SOFTWARE BRIEF

Harness the Power of Serious & SEGGER

Serious comms/control module customers are equipped with a no-cost license of Segger software stacks

Serious and Segger have partnered to bundle pre-licensed, pre-ported Segger software on ARM-based Serious Communications/Control Modules (SCMs). After one-time activation on an SCM dev kit, embedded systems designer can rapidly create and deploy products with sophisticated IoT/IT/industrial networking connectivity and system control leveraging a high quality commercially-supported software-on-hardware platform.

To reduce software development time for embedded applications, we offer high quality, compact, flexible, and easy-to-use products, allowing developers to concentrate on their applications. Rather than having to buy separate licenses for projects using Serious Communication Modules (SCMs), our partnership allows us to offer pre-licensed, pre-ported packages ready for you to use after your one-time activation on your boards.

Serious Communication Modules (SCMs) are equipped with the following software:

Embedded Studio—A Fully-unlocked Commercial License

Each SCM development kit includes a full commercial license to Segger Embedded Studio, a high-performance integrated development environment (IDE) for embedded C development and debug. Embedded Studio is a powerful C/C++ IDE (Integrated Development Environment) for ARM microcontrollers. It is specifically designed to provide users with everything needed for professional embedded C programming and development: An all-in-one solution providing stability and a continuous workflow for any development environment.

embOS— Leading Real Time Operating System

embOS is a priority-controlled real-time operating system (RTOS), designed to be used as foundation for the development of embedded real-time applications within an embedded system.

embOS/IP Comm Stack for Embedded Devices

World Class IP Based Communication embOS/IP is the industry-leading TCP/IP stack for embedded systems.

- ANSI C socket.h-like API for user applications. An application using the standard C socket library can easily be ported to use embOS/IP.
- Small memory footprint
- Runs “out-of-the-box
- No configuration required

embOS/IP on the SCM includes most important protocols related to Ethernet communication stack:

- ACD
- ARP
- AutoIP
- DHCP client
- DNS client
- ICMP
- IPv4
- TCP
- Loopback device
- Multicast
- RAW Sockets
- UDP
- UPnP
- VLAN
- WiFi support

Depending on the engineer’s needs, there are several additional protocols available as an upgrade.

emFile—Fail Safe File System for Embedded Systems

emFile is a high-performance library optimized for minimum memory consumption in RAM, ROM, high speed, and versatility working on any embedded device. Ready-to-use device drivers are available for NAND, and NOR flash, SD/SDHC/SDXC/MMC cards, e.MMC storage devices, CompactFlash cards, and USB flash drives.

emUSB-Device—High Performance, Flexible USB Device Stack

emUSB-Device was specifically designed for embedded systems with support for bulk, MSC, CDC, HID and more. The software is written in ANSI C and can run on any platform. Drivers for the SCM are pre-ported and included. Multiple standard classes are supported.

emUSB-Host – Efficient USB host stack

SEGGER's emUSB-Host is a USB host stack specifically designed for embedded systems, and comes with pre-ported drivers for SCMS with USB Host capability. It implements full USB v1.1 and v2.0 host functionality, including external hub support and all transfer modes (control, bulk, interrupt, isochronous) at all speeds. USB pipe management and extended error recovery mechanisms required for reliable operation are implemented internally.

emCrypt – Cryptographical Library

emCrypt is a secure and efficient implementation of essential cryptographic algorithms specifically designed for embedded systems.

- Supports modern cryptography standards
- NIST-validated implementations of many algorithms
- Secure, fast, and cleanly-written code
- Extensive 2,000 page manual covering all API features and functions
- Decoupled implementation links only what you need
- Public key cryptography (RSA, DSA, ECDSA, EdDSA)
- Fast, tunable ciphers, hash algorithms, and message authentication codes (MACs)
- Key derivation, key wrapping, key encapsulation
- Random bit generation, cryptographically secure pseudo-random numbers

Ready to Test Drive Segger, Seriously?

Request a Demo Today!

Contact us at sales@seriousintegrated.com to request a demo or visit seriousintegrated.com/products for additional information about our SCM modules and their comms/control capabilities.

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