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.

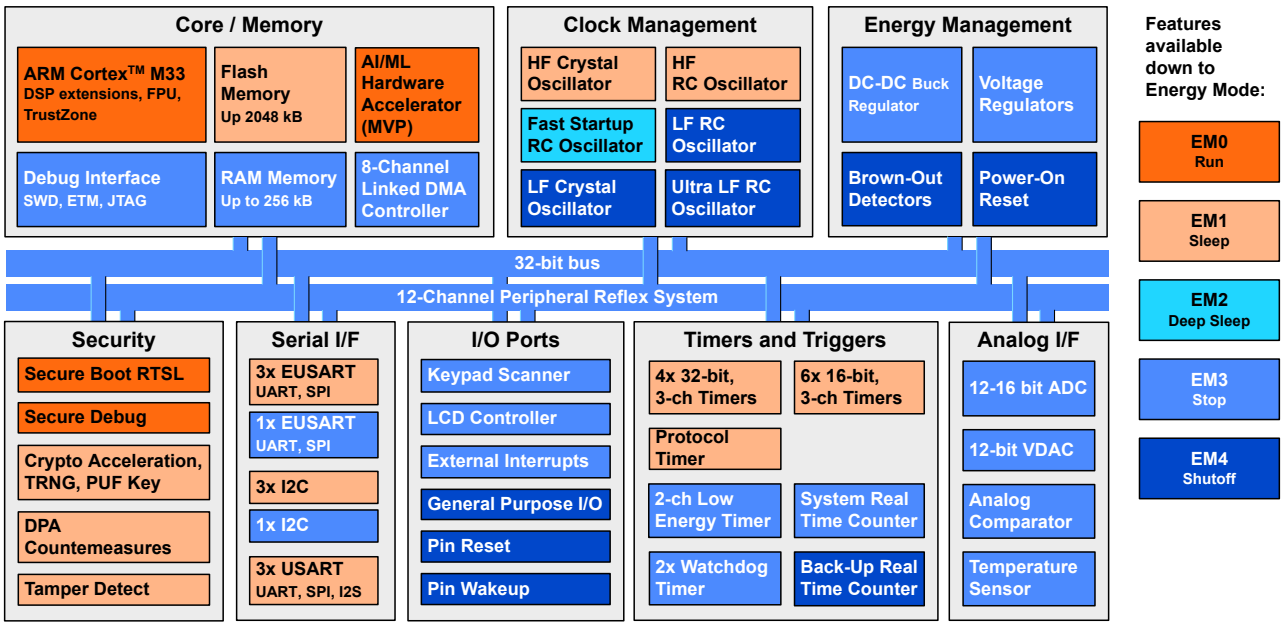
The highly efficient solution contains a 80 MHz Cortex-M33 with rich analog and communication peripherals to provide an industry-leading, energy efficient MCU for consumer and industrial applications.

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

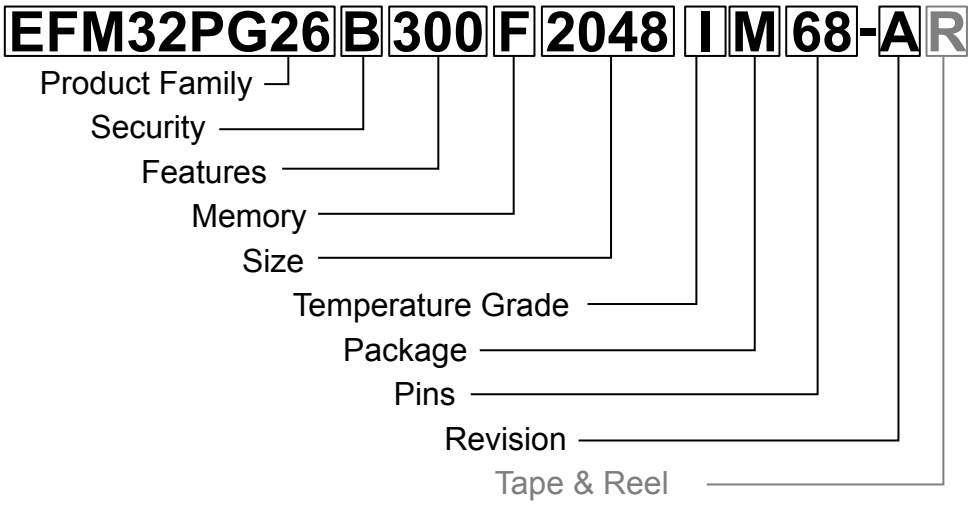
The EFM32PG26 highlighted features are listed below.

- **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 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
- **Wide selection of MCU peripherals**
  - Analog to Digital Converter (IADC)
    - 12-bit @ 1 Msps or 16-bit @ 76.9 ksps
    - 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/I^2S
  - 4 × Enhanced Universal Synchronous/Asynchronous Receiver/Transmitter (EUSART) supporting UART/SPI/DALI/IrDA
  - 4 × I^2C 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**
  - **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	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	• **EFM32PG26**: Gecko 26 Family
Security	• **A**: Secure Vault Mid • **B**: Secure Vault High

Features [f1][f2][f3]	• f1
	  • **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
	  • **0**: No feature enabled
	• f3
	  • **0**: No feature enabled

Memory	• **F**: Flash
Size	• **Memory Size** in kBytes
Temperature Grade	• **I**: -40 to +125 °C
Package	• **M**: QFN • **L**: BGA
Pins	• **Number of Package Pins**
Revision	• **A**: Revision A
Tape & Reel	• **R**: Tape & Reel (optional)

Figure 2.1. Ordering Code Key

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Silicon Laboratories Inc.
400 West Cesar Chavez
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USA

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