

Wireless Module

***Bluetooth® low energy* Module**

Overview

May 20, 2019 Version 1.9

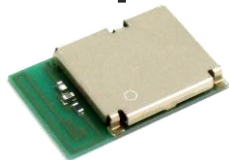
TAIYO YUDEN Bluetooth® low energy Module Line-Up

nRF52 Bluetooth® low energy Module

nRF52840 Module

EYSKBN Series

High-end



**EYSKBN
ZWB**

RAM 256kB
SoftDevice
S140

EYSHCN EYSLCN Series

Big



**EYSHCN
ZWZ**

RAM 64kB
SoftDevice
S132



**EYSLCN
ZWW**

RAM 24kB
SoftDevice
S112

nRF52832 Module nRF52810 Module

EYSHJN Series

Small

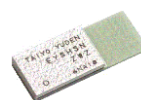


**EYSHJN
ZWZ**

RAM 64kB
SoftDevice
S132

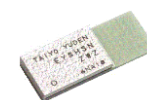
EYSHSN EYSLSN Series

Ultra-small



**EYSHSN
ZWZ**

RAM 64kB
SoftDevice
S132



**EYSLSN
ZWW**

RAM 24kB
SoftDevice
S112

High-end

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

Big

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

Small

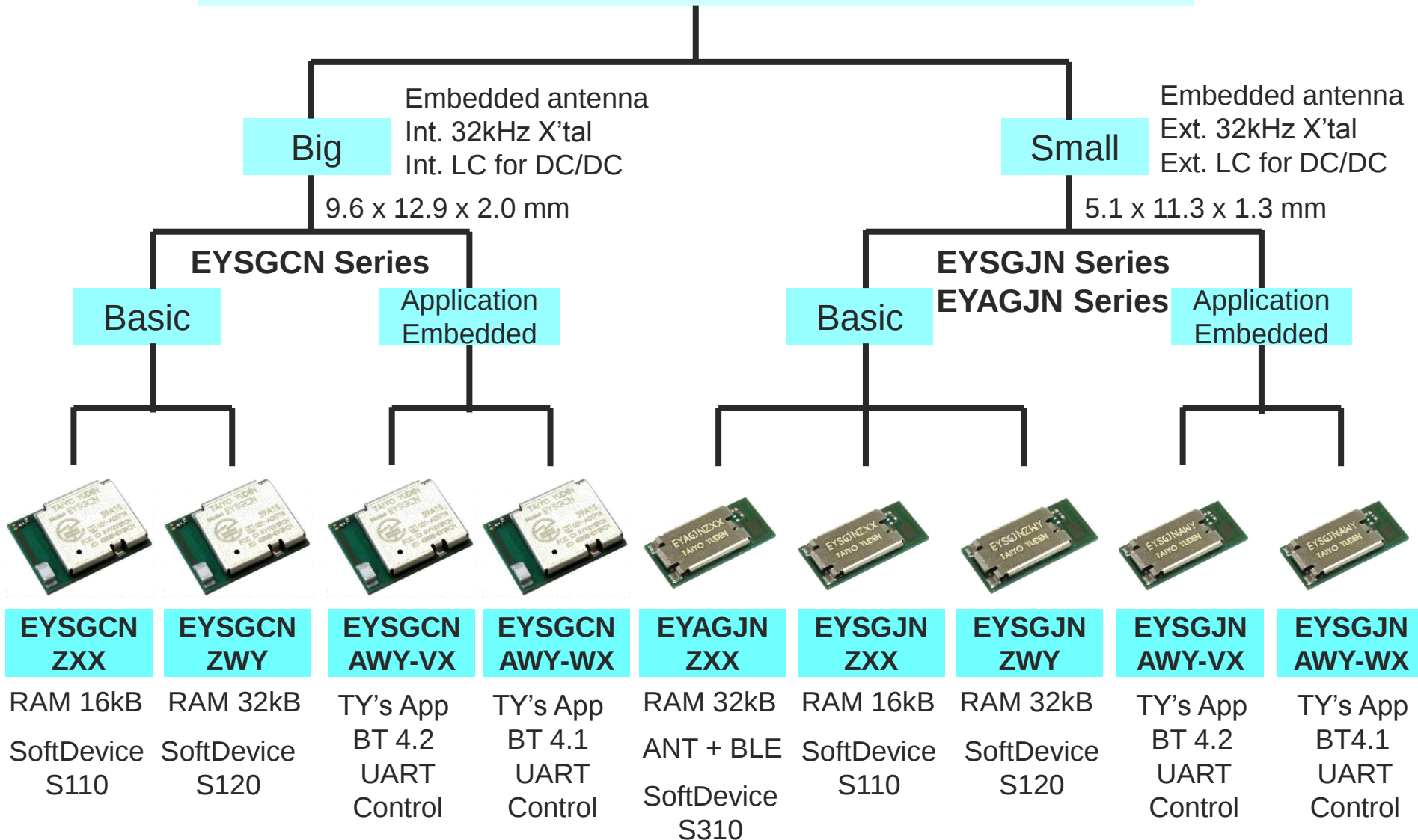
Embedded antenna
Ext. 32kHz X'tal
Ext. LC for DC/DC
5.1 x 11.3 x 1.3mm

Ultra-small

Embedded antenna
Ext. 32kHz X'tal
Ext. LC for DC/DC
EYSHSN
3.25 x 8.55 x 0.85mm
EYSLSN
3.25 x 8.55 x 1.00mm

TAIYO YUDEN Bluetooth® low energy Module Line-Up

nRF51x22 Bluetooth® low energy Module



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

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

EYSHCNZXZ	http://www.yuden.co.jp/or/product/category/module/EYSHCNZXZ.html
EYSHJNZXZ	http://www.yuden.co.jp/or/product/category/module/EYSHJNZXZ.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

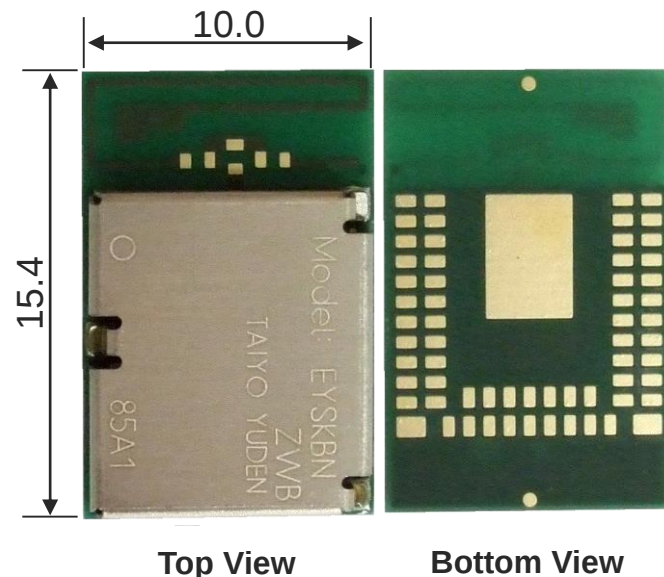
- Frequency: 2402 to 2480 MHz with **+8dBm** Output power
- Single power supply: 1.7 – 5.5V
- Single Mode **Bluetooth 5.0 / 802.15.4** (e.g. Thread, Zigbee)
- Bluetooth 5 data rate support: 2M / 1M / 500k / 125kbps**
- Chip: **nRF52840** (Nordic)
- Integrated System/**Sleep Clock, 2 x LC for DC/DC**
- 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

Applications

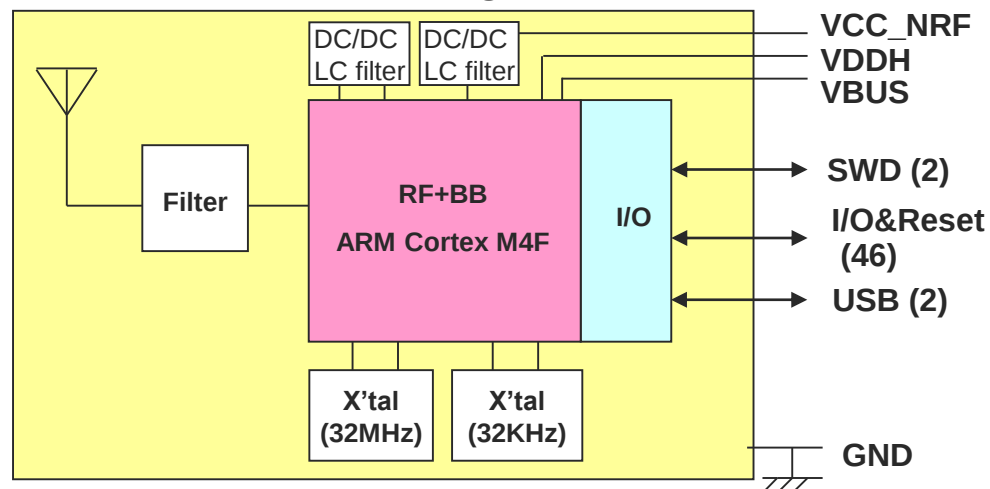
- Advanced wearables
 - Connected watches
 - Advanced personal fitness devices
 - Wearables with wireless payment
 - Connected health
 - Virtual/Augmented reality applications
- Internet of Things
 - Smart home sensors and controllers
 - Industrial IoT sensors and controllers
- Interactive entertainment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

Outline

Unit: mm



Block Diagram



All specifications are subject to change without notice.

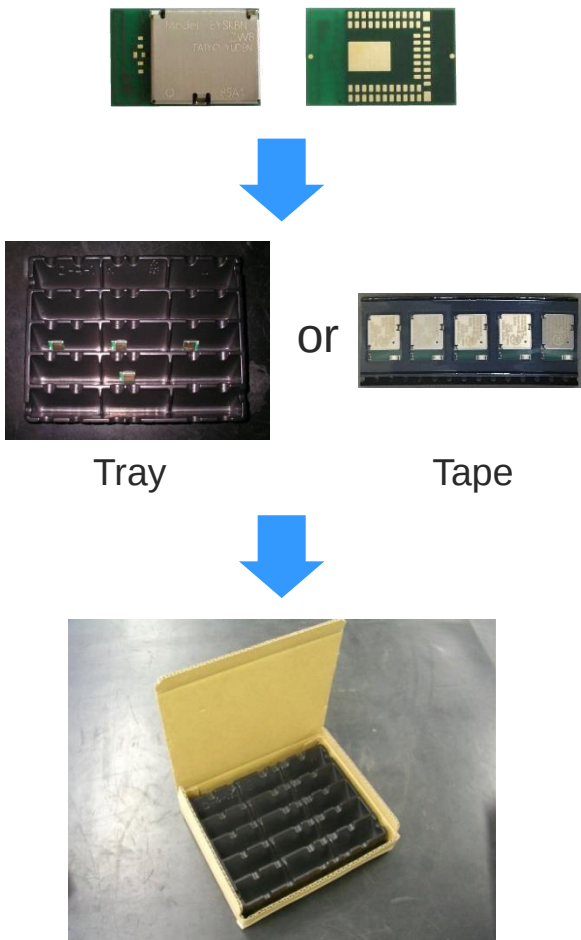
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Bluetooth® low energy Module Sample, Evaluation Board / Kit

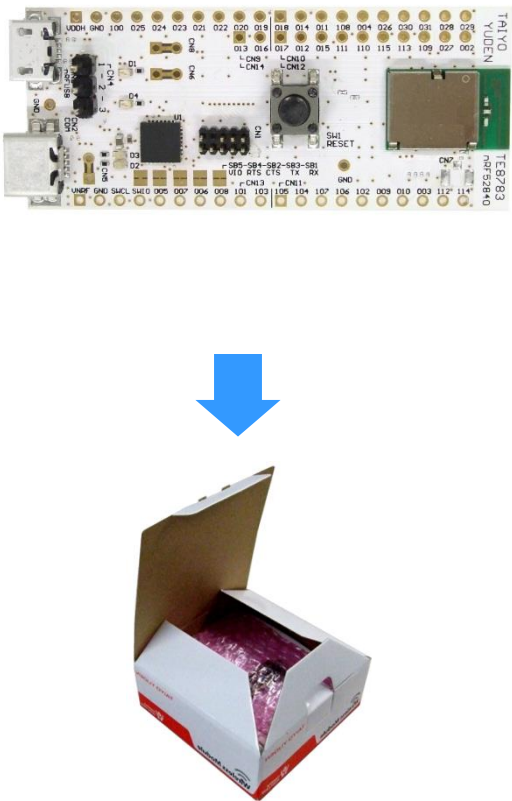
EYSKBNZWB (Module)

