

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 uClinux 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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uClinux Embedded Operating System

Arcturus™ uClinux™ is an essential, embedded implementation of Linux, complete with the uC embedded library collection. uClinux or Micro-controller Linux is designed to function on SoC based micro-controllers, regardless of memory management hardware. This makes uClinux a very feature rich, royalty free operating system functioning on micro-controllers ideal for embedded applications. uClinux employs the GNU Compiler Collection (GCC) and supports debugging with GDB stub/server (DDD graphic front end), JTAG and BDM. uClinux includes robust support for numerous architectures and platforms, broad driver support and applications ranging from server-side DHCP, port forwarding, IP masquerading to tunneling, encryption and MMI/HMI graphic interface utilities. uClinux is ideally suited to residential gateway and embedded edge device development, with uClinux and Residential Gateway firmware, Arcturus offers one stop RG development.



Residential Gateway

Arcturus Secure Data and Routing firmware

Virtual Private Networks (VPN), firewalls and Secure Data transfer, tunneling, encryption and hardware accelerated encryption, masquerading, port forwarding and stateful firewall.



Arcturus Voice and Media firmware

Session Initiation Protocol (SIP) based VoIP telephony including G series codecs and multi-channel DSP voice conversion.



Arcturus Management and Configuration

Management Information Base (MIB) infrastructure including SNMP and / or Web based remote access. Ideal for OEM, ISP, or Telco deployment, stats gathering monitoring, and provisioning, enabling service on demand, content swapping, banner substitution.

uClinux Features

- MMU non-dependent
- Complete TCP/IP, SLIP and PPP support
- Embedded Web servers
- Embedded uC library collection uClibc, uClibns, uCcrypt
- Filesystem Support for: NFS / JFFS / bFLAT EXT2FS / MINIX / SMB
- Realtime Available
- fully customizable
- source code available
- extensible and scalable
- Cost-effective

Code Size

- Typical Kernel implementation under ~ 512KB
- Typical Full System Implementation ~1MB

Platforms

- **Motorola**
ColdFire
MCF5272, MCF5206E, MCF5307, MCF5407, DragonBall 68328, QUICC 68360
- **Atmel**
AT91 Family (ARM 7TDMI)
AT75 Family (ARM 7TDMI)
- **Samsung**
ARM 7
ARM 9
- **Conexant**
ARM 9
- **Analog Devices**
MSA / Blackfin
- **Hitachi**
SHx,
- **SPARC**
- **Intel**
i960, x86
- **MIPS 4K**
more.....

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