



# High-Performance Six-Core DSP

## MSC8256

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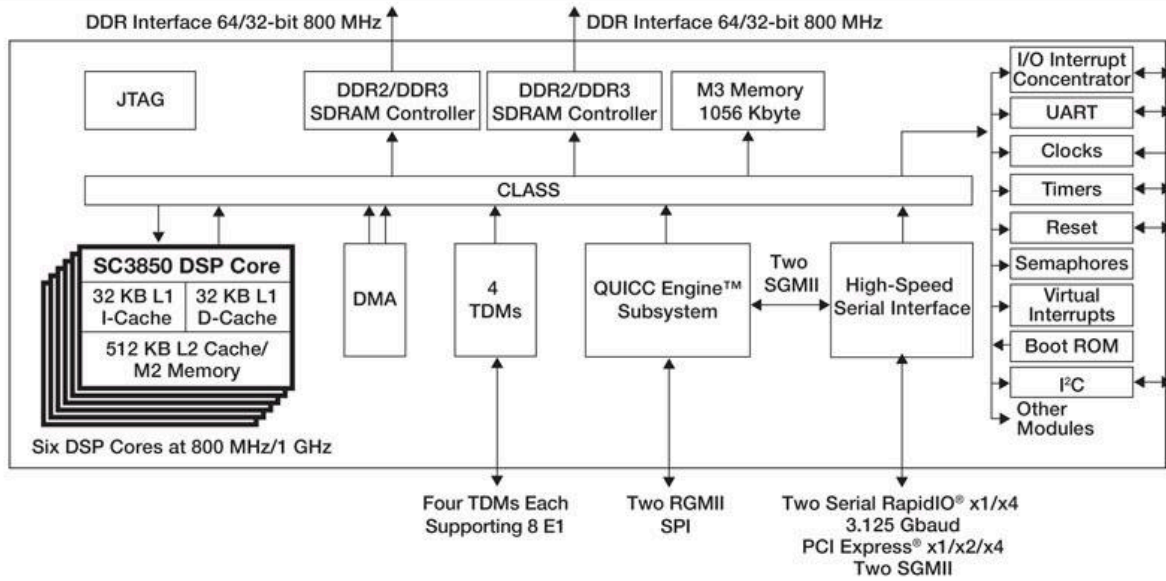
The MSC8256 is based on the industry's highest-performance DSP core built on StarCore® technology and designed for the advanced processing requirements and capabilities of today's high-performance industrial applications for the medical imaging, aerospace, defense and advanced test and measurement markets. 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 MSC8256 helps equipment manufacturers create end products and services that integrate more functionality in a smaller hardware footprint.

The MSC8256 DSP delivers a high level of performance and integration, combining six enhanced fully programmable SC3850 cores each running at up to 1GHz. The SC3850 DSP core has been independently assessed to enable 40 percent more processing capability per MHz than the nearest DSP competition. 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 MSC8256 embeds a substantial amount of internal memory to support 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 multichannel TDM interfaces. The MSC8256 allows a high degree of scalability through pin compatibility with all MSC825x and MSC815x DSP devices.

**MSC8256 High-Performance Six-Core DSP Block Diagram Block Diagram**

## MSC8256 Block Diagram



View additional information for [High-Performance Six-Core DSP](#).

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