



We are the link
between the real and
the digital world.

Getting Started with Infineon Wi-Fi MCU

Infineon's virtual show 2020



Infineon Connectivity Solutions for Wi-Fi Connected Products

Wi-Fi & Wi-Fi Bluetooth Combo Connectivity

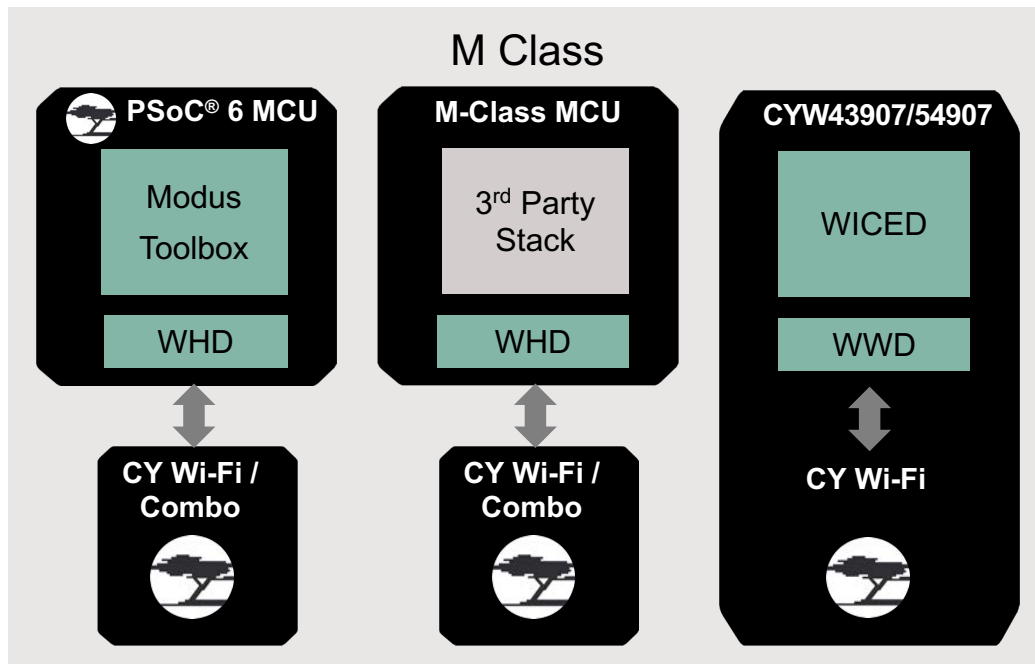
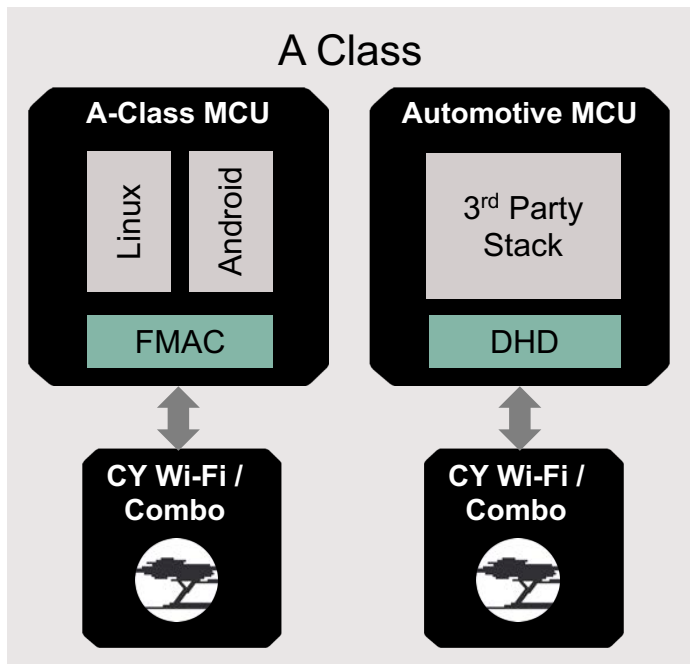
- › Robust, secure connectivity provides a great customer experience
- › Ultra low power options for battery-operated products
- › Broad family of technology, band, and power options
- › Software support for Linux, Android, and RTOS
- › Wide range of Wi-Fi and Bluetooth capabilities
- › Current IoT Network Intelligence included for rich telemetry and high reliability

