[Upgrade to Revision]

RX Family

R20TS0853EJ0100
Rev.1.00
Jul. 01, 2022

Demonstration of Digital Signal Analysis and Judgement Using FFT Rev.1.60

Outline

The RX Family Demonstration of Digital Signal Analysis and Judgement Using FFT has been updated from Rev.1.50 to 1.60. This application note is supplied free of charge.

1. Products to Be Updated

- RX Family Demonstration of Digital Signal Analysis and Judgement Using FFT

  Revision: 1.50

  Document number: R01AN4431EJ0150

2. Description

The main changes are as follows. Refer to the application note for details..

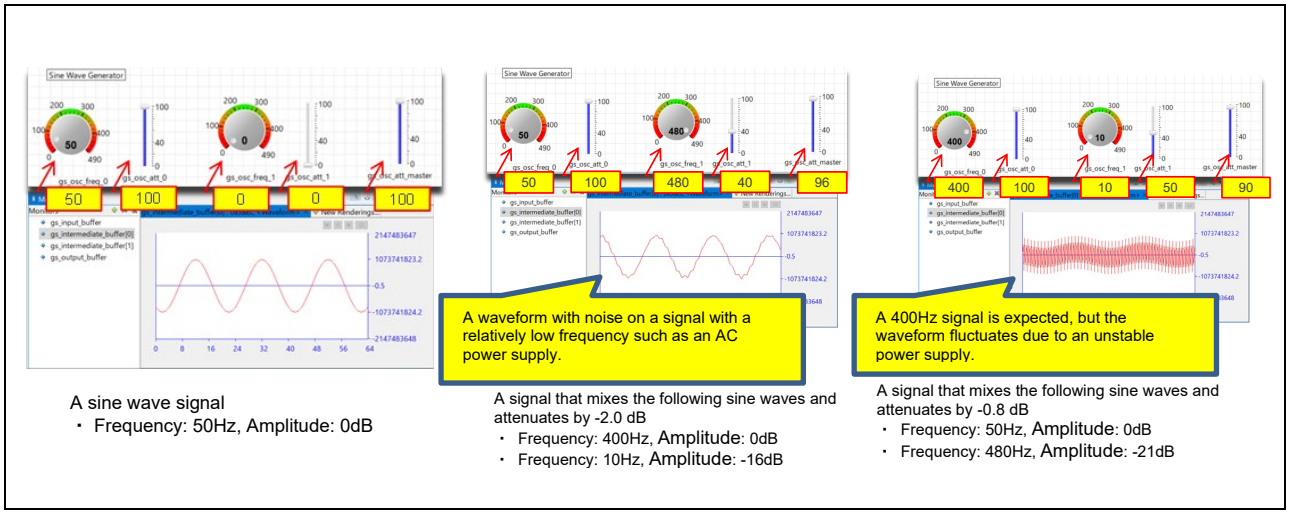
- Added sine wave generation processing (Refer to Figure 1)

  Generates a test signal to evaluate the DSP (IIR filter and FFT processing) of the sample program. By using this function, DSP can be demonstrated only with an evaluation board (Target Board for RX231, etc.) and a PC (e^2 studio).

  - Control the frequency and amplitude of the sine wave with controllers that applies Visual Expressions of e^2 studio.
  - A mixed signal can be output by controlling the outputs of the two oscillators. (Refer to Figure 2)

- As a signal source for DSP processing, RX231 analog signal input or sine wave generation processing can be selected.
- Updated software modules (Firmware Integration Technology, Code Generator)

Figure 1 Sine wave generation processing console (e^2 studio)



A sine wave signal
- Frequency: 50Hz, Amplitude: 0dB

A signal that mixes the following sine waves and attenuates by -2.0 dB
- Frequency: 400Hz, Amplitude: 0dB
- Frequency: 10Hz, Amplitude: -16dB

A signal that mixes the following sine waves and attenuates by -0.8 dB
- Frequency: 50Hz, Amplitude: 0dB
- Frequency: 480Hz, Amplitude: -21dB

Figure 2 Example output signal for sine wave generation processing

3. Updating the Product

Obtain the program from the URL below. (Released on Jun.2022)

https://www.renesas.com/search?keywords=r01an4431

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4. Related Web Site

DSP Library for RX Family (Introduction for DSP Library)
https://www.renesas.com/software-tool/dsp-library-rx-family

Revision History

Rev.	Date	Description	
		Page	Summary
1.00	Jul.01.22	-	First edition issued

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