-WX (Module)

Module samples



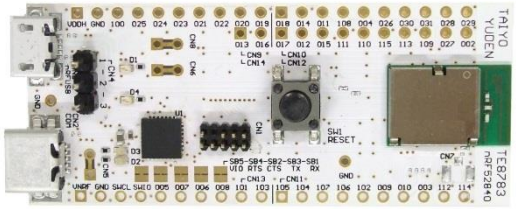
or

Tray

Tape

EBSKBNUWB-WX (EV-B)

Evaluation board



Bluetooth® low energy Module: EYSGCNAWY-VX

Features

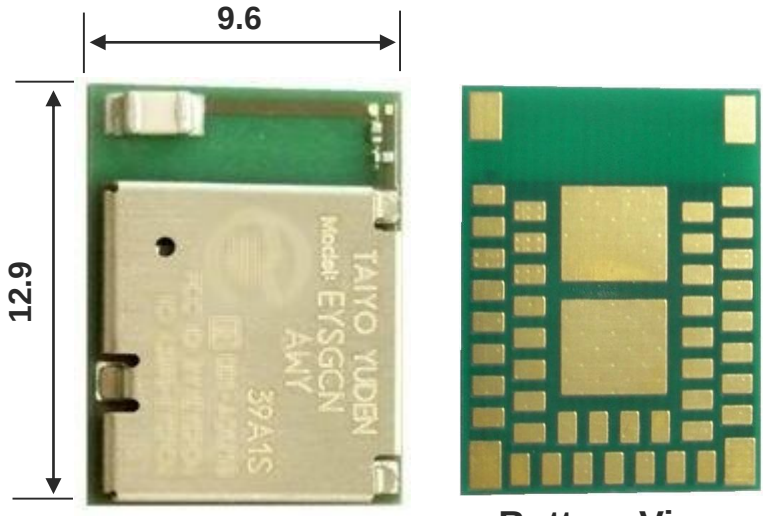
- Frequency: 2402 to 2480 MHz
- Output power: +4dBm typ.
- Single power supply: 1.8 – 3.6V
- Single Mode Bluetooth 4.2 low energy Slave / Master
- Chip: nRF51822 (Nordic)
- Integrated System/Sleep Clock
- Integrated high performance ceramic chip antenna
- ARM Cortex M0 32bit processor
- Application Embedded by Taiyo Yuden
- (TY's App : Generic Data transfer, Battery Service)
- Interface: UART
- Outline: 9.6 x 12.9 x 2.0 mm with 1mm pad pitch
- Operating Temperature range: -25 to 85 deg-C
- Bluetooth and Japan, FCC, IC qualified
- CE Conducted Test Report Available
- RoHS compliant / Complete Lead Free

Applications

- Cycle computer
- Heart rate monitor
- Blood pressure monitor
- Blood glucose meter
- Weighing machine
- Thermometer
- Mobile accessories
- Sports and fitness sensors
- Remote controllers / Toys

