Flexible Power/Comms Connectivity

Flexible Communications & Power Connectivity

The SCM208 is designed to complement Serious Integrated Modules (SIMs) powering the SIM+SCM from a wide 9-25VDC input and providing Ethernet, WiFi, Bluetooth Smart with NFC™-A tag support, RS232 or RS422/485, and CAN connectivity. An on-board Renesas Synergy™ MCU provides an open programming platform for protocols, IoT and IT connectivity, GPIO, OEM system control and custom data interchange between the SIM's GUI and the OEM system.

Family Highlights & Options

Easy SIM Connectivity
- Board-to-board direct attach to 3rd and 4th Generation SIMs

Renesas Synergy™ S7G2 MCU for Comms Management
- On-board protocol translation, machine to GUI messaging, and IoT connectivity
- USB 2.0 FS Device Micro B connector
- Tag-Connect TC2050 Debug Port

Network to SIM Power Conversion
- 9-25V to 5V DC-DC converter powers the SCM and attached SIM

CAN Connectivity
- Robust 4 pin industrial wire connector
- MCU-based CAN Controller

RS232/RS422/RS485 Connectivity
- Robust 6-pin industrial wire connector
- RS232 or RS422/RS485 mode, half or full duplex
- Differential or single ended RS4XX with selectable slew rate

WiFi 802.11 b/g/n
- Qualcomm QCA4002 2.4GHz with external antenna support

Bluetooth Smart with NFC™-A Tag Touch-to-Pair
- nRF52-based with Bluetooth Smart, -96dbm sensitivity, 2Mbps max data rate
- NFC™-A tag support for touch-to-pair capability

Ethernet 10/100 with Power-over-Ethernet (PoE) Option
- Optional Serious Physical Module (SPM) for flexible connection & mounting
  - **Coming Soon**
- For industrial or custom options contact Serious

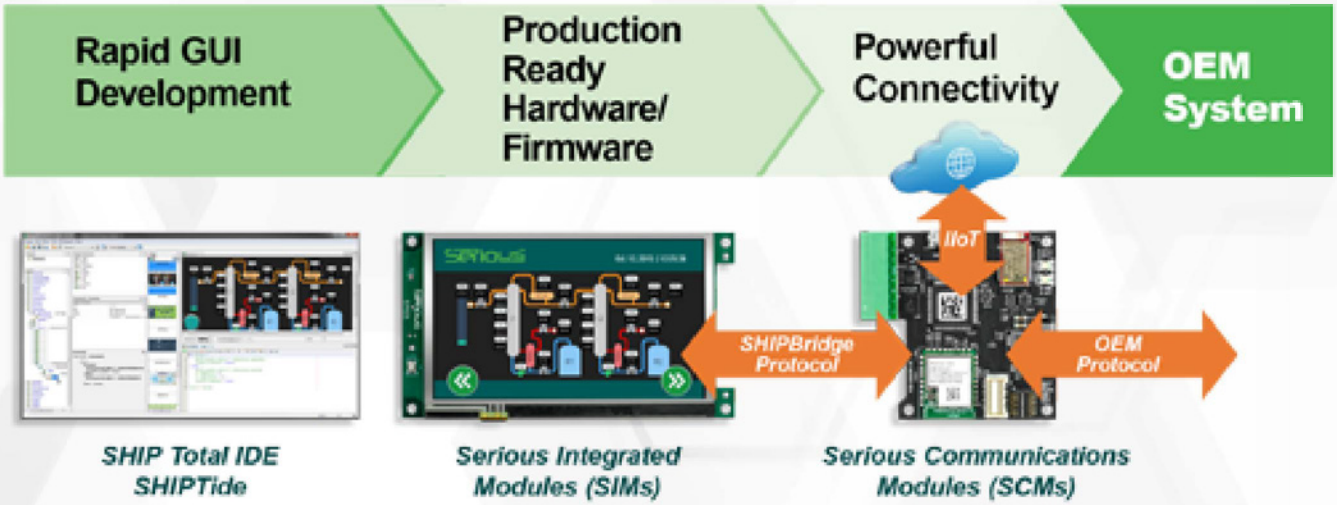
Wide Operating Range
- -40 to +85°C extended operating temperature
- 9-25 VDC Input Power

