



Press Release

For Immediate Release

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Vubiq Networks Awarded New RFID Patent, Increasing Bit Density and Lowering Chipless Data Tag Costs

IRVINE, CA, January 18, 2022 – Vubiq Networks, Inc., the innovation leader in millimeter wave wireless broadband technology, products and solutions, today announced that it has been awarded a new radio frequency identification (RFID) patent by the U.S. Patent and Trademark Office. Patent number 11216625 is entitled ***High Bit Density Millimeter Wave RFID Systems, Devices, and Methods Thereof.***

“This new patent reinforces our three existing RFID patents, providing further protection of our chipless RFID technology,” said Vubiq CEO John Dilworth. “The patent covers orders of magnitude higher bit density for RFID tags as compared to prior art or other competitive approaches.”

Vubiq Networks’ unique technology lowers costs by enabling the use of low electrical conductivity metals for the antenna elements, avoiding costly silver-based inks. Vubiq Networks has been able to achieve this breakthrough because the technology does not rely on spectral resonance response, but instead relies on radar cross-section and antenna reradiation mechanisms.

“This patent award includes ‘reduction to practice’ by addressing both hardware and software techniques,” explained Mike Pettus, founder and CTO of Vubiq Networks. “It provides for very high density chipless tag data storage through innovative geometrical layout of the microstructure patch antennas as the tag elements using phase, polarization, and spatial encoding parameters. This results in many bits per element and optimized element spacing, providing very high bit density.”

A History of RFID Technology Innovation

Vubiq Networks has a long history of innovation in millimeter wave RFID technology. In addition to the new patent award announced today, the company holds three other RFID patents:

- US Patent 7460014 issued 12-2-08: RFID System Utilizing Parametric Reflective Technology
- US Patent 7498940 issued 3-3-09: RFID System Utilizing Parametric Reradiated Technology
- US Patent 10839179 issued 11-17-20: Multimode Millimeter Wave RFID Systems and Methods of Use Thereof

The expanding RFID patent portfolio covers the company’s unique data encoding technology that exploits the natural physics of antennas at a tremendously small scale. The result is a chipless RFID data tag that approaches the cost of printing a bar code, but with the ability to contain hundreds of data bits in the size of a postage stamp.

Utilizing the company’s innovative polarimetric synthetic aperture radar (POLSAR) hyperimaging techniques, not only can the data be retrieved from the tag, but also the physical three-dimensional location. The technology can read tags through materials such as cardboard, pill bottles, and envelopes, eliminating the need to unpackage and scan each individual tagged package or product.

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Video Demonstration

To view an animated video demonstrating Vubiq Networks' patented RFID technology, visit www.vubiqnetworks.com/chipless-rfid-tag-hyperimaging.

About Vubiq Networks

Vubiq Networks, Inc. is a privately held millimeter wave innovation company headquartered in Irvine, California. With over 15 years of experience in telecommunications and extremely high frequency (EHF) applications, the company continues to expand its global reach into cutting-edge markets such as 5G point-to-point connectivity, wireless fabric architecture, chipless RFID data tag hyperimaging, IoT smart sensors, EHF medical applications, and more. For further information, visit www.vubiqnetworks.com.

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