SE*cube*™ DevKit

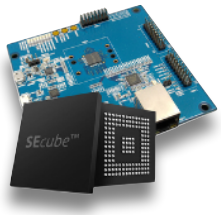
Open Source Development Kit

The ideal 3-in-1 development platform featuring :

STM32F4 - ARM® 32-bit Cortex®-M4 CPU
Certified Common Criteria CC EAL5+ Smart Card
FPGA - MachXO2-7000 - 6864 LUTs - Ultra Low Power

SEcube™ Development kit comes with the following options :

SE*cube*™ Development Kit (Board Only)



SE*cube*™ bundle (1 DevKit Board + 10 x SE*cube*™ chipsets)

USE*cube*™ bundle (1 DevKit Board + 5 x USE*cube*™ tokens with embedded chipset)

Blu5 Group
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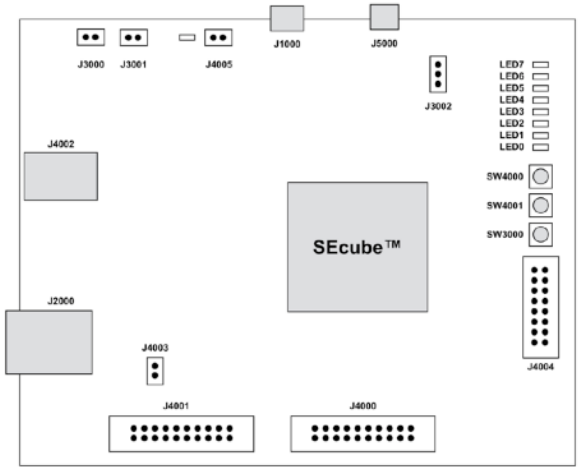
www.blu5group.com

SE*cube*™ DevKit

Technical Specifications



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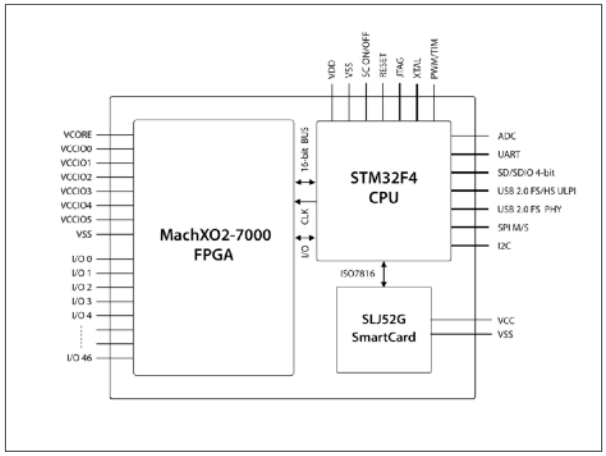

SE*cube*™

SE*cube*™ DevKit board is equipped with several interfaces and peripherals, including:

- Dimension* 10cm x 10cm x 1.8cm
- USB 2.0 High Speed (J5000)
- USB 2.0 to UART (J1000)
- microSD card (J4002)
- Ethernet 10/100 socket (J2000)
- Switches and Led (SW4000, SW4001, SW3000, LED0, …)
- SE*cube*™ embedded FPGA and CPU GPIOs (J4004, J4000)
- SE*cube*™ embedded CPU JTAG (J4001)
- Powered by *one of the 2* micro USB connectors (J3002 selects the connector to be used to power the board (pins 1-2 select J5000, pins 2-3 select J1000)
- Allows connecting two power supply lines and measuring the related power consumption, through the following jumpers 3000: 1V2 power supply line and J3001: 3V3 power supply line
- Power supply of the embedded SmartCard controlled by a dedicated pin. Jumper J4005 allows to bypass this control and power the embedded smart card permanently
- The jumper J4003 allows a direct control of the SE*cube*™ reset pin via the JTAG interface.

**Product size and dimension are based on nominal values only. Actual measurements between individual products may vary.*

NOTE:
Debugger/Programmer is not included.
Suggestion : ULINK based debugger & KEIL MDK Development Tools

(more details can be found at www.secube.eu)

The Processor

The processor adopted within the SEcube™ is the STM32F4: a high-performance ARM Cortex M4 RISC CPU, produced by ST Microelectronics. It provides the following features:

- 2 MiB of Flash memory
- 256 KiB of SRAM
- 32 bit parallelism
- Operating frequency of 180 MHz
- Low power consumption

The FPGA

The FPGA element, a Lattice MachXO2-7000 device, is based on a fast, non-volatile logic array providing the following main features:

- 7,000 LUTs
- 240 Kib embedded block RAM
- 256 Kib user flash memory
- Ultra low-power device.

The SmartCard

The third component of the SEcube™ Chip is an EAL5+ certified security controller, hereafter named smartcard, based on a secure chip produced by Infineon, that provides the following features:

- ISO7816 interface
- JavaCard Platform, Global Platform 2.2
- 128 KiB Flash
- EC, ECDH up to 521 bit (HW accelerator)
- RSA up to 2 Kib (HW accelerator)
- AES128/192/256 (HW accelerator)

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