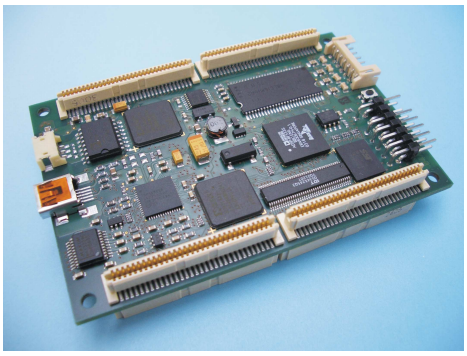
S.Module2 BF533
Digital Signal Processor System

High Performance ADSP-BF533

- Up to 1066 MMACs
- Full SIMD architecture
- Power Efficient Processor
- Up to 148 kB on-chip RAM



The S.Module2 BF533 is a high performance signal processing board with:

Analog Devices ADSP-BF533,
Flash Memory for nonvolatile storage and program boot load
SDRAM for data storrage
A/D- and D/A-converter
Several serial interfaces like USB, I²C, SPI, RS232 or RS485
External Bus Interface for connecting memory mapped peripherals
Power Supply Supervisory
Software support for initialisation, communication etc.

The ADSP-BF533 provides a high performance, power-efficient processor choice for today's most demanding convergent signal processing applications. With performance up to 533 MHz, applications can now add greater signal processing performance. The high performance 16-bit/32-bit Blackfin embedded processor core, the flexible cache architecture, the enhanced DMA subsystem, and the dynamic power management (DPM) functionality allow system designers a flexible platform to address a wide range of applications.
The processor provides a parallel peripheral interface (PPI) that can connect directly to parallel AD/DA converters, video encoder/decoder or other general-purpose peripherals.

The Flash-Memory can be used for boot loading programs and parameters as well as for nonvolatile data storage. A sector architecture is used, which allows independent erase of a sector and single-byte programming.
Additionally to the large on-chip RAM of 148kB the module is equipped with 16M x 16 Bit SDRAM.

For some comman data aquisation tasks the module is equipped with an 4x 14-Bit ADC with differential ended inputs. The software selectable input ranges are ±10V, ±5V, ±2.5V and ±1.25V. The maximum per-channel output rate is 150 ksps.
The quad 12-Bit on-board DAC con be used to provide analog signals up to 100 kHz.

Beside the high speed pheripheral bus the module provide a variety of interfaces: USB 2.0 peripheral controller, RS232, SPI, I²C and a isolated RS485.

In the board logic are 32 programmable I/O's available. The user can reprogram these signals from the board logic to a custom interface.

The module features a power supply supervisory which generates a reset signal on powerd-up or power-fail condition.

S.Module Base software provides programming support for all on board resources. This includes a selftest, initialization, communication routines, flash erase and programming algorithms as well as up- and download functions for program and data.

S.Module2-Series has a standardized mechanic and common pinout, compatible with D.Module series of D.SignT.

Please contact us for data sheets and detailed information.

Specifications	
DSP clock frequency	up to 533 MHz
Flash Memory	up to 4M x 16 Bit
SDRAM	16M x 16 Bit
A/D-Converter	4x 14 Bit, up to 150 ksps / channel
D/A-Converter	4x 12-Bit
USB 2.0	High-Speed 480 Mbit/s
Digital I/O	3.3 V CMOS
Temperature	-25 .. +85°C (industrial)
Power Supply	3.3 V single supply
Debug / Emulation	JTAG
Mechanical Dimensions	
86 mm x 58 mm 10 layers multilayer, SMD	

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