Module samples



ESKBNZWB (EV-B)

Evaluation board



EKSKBNZWB (EV-K)

Evaluation kit

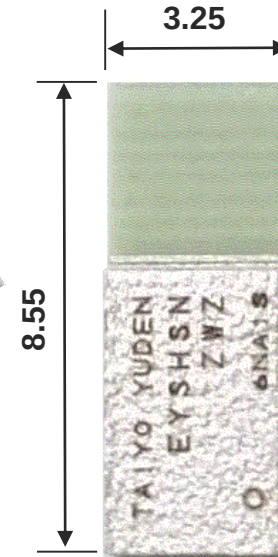


2Mbps Bluetooth® 5.0 low energy Module: EYSHSNZWZ

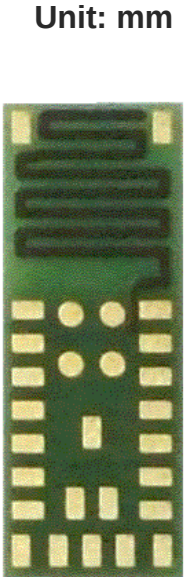
Features

- 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 0.85**mm 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



Top View



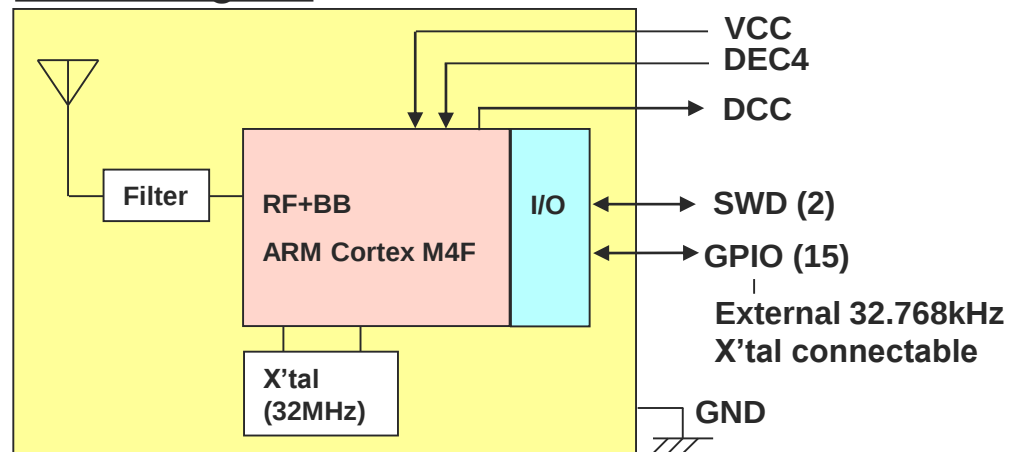
Bottom View

Unit: mm

Applications

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

Block Diagram



All specifications are subject to change without notice.

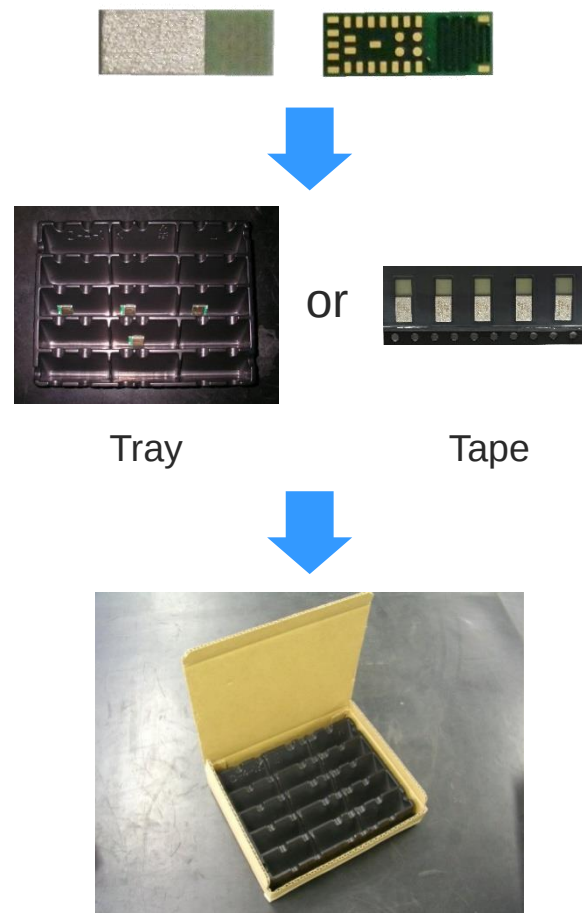
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Bluetooth® low energy Module Sample, Evaluation Board / Kit

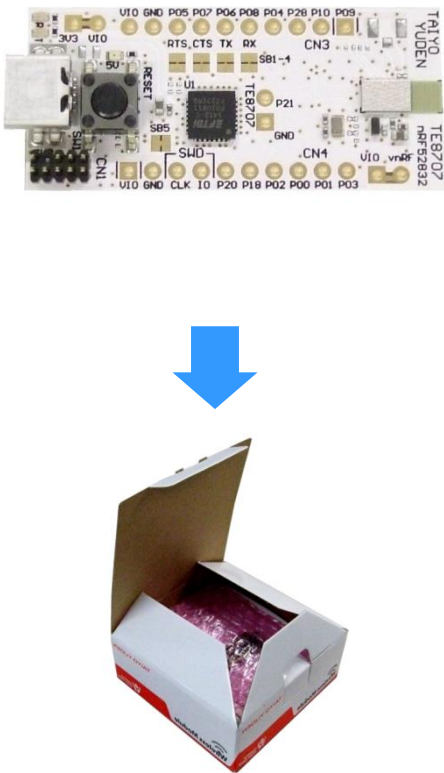
EYSHSNZWZ (Module)

Module samples



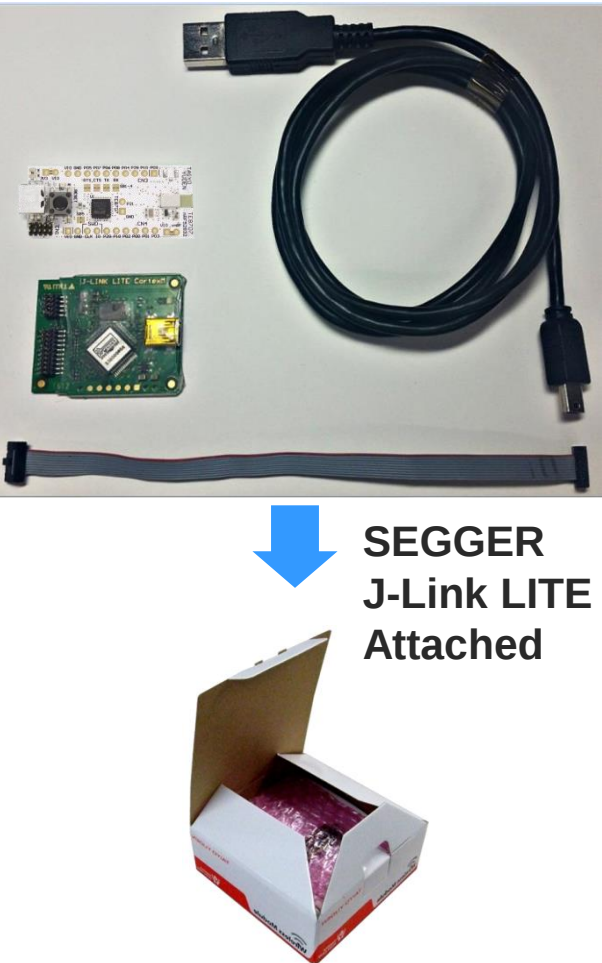
EBSHSNZWZ (EV-B)

Evaluation board



EKSHSNZWZ (EV-K)

Evaluation kit



2Mbps Bluetooth® 5.0 low energy Module: EYSHCNZWZ

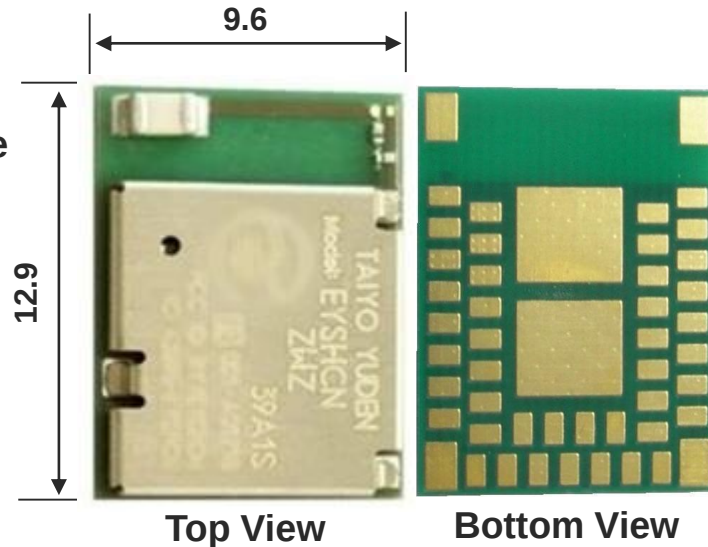
Features

- 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

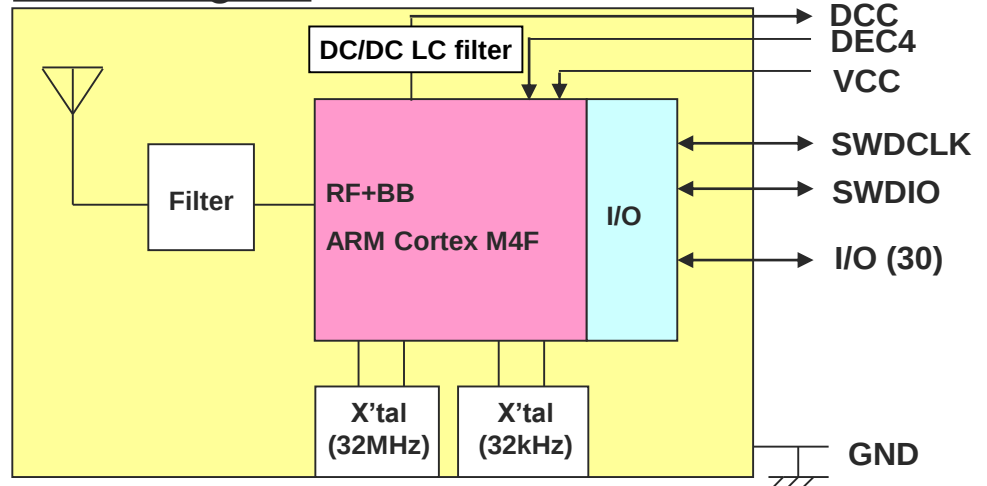
Applications

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

Outline



Block Diagram



All specifications are subject to change without notice.

