Product brief

PSoC™ 4100S Max



Introducing the PSoC™ 4100S Max as a new member of the PSoC™ 4 MCU family. PSoC™ 4100S Max will introduce Multi-Sense Convertor (MSC) technology which enables the next-gen CAPSENSE™ solutions and other sense modes such as inductive, resistive and current measurements. MSC based CAPSENSE™ will greatly enhance the SNR and lower the power from existing CAPSENSE™ solutions. The PSoC™ 4100S Max features two MSC blocks which can work in synchronized mode to scan a large number of sensors with minimal CPU involvement. These advancements enable higher performance, lower power and lower cost HMI applications. Combined with new communication methods and a cryptographic accelerator, the PSoC™ 4100S Max innovates your product to the next level.

The PSoC™ 4100S Max family provides:

- 48MHz Cortex-M0+ CPU with 16 DMA channels
- Up to 384KB Flash and 32KB SRAM
- 12-bit, 1-Msps SAR ADCs
- Two Opamps and two low-power comparators
- Eight TCPWM blocks and five SCB blocks (one supports 3.4Mbsp I2C)
- Cryptographic accelerator (AES / SHA / CRC / TRNG / PRNG)
- One CAN-FD controller
- One Tx I2S interface
- One LCD controller
- Up to 84 GPIOs, including 24 Smart I/Os
- 100-TQFP, 64-TQFP and 48-TQFP packages



Powered by CAPSENSE™

Key applications:

Smart Home	Thermostats, Vacuum Cleaners, Smart Locks
Home Appliance	Dishwasher, Fridge, Microwave, Ovens
Consumer	Printers, 3-D Printers, Notebooks
Smart Building	Gesture Control, Building Automation, Presence Detection
Industrial Automation	Industrial Robots, Inductive Sensors, Motor Control

PSoC™ 4 Part Number Nomenclature

CY8C 4 A B C DE F - S XYZ

Field	Description	Values	Meaning
CY8C	Cypress Prefix		
4	Architecture	4	PSoC™ 4
A	Family	1	PSoC™ 4100 Family
B	CPU Speed	4	48 MHz
C	Flash Capacity	8	256 KB
		9	384 KB
DE	Package Code	AX/AZ	TQFP (0.8mm pitch) / (0.5mm pitch)
F	Temperature Range	I	Industrial
		Q	Extended Industrial
S	Series Designator		
XYZ	Attributes Code	000-999	Code of feature set in specific family

PSoC™ 4100S Max Part Numbers	
CY8C4148AZI-S548	CY8C4149AZI-S555
CY8C4148AZI-S553	CY8C4149AZQ-S555
CY8C4148AZI-S555	CY8C4149AZI-S558
CY8C4148AZI-S558	CY8C4149AZQ-S558
CY8C4148AZQ-S558	CY8C4149AZI-S565
CY8C4148AZI-S583	CY8C4149AZI-S568
CY8C4148AZI-S585	CY8C4149AZI-S575
CY8C4148AZI-S588	CY8C4149AZI-S578
CY8C4148AZI-S593	CY8C4149AZI-S583
CY8C4148AZI-S595	CY8C4149AZI-S585
CY8C4148AZI-S598	CY8C4149AZI-S588
CY8C4149AZI-S543	CY8C4149AZI-S593
CY8C4149AZI-S545	CY8C4149AZQ-S593
CY8C4149AZQ-S545	CY8C4149AZI-S595
CY8C4149AZI-S548	CY8C4149AZQ-S595
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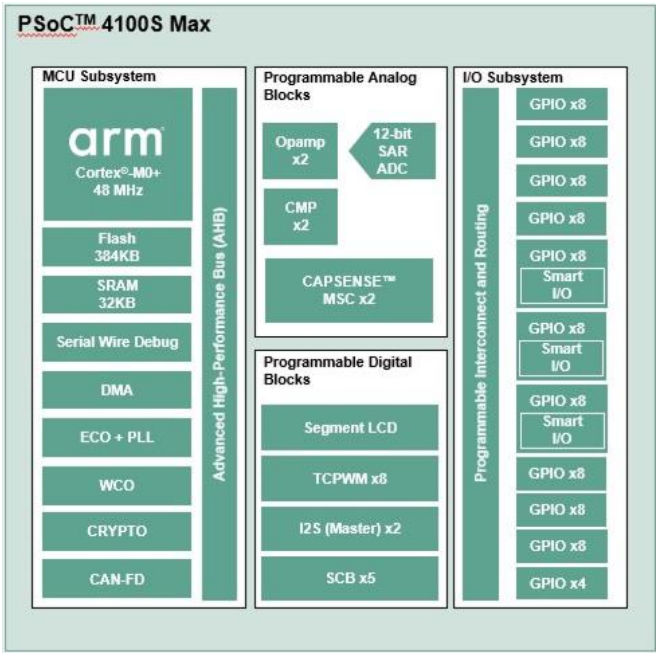
CY8C4149AZI-S553	CY8C4149AZQ-S598



PSoC™ 4100S Max Getting Started

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Easy as 1-2-3!

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