



# **Product DATA SHEET**

### **Features**

· Complete Nios® II processor system on a module

Altera Cyclone™ II FPGA

• Up to 95 user I/O available

· Functionally compatible with Firefly I modules

· Hardware DSP support

RoHS compliant

· RS-232 serial device interface

Low profile, 0.1" male headers
 (can be soldered directly onto the carrier board or matched with female headers for easy removal of the module)



### **DESCRIPTION**

The Firefly® II Configurable Processor Module combines the benefits of an off-the-shelf module with the flexibility of an FPGA with hardware DSP support. This "computer on a board" comes complete with a processor and memory. Just plug the Firefly II module into your project and you can quickly go from design to prototype to product stages.

Using the 484 pin Altera FPGA package allows for added flexibility in choosing the right configuration for your project. Select from the EP2C35 or EP2C50 device. The Firefly II module utilizes the EPCS16 serial programming device.

Programming the FPGA is achieved through JTAG. This method provides 95 general I/O's. Optionally, you can

request an active serial interface. This method reduces the device I/O's to 88.

The Firefly II module can be ordered, "blank" or with a preloaded core. Microtronix offers a core building service for as little as US\$595.

It is possible to create your own custom SOC design to program into the Firefly II modules prior to delivery.

The Firefly II module is fully compatible with any operating system which is supported by Altera's Nios II processor. Microtronix also offers engineering support services and support for embedded uClinux, ecos and  $\mu$ C/OS-II RTOS operating systems. Microtronix also supports OS-less environments.

### MEMORY CONFIGURATION

| TYPE  |      | OPTIONS |         |      |
|-------|------|---------|---------|------|
|       |      |         | Default |      |
| SDRAM | 16Mb | 32Mb    | 64Mb    |      |
| Flash | 8Mb  | 16Mb    | 32Mb    | 64Mb |

# **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 II EP2C35/50
- Flexible memory configurations available
- · Custom design versions offered
- · Choose from JTAG or active serial programming.
- Requires 3.3V & 1.2V supply voltages

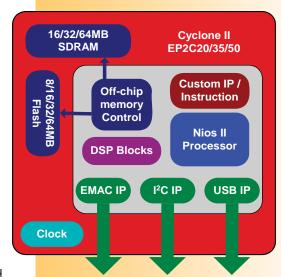
Using the Firefly II Configurable Processor Module also allows for quick field upgrades: simply unplug one Firefly module and insert a new module. You can upgrade your embedded processor in a matter of seconds and have a system that grows as your hardware requirements do.

Get your product to market in weeks, instead of months!

| ORDERING INFORMATION |   |  |  |  |
|----------------------|---|--|--|--|
| PART NUMBE           | R DESCRIPTION                                       |  |  |  |
| 6234-35-21           | Firefly II Module EP2C35 (64 MB SDRAM, 32 MB Flash) |  |  |  |
| 6234-35-21-i         | Firefly II Module EP2C35 (Industrial Grade)         |  |  |  |
| 6234-50-21           | Firefly II Module EP2C50 (64 MB SDRAM, 32 MB Flash) |  |  |  |
| 6234-50-21-i         | Firefly II Module EP2C50 (Industrial Grade)         |  |  |  |

# Where to Buy

This product is available online from: Distributor / Representative: Microtronix webstore and through Microtronix authorized distributors.



Firefly II modules can be designed to fit any number of embedded device requirements



#### **North American Head Office:**

9-1510 Woodcock Street London, Ontario N6H 5S1 **CANADA** 

Tel: +1 888 690-0091 Tel: +1 519 690-0091 Fax: +1 519 690-0092

#### **United States:**

San Jose California +1 408-981-7954

#### Europe:

Oosterhout The Netherlands +31 162 714017

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