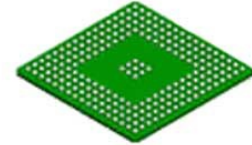


DSP Fixed-Point 16bit 533MHz 316-Pin Mini-BGA Tray

Manufacturers	Analog Devices, Inc
Package/Case	316-CSPBGA
Product Type	Embedded Processors & Controllers
RoHS	Rohs
Lifecycle	



Images are for reference only

Please submit RFQ for ADSP-BF538BBCZ-5F8 or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

[RFQ](#)

General Description

The Blackfin® Processor family has been expanded to address the ever-increasing need for more connection possibilities. This connectivity is coupled with the high performance 16-/32-bit Blackfin embedded processor core, the flexible cache architecture, the enhanced DMA subsystem, and the Dynamic Power Management (DPM) functionality. System designers can take advantage of the combined control and signal processing capabilities of the processor core across a wide range of end applications through code compatibility of these new family members with existing Blackfin offerings.

The ADSP-BF538F processors are a functional extension of the popular ADSP-BF533 processor, and they are ideally suited for applications with multiple device connections. The ADSP-BF538F is equivalent in functionality to the ADSP-BF538 processor with the exception of the addition of onboard FLASH memory. Ideally suited for a broad range of industrial, instrumentation and medical appliance applications—allowing for broad connection possibilities coupled with a mix of control and signal processing needs based on the end product.

Designed for Embedded Development

A new addition to the Blackfin Processor family is the inclusion of integrated FLASH memory alongside the processor. There are two choices available in the ADSP-BF538F family, one with 512KB of onboard FLASH memory and one with 1MB of onboard FLASH memory. Both offer large code space for complex embedded systems and fast access time to the Blackfin core. This is in addition to the complementary Blackfin processor memory system that offers a powerful and flexible cache architecture that can dynamically balance between the hard real-time tasks desired in SRAM and soft real-time control tasks and an Operating System (OS) requiring cache functionality.

FLASH Memory Data Sheets:

4 Megabit (512 K x 8-Bit/256 K x 16-Bit) FLASH memory 8 Megabit (1 M x 8-Bit/512 K x 16-Bit) FLASH memory

Dynamic Power Management additionally lowers power consumption for extending battery life or for minimizing power dissipation in enclosed applications.

Designed as an Integrated System

In addition to the embedded connectivity of CAN, the ADSP-BF538F processors include a variety of general purpose functions designed to minimize external IC count and offer broad control and communication. Peripherals include three SPI®-compatible ports, three UARTs, four SPORT ports, three multifunction timers, 54 general-purpose I/Os, dual Two-Wire Interface for I2C operation, a real-time clock, a watchdog

timer, an event controller, and a JTAG/debug interface. The flexible Parallel Peripheral Interface (PPI) offers a direct connection to a variety of video encoders/ decoders, display drivers, image sensors, and general-purpose converters.

Development Tools

Blackfin Processors are supported by:

Analog Devices CROSSCORE® brand of industry leading development tools. The CROSSCORE components include the VisualDSP++® software development environment, EZ-KIT Lite® evaluation systems, EZ-Extender™ daughter boards, and PCI-based or USB-based emulators.

Green Hills® Software award-winning MULTI® Embedded Software Development Environment and associated emulators.

Features

Powerful and flexible cache architecture suitable for soft real-time control tasks and industry-standard operating systems, plus hard real-time signal processing tasks

Addition of onboard FLASH memory (512K bytes or 1M byte) for code storage of complex system applications that run on a powerful 400MHz or 500MHz processor

Applications-tuned peripherals provide glueless connectivity to general-purpose converters in data acquisition applications

Enhanced Dynamic Power Management with on-chip voltage regulation

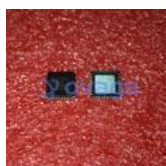
High performance 16-/32-bit embedded processor core

10-stage RISC MCU/DSP pipeline with mixed 16-/32-bit ISA for optimal code density

Full SIMD architecture, including instructions for accelerated video and image processing

Memory Management Unit (MMU) supporting full memory protection for an isolated and secure environment

Related Products



[ADUC7022BCPZ62](#)

Analog Devices, Inc
LFCSP-40



[ADUC7020BCPZ62](#)

Analog Devices, Inc
LFCSP-40



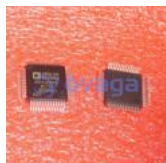
[ADUC841BSZ62-5](#)

Analog Devices, Inc
QFP-52



[ADUC841BSZ62-3](#)

Analog Devices, Inc
QFP-52



[ADUC831BSZ](#)

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QFP-52



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BGA-208



[ADSP-21369BBPZ-2A](#)

Analog Devices, Inc

SBGA-256



[ADSP-BF561SBBCZ-5A](#)

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CSPBGA-256