

## Notice for TAIYO YUDEN products

---

Please read this notice before using the TAIYO YUDEN products.

### REMINDERS

- Product information in this catalog is as of October 2016. All of the contents specified herein are subject to change without notice due to technical improvements, etc. Therefore, please check for the latest information carefully before practical application or use of our products.

Please note that TAIYO YUDEN shall not be in any way responsible for any damages and defects in products or equipment incorporating our products, which are caused under the conditions other than those specified in this catalog or individual specification.

- Please contact TAIYO YUDEN for further details of product specifications as the individual specification is available.
- Please conduct validation and verification of our products in actual condition of mounting and operating environment before using our products.

- The products listed in this catalog are intended for use in general electronic equipment (e.g., AV equipment, OA equipment, home electric appliances, office equipment, information and communication equipment including, without limitation, mobile phone, and PC). Please be sure to contact TAIYO YUDEN for further information before using the products for any equipment which may directly cause loss of human life or bodily injury (e.g., transportation equipment including, without limitation, automotive powertrain control system, train control system, and ship control system, traffic signal equipment, disaster prevention equipment, medical equipment, highly public information network equipment including, without limitation, telephone exchange, and base station).

Please do not incorporate our products into any equipment requiring high levels of safety and/or reliability (e.g., aerospace equipment, aviation equipment, nuclear control equipment, undersea equipment, military equipment).

When our products are used even for high safety and/or reliability-required devices or circuits of general electronic equipment, it is strongly recommended to perform a thorough safety evaluation prior to use of our products and to install a protection circuit as necessary.

Please note that unless you obtain prior written consent of TAIYO YUDEN, TAIYO YUDEN shall not be in any way responsible for any damages incurred by you or third parties arising from use of the products listed in this catalog for any equipment requiring inquiry to TAIYO YUDEN or prohibited for use by TAIYO YUDEN as described above.

- Please note that TAIYO YUDEN shall have no responsibility for any controversies or disputes that may occur in connection with a third party's intellectual property rights and other related rights arising from use of our products. TAIYO YUDEN grants no license for such rights.
- Please note that unless otherwise agreed in writing, the scope of warranty for our products is limited to the delivered our products themselves and TAIYO YUDEN shall not be in any way responsible for any damages resulting from a fault or defect in our products.
- The contents of this catalog are applicable to our products which are purchased from our sales offices or authorized distributors (hereinafter "TAIYO YUDEN's official sales channel"). Please note that the contents of this catalog are not applicable to our products purchased from any seller other than TAIYO YUDEN's official sales channel.

#### ■ Caution for Export


Some of our products listed in this catalog may require specific procedures for export according to "U.S. Export Administration Regulations", "Foreign Exchange and Foreign Trade Control Law" of Japan, and other applicable regulations. Should you have any questions on this matter, please contact our sales staff.

# Wireless Module

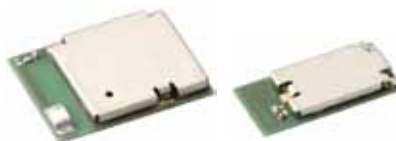
Our recommended Line Up of *Bluetooth*<sup>®</sup>, W-LAN & UWB Module

■ For Smartphone Peripheral & IoT Solution

Electricity/Light




Security/Access

*Bluetooth*<sup>®</sup> low energy Module

■ For Industrial Market

Handy Terminal / Mobile Printer





WLAN (+BT)  
Original Antenna & Board to Board Connector

■ For IoT Solution & Industrial

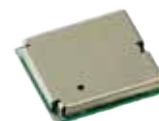
White Goods



Heating and Cooling





Software Embedded  
WLAN Module



GPS Full Module

Alarm/Sensing




Support for 2.4GHz or 5GHz  
Miniaturized BT+WLAN Module

※As some of the Wireless Modules listed above are still under development, the specification is subject to change without prior notice.  
We also have Evaluation Kits for our modules.  
For the latest information, please visit our web site at <http://www.ty-top.com/> or feel free to contact our sales department.

※The *Bluetooth*<sup>®</sup> word mark and logos are owned by the Bluetooth SIG, Inc. and any use of such marks by TAIYO YUDEN CO., LTD. is under license.  
Other trademarks and trade names are those of their respective owners.

▶ This catalog contains the typical specification only due to the limitation of space. When you consider the purchase of our products, please check our specification. For details of each product (characteristics graph, reliability information, precautions for use, and so on), see our website (<http://www.ty-top.com/>).

