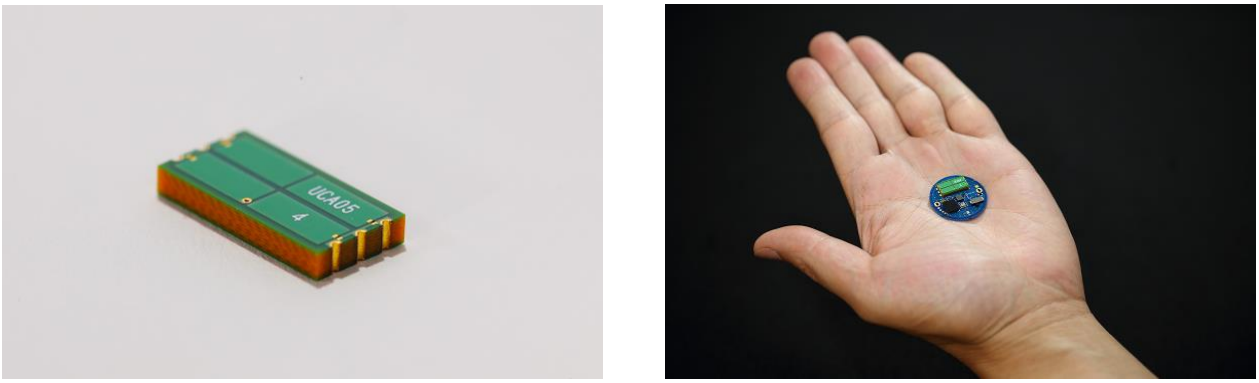
Press Information

Kyocera wins CEATEC Award for “Amcenna” IoT Antenna

Innovative technology yields compact antenna that solves performance challenges when mounted on metals or near water

Kyoto/London, November 14th, 2018. Kyocera announced that its Amcenna IoT antenna has received Japan’s Minister of Internal Affairs and Communications Award. Amcenna, a compact antenna that performs well even when mounted on metals or near water, was recognized during the 2018 CEATEC Awards, organized by CEATEC JAPAN 2018 — one of Asia’s largest IT and electronics tradeshows.



Kyocera’s Amcenna (left) and a sensor module using Amcenna (right)

Kyocera’s Amcenna Technology Innovations

To create Amcenna, Kyocera miniaturized an Artificial Magnetic Conductor (AMC) and integrated an antenna function into the AMC itself. The result is an exceptionally thin, compact antenna that can operate in close proximity to metals or water with no loss of performance. In combination with its compact form factor (7.0×13.6×1.9mm at 2.4GHz), Amcenna’s unique performance can allow IoT devices to be installed in a wider range of applications — including on manufacturing equipment, on metallic automotive body panels, and in wearable devices, to name just a few examples.

Background

Radio waves experience a 180-degree phase shift when reflected by metals. Consequently, waves emitted from an antenna can be canceled by radio waves reflected from the metal. Traditional solutions have involved using an AMC and a separate antenna to interrupt reflection

but this method impedes miniaturization. In designing Amcenna, Kyocera sought to create a new type of antenna that can be miniaturized significantly while solving these performance challenges.

Inspired by three-fold mirrors, Kyocera's proprietary Amcenna design produces an AMC consisting of just a few cells electromagnetically equivalent to an infinite periodic structure. This approach reduced surface area to 1/60 as compared to Kyocera prototype antenna using conventional AMC technology. Amcenna will support miniaturized applications, such as wearable devices, while experiencing no performance degradation when mounted on metals or near water.

Kyocera plans to develop Amcenna-based solutions for a wide range of applications, including IoT systems for manufacturing sites, wearable technology and other IoT innovations.

About the 2018 CEATEC Awards

The 2018 CEATEC Awards recognize outstanding technologies, products, and services from among exhibits at the CEATEC JAPAN 2018 tradeshow. Based on academic, technological, and marketability criteria, the Award Review Panel evaluated entry exhibits and selected for recognition those deemed to be most innovative and sophisticated. This year marks the 8th of the awards.

For more information on Kyocera: www.kyocera.co.uk

About Kyocera

Headquartered in Kyoto, Japan, Kyocera Corporation is one of the world's leading manufacturers of fine ceramic components for the technology industry. The strategically important divisions in the Kyocera Group, which is comprised of 264 subsidiaries (as of March 31, 2018), are information and communications technologies, products which increase quality of life, and environmentally friendly products. The technology group is also one of the oldest producers of solar energy systems worldwide, with more than 40 years of experience in the industry.

The company is ranked #522 on Forbes magazine's 2017 "Global 2000" listing of the world's largest publicly traded companies. With a global workforce of over 75,000 employees, Kyocera posted net sales of approximately €12.04 billion in fiscal year 2017/2018. The products marketed by the company in Europe include printers, digital copying systems, microelectronic components, and fine ceramic products. The Kyocera Group has two independent companies in the United Kingdom: Kyocera Fineceramics Ltd. and Kyocera Document Solutions.

The company also takes an active interest in cultural affairs. The Kyoto Prize, a prominent international award, is presented each year by the Inamori Foundation — established by Kyocera founder Dr. Kazuo Inamori — to individuals and groups worldwide who have contributed significantly to the scientific, cultural, and spiritual betterment of humankind (converted at approximately €764,000 per prize category).

Contact
Kyocera Fineceramics Ltd.
Daniela Faust
Manager Corporate Communications
Hammfelddamm 6
41460 Neuss
Germany
Tel.: +49 (0)2131/16 37 – 188
Fax: +49 (0)2131/16 37 – 150
Mobil: +49 (0)175/727 57 06
daniela.faust@kyocera.de
www.Kyocera.de