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Understanding [Embedded - Microcontroller, Microprocessor, FPGA Modules](#)

Embedded - Microcontroller, Microprocessor, and FPGA Modules are fundamental components in modern electronic systems, offering a wide range of functionalities and capabilities. Microcontrollers are compact integrated circuits designed to execute specific control tasks within an embedded system. They typically include a processor, memory, and input/output peripherals on a single chip. Microprocessors, on the other hand, are more powerful processing units used in complex computing tasks, often requiring external memory and peripherals. FPGAs (Field Programmable Gate Arrays) are highly flexible devices that can be configured by the user to perform specific logic functions, making them invaluable in applications requiring customization and adaptability.

Applications of [Embedded - Microcontroller,](#)

Details

Product Status	Active
Module/Board Type	MPU Core
Core Processor	ADSP-BF609 (Dual Core)
Co-Processor	-
Speed	500MHz x 2
Flash Size	8MB
RAM Size	256KB
Connector Type	Expansion 2 x 100
Size / Dimension	1.73" x 1.3" (44mm x 33mm)
Operating Temperature	-40°C ~ 85°C
Purchase URL	https://www.e-xfl.com/product-detail/bluetechnix/100-1218-1

eCM-BF609

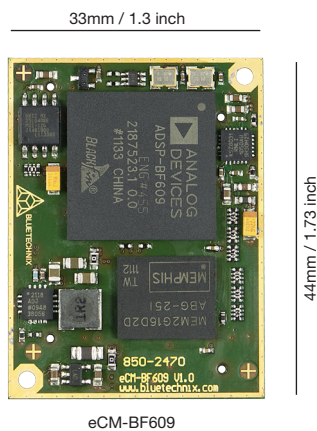
Blackfin® based System-on-Module



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The Core Module eCM-BF609 is optimized for performance and parallel data processing. The module integrates processor, DDR2 SDRAM, flash, Ethernet PHY and power supply at a size of 44x33mm! It is based on the latest high performance dual-core processor ADSP-BF609 from Analog Devices.

The ADSP-BF609 integrates a co-processor unit to accelerate signal and image algorithms (i.e. for pre- and co-processing of video frames in ADAS applications). The eCM-BF609 is designed for industrial and commercial applications. It addresses 256MByte DDR2 SDRAM via its dedicated DDR2 interface and has an onboard SPI flash of 8MByte.



Highlights

- » ADSP BF609 Dual Core DSP
- » 256 MByte DDR2 SD-RAM up to 266 MHz
- » 8 MByte SPI Flash
- » Optimized for parallel digital signal processing
- » Pipeline Vision Processor (PVP)
- » Industrial SoM available

Most of the ADSP-BF609's pins are available on the Core Module connectors for maximum flexibility during system design.

Applications

- » Parallel digital signal processing
- » Automotive vision systems
- » Imaging and consumer multimedia
- » Stereo vision systems

Ordering Information

Order No.	Info
100-3401	Blackfin Evaluation Starter Package with eCM-BF609
100-1217-1	eCM-BF609
100-1218-1	eCM-BF609 Industrial

eCM-BF609

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ADSP-BF609 Facts

The ADSP-BF609 Blackfin processor is optimized for embedded vision and video analytics applications using a dual-core fixed-point DSP processor with a unique pipelined vision processor (PVP). The PVP is a set of functional blocks next to the Blackfin cores designed to accelerate image processing algorithms and reduce overall bandwidth requirements.

Feature Overview

PROCESSOR	ADSP-BF609SKBCZ-6A Blackfin® embedded processor (Dual Core)
CLOCK	2 x 500 MHz
RAM	256 MByte DDR2 SD-RAM up to 266 MHz
FLASH	8 MByte SPI
ETHERNET 10/100 MBIT	1 with IEEE1588 Precision Clock Synchronization
PPI	3 (1 x 24 bit and 2 x 18 bit)
CAN 2.0 / TIMER / COUNTER	1 / 8 / 1
USB 2.0 OTG	1
SPI / I²C / UART / SPORT	2 / 2 / 2 / 3
EMMC/RSI	1
LINK PORT	4
GPIO / ACM / PWM	112 / 1 / 2
TEMPERATURE RANGE*	Commercial (0°C to +70°C) Industrial (-40 to +85°C)
DIMENSIONS	44 x 33mm
ADDITIONAL	On-Board core voltage regulator Low voltage reset circuit

*depends on version - see ordering information

Further information at
<http://www.bluetechnix.com/goto/ecm-bf609>

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