Bluetooth® & Bluetooth® low energy Module

Part number	Function										I/F					Module type			Type approval				
	BLE	BT	ANT+	NFC	802.11a	802.11b	802.11g	802.11n	802.11ac	GPS	GLONASS	UART	USB	PCI	I2S	SDIO	SMD	Connector	Antenna	Japan	FCC	IC	CE
EYSHJNZXZ	○		○*	○							○		○	○		○		○	○	○	○	○	○*
EYSGJNZXX	○										○					○		○	○	○	○	○	○*
EYSGJNZWY	○										○		○	○		○		○	○	○	○	○	○*
EYSGJNAWY-1X	○										○		○	○		○		○	○	○	○	○	○*
EYSGJNAWY-WX	○										○		○	○		○		○	○	○	○	○	○*
EYSHCNZXX	○		○*	○							○		○	○		○		○	○	○	○	○	○*
EYSGCNZXX	○										○		○	○		○		○	○	○	○	○	○*
EYSGCNZWY	○										○		○	○		○		○	○	○	○	○	○*
EYSGCNAWY-1X	○										○		○	○		○		○	○	○	○	○	○*
EYSGCNAWY-WX	○										○		○	○		○		○	○	○	○	○	○*

\*Softdevice S332

\*CE Conducted test report available

Bluetooth® low energy & ANT Module

Part number	Function										I/F					Module type			Type approval				
	BLE	BT	ANT+	NFC	802.11a	802.11b	802.11g	802.11n	802.11ac	GPS	GLONASS	UART	USB	PCI	I2S	SDIO	SMD	Connector	Antenna	Japan	FCC	IC	CE
EYAGJNZXX	○		○									○		○	○		○		○	○	○	○	○*

\*CE Conducted test report available

CPU Embedded WLAN Module

Part number	Function										I/F					Module type			Type approval					
	BLE	BT	ANT+	NFC	802.11a	802.11b	802.11g	802.11n	802.11ac	GPS	GLONASS	UART	USB	PCI	I2S	SDIO	SMD	Connector	Antenna	Japan	FCC	IC	CE	
WYSACVLXY-XZ						○	○	○				○				○		○	○	○	○	○	○*	
WYSACVLXY-XX						○	○	○				○				○		○	○	○	○	○	○	○*
WYSAAVKXY-XZ-I						○	○	○				○	○			○		○	○	○	○	○		
WYSAAVKXY-XX-1						○	○	○				○				○		○	○	○	○	○		

\*CE Conducted test report available

WLAN or WLAN+BT Module

Part number	Function										I/F					Module type			Type approval				
	BLE	BT	ANT+	NFC	802.11a	802.11b	802.11g	802.11n	802.11ac	GPS	GLONASS	UART	USB	PCI	I2S	SDIO	SMD	Connector	Antenna	Japan	FCC	IC	CE
WYSBHVXGX	○	○			○	○	○	○	○						○	○		○	○	○	○	○	
WYSAGVXD7					○	○	○	○	○						○	○		○	○	○	○	○	
WYSAAVDXB		○			○	○	○	○	○						○	○		○	○	○	○	○	
WYSAAVDX7					○	○	○	○	○						○	○		○	○	○	○	○	
WYSBCVGXA		○			○	○	○	○	○						○	○		○	○	○	○	○	
WYSBCVGX7					○	○	○	○	○						○	○		○	○	○	○	○	
WYSBMVXGB		○			○	○	○	○	○						○	○		○	○	○	○	○	
WYSBMVXG4					○	○	○	○	○						○	○		○	○	○	○	○	











\*CE Conducted test report available

GNSS Module

Part number	Function										I/F					Module type			Type approval					
	BLE	BT	ANT+	NFC	802.11a	802.11b	802.11g	802.11n	802.11ac	GPS	GLONASS	UART	USB	PCI	I2S	SDIO	SMD	Connector	Antenna	Japan	FCC	IC	CE	
GYSFFMAXB										○		○				○								
GYSFFMAXC										○	○					○								
GYSFDMAXB										○	○	○				○		○	○					

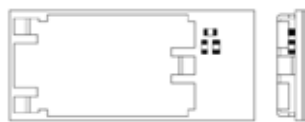
▶ This catalog contains the typical specification only due to the limitation of space. When you consider the purchase of our products, please check our specification. For details of each product (characteristics graph, reliability information, precautions for use, and so on), see our website (<http://www.ty-top.com/>).