SCM208 Variants	A00	A01	A02
Board-to-Board Docking for Gen3 & Gen4 SIMs	●	●	●
9-25V Input Power	●	●	●
Synergy S7G2 MCU 240MHz ARM Cortex-M4 3MB FLASH/ 640kB RAM	●	●	●
USB 2.0 FS Device Micro B	●	●	●
Digital/Analog I/O connector	●	●	●
e.MMC (GB)	2	2	
CAN Controller	MCU	MCU	MCU
CAN Transceiver	●	●	●
RS232 or RS422/485	●	●	●
Tag-Connect TC2050 Debug	●	●	●
Bluetooth Smart w/NFC™-A Tag Support	●		
WiFi 802.11 2.4GHz b/g/n	●	●	
Ethernet Ready*	●		
Power Over Ethernet 802.3af Ready*	●		

RENESAS synergy™

SCM208

Get *Serious* With Your New, Connected Front Panel



Easier to Develop

Renesas Synergy Framework

Use the Renesas Synergy framework with the SCM208 to streamline C-level software development. The Renesas Synergy Software Package (SSP), the core of the Renesas Synergy Platform, integrates a real-time operating system with a rich set of utilities, drivers, libraries, software stacks, and application framework — all optimized specifically for the Renesas Synergy MCU architecture and fully supported by Renesas.

Partner Support

Serious is a Renesas Platinum Partner. Serious Integrated Modules are supported with software and services from Renesas and *Serious* strategic partners.

Easier to Connect

Serious Communications Modules dock into the back of 3rd and 4th generation SIMs. SCMs provide connectivity, 9-25VDC to 5VDC power conversion for the SCM and SIM, and on-board OEM programmable 32-bit MCUs for custom protocol conversion between your OEM system and the SIM. For more information on SCMs, see: www.seriousintegrated.com/SCMs. *Serious* also offers numerous communications daughter cards for Serious Integrated Modules to enable advanced in- and out-of-chassis connectivity, including CAN, RS232, RS485, WiFi, Bluetooth, Ethernet, and more.

Easier to Deploy

All Serious modules are designed for both low and high volume production. By carefully managing the supply chain, Serious' goal is to maintain production availability of hardware modules for as long as commercially feasible — typically up to 15 years. Using standard off-the-shelf hardware can accelerate time-to-revenue, increase product quality, and relieve internal resource constraints which often results in lower total life cycle costs.

Sometimes customers need additional hardware and/or software features not offered by standard products. The Serious System Engineering Design Service will design additional features into SIM's and SCM's, working closely with your product development team, to ensure designs comply with your requirements and target price-point. Some customers need assistance with GUI development as well, whether for training, for demonstration, or for actual product development.

Need More Information?

Contact your local *Serious* Representative or visit seriousintegrated.com/SIMs for:

- Ordering information
- Mechanical Design Package (MDP)
- Technical Reference Manual (TRM)
- Schematics
- Software, tools, and downloads

Development Kit

Preorder a development kit today, which contains everything you need to start working with SCM208*, including:

- SCM208-A00 module
- AC power adapter and sample 16-pin/14-pin cable
- Segger J-Link LITE RX Debugger/Programmer
- TC2050 Tag Connect Debug Cable (with retention legs)
- Serious FINE debug adapter for Renesas E1 and Segger J-Link

SCM208-A00-SJL-01

*C-based development and debugging requires a JTAG debugger (e.g. Segger JLink or IAR I-jet), a Tag-Connect TC2050 cable, and the Tag-Connect TC2050-ARM2010 adapter which are not included.