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**PRESS RELEASE**

# The SoM (System on Module / Stack on Module) including the multi-protocol technology “GOAL” (PROFINET, EtherNetIP, EtherCAT) from port GmbH receives an extensive firmware update 2.1.

## The SoM receives an extensive firmware update which will be available from 08/2021. The update contains a number of extended functions and performance improvements. An important extension is the integration of the µGOAL technology in order to be able to incorporate low performance CPUs (e.g. 8 bit). All stacks meet the current conformance specifications. MRP and DLR have also been integrated. The update 2.1. was included in the extensive tool chain.

The firmware update contains the following enhancements.

Port's µGOAL technology has been integrated and now allows the simple connection of low performance CPUs such as the ATMEGA2560, STM32F, STM32G, STM32H and STM32L. The µGOAL technology makes it possible to make almost every MCU with SPI interface EtherCAT, PROFINET and EtherNetIP capable.

**General**

**Introduction of uGOAL:** Very small footprint, Support a wide variety of platforms from 64bit Linux down to 8bit embedded systems (e.g. ATMEGA2560)

**Extension of process image:** Support of max. data of different stacks (EIP 509/508 Bytes Forward Open, PROFINET 1434 bytes for each direction, ECAT 1408 byte). Size depending on RAM of target platform.

**New examples:** more examples to speed up the development like IP management via HTTP, TCP proxy example and uGOAL examples for the different network stacks

**Support for STM Cube IDE**: generate AC applications directly from STM Cube IDE

**Generator for IDE projects:** generate applications for IDEs like E2 Studio, STM Cube and Eclipse

**PROFINET**

**Support of MRP**: MRP Slave support

**PNIO Process Alarm Queue:** Prioritizing alarms for PROFINET

**PNIO Conformance to v2.4:** conformance to the latest PNIO specification

**Dynamic reconfiguration of PNIO:** plugged modules can be reconfigured at runtime

**Simplified API:** create new applications with less code

**Backwards compatible:** compatible with older AC applications

**EtherCAT**

**EoE can be deactivated:** for smaller applications

**EtherNet/IP**

**ACD support:** support for ACD IP address conflict detection and resolution

**CT 18 conformance:** conformance according to latest specification

**Plugfest Tests conformance:** passes all plugfest tests

**Support for Virtual Classes:** Extended parameterization possibilities

**Tool ICC - Industrial Communication Creator**

**Support for Mac OS:** support for Mac OS on Intel and M1 (via Rosetta 2)

**Better support for iRJ45:** including automatic LED support etc.

**Tool ICE - Industrial Communication Explorer**

**Support for Mac OS:** supports Mac OS on Intel and M1 (via Rosetta 2)

**Update of interface list at runtime:** refresh list of active interfaces at runtimes

**EtherCAT**

**Support for EtherCAT state machines:** switch through the different states of EtherCAT visually

**EEPROM initialization:** write an ESI file generated by the Industrial Communication Creator to the device

**PROFINET**

**Alarm support:** show and acknowledge alarms

**Scripting support:** add own Python scripts for manipulating the process image

**IN/OUT module support:** supports data exchange using combined input/output modules

**about port** **GmbH**
port is a leading supplier of industrial real time communication technologies like CANopen and Industrial Ethernet including the PROFINET, EtherNetIP, EtherCAT POWERLINK, CC-LinkIE TSN, and TSN protocols. port GmbH has been located in Halle/Saale since 1990.  For more than five years port has successfully provided Industrial Ethernet Technology such as PROFINET, EtherCAT, POWERLINK, EtherNetIP and CC-LinkIE TSN. port offers stacks, tools, workshops and integration support as well as custom hardware and software development, including manufacturing of electronic devices and systems.

#### Keywords: System on Module, Stack on Module, embedded PROFINET Module, embedded EtherNetIP Module, embedded EtherCAT Module, industrial Ethernet, PROFINET, EtherNetIP, EtherCAT, GOAL, µGOAL, Multi Protocol Solution, industrial Ethernet Communication, STM Cube IDE, PROFINET Conformance Test v2.4, EtherNetIP Conformance Test CT 18,

#### Links

#### Stack on Module: <https://www.system-on-module.com/product-details/som-iot-rin32m3ec/>

#### Tools: <https://www.system-on-module.com/engineering-tools/>

#### GOAL / µGOAL: [https://portgmbh.atlassian.net/wiki/spaces/IRJ45SOM/pages/361365505/Feature+comparison+between+uGOAL+and+GOAL](https://portgmbh.atlassian.net/wiki/spaces/IRJ45SOM/pages/361365505/Feature%2Bcomparison%2Bbetween%2BuGOAL%2Band%2BGOAL)

#### Update 2.1.0.0: [https://portgmbh.atlassian.net/wiki/spaces/IRJ45SOM/pages/386924577/Version+2.1.0.0](https://portgmbh.atlassian.net/wiki/spaces/IRJ45SOM/pages/386924577/Version%2B2.1.0.0)

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