Notice for TAIYO YUDEN products

Please read this notice before using the TAIYO YUDEN products.

REMINDERS

Product Information in this Catalog

Product information in this catalog is as of January 2021. All of the contents specified herein and production status of the products listed in this catalog are subject to change without notice due to technical improvement of our products, 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 product specification sheets.

Approval of Product Specifications

Please contact TAIYO YUDEN for further details of product specifications as the individual product specification sheets are available. When using our products, please be sure to approve our product specifications or make a written agreement on the product specification with TAIYO YUDEN in advance.

Pre-Evaluation in the Actual Equipment and Conditions

Please conduct validation and verification of our products in actual conditions of mounting and operating environment before using our products.

Limited Application

1. Equipment Intended for Use

The products listed in this catalog are intended for generalpurpose and standard 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) and other equipment specified in this catalog or the individual product specification sheets.

TAIYO YUDEN has the line-up of the products intended for use in automotive electronic equipment, telecommunications infrastructure and industrial equipment, or medical devices classified as GHTF Classes A to C (Japan Classes I to III). Therefore, when using our products for these equipment, please check available applications specified in this catalog or the individual product specification sheets and use the corresponding products.

2. Equipment Requiring Inquiry

Please be sure to contact TAIYO YUDEN for further information before using the products listed in this catalog for the following equipment (excluding intended equipment as specified in this catalog or the individual product specification sheets) which may cause loss of human life, bodily injury, serious property damage and/or serious public impact due to a failure or defect of the products and/or malfunction attributed thereto.

- (1) Transportation equipment (automotive powertrain control system, train control system, and ship control system, etc.)
- (2) Traffic signal equipment
- (3) Disaster prevention equipment, crime prevention equipment
- (4) Medical devices classified as GHTF Class C (Japan Class III)
- (5) Highly public information network equipment, dataprocessing equipment (telephone exchange, and base station, etc.)
- (6) Any other equipment requiring high levels of quality and/or reliability equal to the equipment listed above

3. Equipment Prohibited for Use

Please do not incorporate our products into the following equipment requiring extremely high levels of safety and/or reliability.

- (1) Aerospace equipment (artificial satellite, rocket, etc.)
- (2) Aviation equipment *1
- (3) Medical devices classified as GHTF Class D (Japan Class IV), implantable medical devices $^{\star 2}$

- (4) Power generation control equipment (nuclear power, hydroelectric power, thermal power plant control system, etc.)
- (5) Undersea equipment (submarine repeating equipment, underwater work equipment, etc.)
- (6) Military equipment
- (7) Any other equipment requiring extremely high levels of safety and/or reliability equal to the equipment listed above

*Notes:

- There is a possibility that our products can be used only for aviation equipment that does not directly affect the safe operation of aircraft (e.g., in-flight entertainment, cabin light, electric seat, cooking equipment) if such use meets requirements specified separately by TAIYO YUDEN. Please be sure to contact TAIYO YUDEN for further information before using our products for such aviation equipment.
- Implantable medical devices contain not only internal unit which is implanted in a body, but also external unit which is connected to the internal unit.

4. Limitation of Liability

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 that is not intended for use by TAIYO YUDEN, or any equipment requiring inquiry to TAIYO YUDEN or prohibited for use by TAIYO YUDEN as described above.

Safety Design

When using our products for high safety and/or reliability-required equipment or circuits, please fully perform safety and/or reliability evaluation. In addition, please install (i) systems equipped with a protection circuit and a protection device and/or (ii) systems equipped with a redundant circuit or other system to prevent an unsafe status in the event of a single fault for a failsafe design to ensure safety.

Intellectual Property Rights

Information contained in this catalog is intended to convey examples of typical performances and/or applications of our products and is not intended to make any warranty with respect to the intellectual property rights or any other related rights of TAIYO YUDEN or any third parties nor grant any license under such rights.

Limited Warranty

Please note that 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 failure or defect in our products. Notwithstanding the foregoing, if there is a written agreement (e.g., supply and purchase agreement, quality assurance agreement) signed by TAIYO YUDEN and your company, TAIYO YUDEN will warrant our products in accordance with such agreement.

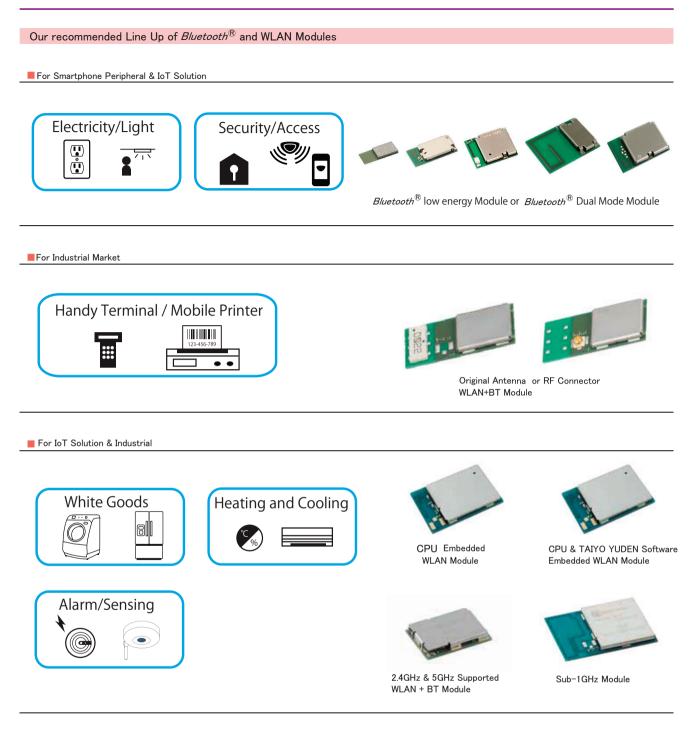
TAIYO YUDEN's Official Sales Channel

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



XAs this catalog includes some Wireless Modules under development, the specifications of such Modules are subjects to change without prior notice. Evaluation Board & Kit for each module is avarable. And development tools for combine with sensors is avarable. For the latest information, please visit our web site at hppt://www.ty-top.com/ or feel free to contact our sales department.

