

# Wireless Module *Bluetooth<sup>®</sup> low energy* Module Overview

May 30, 2018 Version 1.8

# TAIYO YUDEN Bluetooth® low energy Module Line-Up

## Taiyo Yuden Bluetooth® low energy Module

nRF52832 Module  
nRF52810 Module

nRF51422 Module  
nRF51822 Module

**EYSHCN Series**  
**EYSLCN Series**

**Big**

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

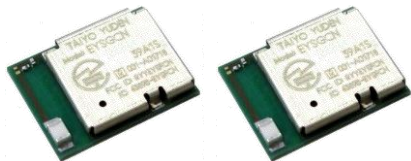
**Small**

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

**Ultra-small**

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

**EYSHSN Series**



**EYSHCN**  
**ZWZ**

**EYSLCN**  
**ZWW**

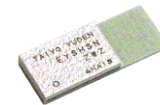
RAM 64kB  
SoftDevice  
S132

RAM 24kB  
SoftDevice  
S112



**EYSHJN**  
**ZWZ**

RAM 64kB  
SoftDevice  
S132

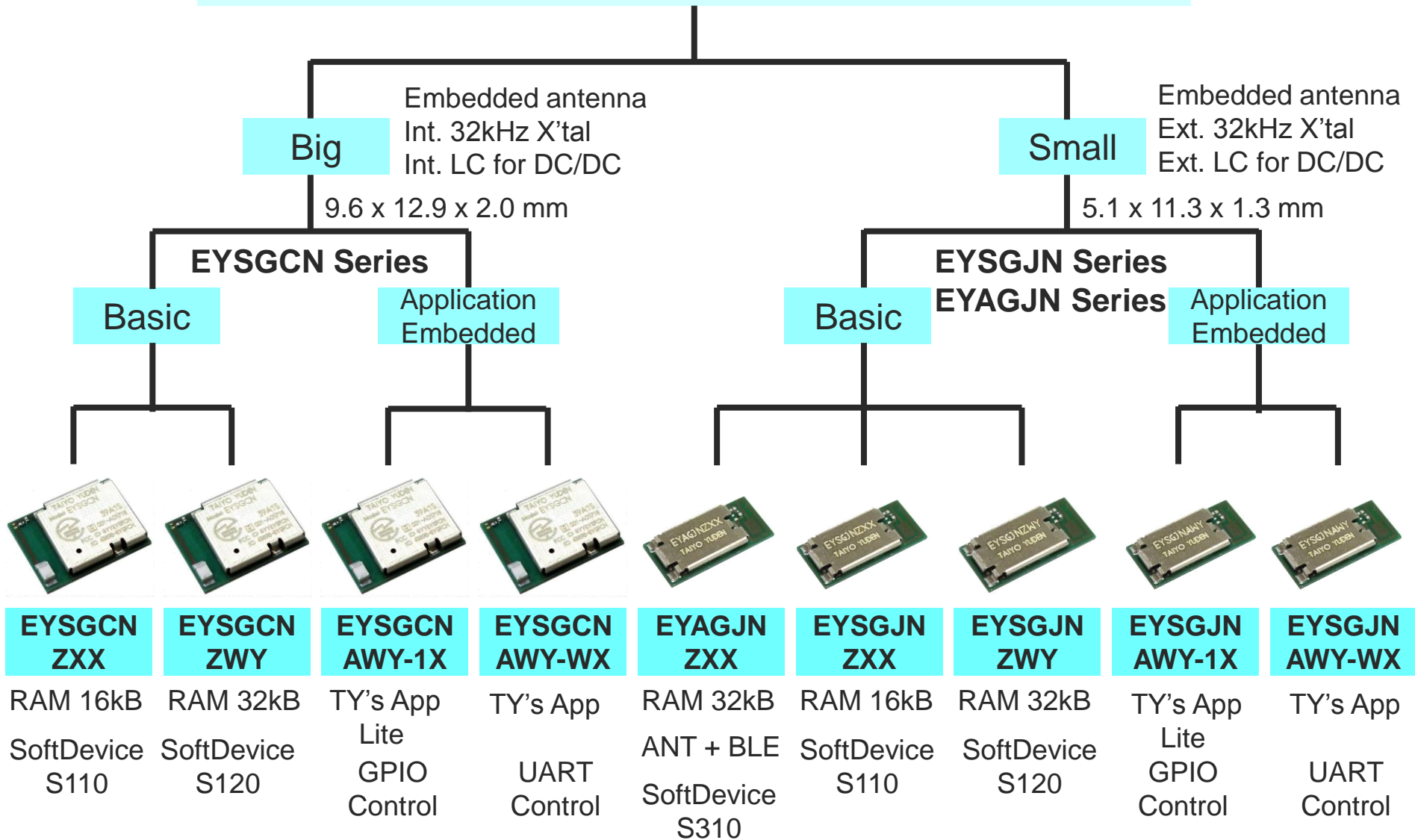


**EYSHSN**  
**ZWZ**

RAM 64kB  
SoftDevice  
S132

# TAIYO YUDEN Bluetooth® low energy Module Line-Up

## nRF51x22 Bluetooth® low energy Module



# Latest Documents for Bluetooth® low energy Module

EYSHSNZWZ	<a href="http://www.yuden.co.jp/or/product/category/module/EYSHSNZWZ.html">http://www.yuden.co.jp/or/product/category/module/EYSHSNZWZ.html</a>
EYSHCNZWZ	<a href="http://www.yuden.co.jp/or/product/category/module/EYSHCNZWZ.html">http://www.yuden.co.jp/or/product/category/module/EYSHCNZWZ.html</a>
EYSHJNZWZ	<a href="http://www.yuden.co.jp/or/product/category/module/EYSHJNZWZ.html">http://www.yuden.co.jp/or/product/category/module/EYSHJNZWZ.html</a>
EYSLCNZWZ	<a href="http://www.yuden.co.jp/or/product/category/module/EYSLCNZWZ.html">http://www.yuden.co.jp/or/product/category/module/EYSLCNZWZ.html</a>
EYSGCNZXX	<a href="http://www.yuden.co.jp/or/product/category/module/EYSGCNZXX.html">http://www.yuden.co.jp/or/product/category/module/EYSGCNZXX.html</a>
EYSGCNZWY	<a href="http://www.yuden.co.jp/or/product/category/module/EYSGCNZWY.html">http://www.yuden.co.jp/or/product/category/module/EYSGCNZWY.html</a>
EYSGJNZXX	<a href="http://www.yuden.co.jp/or/product/category/module/EYSGJNZXX.html">http://www.yuden.co.jp/or/product/category/module/EYSGJNZXX.html</a>
EYSGJNZWY	<a href="http://www.yuden.co.jp/or/product/category/module/EYSGJNZWY.html">http://www.yuden.co.jp/or/product/category/module/EYSGJNZWY.html</a>
EYAGJNZXX	<a href="http://www.yuden.co.jp/or/product/category/module/EYAGJNZXX.html">http://www.yuden.co.jp/or/product/category/module/EYAGJNZXX.html</a>
EYSGCNAWY-1X	<a href="http://www.yuden.co.jp/or/product/category/module/EYSGCNAWY-1X.html">http://www.yuden.co.jp/or/product/category/module/EYSGCNAWY-1X.html</a>
EYSGJNAWY-1X	<a href="http://www.yuden.co.jp/or/product/category/module/EYSGJNAWY-1X.html">http://www.yuden.co.jp/or/product/category/module/EYSGJNAWY-1X.html</a>
EYSGCNAWY-WX	<a href="http://www.yuden.co.jp/or/product/category/module/EYSGCNAWY-WX.html">http://www.yuden.co.jp/or/product/category/module/EYSGCNAWY-WX.html</a>
EYSGJNAWY-WX	<a href="http://www.yuden.co.jp/or/product/category/module/EYSGJNAWY-WX.html">http://www.yuden.co.jp/or/product/category/module/EYSGJNAWY-WX.html</a>
EYSHCNZXZ	<a href="http://www.yuden.co.jp/or/product/category/module/EYSHCNZXZ.html">http://www.yuden.co.jp/or/product/category/module/EYSHCNZXZ.html</a>
EYSHJNZXZ	<a href="http://www.yuden.co.jp/or/product/category/module/EYSHJNZXZ.html">http://www.yuden.co.jp/or/product/category/module/EYSHJNZXZ.html</a>
EYSFCNZXX	<a href="http://www.yuden.co.jp/or/product/category/module/EYSFCNZXX.html">http://www.yuden.co.jp/or/product/category/module/EYSFCNZXX.html</a>

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

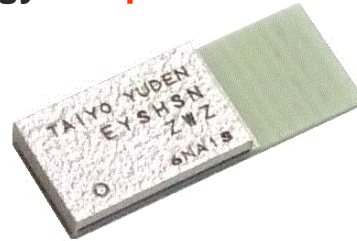
- The Japanese documents are available on the following page.