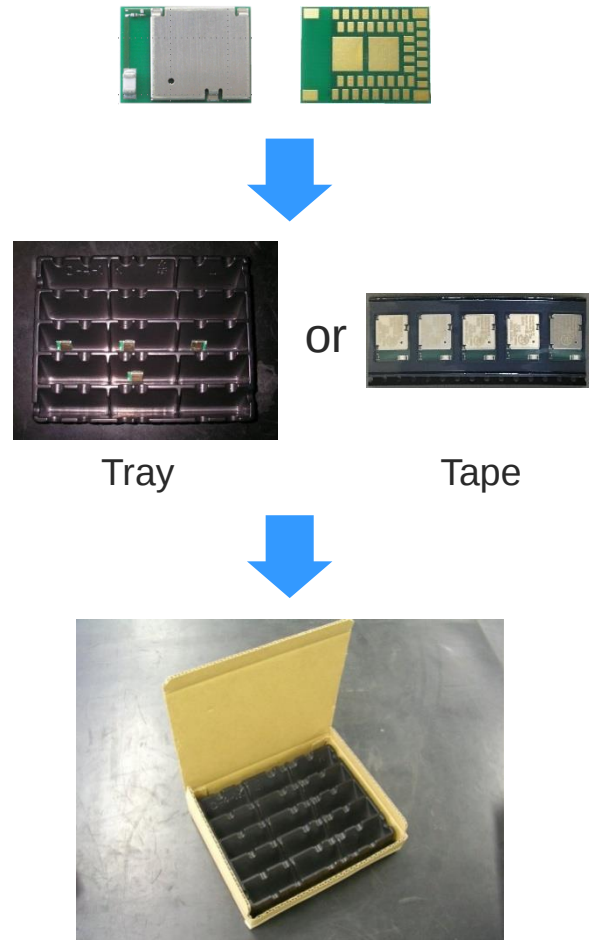
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Bluetooth® low energy Module Sample, Evaluation Board / Kit

EYSHCNZWZ (Module)

Module samples



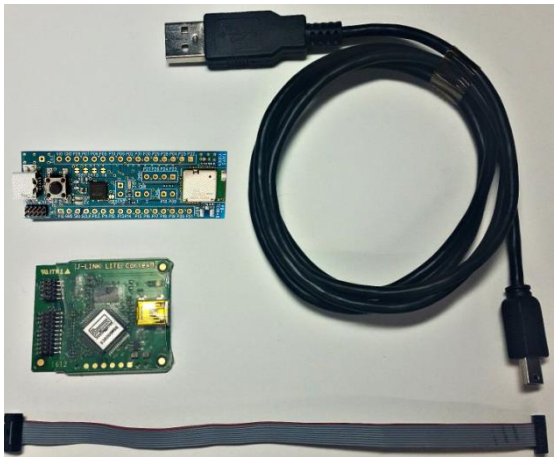
EBSHCNZWZ (EV-B)

Evaluation board



EKSHCNZWZ (EV-K)

Evaluation kit



2Mbps Bluetooth® 5.0 low energy Module: EYSHJNZWZ

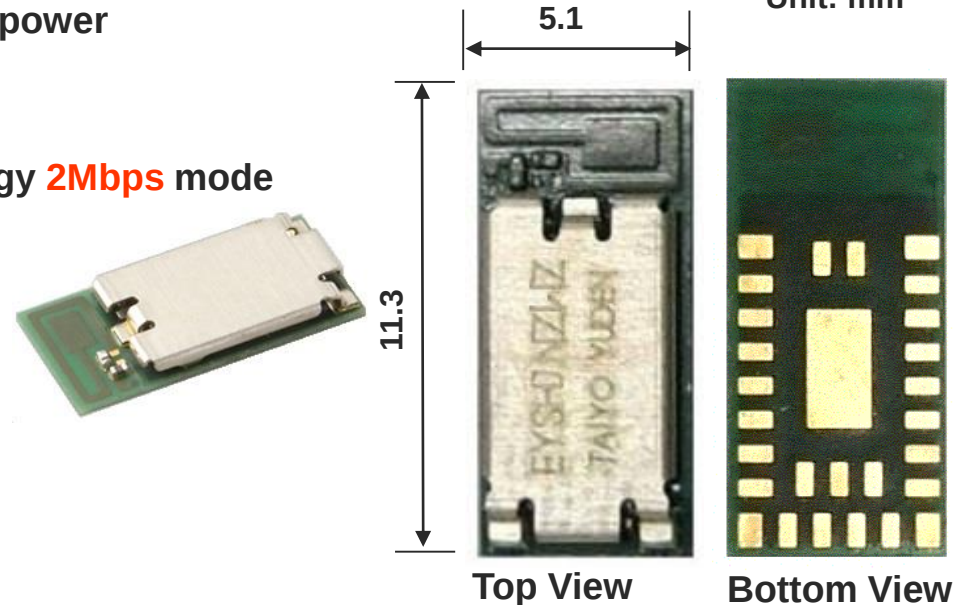
Features

- 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 1.3**mm 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

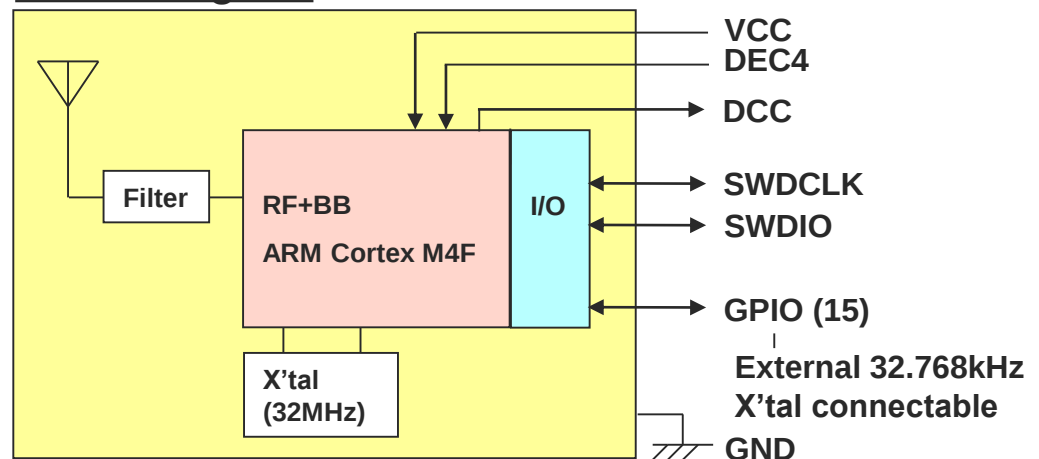
Applications

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

Outline



Block Diagram



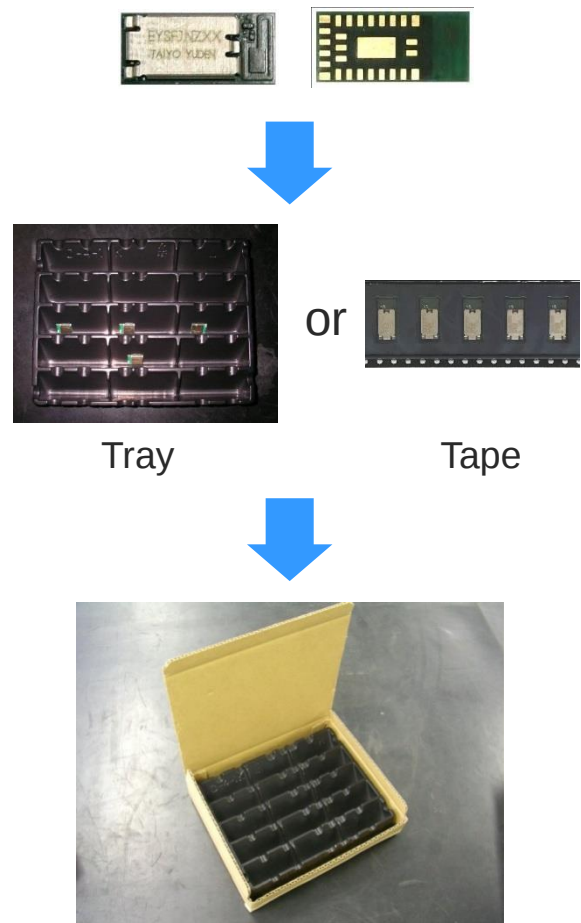
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Bluetooth® low energy Module Sample, Evaluation Board / Kit

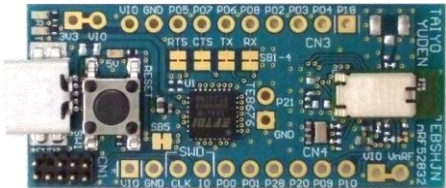
EYSHJNZWZ (Module)

Module samples



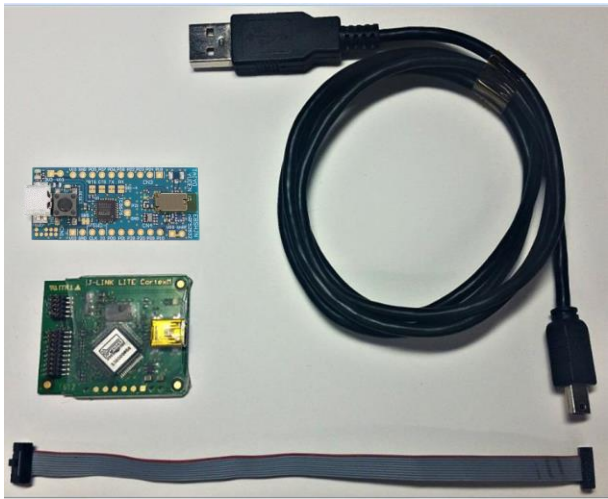
EBSHJNZWZ (EV-B)

Evaluation board



EKSHJNZWZ (EV-K)

Evaluation kit



2Mbps Bluetooth® 5.0 low energy Module: EYSLSNZWW

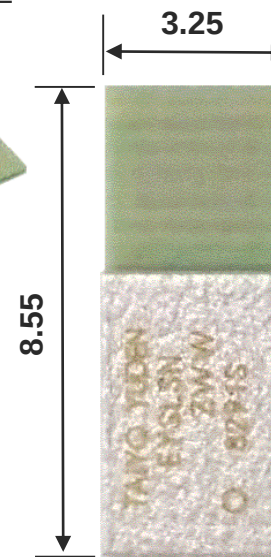
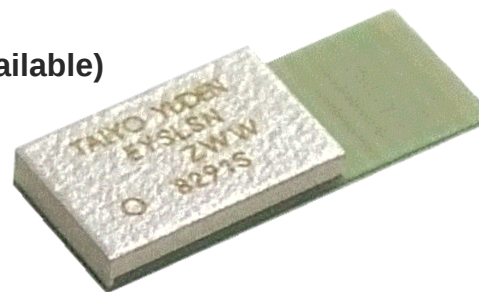
Features

- 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

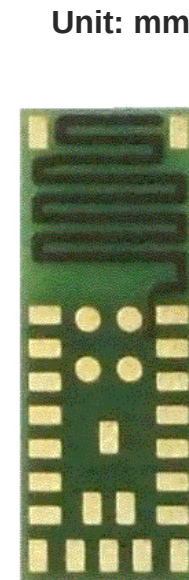
Applications

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

Outline



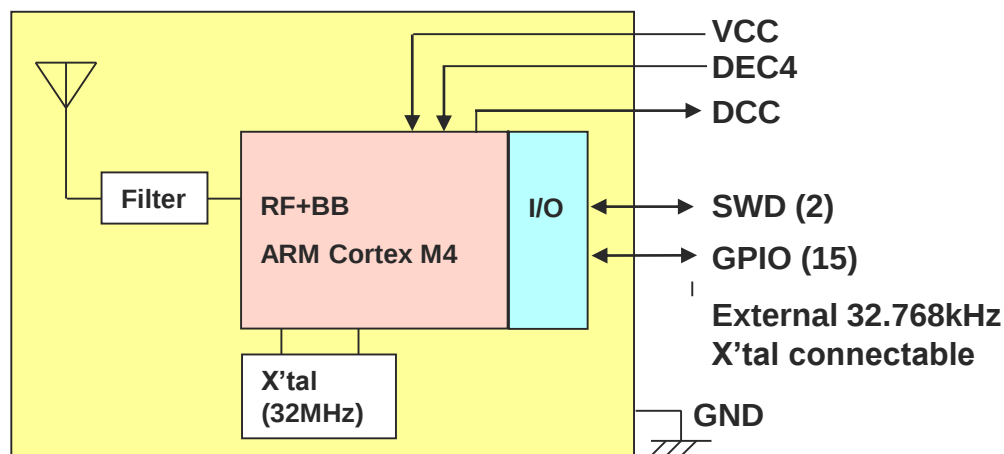
Top View



Bottom View

Unit: mm

Block Diagram



All specifications are subject to change without notice.

