

# **Fujitsu Semiconductor Selects eSOL's eT-Kernel RTOS and IDE for Developing Advanced Automotive Graphic Applications on MB86R11 'Emerald-L' SDK**

**Collaboration will aid real-time, reliable performance of demanding systems such as Fujitsu's 360° Wraparound Video Imaging Technology**

Tokyo, Japan. July 6, 2011 – eSOL, a leading developer of real-time embedded software solutions, announced today that Fujitsu Semiconductor has adopted eSOL's eT-Kernel real-time operating system (RTOS) and eBinder integrated development environment (IDE) for Fujitsu's MB86R11 "Emerald-L" system-on-a-chip (SoC) software development kit (SDK) for automotive graphic applications. The MB86R11 SDK with eT-Kernel and eBinder enables users to develop demanding automotive systems such as center cluster information displays, navigation, in-car multimedia graphics applications, and Fujitsu's 360° Wraparound Video Imaging Technology in less time and at lower cost.

eSOL has completed porting the small-footprint eT-Kernel/Compact RTOS profile to the MB86R11 SoC. Other eT-Kernel profiles that eSOL will port to the SoC include a POSIX-compliant real-time OS, which covers low- to high-end devices for a variety of applications and the eT-Kernel Multi-Core Edition for multi-core processors. eT-Kernel also supports ARM NEON™ technology implemented on the ARM Cortex-A9, which speeds the processing of multimedia/signal processing algorithms. As a result, the high-performance eT-Kernel is especially good for devices with multimedia capabilities including audio, video, and 3D graphics.

eT-Kernel and eBinder have been adopted in car navigation and audio systems throughout the world. The eBinder IDE is specifically designed for RTOS-based software development. With eBinder, developers can easily solve challenging issues unique to real-time systems, thus reducing their workloads and improving development efficiency.

“eSOL’s eT-Kernel and eBinder were obvious choices to support our top-of-the-line MB86R11 graphics SoC for automotive applications,” said Takashi Fuse, General Manager, Automotive Business Division of Fujitsu Semiconductor Limited. “eT-Kernel and eBinder have a successful track record as a real-time OS and IDE for car navigation and audio systems built on our MB86R01 SoC, a predecessor of the MB86R11.”

“Modern automotive applications must quickly convey a wide variety of information to drivers by means of easy-to-understand graphics,” said Nobuyuki Ueyama, Executive Vice President of eSOL. “Fujitsu’s MB86R11 SoC provides the high-definition graphics needed for this new generation of systems.”

Older generation digital instrument clusters primarily included speedometers and fuel gauges. Today’s more advanced automotive instruments display maps, vehicle operating status, and surrounding conditions, requiring the instantaneous display of high-definition graphics in real time with extremely high reliability. Fujitsu’s MB86R11 SoC is well-suited to the new graphics-intensive automotive applications. Based on an ARM Cortex™-A9 core, the MB86R11 SoC implements GUI capabilities such as four video inputs, three display outputs, high-speed 2D/3D drawing capabilities, and specific peripheral interfaces for automotive applications such as CAN, USB, and Ethernet.

In response to market demands, eSOL plans to develop drivers and middleware for network, file system and USB capabilities for controllers incorporated in the MB86R11. eSOL also plans to port the eT-Kernel SDK, eSOL's new, fully integrated software platform for prototyping, to the MB86R11 SoC. The eT-Kernel SDK will enable developers to more quickly develop sophisticated GUI and audio functions.

eT-Kernel and eBinder are the main components of eSOL's eCROS software platform.

eCROS also includes a wide variety of middleware and professional services.

### **Resources**

360° Wraparound Video Imaging Technology: A driver assistance technology developed by Fujitsu. This technology synthesizes images from four cameras to create a true 3-D hemispheric view of a vehicle's surroundings. The technology enables flexible omnidirectional monitoring around a vehicle from a dynamically definable perspective or "free eye point. For more information:

<http://www.fujitsu.com/us/services/edevices/microelectronics/gdc/products/omni.html>

### **About eSOL**

eSOL is a leading embedded software developer that enables customers to accelerate development of applications based on high-end embedded processors including multi-core. Our advanced, scalable, multi-profiled real-time operating systems are tightly integrated with development tools and middleware components to create flexible development platforms used by OEMs and ODMs worldwide in competitive vertical markets such as automotive, consumer electronics, industrial and medical equipment and aerospace. Founded in 1975, eSOL is based in Tokyo, Japan.

For more information, please visit <http://www.esol.com>