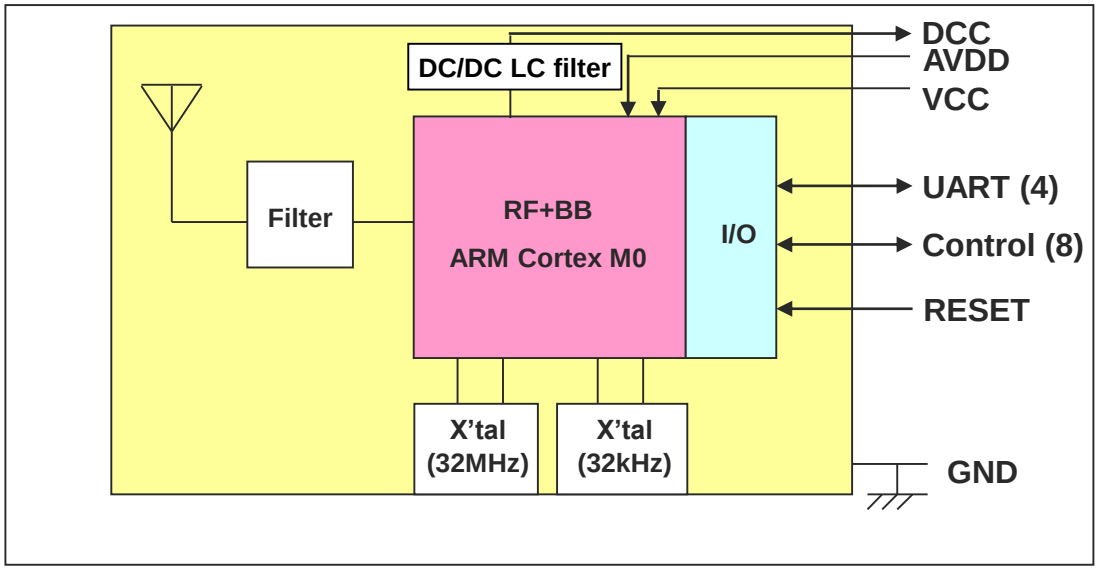
Outline

Unit: mm



Top View　　Bottom View

Block Diagram



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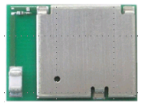
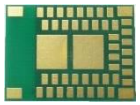
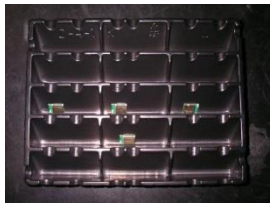
Bluetooth® low energy Module Sample, Evaluation Board / Kit

EYSGCNAWY-VX (Module)

Module samples


or

Tray Tape

EBSGCNAWY-VX (EV-B)

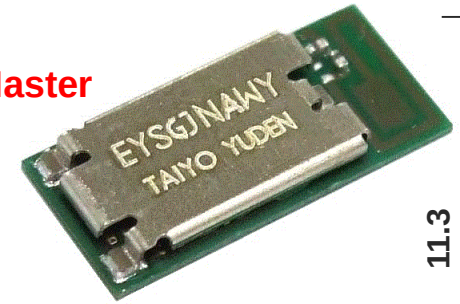
Evaluation board

Bluetooth® low energy Module EYSGJNAWY-VX

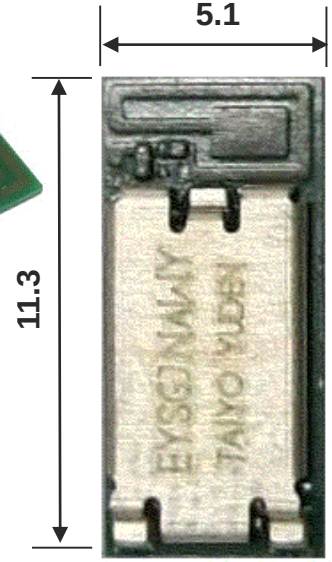
Features

- Frequency: 2402 to 2480 MHz
- Output power: +4dBm typ.
- Single power supply: 1.8 – 3.6V
- Single Mode Bluetooth 4.2 low energy Slave / Master
- Chip: nRF51822 Rev3 (Nordic)
- Integrated System Clock
- ARM Cortex M0 32bit processor
- Application Embedded by Taiyo Yuden
- (TY's App : Generic Data transfer, Battery Service)
- Interface: UART
- Integrated high performance pattern antenna
- Outline: 5.1 x 11.3 x 1.3mm MAX
- Operating Temperature range: -25 to 85 deg-C
- Bluetooth and Japan, FCC, IC qualified
- CE Conducted Test Report Available
- RoHS compliant / Complete Lead Free

