

EFM32PG26 Gecko SoC Family Data Short

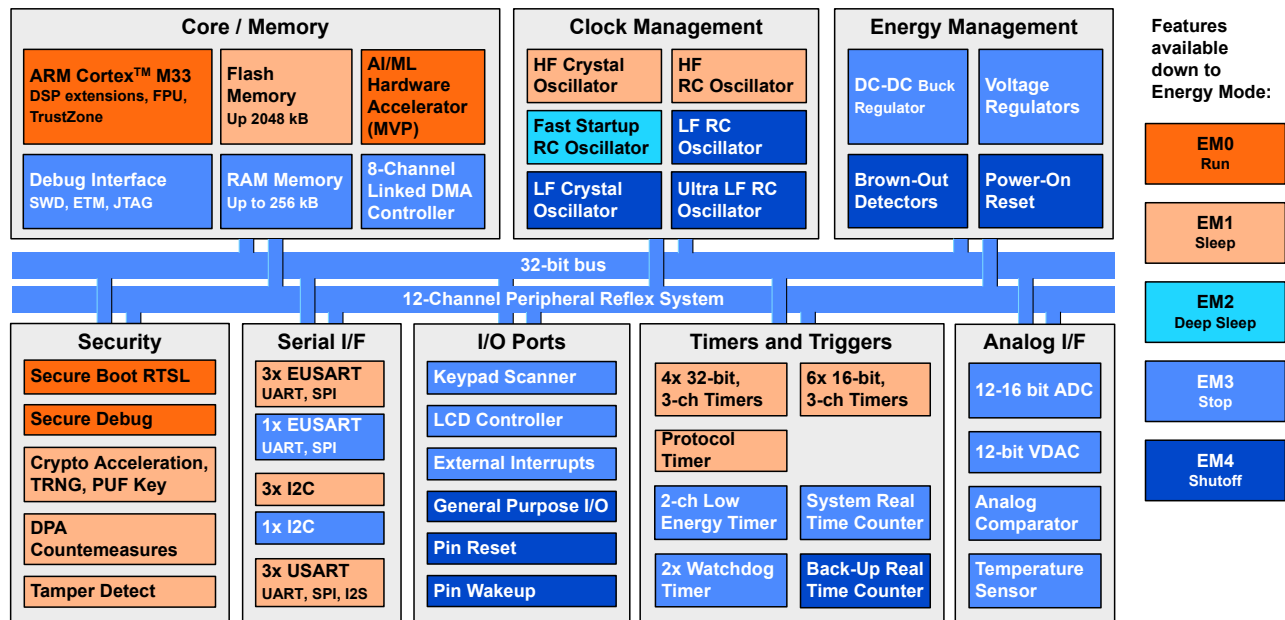
The EFM32PG26 MCU family of microcontrollers is part of the Series 2 Gecko portfolio. EFM32PG26 MCU MCUs are ideal for enabling energy-friendly embedded applications.

The highly efficient solution contains a 80 MHz Cortex-M33 with rich analog and communication peripherals to provide an industry-leading, energy efficient MCU for consumer and industrial applications.

Target applications include:

- Metering
- Industrial Automation
- Appliances
- Portable Medical Devices

KEY FEATURES
• 32-bit ARM® Cortex®-M33 core with 80 MHz maximum operating frequency
• Up to 2048 kB of flash and 256 kB of RAM
• Energy efficient design with low active and sleep currents
• Secure Vault™
• AI/ML Hardware Accelerator



1. Feature List

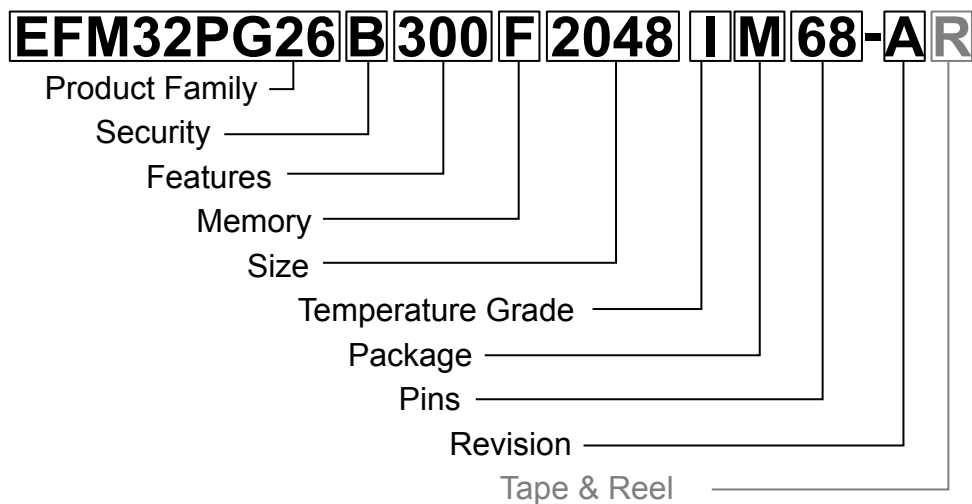
The EFM32PG26 highlighted features are listed below.