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Bluetooth® low energy	& ANT Module, Bluetooth® Dual	Mode Module
Diactocino ion chergy		mode module

Didetoouris low en						uncti									I/F					dule pe	т	ype a	pprov	al	*
Part number	BLE	BT Classic	ANT	NFC	802.11a	802.11b	802.11g	802.11n	802.11ac	802.15.4 (Thread)	802.15.4g	UART	USB	PCM	IdS	12 C	I2S	SDIO	SMD	Antenna	Japan	FCC	ISED	CE	Remark
EYSKBNUWB-WX	0											0	0		0				0	0	0	0	0	0*	TY's APP、32k X'tal、BT5
EYSKJNAWB-WX	0											0							0	0	0	0	0	0*	TY's APP、BT5
EYSKBNZWB	0		O△	0						0		0	0		0	0	0		0	0	0	0	0	0*	32k X'tal、1M Flash、256K RAM、BT5(Full)
EYSKDNZWB	0		O△	0						0		0	0		0	0	0		0	0	0	0	0	0*	High Performance Antenna、1M Flash、 256K RAM、BT5(Full)
EYSKJNZWB	0		O△	0						0		0			0	0	0		0	0	0	0	0	0*	1M Flash、256K RAM、BT5(Full)
EYSPBNZUA	0		O△	0						0		0	0		0	0	0		0	0	0	0	0	0*	32k X'tal、512K Flash、128K RAM、BT5.2、 Wide Temp.
EYSPDNZUA	0		O△	0						0		0	0		0	0	0		0	0	0	0	0	0*	High Performance Antenna、512K Flash、 128K RAM、BT5.2、Wide Temp.
EYSPJNZUA	0		O△	0						0		0			0	0	0		0	0	0	0	0	0*	512K Flash、128K RAM、BT5.2、Wide Temp.
EYSHCNZWZ	0		0*	0								0			0	0	0		0	0	0	0	0	0**	32k X'tal、512K Flash、64K RAM、BT5
EYSHJNZWZ	0		0*	0								0			0	0	0		0	0	0	0	0	0**	512K Flash、64K RAM、BT5
EYSHSNZWZ	0		0*	0								0			0	0	0		0	0	0	0	0	0**	512K Flash、64K RAM、BT5
EYSRCNZUY	0		O△							0		0	0		0	0	0		0	0	0	0	0	0*	32k X'tal、256K Flash、32K RAM、BT5.2、 Wide Temp.
EYSRSNZUY	0		O△							0		0	0		0	0	0		0	0	0	0	0	0*	256K Flash、32K RAM、BT5.2、Wide Temp.
EYSNCNZWW	0		0*							0		0			0	0			0	0	0	0	0	0*	32k X'tal、192K Flash、24K RAM、BT5.2
EYSNSNZWW	0		0^							0		0			0	0			0	0	0	0	0	0*	192K Flash、24K RAM、BT5.2
EYSLCNZWW	0		0^									0			0	0			0	0	0	0	0	0*	32k X'tal、192K Flash、24K RAM、BT5
EYSLSNZWW	0		0*									0			0	0			0	0	0	0	0	0*	192K Flash、24K RAM、BT5
EYSSSNZWW	0		0\$									0			0	0			0	0	0	0	0	0*	192K Flash、24K RAM、BT5.2
EYSGCNAWY-VX	0											0							0	0	0	0	0	0*	TY's APP、32k X'tal
EYSGJNAWY-VX	0											0							0	0	0	0	0	0*	TY's APP
EYSGCNZWY	0											0			0	0			0	0	0	0	0	0*	32k X'tal、256K Flash、32K RAM
EYSGCNZXX	0											0			0	0			0	0	0	0	0	0*	32k X'tal、256K Flash、16K RAM
EYSGJNZWY	0											0			0	0			0	0	0	0	0	0*	256K Flash、32K RAM
EYSGJNZXX	0											0			0	0			0	0	0	0	0	0*	256K Flash、16K RAM
EYAGJNZXX	0		0									0			0	0			0	0	0	0	0	0*	256K Flash、32K RAM
EYSGCCAXW	0	0										0							0	0	0	0	0	0*	HCI Firmware
EYSGCCSXW	0	0											0						0	0	0	0	0		HCI Firmware
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		Function										I/F						Module type Type approval				pprov	al	×	
Part number	BLE	BT Classic	ANT	NFC	802.11a	802.11b	802.11g	802.11n	2.11a	802.15.4 (Thread)	2.15.4	UART	USB	PCM	IdS	I2C	12 S	SDIO	SMD	Antenna	Japan	FCC	ISED	CE	Remar
SYSFCSAXX-XX											0	0							0	0	0				32k X'tal、31Multihop

					F	unctio	on								I/F				Moo ty	dule pe	т	ype a	pprov	ral	*
Part number	BLE	BT Classic	ANT	NFC	802.11a	802.11b	802.11g	802.11n	802.11ac	802.15.4 (Thread)	802.15.4g	UART	USB	PCM	IdS	12 C	12S	SDIO	SMD	Antenna	Japan	FCC	ISED	CE	Rema
YSACVLAY-WX						0	0	0				0							0	0	0	0	0	0*	TY's APP
/YSACVLAY-AW						0	0	0				0							0	0	0	0	0	0*	AWS Support
VYSACVLAY-XZ						0	0	0				0			0				0	0	0	0	0	0*	w/Cortex M4、4M-Flash ROM