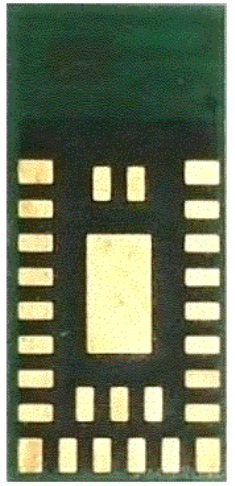
Outline



Unit: mm

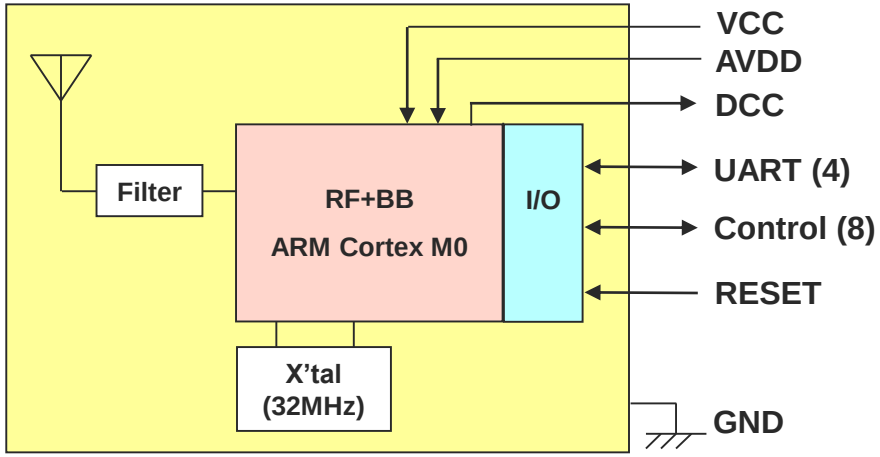


Top View



Bottom View

Block Diagram



Applications

- Cycle computer
- Heart rate monitor
- Blood pressure monitor
- Blood glucose meter
- Weighing machine
- Thermometer
- Mobile accessories
- Sports and fitness sensors
- Remote controllers / Toys

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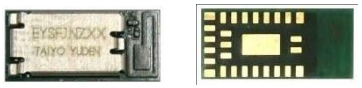
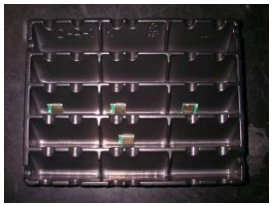
Bluetooth® low energy Module Sample, Evaluation Board / Kit

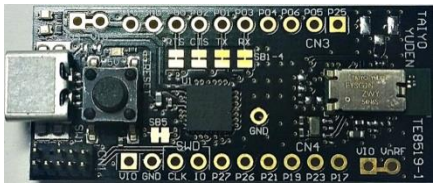
EYSGJNAWY-VX (Module)	EBSGJNAWY-VX (EV-B)
■ Module samples	■ Evaluation board





or

Tray　　Tape



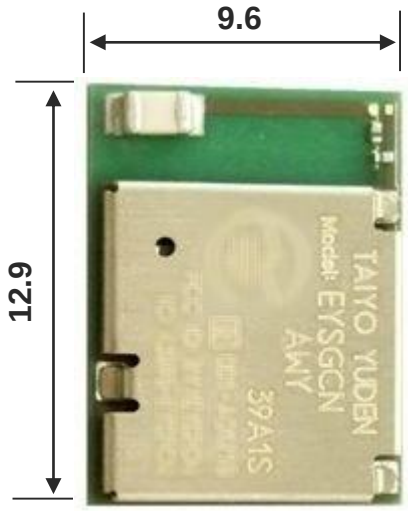
Bluetooth® low energy Module: EYSGCNAWY-WX

Features

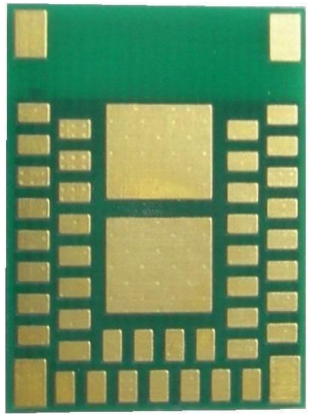
- Frequency: 2402 to 2480 MHz
- Output power: +4dBm typ.
- Single power supply: 1.8 – 3.6V
- Single Mode Bluetooth 4.1 low energy Slave / Master
- Chip: nRF51822 (Nordic)
- Integrated System/Sleep Clock
- Integrated high performance ceramic chip antenna
- ARM Cortex M0 32bit processor
- Application Embedded by Taiyo Yuden
- (TY's App : Generic Data transfer, Battery Service)
- Interface: UART
- Outline: 9.6 x 12.9 x 2.0 mm with 1mm pad pitch
- Operating Temperature range: -25 to 85 deg-C
- Bluetooth and Japan, FCC, IC qualified
- ETSI EN 300 328 v2.1.1 Conducted Test Report Available
- RoHS compliant / Complete Lead Free