- **Low Power System-on-Chip**
 - High Performance 32-bit 80 MHz ARM Cortex[®]-M33 with DSP instruction and floating-point unit for efficient signal processing
 - Up to 2048 kB flash program memory
 - Up to 256 kB RAM data memory
 - Matrix Vector Processor for AI/ML acceleration
- **Low System Energy Consumption**
 - 44.6 μ A/MHz in Active Mode (EM0) at 80 MHz
 - 1.4 μ A EM2 DeepSleep current (16 kB RAM retention and RTC running from LFRCO)
- **Secure Vault**
 - Hardware Cryptographic Acceleration for AES128/192/256, ChaCha20-Poly1305, SHA-1, SHA-2/256/384/512, ECDSA +ECDH(P-192, P-256, P-384, P-521), Ed25519 and Curve25519, J-PAKE, PBKDF2
 - True Random Number Generator (TRNG)
 - ARM[®] TrustZone[®]
 - Secure Boot (Root of Trust Secure Loader)
 - Secure Debug Unlock
 - DPA Countermeasures
 - Secure Key Management with PUF
 - Anti-Tamper
 - Secure Attestation
- **Wide selection of MCU peripherals**
 - Analog to Digital Converter (IADC)
 - 12-bit @ 1 Msps or 16-bit @ 76.9 kps
 - Select OPNs support High Speed Mode (up to 2 Msps) and High Accuracy Mode (up to 16 bits ENOB at 3.8 kps)
 - 2 \times Analog Comparator (ACMP)
 - 2 \times Digital to Analog Converter (VDAC)
 - Up to 64 General Purpose I/O pins with output state retention and asynchronous interrupts
 - 8 Channel DMA Controller (LDMA)
 - 20 Channel Peripheral Reflex System (PRS)
 - 6 \times 16-bit Timer/Counter with 3 Compare/Capture/PWM channels (TIMER2/3/4)
 - 4 \times 32-bit Timer/Counter with 3 Compare/Capture/PWM channels (TIMER0/1)
 - 2 \times 32-bit Real Time Counter (SYSRTC/BURTC)
 - 24-bit Low Energy Timer for waveform generation (LETIMER)
 - 16-bit Pulse Counter with asynchronous operation (PCNT)
 - 2 \times Watchdog Timer (WDOG)
 - 3 \times Universal Synchronous/Asynchronous Receiver/Transmitter (USART), supporting UART/SPI/SmartCard (ISO 7816)/IrDA/I²S
 - 4 \times Enhanced Universal Synchronous/Asynchronous Receiver/Transmitter (EUSART) supporting UART/SPI/DALI/IrDA
 - 4 \times I²C interface with SMBus support
 - Low-Frequency RC Oscillator with precision mode to replace 32 kHz sleep crystal (LFRCO)
 - Keypad scanner supporting up to 6x8 matrix (KEYSCAN)
 - Integrated Low-Energy LCD Controller supporting up to 4 \times 40 segments (LCD)
 - Die temperature sensor with \pm 1.5 $^{\circ}$ C accuracy after single-point calibration
- **Wide Operating Range**
 - 1.71 V to 3.8 V single power supply
 - -40 $^{\circ}$ C to 125 $^{\circ}$ C
- **Packages**
 - **QFN68** 8 mm \times 8 mm \times 0.85 mm
 - **BGA136** 7 mm \times 7 mm \times 0.82 mm

2. Ordering Information

Table 2.1. Ordering Information

Ordering Code	Flash (kB)	RAM (kB)	Secure Vault	IADC High-Speed / High-Accuracy	Matrix Vector Processor	GPIO	Package / Pinout
EFM32PG26B300F2048IM68-A	2048	256	High	Yes	Yes	48	QFN68 / MCU
EFM32PG26B300F2048IL136-A	2048	256	High	Yes	Yes	64	BGA136 / ADC
EFM32PG26B300F1024IM68-A	1024	256	High	Yes	Yes	48	QFN68 / MCU
EFM32PG26B300F1024IL136-A	1024	256	High	Yes	Yes	64	BGA136 / ADC
EFM32PG26B100F512IL136-A	512	128	High	Yes	Yes	64	BGA136 / ADC



Field	Options
Product Family	<ul style="list-style-type: none"> • EFM32PG26: Gecko 26 Family
Security	<ul style="list-style-type: none"> • A: Secure Vault Mid • B: Secure Vault High
Features [f1][f2][f3]	<ul style="list-style-type: none"> • f1 <ul style="list-style-type: none"> • 1: 128kB RAM • 1: 128kB RAM, IADC High-Speed / High-Accuracy Available • 2: 256kB RAM • 3: 256kB RAM, IADC High-Speed / High-Accuracy Available • 4: 512kB RAM • 5: 512kB RAM, IADC High-Speed / High-Accuracy Available • f2 <ul style="list-style-type: none"> • 0: No feature enabled • f3 <ul style="list-style-type: none"> • 0: No feature enabled
Memory	<ul style="list-style-type: none"> • F: Flash
Size	<ul style="list-style-type: none"> • Memory Size in kBytes
Temperature Grade	<ul style="list-style-type: none"> • I: -40 to +125 °C
Package	<ul style="list-style-type: none"> • M: QFN • L: BGA
Pins	<ul style="list-style-type: none"> • Number of Package Pins
Revision	<ul style="list-style-type: none"> • A: Revision A
Tape & Reel	<ul style="list-style-type: none"> • R: Tape & Reel (optional)

Figure 2.1. Ordering Code Key

Simplicity Studio

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