

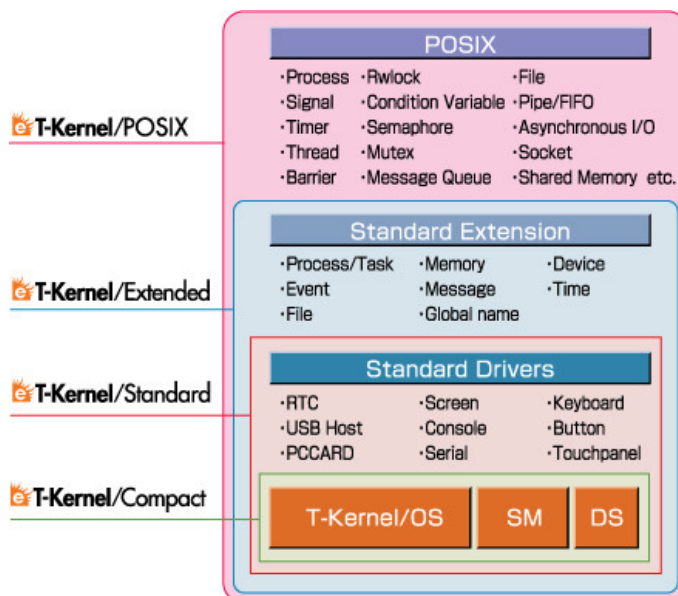
High Performance RTOS Suite

Product Overview

eT-Kernel is eSOL's implementation of the T-Kernel standard. eSOL has optimized T-Kernel for performance and ease of use, while maintaining compatibility with the standard T-Kernel OS.

Key Features

- ❑ Preemptive kernel
- ❑ Reentrant design
- ❑ Small footprint
- ❑ User configurable
- ❑ Very low interrupt latency
- ❑ Advanced RTOS features scale in multiple versions
- ❑ Completely ROMable
- ❑ Supports CPU specific functions
- ❑ Compliant with T-Kernel standard
- ❑ Backward compatible with μ ITRON 4.0
- ❑ Complete source code provided
- ❑ Target monitor included



OS: Operating System, SM: System Manager, DS: Debugger Support

T-Engine/T-Kernel

T-Kernel is an open specification for a realtime operating system with system management and debugging support. T-Kernel is part of the larger T-Engine specification, which provides a standard for open embedded systems development platforms that scale from tiny to complex. T-Engine and T-Kernel are designed to make it easy to move middleware from one platform to another.

System Manager (SM)

The T-Kernel System Manager manages the OS resources. The SM provides management for system memory, address space, devices, interrupts, I/O access, power, and system configuration.

Debug Support (DS)

The T-Kernel Debugger Support interfaces to track debug information such as the current state of kernel objects, and information for tracing program execution. eSOL provides eBinder, with which its tools EvenTrek and PartScope use this debug information to provide powerful system analysis.

eT-Kernel Scaled Solutions

- ❑ **eT-Kernel / Compact:** Full T-Kernel implementation optimized for performance and easy configuration. Compile-time switch for full compatibility with μ ITRON4.0.
- ❑ **eT-Kernel / Standard:** eT-Kernel/Compact with T-Engine drivers.
- ❑ **eT-Kernel / Extended:** Single-user, multiprocess operating system based on the T-Kernel specification and the Standard Extension. Supports MMU.
- ❑ **eT-Kernel/POSIX:** Comprehensive POSIX support. Requires eT-Kernel/Extended.
- ❑ **eT-Kernel Multi-Core Edition:** Supports AMP and SMP for homogeneous multicore processors.

Development Environment Package

eT-Kernel is fully integrated with eBinder and is offered as a package solution. eBinder is an Integrated Development Environment specifically designed for eT-kernel, and it includes a multicontext debugger, performance analysis tools, and a cross-compiler (see the table).

Processors Supported

eT-Kernel edition	Supported processor
eT-Kernel/Compact	ARM9/10/11
eT-Kernel/Standard	ARM9/10/11
eT-Kernel/Extended	ARM11 and MIPS
eT-Kernel /POSIX	ARM11 and MIPS
eT-Kernel/Multi-Core Edition	ARM11 MPCore

eBinder Package	Availability
Compiler	RVCT included for ARM. GCC included for MIPS and SH.
Debugger	Included
Editor	Included
Shell (Command-line based)	Included
Platform package builder	Included
Thread-safe C Library	Included
PartScope (Task-state Monitor)	Included
EvenTrek (System Analysis Tool)	Included
Realtime Profiler	Included
Virtual TTY	Included
Target Monitor	Included
Board Support Package	Select one BSP from the list
JTAG Driver	Optionally available for ARM Multi-ICE, Signum JTAGjet, KMC Partner J and YDC advicePLUS
eB-SIM	Optionally available for ARM and SH
PackageBuilder (BSP generator)	Optionally available

For a complete list of supported processors, please visit our website.
(<http://www.esol.co.jp/english/embedded/et-kernel.html>)

Compatible Products

- **PrFILE[®]2**: Portable DOS/Windows-compatible file system
- **PrCONNECT[®]/Pro**: TCP/IP protocol stack
- **PrUSB[®]**: USB device and host drivers. On-The-Go is also available on selected platforms.
- **PictDirect[™]**: PictBridge-compliant module.

Third Party Solutions

- **GUI Library**: The industry standard PEG Embedded GUI library is integrated with eT-Kernel and now available from Swell Software.
- **Browser**: ESPRIT, designed for consumer electronics, is now available for eT-Kernel from WebSoft International.

Licensing

Full source code is provided.
Flexible license options are available.

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