Outline

Unit: mm



Top View

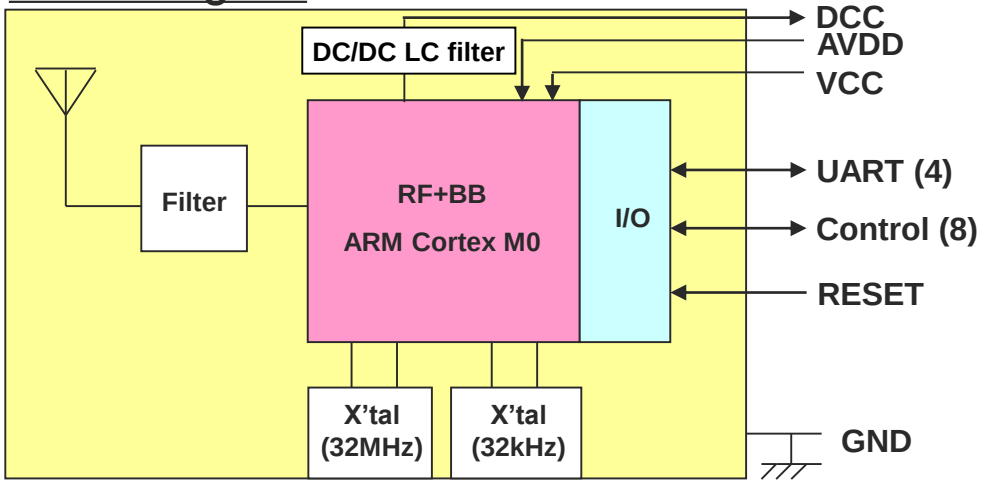


Bottom View

Applications

- Cycle computer
- Heart rate monitor
- Blood pressure monitor
- Blood glucose meter
- Weighing machine
- Thermometer
- Mobile accessories
- Sports and fitness sensors
- Remote controllers / Toys

Block Diagram



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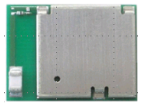
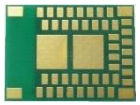
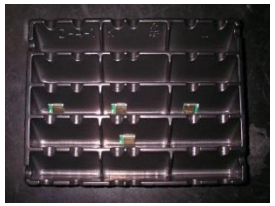
Bluetooth® low energy Module Sample, Evaluation Board / Kit

EYSGCNAWY-WX (Module)

Module samples


or

Tray Tape

EBSGCNAWY-WX (EV-B)

Evaluation board

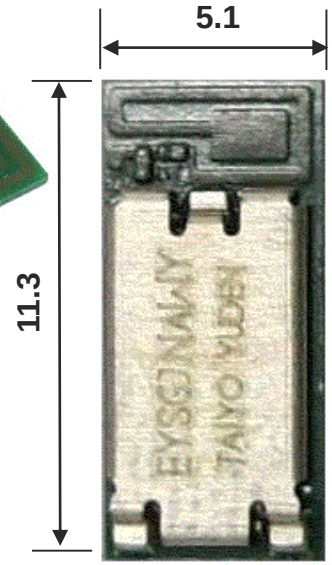
Bluetooth® low energy Module EYSGJNAWY-WX

Features

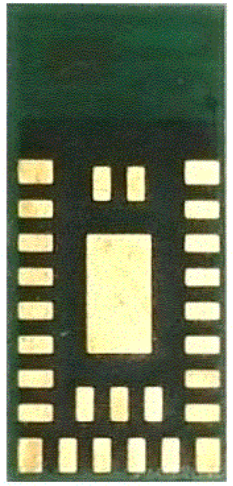
- Frequency: 2402 to 2480 MHz
- Output power: +4dBm typ.
- Single power supply: 1.8 – 3.6V
- Single Mode Bluetooth 4.1 low energy Slave / Master
- Chip: nRF51822 Rev3 (Nordic)
- Integrated System Clock
- ARM Cortex M0 32bit processor
- Application Embedded by Taiyo Yuden
- (TY's App : Generic Data transfer, Battery Service)
- Interface: UART
- Integrated high performance pattern antenna
- Outline: 5.1 x 11.3 x 1.3mm MAX
- Operating Temperature range: -25 to 85 deg-C
- Bluetooth and Japan, FCC, IC qualified
- ETSI EN 300 328 v2.1.1 Conducted Test Report Available
- RoHS compliant / Complete Lead Free

