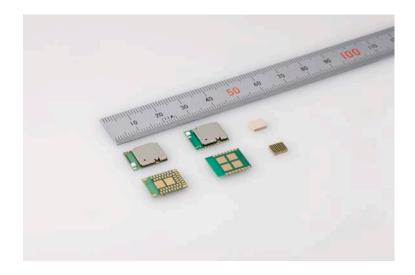
# TAIYO YUDEN

For Immediate Release

# TAIYO YUDEN Presents a Lineup of Three *Bluetooth*<sup>®</sup> Smart Modules

A Built-in Antenna Offers a Simple Design, and Enables Use in Healthcare Equipment



TOKYO, August 26, 2014 - TAIYO YUDEN CO., LTD. announces the development of the  $Bluetooth^{(0)}$  (\*1) Smart (\*2) module, and the start of production for this product.

This is an optimal product for small and thin devices such as healthcare, sports and fitness equipment, wearable computers, home and entertainment devices, and mobile/PC accessory devices. The device operates as a wireless communication module conforming to *Bluetooth*<sup>®</sup> v4.0 low energy (*Bluetooth*<sup>®</sup> Smart), a type of wireless communication standard.

Since the commercialization of the *Bluetooth*<sup>®</sup> module in 1999, TAIYO YUDEN has continued to provide top-level *Bluetooth*<sup>®</sup> module solutions to the market, including the acquisition of a certification of a full module conforming to *Bluetooth*<sup>®</sup> v1.1 for the first time in the world, accomplished in 2001. In January 2014, TAIYO YUDEN started production of the "EYSFCNZXX" (12.9 x 9.6 x 2.0mm), conforming to *Bluetooth*<sup>®</sup> Smart where the electrodes are concentrated at the base. Currently, TAIYO YUDEN has started sample production of the "EYSFFNZXZ" (12.9 x 10.5 x 2.0mm) where the electrodes are formed at the sides, and the "EVSFLNZXX" (5.3 x 4.3 x 1.2mm) that has achieved the smallest size in the world in its class and uses TAIYO YUDEN's proprietary copper-core embedded-parts multilayer wiring substrate "EOMIN<sup>TM</sup>" (\*3), with commercial production planned to start within 2014.

Production of these products will commence at a production rate of 300,000 units per month. The sample price is 2,000 yen per unit for each item.

## Technology Background

*Bluetooth*<sup>®</sup> v4.0 low energy (*Bluetooth*<sup>®</sup> Smart), which is one of the standards of *Bluetooth*<sup>®</sup>, is an extremely high power-saving communication standard. As a result, it is being adopted quickly in the market for various devices including healthcare equipment such as health meters and blood pressure meters, which were not equipped with a communication function in the past, as well as sports and

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fitness equipment such as activity trackers. One hurdle that these products face is the high cost of development relating to the implementation of a wireless function, including the design technology of high-frequency circuits, and compliance with the radio laws and regulations defined in each country.

To address this hurdle and to shorten the development period and meet the circuit design requirements, TAIYO YUDEN has started the commercialization of the "EYSFCNZXX" in which the electrodes are concentrated at the base, as well as the "EYSFFNZXZ" in which the electrodes are formed at the sides. These products are provided with a built-in antenna and flash memory. In order to meet the demand for a further reduction in size, we are also able to offer the "EVSFLNZXX" that has achieved the smallest size in the world in its class, thereby complying with the various needs of our customers.

TAIYO YUDEN will continue to actively promote a reduction in size and thickness, and expand the lineup of our *Bluetooth*<sup>®</sup> Smart Modules to address the ever-growing demand in the market, and we are committed to make further advancements with regard to conformance to *Bluetooth*<sup>®</sup> v4.1.

\*1 The *Bluetooth*<sup>®</sup> word mark and logos are owned by Bluetooth SIG, Inc. and any use of such marks by TAIYO YUDEN CO., LTD. is under license.

\*2 "Bluetooth<sup>®</sup> Smart" is a standard stipulated by Bluetooth SIG, Inc.

\*3 "EOMIN" is a registered trademark or trademark of TAIYO YUDEN CO., LTD. used both for Japan and other countries.

#### ■ Application

Wireless communication modules for small and thin devices such as healthcare, sports and fitness equipment, wearable computers, home and entertainment devices, and mobile/PC accessory devices.

Part Number	Feature	Function	Module Type	I/F
EYSFCNZXX	Bluetooth <sup>®</sup> v4.0	<i>Bluetooth®</i> v4.0 Smart	BLE Slave SMD	UART SPI I <sup>2</sup> C and 8/9/10 bit ADC
EYSFFNZXZ	w/ CPU			
	w/ Antenna			
EVSFLNZXX	Bluetooth <sup>®</sup> v4.0			
	w/ CPU			

The characteristics of the *Bluetooth*<sup>®</sup> Smart modules that are currently commercialized are as follows:

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