				F	unctio	on								I/F						Т	ype a	pprov	al	×
BLE	BT Classic	ANT	NFC	802.11a	802.11b	802.11g	802.11n	802.11ac	802.15.4 (Thread)	802.15.4g	UART	USB	PCM	IdS	12 C	12S	SDIO	SMD	Antenna	Japan	FCC	ISED	CE	Rema
0	0			0	0	0	0	0					0				0	0	0	0	0	0	0*	Dual Band Antenna(Chip)
0	0			0	0	0	0	0					0				0	0	∆**	0	0	0		RF Connector(Limited antenna)
0	0			0	0	0	0	0					0				0	0						
	0 0 BL	0 0 BLE 0 0 BT Clas	O O BLE O O BT Class O O BT Class	0 0 0 BLCLass	0 0 BLE 0 0 BT Classic 0 0 BT Classic 0 0 BT Classic 0 0 0 0 0 BT Classic 0 0 BT Classic 0 0 BT Classic 0 0 BT Classic	O O BLE O O BT Classic ANT N N N N O O B ANT N N S02.114 O O 802.114	O O BLE O O BT Class O O BT Class N N NT N N NT	O O BLE O O BT Classio P O BT Classio NFC ANT O O BT Classio O D BT Classio O O BT Classio O O BT Classio O D BT Classio	O O BLE O O BT Classic NT ANT N S02.11a O O 802.11a O O 802.11a O O 802.11a O O 802.11a	O O BLE O O BT Classic N ANT ANT N O BU BU N N N Solution O O BO2.11a BO2.11a O O BO2.11a BO2.11a O O BO2.11a BO2.11a O O BO2.11a BO2.11a O O BO2.11a BO2.11a	O O BLE O O BT Classic N O BT Classic N O BT Classic N O BT Classic N N N N	O O BLE O O BT Classic ANT ANT NFC ANT O O BT Classic O O BT Classic NFC ANT O O BO2.11a O O BO2.134 O O BO2.14A O BO2.15A O BO2.15A O BO2.15A O BO2.15A O BO2.15A O BO2.15A BO2.15A BO2.15A	O O BLE O O BT Classic N ATT ATT N O BT Classic N N NFC O O BO2.11a O O BO2.114a O O BO2.154 O O BO2.154 <td>O O BLE O O BT Classic N ANT ANT N O BC 11 O O BO2.11 O D BO2.11 O O BO2.11</td> <td>O O BLE O O BT Classic P N ANT N N NFC O O B02.11a O O B02.15.4g O O B02.15.4g O O D O O B02.15.4g O O D O O D O O D</td> <td>O O BLE O O BT Classic N ANT ANT N N NFC O O BQ2.11a O O BQ2.154 O O BQ2.154</td> <td>O O BLE O O BT Classic N N ANT N N N N S02.118 S02.118 O O S02.118</td> <td>O O BLE O O BT Classic N N ANT N N NFC N O 0 B02.11a O O 0 B02.11a O O O B02.11a O O B02.11a O O B02.11a O O B02.11a O O B02.154 N N N O O B02.154 N N N O O B02.154 N N N N N N N N N N N N N N N N N N N N N N N N N N N N N N <</td> <td>All All Instant All All All All All All All B2114s All All B2114s B2114s All B2114s B2114s All All B2114s All B2114s B2114s All B2154g B2154g All B354g B214g All B354g B354g</td> <td>O O BLE O O BT Classic NFC NFC NFC NFC O O B02.11a O O B02.13a O O B02.14a O O B02.15A O O B02.14a O</td> <td>Image: line state state</td> <td>Image: line with two participation of the structure with twith</td> <td></td> <td>Image: line state s</td>	O O BLE O O BT Classic N ANT ANT N O BC 11 O O BO2.11 O D BO2.11 O O BO2.11	O O BLE O O BT Classic P N ANT N N NFC O O B02.11a O O B02.15.4g O O B02.15.4g O O D O O B02.15.4g O O D O O D O O D	O O BLE O O BT Classic N ANT ANT N N NFC O O BQ2.11a O O BQ2.154 O O BQ2.154	O O BLE O O BT Classic N N ANT N N N N S02.118 S02.118 O O S02.118	O O BLE O O BT Classic N N ANT N N NFC N O 0 B02.11a O O 0 B02.11a O O O B02.11a O O B02.11a O O B02.11a O O B02.11a O O B02.154 N N N O O B02.154 N N N O O B02.154 N N N N N N N N N N N N N N N N N N N N N N N N N N N N N N <	All All Instant All All All All All All All B2114s All All B2114s B2114s All B2114s B2114s All All B2114s All B2114s B2114s All B2154g B2154g All B354g B214g All B354g B354g	O O BLE O O BT Classic NFC NFC NFC NFC O O B02.11a O O B02.13a O O B02.14a O O B02.15A O O B02.14a O	Image: line state	Image: line with two participation of the structure with twith		Image: line state s

* ETSI EN 300 328 & ETSI EN 301 893 v2.2.2 Conducted Test Report Available ** Embedded RF Connector for Limited Antenna

