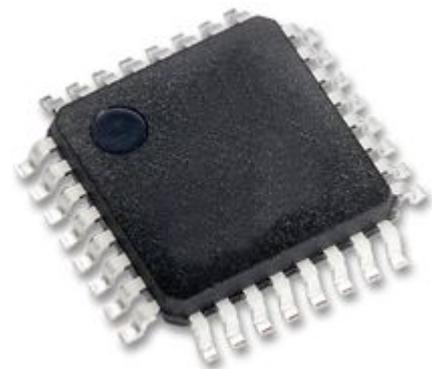




MC9S08MP16VLC 8-bit Motor Control Microcontrollers

General Description:

The S08MP16 is a low cost 8-bit MCU that delivers Safe, Accurate and Inexpensive Motor Control for a wide speed range of Industrial and Automotive applications. An ideal entry-level solution for Brushless DC (BLDC) motor applications it features an 8 channel PWM/FlexTimer module providing hardware dead-time insertion, Analogue Comparators, Programmable Gain Amplifier, and a 12-bit ADC with PWM hardware triggering. Also offered is an Independently Clocked COP & Cyclic Redundancy Check (CRC) Engine providing clock failure protection & memory content validation for safety-critical applications implementing IEC60730



S08MP16 Block Diagram		
SPI	16 KB Flash	13-ch., 12-bit ADC with Temperature Sensor
SCI	1 KB RAM	(6+2)-ch., 16-bit FlexTimer with PWM Functions
I ² C	BDM/ICE	Programmable Gain Amplifier
RTC	CRC Generator	ICS
8-bit MTIM	KBI	COP/Watchdog
5-bit DAC (x3)	S08 50 MHz CPU	28 SOIC, 32 LQFP, 48 LQFP

Key Features:

- Up to 50MHz HCS08 CPU core (40MHz for Automotive)
- 2.7 to 5.5V operating voltage
- 16KB Flash, 1KB RAM
- Motor Control Dedicated 1x 2-ch + 1x 6ch FlexTimer
- 3x High Speed Analogue Comparators
- Programmable Gain Amplifier
- 2x Programmable Delay Blocks

- 13ch, 12-bit ADC with 2.5µs conversion time
- 28SOIC, 32LQFP, 48LQFP packages
- 40°C to 105°C for industrial and up to 125°C for automotive (48LQFP only)
- Single-wire Background Debug Interface and ICE debug module

Applications:

- Industrial drives/fans/pumps
- HVAC systems
- Actuator systems
- Medical equipment (infusion pumps, respirators, analyzers)
- Office Equipment
- Small appliance/personal care (food processors, shavers)
- Automotive electrical fuel pump
- Automotive window lift
- Automotive fan control
- Automotive high-brightness LEDs

Related Products Information:

Mfr Part #	Farnell #	Newark #	Description
MC9S08MP16VLC	1784750	29R0576	8-Bit Microcontroller IC, Family/Series:HCS08, 32LQFP
S9S08MP16E2MLF	1784751	29R0663	8-Bit Microcontroller IC, Family/Series:HCS08 , 48LQFP