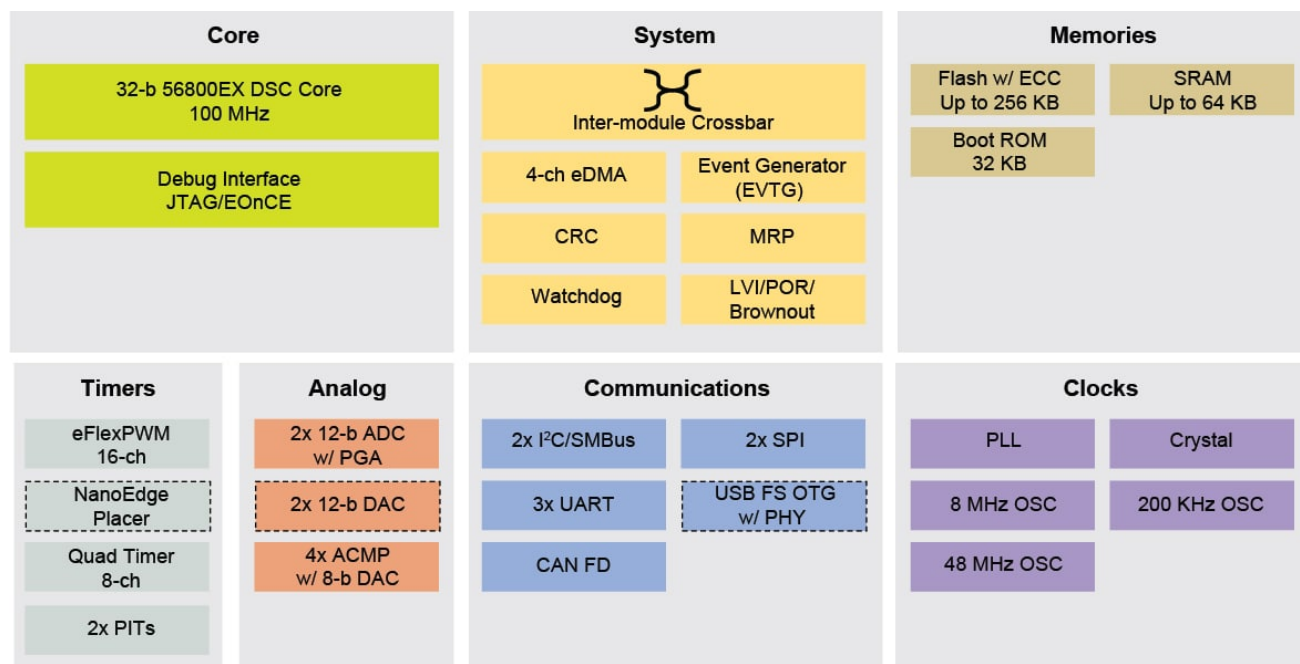


DIGITAL SIGNAL PROCESSOR

## With on-chip CAN FD controller

NXP has launched the MC56F83 family of digital signal controllers (DSC). It is intended for digital power conversion and motor control applications.



 Optional

The DSC family is dedicated for non-automotive applications including photovoltaic (Photo: NXP)

The DSC family features dual-partition flash-memory, flash-memory ECC (error-correction code), and USB connectivity. In addition, the products offers enhanced DMA function (eDMA), inter-module crossbar (XBAR) with more flexible event generator (EVTG), low-power high-speed A/D converter, extended RAM size, and up to 16 channels of high-resolution PWM (pulse-width modulation). The on-chip CAN FD controller complies with ISO 11898:2015.

The introduced semiconductors target digital power application, including switched mode power supply (SMPS), uninterruptable power supply (UPS), photovoltaic systems, and power distribution systems. Another addressed application is motor control for machines, domestic appliances, and general purposes. The on-chip USB and CAN FD interfaces can be used to connect sensors and host controllers. The USB FS/LS 2.0 OTG controller supports crystal-less operation. The FlexCAN module complies with ISO 11898:2015 supporting Classical CAN and CAN FD.

The up to 256 KiB dual-partition flash-memory supports live update function with an integrated 64 KiB SRAM ECC functionality. This allows more code to execute from SRAM for faster calculation speed. The 32 KiB boot ROM features code update through I<sup>2</sup>C, UART, or CAN FD. Peripherals include up to 16 channels of high-resolution PWM with a 312 ps resolution, two 12-bit high-speed, low-power A/D converters.

The introduced products are pin-compatible with the MC56F84xxx and MC56F82xxx families. Engineering samples are available in 100-pin LQFP, 80-pin LQFP, and 64-pin LQFP packages. Mass production is planned for September 2019. The chipmaker enables developers through its CodeWarrior software and tools ecosystem, along with its MC56F83000 EVK development platform.

[hz](#)