Part number	nergy & ANT Module, Bluetooth® Dual N		1./5	I	
	Function	Module type	I/F	Feature	Outline [mm] (Height : Maximum)
YSKBNUWB-WX nRF52840)	Bluetooth® low energy v5.0	BLE Central and Peripheral SMD type	UART USB	w/CPU (Cortex M4F)	10.0 x 15.4 x 2.0
1RF92840)				32kHz Crystal	
		TAIYO YUDEN Software Embedded	SPI	Antenna	
				FCC/ISED/Japan certified	
				ETSI EN 300 328 v2.2.2 Conducted	
				Test Report Available	
YSKJNAWB-WX	Bluetooth® low energy v5.0	BLE Central and Peripheral	UART	w/CPU (Cortex M4F)	5.1 x 11.3 x 1.3
nRF52840)	Didetooth® low energy V3.0		SPI	Antenna	5.1 × 11.5 × 1.5
nRF52840)		SMD type	SPI		
		TAIYO YUDEN Software Embedded		FCC/ISED/Japan certified	금 기념
				ETSI EN 300 328 v2.2.2 Conducted	• 쓴 _ 터
				Test Report Available	
YSKBNZWB	Bluetooth® low energy v5.0(Full)	BLE Central and Peripheral	UART	w/CPU (Cortex M4F)	10.0 x 15.4 x 2.0
nRF52840)	& 802.15.4 (Thread)	SMD type	USB	32kHz Crystal	A A
	& NFC-A Type-2		I2C	Antenna	
	d th o X type 2		SPI	1MB Flash	
			I2S	256KB RAM	
	1		PDM	FCC/ISED/Japan certified	
			46 GPIO	ETSI EN 300 328 v2.2.2 Conducted	,
(0)/D)			<u> </u>	Test Report Available	
YSKDNZWB	Bluetooth® low energy v5.0(Full)	BLE Central and Peripheral	UART	w/CPU (Cortex M4F)	9.6 x 12.9 x 1.4
nRF52840)	& 802.15.4 (Thread)	SMD type	USB	Antenna	
	& NFC-A Type-2	High Performance Antenna Type	I2C	1MB Flash	
	1		SPI	256KB RAM	
	1		12S	FCC/ISED/Japan certified	
	1		PDM	ETSI EN 300 328 v2.2.2 Conducted	
			19 GPIO	Test Report Available	
YSKJNZWB	Bluetooth® low energy v5.0(Full)	BLE Central and Peripheral	UART	w/CPU (Cortex M4F)	5.1 x 11.3 x 1.3
nRF52840)	& 802.15.4 (Thread)	SMD type	I2C	Antenna	
	& NFC-A Type-2		SPI	1MB Flash	
	& NFC-A Type-2				
			12S	256KB RAM	명한 국태
			PDM	FCC/ISED/Japan certified	
			15 GPIO	ETSI EN 300 328 v2.2.2 Conducted	
YSPBNZUA	Bluetooth® low energy v5.2	BLE Central and Peripheral	UART	Test Report Available w/CPU (Cortex M4F)	10.0 x 15.4 x 2.0
			USB	Antenna	
nRF52833)	& 802.15.4 (Thread)	SMD type			
	& NFC-A Type-2		I2C	512KB Flash	
			SPI	128KB RAM	
			I2S	FCC/ISED/Japan certified	
			PDM	ETSI EN 300 328 v2.2.2 Conducted	
			40 GPIO	Test Report Available	
VODNZUA	<u> </u>	RIF Output and Durink and		Operation temperature:-40°C~105°C	
YSPDNZUA	Bluetooth® low energy v5.2	BLE Central and Peripheral	UART	w/CPU (Cortex M4F)	9.6 x 12.9 x 1.4
nRF52833)	& 802.15.4 (Thread)	SMD type	USB	Antenna	100
	& NFC-A Type-2	High Performance Antenna Type	I2C	512KB Flash	
			SPI	128KB RAM	
			I2S	FCC/ISED/Japan certified	
			PDM	ETSI EN 300 328 v2.2.2 Conducted	0
	1		19 GPIO	Test Report Available	in in S
			+	Operation temperature:-40°C~105°C	
YSPJNZUA	Bluetooth® low energy v5.2	BLE Central and Peripheral	UART	w/CPU (Cortex M4F)	5.1 x 11.3 x 1.3
nRF52833)	& 802.15.4 (Thread) & NFC-A Type-2	SMD type	I2C SPI	Antenna 512KB Flash	
	GINO A Type 2		I2S	128KB RAM	
			PDM	FCC/ISED/Japan certified	
				ETSI EN 300 328 v2.2.2 Conducted	
			15 GPIO		
			15 GPIO	Test Report Available	
VSHCN7W7	Rivetooth® low operative 0	BLE Central and Devictorial		Test Report Available Operation temperature:−40°C~105°C	
	Bluetooth® low energy v5.0 & NFC-A Type-2	BLE Central and Peripheral SMD type	UART	Test Report Available Operation temperature:-40°C~105°C w/CPU (Cortex M4F)	9.6 x 12.9 x 2.0
	Bluetooth [®] low energy v5.0 & NFC-A Type-2	BLE Central and Peripheral SMD type	UART I2C	Test Report Available Operation temperature:-40°C~105°C w/CPU (Cortex M4F) Antenna	
			UART I2C SPI	Test Report Available <u>Operation temperature:~40°C~105°C</u> w/CPU (Cortex M4F) Antenna 512KB Flash	9.6 x 12.9 x 2.0
			UART I2C SPI I2S	Test Report Available <u>Operation temperature:~40°C~105°C</u> w/CPU (Cortex M4F) Antenna 512KB Flash 64KB RAM	9.6 x 12.9 x 2.0
			UART I2C SPI I2S PDM	Test Report Available <u>Operation temperature:-40°C~105°C</u> w/CPU (Cortex M4F) Antenna 512KB Flash 64KB RAM 32kHz Crystal	9.6 x 12.9 x 2.0
YSHCNZWZ nRF52832)			UART I2C SPI I2S	Test Report Available <u>Operation temperature:~40°C~105°C</u> w/CPU (Cortex M4F) Antenna 512KB Flash 64KB RAM	9.6 x 12.9 x 2.0
			UART I2C SPI I2S PDM	Test Report Available Operation temperature:-40°C~105°C w/CPU (Cortex M4F) Antenna 512KB Flash 64KB RAM 32kHz Crystal FCC/ISED/Japan certified Complies with standards required by	9.6 x 12.9 x 2.0
			UART I2C SPI I2S PDM	Test Report Available Operation temperature:-40°C~105°C w/CPU (Cortex M4F) Antenna 512KB Flash 64KB RAM 32kHz Crystal FCC/ISED/Japan certified Complies with standards required by RED (2014/53/EU)	9.6 x 12.9 x 2.0
			UART I2C SPI I2S PDM	Test Report Available Operation temperature:-40°C~105°C w/CPU (Cortex M4F) Antenna 512KB Flash 64KB RAM 32kHz Crystal FCC/ISED/Japan certified Comples with standards required by RED (2014/53/EU) ETSI EN 300 328 v2.2.2 Conducted	9.6 x 12.9 x 2.0
