

Press Release
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FOR IMMEDIATE RELEASE

Digital Signal Memory SoC with Industry's Highest Performance ADCs/DACs.

Moscow, Russia, October 21, 2002 – Research Center “Module”, a leading developer of high-end RISC/DSP architectures and mixed-signal ASICs announced today Digital Signal Memory (DSM) – a 0.25 μ m CMOS System-On-A-Chip (SoC) device with high performance on-chip ADCs and DACs that may be used in wide range of digital signal-processing systems.

The DSM contains two 6-bit 600 MSPS ADC channels to convert quadrature I/Q components of input signal and four 8-bit 300 MSPS DAC channels to form even and odd samples of quadrature I/Q output signal. 2 Mbit on-chip SRAM allows DSM to receive and store high frequency analog signals with duration of up to 654 μ s. The DSM digital core has a 128-bit Very Long Instruction Word (VLIW) architecture and operates at 150 MHz clock speed. The core has internal high-speed arithmetic units to enable the programmable amplification of input signals, the input and output signals addition and programmable Doppler shift of output signal. There are 8 on-chip programmable DMA channels.

The flexible 32/64-bit interface allows using of DSM with different DSP processors, such as RC Module's NeuroMatrix® NM6403/04 DSP, Analog Devices SHARC® and TigerSHARC® DSPs. The DSM supports 32/64-bit external SRAM, SSRAM and SDRAM memory types. External bus provides fast instruction and data transfer rate between DSM and external memory or host DSP both in DMA and random access mode. The external ADC and DAC can be used via external bus too. The DSM SoC is packaged in BGA576.

About RC Module (www.module.ru): RC Module is a leading Moscow-based fabless semiconductor company which designs high-end RISC/DSP processor architectures, embedded computers and application software for video image processing, DSP and artificial neural networks. RC Module also provides system and ASIC/SIP design services to a variety of telecommunication and computer-related OEMs manufacturers. RC Module's NeuroMatrix® product family includes:

- 1-64-bit NM6403 RISC/DSP processors and cores, SDK and video-image processing libraries.
- Broad range of DSP boards and real-time application software.
- "TrafficMonitor-E" - smart video terminal for Intelligent Transport Systems.
- “CCAS” – Car Collision Avoidance System for automotive applications.
- “VCS” - Vehicle Classification System for free-flow electronic toll collection.