Outline

Unit: mm



Top View

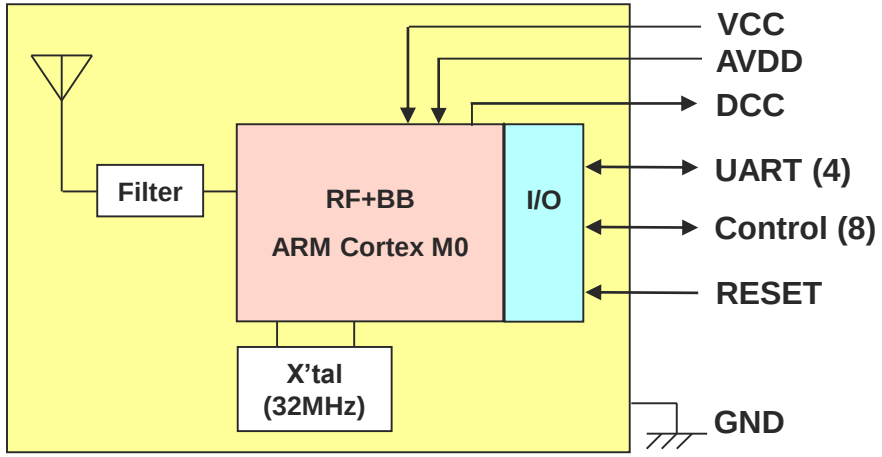


Bottom View

Applications

- Cycle computer
- Heart rate monitor
- Blood pressure monitor
- Blood glucose meter
- Weighing machine
- Thermometer
- Mobile accessories
- Sports and fitness sensors
- Remote controllers / Toys

Block Diagram



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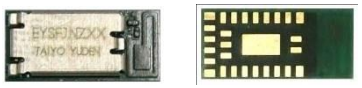
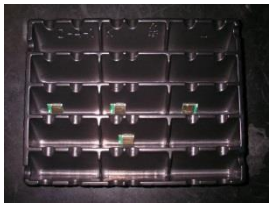
Bluetooth® low energy Module Sample, Evaluation Board / Kit

EYSGJNAWY-WX (Module)