<http://www.yuden.co.jp/jp/product/category/module/lineup.html#Bluetooth>

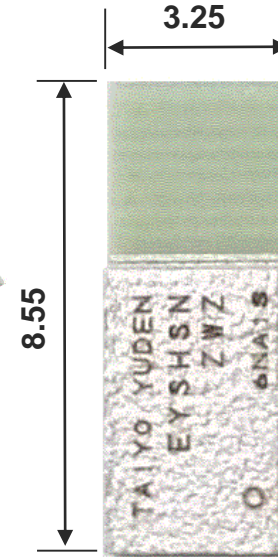
# 2Mbps Bluetooth® 5.0 low energy Module: EYSHSNZWZ

## Features

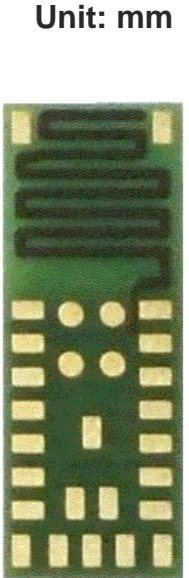
- Frequency: 2402 to 2480 MHz with +4dBm Output power
- Single power supply: 1.7– 3.6V
- Single Mode Bluetooth low energy (ANT™ Available)
- Chip: **nRF52832** (Nordic) with Bluetooth low energy **2Mbps** mode
- Integrated System Clock
- ARM Cortex M4F** 32bit processor
- 512kB Flash and 64kB RAM**
- 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



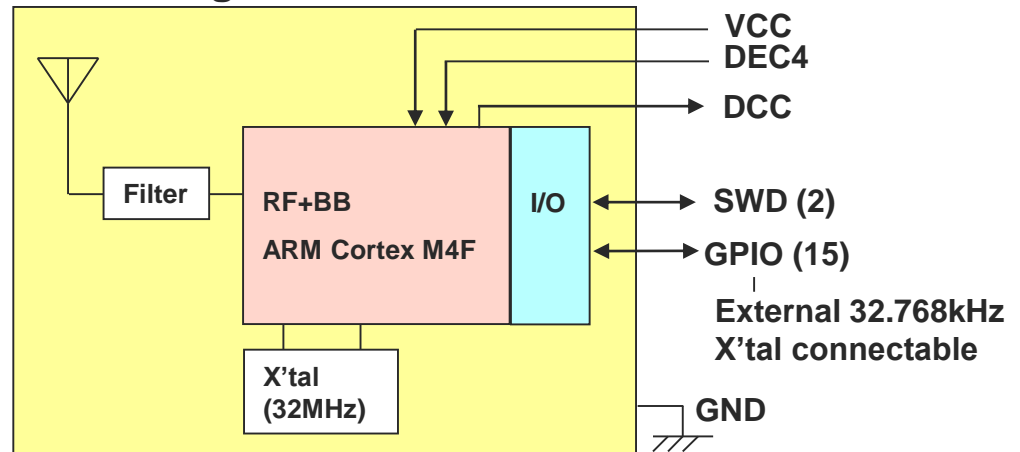
Bottom View

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



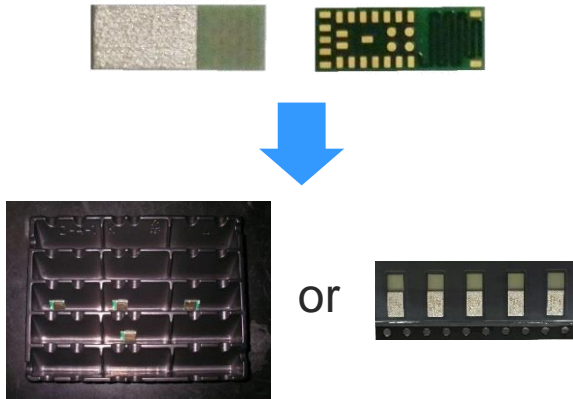
All specifications are subject to change without notice.

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# Bluetooth® low energy Module Sample, Evaluation Board / Kit

## EYSHSNZWZ (Module)

### Module samples



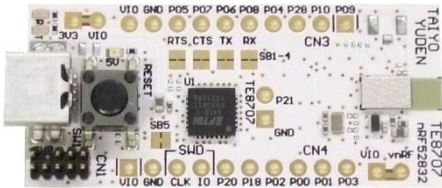
Tray

Tape



## EBSHSNZWZ (EV-B)

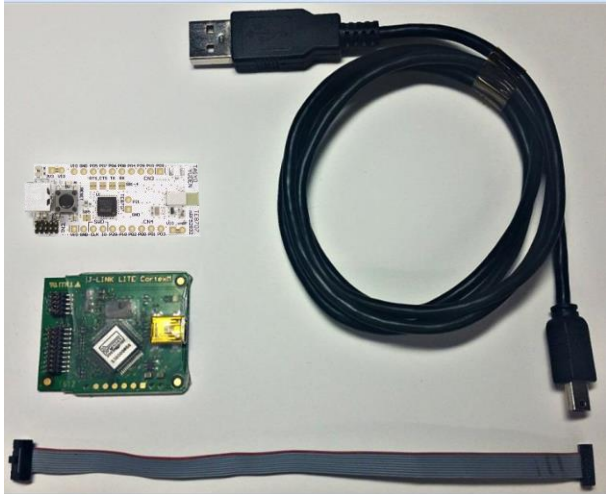
### Evaluation board



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## EKSHSNZWZ (EV-K)

### Evaluation kit



# 2Mbps Bluetooth® 5.0 low energy Module: EYSHCNZWZ

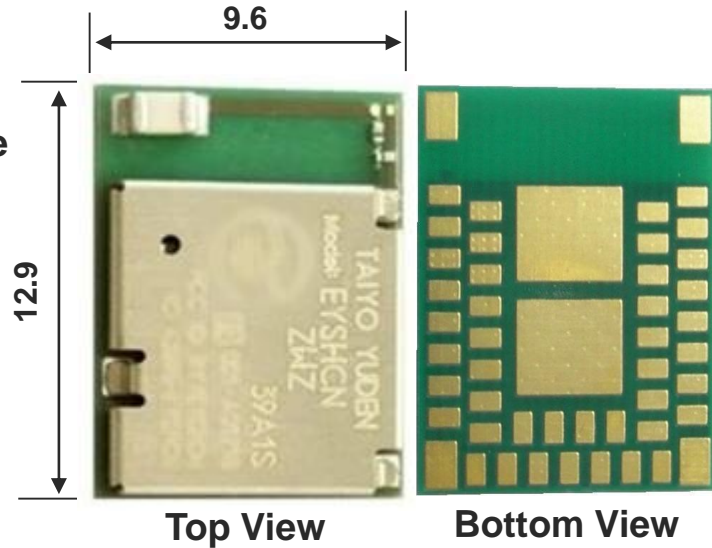
## Features

- Frequency: 2402 to 2480 MHz with +4dBm Output power
- Single power supply: 1.7 – 3.6V
- Single Mode Bluetooth low energy Slave/Master (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

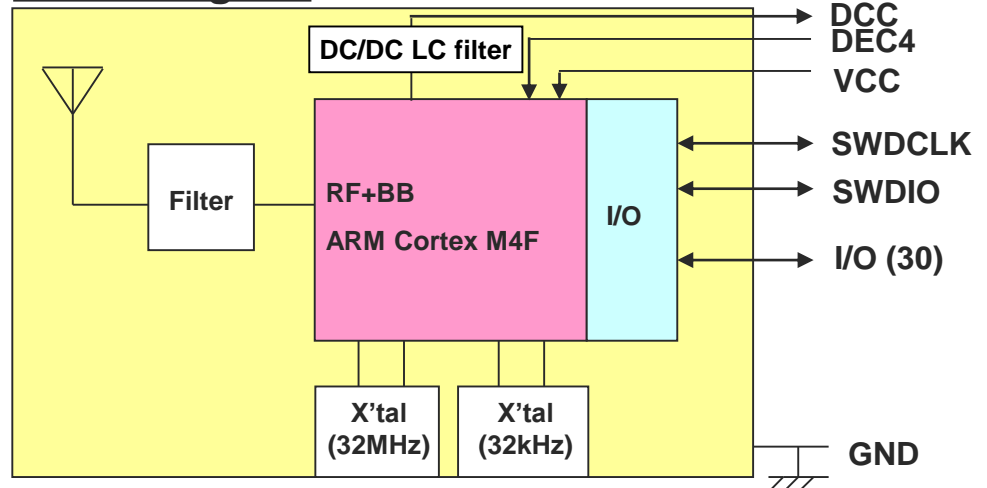
## Applications

- 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.

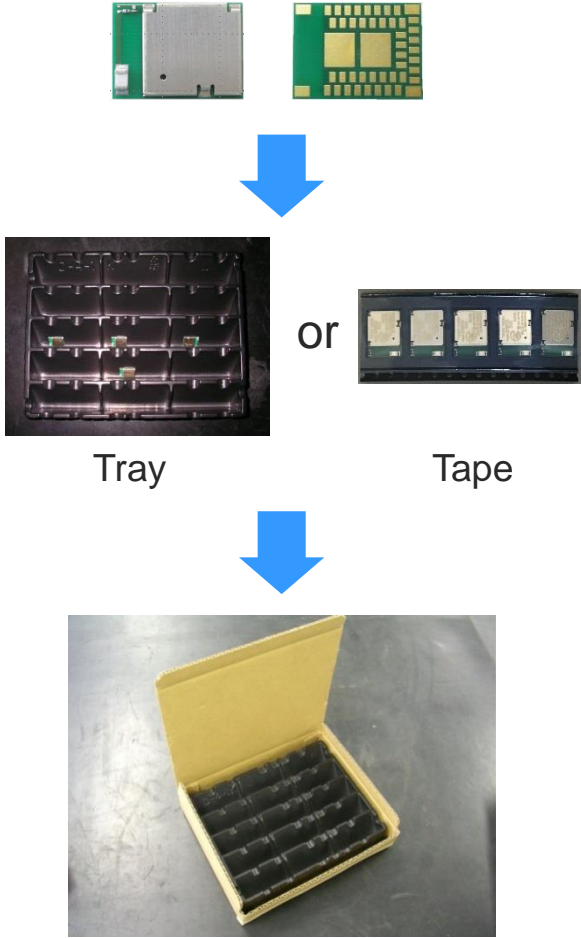
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# Bluetooth® low energy Module Sample, Evaluation Board / Kit

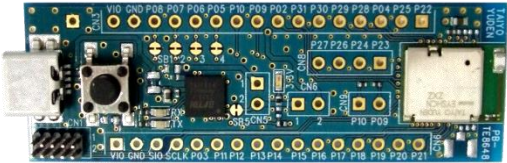
## EYSHCNZWZ (Module)

### Module samples



## EBSHCNZWZ (EV-B)

### Evaluation board



## EKSHCNZWZ (EV-K)

### Evaluation kit





# 2Mbps Bluetooth® 5.0 low energy Module: EYSHJNZWZ

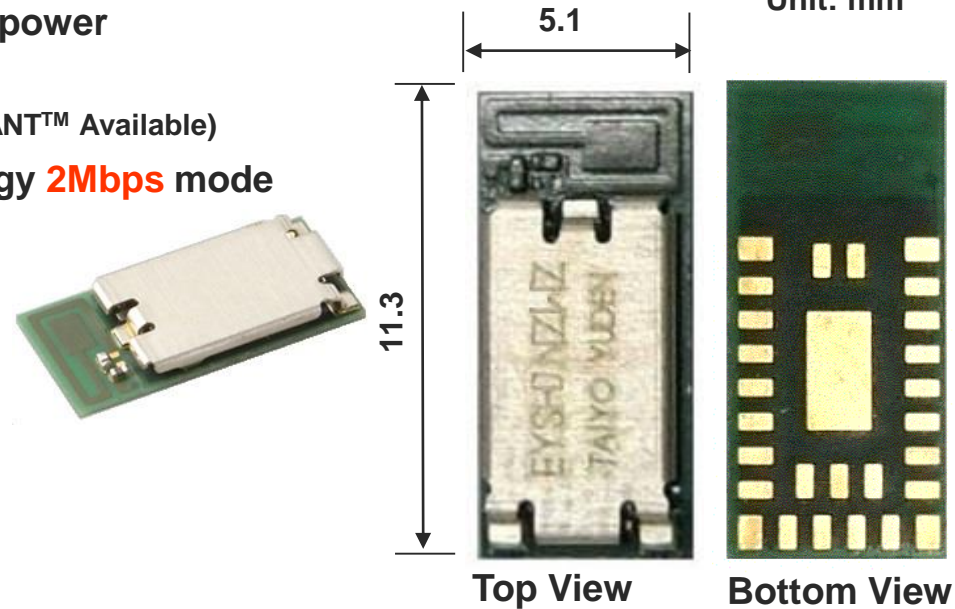
## Features

- Frequency: 2402 to 2480 MHz with +4dBm Output power
- Single power supply: 1.7– 3.6V
- Single Mode Bluetooth low energy Slave/Master (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

