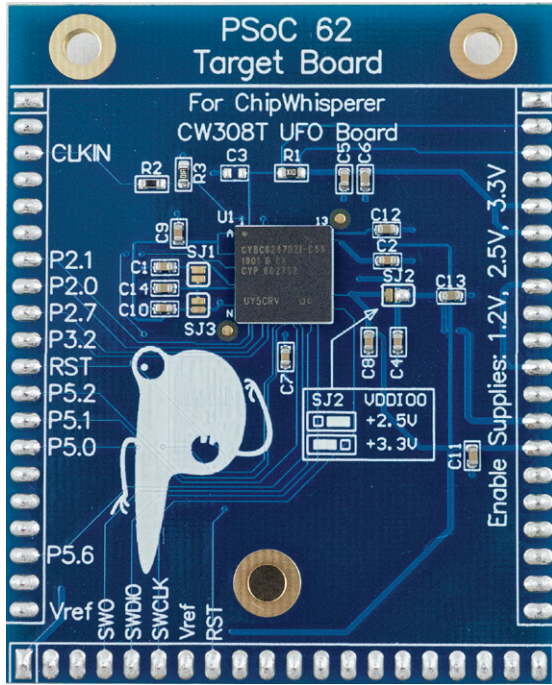




Cypress PSOC62 UFO Target

NewAE Technology Inc.
newae.com



The PSoC62 board features the CY8C6247BZI-D44 from Cypress Semiconductors. This device features multiple secure boot features, and a separate Cortex-M0 “security code” in addition to the Cortex-M4 “main processor.

The PCB layout should be compatible with the PSoC64 - the PSoC64 features effectively the PSoC62 with pre-programmed secure core memory.

This board requires an external JTAG/SWD programmer (such as OpenOCD or J-Link) for use, as does not include a bootloader.

The design files are available as part of the open-source ChipWhisperer example targets.

CW308 UFO Baseboard REQUIRED for use!

JTAG Programmer REQUIRED for use!

Product Highlights

CY8C6247BZI-D44 (PSoC62) in 124-BGA package features many security features, including E-Fuse boot options, boot verification, and a security co-processor.

Total of 1MB of FLASH Memory, 288 KB SRAM, and 1KB EFUSE memory.

Cortex-M4F main processor, and Cortex-M0+ co-processor used for security and secure boot, boots from ROM first.

