

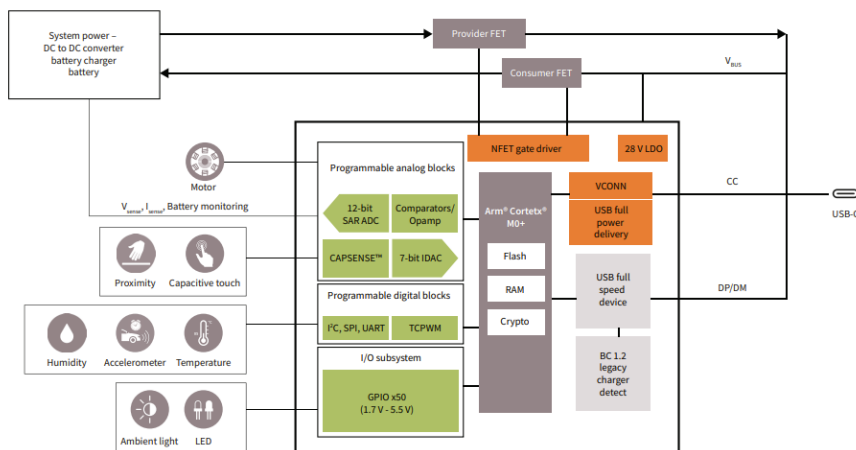
# EZ-PD™ Power Delivery Microcontroller Gen 1

Industry's first high-voltage USB-C PD solution with an onboard MCU



Power delivery microcontroller gen 1 (EZ-PD™ PMG1) is a high-voltage USB-C power delivery microcontroller (PD MCU) targeting market segments, such as consumer, industrial, and communications, that powers from the USB-C connector and needs a MCU to implement the product features.

The EZ-PD™ PMG1 family of devices has a market-proven USB power delivery stack, ensuring spec compliance and interoperability. It's the only high-voltage, programmable USB power delivery solution on the market today, complete with an integrated ARM® Cortex®-M0/M0+, up to 256 KB Flash and 32 KB RAM, a USB full speed device, with analog and digital peripherals. The EZ-PD™ PMG1 family offers customers a unified firmware view with an SDK supported in ModusToolbox™, enabling seamless migration between all EZ-PD™ PMG1 devices.



## Key features

### USB power delivery 3.1

- Supports up to 28 V on VBUS EPR
- VBUS FET gate drivers
- VBUS fault protections: OVP, OCP

### 32-Bit MCU subsystem

- 48-MHz ARM® Cortex®-M0/M0+ MCU with DMA controller and RTC
- Up to 256 KB flash and 32 KB RAM

USB full speed device with BC v1.2

### Analog peripherals

- One 12-bit, 1 MS/second ADC
- Buck-boost controller
- 2x low-power comparators, OpAmps
- CAPSENSE™ with SMARTSENSE™ auto-tuning
- 2x 7-bit current output IDACs configurable as a single 8-bit IDAC

### Digital peripherals

- Up to 8x 16-bit TCPWM blocks
- Up to 8x serial communication blocks (SCBs): I²C, SPI, UART

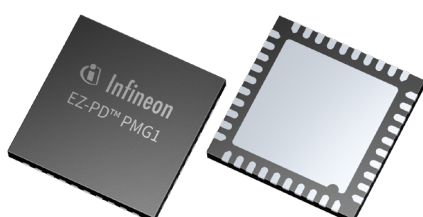
### Hardware crypto block

- AES<sup>1)</sup>, SHA<sup>2)</sup>, CRC<sup>3)</sup>, TRNG<sup>4)</sup> and vector unit

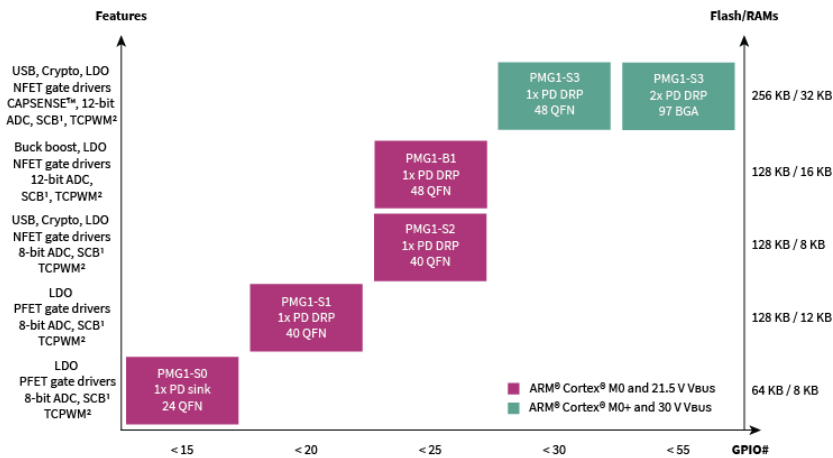
### Packages

- 24-, 40-, 48-QFN, 42-CSP and 97-BGA

- 1) Advanced encryption standard
- 2) Secure hash algorithm
- 3) Cyclic redundancy check
- 4) Pseudo random number generation



## EZ-PD™ PMG1 portfolio overview



<sup>1</sup>SCB: Serial Communication Block, <sup>2</sup>TCPWM: Timer Counter Pulse Width Modulator

### Key benefits

- BOM and area efficiency
- Reliability and safety
- Flexibility and customization
- Low risk and less compatibility issues

## Getting started with EZ-PD™ PMG1

- 1 Download **ModusToolbox™** suite
- 2 Purchase the **EZ-PD™ PMG1 kits**
- 3 Download the **Getting Started EZ-PD™ PMG1 app note to learn more**

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