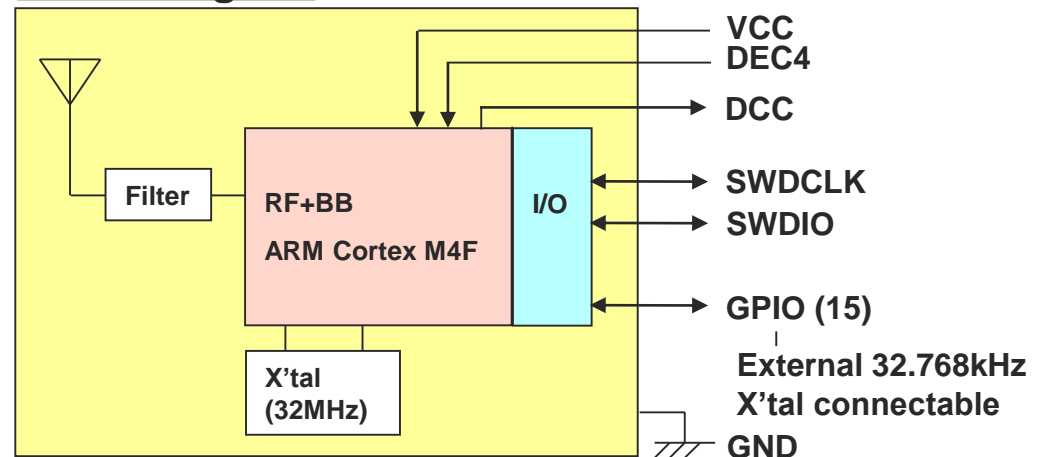
## Applications

- 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



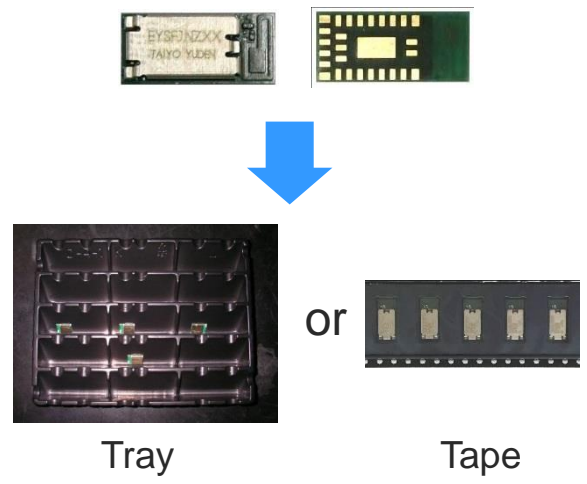
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# Bluetooth® low energy Module Sample, Evaluation Board / Kit

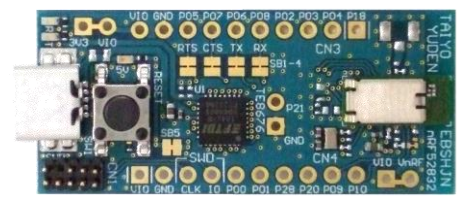
## EYSHJNZWZ (Module)

### Module samples



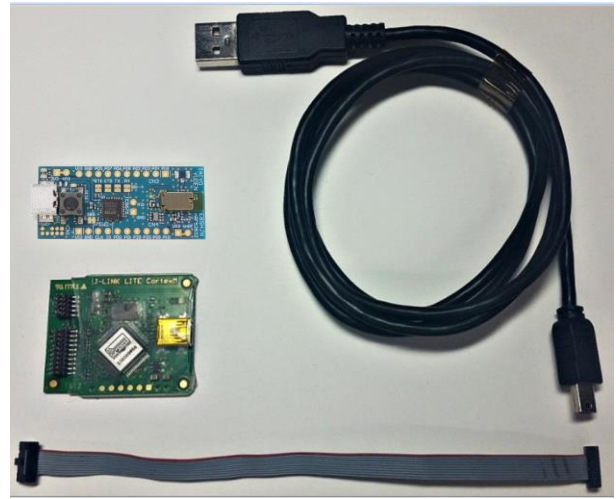
## EBSHJNZWZ (EV-B)

### Evaluation board



## EKSHJNZWZ (EV-K)

### Evaluation kit



# 2Mbps Bluetooth® 5.0 low energy Module: EYSLCNZWW

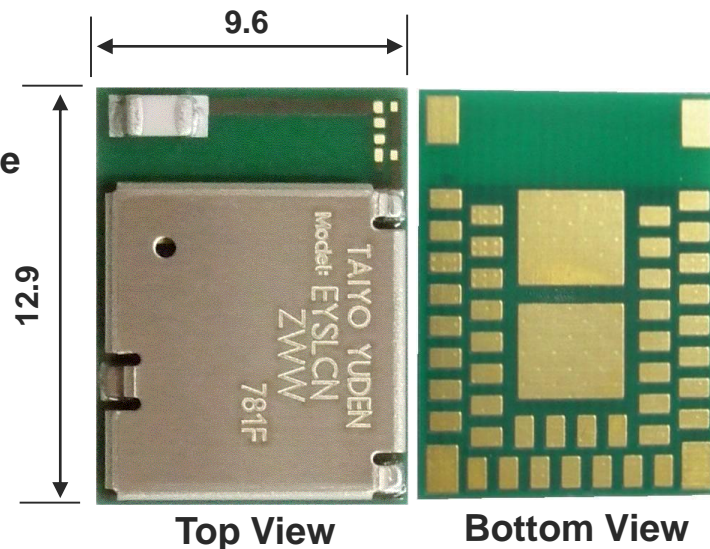
## Features

- Frequency: 2402 to 2480 MHz with +4dBm Output power
- Single power supply: 1.7 – 3.6V
- Single Mode Bluetooth low energy Slave/Master (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

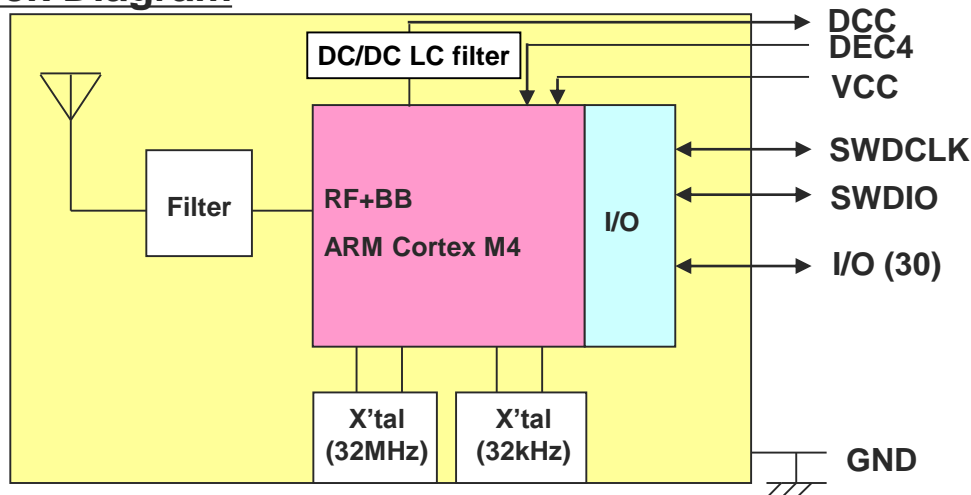
## Applications

- 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



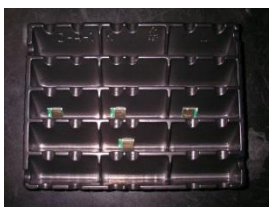
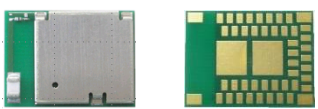
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# Bluetooth® low energy Module Sample, Evaluation Board / Kit

## EYSLCNZWW (Module)

### Module samples



or



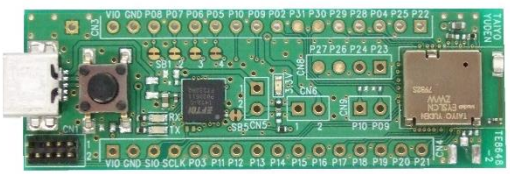
Tray

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

## Applications

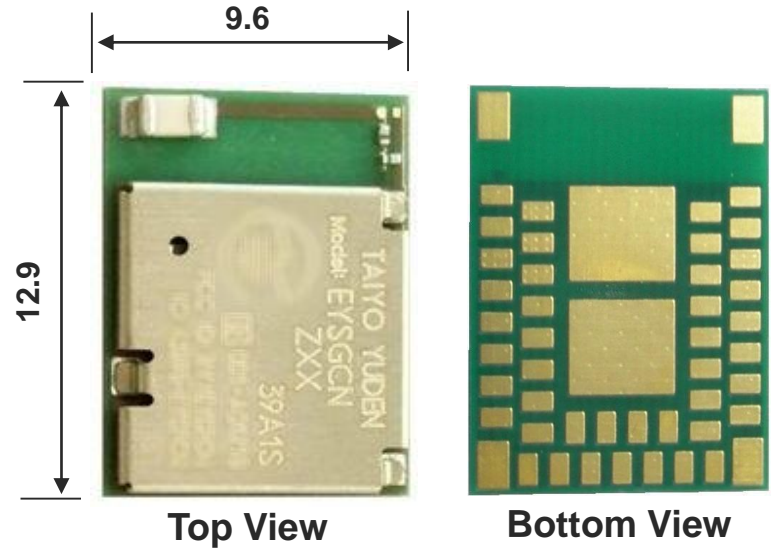
- Cycle computer
- Heart rate monitor
- Blood pressure monitor
- Blood glucose meter
- Weighing machine
- Thermometer
- Mobile accessories
- Sports and fitness sensors
- Remote controllers / Toys

All specifications are subject to change without notice.