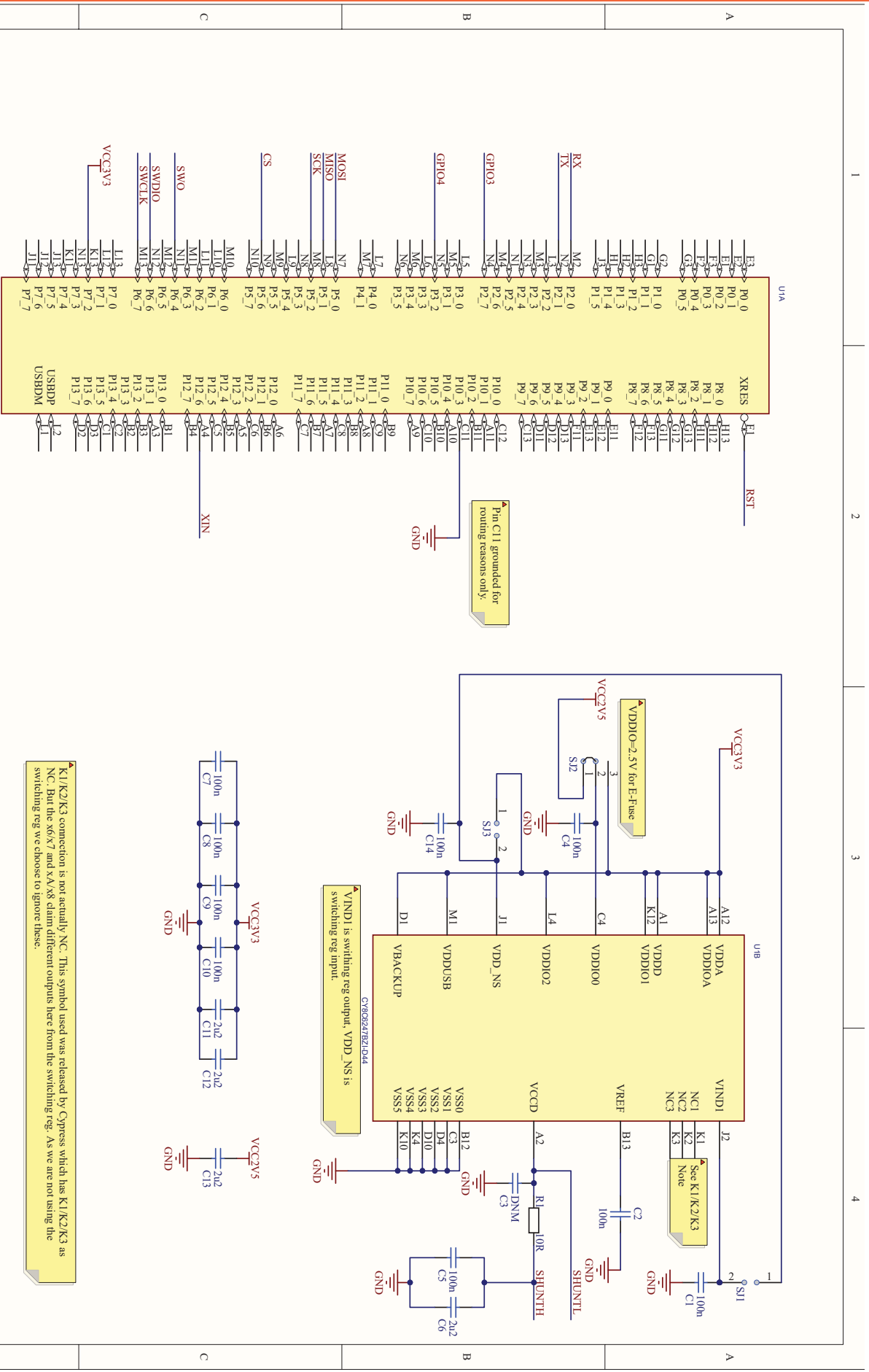
Multiple cryptographic accelerators including AES, 3DES, RSA, SHA-512, SHA-256 and ECC.

Ordering Summary

NAE-CW308T-PSOC62 Cypress PSOC62 (CY8C6247BZI-D44) UFO Target Board.

Product Links

- Full Documentation <https://wiki.newae.com/CW308T-PSOC62>
- Hardware Design <https://github.com/newaetech/chipwhisperer-target-cw308t>
- Firmware Example <https://github.com/newaetech/chipwhisperer/tree/develop/hardware/victims/firmware/>



