

Product Release Notice

IntervalZero ETS™ 14.1

- Product Released to Channel Partners on August 19, 2009.
- Product Released for General Availability on August 24, 2009.

PRODUCT OVERVIEW:

IntervalZero Inc. announces the release of ETS 14.1 - the smallest-footprint full-featured real-time embedded operating system that supports the Win32 API.

IntervalZero's Embedded ToolSuite (ETS™) provides the ability to create a complete real-time embedded runtime system for 32-bit, x86-compatible microprocessors. The ETS SDK is a set of development tools that work in the familiar Microsoft Visual Studio environment. A Visual System Builder (VSB) is provided with the ETS SDK to allow the developer to choose only those components that are needed by the target system. The ETS SDK uses the 32-bit Microsoft Visual C/C++ compiler and the IntervalZero LinkLoc linker to create an embedded real-time operating system (RTOS).

The 32-bit Microsoft Visual C/C++ compiler and linker are used to develop an application to run on the RTOS. The combination of the embedded RTOS and application are referred to as an ETS Runtime. This ETS Runtime is then deployable as a standalone embedded system.

The ability to create a customized kernel and application allow ETS RTOS to be the smallest-footprint full-featured real-time embedded operating system that supports the Win32 API.

ETS 14.1 PRODUCT AND PRICING INFORMATION:

Pricing information and details about the product are available through Channel Partners and by contacting IntervalZero Sales – sales@IntervalZero.com.

ETS 14.1 SDK:

The ETS SDK is used to create a real-time operating system and target application. It provides:

- A set of Win32 based APIs that can be used to write real-time applications
- Development and debugging support that integrates into Microsoft Visual Studio 6.0, .NET 2002, .NET 2003, and 2005
- A Visual System Builder tool to build and configure an ETS Runtime Target
- A number of sample applications to show basic programming concepts
- A rich documentation set to explain how to develop and debug real-time applications

ETS 14.1 Runtime:

The ETS split-application architecture provides a system with separate ETS Kernel and application components.

- Only necessary components are loaded onto the target.
- An ETS Runtime license must accompany the final target system.

New Features and Updates:

ETS 14.1 includes the following new features and updates:

- Dual IPv4 and IPv6 TCP/IP Stack (Stack 3)
- Stack 3 provides IPv4 support for the following:
 - FTP
 - BOOTP
 - SMTP
 - DHCP
 - DNS
- SNMPv2c and SNMPv3 support (agent can be purchased by contacting DMH Software at sales@dmhsoftware.com)
- Added ability to ignore USB devices that have failed
- Added support for boards without PCI BIOS, by allowing direct write access to address and data registers

Bug Fixes, Patches:

The following updates have been incorporated since the release of ETS 14.0:

- **CUSTOM-1-14** - 7/28/2009 - This patch ensures that the `GetEnvironmentVariable()` function will return the correct Time Zone (TZ) value.

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- **DLLLOADER-1-14** - 1/23/2009 - This update corrects issues found when loading ETS using memory protection.
- **FTPServe7-1-14** - 5/22/2009 - This update contains an updated version of the FTP server library for the TCP/IP version 2 stack along with fixes for problems with the ETS FTP server.
- **MONITOR-1-14** - 1/29/2009 - Previously, when the ETS software attempted to boot from a single-partition FAT 32 disk larger than 127 GB, the attempt failed. This resolves the problem, enabling boot from single-partition FAT 32 disks up to 2 Terabytes in size.
- **NetworkDebuggingPatch-1-14** - 1/29/2009 – This corrects issues found when using network debugging to debug a target system.
- **PCI-2-14** - 6/12/2009 - This corrects a problem with accessing the PCI configuration space on PC motherboards that do not have PCI BIOS functionality.
- **PEG-1-14** -12/3/2007 - This corrects some problems in the PEG embedded GUI libraries included with ETS 14.0. Specific fixes are listed in **Peg-1-14.txt** file.
- **PEG-WIN32-0-14** - 12/12/2007 – This update to the baseline release of ETS 14.0 adds the ability to compile, test and run PEG (Swell Software's Portable Embedded GUI) applications.
- **S-3-14** - 1/7/2009 - This corrects problems in the MS DOS-compatible real-time file system library. Extra logic has also been added to handle situations where the file system fails to mount a USB device.
- **RTOSEXE-1-14** - 1/9/2009 - This updates the version of the core split-architecture ETS Kernel.
- **RTWINAPI-1-14** - 1/15/2008 - This provides a new version of RTWINAPI.h
- **SERIAL-1-14** - 5/15/2008 - This fixes an issue where Serial port APIs incorrectly access ports when opening them for the second time. An additional fix corrects the search order used for finding serial mice.
- **TCPIP2-1-14** - 5/22/2009 - This updates the version of the TCP/IP Stack 2 library and fixes problems with the ETS FTP server.
- **VSNETDIR-1-14** - 1/18/2008 – This provides a new version of the VSNetDir.EXE file, used by the InstallPlugin utility, to retrieve VS configuration file directory name.
- **VT610X-2-14** - 1/22/2008 - This updates support for the VIA VT6103 and VT6105 Ethernet controllers to the ETS 12.0 TCP/IP stacks, both V1 and V2.
- **USB-2-14** - 4/15/2009 - This corrects an issue with resetting root hubs, and allowing a halted drive to be detached from the USB stack without adversely affecting the USB stack or the system. Changes were made to the toggle logic for the EHCI and UHCI controllers. Also, the software no longer attempts to abort transfers in a USB pipe when clearing a halted endpoint.
- **WIN32-4-14** - 7/28/2009 - This resolves a problem with clock updates during daylight savings time; corrects a race condition that causes RTOS.ini to not be found on the

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target system, an issue involving memory protection; and corrects a dependence issue that arose when using Microsoft Visual Studio 2005 C Runtime.

- **WININET-1-14** - 5/22/2009 - This fixes problems with the FtpOpenFile and FtpFindFirstFile functions that have been found since the last version of the library was released.

Availability

ETS 14.1 is available through Partners and by contacting Sales: sales@intervalzero.com or 781.996.4481.

We look forward to comments and feedback. If you have any other recommendations or wish to suggest any enhancements to IntervalZero, please contact Sales at sales@intervalzero.com or Product Management at: ProductManagement@intervalzero.com.

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