

# 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 2009. 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 usage of the Products.

Please note that Taiyo Yuden Co., Ltd. shall not be responsible for any defects in products or equipment incorporating such products, which are caused under the conditions other than those specified in this catalog or individual specification.

- Please contact Taiyo Yuden Co., Ltd. for further details of product specifications as the individual specification is available.
- Please conduct validation and verification of products in actual condition of mounting and operating environment before commercial shipment of the equipment.

- All electronic components or functional modules listed in this catalog are developed, designed and intended for use in general electronics equipment.(for AV, office automation, household, office supply, information service, telecommunications, (such as mobile phone or PC) etc.). Before incorporating the components or devices into any equipment in the field such as transportation,( automotive control, train control, ship control), transportation signal, disaster prevention, medical, public information network (telephone exchange, base station) etc. which may have direct influence to harm or injure a human body, please contact Taiyo Yuden Co., Ltd. for more detail in advance. Do not incorporate the products into any equipment in fields such as aerospace, aviation, nuclear control, submarine system, military, etc. where higher safety and reliability are especially required.

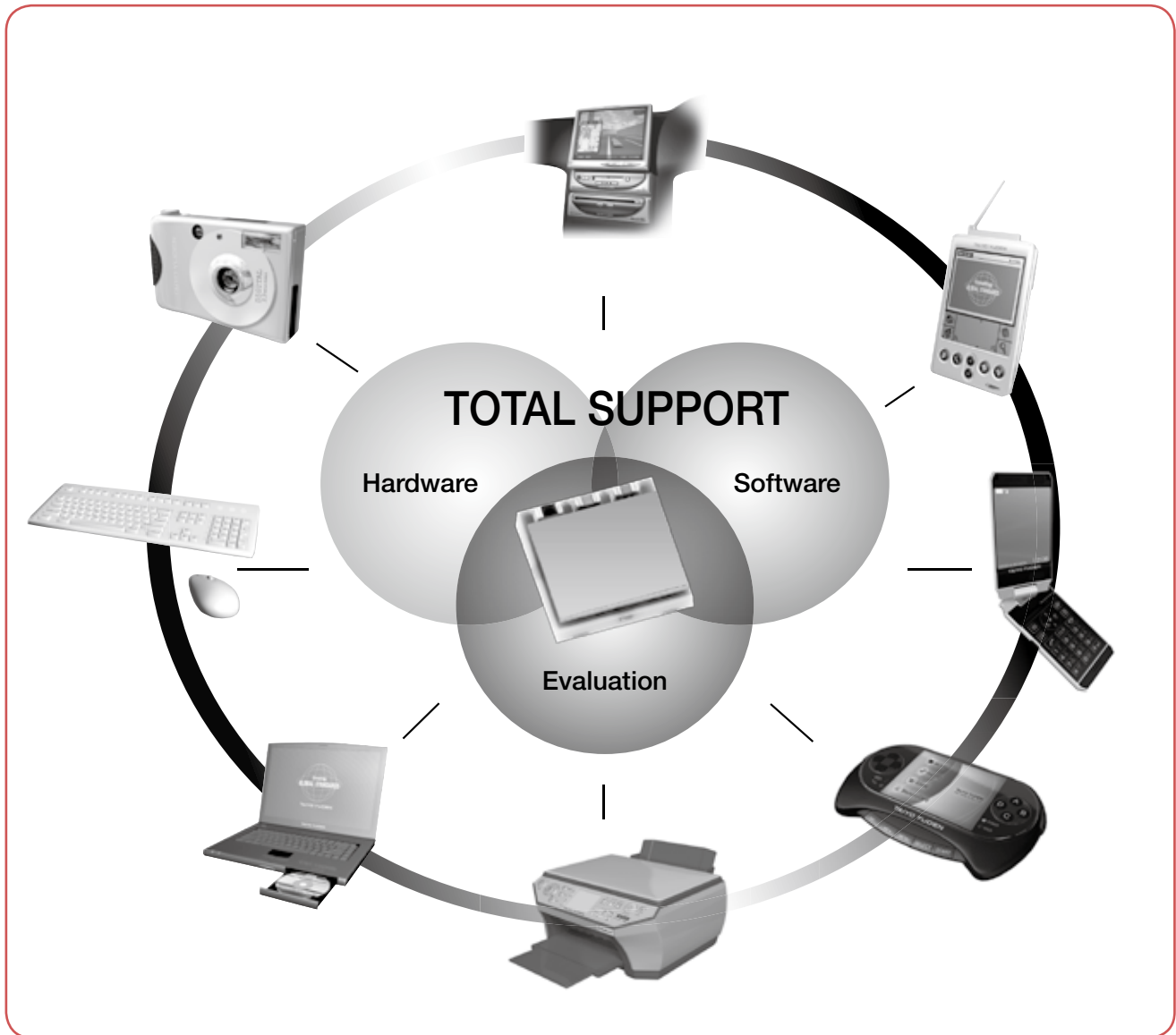
In addition, even electronic components or functional modules that are used for the general electronic equipment, if the equipment or the electric circuit require high safety or reliability function or performances, a sufficient reliability evaluation check for safety shall be performed before commercial shipment and moreover, due consideration to install a protective circuit is strongly recommended at customer's design stage.

