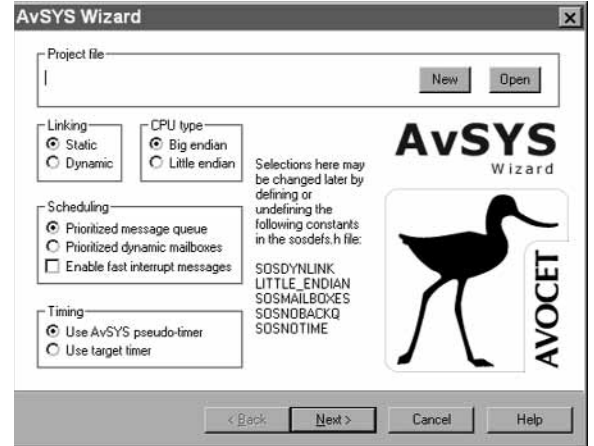


AvSYS | Real-Time Operating System

A Royalty-Free RTOS from Avocet

With our RTOS, AvSYS, your project starts two weeks ahead of schedule. Don't reinvent the wheel when you can have the power of pre-written and pre-tested code at your fingertips. AvSYS makes your code organized AND portable, creating a cohesive standard within, and across, projects. Handle interrupts, task-switching, and timing with ease. Save yourself weeks of development, testing, and maintenance. AvSYS includes the AvSYS Wizard, a powerful initial code generator for AvSYS-based applications, walking you step by step through the creation of an OS framework. After stepping through the Wizard, simply click the "Generate Code" button on the final page, and fully commented and formatted ANSI C code will be written FOR you based on the selections made throughout the wizard. The next step is to write your tasks and drivers (handy source code comments point you exactly where to hang them in the framework), link the AvSYS-generated code with the royalty-free source code included with AvSYS, and build your RTOS.



Royalty Free

- Why pay royalties when you don't have to? Pay once, use it as often as you like

Completely Portable: Supports All Processors and Platforms

- Requires only an ANSI C Compiler for your CPU, MPU, or DSP
- Reusable across projects

Code-Generating Wizard Gets Your Project Off to a Fast Start

- The AvSYS Wizard takes you step-by-step through the creation of an OS for your application
- Generates pre-written and pre-tested code with clear and concise comments
- Generated code comments show you exactly where to hang your tasks.
- Manual and online help includes a walk through of a complete sample project

Fully scalable and modular

- Footprint starts below 1K (ROM and RAM) yet designed for full-scale systems
- Configurable to fit your project

Source Code Included

- Includes well organized, easy to maintain, fully commented source code
- 100% ANSI C

Concentrate on Your Project and Let AvSYS Do the Rest

- Preemptive and non-preemptive multitasking
- Sophisticated scheduler controls the foreground and background processes
- Powerful Memory Manager controls allocation of shared memory areas
- Resource Manager shares and locks processes, protecting them from interfering with each other
- Device Driver Manager makes adding peripherals a snap
- Device-independent File System lets you drop in your device drivers to support hard drives, Flash, or other block-oriented storage
- Universal Network Manager allows support for any standard network protocol.
- High speed data transfer protocol with database compiler
- Built-in System Monitor and real-time statistics simplify debugging
- Run-Time Dynamic Linking allows you to bring in processes from File or Network Systems



The Complete Solution for Embedded Systems Development Tools

What is AvSYS?

Anyone who has ever developed an embedded project with even a single interrupt has spent the time to create their own Real-Time Operating System. Sometimes even embedded systems with no interrupts handle more than one task at once and require a lot of thought and design to handle timing and data considerations. Why reinvent the wheel? Avocet has already solved these problems for you with AvSYS.

AvSYS comes complete with a Wizard that gets you started fast. Simply enter a few parameters about your tasks into friendly dialog boxes and push a button. Your complete interface with the operating system will be written for you! All you have to do is insert the code for the project.

AvSYS was designed for fast real-time embedded development. It can compile down to less than 1K total RAM/ROM usage. Practically speaking, AvSYS is just code that you would have to write anyway.

In addition to managing your tasks, interrupts, and timing, AvSYS can control resources, memory, device drivers, file handling, network communication, flash memory blocks, and polling. AvSYS takes care of these side problems for you so you can concentrate on developing your application.

AvSYS is ready to go for any microprocessor or microcontroller. An entire distributed processing system can be implemented across a processor independent network.

AvSYS is a multitasking, multipurpose, platform-independent Real-Time Operating System. It combines preemptive scheduling to maximize the performance and simplicity of any application.

Originally designed for embedded systems, AvSYS' source code is of the highest level of efficiency and speed. However, it is powerful and flexible enough for large and complex applications. The possibilities of its use are endless, which makes creating or porting code extremely simple.

AvSYS offers a completely modular method for handling networking, file systems, device drivers and resource management.

Our system offers a structured method for designing device drivers that can be easily plugged in an out as you change from one peripheral to another or one processor to another. These drivers may be used directly as IO processes or they can be linked into our higher level systems. Resource management ensures that multiple device drivers or systems do not conflict.

The file system allows you to take advantage of block storage devices such as FLASH or disks by adding prewritten, pretested code for handling open, close, read and write. You drop in the basic device driver written to our modular specification and the high level functions are ready to run.

Networking is also handled by adding the high level structure to your standard device drivers. The AvSYS networking protocol includes support for 6 byte hardware node addresses and custom broadcast addresses. Support for packet sending, port listening and multiple port per node communications is all supported. All high level modules are independent and you only need to link in the modules appropriate for your project.

When it is time to debug your application, the built in system monitor acts as a ready-to-go remote monitor debugger that is fully system aware. All statistics from processors, timers and drivers are readily available.

So, don't write each new project from scratch. Start with AvSYS and have large sections of code already written. Keep using AvSYS and you will have a system that is easily portable and extensible for future projects.

With AvSYS Your Project Starts Two Weeks Ahead of Schedule

- Fully scalable and modular. Footprint starts below 1K, yet designed for full-scale systems
- Sophisticated scheduler controls the foreground and background processes
- Foreground can be shared among nonpreemptive processes, while background operates in a preemptive, interrupt driven mode allowing high priority execution of time critical operations
- Priorities are found in every level of processing, ensuring correct order of execution to accomplish the most important tasks first
- Optimized time sharing
- The foreground processes communicate and/or synchronize via a global message queue
- The background is interrupt driven. Hardware independent, but hardware aware scheduler.
- The scheduler handles multiple interrupts and is priority driven. When the scheduler requires full real-time processing interrupt sources can be masked dynamically
- Powerful Memory Manager controls allocation of shared memory areas, minimizing the possibility of conflicts and hard to find heap errors
- Built in System Monitor and real time statistics. When enabled, these simplify debugging and help discover many errors, even those not Operating System related.
- Dynamic memory allocation including support for non-contiguous memory heaps
- Simple access to process statistics
- Run-Time dynamic linking allows bringing in different processes from File system or Network system
- Resource sharing and locking protects your processes from interfering with each other as your program grows
- Management of device drivers allows for a standard driver interface for simple retargeting to different devices or target processors
- Drop in your device drivers to gain full File System support for hard drives, FLASH, or other block oriented storage
- Universal network management allows support for any standard network protocol
- Network systems handles broadcast and unicast messages
- Network system includes port listening, packet sending and message acknowledgement



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