Combined Compute + Connectivity

- › Ultra-low-power PSoC® 6 MCUs
- › Power, package, and peripherals well suited to the IoT
- › Best-of-breed CapSense built in
- › New PSoC® 64 "Just Works" secure MCU with hardware-based security and root of trust
- › Full integrated software stack improves time to market, security, risk, and software reuse
- › Compatible with all Wi-Fi and Wi-Fi Bluetooth combo chips

**Reduce cost, risk, and time to bring
high-quality, differentiated connected products to market**

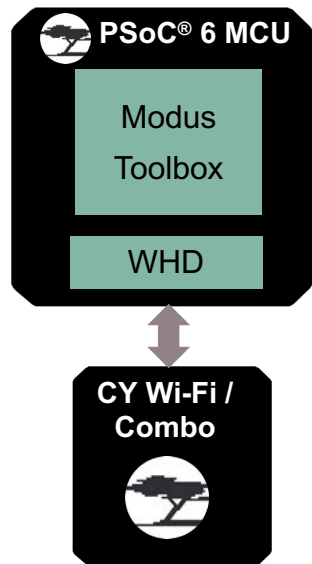
Software & Solution Architectures for Wi-Fi Connected Products



3rd-Party Software
 ICW Software
 Devices

Serving a broad range of Wi-Fi applications

Unified Compute and Connectivity



Benefits of PSoC® 6 MCU

- › Lowest power MCU
- › Peripheral rich options
- › Hardware-based security & root of trust



Benefits of CY Wi-Fi / Combo

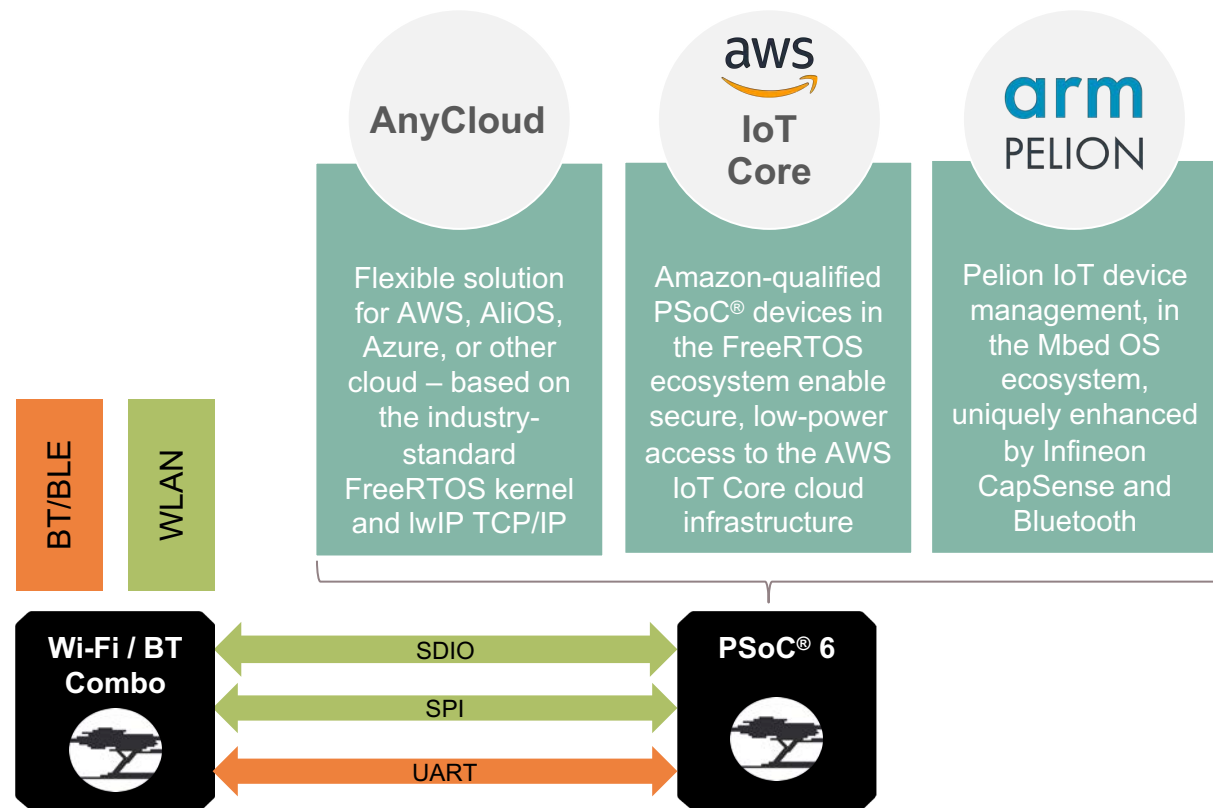
- › Lowest power
- › INI for remote telemetry & continuous improvement
- › Robust & reliable connectivity