- The contents of this catalog are applicable to the products which are purchased from our sales offices or distributors (so called "TAIYO YUDEN' s official sales channel"). It is only applicable to the products purchased from any of TAIYO YUDEN' s official sales channel.

- Please note that Taiyo Yuden Co., Ltd. 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 your usage of products in this catalog. Taiyo Yuden Co., Ltd. grants no license for such rights.

- Caution for export

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



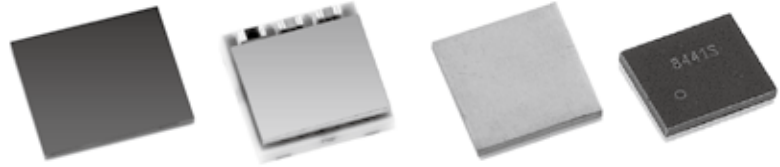
The Wireless technology connects you with the applications used everywhere around us wirelessly. Taiyo Yuden offers you the one-stop solution to meet all the requirements.

For the latest information on Taiyo-Yuden's Wireless module, please visit our web site at <http://www.ty-top.com/>

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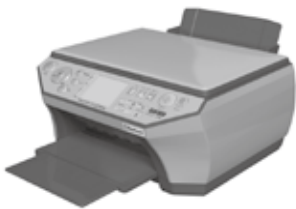
Our recommended Line Up of *Bluetooth*<sup>®</sup>, W-LAN & UWB Module

■ For Cellular and PDA



Ultra Miniaturized BT+WLAN, BT and BT+FM Module

■ For Laptop PC, Printer and Peripheral



With RF Connector & Board to Board Connector



Wireless USB Host Half-Mini Card

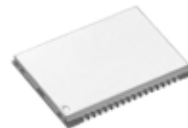


With Our Original Antenna & Board to Board Connector

■ For General Purpose (Handy Terminal for Industrial Use, etc.)



Miniaturized WLAN Module



High Reliability Support for Class1



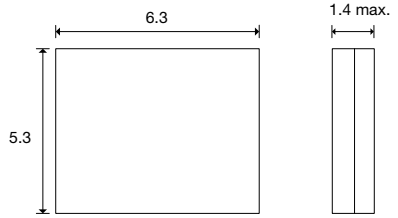
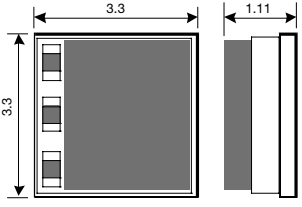
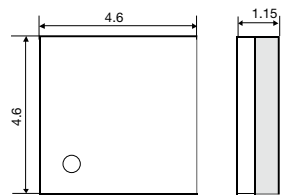
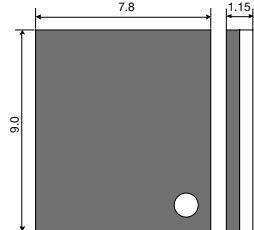
Miniaturized Full Module

※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.