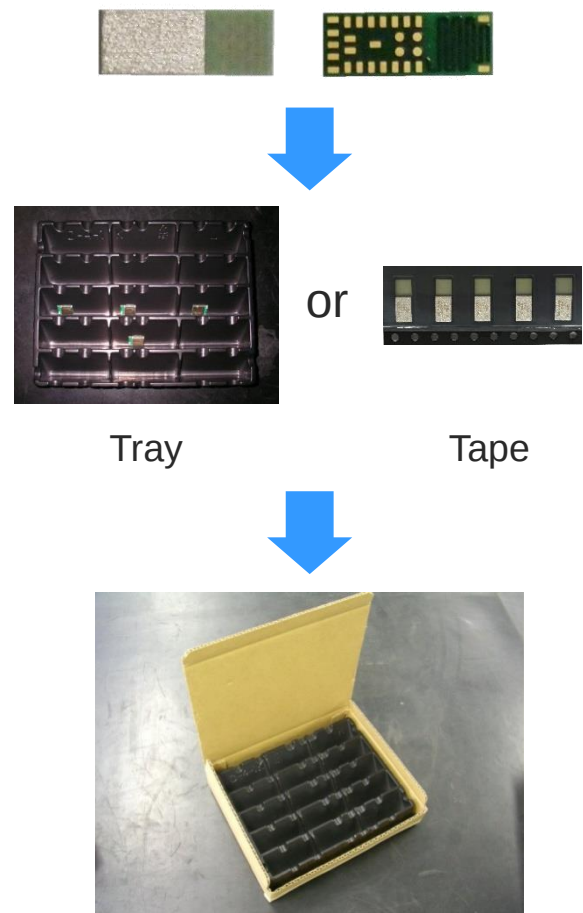
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Bluetooth® low energy Module Sample, Evaluation Board / Kit

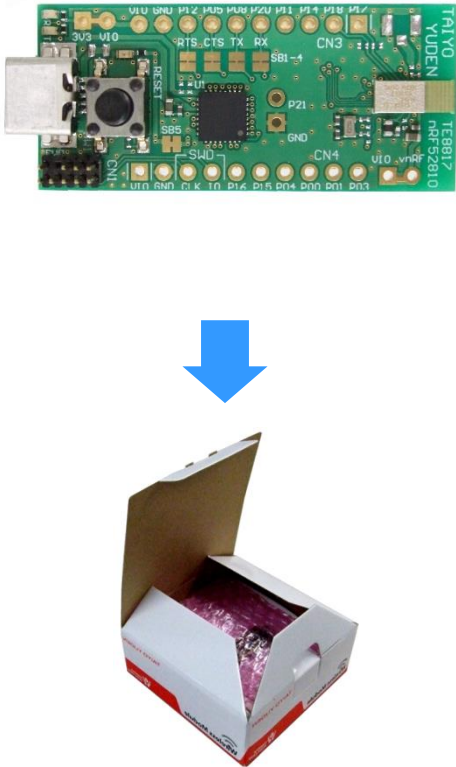
EYSLSNZWW (Module)

Module samples



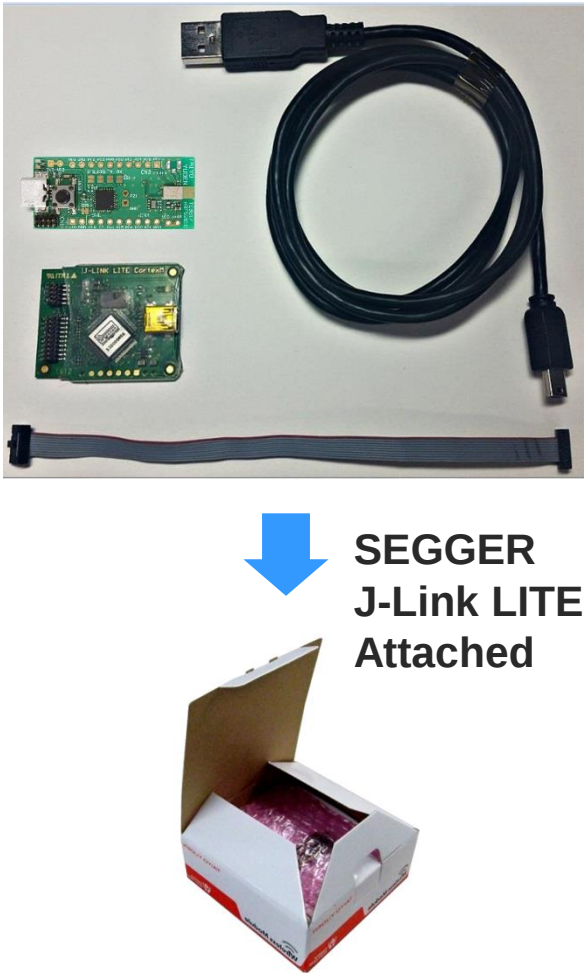
EBSLSNZWW (EV-B)

Evaluation board



EKSLSNZWW (EV-K)

Evaluation kit



2Mbps Bluetooth® 5.0 low energy Module: EYSLCNZWW

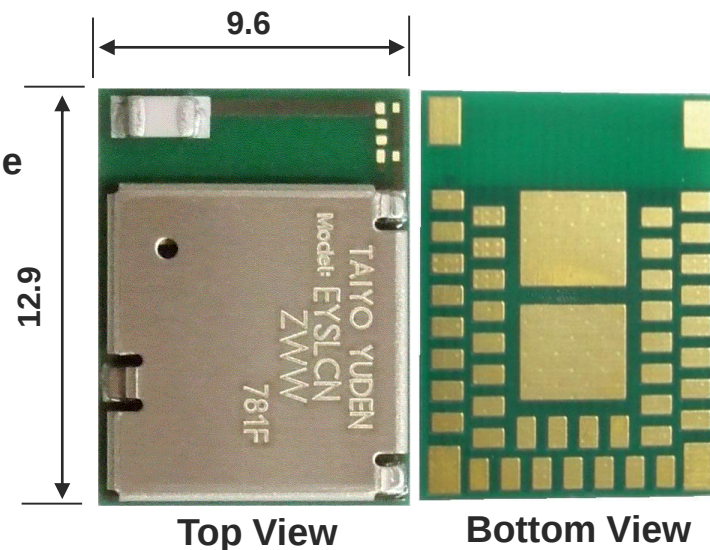
Features

- 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

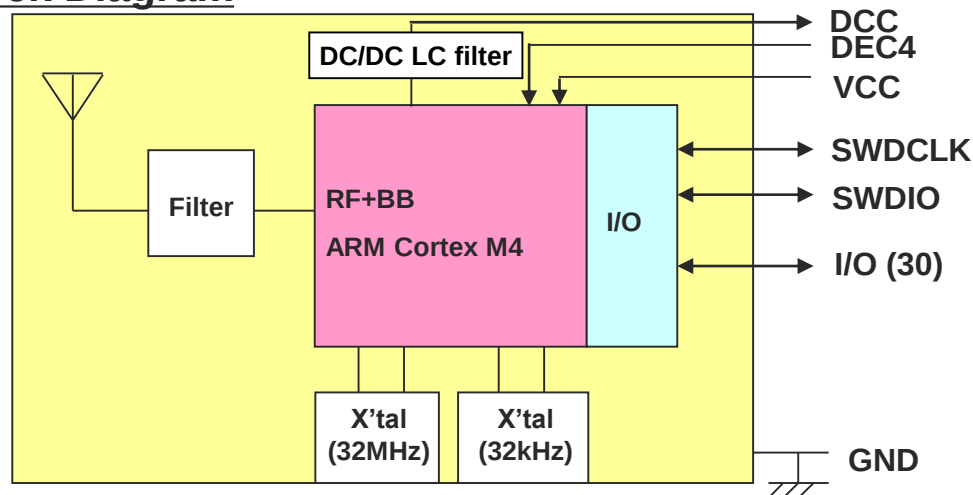
Applications

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

Outline



Block Diagram



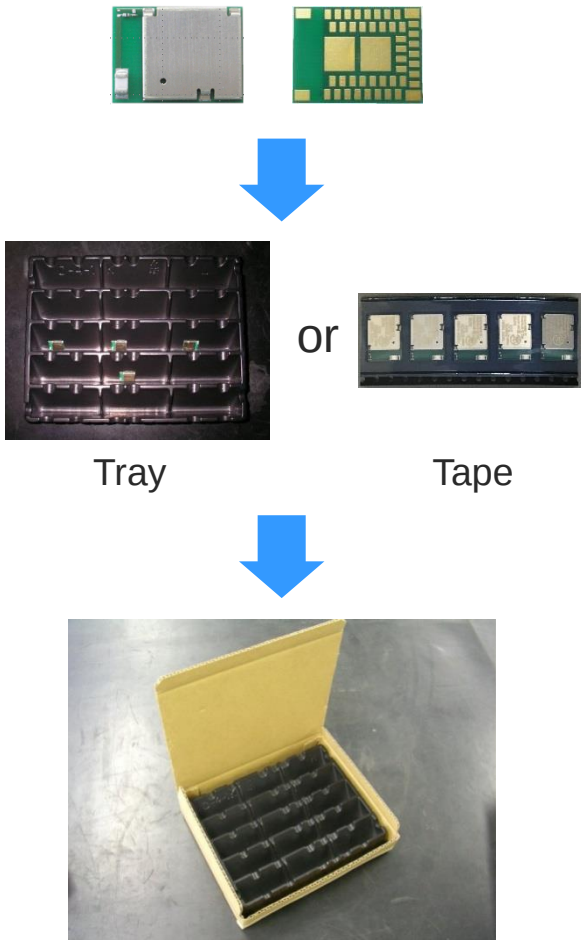
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Bluetooth® low energy Module Sample, Evaluation Board / Kit

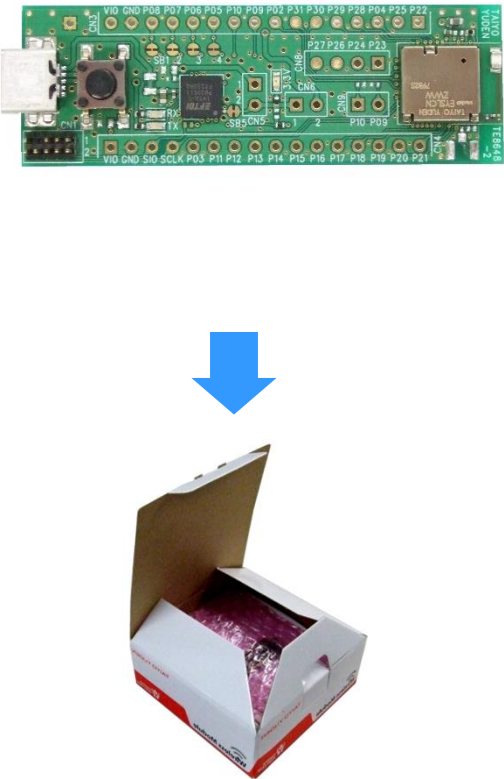
EYSLCNZWW (Module)

Module samples



EBSLCNZWW (EV-B)

Evaluation board



EKSLCNZWW (EV-K)

Evaluation kit



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

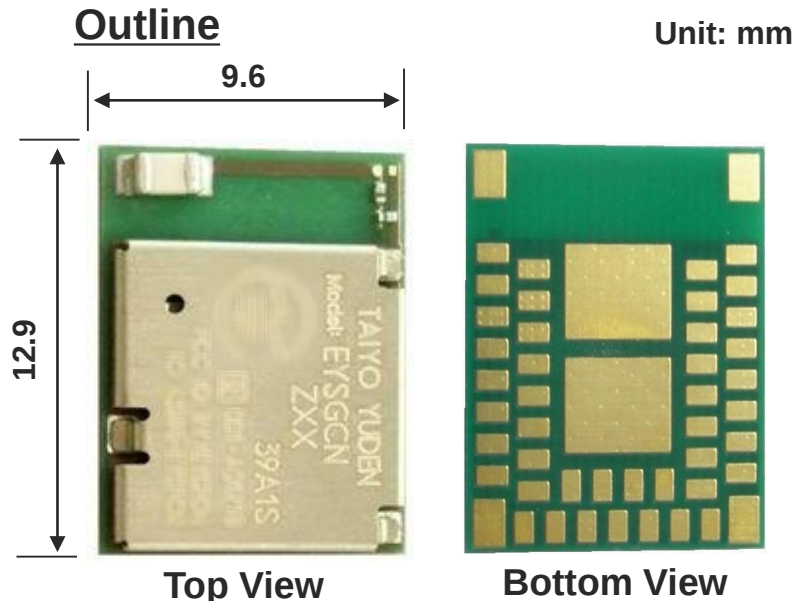
Applications

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

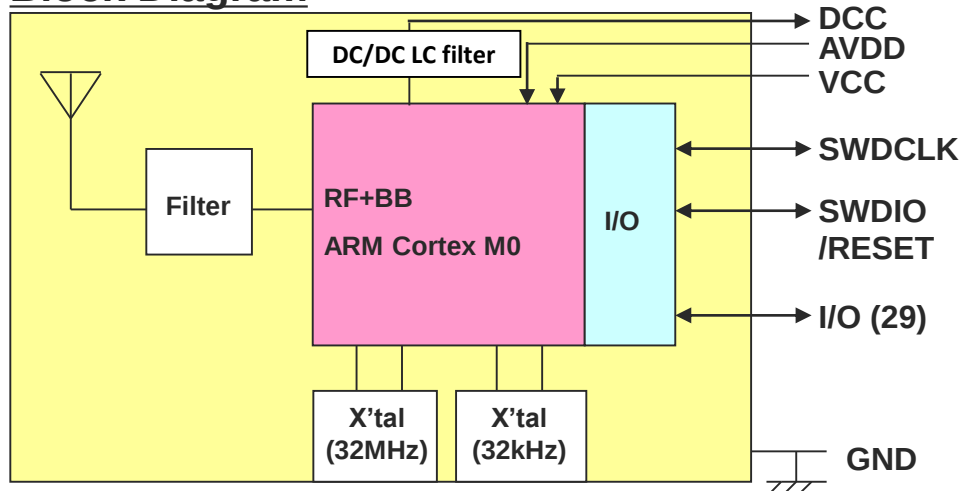
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TAIYO YUDEN