Best Platform for M-Class Wi-Fi

- › Integrated software accelerates time to market
- › Unified updates for security fixes and new features reduces lifecycle costs
- › Pre-tested, pre-integrated software improves security and quality
- › Coordinated MCU and Wi-Fi optimized power consumption increases battery life
- › Prepared for new connectivity and security features and roadmap chips to future proof your design

M-Class Wi-Fi Architecture for Edge Applications



Choices

- › Cloud Solution
- › Development ecosystem
- › IDE/debugger
- › Compiler
- › Secure MCU
- › Connectivity device
 - Hardware interface

ModusToolbox – What's Inside?



Tools

Libraries

Project Creator

Code Examples
(mtb_*)

Library Manager

AnyCloud Libraries

Configurators and
Tuners

MCU Middleware

Partner IDEs

Device Libraries
(e.g. PSoC® 6 MCU)

Partner Compilers

Board Support (BSP)
(TARGET_*)

Multi-platform development tools

- › Create projects for any hardware
- › Add libraries and update versions
- › Set up peripherals graphically
- › Build with the best optimizations
- › Edit and Debug in your favorite tools
- › CI-friendly build flow

Complete set of Libraries

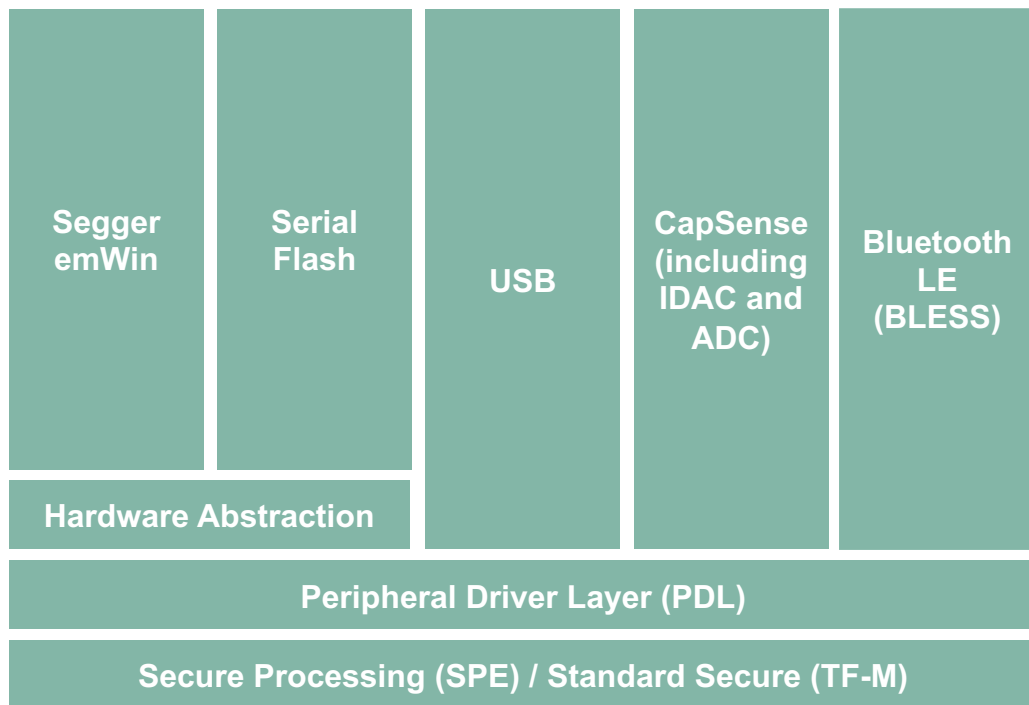
- › Vigorously documented Code Examples
- › Extensive middleware
- › Easily-extended BSPs

Embedded Solution

- › Famous PSoC® MCU
 - CapSense
 - Motor Control
 - On-chip Bluetooth LE
 - Flexible analog peripherals

