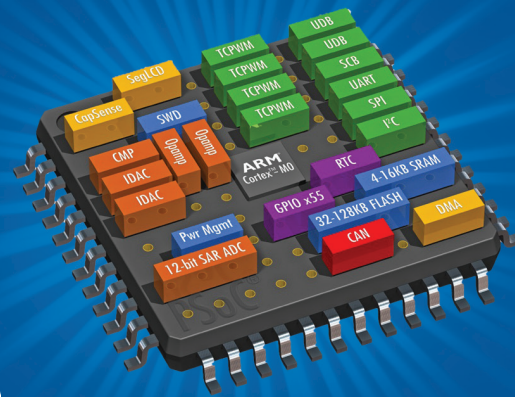


CYPRESS

PSoC[®] 4 M-SERIES

REPLACE LEGACY 8-/16-BIT PLATFORMS WITH THE
WORLD'S MOST FLEXIBLE 32-BIT ARM[®] CORTEX[®]-M0
ONE-CHIP SOLUTION



PRODUCT OVERVIEW

Solve Complex Design Problems with PSoC 4, The World's Most Flexible 32-bit ARM[®] Cortex[®]-M0 Platform

The new PSoC 4 M-Series expansion to the portfolio includes more programmable analog and digital blocks, expanded memory, new peripherals and higher number of I/Os for all your mixed-signal embedded requirements.

Design Custom Analog Front Ends (AFEs) with 12 Programmable Analog Blocks:

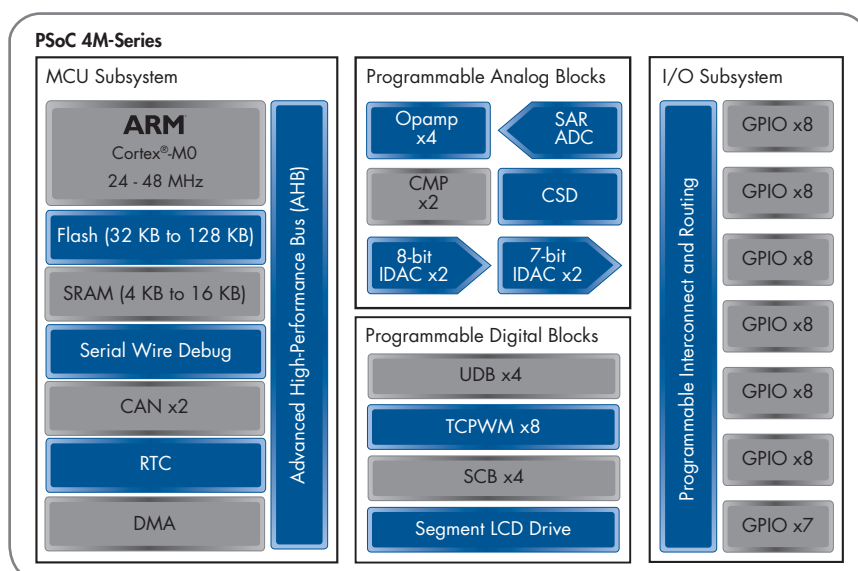
Implement complex 12-bit AFEs with the integrated low-power opamps, comparators, analog multiplexers and SAR ADC. Replace mechanical buttons with sophisticated CapSense touch-sensing interfaces.

Implement Coprocessors and Serial Interfaces with 16 Programmable Digital Blocks:

Offload the CPU with custom coprocessors and support emerging interface standards by using the integrated timer/counter/PWM blocks, serial communication blocks and the Universal Digital Blocks.

Now Featuring:

Dual Controller Area Network blocks (CAN 2.0), peripheral-to-peripheral Direct Memory Access (DMA) and up to 55 I/Os that support analog, digital, LCD drive and CapSense touch-sensing interfaces.



PSoC 4 M-Series Block Diagram

FEATURES

32-BIT ARM[®] CORTEX[®]-M0 CPU

- Up to 48-MHz Clock Speed
- Up to 128KB Flash, 16KB SRAM
- DMA Controller
- 2x Controller Area Network (CAN 2.0)
- Real Time Clock (RTC)

CAPSENSE[®] WITH SMARTSENSE[™] AUTO-TUNING

- Capacitive Sigma-Delta (CSD) Controller
- CapSense on up to 55 I/Os

PROGRAMMABLE ANALOG BLOCKS

- 2x Low-Power Comparators
- 4x Low-Power Opamps
- 1x 12-bit, 1 Msps SAR ADC
- 4x IDACs (2x 8-bit, 2x 7-bit)
- 1 to 55 Channel Analog Multiplexer