IRF52832)	& NFC-A Type-2	SMD type	UART I2C SPI I2S PDM 30 GPIO	Test Report Available Operation temperature:-40°C~105°C w/CPU (Cortex M4F) Antenna 512KB Flash 64KB RAM 32kHz Crystal FCC/ISED/Japan certified Complies with standards required by RED (2014/53/EU) ETSI EN 300 328 v2.2.2 Conducted Test Report Available	
rF52832) YSHJNZWZ	& NFC-A Type-2 Bluetooth® low energy v5.0	SMD type BLE Central and Peripheral	UART I2C SPI I2S PDM 30 GPIO	Test Report Available Operation temperature:-40°C~105°C w/CPU (Cortex M4F) Antenna 512KB Flash 64KB RAM 32kHz Crystal FCC/ISED/Japan certified Complies with standards required by RED (2014/53/EU) ETSI EN 300 328 v2.2.2 Conducted Test Report Available w/CPU (Cortex M4F)	9.6 x 12.9 x 2.0
rF52832) YSHJNZWZ	& NFC-A Type-2	SMD type	UART I2C SPI I2S PDM 30 GPIO UART I2C	Test Report Available Operation temperature:-40°C~105°C w/CPU (Cortex M4F) Antenna 512KB Flash 64KB RAM 32kHz Crystal FCC/ISED/Japan certified Complies with standards required by RED (2014/53/EU) ETSI EN 300 328 v2.2.2 Conducted Test Report Available w/CPU (Cortex M4F) Antenna	
rF52832) YSHJNZWZ	& NFC-A Type-2 Bluetooth® low energy v5.0	SMD type BLE Central and Peripheral	UART I2C SPI I2S PDM 30 GPIO UART I2C SPI	Test Report Available Operation temperature:-40°C~105°C w/CPU (Cortex M4F) Antenna 512KB Flash 64KB RAM 32kHz Crystal FCC/ISED/Japan certified Comples with standards required by RED (2014/53/EU) ETSI EN 300 328 v2.2.2 Conducted Test Report Available w/CPU (Cortex M4F) Antenna 512KB Flash	
	& NFC-A Type-2 Bluetooth® low energy v5.0	SMD type BLE Central and Peripheral	UART I2C SPI I2S PDM 30 GPIO UART I2C SPI I2S	Test Report Available Operation temperature:-40°C~105°C w/CPU (Cortex M4F) Antenna 512KB Flash 64KB RAM 32KHz Crystal FCC/ISED/Japan certified Complies with standards required by RED (2014/53/EU) ETSI EN 300 328 v2.2.2 Conducted Test Report Available w/CPU (Cortex M4F) Antenna 512KB Flash 64KB RAM	
nRF52832) YSHJNZWZ	& NFC-A Type-2 Bluetooth® low energy v5.0	SMD type BLE Central and Peripheral	UART I2C SPI I2S PDM 30 GPIO UART I2C SPI	Test Report Available Operation temperature:-40°C~105°C w/CPU (Cortex M4F) Antenna 512KB Flash 64KB RAM 32kHz Crystal FCC/ISED/Japan certified Comples with standards required by RED (2014/53/EU) ETSI EN 300 328 v2.2.2 Conducted Test Report Available w/CPU (Cortex M4F) Antenna 512KB Flash	
nRF52832) YSHJNZWZ	& NFC-A Type-2 Bluetooth® low energy v5.0	SMD type BLE Central and Peripheral	UART I2C SPI I2S PDM 30 GPIO UART I2C SPI I2S	Test Report Available Operation temperature:-40°C~105°C w/CPU (Cortex M4F) Antenna 512KB Flash 64KB RAM 32kHz Crystal FCC/ISED/Japan certified Complies with standards required by RED (2014/53/EU) ETSI EN 300 328 v2.2.2 Conducted Test Report Available w/CPU (Cortex M4F) Antenna 512KB Flash 64KB RAM FCC/ISED/Japan certified Complies with standards required by	
(SHJNZWZ	& NFC-A Type-2 Bluetooth® low energy v5.0	SMD type BLE Central and Peripheral	UART I2C SPI I2S PDM 30 GPIO UART I2C SPI I2S PDM	Test Report Available Operation temperature:-40°C~105°C w/CPU (Cortex M4F) Antenna 512KB Flash 64KB RAM 32KHz Crystal FCC/ISED/Japan certified Comples with standards required by RED (2014/53/EU) ETSI EN 300 328 v2.2.2 Conducted Test Report Available w/CPU (Cortex M4F) Antenna 512KB Flash 64KB RAM FCC/ISED/Japan certified Complies with standards required by RED (2014/53/EU)	9.6 x 12.9 x 2.0
RF52832) 	& NFC-A Type-2 Bluetooth® low energy v5.0	SMD type BLE Central and Peripheral	UART I2C SPI I2S PDM 30 GPIO UART I2C SPI I2S PDM	Test Report Available Operation temperature:-40°C~105°C w/CPU (Cortex M4F) Antenna 512KB Flash 64KB RAM 32kHz Crystal FCC/ISED/Japan certified Complies with standards required by RED (2014/53/EU) ETSI EN 300 328 v2.2.2 Conducted Test Report Available w/CPU (Cortex M4F) Antenna 512KB Flash 64KB RAM FCC/ISED/Japan certified Complies with standards required by RED (2014/53/EU) ETSI EN 300 328 v2.2.2 Conducted	9.6 x 12.9 x 2.0
RF52832) /SHJNZWZ (RF52832)	& NFC-A Type-2 <i>Bluetooth</i> ® low energy v5.0 & NFC-A Type-2	SMD type BLE Central and Peripheral SMD type	UART I2C SPI I2S PDM 30 GPIO UART I2C SPI I2S PDM 15 GPIO	Test Report Available Operation temperature:-40°C~105°C w/CPU (Cortex M4F) Antenna 512KB Flash 64KB RAM 32kHz Crystal FCC/ISED/Japan certified Complies with standards required by RED (2014/53/EU) ETSI EN 300 328 v2.2.2 Conducted Test Report Available w/CPU (Cortex M4F) Antenna 512KB Flash 64KB RAM FCC/ISED/Japan certified Complies with standards required by RED (2014/53/EU) ETSI EN 300 328 v2.2.2 Conducted Test Report Available	9.6 x 12.9 x 2.0
