

# Free Remote Debugging Tool for J-Link

Hilden, Germany - October 23<sup>rd</sup>, 2012 - Remote Debugging via the SEGGER J-Link is now possible over the internet even if the target sits behind a firewall. With the introduction of SEGGER's J-Link Tunnel Mode, it is now possible to quickly access a J-Link connected to a PC on a remote network. Software development of a product can be done in multiple locations and without regards to the location of the target hardware, as is often necessary.

The PC (Server) hosting the connected J-Link and target hardware needs nothing more; no need of an expensive IDE license or production flash programming software. All that is required is a running instance of the SEGGER J-Link Remote Server in Tunnel Mode. Once the J-Link is connected, the SEGGER Tunnel Server (Tunnel) offers up the J-Link for a remote debugging session. The user of the remote PC (Client) may then connect via the Tunnel Server to the desired J-Link and target hardware. From the engineers perspective, it is as if the hardware is on their desk.





The host site does not gain access to any proprietary or intellectual property controlled code which would typically require lengthy Non-Disclosure Agreements (NDAs) and legal interaction to facilitate such a project. Even with the correct legal paperwork in place, considerable issues are often encountered as the proper tools and the best engineer to accomplish the work may not be available at the hardware site.

"With companies offering their services across borders, it becomes an increasingly important task to find affordable ways for developing and supporting products by international teams. We have used the Tunnel Server ourselves with great success when we work with silicon vendors to implement and test J-Link support at the very early stages", says Alexander Gruener, J-Link Product Manager of SEGGER.

## **Behind the Technology**

Starting the J-Link Remote Server in Tunnel Mode triggers the Remote Server to connect with the Tunnel Server from SEGGER. The Remote Server registers the serial number of the locally connected J-Link at the Tunnel Server. Now the Tunnel Server is able to provide

access to this J-Link via the Internet using its serial number.

When a debugger or any other tool using the J-Link DLL connects with the Tunnel Server and requests a connection to this serial number, the Tunnel Server establishes the connection by forwarding the messages from the J-Link DLL to the Remote Server and vice versa.

More information on the Remote Server and the Tunnel Mode are available at:

SERVER
TUNNEL
SEGGER
Tunnel
Server

PC
PC
PC
PC
PC
PC

http://www.segger.com/tcp-ip-server.html?p=16#tunneling mode

#### **About J-Link**

The SEGGER J-Link is the industry-standard for ARM debug emulators, supported by all major tool chains for ARM cores. The SEGGER J-Link is independent and will work with IDEs from: Freescale, IAR, KEIL, Mentor Graphics, Rowley, Renesas, Tasking, Phyton and others. In addition to those listed above; any RDI compliant debugger can be used with the optional RDI module, and any GDB compliant debugger with the free GDB-Server. Therefore; as projects change, a different compiler/debugger may have to be used. With the J-Link family, investments (monetary and learning curve) in development/production tools are preserved. Setup of a J-Link is done in mere minutes.



J-Link supports multiple CPU families, such as ARM 7, 9, 11, Cortex-M0, M1, M3, M4, R4, A5, A8, A9, Renesas RX in a single model; there is typically no need to buy a new J-Link or new license when switching to a different CPU family or tool-chain. SEGGER is also continuously adding support for additional cores, which in most cases, only requires a software/firmware update. Unlimited free updates are included with even the baseline model of the J-Link. SEGGER is excited to continue advanced development of its cutting edge embedded tool solutions to be utilized with pretty much any development environment you choose. All J-Links are fully compatible to each other, so an upgrade from a lower-end model to a higher end model is a matter of a simple plug-and-play.

Full product specifications are available at: http://www.segger.com/jlink.html

The J-Link-Software is available at: http://www.segger.com/download\_jlink.html

U.S. On-Line Web Shop: <a href="http://shop-us.segger.com">http://shop-us.segger.com</a>

Online Shop (Europe, Asia, Africa): <a href="http://shop.segger.com">http://shop.segger.com</a>

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#### **About SEGGER**

**SEGGER Microcontroller** develops and distributes hardware and software development tools as well as software components for embedded systems. An "embedded system" is one in which a microprocessor and associated components are incorporated into a device helping to accomplish difficult and complex tasks in products such as cell phones, medical instruments, instrument clusters, measurement instruments, satellite radios, digital cameras etc.

SEGGER was founded in 1997, is privately held, and is growing steadily. Based in Hilden with distributors in all continents and a local office in Massachusetts, SEGGER offers its full product range worldwide.

SEGGER software products include: embOS (RTOS), emWin (GUI), emFile (File System), emUSB (USB host and device stack) and embOS/IP (TCP/IP stack). With the experience in programming efficiently on embedded systems, SEGGER created highly integrated, cost-effective programming and development tools, such as the Flasher (stand-alone flash programmer) and the industry leading J-Link/J-Trace emulator.

SEGGER's intention is to cut software development time for embedded applications by offering affordable, high quality, flexible and easy-to-use tools and software components allowing developers to focus on their applications. Find out more at <a href="http://www.segger.com">http://www.segger.com</a>.

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