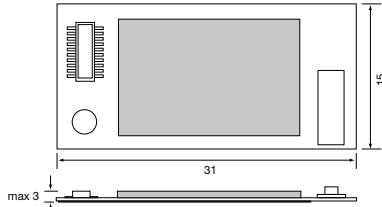
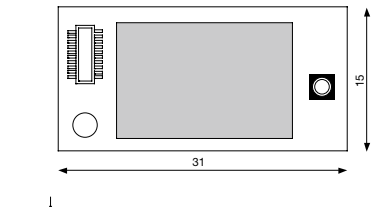
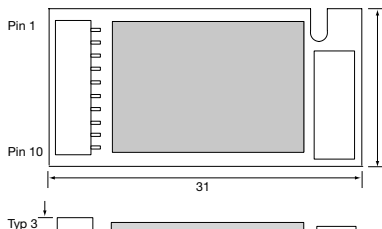
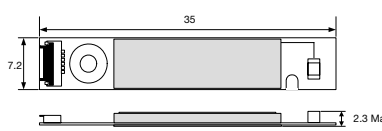
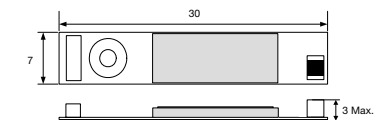
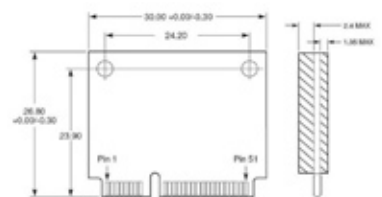
For the latest information, please visit our web site at <http://www.ty-top.com/> or feel free to contact our sales department.

※※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.

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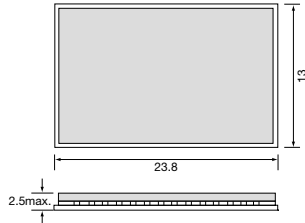
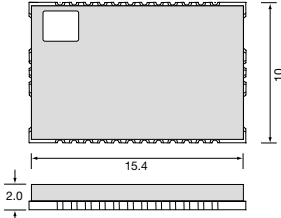
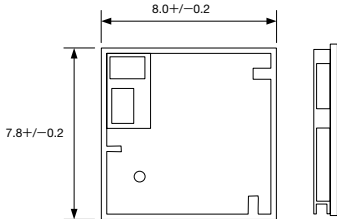
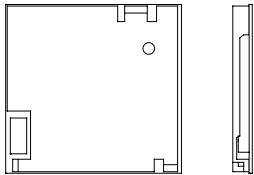
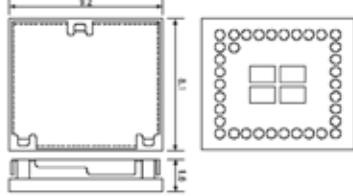
Part Number	Function	Module Type	I/F	Feature	Outline [mm] (Height : Max Number)
EWFNLBAXX	Bluetooth® 2.1+EDR , FM (RX)	Mask ROM Type, SMD Type	UART, PCM (I2S), I2C	Class2 & 1, w/o EEPROM, w/o X'tal	6.3x5.3x1.4 
EVSMMBAXX	Bluetooth® 2.1+EDR	Mask ROM Type, SMD Type	UART, PCM (I2S)	Class2 & 1, w/o EEPROM, w/o X'tal	3.3x3.3x1.11 
EWSMLCAXX	Bluetooth® 2.1+EDR	Mask ROM Type, SMD Type	UART, CSPI, PCM	Class2 & 1, w/o EEPROM, w/o X'tal	4.6x4.6x1.15 
WYSDNBGX6	IEEE802.11b/g, Bluetooth® 2.1+EDR , FM(RX)	Mask ROM Type, SMD Type	SDIO, SPI, UART, PCM	Class2 & 1 (BT), w/ LNA w/o EEPROM, w/o X'tal	9.0x7.8x1.15 

