

Firefly™ IV Configurable Processor Module

Overview

- Complete Nios® II embedded processor system
- Altera Cyclone™ IV CE FPGA
- 95 user configurable GP I/O signals
- 32MB Flash and 64MB SDRAM
- Functionally compatible with Firefly II module
- Hardware DSP blocks
- RoHS compliant
- Industrial temperature available



Description

The Firefly® IV Configurable Processor Module combines the benefits of an off-the-shelf module with the flexibility of an programmable FPGA with hardware DSP support. This "computer on a board" comes complete with a soft-core processor, Flash (x16) and 32MB of SDRAM (x32) memory. Just plug the Firefly IV module into a socket on your host board and you can quickly go from the prototype design stage directly to product completion in the same footprint!

Using the 484-pin Altera BGA package allows for added flexibility in choosing the right configuration for your project. Select from the EP4CE30, EP4CE40, EP4CE55 or EP4CE75 device for optimal device cost.

The Firefly IV module utilizes the M25P64 64Mb serial programming device. Programming of the FPGA is through JTAG which allows for a total of 95 general purpose I/O's.

The Firefly IV module can be ordered, "blank" or preloaded with our standard core or a core tailored to your specific requirements. A base development board supporting two Santa Cruz headers is available for design prototyping.

Target Applications

- Embedded network devices
- Embedded military or industrial devices
- Embedded control devices
- Data acquisition systems
- High speed signal processing

Technical Specifications

- Embedded hardware multiplier blocks
- Altera Cyclone IV EP4CE30/40/55/75
- 64MB (16M x 32-bit) SDRAM
- Flexible memory configurations available
- Custom design versions offered
- JTAG programming.
- Requires 3.3V & 1.2V supply voltages

Options

- FPGA: EP4CE30, EP4CE40, EP4CE55 or EP4CE75
- Flash: 32MB (default) or 64MB
- Non-RoHS
- Commercial or industrial temperature

REV: 1.4

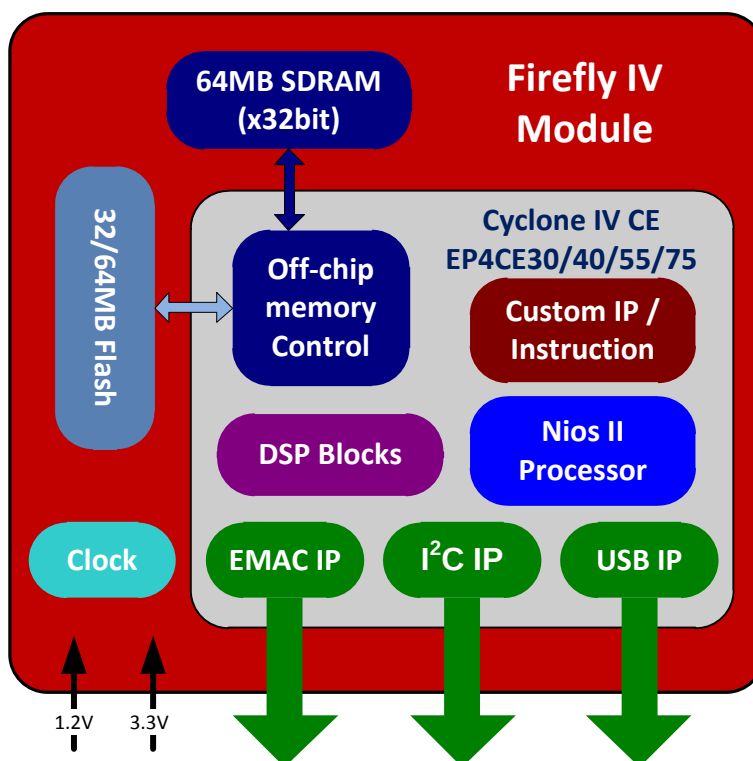
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Microtronix reserves the right to change this product specification without notice

Block Diagram of Firefly IV SoC Application



Ordering Information

Part Number	Description	Unit Price
6285-XX-21*	Firefly IV Configurable Processor Module Comm. Temp, 32MB Flash	Contact Sales
6285-XX-21-I*	Firefly IV Configurable Processor Module Ind. Temp, 32MB Flash	Contact Sales
6285-XX-31*	Firefly IV Configurable Processor Module Comm. Temp, 64MB Flash	Contact Sales
6285-XX-31-I*	Firefly IV Configurable Processor Module Ind. Temp, 64MB Flash	Contact Sales

*where XX denotes FPGA size. Please specify 30, 40, 55 or 75 when ordering.

Examples:

- 1) 6285-40-21 contains a Cyclone IV EP4CE40F23C6N Commercial Temp FPGA device with 32MB Flash
- 2) 6285-55-31-I contains a Cyclone IV EP4CE55F23I7N Industrial Temp FPGA device with 64MB Flash
- 3) 6285-75-21-I contains a Cyclone IV EP4CE75F23I7N Industrial Temp FPGA device with 32MB Flash