

# CYPRESS SECURE DEVICE MANAGEMENT FOR THE INTERNET OF THINGS

The Internet of Things (IoT) and its exponential growth exposes connected devices to cyber threats. To protect privacy and keep users safe from physical harm, security must be implemented throughout the lifecycle of your IoT product.

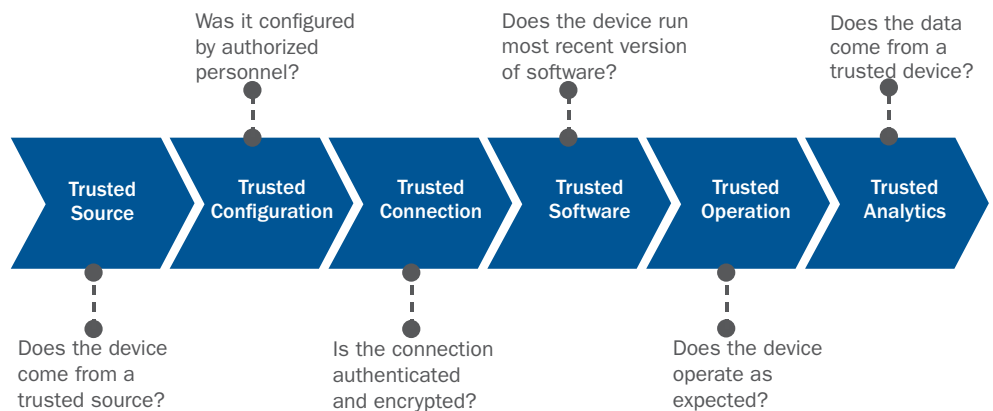
Cypress and Amazon Web Services are working together to implement a scalable, easy-to-use, cost-effective, and secure “device-to-cloud” solution, incorporating secure hardware, secure provisioning, and secure device management.



## CAN YOU TRUST YOUR DATA?

There are many points from source to consumption where data can be compromised.

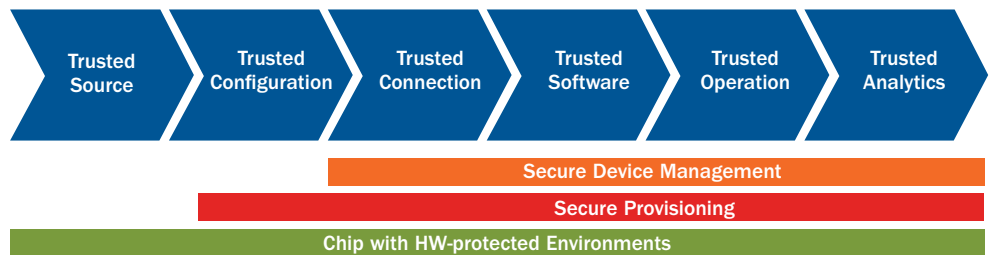
Have you implemented the right security to trust your data?



## TRUSTED DATA STARTS WITH A TRUSTED DEVICE

Trusted data starts with a securely provisioned device that safeguards data through protected execution & data storage.

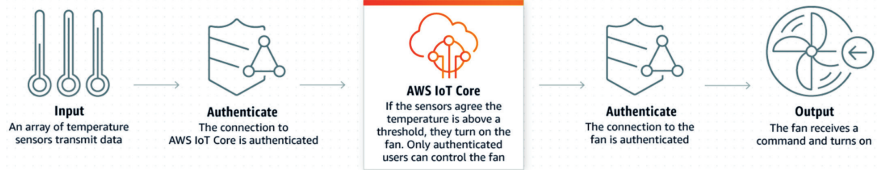
Secure device management can securely manage and update all devices and protect data throughout the product’s lifecycle.





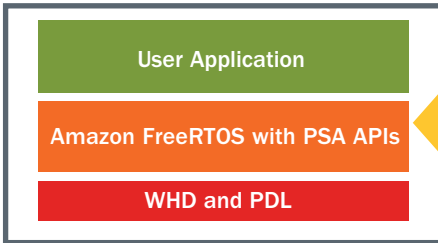
## AWS IoT CORE

- Secure device management with AWS IoT Core and PSoC 64 Secure MCUs
- Just in Time Provisioning for secure device onboarding
- Authenticated data from device to cloud
- Supports end-to-end data encryption



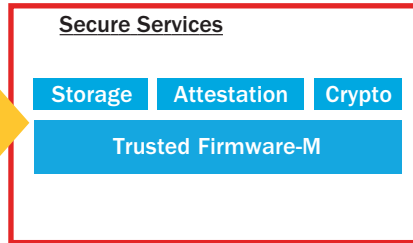
## PSOC 64 SECURE MICROCONTROLLERS

### Non-Secure Processing Environment (NSPE)



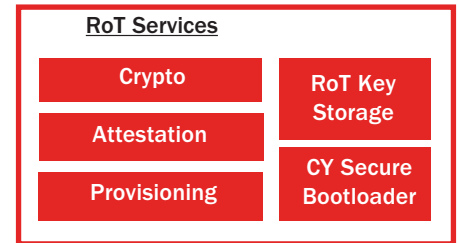
Cortex-M4

### Secure Processing Environment (SPE)



Cortex-M0+

### Root-of-Trust and Services



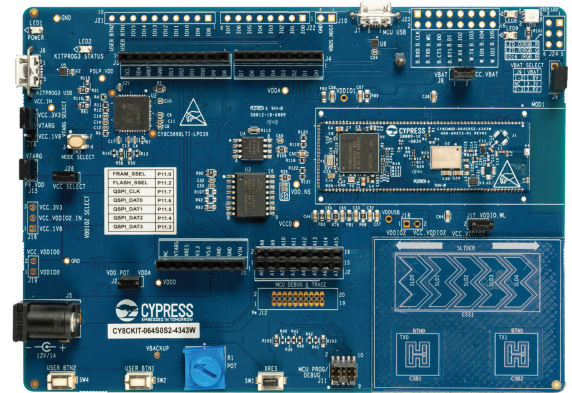
Develop your user application on the Arm® Cortex® -M4 processor in PSoC 64. Amazon FreeRTOS supports Platform Security Architecture APIs enabling you application to access secure services within the secure processing environment.

PSoC 64 Standard Secure MCUs ship with a pre-established SPE and an isolated root-of-trust all running in the Cortex-M0+. This dedicated security co-processor utilizes open source Trusted Firmware-M (TF-M) and interacts with the NSPE through a hardware-based Inter-Processor Communication (IPC) interface.

The root-of-trust is isolated from the SPE and provides an immutable identify for the device, securely stores keys, and supports secure services such as secure boot, secure provisioning, and attestation. The security co-processor in PSoC 64 makes it easy for you to implement security in your application.

## PSOC 64 DEVELOPMENT KIT

- PSoC 64 secure MCU with 2MB Flash/1MB SRAM
- Platform Security Architecture (PSA) certified
- Murata Type 1DX module based on Cypress' CYW4343W (2.4GHz Wi-Fi / Bluetooth combo)
- 512-Mbit external Quad-SPI NOR flash
- CapSense® capacitive sensing buttons and slider
- On-board programmer/debugger
- Arduino Uno expansion headers



CY8CKIT-064S0S2-4343W



GET STARTED NOW

FOR MORE INFORMATION: [www.cypress.com/psoc64](http://www.cypress.com/psoc64)  
[www.aws.amazon.com/iot-core](http://www.aws.amazon.com/iot-core)

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