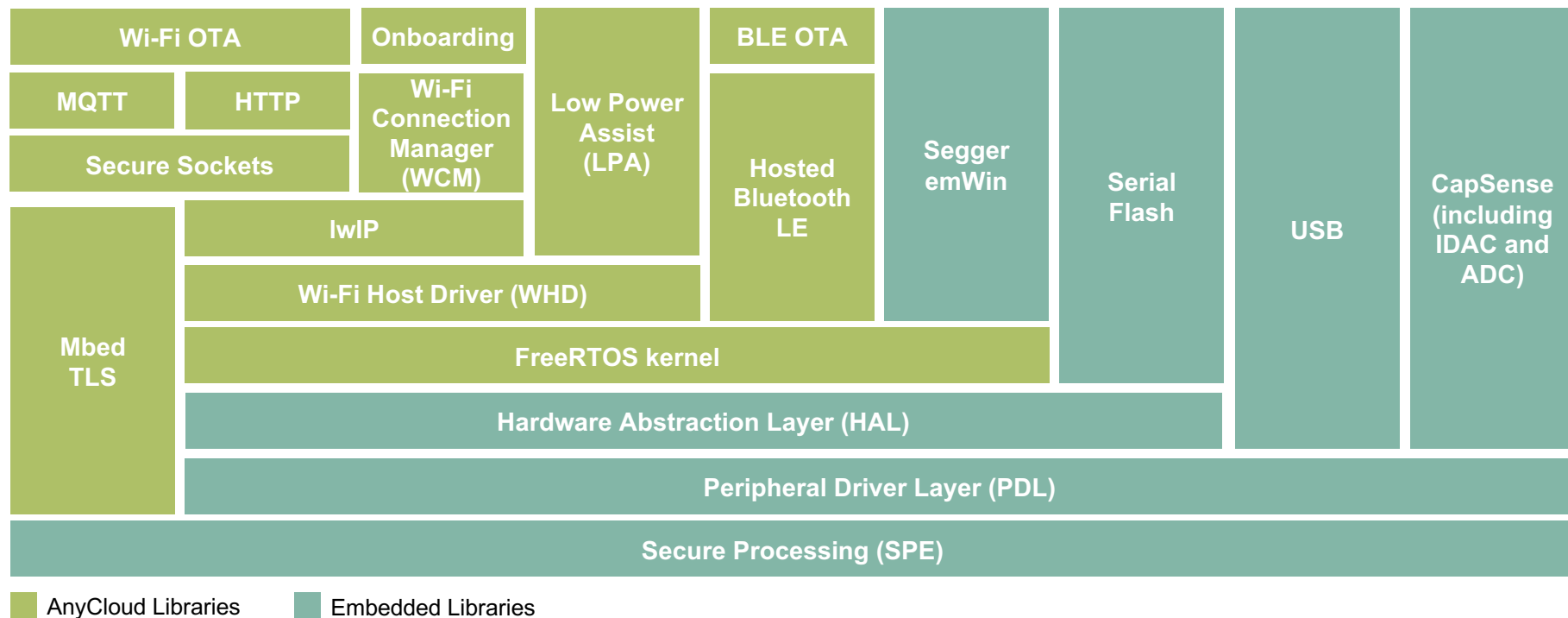
- › PSoC® 6 – Purpose-built for IoT
 - 150MHz ARM Cortex-M4 with FPU
 - Secure Cortex-M0+
 - Secure boot, Root-of-Trust, TF-M