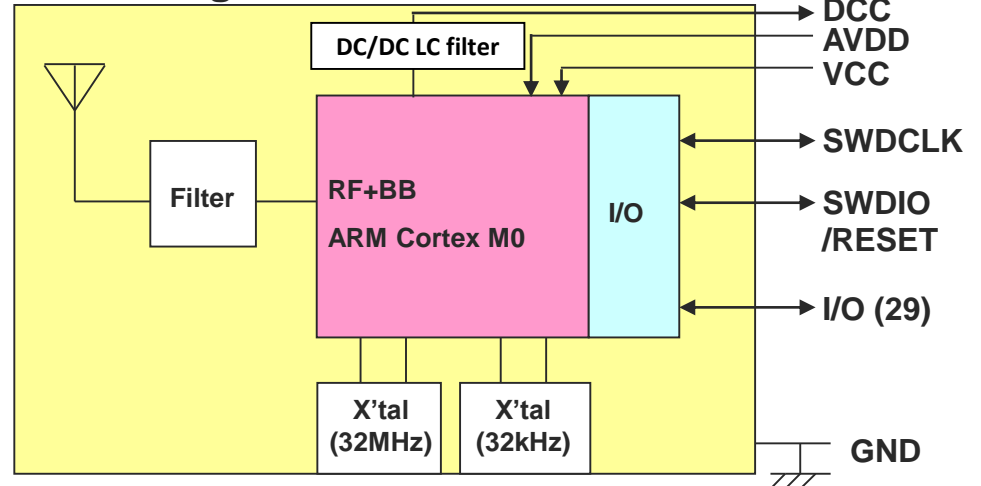
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## Outline

Unit: mm



## 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

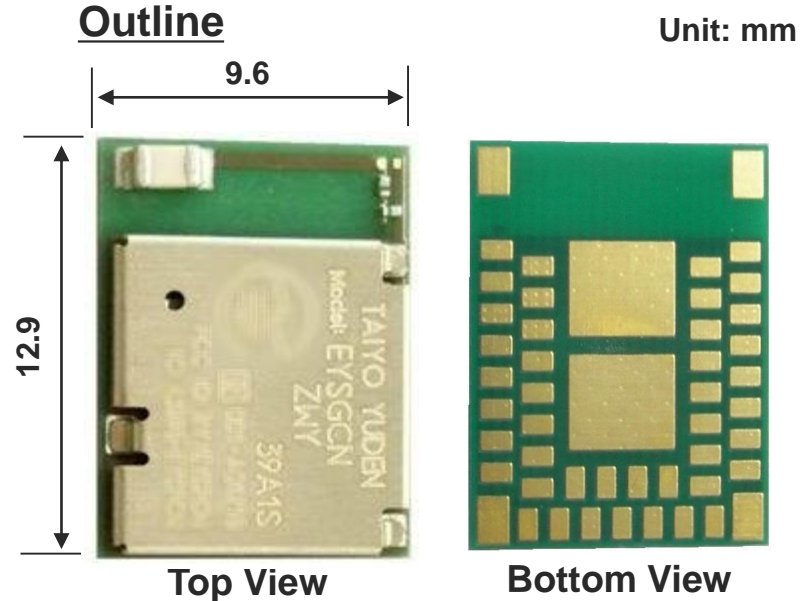
## Applications

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

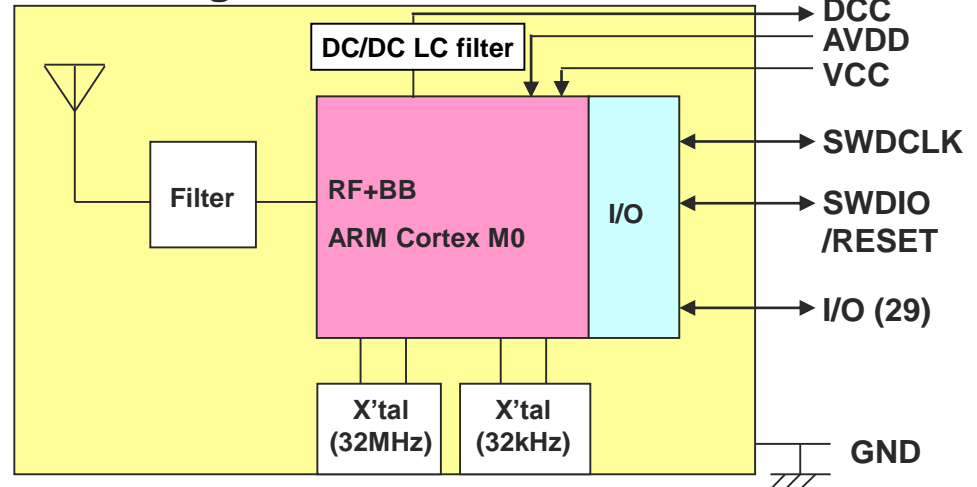
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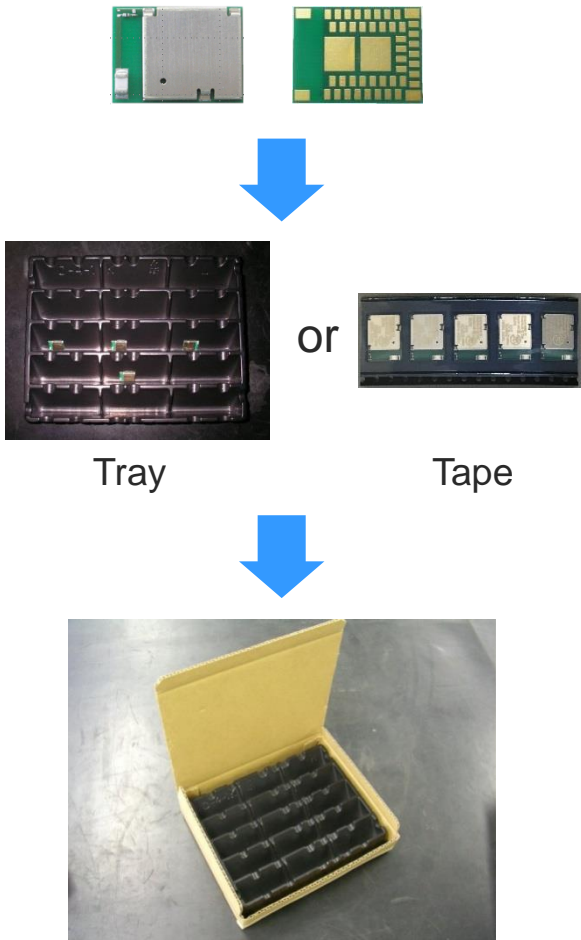
## Block Diagram



# Bluetooth® low energy Module Sample, Evaluation Board / Kit

## EYSGCNZXX, EYSGCNZWY (Module)

### Module samples



## EBSGCMZWY (EV-B)

### Evaluation board



## EKSGCMZWY (EV-K)

### Evaluation kit

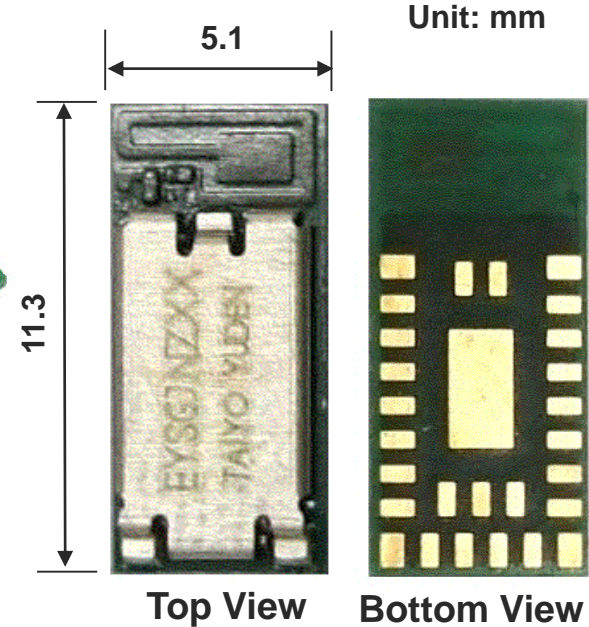


# Bluetooth® low energy Module **EYSGJNZXX**

## 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

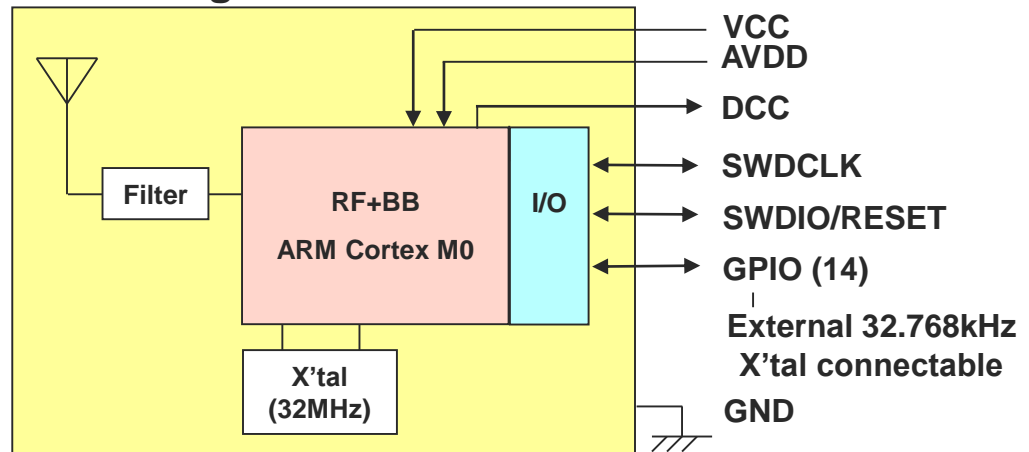
## Outline



## 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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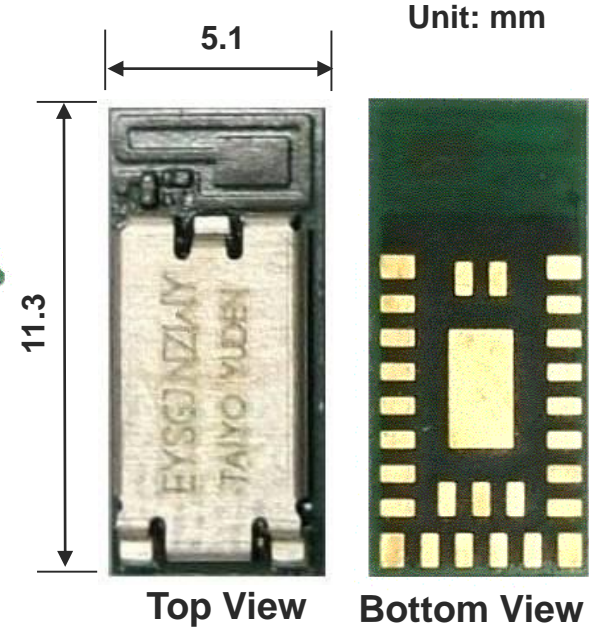


