

## **Fujitsu and SEGGER announce embOS real-time operating system for 16FX microcontroller series**

**Langen and Hilden, Germany, March 19 2008** – Fujitsu Microelectronics Europe (FME) and SEGGER Microcontroller, a leading manufacturer of middleware for embedded systems, have today announced the availability of SEGGER's real-time operating system, embOS, for FME's 16FX microcontroller family.

FME's 16FX family retains compatibility with the company's 16LX microcontrollers while providing customers with major performance enhancements including up to five times the computing power, a significant 80% reduction in power consumption (at the same performance) and greater on-chip functionality compared to its predecessor.

It is based on an improved CPU with significantly increased internal bus bandwidth. As a result, program execution is about three times faster (depending on the memory model used) than 16LX at the same clock frequency. For example at 24MHz, 16FX achieves more than 11 real MIPS (Dhrystone 2.1). New technology and improved design allow CPU frequencies up to 56MHz – thus enabling processing performance ranges equivalent to 32-bit processors.

The embOS port for the 16FX takes full advantage of the family's advanced architecture. "The tiny footprint of the embOS kernel and the code-size optimised instruction set of the Fujitsu 16FX microcontroller family are a perfect match," said Robert Teufel, COO at SEGGER. embOS offers zero interrupt latency to support the sophisticated interrupt structure on the 16FX.

Other high-end features of embOS include embOSView, a graphical profiler, an unlimited number of possible tasks and no pre-configuration or assembly language required. SEGGER does not charge royalties for embOS.

The 16FX family consists of several devices ranging in package size from 64 to 144-pin, with more currently under design. All devices are available with CAN, and the new 144-pin MB96F330 offers USB MiniHost functionality as an option. The 16FX series targets key market sectors, including automotive control applications where the new devices meet the demand for higher computing power combined with a high degree of integration as well as industrial control applications. The 16FX family is developed in Fujitsu's European Microcontroller Design Centre in Langen, Germany.

**Image caption:**

*Profiling using embOSVIEW: The embOSView tool analyses the running of F16 target applications in real-time and displays the state of these applications using embOS. All communication takes place within the communication interrupt routines. This means the communication is non-intrusive if embOSView is not connected and minimum-intrusive while embOSView is connected. In the profiling build, embOS collects precise timing information for every task, which enables embOSView to show the CPU load.*

Ends...PR904

**About Fujitsu Microelectronics Europe**

Fujitsu Microelectronics Europe (FME) is a major supplier of semiconductor products. The company provides advanced systems solutions to the automotive, digital TV, mobile telephony, networking and industrial markets. Engineers from design centres dedicated to microcontrollers, graphics controllers, mixed-signal, wireless, multimedia ICs and ASIC products work closely with FME's marketing and sales teams throughout Europe to help satisfy customers' system development requirements. This solutions approach is supported by a broad range of advanced semiconductor devices, IP and building blocks.

For more information, please see:

[http://mcu.emea.fujitsu.com/mcu\\_portal.htm](http://mcu.emea.fujitsu.com/mcu_portal.htm)

### **About SEGGER Microcontroller**

SEGGER Microcontroller develops and distributes hardware and software development tools as well as software components. All software components are ANSI 'C' compliant and can be used in embedded systems including industries such as telecom, medical technology, consumer electronics, automotive industry and industrial automation. SEGGER software products include: embOS (RTOS), emWin (GUI), emFile (File System), emUSB (USB device stack) and embOS/IP (TCP/IP stack). Besides the highly efficient software products, SEGGER also provides embedded hardware tools such as the well-known J-TAG emulator J-Link, J-Trace and the Flasher (stand-alone programmer). SEGGER's intention is to cut software development time for embedded applications by offering affordable, flexible and easy-to-use tools and software components allowing developers to focus on their applications.

For further information please visit: <http://www.segger.com>

### **Contact information:**

Ivo Geilenbruegge,  
Marketing Manager  
Tel:+49-02103-2878-0,  
e-mail: [info@segger.com](mailto:info@segger.com)

### **Issued on behalf of:**

**Fujitsu Microelectronics Europe**  
Pittlerstrasse 47  
63225 Langen  
Germany

Tel: +49 (0)6103 69 00  
Fax: +49 (0)6103 69 01 22  
E-mail: [jim.bryant@fme.fujitsu.com](mailto:jim.bryant@fme.fujitsu.com)

Contacts: Jim Bryant

### **More information from:**

**JDK Marketing Communications**  
The Oasts, Charmans Farm  
Beggars Lane  
Westerham  
Kent TN16 1QP

Tel: 0870 787 9510  
Fax: 0870 787 9509  
E-mail: [joanne@jdk.co.uk](mailto:joanne@jdk.co.uk)

Joanne Bennett