Bluetooth® & Bluetooth® low energy Module

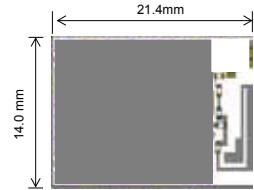
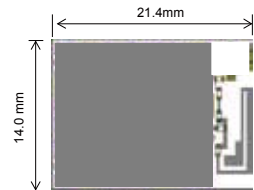


Part number	Function	Module type	I/F	Feature	Outline [mm](Height : Maximum)
EYSHJNZXZ (nRF52832)	Bluetooth® low energy & NFC-A Type-2	BLE Slave or Master NFC-A Type-2 SMD type	UART I2C SPI I2S PDM 15 GPIO	w/CPU (Cortex M4F) Antenna 512KB Flash 64KB RAM FCC/IC/Japan certified CE Conducted test report available	11.3 x 5.1 x 1.3 
EYSGJNZXX (nRF51822)	Bluetooth® low energy	BLE Slave or Master SMD type	UART I2C SPI 14 GPIO	w/CPU (Cortex M0) Antenna 256KB Flash 16KB RAM FCC/IC/Japan certified CE Conducted test report available	11.3 x 5.1 x 1.3 
EYSGJNZWY (nRF51822)	Bluetooth® low energy	BLE Slave or Master SMD type	UART I2C SPI 14 GPIO	w/CPU (Cortex M0) Antenna 256KB Flash 32KB RAM FCC/IC/Japan certified CE Conducted test report available	11.3 x 5.1 x 1.3 
EYSGJNAWY-1X (nRF51822)	Bluetooth® low energy	BLE Slave or Master SMD type Original Software Embedded (limited edition)	UART	w/CPU (Cortex M0) Antenna FCC/IC/Japan certified CE Conducted test report available	11.3 x 5.1 x 1.3 
EYSGJNAWY-WX (nRF51822)	Bluetooth® low energy	BLE Slave or Master SMD type Original Software Embedded (Full Version)	UART	w/CPU (Cortex M0) Antenna FCC/IC/Japan certified CE Conducted test report available	11.3 x 5.1 x 1.3 
EYSHCNZXX (nRF52832)	Bluetooth® low energy & NFC-A Type-2	BLE Slave or Master NFC-A Type-2 SMD type	UART I2C SPI I2S PDM 30 GPIO	w/CPU (Cortex M4F) Antenna 512KB Flash 64KB RAM 32kHz Crystal FCC/IC/Japan certified CE Conducted test report available	12.9 x 9.6 x 2.0 
EYSGCNZXX (nRF51822)	Bluetooth® low energy	BLE Slave or Master SMD type	UART I2C SPI 29 GPIO	w/CPU (Cortex M0) Antenna 256KB Flash 16KB RAM 32kHz Crystal FCC/IC/Japan certified CE Conducted test report available	12.9 x 9.6 x 2.0 
EYSGCNZWY (nRF51822)	Bluetooth® low energy	BLE Slave or Master SMD type	UART I2C SPI 29 GPIO	w/CPU (Cortex M0) Antenna 256KB Flash 32KB RAM 32kHz Crystal FCC/IC/Japan certified CE Conducted test report available	12.9 x 9.6 x 2.0 
EYSGCNAWY-1X (nRF51822)	Bluetooth® low energy	BLE Slave or Master SMD type Original Software Embedded (limited edition)	UART	w/CPU (Cortex M0) Antenna 32kHz Crystal FCC/IC/Japan certified CE Conducted test report available	12.9 x 9.6 x 2.0 
EYSGCNAWY-WX (nRF51822)	Bluetooth® low energy	BLE Slave or Master SMD type Original Software Embedded (Full Version)	UART	w/CPU (Cortex M0) Antenna 32kHz Crystal FCC/IC/Japan certified CE Conducted test report available	12.9 x 9.6 x 2.0 

▶ This catalog contains the typical specification only due to the limitation of space. When you consider the purchase of our products, please check our specification. For details of each product (characteristics graph, reliability information, precautions for use, and so on), see our website (<http://www.ty-top.com/>).

■ Bluetooth® low energy & ANT Module

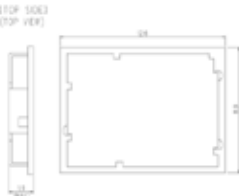
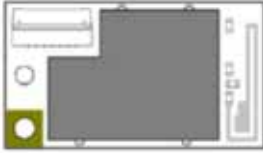
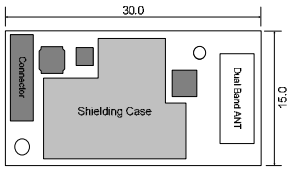
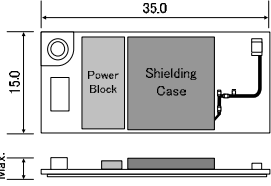

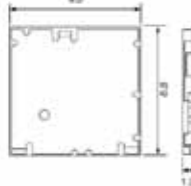

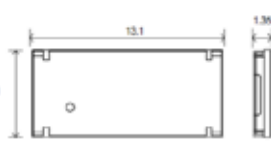
Part number	Function	Module type	I/F	Feature	Outline [mm](Height : Maximum)
EYAGJNZXX (nRF51422)	Bluetooth® low energy & ANT	BLE Slave ANT SMD type	UART I2C SPI 14 GPIO	w/CPU (Cortex M0) Antenna 256KB Flash 32KB RAM FCC/IC/Japan certified CE Conducted test report available	11.3 x 5.1 x 1.3 

