



Digital Signal Controller

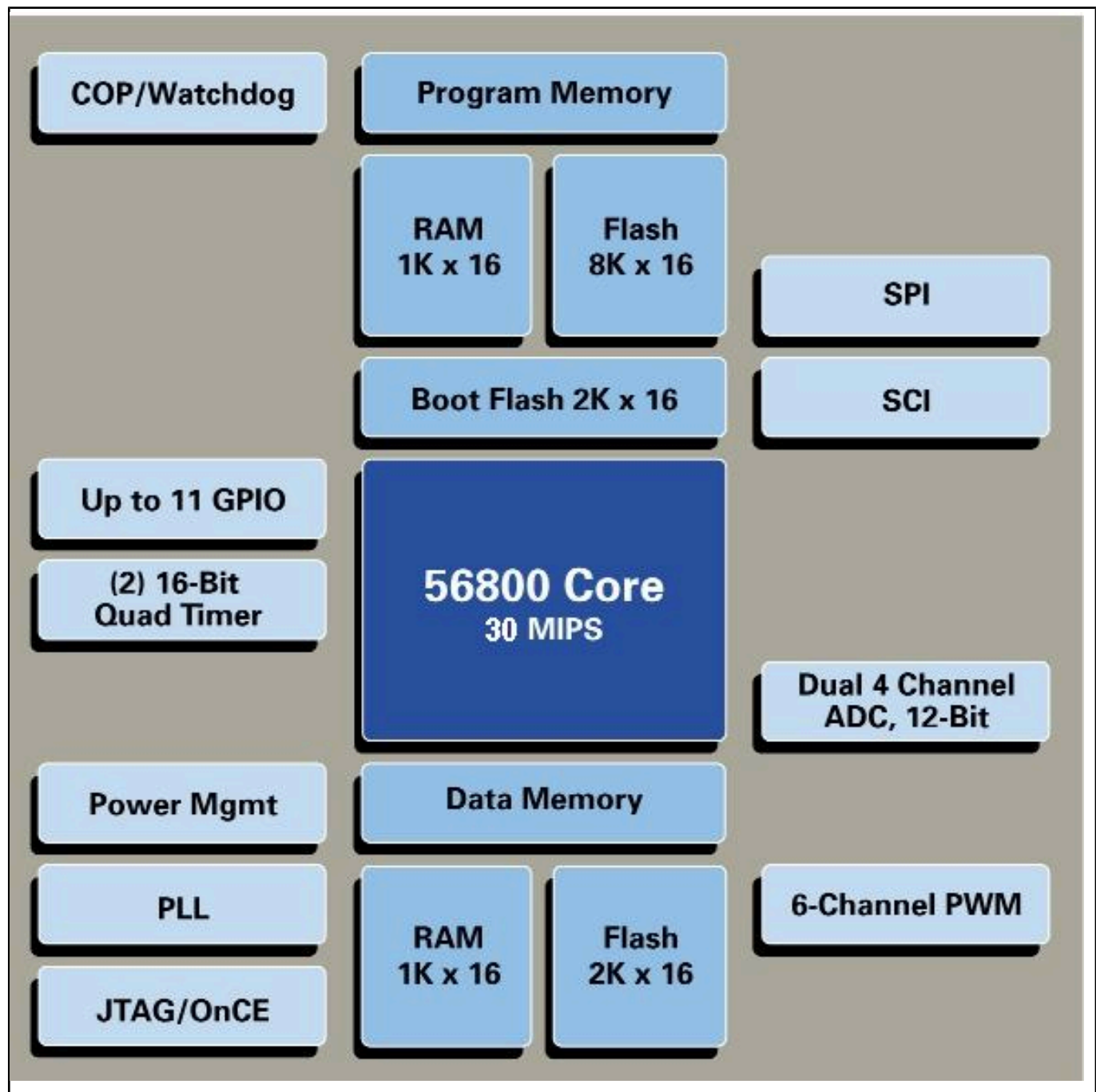
DSP56F801FA60

Last Updated: Jan 7, 2026

The 56F801FA60, a member of the 56800 core-based family of Digital Signal Controllers, combines the processing power of a DSP and the functionality of a microcontroller with a flexible set of peripherals on a single chip to create an extremely cost-effective solution for servo and motor control, power inverter, and converter applications.

The 56800 core is based on a Harvard-style architecture consisting of three execution units which operate in parallel, allowing as many as six operations per instruction cycle. The microprocessor-style programming model and optimized instruction set allow straightforward generation of efficient, compact code for both DSP- and MCU-style applications. The instruction set is also highly efficient for C Compilers, enabling rapid development of optimized control applications.

DSP56F801FA60 Block Diagram Block Diagram



View additional information for [Digital Signal Controller](#).

Note: The information on this document is subject to change without notice.

www.nxp.com

NXP and the NXP logo are trademarks of NXP B.V. All other product or service names are the property of their respective owners. The related technology may be protected by any or all of patents, copyrights, designs and trade secrets. All rights reserved. © 2026 NXP B.V.