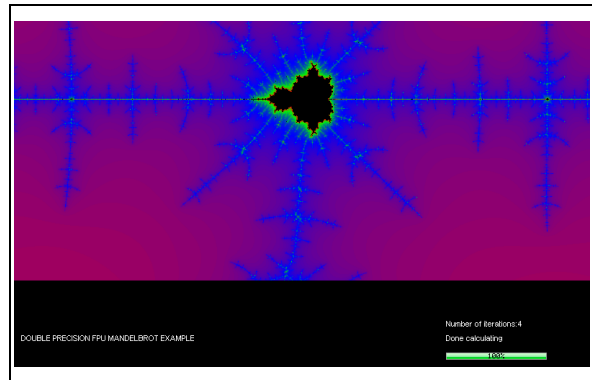


Floating-point-unit demonstration on STM32 microcontrollers, software expansion for STM32Cube

Data brief

Features

- Floating-point unit (SP FPU) in single precision
- Floating-point unit (DP FPU) in double precision
- Julia-set
- Mandelbrot-set



Description

This firmware package (X-CUBE-FPUDEMO) demonstrates the usage of the floating-point units (FPUs) available in the STM32 microcontrollers based on Cortex[®]-M4 and -M7 cores. It includes the implementation of the Julia-set and Mandelbrot-set algorithms to highlight the performances on the STM32 microcontrollers, but also to show the added value of the double-precision FPU on the STM32 microcontrollers based on Cortex[®]-M7 core.

Choosing Julia-set gives the user an indication of the performances of the STM32 microcontrollers based on Cortex[®]-M4 and -M7 cores. Choosing Mandelbrot-set gives the user an indication about the gain in precision of the double-precision FPU on the STM32 microcontrollers based on Cortex[®]-M7 core.

This application is developed with the STM32Cube embedded software. It uses the IAR[™]: EWARM, the ARM[®] Keil[®]: MDK-ARM and the free AC6: SW4STM32 tool chains and it can be easily tailored for any other tool chain.

Revision history

Table 1. Document revision history

Date	Revision	Changes
20-Dec-2016	1	Initial release.

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