RF52832) 	& NFC-A Type-2 Bluetaoth® low energy v5.0 & NFC-A Type-2 Bluetaoth® low energy v5.0	SMD type BLE Central and Peripheral SMD type BLE Central and Peripheral	UART I2C SPI I2S PDM 30 GPIO UART I2C SPI I2S PDM 15 GPIO UART	Test Report Available Operation temperature:-40°C~105°C w/CPU (Cortex M4F) Antenna 512KB Flash 64KB RAM 32KHz Crystal FCC/ISED/Japan certified Complies with standards required by RED (2014/53/EU) ETSI EN 300 328 v2.2.2 Conducted Test Report Available w/CPU (Cortex M4F) Antenna 512KB Flash 64KB RAM FCC/ISED/Japan certified Complies with standards required by RED (2014/53/EU) ETSI EN 300 328 v2.2.2 Conducted Test Report Available w/CPU (Cortex M4F)	
RF52832) /SHJNZWZ (RF52832) /SHSNZWZ	& NFC-A Type-2 <i>Bluetooth</i> ® low energy v5.0 & NFC-A Type-2	SMD type BLE Central and Peripheral SMD type	UART I2C SPI I2S PDM 30 GPIO UART I2C SPI I2S PDM 15 GPIO UART I2C	Test Report Available Operation temperature:-40°C~105°C w/CPU (Cortex M4F) Antenna 512KB Flash 64KB RAM 32KHz Crystal FCC/ISED/Japan certified Complies with standards required by RED (2014/53/EU) ETSI EN 300 328 v2.2.2 Conducted Test Report Available w/CPU (Cortex M4F) Antenna 512KB Flash 64KB RAM FCC/ISED/Japan certified Complies with standards required by RED (2014/53/EU) ETSI EN 300 328 v2.2.2 Conducted Test Report Available w/CPU (Cortex M4F) Antenna	9.6 x 12.9 x 2.0
RF52832) /SHJNZWZ (RF52832) /SHSNZWZ	& NFC-A Type-2 Bluetaoth® low energy v5.0 & NFC-A Type-2 Bluetaoth® low energy v5.0	SMD type BLE Central and Peripheral SMD type BLE Central and Peripheral	UART I2C SPI I2S PDM 30 GPIO UART I2C SPI I2S PDM 15 GPIO UART	Test Report Available Operation temperature:-40°C~105°C w/CPU (Cortex M4F) Antenna 512KB Flash 64KB RAM 32KHz Crystal FCC/ISED/Japan certified Complies with standards required by RED (2014/53/EU) ETSI EN 300 328 v2.2.2 Conducted Test Report Available w/CPU (Cortex M4F) Antenna 512KB Flash 64KB RAM FCC/ISED/Japan certified Complies with standards required by RED (2014/53/EU) ETSI EN 300 328 v2.2.2 Conducted Test Report Available w/CPU (Cortex M4F)	9.6 x 12.9 x 2.0
RF52832) /SHJNZWZ (RF52832) /SHSNZWZ	& NFC-A Type-2 Bluetaoth® low energy v5.0 & NFC-A Type-2 Bluetaoth® low energy v5.0	SMD type BLE Central and Peripheral SMD type BLE Central and Peripheral	UART I2C SPI I2S PDM 30 GPIO UART I2C SPI I2S PDM 15 GPIO UART I2C	Test Report Available Operation temperature:-40°C~105°C w/CPU (Cortex M4F) Antenna 512KB Flash 64KB RAM 32KHz Crystal FCC/ISED/Japan certified Complies with standards required by RED (2014/53/EU) ETSI EN 300 328 v2.2.2 Conducted Test Report Available w/CPU (Cortex M4F) Antenna 512KB Flash 64KB RAM FCC/ISED/Japan certified Complies with standards required by RED (2014/53/EU) ETSI EN 300 328 v2.2.2 Conducted Test Report Available w/CPU (Cortex M4F) Antenna	9.6 x 12.9 x 2.0
nRF52832) YSHJNZWZ	& NFC-A Type-2 Bluetaoth® low energy v5.0 & NFC-A Type-2 Bluetaoth® low energy v5.0	SMD type BLE Central and Peripheral SMD type BLE Central and Peripheral	UART I2C SPI I2S PDM 30 GPIO UART I2C SPI I2S PDM 15 GPIO UART I2C SPI	Test Report Available Operation temperature:-40°C~105°C w/CPU (Cortex M4F) Antenna 512KB Flash 64KB RAM 32kHz Crystal FCC/ISED/Japan certified Complies with standards required by RED (2014/53/EU) ETSI EN 300 328 v2.2.2 Conducted Test Report Available w/CPU (Cortex M4F) Antenna 512KB Flash 64KB RAM FCC/ISED/Japan certified Complies with standards required by RED (2014/53/EU) ETSI EN 300 328 v2.2.2 Conducted Test Report Available w/CPU (Cortex M4F) Antenna 512KB Flash 64KB RAM 512KB Flash 64KB RAM	9.6 x 12.9 x 2.0
(SHJNZWZ (SHJNZWZ (RF52832) (SHSNZWZ	& NFC-A Type-2 Bluetaoth® low energy v5.0 & NFC-A Type-2 Bluetaoth® low energy v5.0	SMD type BLE Central and Peripheral SMD type BLE Central and Peripheral	UART 12C SPI 12S PDM 30 GPIO UART 12C SPI 12S PDM 15 GPIO UART 12C SPI 12S PDM	Test Report Available Operation temperature:-40°C~105°C w/CPU (Cortex M4F) Antenna 512KB Flash 64KB RAM 32kHz Crystal FCC/ISED/Japan certified Complies with standards required by RED (2014/53/EU) ETSI EN 300 328 v2.2.2 Conducted Test Report Available w/CPU (Cortex M4F) Antenna 512KB Flash 64KB RAM FCC/ISED/Japan certified Complies with standards required by RED (2014/53/EU) ETSI EN 300 328 v2.2.2 Conducted Test Report Available w/CPU (Cortex M4F) Antenna 512KB Flash 64KB RAM FCC/ISED/Japan certified	9.6 x 12.9 x 2.0
rF52832) /SHJNZWZ .rF52832) /SHSNZWZ	& NFC-A Type-2 Bluetaoth® low energy v5.0 & NFC-A Type-2 Bluetaoth® low energy v5.0	SMD type BLE Central and Peripheral SMD type BLE Central and Peripheral	UART I2C SPI I2S PDM 30 GPIO UART I2C SPI I2S PDM 15 GPIO UART I2C SPI I2C SPI I2S	Test Report Available Operation temperature:-40°C~105°C w/CPU (Cortex M4F) Antenna 512KB Flash 64KB RAM 32kHz Crystal FCC/ISED/Japan certified Complies with standards required by RED (2014/53/EU) ETSI EN 300 328 v2.2.2 Conducted Test Report Available w/CPU (Cortex M4F) Antenna 512KB Flash 64KB RAM FCC/ISED/Japan certified Complies with standards required by RED (2014/53/EU) ETSI EN 300 328 v2.2.2 Conducted Test Report Available w/CPU (Cortex M4F) Antenna 512KB Flash 64KB RAM 512KB Flash 64KB RAM	9.6 x 12.9 x 2.0