■ Module samples





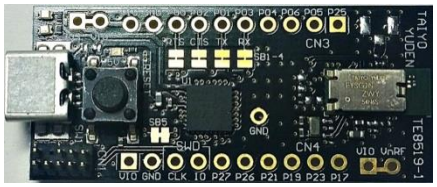
or

Tray

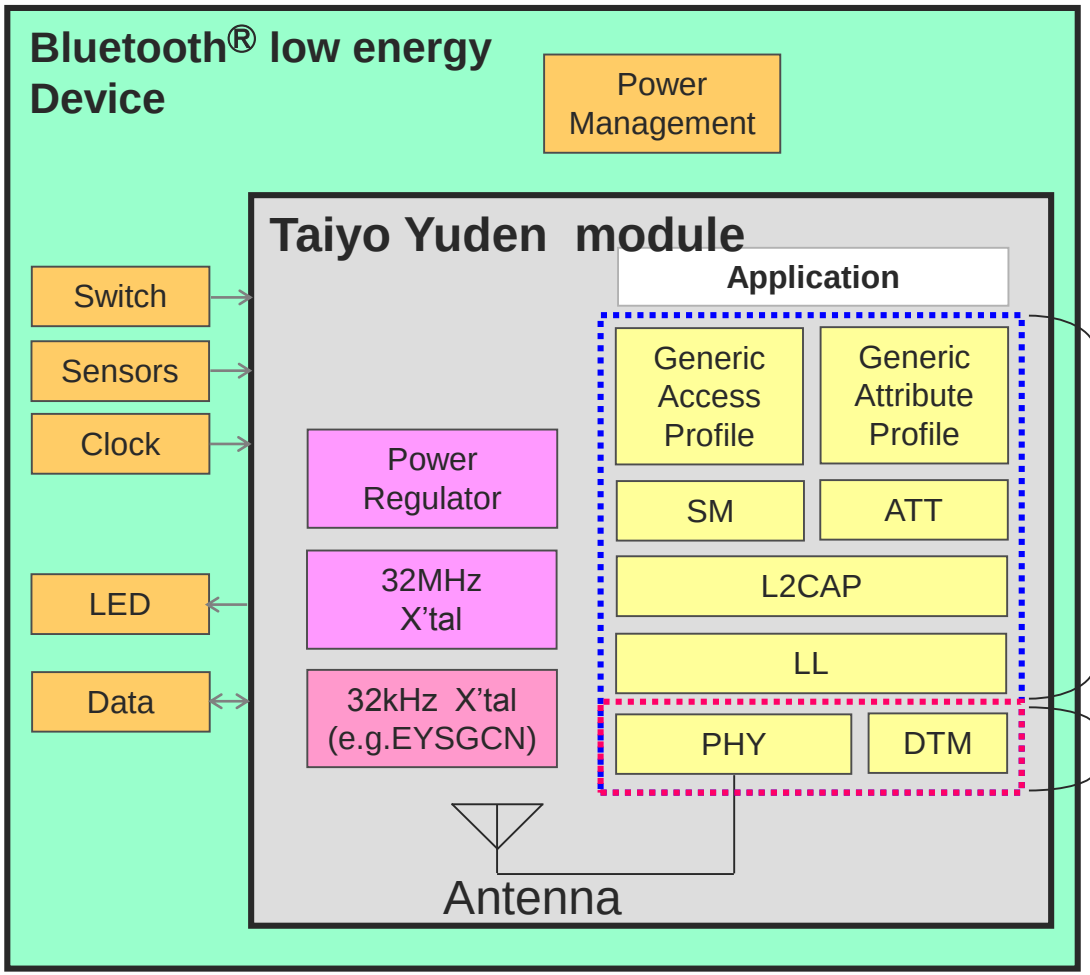
Tape

EBSGJNAWY-WX (EV-B)

■ Evaluation board



Application Layer image for **Application Embedded Module**



Connection option

-VX , -WX module for
Module – Module
Module – Smart phone

Softdevice

Taiyo Yuden module

Taiyo Yuden
Application Embedded Module

SM:	Security Manager
ATT:	Attribute Protocol
L2CAP:	Logical Link Control and Adaptation Protocol
LL:	Link Layer
PHY:	Physical Layer
DTM:	Direct Test Mode

Bluetooth® low energy standard module

Type	Part No.	Size (LxWxH)	Specifi-cation	ANT™ Support	I/F	RAM (kB)	Certifi-cation	Tempera-ture
High Performance Basic (Software Support : Nordic)	EYSKBNZWB	10.0x15.4 x2.0mm	Bluetooth V5.0	✔	USB※3 UART SPI I2C I2S※4 PDM	256	Japan FCC IC (CE)※2	-40~+85 deg-C
	EYSHSNZWZ	3.25x8.55 X0.85mm		✔		64		
	EYSLSNZWW	3.25x8.55 X1.00mm		✔		24		
	EYSHCNZWZ	9.6x12.9 X2.0mm		✔		64		
	EYSLCNZWW					24		
	EYSHJNZWZ	5.1x11.3 X1.3mm		✔		64		
Basic (Software Support : Nordic)	EYSGCNZXX	9.6x12.9x 2.0mm	Bluetooth V4.2※1		UART SPI I2C	16		-40~+85 deg-C (EYSKBNUWB-WX ,EYSGCNZXX, EYSGJNZXX) -25~+85 deg-C (other than the above)
	EYSGCNZWY					32		
	EYSGJNZXX	5.1x11.3x 1.3mm				16		
	EYSGJNZWY					32		
	EYAGJNZXX			✔		32		
Application Embedded – Module (Software Support : TAIYO YUDEN)	EYSKBNUWB -WX	10.0x15.4 x2.0mm	Bluetooth V5.0		UART, SPI USB	N/A		
	EYSGCNAWY -VX	9.6x12.9x 2.0mm	Bluetooth V4.2		UART			
	EYSGJNAWY-VX	5.1x11.3x 1.3mm						

※1 Supported by S130 SoftDevice, ※2 ETSI EN 300 328 v2.1.1 conducted test report available
※3 Supported by EYSKBNZWB only, ※4 Supported by EYSKBNZWB and EYSHxNZWZ

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