

High-Performance Six-Core DSP with Security

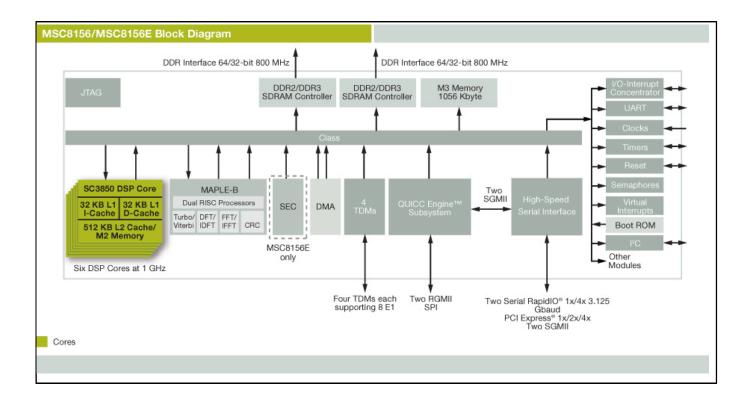
MSC8156E

Last Updated: Apr 8, 2022

The MSC8156E is based on the industry's highest-performance DSP core built on StarCore® technology and designed for the advanced processing requirements and capabilities of today's high-performance applications for the wireless broadband, medical imaging, aerospace, defense and advanced test and measurement markets. It delivers higher performance and power savings, leveraging 45 nm process technology in a highly integrated system-on-chip (SoC) to provide performance equivalent to a 6 GHz, single-core device. The MSC8156E helps equipment manufacturers create end products and services that integrate more functionality in a smaller hardware footprint.

The MSC8156E DSP delivers a high level of performance and integration, combining six fully programmable enhanced SC3850 DSP cores, each running at up to 1 GHz. Developed by NXP® and integrated on-chip, the MAPLE-B accelerator supports hardware acceleration for Turbo and Viterbi channel decoding and for DFT/iDFT and FFT/iFFT algorithms. A high-performance internal RISC-based QUICC Engine® subsystem supports multiple networking protocols to guarantee reliable data transport over packet networks while significantly offloading processing from the DSP cores.

The MSC8156E embeds large internal memory and supports a variety of advanced high-speed interface types, including two RapidIO® interfaces, two gigabit Ethernet interfaces for network communications, a PCI Express® controller, two DDR controllers for high-speed, industry standard memory interface and four multi-channel TDM interfaces. The MSC8156E allows a high degree of scalability through pin compatibility with all MSC825x and MSC815x DSP devices.



View additional information for High-Performance Six-Core DSP with Security.

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. © 2024 NXP B.V.