					lectronic Equipment
Part number EYSRCNZUY	Function Bluetooth® low energy v5.2	Module type BLE Central and Peripheral	I/F UART	Feature w/CPU (Cortex M4)	Outline [mm] (Height : Maximum) 9.6 x 12.9 x 2.0
(nRF52820)	& 802.15.4 (Thread)	SMD type	USB	Antenna	
			I2C SPI	256KB Flash 32KB RAM	
			I2S	FCC/ISED/Japan certified	
			PDM 16 GPIO	ETSI EN 300 328 v2.2.2 Conducted Test Report Available	
			10 GPIO	Operation temperature:-40°C~105°C	
EYSRSNZUY	Bluetooth® low energy v5.2	BLE Central and Peripheral	UART	w/CPU (Cortex M4)	3.25 x 8.55 x 1.00
(nRF52820)	& 802.15.4 (Thread)	SMD type	USB	Antenna	5.25 X 0.55 X 1.00
			I2C SPI	256KB Flash 32KB RAM	
			I2S	FCC/ISED/Japan certified	
			PDM	ETSI EN 300 328 v2.2.2 Conducted	
			12 GPIO	Test Report Available Operation temperature:-40°C~105°C	
EVOLODIEU.				w/CPU (Cortex M4)	
EYSNCNZWW (nRF52811)	Bluetooth® low energy v5.2 & 802.15.4 (Thread)	BLE Central and Peripheral SMD type	UART I2C	w/GPU (Cortex M4) Antenna	9.6 × 12.9 × 2.0
			SPI PDM	192KB Flash 24KB RAM	
			30 GPIO	32kHz Crystal	
				FCC/ISED/Japan certified	
				ETSI EN 300 328 v2.2.2 Conducted Test Report Available	
EYSNSNZWW	Bluetooth® low energy v5.2	BLE Central and Peripheral	UART	w/CPU (Cortex M4)	3.25 x 8.55 x 1.00
(nRF52811)	& 802.15.4 (Thread)	SMD type	I2C SPI	Antenna 192KB Flash	
			PDM	24KB RAM	
			15 GPIO	FCC/ISED/Japan certified ETSI EN 300 328 v2.2.2 Conducted	
				Test Report Available	
EYSLCNZWW	Bluetooth® low energy v5.0	BLE Central and Peripheral	UART	w/CPU (Cortex M4)	9.6 x 12.9 x 2.0
(nRF52810)	(2Mbps Data Rate suppurt)	SMD type	I2C SPI	Antenna 192KB Flash	
			PDM	24KB RAM	
			30 GPIO	32kHz Crystal	
				FCC/ISED/Japan certified	
				ETSI EN 300 328 v2.2.2 Conducted Test Report Available	
EYSLSNZWW	Bluetooth® low energy v5.0	BLE Central and Peripheral	UART	w/CPU (Cortex M4)	3.25 x 8.55 x 1.00
(nRF52810)	(2Mbps Data Rate suppurt)	SMD type	I2C	Antenna	
			SPI PDM	192KB Flash 24KB RAM	
			15 GPIO	FCC/ISED/Japan certified	
			10 01 10	ETSI EN 300 328 v2.2.2 Conducted	
EYSSSNZWW	Bluetooth® low energy v5.2	BLE Central and Peripheral	UART	Test Report Available w/CPU (Cortex M4)	3.25 x 8.55 x 1.00
(nRF52805)	Diactobario low chargy Volz	SMD type	I2C	Antenna	0.20 × 0.00 × 1.00
			SPI	192KB Flash	
			10 GPIO		
				FCC/ISED/Japan certified ETSI EN 300 328 v2.2.2 Conducted	
				Test Report Available	
EYSGCNAWY-VX	Bluetooth® low energy v4.2	BLE Central and Peripheral	UART	w/CPU (Cortex M0)	9.6 x 12.9 x 2.0
(nRF51822)		SMD type TAIYO YUDEN Software Embedded		Antenna 32kHz Crystal	
		TATIO TODEN Software Embedded		FCC/ISED/Japan certified	
				ETSI EN 300 328 v2.2.2 Conducted	
				Test Report Available	
EYSGJNAWY-VX	Bluetooth® low energy v4.2	BLE Central and Peripheral	UART	w/CPU (Cortex M0)	5.1 x 11.3 x 1.3
(nRF51822)		SMD type		Antenna	
		TAIYO YUDEN Software Embedded		FCC/ISED/Japan certified ETSI EN 300 328 v2.2.2 Conducted	
				Test Report Available	명근 _ ㅠ 비
EYSGCNZWY	<i>Bluetooth</i> ® low energy v4.2 (*)	BLE Central and Peripheral	UART I2C	w/CPU (Cortex M0)	9.6 x 12.9 x 2.0
(nRF51822)		SMD type	I2C SPI	Antenna 256KB Flash	
				32KB RAM	
				32kHz Crystal	
				FCC/ISED/Japan certified	
				ETSI EN 300 328 v2.2.2 Conducted Test Report Available	
EYSGCNZXX	Bluetooth® low energy v4.2 (*)	BLE Central and Peripheral	UART	w/CPU (Cortex M0)	9.6 x 12.9 x 2.0
(nRF51822)		SMD type	I2C	Antenna	
			SPI 29 GPIO	256KB Flash 16KB RAM	
			23 0010	32kHz Crystal	
				FCC/ISED/Japan certified	
				ETSI EN 300 328 v2.2.2 Conducted	
EYSGJNZWY	Bluetooth® low energy v4.2 (*)	BLE Central and Peripheral	UART	Test Report Available w/CPU (Cortex M0)	5.1 x 11.3 x 1.3
(nRF51822)		SMD type	I2C	Antenna	
			SPI	256KB Flash	
			14 GPIO		
				FCC/ISED/Japan certified	
				ETSI EN 300 328 v2.2.2 Conducted Test Report Available	

