



Building the Most Trusted MCU Solutions

5-Volt 8-bit S08P MCU Family

The scalable S08P family provides a wide range of feature/price options for product differentiation. Choose between the full-featured TSI-enabled PT class, the equally full-featured PA and PB class, or the cost-effective PL and PLS class.

TARGET APPLICATIONS

- ▶ Appliances (large and small)
- ▶ Metering
- ▶ HVAC
- ▶ UPS
- ▶ Electric motors
- ▶ Power tools
- ▶ Battery chargers
- ▶ Lighting controls
- ▶ Circuit breakers

OVERVIEW

The 8-bit S08P MCU family gives your designs more durability and reliability in both harsh industrial and user interface environments while meeting appliance safety standard, IEC 60730. The S08P family is simple, yet powerful, and offers exceptional EFT/ESD performance. This scalable and pin-compatible MCU family reuses the existing S08 core, IP and tools for easy migration from existing 8-bit S08 products.

DIFFERENTIATED FEATURES

S08P MCUs integrate key features, including a touch-sensing interface (TSI), EEPROM and motor control FlexTimer to simplify designs and help reduce system costs. Integrated peripherals simplify PCB design, and combined with a broad portfolio of device options, result in reduced BOM costs. In addition, the S08P family is supported by our cost-effective evaluation kit.

S08P MCU FAMILY BLOCK DIAGRAM



HARDWARE DEVELOPMENT TOOLS

S08PT60 Development Board (S08PT60-EVK)

The S08PT60-EVK is a full-featured evaluation board which support S08PT, S08PA and S08PL MCUs. This board is powered by the superset, LQFP64 packaged MC9S08PT60 MCU. It also integrates rich on-board resources include thermistor, IrDA transceiver, touch electrodes and accelerometer. This board supports on-board debugger (OSBDM) to flash program and run-control debug without an external debug tool. S08PT60-EVK is compatible with the Arduino® pin layout, providing a

broad range of expansion board options, including FRDM-MC-LVBLDC for motor control application and FRDM-TOUCH for touch sensing application.

S08PB16 Development Board (S08PB16-EVK)

The S08PB16-EVK is a full-featured evaluation board which support S08PB and S08PLS MCUs. This board is powered by the TSSOP20 packaged MC9S08PB16 MCU. It integrates on-board resource include potentiometer and RGB LED. Similar as S08PT60-EVK, this board also support on-board debugger and Arduino® compatible extension.

SOFTWARE DEVELOPMENT TOOLS

CodeWarrior Development Studio (IDE)

CodeWarrior Development Studio for Microcontrollers is a suite of tools that supports software development for NXP S08, ColdFire and Kinetis families. To learn more, visit nxp.com/CodeWarrior

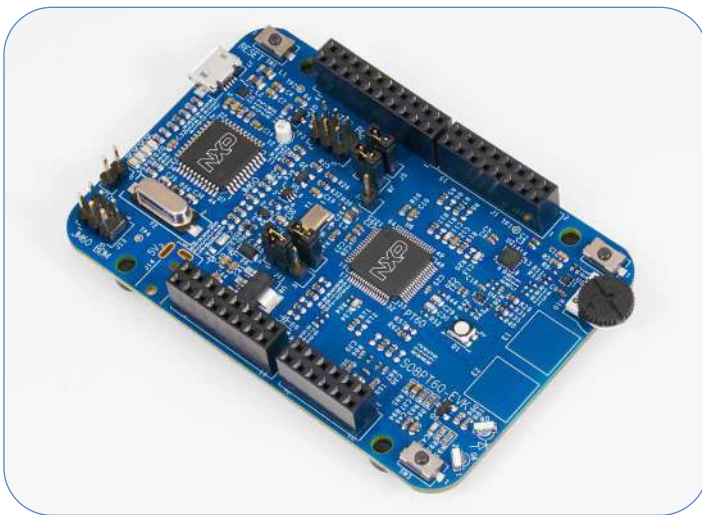
Processor Expert

Designers can further accelerate application development with the help of Processor Expert, an award-winning rapid application development tool integrated into the CodeWarrior tool suite. To learn more, visit nxp.com/ProcessorExpert

S08P MCU FAMILY FEATURE TABLE

Class	Flash	RAM	EEPROM	Interfaces	ADC	ACMP/Opamp	Temperature	Pin Count	Evaluation Board
S08PT	8 to 60 KB	2 to 4 KB	256 B	SCI, I ² C, SPI	12-bit	1 / -	-40 to 105 °C	16 to 64	S08PT60-EVK
S08PA	4 to 60 KB	512 B to 4 KB	128 to 256 B	SCI, I ² C, SPI	12-bit	1 / -	-40 to 105/125 °C	8 to 64	S08PT60-EVK
S08PB	8 to 16 KB	1 KB	-	SCI, I ² C	12-bit	2 / 1	-40 to 105/125 °C	8 to 20	S08PB16-EVK
S08PL	4 to 60 KB	512 B to 4 KB	128 B to 256 B	SCI	10-bit	1 / -	-40 to 85 °C	8 to 64	S08PT60-EVK
S08PLS	8 to 16 KB	1 KB	-	SCI	10-bit	1 / -	-40 to 85 °C	8 to 20	S08PB16-EVK

S08PT60-EVK



S08PB16-EVK



www.nxp.com/s08

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