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ATSAM4 Target

Product Datasheet
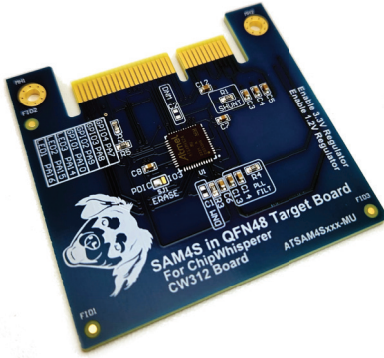
This microcontroller-based target is a Microchip SAM4S2A, which has 128 KBytes of FLASH and 64 KBytes of SRAM. It is large enough to run most algorithms you throw at it, including AES, RSA, and ECC.

The Atmel SAM4S has an internal 1.2V regulator. This regulator is not used in this target design. Instead, power for the core is supplied by an external LDO on the connected breakout board. If using a different base-board be sure that they can provide 1.2V.

This target board is used for many tutorials offered by NewAE and offers great compatibility with NewAE tools. Firmware can be written to the device directly using a ChipWhisperer, and many useful binaries are available for free.

CW313 Baseboard Required for use!

Product Specs

Target Device	ATSAM4S2
Target Architecture	Arm Cortex-M4
Core Voltage	1.2V
Flash	128KB
SRAM	64KB
Programming	Bootloader or JTAG
Shunt resistance	10Ω

Programming

The serial bootloader can be used to program this board. Atmel SAM4S has a built-in bootloader. This bootloader is ROM-Resident, and a hardware "ERASE" pin is used to erase the user-programmable FLASH memory. When the FLASH memory is empty, the bootloader runs by default.

The process of erasing the flash using the pin is handled automatically by the ChipWhisperer programming scripts.

Ordering Summary

NAE-CW312T-SAM4S   SAM4S CW313 Target for chipwhisperer

Product Links

Full Documentation

https://chipwhisperer.readthedocs.io/en/latest/chipwhisperer-target-cw308t/CW312T_ATSAM4S/README.html

Firmware Examples

https://github.com/newaetech/chipwhisperer/tree/master/hardware/victims/firmware

Design Files

https://github.com/newaetech/chipwhisperer-target-cw308t/tree/main/CW312T_ATSAM4S