RENESAS Tool News

The Sound Playback System and Compression Library M3S-S2-Tiny for the RL78 Family V.3.00 Release 00 Published

We have published the sound playback system and compression library M3S-S2-Tiny for the RL78 Family V.3.00 Release 00.
We supply this software product free of charge. For details of M3S-S2-Tiny, see at:
https://www.renesas.com/mw/s2
The above URL is one of our global sites.

1. Outline

M3S-S2-Tiny for the RL78 Family efficiently compresses and expands sound data at high speed by using an original algorithm for ADPCM.
So you can implement sound compression and playback systems in all your applications designed with MCUs of the RL78 series.

2. Features

The product comes with the following features:
(1) Compressing and expanding sound data by using an original ADPCM technique.
   Compresses 16-bit PCM data to 4-bit data; expands compressed 4-bit data to 16-bit PCM data; and converts expanded 16-bit data to 8- or 10-bit data according to your system's requirements.
(2) Expanding compressed data of two or more channels in parallel.
(3) Compactly designed for embedded systems.
   Consumes about 400 bytes of ROM, so can be programmed into MCUs whose internal ROMs are small in size; for example, those of the R78 family.
(4) Including sound compression and expansion utility (application

for personal computers).
Allows you to compress sound data recorded in the wav format on
your PC and to program the compressed data into MCUs.
The compressible data is monophonic PCM in 16 quantized bits
(files in the wav format).
(5) Including the sample driver for A/D input in the compression
Library which is included in the product.
(6) Including the sample driver for PWM output in the expansion library
which is included in the product.
(7) Providing sample programs in the project format of integrated
development environment CubeSuite+ package.
The sample programs run on the sound compression and playback
circuits used together with Renesas Starter Kit for RL78/G13
(under development).
The libraries and drivers used for the sample programs are
as follows:
 - Compression library and A/D driver:
      for sample program for sound compression
 - Expansion library and PWM driver:
      for sample program for sound playback

3. Obtaining Product

To obtain the product, follow these steps:
(1) Go to the following Web page:

https://www.renesas.com/products/software-tools/software-os-middleware-driver/
renesas-software-library/m3s-s2-tiny.html#sampleCodes

You see the list of application notes.
(2) In the Document Title column, look for the following title of
application note:
    RL78 Family M3S-S2-Tiny: ADPCM Encoder/Decoder Introduction Guide
(3) Click Sample Program in the Project Files column to the right of the
above title.
(4) Read through AGREEMENT that appears; then click Agree.
(5) From the Download page, download the product.