# Bluetooth® low energy Module **EYSGJNZWY**

## 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

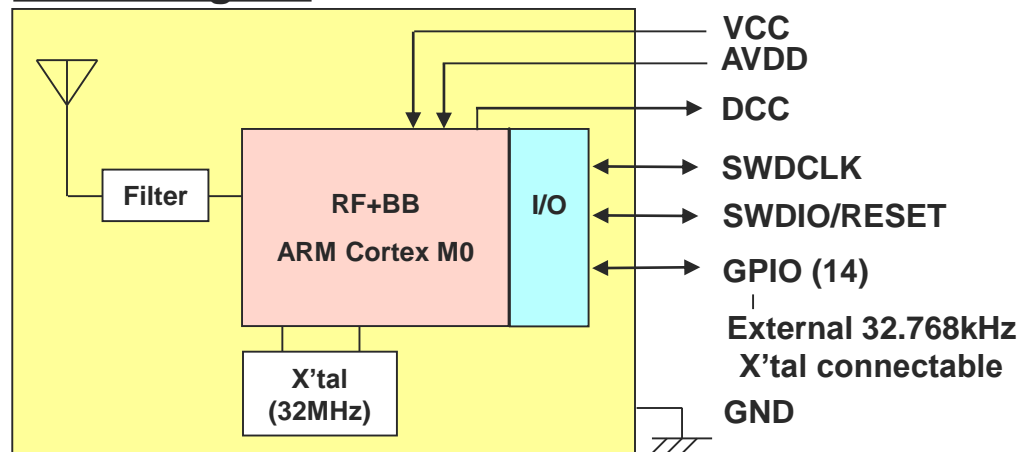
## Outline



## 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.

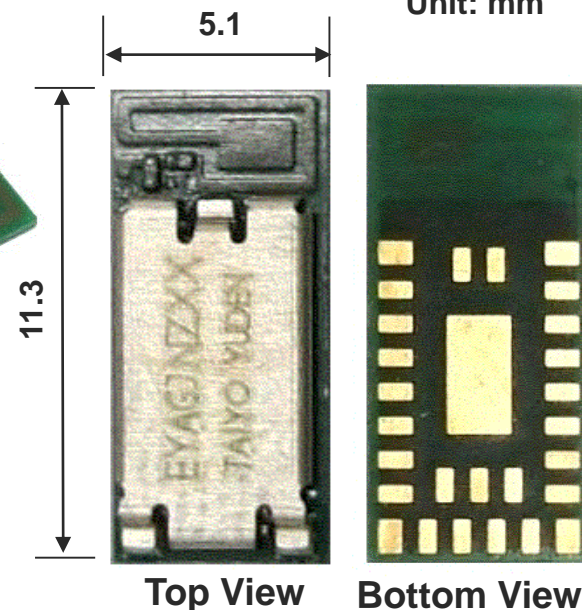
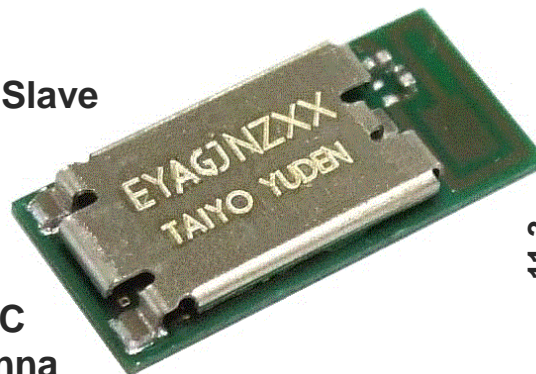
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# ANT + Bluetooth® low energy Module **EYAGJNZXX**

## 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

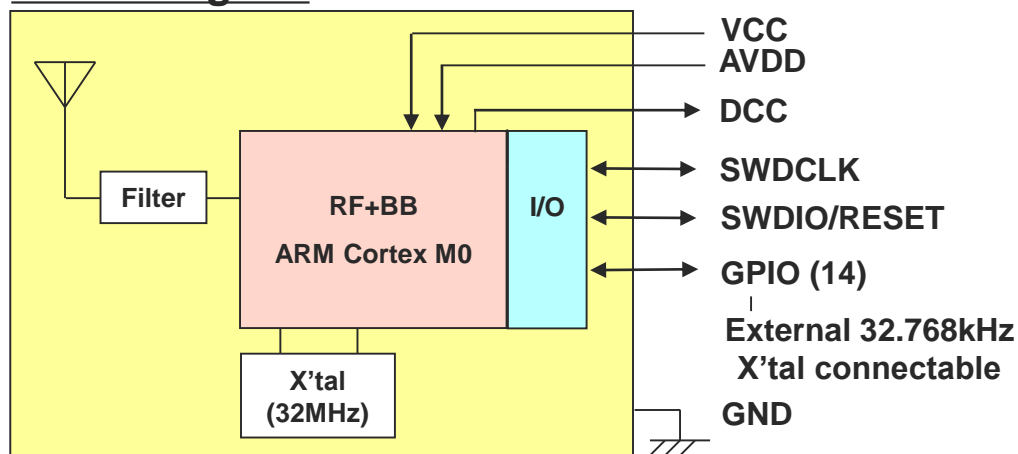
## Outline



## 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



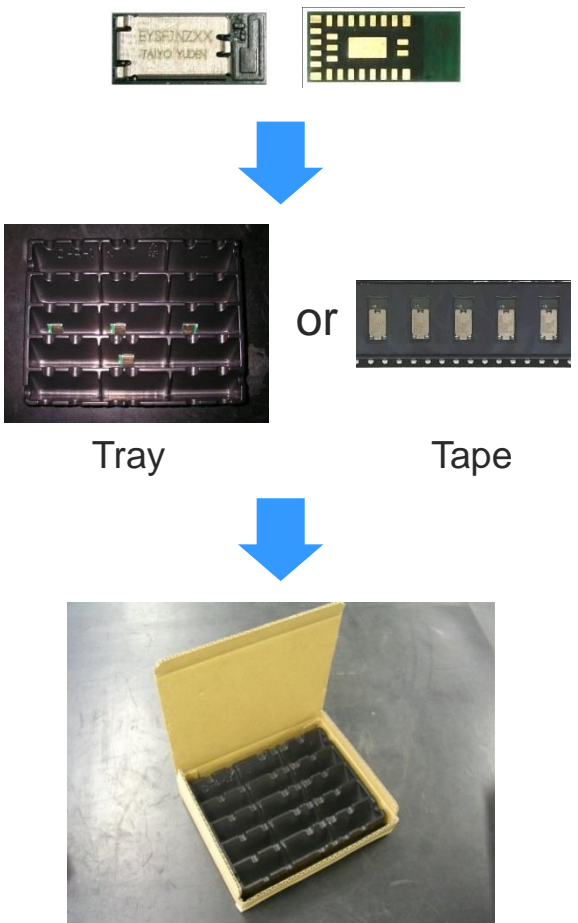
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# Bluetooth® low energy Module Sample, Evaluation Board / Kit

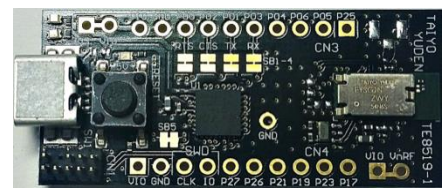
**EYSGJNZXX, EYSGJNZWY, EYAGJNZXX** (Module)

