

EFM32PG26 Gecko SoC Family Data Short

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

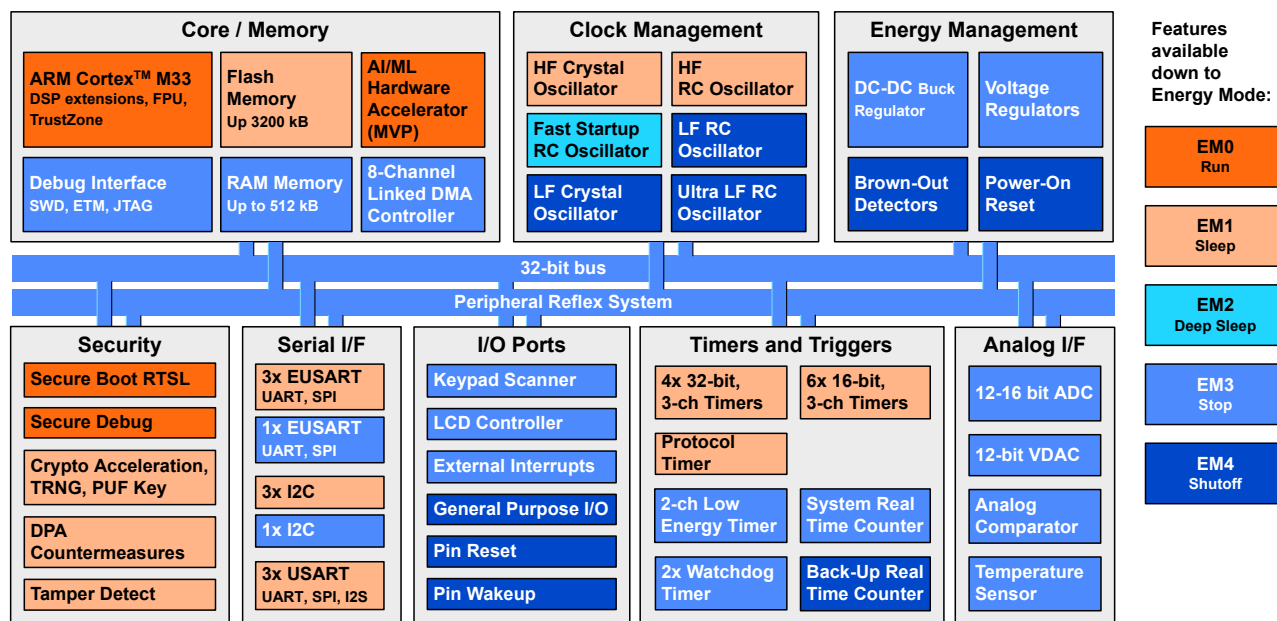
The highly efficient solution contains a 80 MHz Cortex-M33 with rich analog and communication peripherals to provide an industry-leading, energy efficient MCU for consumer and industrial applications.

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 3200 kB of flash and 512 kB of RAM
- Energy efficient design with low active and sleep currents
- Secure Vault™
- AI/ML Hardware Accelerator



1. Feature List

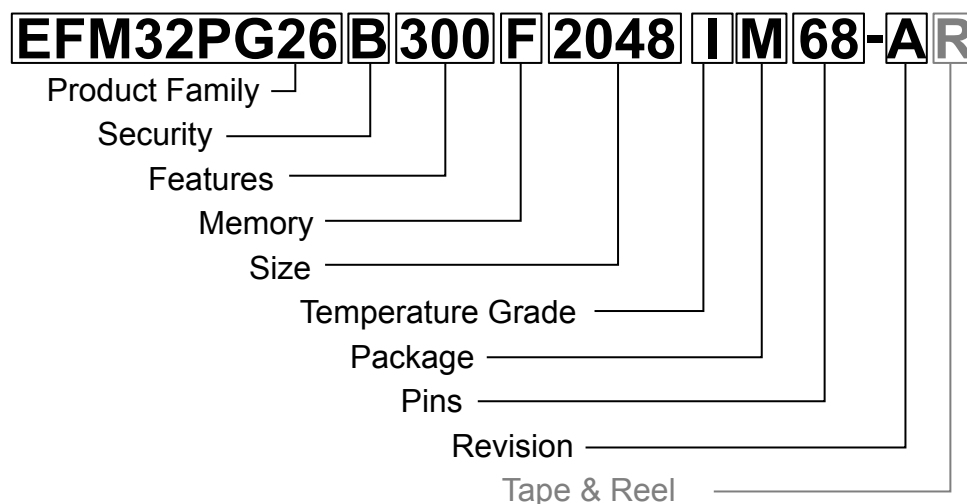
The EFM32PG26 highlighted features are listed below.