■ CPU Embedded WLAN Module

Part number	Function	Module type	I/F	Feature	Outline [mm](Height : Maximum)
WYSACVLXY-XZ	IEEE802.11b/g/n	SMD type	UART SPI	Integrated System Clock Antenna Supprt Micro AP Supprt WiFi Direct FCC/IC/Japan certified CE Conducted test report available	21.4 x 14.0 x 2.4 
WYSACVLXY-XX	IEEE802.11b/g/n	SMD type	UART SPI	Integrated System Clock Antenna Supprt Micro AP Supprt WiFi Direct FCC/IC/Japan certified CE Conducted test report available	21.4 x 14.0 x 2.4 
WYSAVKXY-XZ-I	IEEE802.11b/g/n	SMD type	UART USB SPI	Integrated System Clock Antenna Supprt Micro AP Supprt WiFi Direct FCC/IC/Japan certified	32.0 x 17.8 x 2.6 
WYSAVKXY-XX-I	IEEE802.11b/g/n	SMD type Original Software Embedded	UART	Integrated System Clock Antenna Supprt Micro AP FCC/IC/Japan certified	32.0 x 17.8 x 2.6 

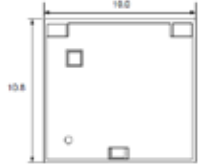
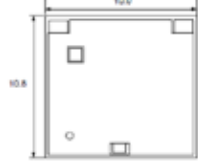
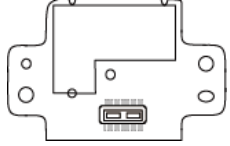
► This catalog contains the typical specification only due to the limitation of space. When you consider the purchase of our products, please check our specification. For details of each product (characteristics graph, reliability information, precautions for use, and so on), see our website (<http://www.ty-top.com/>).

■ WLAN or WLAN+BT Module

Part number	Function	Module type	I/F	Feature	Outline [mm] (Height : Maximum)
WYSBHVXG	IEEE802.11ac/a/b/g/n+Bluetooth® 4.2	SMD type	SDIO PCM	Integrated System Clock 2.4GHz & 5GHz 11ac(HT80)	12.6x8.9x1.9 
WYSAGVDX7	IEEE802.11b/g/n	Connector type	SDIO	Integrated System Clock Antenna FCC/IC/Japan certified	20 x 11 x 2.15 
WYSAAVDXB	IEEE802.11 a/b/g/n+Bluetooth® 3.0	Connector type	SDIO PCM	Integrated System Clock Dual Band Antenna HT40 Japan certified	30 x 15x 2.45 
WYSAAVDX7	IEEE802.11b/g/n	Connector type	SDIO	Integrated System Clock Antenna HT40 FCC/IC/Japan certified	35 x 15 x 2.9 
WYSBCVGXA	IEEE802.11 b/g/n+Bluetooth® 3.0	SMD type	SDIO PCM	Integrated System Clock HT40	9.0 x 8.8 x 1.35 
WYSBCVGX7	IEEE802.11b/g/n	SMD type	SDIO	Integrated System Clock HT40	9.0 x 8.8 x 1.35 
WYSBMVGXB	IEEE802.11a/b/g/n+Bluetooth® 3.0	SMD type	SDIO PCM	2.4GHz & 5GHz HT40	13.1 x 6.1 x 1.35 
WYSBMVGX4	IEEE 802.11a/b/g/n	SMD type	SDIO	2.4GHz & 5GHz HT40	13.1 x 6.1 x 1.35 

► This catalog contains the typical specification only due to the limitation of space. When you consider the purchase of our products, please check our specification. For details of each product (characteristics graph, reliability information, precautions for use, and so on), see our website (<http://www.ty-top.com/>).

■ GNSS Module

Part number	Function	Module type	I/F	Feature	Outline [mm](Height : Maximum)
GYSFFMAXB	GPS Full Module NMEA Output	SMD type	UART	TCXO RTC LNA SAW On-chip Logger	10.8 x 10.0 x 2.05 
GYSFFMAXC	GPS&GLONASS Full Module NMEA Output	SMD type	UART	TCXO RTC LNA SAW On-chip Logger	10.8 x 10.0 x 2.05 
GYSFDMAXB	GPS Full Module NMEA Output	Connector type	UART	Patch Antenna TCXO RTC LNA SAW On-chip Logger	23.2 x 15.3 x 6.9 

► This catalog contains the typical specification only due to the limitation of space. When you consider the purchase of our products, please check our specification. For details of each product (characteristics graph, reliability information, precautions for use, and so on), see our website (<http://www.ty-top.com/>).