Block Diagram



Bluetooth® low energy Module: **EYSGCNZWY**

Features

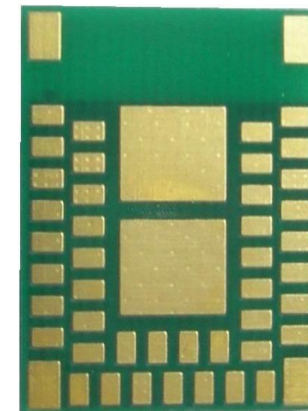
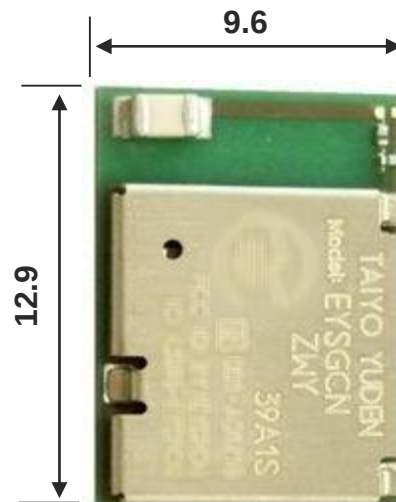
- Frequency: 2402 to 2480 MHz
- Output power: +4dBm typ.
- Single power supply: 1.8 – 3.6V
- Single Mode Bluetooth low energy **Slave / Master**
- Chip: nRF51822 **Rev.3** (Nordic)
- Integrated System/**Sleep Clock**
- Integrated high performance ceramic chip antenna
- ARM Cortex M0** 32bit processor
- 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

Applications

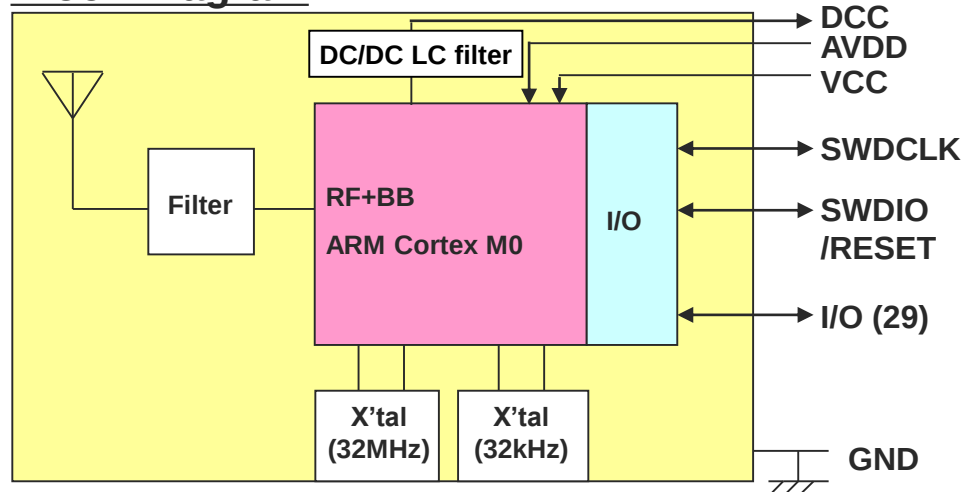
- Cycle computer
- Heart rate monitor
- Blood pressure monitor
- Blood glucose meter
- Weighing machine
- Thermometer
- Mobile accessories
- Sports and fitness sensors
- Remote controllers / Toys

Outline

Unit: mm



Block Diagram



All specifications are subject to change without notice.

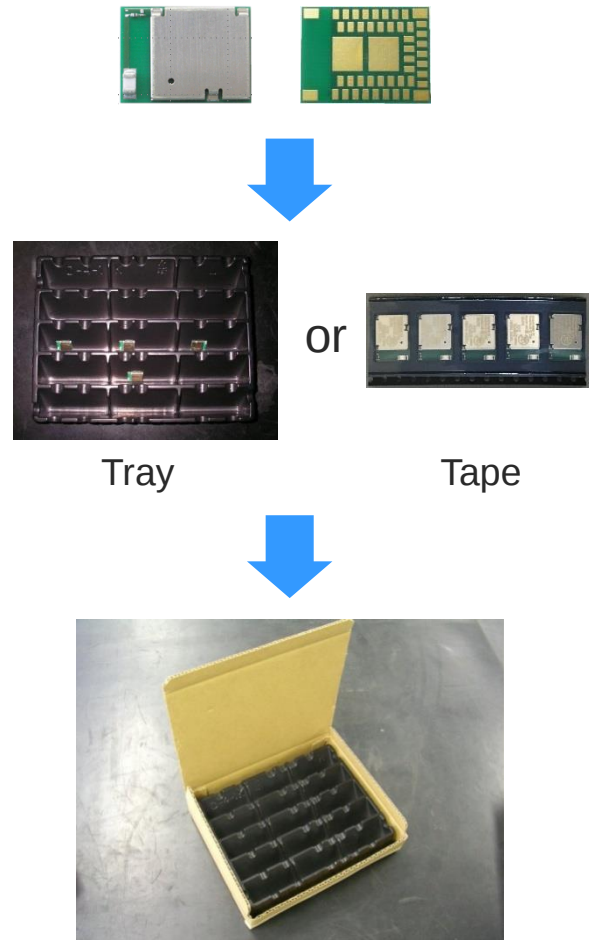
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Bluetooth® low energy Module Sample, Evaluation Board / Kit

EYSGCNZXX, EYSGCNZWY (Module)

Module samples



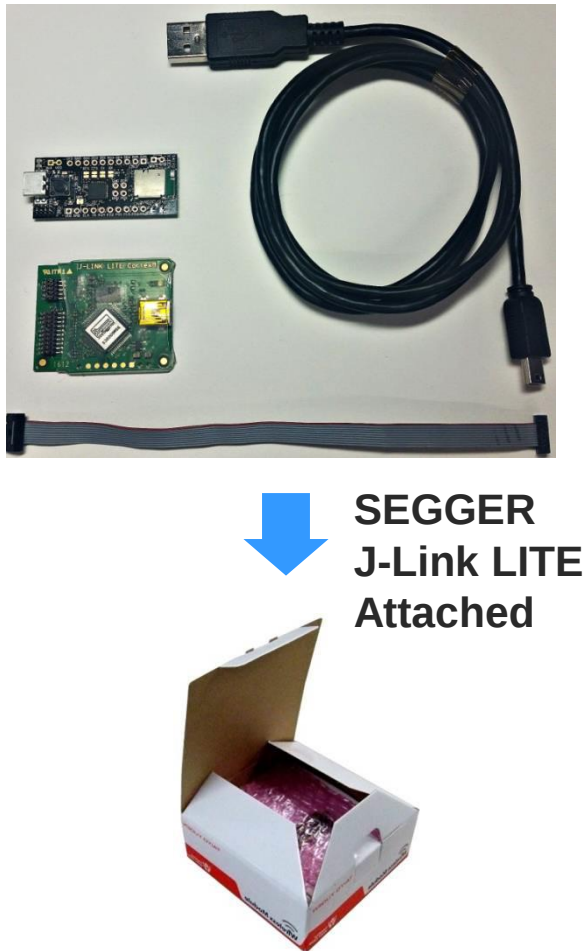
EBSGCMZWY (EV-B)

Evaluation board



EKSGCMZWY (EV-K)

Evaluation kit

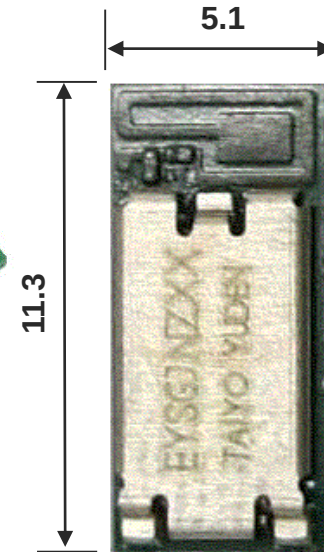


Bluetooth® low energy Module **EYSGJNZXX**

Features

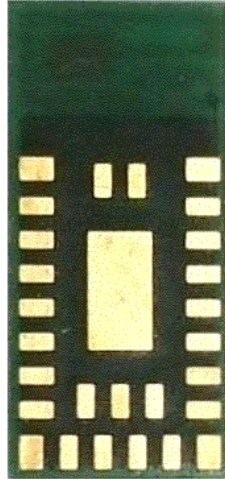
- Frequency: 2402 to 2480 MHz
- Output power: +4dBm typ.
- Single power supply: 1.8 – 3.6V
- Single Mode Bluetooth low energy Slave
- Chip: nRF51822 **Rev.3** (Nordic)
- Integrated System Clock
- ARM Cortex M0** 32bit processor
- 256kB Flash** and **16kB RAM**
- Interface: SPI, UART, I2C and 8/9/10bit 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



Top View

Unit: mm

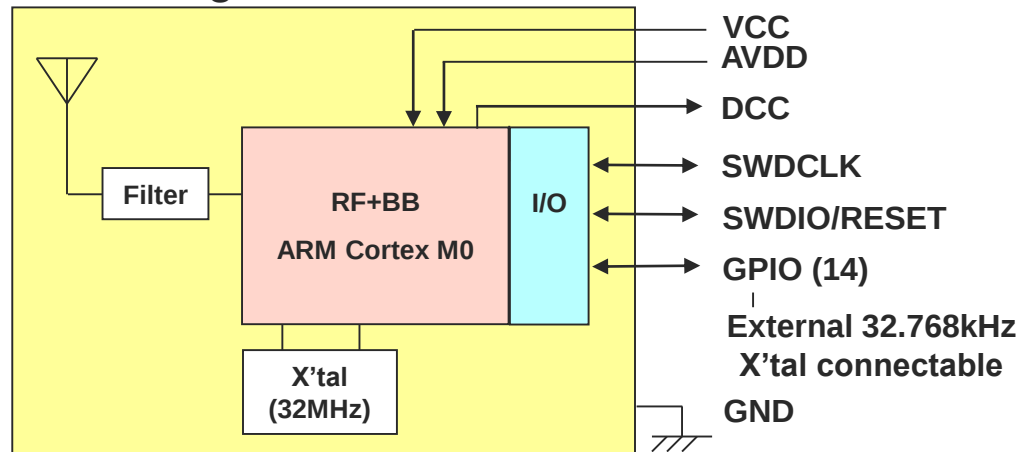


Bottom View

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



All specifications are subject to change without notice.

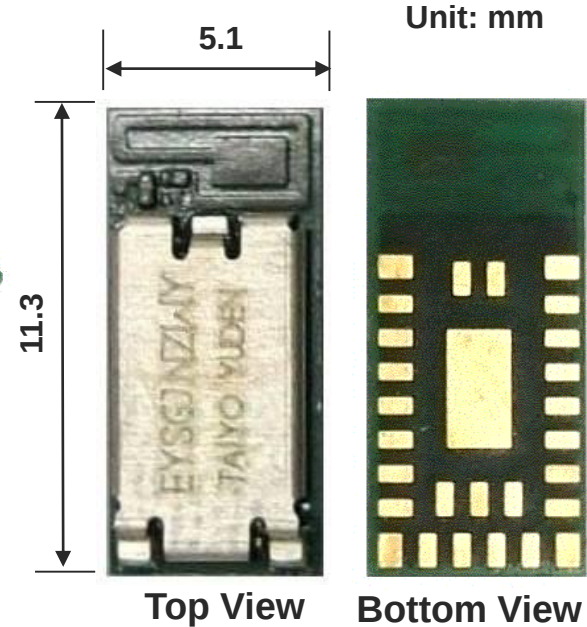
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Bluetooth® low energy Module **EYSGJNZWY**

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

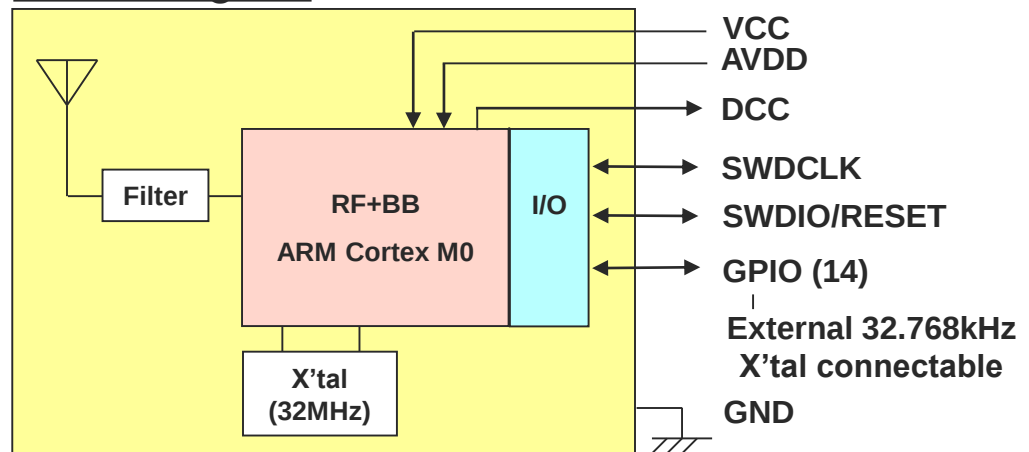
Outline



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



All specifications are subject to change without notice.

