[Released on the Web]

RZ Family RZ/A2M Software Package V8.00

Outline

The RZ/A2M Software Package V8.00 has been released on the web as a RZ/A2M FreeRTOS™ software development kit.

This product is available free of charge.

1. Product Features

(1) What is an RZ/A2M Software Package?

The RZ/A2M Software Package is a software development kit that supports various functions of the RZ/A2M group, such as DRP (Dynamically Reconfigurable Processor), camera input, LCD output, and image adjustment. It consists of device drivers, middleware, sample applications for the RZ/A2M and FreeRTOS OS.

*1 embedded Graphics Multiplatform Library by TES Electronic Solutions

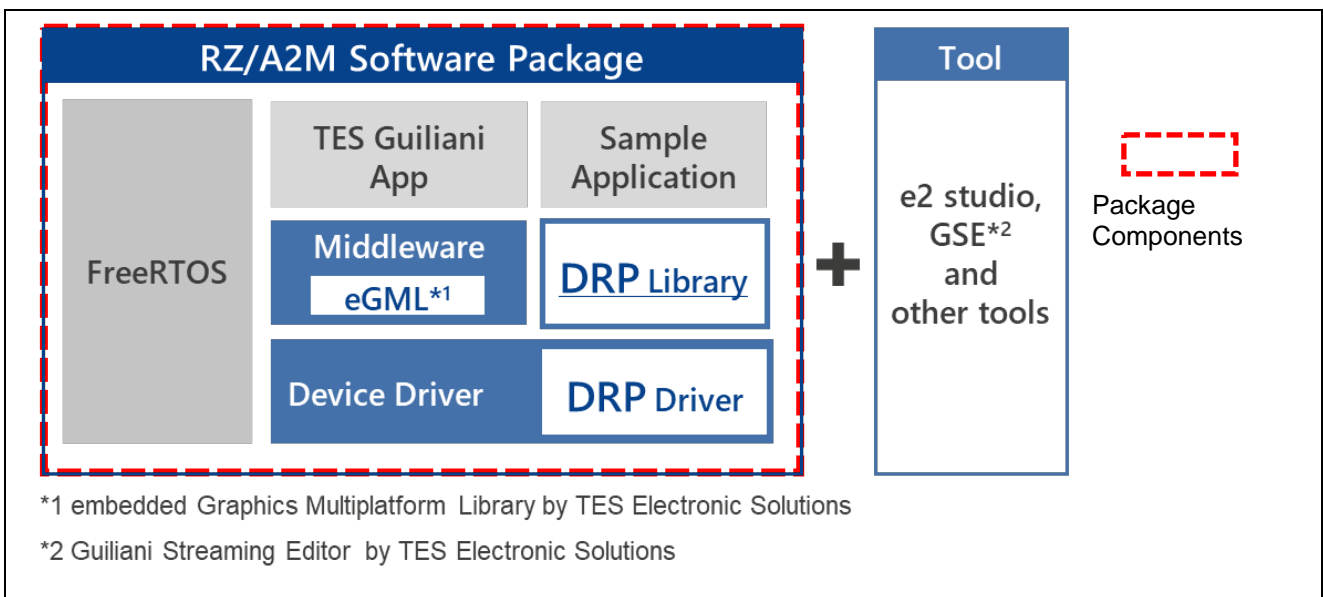*2 Guiliani Streaming Editor by TES Electronic Solutions

Figure 1 RZ/A2M Software Package Structure

(2)   Details of the update

The details of the update by RZ/A2M Software Package V8.00 are as follows.

The following functions have been newly added to the RZ/A2M Simple Application Package.

[Simple Applications Package] RZ/A2M Simple Applications Package V8.00

➤ Addition of a Simple ISP sample program

This sample program uses Simple ISP (Image Signal Processor) functions to perform color correction or noise reduction on the data input from the camera. The resulting image is then output to the display with excellent color reproduction. It can be used for reference when using camera applications that require very high color reproducibility (such as those for preprocessing AI data).

➤ Expansion of DRP library functions

The following functions have been added to the DRP library.

• Extended versions of the Simple ISP functions have been added.

✓ Simple ISP with object detection by color (HSV)
A Simple ISP to be used for object detection based on the color component of the target object.

✓ Simple ISP with background subtraction
A Simple ISP used to extract a moving object with the background subtraction method.

✓ Simple ISP with object detection using sobel
A Simple ISP used to extract an object with a complex outline from multiple objects.

✓ Simple ISP with distortion correction
A Simple ISP used to correct distortion.

✓ Simple ISP with scaling and normalization (32 bit)
A Simple ISP to be used to preprocess data for AI inference (conversion to floating point numbers, normalization, and resizing).

✓ Simple ISP with color calibration and 3DNR
A Simple ISP specially designed to output an image with excellent color reproduction with color matrix correction or 3D noise reduction.

• The Remap function has been added. This is a function to perform image conversion using X, Y coordinate value mapping data.

• The ImageMerging function has been added. This is a function to merge two grayscale images that are separately captured.

[Application Specific Package] RZ/A2M Trusted Secure IP Package V3.00

➤ Addition of a security communication sample program

This sample program uses the cryptographic functions of the RZ/A2M Trusted Secure IP driver to perform secure communication based on TLS (Transport Layer Security) 1.2.

2. Supported Devices

RZ/A2M group

3. Operating Environment

The operating environment mainly consists of the following:

・Integrated development environment: e^2 studio V7.8.0 or later

https://www.renesas.com/e2studio

・Compiler: GNU Arm Embedded Toolchain (6- 2017-q2)

https://developer.arm.com/tools-and-software/open-source-software/developer-tools/gnu-toolchain/gnu-rm/downloads

・Supported board: RZ/A2M Evaluation Board Kit

https://www.renesas.com/rz-a2m-evaluation-board-kit

・Emulator: SEGGER J-link LITE (included with the board above)

・Development assistance tool: Smart Configurator, QE for Display, QE for Camera

4. Obtaining the Product

Obtain RZ/A2M Software Package V8.00 from the URL below.

https://www.renesas.com/rza2-software-development-kit-free-rtos

5. Using the Product

Download the desired package from the URL shown in section 4. Decompress the zip file, then start building your project in e^2 studio. In e^2 studio, peripheral functions and middleware can be easily added to an existing project by using Smart Configurator.

Refer to the following user's guide for details.
RZ/A2M Smart Configurator User's Guide: e^2 studio
Document number: R20AN0583 (Note)
Note: The last 6 digits are omitted.

https://www.renesas.com/search/keyword-search.html#q=r20an0583&genre=document&redirect=true

RENESAS

Revision History

Rev.	Date	Page	Summary
		Description	
1.00	Jul.01.20	-	First edition issued

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