- **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 3200 kB flash program memory
 - Up to 512 kB RAM data memory
 - Matrix Vector Processor for AI/ML acceleration
- **Low System Energy Consumption**
 - 42.8 µA/MHz in Active Mode (EM0) at 80 MHz
 - 1.4 µA 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
 - PSA L3 certified
- **Wide selection of MCU peripherals**
 - Analog to Digital Converter (IADC)
 - 12, 16, or 20-bit output
 - Select OPNs support High Speed Mode (up to 2 Msps) and High Accuracy Mode (up to 16 bits ENOB at 3.8 ksps)
 - 2 × Analog Comparator (ACMP)
 - 2 × 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 × 16-bit Timer/Counter with 3 Compare/Capture/PWM channels (TIMER2/3/4)
 - 4 × 32-bit Timer/Counter with 3 Compare/Capture/PWM channels (TIMER0/1)
 - 2 × 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 × Watchdog Timer (WDOG)
 - 3 × Universal Synchronous/Asynchronous Receiver/Transmitter (USART), supporting UART/SPI/SmartCard (ISO 7816)/IrDA/I²S
 - 4 × Enhanced Universal Synchronous/Asynchronous Receiver/Transmitter (EUSART) supporting UART/SPI/DALI/IrDA
 - 4 × 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 × 40 segments (LCD)
 - Die temperature sensor with +/-1.5 °C accuracy after single-point calibration
- **Wide Operating Range**
 - 1.71 V to 3.8 V single power supply
 - -40 °C to 125 °C
- **Packages**
 - **QFN48** 6 mm × 6 mm × 0.85 mm
 - **QFN68** 8 mm × 8 mm × 0.85 mm
 - **BGA136** 7 mm × 7 mm × 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	Dedicated ADC Inputs	GPIO	Package / Pin-out
EFM32PG26B501F3200IM68-B	3200	512	High	Yes	No	4	48	QFN68 / MCU
EFM32PG26B501F3200IM48-B	3200	512	High	Yes	No	4	28	QFN48 / MCU
EFM32PG26B501F3200IL136-B	3200	512	High	Yes	No	4	64	BGA136 / MCU
EFM32PG26B500F3200IM68-B	3200	512	High	Yes	Yes	4	48	QFN68 / MCU
EFM32PG26B500F3200IM48-B	3200	512	High	Yes	Yes	4	28	QFN48 / MCU
EFM32PG26B500F3200IL136-B	3200	512	High	Yes	Yes	4	64	BGA136 / MCU
EFM32PG26B301F2048IM68-B	2048	256	High	Yes	No	4	48	QFN68 / MCU
EFM32PG26B301F2048IL136-B	2048	256	High	Yes	No	4	64	BGA136 / MCU
EFM32PG26B301F1024IM68-B	1024	256	High	Yes	No	4	48	QFN68 / MCU
EFM32PG26B301F1024IL136-B	1024	256	High	Yes	No	4	64	BGA136 / MCU
EFM32PG26B101F512IM68-B	512	128	High	Yes	No	4	48	QFN68 / MCU
EFM32PG26B101F512IL136-B	512	128	High	Yes	No	4	64	BGA136 / MCU



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 B: Revision B
Tape & Reel	<ul style="list-style-type: none"> R: Tape & Reel (optional)

Figure 2.1. Ordering Code Key

Simplicity Studio

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