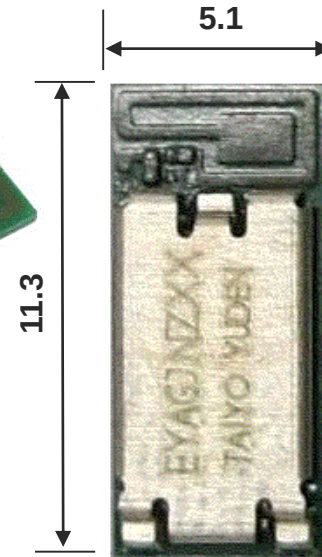
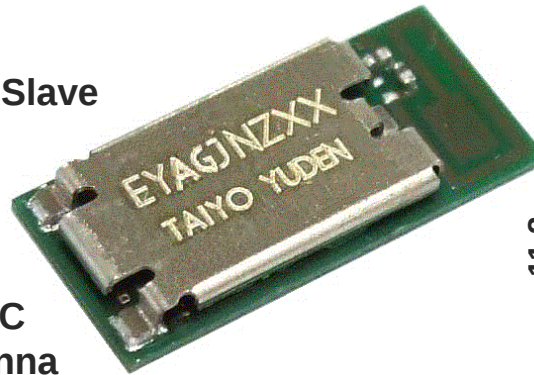
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ANT + Bluetooth® low energy Module **EYAGJNZXX**

Features

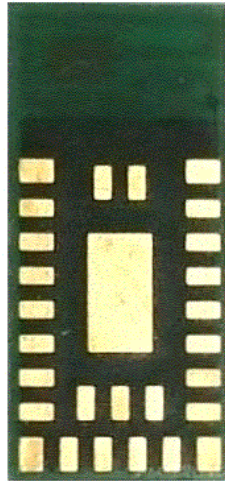
- Frequency: 2402 to 2480 MHz
- Output power: +4dBm typ.
- Single power supply: 1.8 – 3.6V
- ANT** + Single Mode Bluetooth low energy Slave
- Chip: **nRF51422 Rev 3** (Nordic)
- Integrated System Clock
- ARM Cortex M0** 32bit processor
- 256kB Flash and 32kB RAM**
- Interface: SPI, UART, I2C and 8/9/10bit 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



Top View

Unit: mm

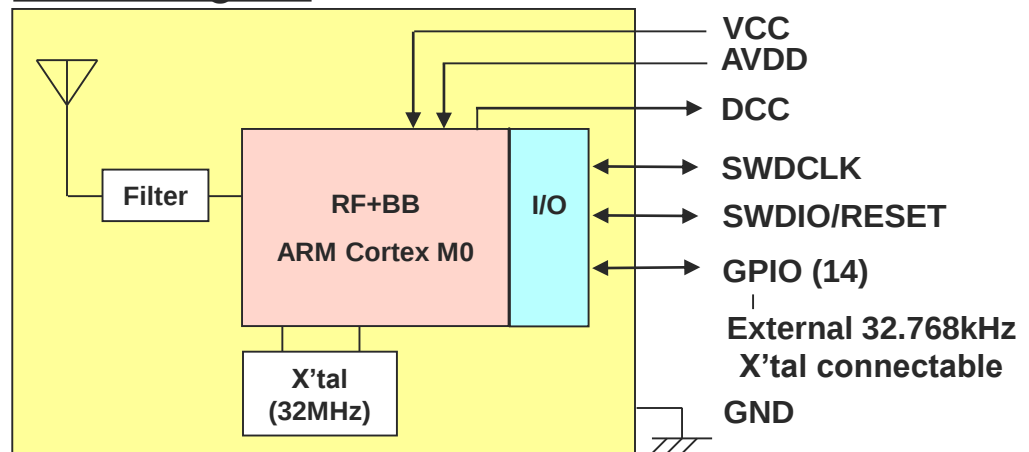


Bottom View

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



All specifications are subject to change without notice.

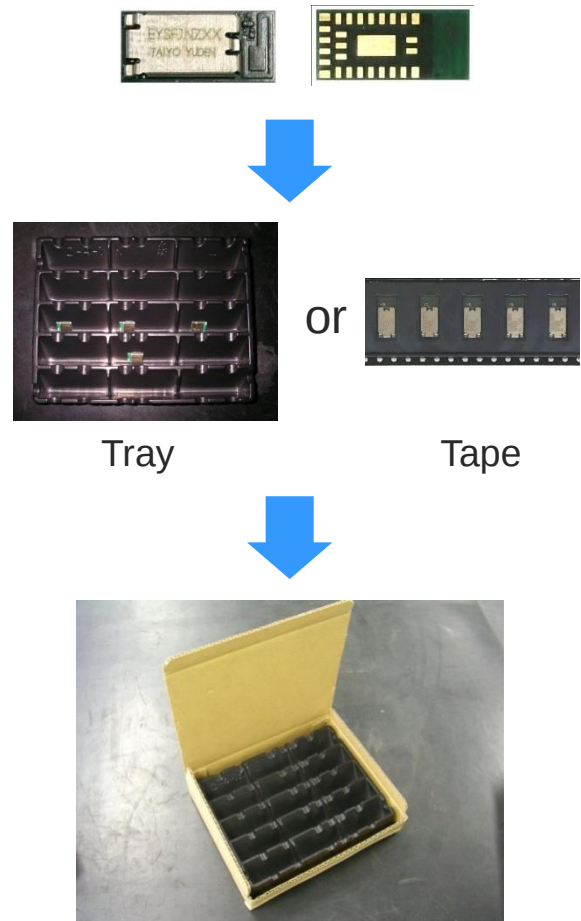
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Bluetooth® low energy Module Sample, Evaluation Board / Kit

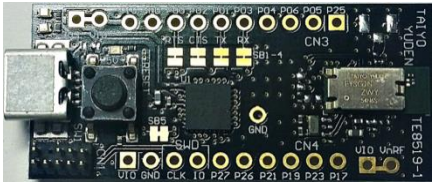
EYSGJNZXX, EYSGJNZWY,
EYAGJNZXX (Module)

Module samples



EBSGJNZWY, EBAGJNZXX
(EV-B)

Evaluation board

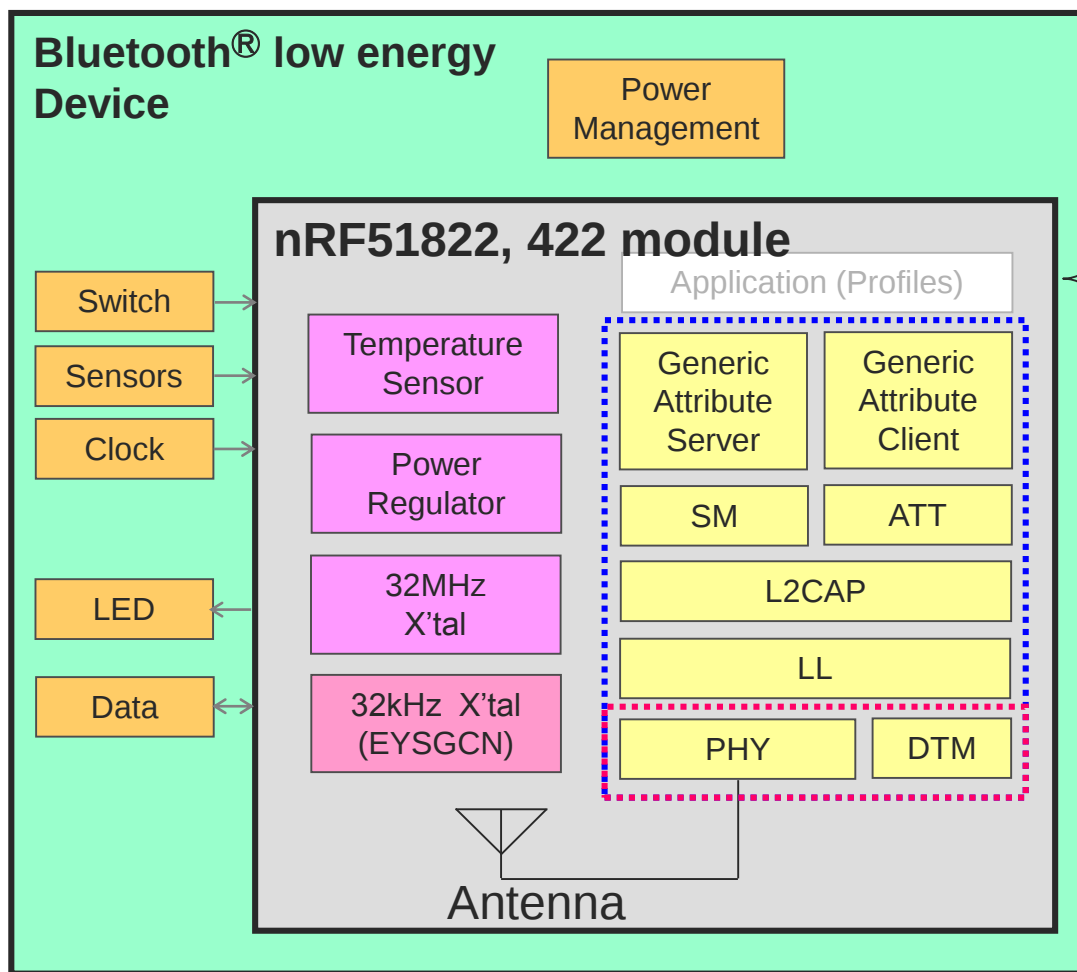


EKSGJNZWY, EKAGJNZXX
(EV-K)

Evaluation kit



Application Layer image for Basic Module



- Alert Notification **Nordic SDK**
- Blood Pressure
- Cycling Speed and Cadence
- Glucose
- HID Mouse
- Heart Rate
- Phone Alert Status
- Proximity
- Running Speed and Cadence
- Time

Basic module will be written under GATT.