PROGRAMMABLE DIGITAL BLOCKS

- 4x Universal Digital Blocks (UDBs)
- 8x 16-bit Timer/Counter/PWM Blocks
- 4x Serial Communication Blocks

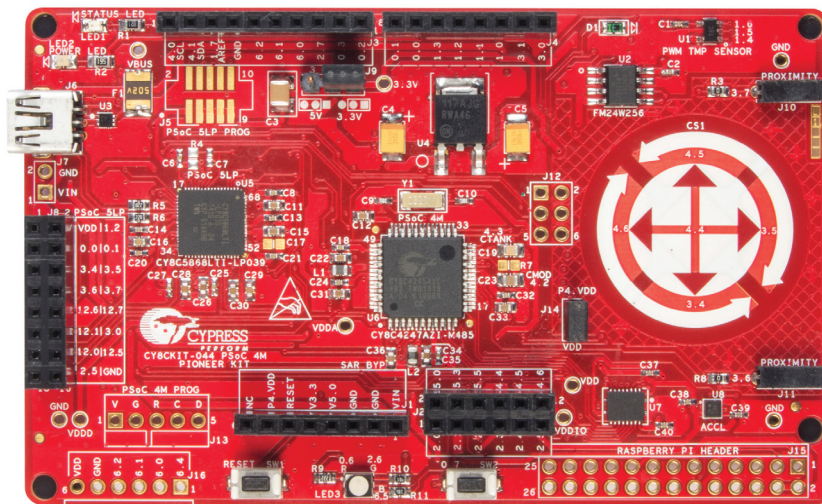
SUPPLY VOLTAGE

- 1.7 – 5.5 V

PACKAGES

- 48-pin LQFP
- 64-pin TQFP (0.8mm pitch)
- 64-pin TQFP (0.5mm pitch)
- 68-pin QFN

PSoC 4 M-SERIES PIONEER KIT



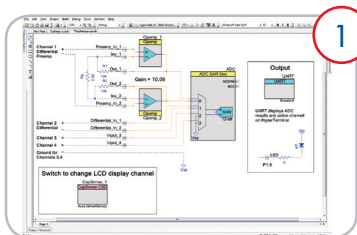
Features

- PSoC 4200M device
- CapSense Gesture Pad and Proximity Headers
- On-board Sensors:
 - Ambient Light
 - 3-Axis Accelerometer
 - Temperature
- Interface Headers for:
 - Arduino Uno shields
 - Raspberry Pi
 - Digilent Pmods
- On-board Programmer and Debugger
- On-board 1-Mbit Cypress F-RAM
- Power measurement

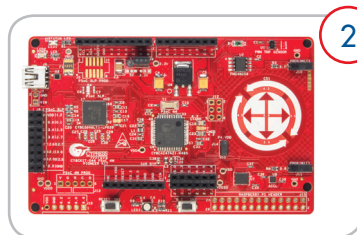
PSoC 4 M-SERIES DEVICE PORTFOLIO

Category	MPN	Features													
		Max. CPU Speed (MHz)	Flash (KB)	SRAM (KB)	UDB	Opamp (CTBm)	CSD	IDAC (1X7-Bit, 1-6-Bit)	Direct LCD Drive	12-bit SAR ADC	LP Comparators	TCPWM Blocks	SCB Blocks	CAN	GPIO
4100M	CY8C4125AZI-M445	24	32	4	0	2	X		X	806 Ksps	2	8	4		51
	CY8C4126AZI-M445	24	64	8	0	2	X		X	806 Ksps	2	8	4		51
	CY8C4126AZI-M475	24	64	8	0	4		X		806 Ksps	2	8	4		51
	CY8C4127AZI-M475	24	128	16	0	4		X		806 Ksps	2	8	4		51
	CY8C4127AZI-M485	24	128	16	0	4	X	X	X	806 Ksps	2	8	4		51
4200M	CY8C4245AZI-M445	48	32	4	4	2	X		X	1000 Ksps	2	8	4		51
	CY8C4246AZI-M445	48	64	8	4	2	X		X	1000 Ksps	2	8	4		51
	CY8C4246AZI-M475	48	64	8	4	4		X		1000 Ksps	2	8	4		51
	CY8C4247AZI-M475	48	128	16	4	4		X		1000 Ksps	2	8	4		51
	CY8C4247AZI-M485	48	128	16	4	4	X	X	X	1000 Ksps	2	8	4	X	51

GET STARTED NOW



Download the PSoC Creator Integrated Design Environment
www.cypress.com/Creator



Buy the \$25 PSoC 4 M-Series Pioneer Kit (CY8CKIT-044)
www.cypress.com/go/CY8CKIT-044



Download the Getting Started Application Note
www.cypress.com/go/AN79953



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