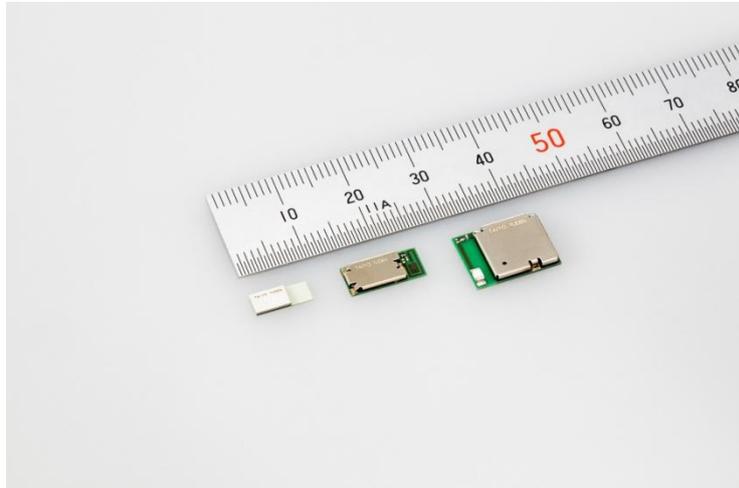


For Immediate Release

TAIYO YUDEN Commercializes three *Bluetooth*® 5 modules
World's smallest Bluetooth® module with an antenna



TOKYO, August 21, 2017—TAIYO YUDEN CO., LTD. has announced the launch of *Bluetooth*®^{*1} 5 modules EYSHCNZWZ (9.6×12.9×2.0), EYSHJNZWZ (5.1×11.3×1.3mm), and EYSHSNZWZ (3.25×8.55×0.9mm).

These wireless communication modules, compatible with the latest wireless communication standard *Bluetooth*® 5, are ideal for various small, thin devices including wearable devices, healthcare equipment, smartphone peripherals, and IoT-related devices.

The EYSHSNZWZ module that we have commercialized on this occasion utilizes our unique shield mold technology to reduce its volume to about one third that of EYSHJNZXZ (5.1 x 11.3 x 1.3 mm), the smallest module from our conventional module lineup. This represents the world's smallest volume for *Bluetooth*® modules with an integrated antenna. (As of August 2017, according to our own research.)

TAIYO YUDEN TECHNO SOLUTIONS CO., LTD. (Takasaki City, Gunma Prefecture, Japan) will commence mass production of these products in August 2017. A sample of each model will cost 3,000 yen^{*2}.

Technology Background

Most devices that require short-range wireless communication (e.g. wearable devices, healthcare equipment, smartphone peripherals) are compatible with the *Bluetooth*® wireless communication standard. Notably, *Bluetooth*® 5 has drawn public attention due to its communication speed, which is twice as fast as *Bluetooth*® V4.2. The size of some conventional *Bluetooth*® modules is not suitable for wearable devices that are the size and shape of pens, rings, or glasses; demand for much smaller modules is high.

Against this backdrop, TAIYO YUDEN has added the EYSHCNZWZ, EYSHJNZWZ, and EYSHSNZWZ modules compatible with the latest standard *Bluetooth*® 5 to its product lineup.

EYSHSNZWZ in particular utilizes our unique shield mold technology to achieve a thickness of 0.9 mm (about one third the volume of EYSHJNZXZ (5.1 x 11.3 x 1.3 mm), the smallest of our conventional modules). It is the world's smallest *Bluetooth*® module with an integrated antenna.

TAIYO YUDEN will continue to meet market needs and enhance its product lineup by increasing functionality and reliability.

*1 The *Bluetooth*® word mark and logos are owned by Bluetooth SIG, Inc. and the use of such marks by TAIYO YUDEN CO., LTD. is under license.

*2 The sample price mentioned in this release is our direct sales price. When considering purchasing via a sales agency, please contact the agency for the sample price.

■ Applications

Wireless communication modules for various types of small and thin equipment, including wearable devices, healthcare equipment, smartphone peripherals, and IoT devices

■ The characteristics of the new *Bluetooth*® 5 modules are as shown below.

Part Number	Size (L×W×H)	Specification	I/F	RAM (kB)	Certification	Temperature
EYSHCNZWZ	9.6×12.9×2.0mm	V5.0 BLE Single Slave/ Master	UART SPI I ² C	64	Japan FCC IC CE*	-40~ +85°C
EYSHJNZWZ	5.1×11.3×1.3mm					
EYSHSNZWZ	3.25×8.55×0.9mm					

* The CE test report can be provided.