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

Part number	Function	Module type	I/F	Feature	Outline [mm](Height : Maximum)
YSGJNZXX	Bluetooth® low energy v4.2 (*)	BLE Central and Peripheral	UART	w/CPU (Cortex M0)	5.1 x 11.3 x 1.3
nRF51822)		SMD type	I2C	Antenna	r m F
			SPI	256KB Flash	
			14 GPIO	16KB RAM	
				FCC/ISED/Japan certified	명근 뒤베
				ETSI EN 300 328 v2.2.2 Conducted	
				Test Report Available	
YAGJNZXX	Bluetooth® low energy v4.2	BLE Peripheral	UART	w/CPU (Cortex M0)	5.1 x 11.3 x 1.3
nRF51422)	& ANT	SMD type	I2C	Antenna	
			SPI	256KB Flash	그 누 그 네
			14 GPIO	32KB RAM	
				FCC/ISED/Japan certified	
				ETSI EN 300 328 v2.2.2 Conducted Test Report Available	
YSGCCAXW	Bluetooth® Legacy & low energy v5.0	BLE Central and Peripheral	UART	Integrated System Clock	10.0 x 15.4 x 2.0
CSRB5348)	5, 5,	HCI Firmware		Antenna	
		SMD type		FCC/ISED/Japan certified	
				ETSI EN 300 328 v2.2.2 Conducted	
				Test Report Available	
YSGCCSXW	Bluetooth® Legacy & low energy v5.0	BLE Central and Peripheral	USB	Integrated System Clock	10.0 x 15.4 x 2.0
CSRB5348)		HCI Firmware		Antenna	
		SMD type		FCC/ISED/Japan certified	
				ETSI EN 300 328 v2.2.2 Conducted	
				Test Report Available	

(*) Supported by S130

Part number	Function	Module type	I/F	Feature	Outline [mm] (Height : Maximum)
SYSFCSAXX-XX	920MHz band wireless module	SMD type	UART	Antenna	21.0 x 30.0 x 2.6
	Compliant IEEE802.15.4g/e	TAIYO YUDEN Software Embedded		Japan certified Singlehop and Multihop netwark	

CPU Embedded WLAN Module

Part number	Function	Module type	I/F	Feature	Outline [mm](Height : Maximum)
WYSACVLAY-WX	IEEE802.11b/g/n	SMD type	UART	Integrated System Clock	14.0 x 21.4 x 2.4
		TAIYO YUDEN Software Embedded		Antenna	
				Supprt Micro AP	
				FCC/ISED/Japan certified	8
				ETSI EN 300 328 v2.2.2 Conducted	0
				Test Report Available	
				W/CPU (Cortex M4)	
WYSACVLAY-AW	IEEE802.11b/g/n	SMD type	UART	Integrated System Clock	14.0 x 21.4 x 2.4
		Application for AWS Software		Antenna	
		Embedded		FCC/ISED/Japan certified	
				ETSI EN 300 328 v2.2.2 Conducted	19
				Test Report Available	. "
				W/CPU (Cortex M4)	
VYSACVLXAY-XZ	IEEE802.11b/g/n	SMD type	UART	Integrated System Clock	14.0 x 21.4 x 2.4
			SPI	Antenna	
				Supprt Micro AP	
				FCC/ISED/Japan certified	8
				ETSI EN 300 328 v2.2.2 Conducted	o'
				Test Report Available	
				W/CPU (Cortex M4)	

WLAN+BT Module					
Part number	Function	Module type	I/F	Feature	Outline [mm](Height : Maximum)
WYSAGVDXG	IEEE802.11ac/a/b/g/n+Bluetooth® 4.2	SMD type	SDIO	Integrated System Clock	12.0 x 26.0 x 2.0
	(Chip antenna Type)		PCM	2.4GHz & 5GHz	
				11ac(HT80)	
				Dual Band compatible Chip Antenna	
				FCC/ISED/Japan certified	
				ETSI EN 300 328 v2.2.2 Conducted	
				Test Report Available	
				ETSI EN 301 893 v2.1.1 Conducted	
WYSEGVDXG	IEEE802.11ac/a/b/g/n+ <i>Bluetooth</i> ® 4.2	SMD type	SDIO	Test Report Available Integrated System Clock	12.0 × 26.0 × 2.0
	(RF connector Type)		PCM	2.4GHz & 5GHz	
				11ac(HT80)	
				U.FL connector for external antenna	
				FCC/ISED/Japan certified	
WYSBHVGXG	IEEE802.11ac/a/b/g/n+ <i>Bluetooth</i> ® 4.2	SMD type	SDIO	Integrated System Clock	8.9 x 12.6 x 1.9
			PCM	2.4GHz & 5GHz	
				11ac(HT80)	