## Module samples



**EBSGJNZWY, EBAGJNZXX** (EV-B)

## Evaluation board

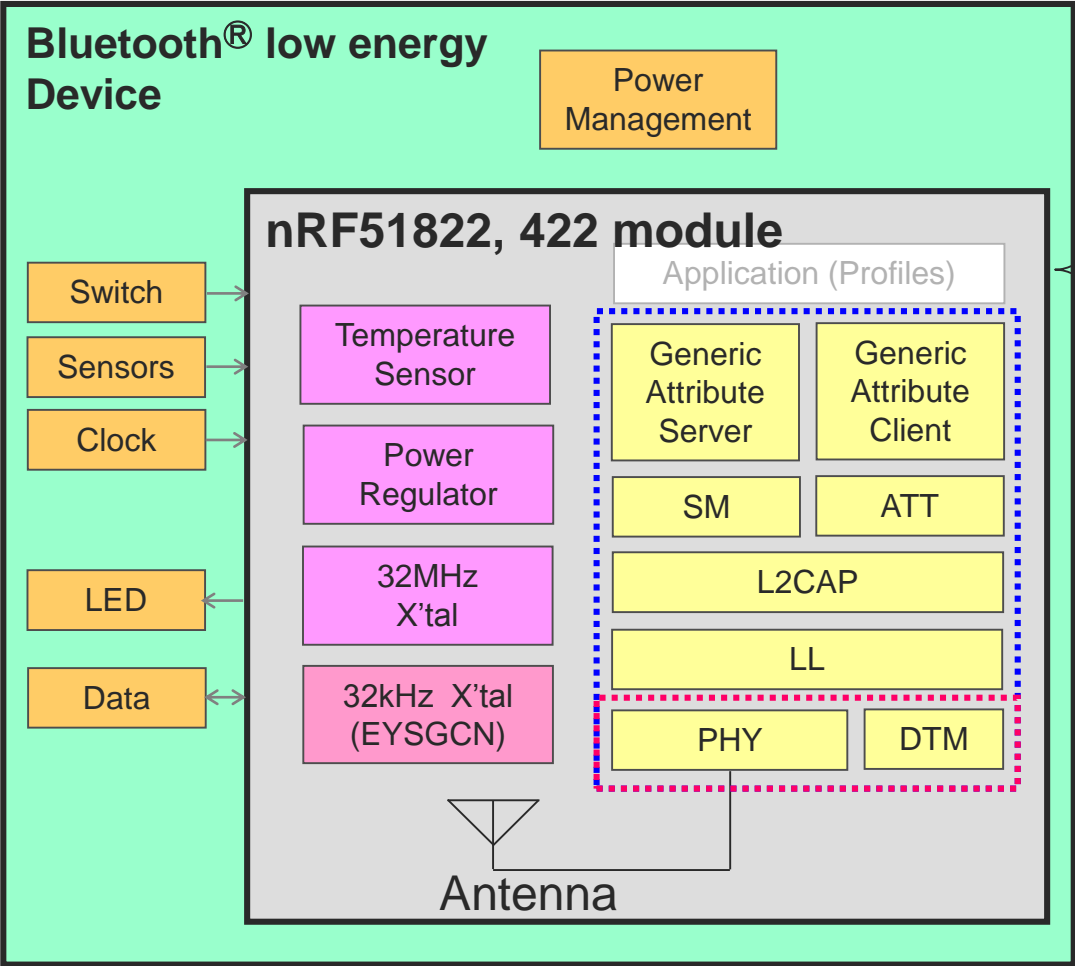


**EKSGJNZWY, EKAGJNZXX** (EV-K)

## 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-1X**

## 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 (Nordic)
- Integrated System/Sleep Clock
- Integrated high performance ceramic chip antenna
- ARM Cortex M0** 32bit processor
- Application Embedded by Taiyo Yuden**
- (TY's App Lite: 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

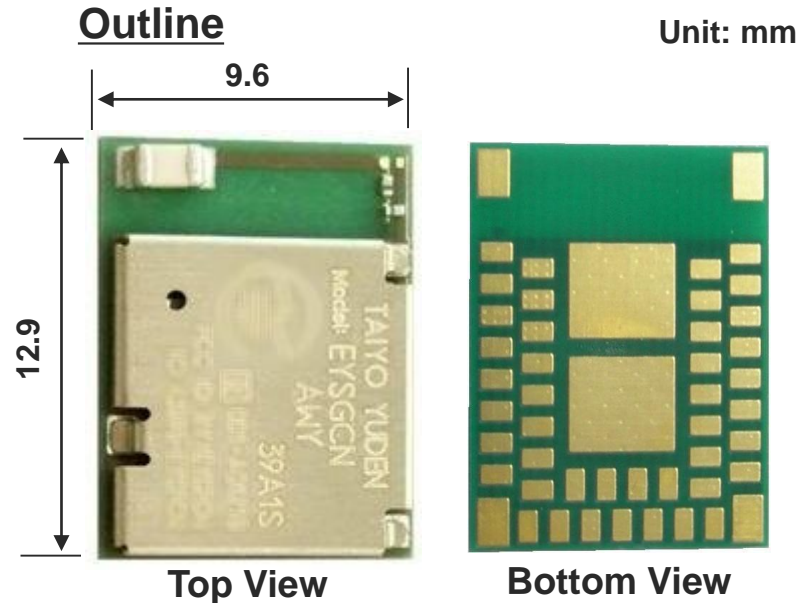
## Applications

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

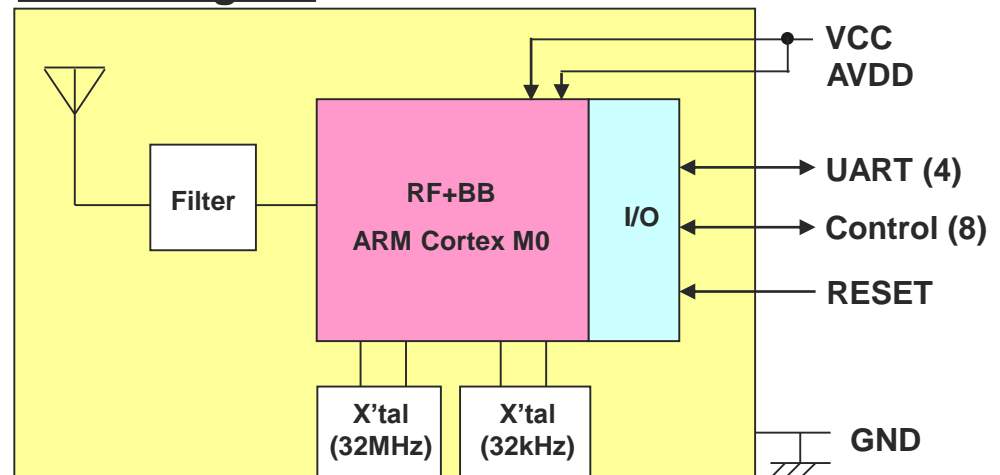
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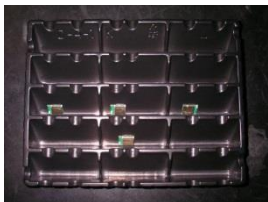
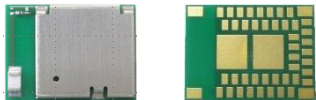
## Block Diagram



# Bluetooth low energy Module Sample, Evaluation Board

## EYSGCNAWY-1X (Module)

### Module samples



Tray

or



Tape



## EBSGCNAWY-1X (EV-B)

### Evaluation board



# Bluetooth® low energy Module **EYSGJNAWY-1X**

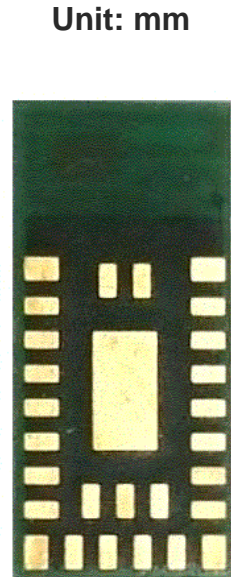
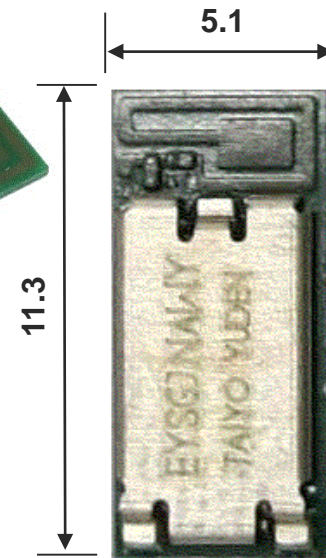
## Features

- 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
- Application Embedded by Taiyo Yuden**
- (TY's App Lite : 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

