


## DSP Fixed-Point 16bit 400MHz 176-Pin LQFP Tray

<b>Manufacturer:</b>	<a href="#">Analog Devices, Inc</a>
<b>Package/Case:</b>	LQFP176
<b>Product Type:</b>	Embedded Processors & Controllers
<b>RoHS:</b>	RoHS Compliant/Lead free 
<b>Lifecycle:</b>	Active



Images are for reference only

[Inquiry](#)

## General Description

Analog Devices initial product family, the ADSP-BF531, ADSP-BF532, and ADSP-BF533, offer all the ease of use and architectural attributes of the Blackfin processor. These three processors are all completely pin compatible - differing solely with respect to their performance and on-chip memory - thus reducing risk and offering the ability to scale up or down depending upon the end application needs. All three processors offer low power consumption with scaleable performance from low-cost to very high performance.

The ADSP-BF532 offers exceptional performance, large on-chip memories, and an array of application-tuned peripherals. Its highly integrated feature set combined with an aggressive price (\$7.50 in quantities of 10Kpcs) make it particularly well suited for applications requiring both a high degree of functionality and low cost such as automotive telematics, information appliances, and wired/wireless communications systems.

### High Level of Integration

- 84Kbytes of on-chip L1 memory configured as --
- 48Kbytes of L1 instruction memory SRAM/Cache
- 32Kbytes of L1 data memory SRAM/Cache
- 4 Kbytes of L1 scratchpad SRAM
- Parallel Peripheral Interface supporting ITU-R 656 video data formats
- Two dual-channel, full-duplex synchronous serial ports supporting eight stereo I2S channels
- 12 DMA channels supporting one and two-dimensional data transfers
- Memory controller providing glueless connection to multiple banks of external SDRAM, SRAM, Flash, or ROM.
- Three timer/counters supporting PWM, pulsewidth, and event count modes
- UART with support for IrDA®
- SPI-compatible port
- Event handler
- Real-time clock
- Watchdog timer
- PLL capable of 1x to 63x frequency multiplication
- 160-ball (12mm x 12mm) Mini-BGA, 176-Lead (24mm x 24mm) LQFP, and 169-ball (19mm x 19mm) Pb-Free Sparse PBGA packages
- Industrial temperature range

## Key Features

Performance to 400MHz/800MMACs enables multi-channel audio plus CIF video processing in multimedia applications

Enhanced Dynamic Power Management with on-chip core voltage regulation allows operation to 0.8V extending battery life in portable applications

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

Multiple low cost, pin- and code-compatible derivatives enable software differentiation in cost-sensitive consumer applications

## Application

Parallel peripheral interface PPI, supporting ITU-R 656 video data formats

2 dual-channel, full duplex synchronous serial ports, supporting eight stereo I

2

S channels

2 memory-to-memory DMAs

8 peripheral DMAs

SPI-compatible port

Three 32-bit timer/counters with PWM support

Real-time clock and watchdog timer

32-bit core timer

Up to 16 general-purpose I/O pins (GPIO)

UART with support for IrDA

Event handler

Debug/JTAG interface

On-chip PLL capable of frequency multiplication



## Recommended For You

**ADSP-BF592KCPZ**

Analog Devices, Inc  
LFCSP64

**ADSP-2183KSTZ-210**

Analog Devices, Inc  
QFP100

**ADSP-BF534BBCZ-4B**

Analog Devices, Inc  
BGA

**ADSP-BF537BBCZ-5A**

Analog Devices, Inc  
CSPBGA-182

**ADSP-BF533SBBCZ500**

Analog Devices, Inc  
BGA

**ADSP-BF533SKBCZ-6V**

Analog Devices, Inc  
BGA

**ADSP-BF533SBBZ500**

Analog Devices, Inc  
BGA

**ADSP-BF533SBSTZ400**

Analog Devices, Inc  
QFP

**ADSP-BF533SBBCZ400**

Analog Devices, Inc  
BGA160

**ADSP-2171BSTZ-133**

Analog Devices, Inc  
QFP

**ADSP-2186MKST-300**

Analog Devices, Inc  
QFP

**ADSP-BF512BSWZ-4**

Analog Devices, Inc  
QFP176

**AD1940YST**

Analog Devices, Inc  
QFP48

**ADSP-BF534BBCZ-5B**

Analog Devices, Inc  
BGA

**ADSP-BF592BCPZ**

Analog Devices, Inc  
LFCSP64