Softdevice

- GAP:** Generic Access Profile
SM: Security Manager
ATT: Attribute Protocol
L2CAP: Logical Link Control and Adaptation Protocol
LL: Link Layer
PHY: Physical Layer
DTM: Direct Test Mode

EYSGCN, EYSGJN, EYAGJN
Basic Module

Bluetooth® low energy Module: **EYSGCNAWY-VX**

Features

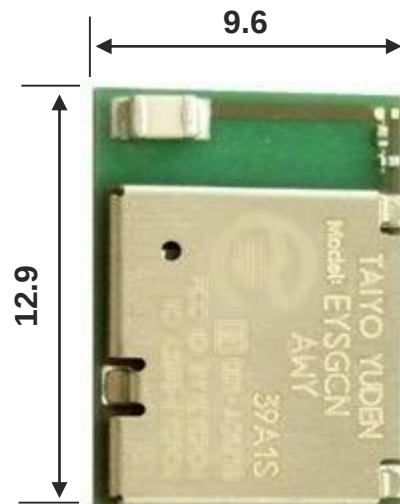
- Frequency: 2402 to 2480 MHz
- Output power: +4dBm typ.
- Single power supply: 1.8 – 3.6V
- Single Mode Bluetooth **4.2** low energy **Slave / Master**
- Chip: nRF51822 (Nordic)
- Integrated System/Sleep Clock
- Integrated high performance ceramic chip antenna
- ARM Cortex M0** 32bit processor
- Application 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

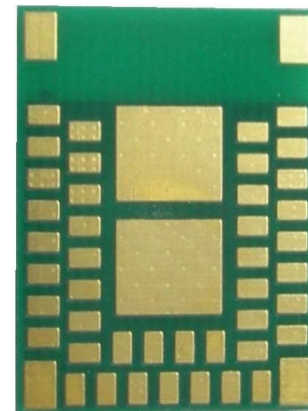
- Cycle computer
- Heart rate monitor
- Blood pressure monitor
- Blood glucose meter
- Weighing machine
- Thermometer
- Mobile accessories
- Sports and fitness sensors
- Remote controllers / Toys

Outline

Unit: mm

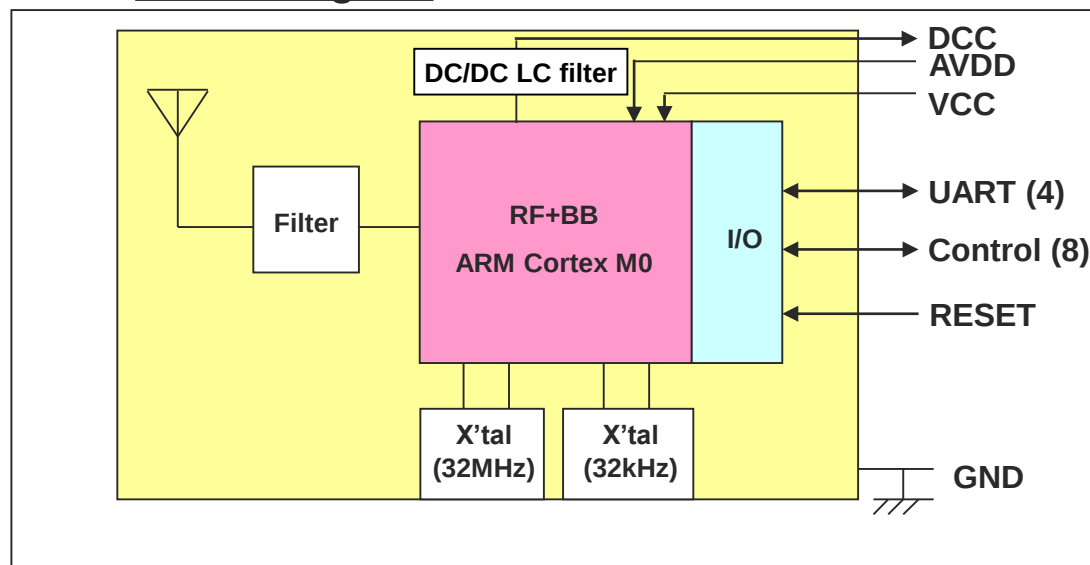


Top View



Bottom View

Block Diagram



All specifications are subject to change without notice.

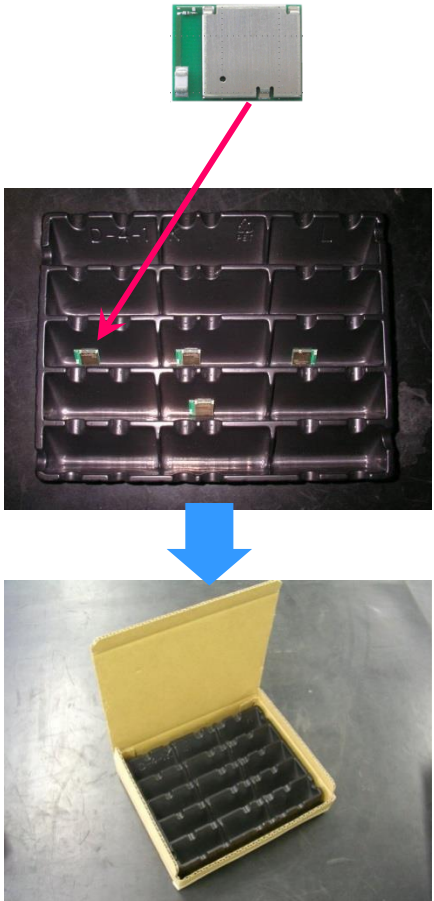
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Bluetooth low energy Module Sample, Evaluation Board

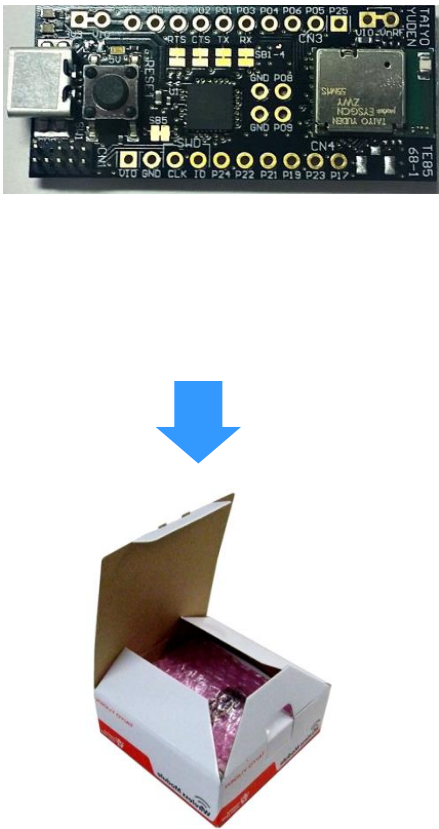
EYSGCNAWY-VX (Module)

■ Module samples



EBSGCNAWY-VX (EV-B)

■ Evaluation board



Bluetooth® low energy Module **EYSGJNAWY-VX**

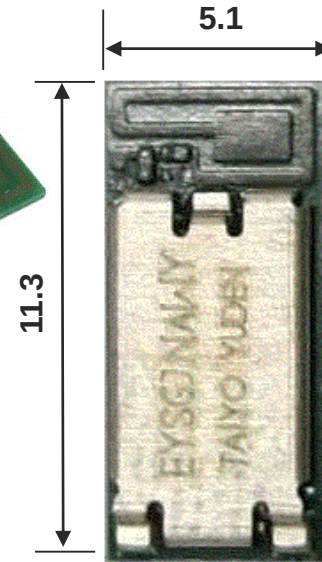
Features

- 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 **1.3**mm 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

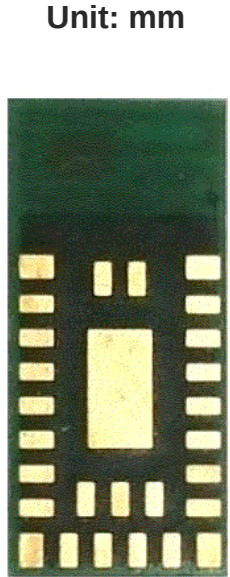
Applications

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

Outline



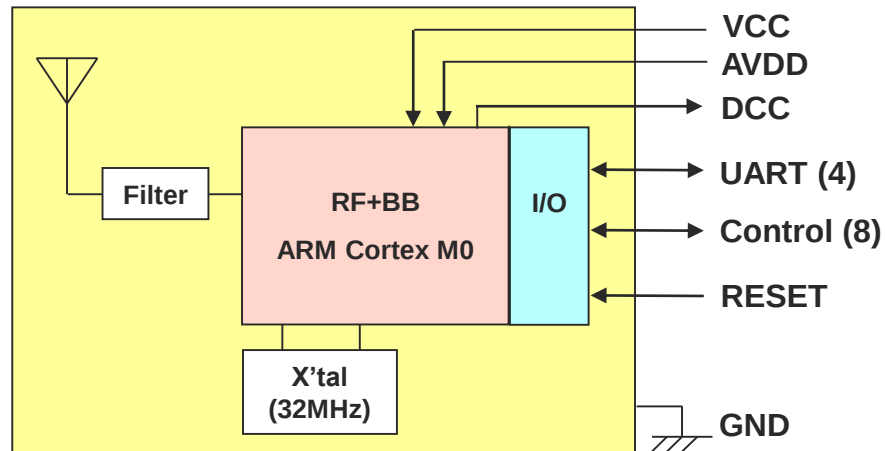
Top View



Bottom View

Unit: mm

Block Diagram



All specifications are subject to change without notice.

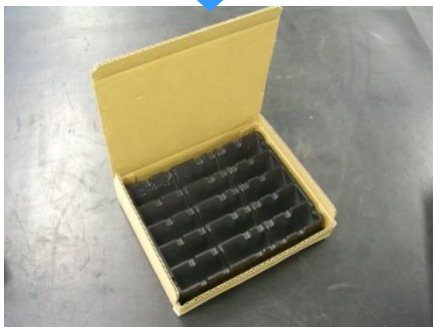
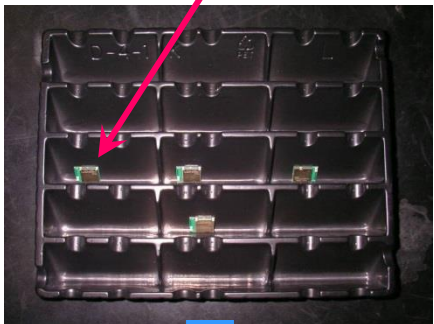
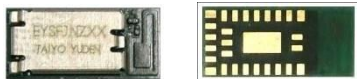
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Bluetooth low energy Module Sample, Evaluation Board

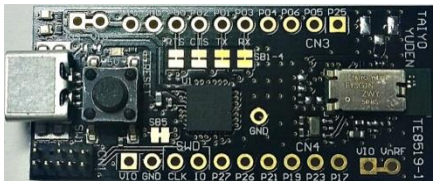
EYSGJNAWY-VX (Module)

■ Module samples



EBSGJNAWY-VX (EV-B)

■ Evaluation board



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

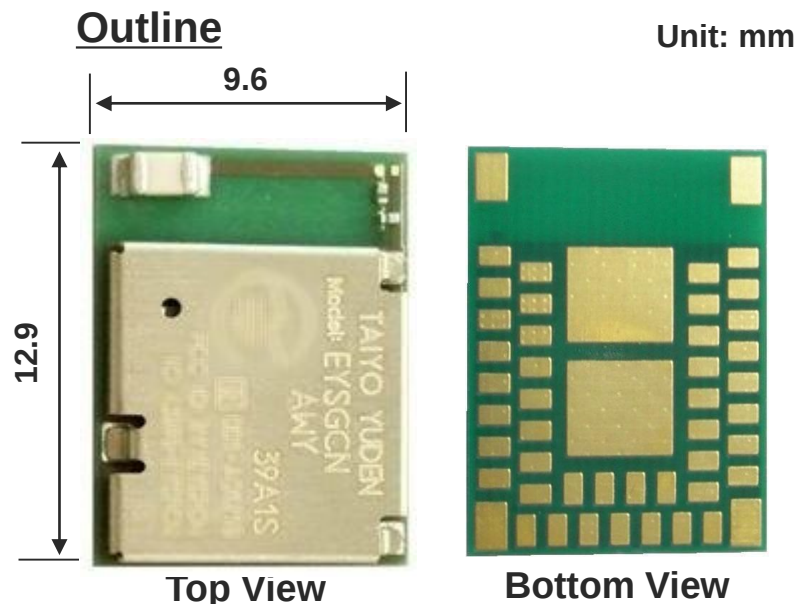
Applications

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

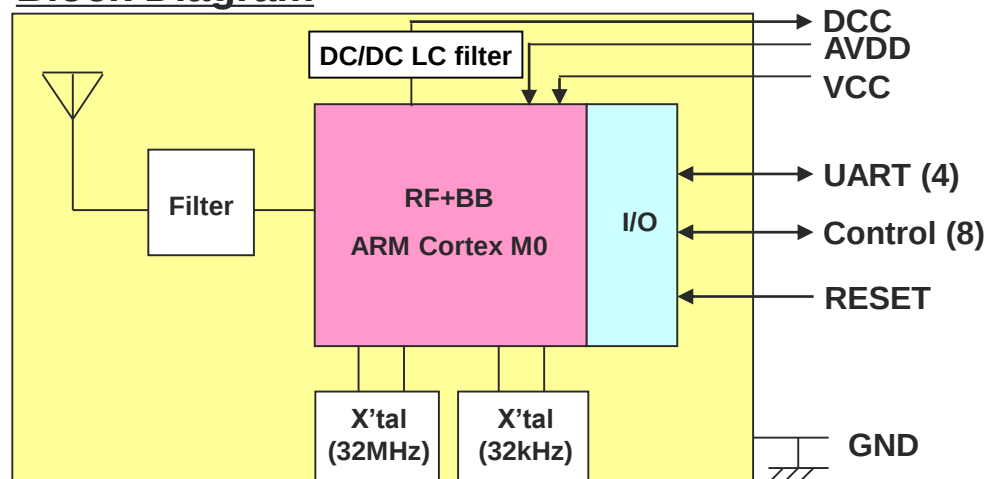
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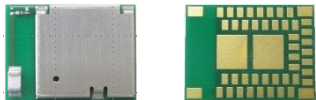
Block Diagram



