

To the Press

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T-Engine Forum

Ultra Tiny Security Unit Developed: the First Product under the T-Engine Appliance License

- Dai Nippon Printing Developed a Ultra Tiny Mobile Security Unit “UbiNet Pass TMAD-L” Enabling Electronic Money, Electronic Tickets or the PC Authentication Units -

Dai Nippon Printing Co., Ltd (Location: Tokyo President: Yoshitoshi Kitajima Capital: 114 million yen) has announced that it has developed a mobile tool, UbiNet Pass TMAD-L, which uses T-Kernel*1, licensed by T-Engine Forum (Location: Tokyo Chairman: Ken Sakamura) and can be used as electronic money or electronic tickets.

UbiNet Pass TMAD- is the first “T-Engine Appliance” product which uses the T-Kernel realtime OS whose source program was made available to the public 30th of January and uses the T-Engine Forum sanctioned license.

It also needs to be noted that a SIM card with eTRON/16Dual, a dual mode security chip which is a fruit of T-Engine Forum’s research, development, and specification design can be inserted into “UbiNet Pass TMAD-L”. eTRON is a security chip which performs encryption/decryption, electronic signature creation, and authenticated communication using public key cryptography technology. The security chip is physically tamper-resistant and repels any illegal manipulation of the internal data through all sorts of manipulating methods, be it through program, physical or electric ones, and can store the valuable data within nonvolatile memory which cannot be copied, tampered, or counterfeited. It has also network function and, forms a VPN (Virtual Private Network) between other eTRON chips on the End-to-End basis and safely transfers the valuable data via the networks. The dual mode of eTRON/16Dual means it can be used dually, with contact mode using metallic point contact and non-contact mode using the 13.56 MHz radio wave as communication path.

USB connectors and wireless communication antenna are mounted inside the body of

UbiNet Pass TMAD-L. It is possible to utilize the eTRON functions through a PC USB port in contact mode or using the radio wave coming out from the reader-writer for non-contact IC card in non-contact communication mode. “UbiNet Pass TMAD-L” mounts a monochrome liquid crystal display (displayed in 11 characters x 4 lines) which can display the available balance of electronic money or electronic tickets stored within eTRON with an easy operation on the menu.

UbiNet Pass uses 16bit CPU (H8 microprocessor) and T-Kernel, licensed by T-Engine Forum, as its OS.

Using UbiNet Pass TMAD-L will enable it to control the valuable electronic data in a variety of ways by combining contact/non-contact, online/offline, and remote/on-site operations. For example, by downloading the electronic tickets into e-TRON via internet on PCs, you can enter a stadium or event hall just by holding it up over a gate machine that works with non-contact IC card. It has been pointed out that IC card has a problem that identifying the contents of the ticket is difficult. The identification will be much easier by using the small liquid crystal display of UbiNet Pass TMAD-L, which will open the way to many different sorts of application.

Reference: T-Engine Appliance Logo



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