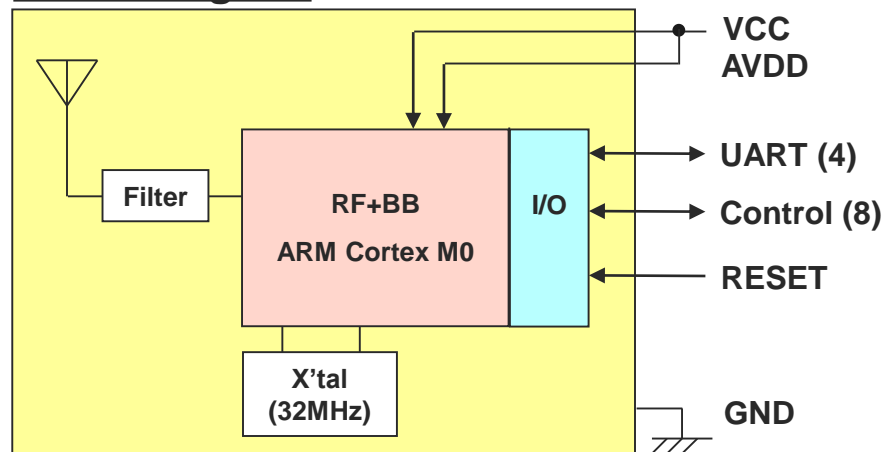


Unit: mm

Top View

Bottom View

## Block Diagram

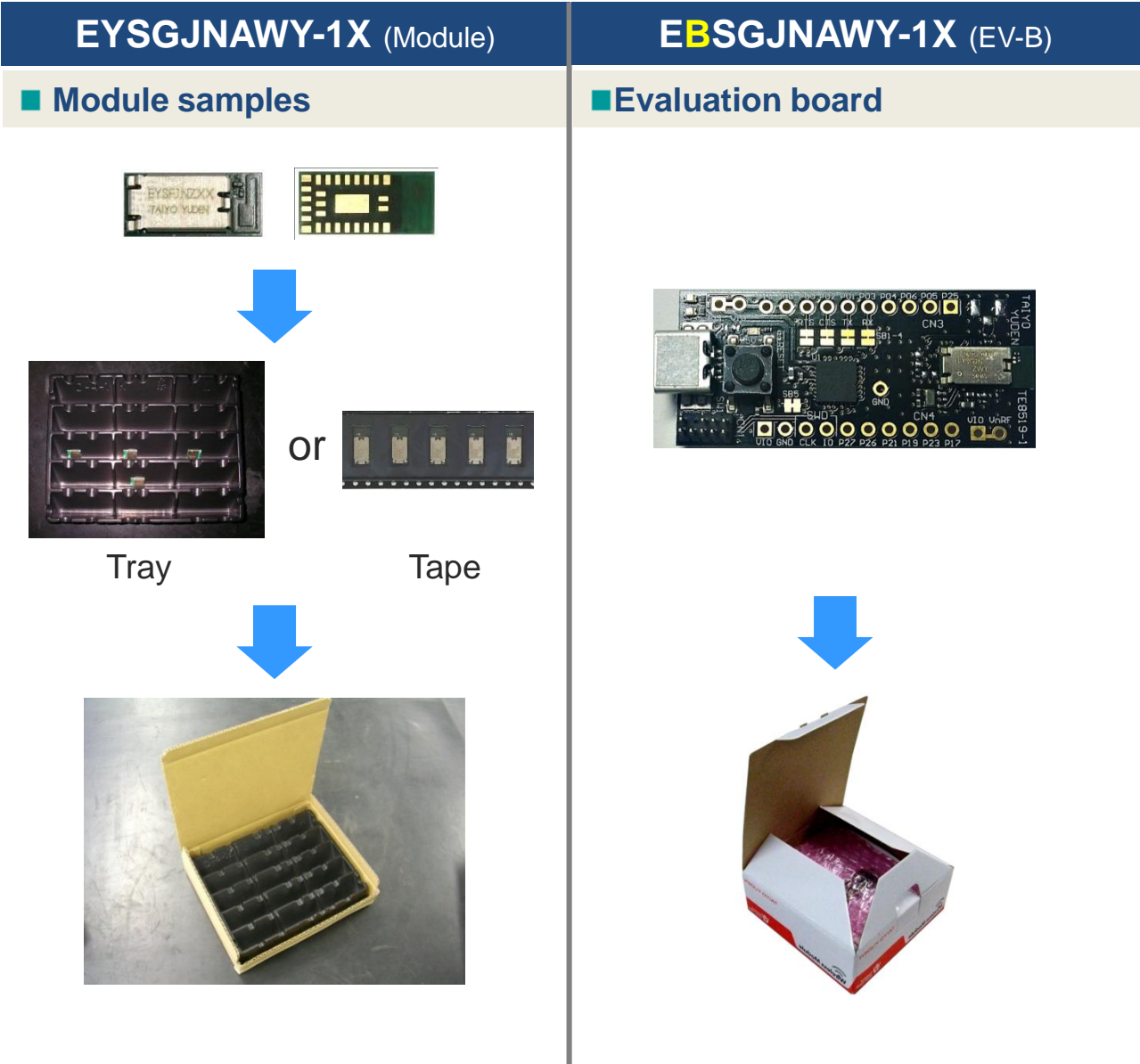


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# Bluetooth low energy Module Sample, Evaluation Board





# 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 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

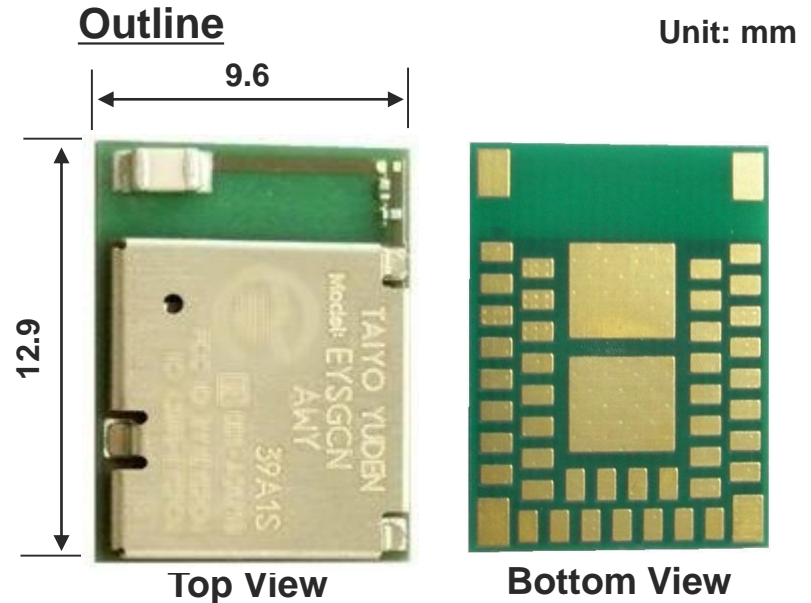
## Applications

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

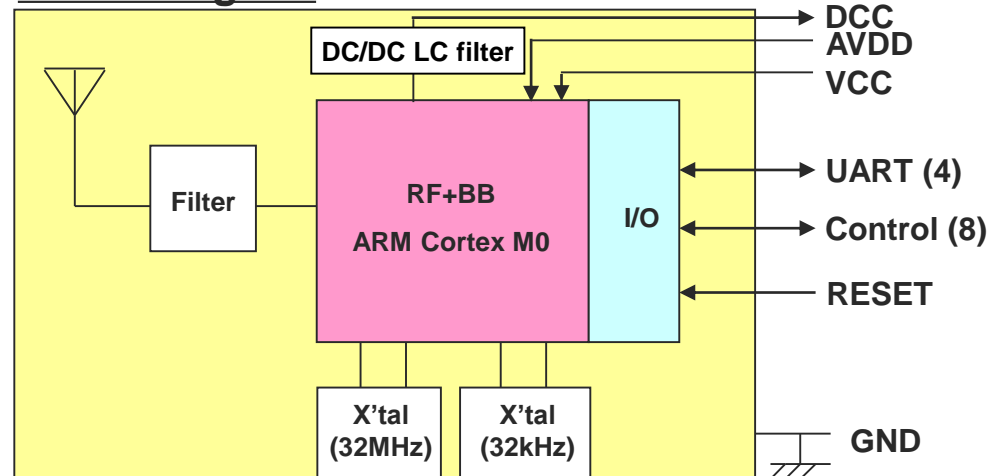
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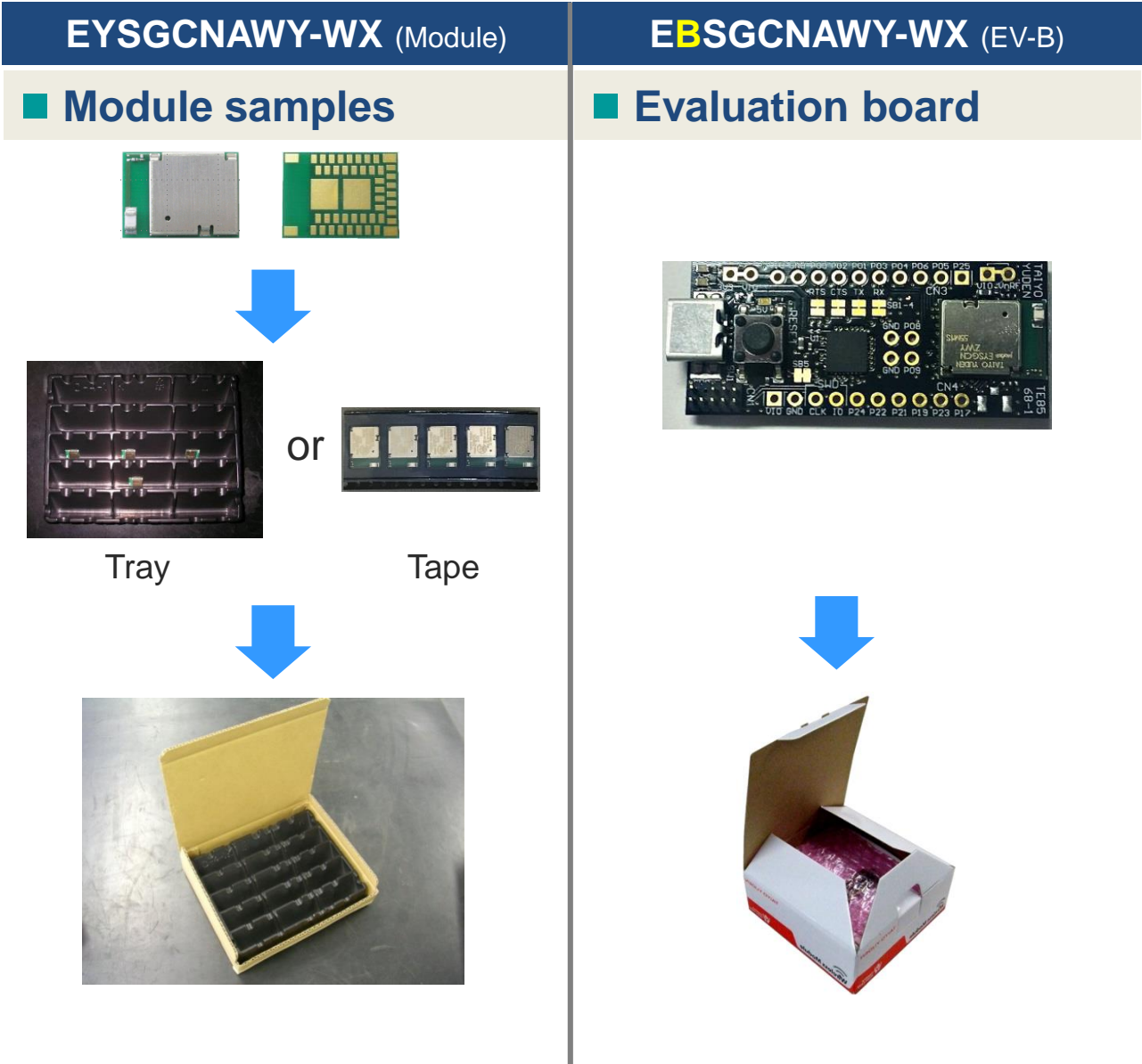
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## Block Diagram



# Bluetooth low energy Module Sample, Evaluation Board

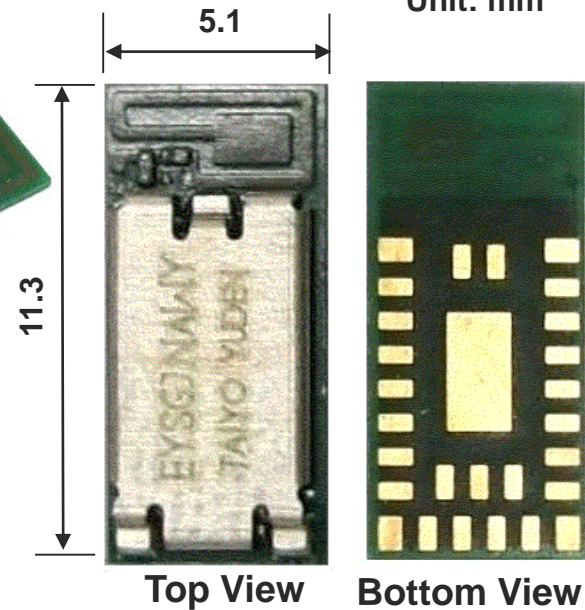


# Bluetooth® low energy Module **EYSGJNAWY-WX**

## Features

- Frequency: 2402 to 2480 MHz
- Output power: +4dBm typ.
- Single power supply: 1.8 – 3.6V
- Single Mode Bluetooth 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

