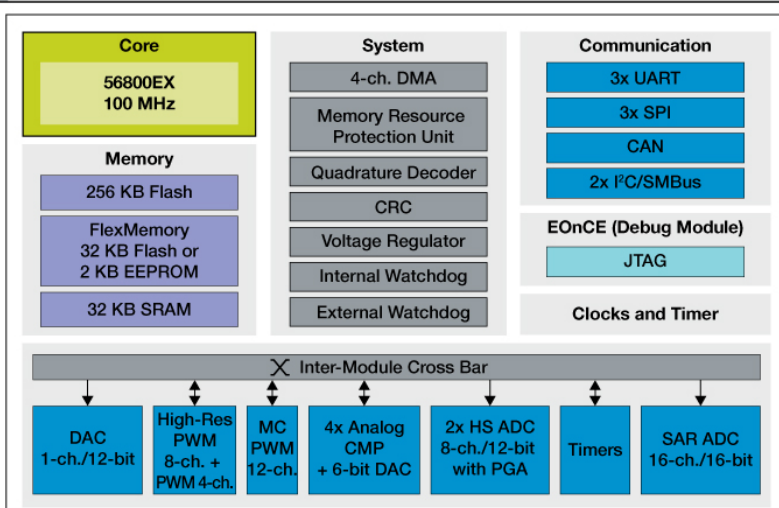


## MC56F84xx: Digital Signal Controllers

The MC56F84xx is based on our newly designed 32-bit DSP core. It is the market's fastest digital signal-processing MCU offering exceptional precision, sensing and control for the most efficient digital power conversion and advanced motor control applications. The MC56F84xx includes advanced high-speed and high-accuracy peripherals such as high-resolution pulse width modulation (PWM) with 312 pico-second resolution and dual, high-speed 12-bit analog-to-digital converters (ADCs) with built-in PGA sampling up to 3.3 mega samples per second (MSPs) and one high-precision 16-bit ADC. Faster application-specific control loops are driven via a high-speed 32-bit DSP core with single-cycle math computations, fractional arithmetic support and parallel moves.

MC56F84xxx



### Features

- 100 MHz/100 MIPS 32-bit DSP core
- 64 KB to 256 KB flash memory flexibility and Direct Memory Access (DMA) controller
- Single-cycle math computations, fractional arithmetic support and parallel moves
- Up to 24 PWM channels with input capture
- Hi-res PWMs with 312 pico-second resolution
- 2x 12-bit high-speed (HS) ADCs with 3.3 MSPs resolution
- 1x 16-bit ADC with 1 MSPs resolution
- 4 analog comparators with integrated 6-bit DACs speed system event identification and shutdown of the PWM outputs
- 1 12-bit DAC with auto waveform generation
- Various communication peripherals: 3 QSCIs; 3 QSPIs; 2 I<sup>2</sup>C/SMBus; 1 FlexCAN

## MC56F84xx: Digital Signal Controllers

Published on Wireless Design & Development (<http://www.wirelessdesignmag.com>)

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- This product is included in Freescale's [product longevity program](#) [1], with assured supply for a minimum of 10 years after launch

<http://www.freescale.com> [2]

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### Links:

[1] [http://www.freescale.com/webapp/sps/site/overview.jsp?code=PRDCT\\_LONGEVITY\\_HM](http://www.freescale.com/webapp/sps/site/overview.jsp?code=PRDCT_LONGEVITY_HM)

[2] <http://www.freescale.com>