Bluetooth low energy Module Sample, Evaluation Board

EYSGCNAWY-WX (Module)

Module samples



Tray

or



Tape



EBSGCNAWY-WX (EV-B)

Evaluation board



Bluetooth® low energy Module **EYSGJNAWY-WX**

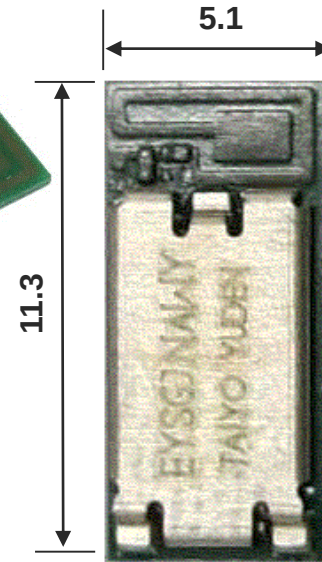
Features

- 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 **1.3**mm 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

Applications

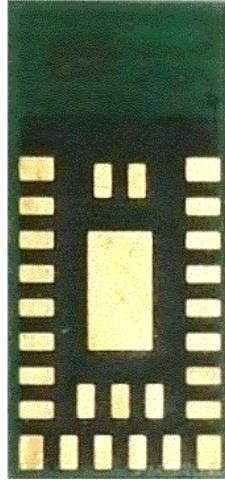
- Cycle computer
- Heart rate monitor
- Blood pressure monitor
- Blood glucose meter
- Weighing machine
- Thermometer
- Mobile accessories
- Sports and fitness sensors
- Remote controllers / Toys

Outline



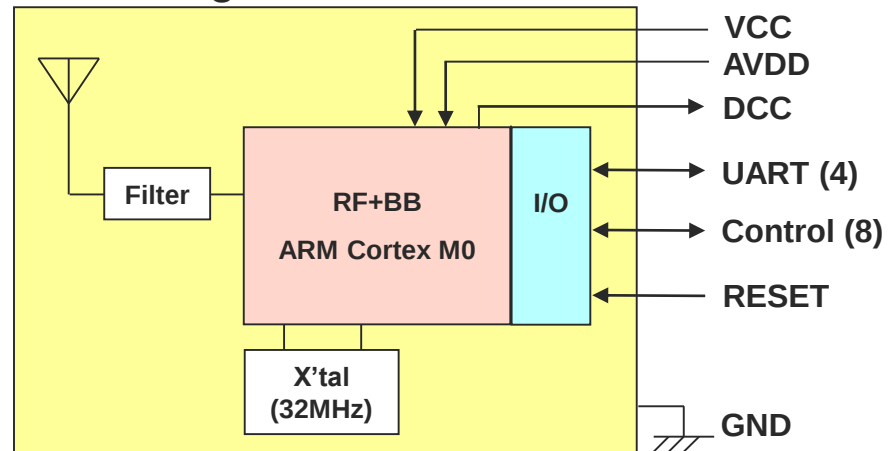
Top View

Unit: mm



Bottom View

Block Diagram

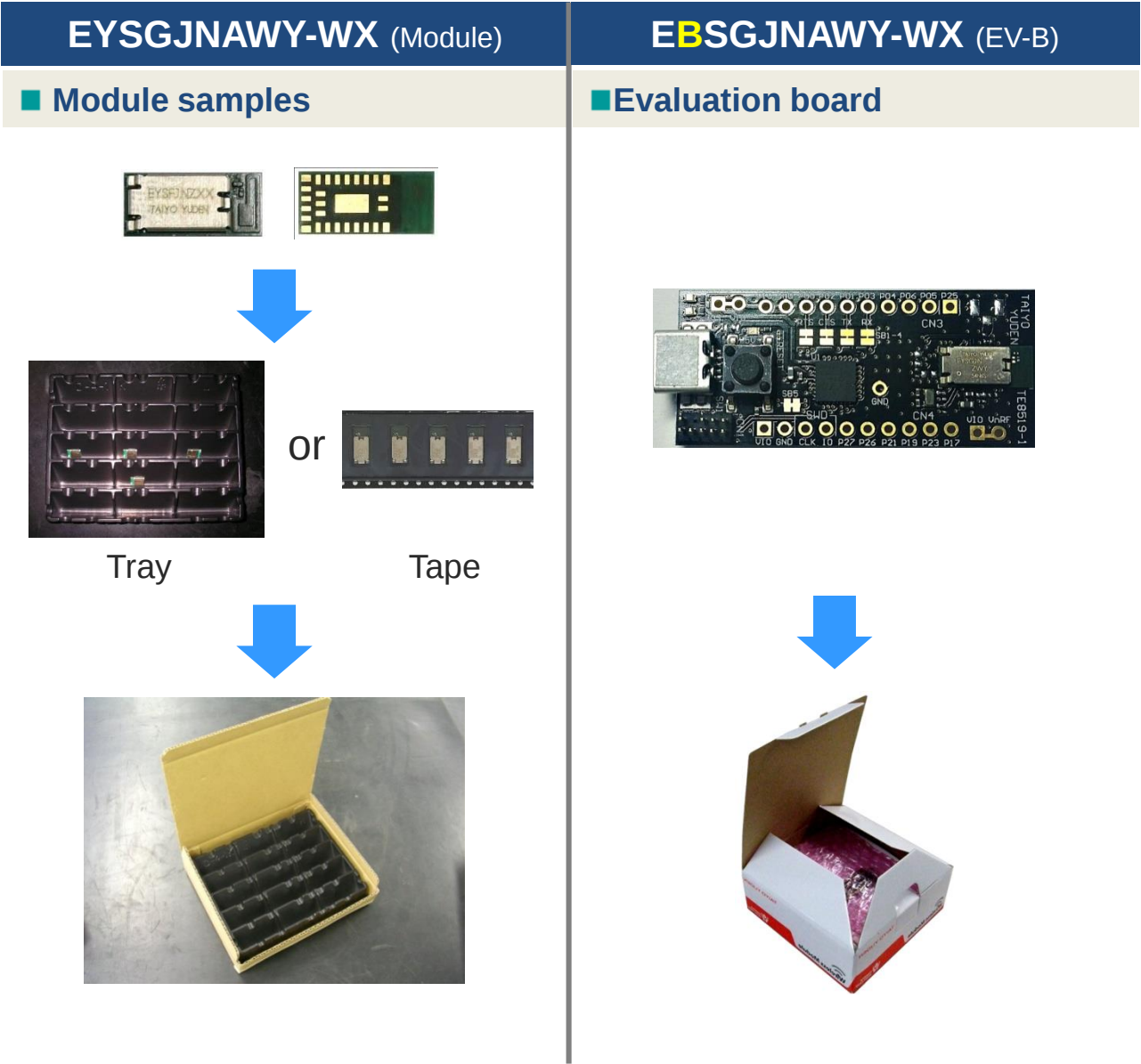


All specifications are subject to change without notice.

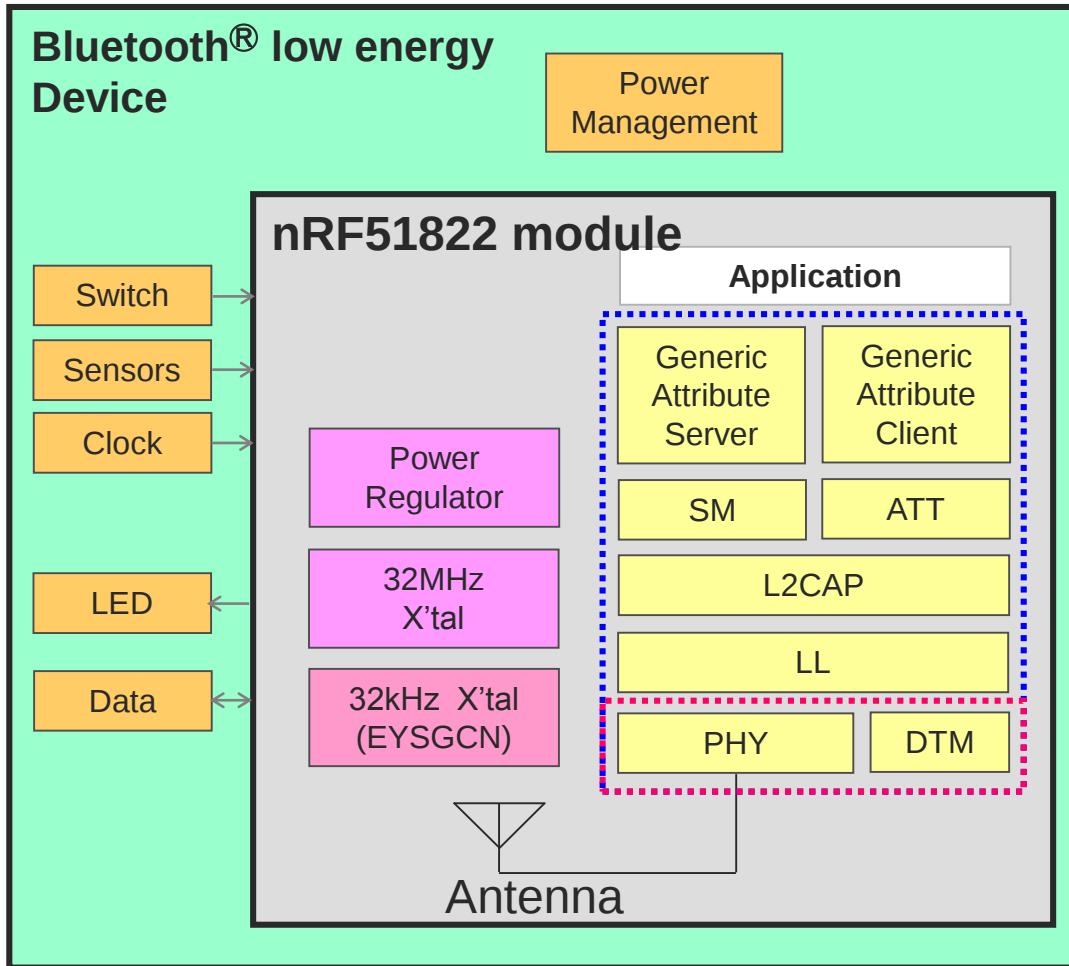
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Bluetooth low energy Module Sample, Evaluation Board



Application Layer image for **Application Embedded Module**



EYSGCN, EYSGJN
Application Embedded Module

Connection option

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

Softdevice

GAP: Generic Access Profile
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	Certifi- cation	Tempera- ture
High Performance Basic (Software Support : Nordic)	EYSKBNZWB	10.0x15.4 x2.0mm	Bluetooth V5.0 BLE Single	✓	USB※3 UART SPI I2C I2S※4 PDM	256kB	Japan FCC IC (CE)※2	-40~+85 deg-C
	EYSHSNZWZ	3.25x8.55 X0.85mm		✓		64kB		
	EYSLSNZWW	3.25x8.55 X1.00mm		✓		24kB		
	EYSHCNZWZ	9.6x12.9		✓		64kB		
	EYSLCNZWW	X2.0mm				24kB		
	EYSHJNZWZ	5.1x11.3 X1.3mm		✓		64kB		
Basic (Software Support : Nordic)	EYSGCNZXX	9.6x12.9x	Bluetooth V4.2※1 BLE Single		UART SPI I2C	16kB		-40~+85 deg-C (EYSGCN ZXX, EYSGJN ZXX)
	EYSGCNZWY	2.0mm				32kB		
	EYSGJNZXX	5.1x11.3x 1.3mm				16kB		
	EYSGJNZWY					32kB		
	EYAGJNZXX			✓		32kB		
Application Embedded – Module (Software Support : TAIYO YUDEN)	EYSGCNAWY-VX	9.6x12.9x 2.0mm	Bluetooth V4.2 BLE Single		UART	N/A		-25~+85 deg-C (other than the above)
	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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