

About Arcturus Networks

Arcturus Networks produces embedded firmware and hardware solutions for the networking and communications industry. Focusing on the converging technology of data, voice and streaming media, Arcturus provides firmware and hardware reference platforms for Internet Attachment Devices (IAD's) specializing in Residential Gateway (RG) and SOHO Routers.

Arcturus Products

The Arcturus product suites consist of modular firmware including a royalty free embedded OS with full TCP/IP support. In addition to basic networking, Arcturus offers support for advanced routing and streaming media including voice. The Arcturus Management and Configuration suite includes seamless support for SNMP and Web based configuration and management as well as customer specific front end plugins. In an effort to assist OEM developers expedite their application development, Arcturus also offers fully compatible hardware reference platforms and design integration. Arcturus solutions enable the turnkey development of IAD or Residential Gateway products on various SOC based microcontrollers.

Firmware and Development

Arcturus is committed to furthering industry development and as such has adopted a leadership role with innovative public development projects such as the uClinix embedded OS initiative. In addition to this public work Arcturus recognizes the need for sustainable advancement and quality assurance within public development efforts. Arcturus Firmware and Development acts as a bridge between proprietary and open source models, leveraging either where appropriate and releasing or protecting IP where applicable.

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uCdimmm DragonBall VZ System Builder Kit

The uCdimmm™ DragonBallVZ microcontroller module delivers two SPI highspeed serial interfaces, two RS232 serial interfaces, parallel I/O, up to 640 x 512 LCD driver and a 10baseT Ethernet connection in a 1.7 inch x 2.7 inch soDIMM form factor. The uCdimmm DragonBallVZ coupled with the specifically designed uCevolution™ host platform allows developers broad access to DragonBall features. The uCevolution also ensures easy cross-platform porting through the quick exchange of the uCdimmm microcontroller modules. Future uCdimmm microcontroller modules will include FPGA, ARM, ColdFire and StrongARM..

Fully Connected

The uCdimmm comes Net-ready right out of the box, embedded with the powerful uClinix™ operating system. The full power of the uCdimmm is realized when combined with uClinix which adds robust network connectivity. With uClinix, the uCdimmm comes complete with a run-time, royalty-free TCP/IP stack as well as file system support for external NFS file systems. Arcturus provides you with the hardware, the design, the tools and the uClinix OS that will help you make your next product Net-ready.

Ideal LAN / WAN Solution

Designed with the OEM and Motorola 68k developer in mind the uCdimmm DragonBallVZ module needs only a very small footprint, a 3.3 volt supply, and a standard 144-pin soDIMM socket. Easy assembly and deployment makes the uCdimmm ideal for applications requiring field upgrades.

From Prototype to Production

The uCdimmm's tiny form factor and standard soDIMM backbone connector make incorporating the uCdimmm into your embedded development or OEM application quite literally a snap.



Kit Includes

- uCdimmm DragonBallVZ Microcontroller Module
- uCevolution Development Platform
- uClinix 68K software CD
- Cable kit including 2 Ethernet (1 x-over) 1 serial
- Power Supply
- Manual
- Reference Manuals

uCdimmm Features

- 33 MHz Motorola 68k core
- 2 MB FLASH ROM
- 8 MB SDRAM
- 10BaseT Ethernet
- 2 RS232 serials
- 2 SPI serials
- on-board LCD controller
- Up to 22 parallel I/O
- PWM
- Chip selects available
- Real-time clock/calendar
- Software watchdog timer
- 16-bit timer counter
- Low power 3.3 volt design
- 1.7" x 2.7" 144 pin soDIMM form factor
- uClinix OS preinstalled
- TCP/IP SLIP and PPP
- Cost-effective



Power Consumption

The uCdimmm operates on 3.3 Volts and consumes typically less than 350 milliwatts under full load. In CPU shut down and with the Ethernet chip idling, the module draws only micro amps.

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uCevolution Development Platform

The innovative Arcturus uCevolution development platform offers all the benefits of a traditional development board, plus the ability to easily swap processor cores. The uCevolution and uCdimm equipped with the powerful uClinux embedded operating system provide the necessary tools for rapid embedded development and prototyping. By using the Arcturus uCdimm family of microcontroller modules, developers gain increased ease in cross-porting to new CPU architectures and feature sets. Future uCdimm microcontroller modules will include FPGA, ARM, ColdFire and StrongARM.

Hardware Features

- Standard Ethernet connector
ETH/DSL switchable Ethernet connector
- Two serial ports
a standard DCE serial port, and a DCE/DTE serial port that allows for either type connection
- Serial port activity indicators (Tx& RxD)
to provide the user constant visual confirmation of data flow
- Health indicator that can provide constant visual indication of health status of DIMM module
- Two USB ports
- USB speed switch (hi/lo)
gives users flexibility to access both hi and lo speed USB devices
- USB power switch allows the use of independent or host-powered USB devices
- LCD/LCD touch screen connector w/ power supplies for 3.3v & 12v enables the connection of an external LCD/LCD touch screen module
- DIMM layout extension for prototyping with 100mil pad distance accelerates design of schematics for prototyping
- Small footprint switching power supply with power LED that requires no heat sinking
- JTAG controller allows access to on-board debug facilities of different interfaces
- Reset button with LED indicator
- 4 interrupt buttons to easily generate interrupts
- 8 bi-directional controls with LED indicators to easily test functionality of I/O
- 3.9" x 1.8" prototyping area ensures ease-of-use
- Generic power supply input (AC/DC)
- Ground and power supply testing points

From Prototype to Production

The uCevolution is ideal for development with your uCdimm. Equipped with all the standard connectors required to give you maximum access to the functionality of your module. The uCevolution gets you up and running in a snap, and makes development, prototyping and debugging fast and convenient.



Extensible

In addition to all the benefits of a traditional development board, the Arcturus uCevolution offers the flexibility to change processor cores as easily as snapping in a memory card. The uCdimm standardized I/O bus ensures developers consistent access to features common among different uCdimm family members. The uCevolution also contains more than seven square inches of on-board prototyping space. The uCevolution is far more than just a host board it is an evolving development and prototyping platform.

Kits Include

- uCdimm micro-controller module
- uClinux software CD
- Serial cable
- Ethernet cable
- Cross Over-cable
- Reference Guide
- Programming Manuals



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