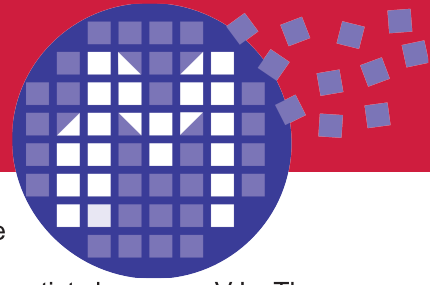


RTEMS APPLICATION SPOTLIGHT

Milkymist One



RTEMS (<http://www.rtems.com>) is an Open Source RTOS providing a powerful development and run-time environment that promotes the production of efficient real-time embedded applications.

Features:

- Scalable Architecture
- Modified GPL License
- Multiple APIs - Classic, POSIX
- Event-driven multitasking
- Priority-based, preemptive scheduling
- Responsive Interrupt Management
- Optional Rate Monotonic Scheduling
- Priority Inheritance and Ceiling Protocols
- Intertask communication and synchronization
- Homogeneous and heterogeneous multiprocessor systems
- Reentrant ANSI C Library
- Add-on libraries including Python, Lua, and Tcl
- High performance BSD TCP/IP Stack
- Protocols: TCP, UDP, BOOTP, ARP, ICMP
- Servers: FTPD, HTTPD, TELNETD
- Clients: DHCP, NTP, DNS, TFTP

Processors Supported:

M680x0	ix86	Coldfire	ARM
M683xx	Pentium	MIPS	Blackfin
PowerPC	SuperH	SPARC	H8
NIOS2	LM32	SPARC64	

Available Services:

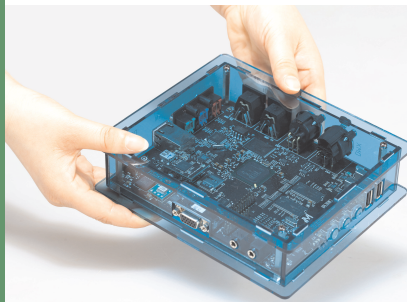
- Training
- Standard Support
- Legacy Support
- RTEMS Application Assistance
- Board Support Package Development
- Application Design and Development
- Ports to New Architectures
- System Architecture Design

On-Line Applications

Research (OAR) Corporation

7047 Old Madison Pike
Suite 320
Huntsville, AL 35806
<http://www.oarcorp.com>
Phone: 256-722-9985
Fax: 256-722-0985

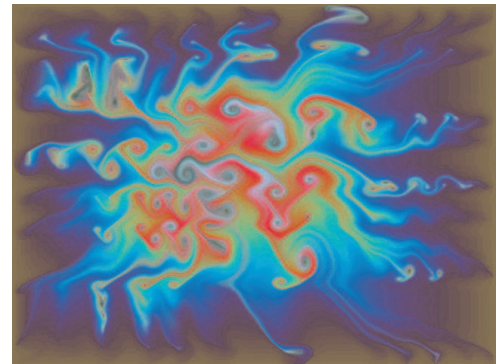
The Milkymist Project consists of a comprehensive open source solution for the live synthesis of interactive and dance-directed visual effects for video performance artists known as VJs. The Milkymist Project has delivered the first commercially available open hardware device to feature a system-on-chip (SoC) supporting accelerated graphics with entirely open source Verilog design files. The Milkymist One is an ideal platform for FPGA developers who want a custom platform.



The Milkymist One is an open hardware product that concentrates all the processing power and the interfaces of an heavily interactive VJ setup into one small box. With a unique combination of built-in interfaces such as MIDI, DMX512, analogue video input, Ethernet, OpenSoundControl and generic digital I/O, it gives you all the tools to create truly interactive performances. It is also the best FPGA development platform for an advanced electronics enthusiast.

Flickernoise is the user-friendly VJ application optimized for the Milkymist One and the Milkymist SoC. It renders hardware-accelerated visual effects comparable like those of MilkDrop, a audio visualization plug-in for Winamp. Flickernoise allows the creation of visual patches and their connection with all the interfaces that the Milkymist One provides thanks to an easy to use graphical user interface. Let the visuals react to sound and MIDI events, connect a camera and create live phantasmagoric images of yourself...

The Milkymist software runs on the RTEMS operating system which provides multitasking, filesystem, TCP/IP networking and basic services such as FTP, NFS and Telnet. We selected RTEMS instead of a more traditional embedded Linux for several reasons. RTEMS is lighter, faster and easier to work with. At the same time, its POSIX capabilities make it easy enough to port existing libraries such as libpng, libjpeg, Freetype and MuPDF. Both our users and developers appreciate the fast boot time of our product and the rich software environment.



References:

- Milkymist Home Page
- <http://www.milkymist.org/>
- Milkymist Wikipedia Page
- <http://en.wikipedia.org/wiki/Milkymist>
- Milkymist One Page
- <http://www.milkymist.org/mnone.html>
- RTEMS Wiki Page
- <http://www.rtems.org/wiki/index.php/Milkymist>