



No Royalty • Full Source Code • ARM • ColdFire • PowerPC • x86 • Portable

Looking for Quality Embedded Software?

ud *Micro Digital*

Micro Digital: Quality solutions fo

Out-of-the-Box Solutions

The main value we provide to our customers is out-of-the-box solutions that let them focus on application development. Our solutions save significant development expense and time to market. With smx, our products run immediately on supported processor evaluation boards and are tightly integrated with quality development tools. Manuals are complete and accurate, and support is excellent. For our processor coverage, see

www.smxrtos.com/processors.

Demos and Evaluation Kits

We offer free evaluation kits for popular ARM, ColdFire, PowerPC, and x86 processors. These are operational kits that demonstrate how quickly our products can be put to work. For USB and file system products we offer free demos that run on the same evaluation boards. They demonstrate out-of-the-box solutions that are ready for immediate use. See www.smxrtos.com/eval and www.smxrtos.com/demo.

Other Platforms and Standalone Support

What if you have picked a processor that we do not support or you are already committed to a different RTOS or tools, or do not want to use an RTOS? We can still help. All of our products are designed to be ported and come with porting instructions and macros. Of course, you will need to provide the BSP code and possibly write your own device drivers. We provide driver templates, if needed. In addition, we have a list of independent consultants to help. See www.smxrtos.com/consult.



SMX® RTOS

SMX is a modular RTOS that meets the needs of small to medium-size embedded systems. The products described herein comprise the SMX RTOS modules. They are small and efficiently written and thus work well on less expensive processors. The **smx** kernel is our flagship product and has been on the market for 20 years. It provides hard, real-time multitasking and is a rich kernel with many unique features. **smxBSP**, which comes with smx, provides the processor-specific BSP and startup code used by all of our products. **smxAware** provides RTOS-aware debugging.

www.smxrtos.com/mt.htm

- Hard Real Time
- C and C++ APIs
- Kernel-Aware Debug Multitasking Kernel
- Board Support
- Kernel Simulator



SMX.Blaze

SMX.Blaze is an integrated networking and multitasking package for embedded systems that need network connection. Multitasking allows the networking and application portions to operate independently, thus making design easier. To enhance project success further, SMX.Blaze provides processor-specific BSP code, an Ethernet driver or PPP, and tool/target-specific project build files and documentation. These ensure that your project will get off to a quick start and never look back.

www.smxrtos.com/rtos/smxblaze.htm



r the embedded systems industry.



USB

USB Device and Host stacks and OTG (On-The-Go) are offered. **smxUSB D** permits connecting an embedded device to a USB host, such as a PC, and emulating serial, mass storage, or other devices. This permits easy connection for control, downloading files, and other activities. **smxUSB H** permits connecting USB devices, such as USB thumb drives, human interface devices, and printers, to an embedded device. **smxUSB O** implements OTG to allow switching roles between device and host. Rich selections of function drivers for smxUSB D and class drivers for smxUSB H cover a multitude of application needs. A large assortment of USB controller drivers creates out-of-the-box solutions for many popular processors and external USB controllers.

www.smxrtos.com/usb.htm

- Host Stack
- Device Stack
- OTG
- Composite
- Controller Drivers
- Mass Storage
- Modem
- Serial
- Serial Converter
- Ethernet Converter
- WiFi
- Audio
- RNDIS
- HID
- Printer



Networking

smxNS offers a clean, modular design that makes it easy to add networking capabilities to embedded systems. It is ROMable and reentrant to support multitasking operation. Because code and data space are at a premium in small embedded systems, smxNS can be configured to use only those features needed by the application. The minimum configuration can fit into as little as 25 KB of flash and requires as little as 12 KB of RAM. smxNS provides a rich selection of protocols, and it has drivers for most popular embedded Ethernet controllers. www.smxrtos.com/tcpip.htm

- TCP/IP
- Web Server
- Email
- SNMP
- FTP, TFTP, BOOTP
- DHCP, IGMP, NAT
- SSL/SSH
- PPP, PPPoE
- Ethernet Drivers



File Systems

A range of file systems is available, from a simple data logger to a full FAT file system. **smxFLog** provides fast, reliable data logging to NAND or NOR flash. **smxFFS** is a simple NAND flash file system that provides wear-leveling, mapping, power-fail safety, and other essential features. **smxFS** is a standard FAT file system that supports both removable, Windows-compatible media, and non-removable media such as NOR flash. Our file systems can coexist and share drivers and can interoperate with our USB and networking products to provide truly comprehensive solutions.

www.smxrtos.com/fs.htm

- FAT 12/16/32
- VFAT LFN
- ATA
- USB Disk
- SD/MMC
- Compact Flash
- NAND/NOR
- Flash File System
- Flash Logger



GUI

The PEG family of products is designed for simple to sophisticated user interfaces for embedded systems. **C/PEG** is the reduced version, mainly for ¼ VGA screens, or smaller. It has a C API and offers a lower-cost GUI solution. **PEG+** and **PEG Pro** are the full-featured versions that support windowing on full size screens and C++.

www.smxrtos.com/gui.htm

- C/PEG
- Window Builder
- PEG+
- Video Drivers
- PEG Pro
- Utilities



Math

GoFast offers a faster alternative to compiler floating point libraries and a cheaper alternative to floating point hardware. It provides single and double precision IEEE 754 operations. GoFast is written in assembly language and optimized for each processor. www.smxrtos.com/ussw/gofast.htm

About Micro Digital

Micro Digital has been in the embedded software business since its inception in 1975 and in the embedded RTOS business for the last 20 years. We know what it takes to develop reliable, cost-effective embedded products, and we provide you with the tools to do so. Our products have been developed with our customers' needs in mind, and with emphasis on quality, support, and good documentation.

Customer Support

With Micro Digital, delivery is not the end of the story. We provide support by the programmers who wrote the code. They work with you to solve problems that arise and to keep your project moving smoothly forward. We want to help you get your product to market quickly. Because our support is so good, we enjoy a high support renewal rate. Take a look at what our customers have to say about our support and our products:

www.smxrtos.com/testimonials.html

Licensing

We offer various no-royalty licensing options. Our basic license is the single product license with a 50,000 production cap. This includes full source code and 90 days of support. Additional support is 20% per year. Higher production caps are available at moderate price increases. We also offer product line, product family, and site development licenses. For more information, please contact us.

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