

## Easily add virtual Ethernet ports to single port MCUs with embOS/IP

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SEGGER's TCP/IP stack now offers support for the Tail Tagging feature of Micrel/Microchip Ethernet switches. embOS/IP is the first embedded IP stack to support Tail Tagging.

This enhancement establishes multiple virtual Ethernet ports when only one physical Ethernet port is available on the CPU - by choosing another PHY.

Offering more than one Ethernet port is normally complex, difficult to handle, and most CPUs only have a single port Ethernet controller. It thus requires additional components such as external Ethernet controllers to extend the number of available ports.

Micrel/Microchip has developed switches which are able to expand one Ethernet port of the CPU into 1+n fully independent ports for the network by using the so-called Tail Tagging mode.

Several ports might, for example, be needed when building a router where every port has to be addressed individually. Additionally, multiple ports can be used to create redundant networks, known as multihoming.

Port addressing is done on a pure software basis and is transparent to the outside. The new feature allows every port to have its own assigned MAC-address so that they appear like different physical hosts in a network.

Additionally, SEGGER is offering hardware to evaluate the feature. embOS/IP Switch Board is now available, including an NXP Kinetis K66 CPU, Micrel/Microchip switch PHY KSZ8794CNX with three usable Ethernet ports and an on-board version of SEGGER's popular J-Link debug probe.

Tail Tagging support, together with a PHY driver, is available as an add-on. The package can be easily evaluated using SEGGER Embedded Studio, even while in evaluation mode.

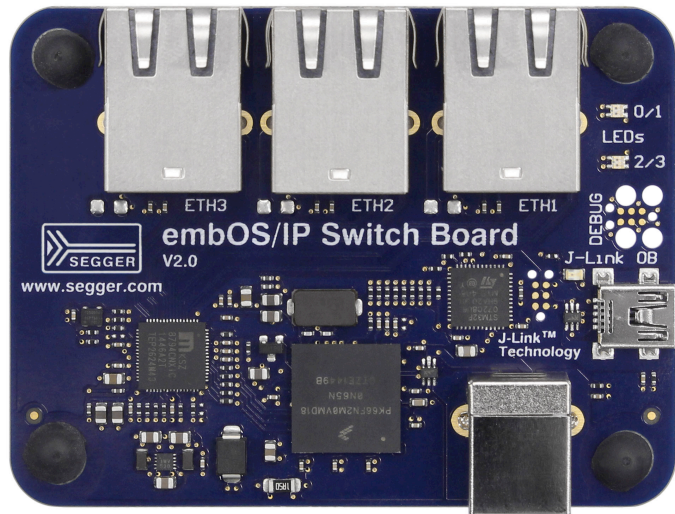
More information on Tail Tagging support can be found at <https://www.segger.com/embos-ip-tail-tagging.html>.

The embOS/IP Switch Board is described in detail here: <https://www.segger.com/embos-ip-switch-board.html>

### About embOS/IP

embOS/IP is a high performance IP stack specifically designed for embedded systems. The flexible stack supports all popular protocols such as ACD, ARP, AutoIP, DHCP, DNS, FTP, HTTP, ICMP, IPv4, IPv6, Multicast, NetBIOS Name Service, PPP/PPPoE, SMTP, SNTP, TCP, UDP, UPnP, VLAN, and many more. embOS/IP is fully compliant to all related RFCs.

Full product specifications are available at: [www.segger.com/embos-ip.html](http://www.segger.com/embos-ip.html)





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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 emSecure, a unique software to generate and verify digital signatures, and the TLS-solution emSSL, SEGGER is also offering software for the growing field of data and product security.

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 cuts 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 [www.segger.com](http://www.segger.com)

### Contact information:

Dirk Akemann  
Marketing Manager  
Tel: +49-2103-2878-0  
E-mail: [info@segger.com](mailto:info@segger.com)

### Issued on behalf of:

SEGGER Microcontroller GmbH & Co. KG  
In den Weiden 11  
40721 Hilden  
Germany  
[www.segger.com](http://www.segger.com)

SEGGER Microcontroller Systems LLC  
106 Front Street  
Winchendon, MA 01475  
United States of America  
[www.segger-us.com](http://www.segger-us.com)

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