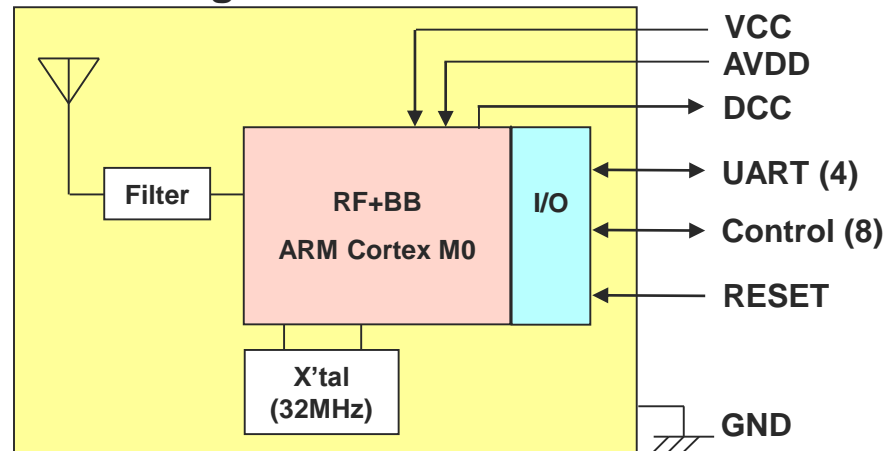
## Outline



## 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

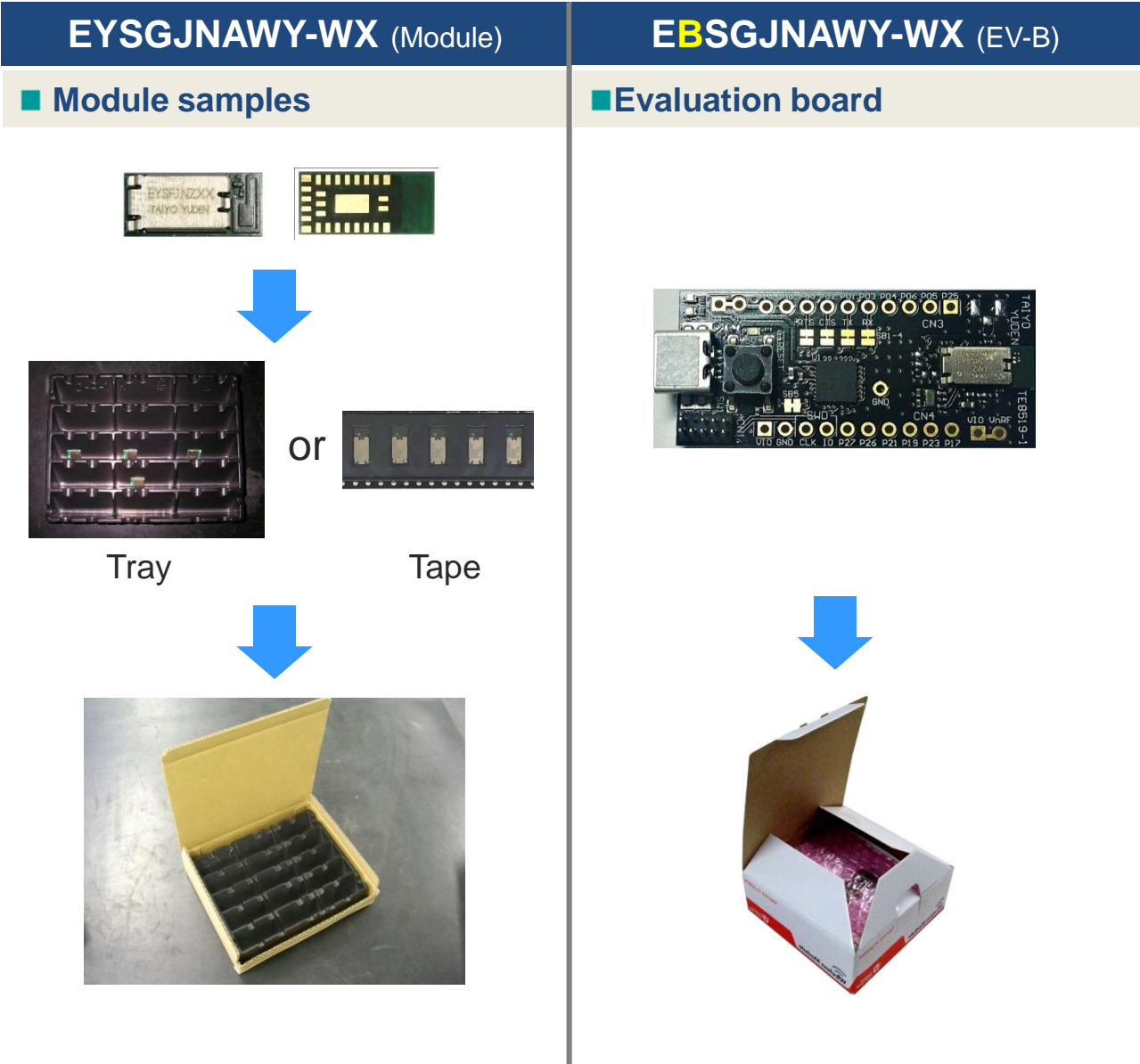


All specifications are subject to change without notice.

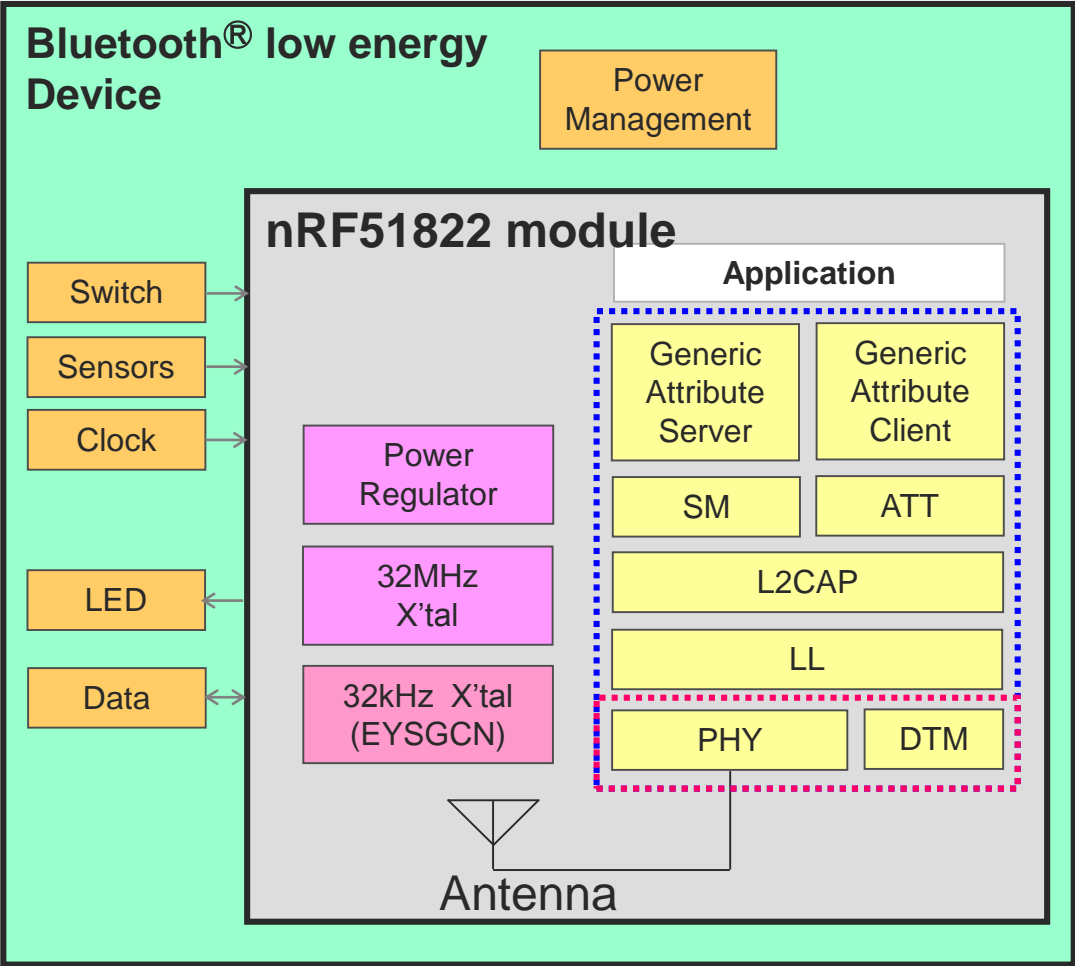
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# Bluetooth low energy Module Sample, Evaluation Board



# Application Layer image for Application Embedded Module



**Connection option**

**-1X module for Module - Module only**

**-WX module for 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

**EYSGCN, EYSGJN**  
**Application Embedded Module**

# Bluetooth® low energy standard module

Type	Part No.	Size (LxWxH)	Specification	ANT™ Support	I/F	RAM	Certification	Temperature	
High Performance Basic (Software Support : Nordic)	EYSHSNZWZ	3.25x8.55 X0.85mm	Bluetooth V5.0 BLE Single Slave/Master	✓	UART SPI I2C	64kB	Japan FCC IC (CE) <sup>※2</sup>	-40~+85 deg-C	
	EYSHCNZWZ	9.6x12.9 X2.0mm		✓		64kB			
	EYSLCNZWW					24kB			
	EYSHJNZWZ	5.1x11.3 X1.3mm		✓		64kB			
Basic (Software Support : Nordic)	EYSGCNZXX	9.6x12.9x 2.0mm	Bluetooth V4.2 <sup>※1</sup> BLE Single Slave/Master		UART SPI I2C	16kB	Japan FCC IC (CE) <sup>※2</sup>	-40~+85 deg-C (EYSGCN ZXX, EYSGJN ZXX)	
	EYSGCNZWY								32kB
	EYSGJNZXX	5.1x11.3x 1.3mm				16kB			
	EYSGJNZWY					32kB			
	EYAGJNZXX			✓		32kB			
Application Embedded – Module (Software Support : TAIYO YUDEN)	EYSGCNAWY-1X	9.6x12.9x 2.0mm	Bluetooth V4.1 BLE Single Slave/Master		UART	N/A		-25~+85 deg-C (other than the above)	
	EYSGCNAWY-WX								
	EYSGJNAWY-1X	5.1x11.3x 1.3mm							
	EYSGJNAWY-WX								

※1 Supported by S130 SoftDevice, ※2 ETSI EN 300 328 v2.1.1 conducted test report available

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