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The DTMF Library M3S-DTMF-Tiny Revised to V.1.00 Release 01

We have revised the DTMF library M3S-DTMF-Tiny from V.1.00 Release 00 to V.1.00 Release 01. We will supply this library free of charge.

1. Description of Revision

The H8/300H Tiny and the M16C/Tiny series of MCUs have been supported in addition to the R8C family.

2. Outline of the Product

M3S-DTMF-Tiny is a software library for generating and detecting DTMF (Dual Tone Multi-Frequency) tones. By using this library, you can introduce capabilities of generating and detecting DTMF tones to your systems designed with MCUs of the R8C family, the H8/300H Tiny and the M16C/Tiny series.

DTMF tones are used for a signaling system of push-button telephones, phone-answering machines, operations of call center equipment, remote control by using telephone handsets, toys, and other applications.

3. Features

- (1) Generates tones by using a tone data table with a sampling frequency of 16 kHz, which lightens the load on the CPU.
- (2) Outputs tones by using the PWM (Pulse Width Modulation) technique and the D/A conversion system.
- (3) Compactly designed for embedded systems; for instance, memory consumption in MCUs of R8C family is as follows:
 - For generating tones: about 16 kilobytes of ROM, 0 bytes of RAM, and 6 bytes of stack
 - For detecting tones: about 3 kilobytes of ROM, about 160 bytes of RAM, and about 60 bytes of stack
- (4) Includes the sample programs built in a workspace of High-performance Embedded Workshop.

In the sample programs are included the sample drivers for PWM output and A/D-converter input.

4. How to Apply for the Update of Your Product

If you want to update your previous version, please apply again for the update.

For how to apply for the update, go to the following Web site and see the product page of M3S-DTMF-Tiny:

<http://www.renesas.com/mw/dtmf>

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