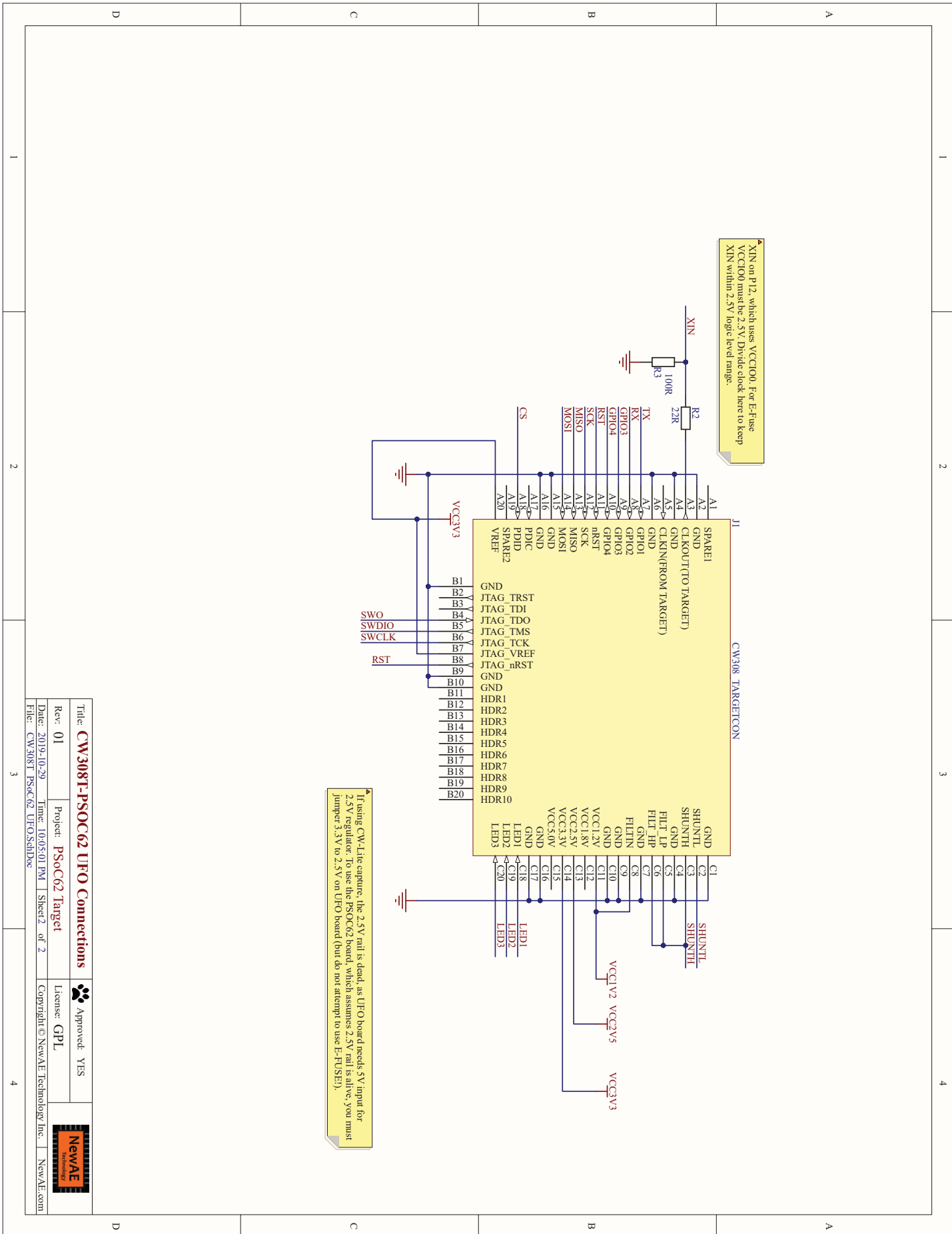
BCGA is 0.65mm spacing, but the breakout done with 5 mil trace/space and 0.3mm drill vias to make PCB fab easier, limits usage of pins to outer two rows + some of the inner balls.

Pin C11 grounded for routing reasons only.

VINDI is switching reg output, VDD_NS is switching reg input.

K1/K2/K3 connection is not actually NC. This symbol used was released by Cypress which has K1/K2/K3 as NC. But the x6/87 and xA/x8 claim different outputs here from the switching reg. As we are not using the switching reg we choose to ignore these.

Title: CW308T-PSOC62 Microcontroller		Approved: YES	
Rev: 01	Project: PSOC62 Target	License: GPL	
Date: 2019-10-29	Time: 10:05:01 PM	Sheet 1 of 2	Copyright © NewAE Technology Inc. NewAE.com
File: CW308T_PSoC62_MCU_SchDoc			



XIN on P12, which uses VCC100. For E-Fuse VCC100 must be 2.5V. Divide clock here to keep XIN within 2.5V logic level range.

If using CW-Lite capture, the 2.5V rail is dead, as UFO board needs 5V input for 2.5V regulator. To use the PSOC62 board, which assumes 2.5V rail is alive, you must jumper 3.3V to 2.5V on UFO board (but do not attempt to use E-FUSE!).

Title: CW308T-PSOC62 UFO Connections		Approved: YES		
Rev: 01	Project: PSOC62 Target	License: GPL	Copyright © NewAE Technology Inc.	
Date: 2019-10-29	Time: 10:05:01 PM	Sheet 2 of 2		NewAE.com
File: CW308T_PSoC62_UFO.SchDoc				

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