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To the Press

T-Engine Forum
Ubiquitous ID Center

The First Domestic UHF-Band RFID Authorized by the Ubiquitous ID Center

The T-Engine Forum, an organization for the standardization and promotion of basic ubiquitous computing technology (Location: Shinagawa-ku, Tokyo, Chairman: Ken Sakamura, Professor of the University of Tokyo/Chairman of the Ubiquitous ID Center) has been advancing the deployment of open infrastructure systems that realize free mobility assistance functions. In these systems, unique numbers called “ucodes” are attached to physical objects and locations using RFIDs and active tags which have infrared or radio communication functions, etc.. These ucodes are read with a portable device called the “Ubiquitous Communicator”. Using information related to physical objects and locations and information acquired from ucodes, new applications are now possible. For example, T-Engine forum has been developing technology to be used as the open technology infrastructure for free mobility assistance functions that can support supply chain management, traceability, and navigating and sightseeing guidance. The Ubiquitous ID Center within the T-Engine Forum, authorizes specifications for RFID tags and radio wave markers, and issues unique numbers for these infrastructure systems so that they are widely used and available.

As RFID usage in the UHF band is now approved in Japan, the Ubiquitous ID Center has received an application for authorization of the first domestic RFID tag chip used in the UHF band, the MB97R7020 (950MHz frequency band, ISO/IEC18000-6 TypeB, 256byte FRAM included) released by Fujitsu Limited. After a review, this RFID tag chip was authorized as a ucode tag (Authorization number 01-007, Category 1, Class 1).

In addition, a new product, the MB89R119 with 256 bytes of FRAM built-in, has been authorized as a ucode tag, (authorization number 01-008, Category 1, Class 1). This has the same radio wave usage specification as the MB89R116/118 by Fujitsu Limited (13.56MHz bandwidth, ISO15693) that had already been authorized by the Ubiquitous ID Center.

The Ubiquitous ID Center authorizes various types of tags and classifies them by interface categories and security classes so that users can use the most appropriate tag for their applications.

The UHF band tag authorized at this time uses the radio wave frequency that is different from those of tags that operate at 2.45GHz or 13.56MHz and has different radio wave usage characteristics. It is expected that the new tag will enable a wider application field for ucodes.

[ucode interface categories]

Category	Contents
Category 0	Print tag (bar code, two-dimensional bar code)
Category 1	RF tags (RFID tags with a contactless interface and a contactless IC card)
Category 2	Active RF tags (RFID tags and sensor nodes that have batteries and communicate using RF)
Category 3	Active Infrared tags (ID tags and sensor nodes that have batteries and communicate using infrared light)

[ucode security classes]

Class	Provided security-related features
Class 0	Data defect detection
Class 1	Physically duplication resistant/Physically forgery resistant
Class 2	Identification prevention
Class 3	Tamper-resistant (physically and logically), access management to resources
Class 4	Secure communications with stranger nodes
Class 5	Time-dependent resource management function
Class 6	Internal program/security information update

[Authorized ucode tag list]

Please refer to the attached list.

END

[Inquires regarding this issue]

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