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Part Number	Function	Module Type	I/F	Feature	Outline [mm] (Height : Max Number)
EY*F*C*XX	Bluetooth® 2.1+EDR	Flash Memory Type, Connector Type	USB, UART, PCM	Class2, w/ X'tal, w/ Antenna (EYSFDC*XX) or RF Connector (EYSFCC*XX)	31x15x3 EYSFDC*XX  EYSFCC*XX 
EYTMECSXX	Bluetooth® 2.1+EDR	Mask ROM Type, Connector Type	USB	Class2, w/ EEPROM, w/ X'tal, w/ Antenna	31x15x3 
EYSMJCSXX	Bluetooth® 2.1+EDR	Mask ROM Type, Connector Type	USB	Class2, w/ EEPROM, w/ X'tal, w/ Antenna	35x7.2x2.3 
Antenna & Connector Module	Bluetooth® 2.1+EDR	Mask ROM Type, Connector Type	USB	Class2, w/ EEPROM, w/ X'tal, w/ Antenna	30x7x3 
Wireless USB Host Half-Mini Card	Wireless USB 1.0	Flash Memory Type	PCI-Express	WiMedia Band Group 1/3/6, WiMedia PHY Spec. V1.2, WiMedia MAC Spec. V1.0	Half-Mini Card (30x26.8) 

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■ For Industrial Use and General Purpose

Part Number	Function	Module Type	I/F	Feature	Outline [mm] (Height : Max Number)
EYSF1C*XX	Bluetooth® V2.0+EDR	Flash Memory Type, SMD Type	USB, UART, PCM	Class1, w/ X'tal	23.8x13x2.5 
EYSF3C*XX	Bluetooth® 2.1+EDR	Flash Memory Type, SMD Type	USB, UART, PCM	Class2, w/ X'tal	15.4x10x2 
WYSBCVXS2-1X	IEEE802.11b/g	Mask ROM Type, SMD Type	SDIO, G-SPI	w/ EEPROM, w/ X'tal	8.0x7.8x1.2 
WYSBHASX2-1M	IEEE802.11b/g	Mask ROM Type, SMD Type	SDIO	w/o EEPROM, w/ X'tal	8.3x8.0x1.2 
EYSMAC*XX	Bluetooth® 2.1+EDR	Mask ROM Type, SMD Type	USB, UART, PCM	Class2, w/ EEPROM, w/ X'tal	8.1x9.2x1.6 

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## ■ PRECAUTIONS

### Precautions on the use of functional module, resonators

#### 1. Storage and operating conditions

Precautions	The products listed in this catalog are not designed for use under the following conditions. Storage and/or usage under following conditions is prohibited.
	1) Exposure to corrosive gas such as chlorine, hydrogen sulfide, ammonia, sulfur dioxide, nitrogen oxide, etc.
	2) Exposure to direct sunlight
	3) Exposure to dust
	4) Exposure to excessive moisture or wet locations
	5) Exposure to salt water or sea breezes
	6) Exposure to strong static electricity or electromagnetic waves

#### 2. Transportation and handling

Precautions	1) Minimize any mechanical vibration or shock and avoid dropping of the product during transportation or dropping the product that contains the substrate.
	2) Since the application of static electricity or overvoltage may cause defect in the product or deterioration of its reliability, caution must be taken against exposure to any static electricity generated by electrified items such as work benches, soldering irons, tools, carrying containers, etc.
	3) Caution shall be taken to avoid overstress to the product during and after the soldering process.
	4) Since the applied soldering method may deteriorate the reliability, thorough evaluation is recommended.
	5) For instructions and precautions regarding immersion of the product into a washing solution after it has been mounted onto a printed board, please consult Taiyo Yuden Technical Services.

#### 3. Applications

Precautions	1) Please conduct validation and verification of products in actual condition of mounting and operating environment before commercial shipment of the equipment.
	2) All electronic components listed in this catalog are developed, designed and intended for use in general electronics equipment (for AV, household, office supply, information service, telecommunications, etc.). Before using the components in any medical equipment, space equipment, nuclear equipment, disaster prevention equipment, etc. where higher safety and reliability are duly required, the applicability and suitability of the electronic components must be fully evaluated to ensure correct operation in these types of equipment. In addition, for the general electronic components which are used under specific conditions or installed in special equipment where a high concern for safety and reliability exist, evaluation of the safety function of the said components shall be thoroughly performed and when applicable, a protective circuit shall be added in design stage.

※ The above matters are general instructions for all components. For specific guidelines on the use of the particular components, please refer to the individual part specifications where detailed instructions are listed.

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