- › PSoC® 4 – Lowest-power MCU
 - 48MHz Cortex-M0+



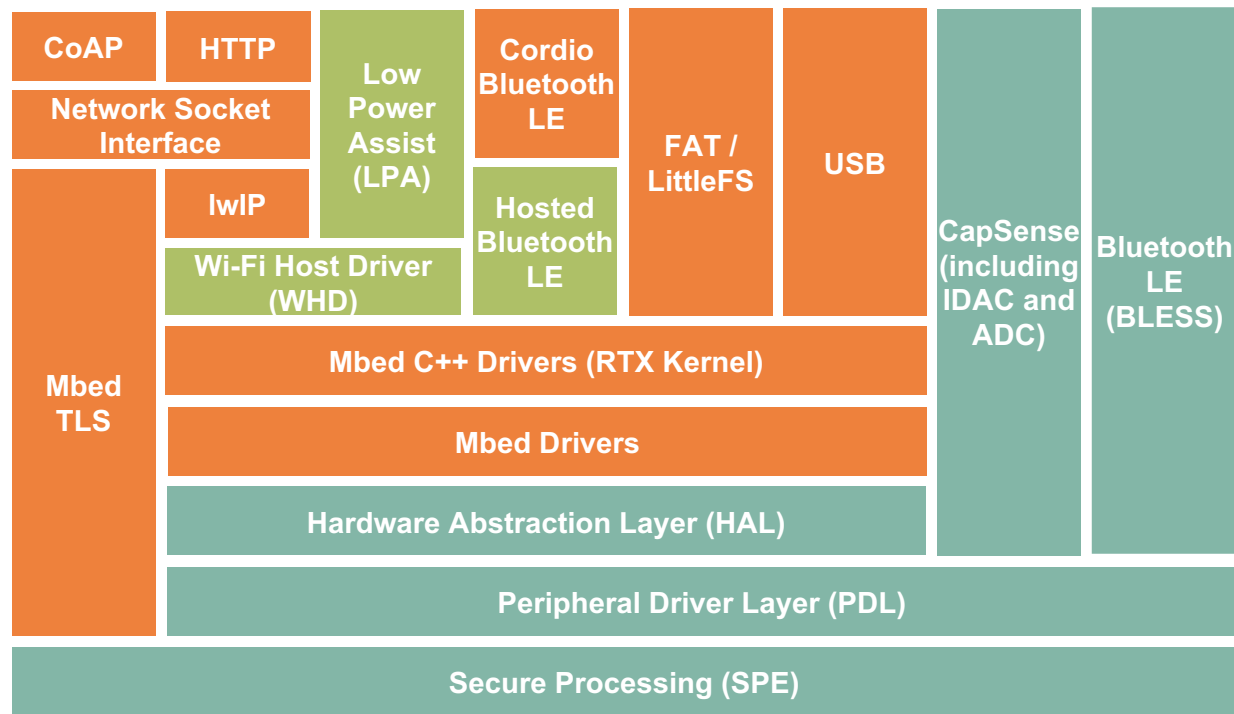
Footprint-optimized and portable across device architecture

AnyCloud Solution



Seamless combination of best-in-class MCU and Wireless functionality

Pelion Solution (Mbed OS)



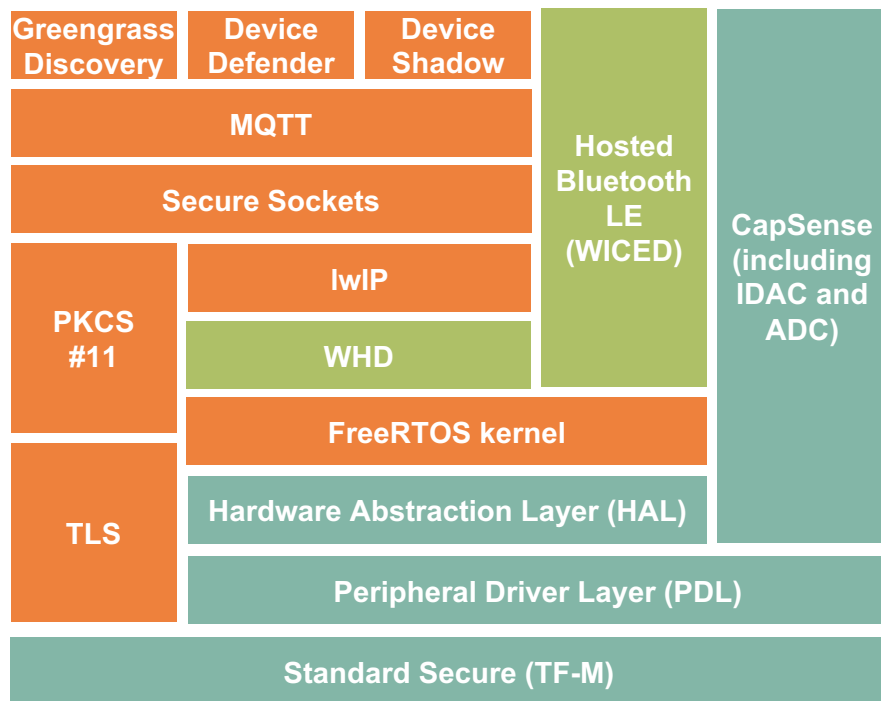
- › Only Si vendor kit with combined Wi-Fi and Bluetooth LE
- › ModusToolbox Configurators and Tuners
 - Low Power config
 - Bluetooth LE (GATT)
 - CapSense config
 - CapSense tuning
- › Secure processing

- AnyCloud Libraries
- Embedded Libraries
- Mbed OS Libraries

Unique Infineon functionality, highest security and lowest power to Mbed OS

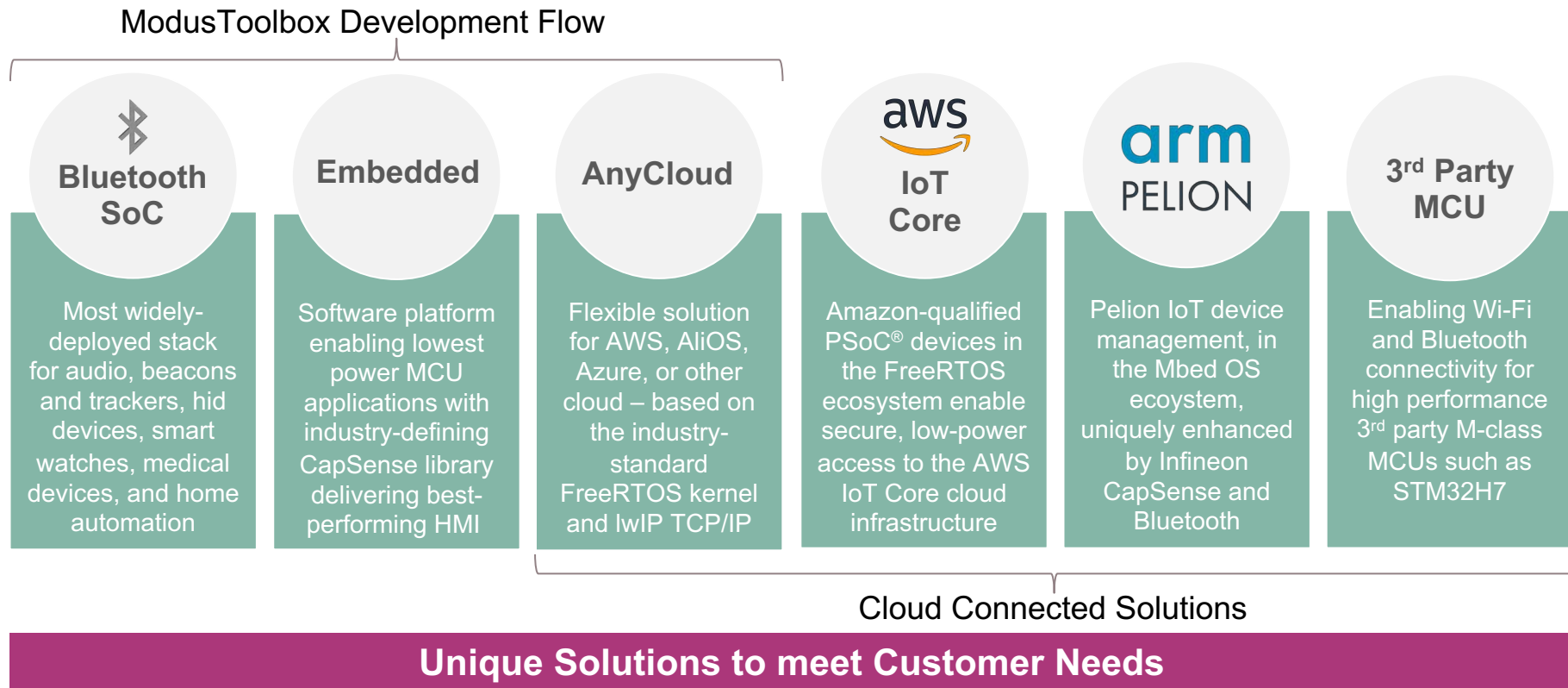
AWS IoT Solution (FreeRTOS)

- › First to market with TF-M
 - [Amazon Announcement](#)
- › ModusToolbox Configurators and Tuners
 - Low Power config
 - Bluetooth LE (GATT)
 - CapSense config
 - CapSense tuning



Unique Infineon functionality, highest security and lowest power to FreeRTOS

ICW Software Solutions





Part of your life. Part of tomorrow.