

Professional 4.3" GUI Performance

With a capacitive touch 4.3" 480x272 24-bit color LCD powered by a 240MHz Renesas Synergy™ S7G2 MCU, the SIM243 delivers an excellent front panel experience for your system.

Standard high speed UART, SPI, and power connectivity is provided by a 16-pin Power/Communications connector — perfect for simple wire-harness attachment to existing systems. A low profile, high-density, module-to-module 60-pin expansion connector supports easy daughter card development for proprietary system integration. Or, choose one of the Serious Communications Modules to provide the communications flexibility you need, including industrial, IT, and IoT connectivity.



Family Highlights & Options

4.3" 480x272 24-bit color TFT display

- Capacitive Touch
- Ambient Light Sensing

Renesas Synergy™ S7G2 MCU

- 240MHz 32-bit ARM Cortex-M4 Core
- 3MB FLASH, 640kB RAM
- LCD Controller with 2D Drawing Engine

On Module Memory

- Up to 16MB DRAM
- Up to 32MB Serial FLASH

Extensive I/O

- 60-pin Board-to-Board I/O Expansion (Power, GPIO, CAN, UART, I2C, I2S, SPI, USB Host, Device)
- 16-pin Wire Harness Expansion (Power, UART, I2C, I2S, SPI)
- USB2.0 HS Device w/Optional Micro B Connector
- USB2.0 FS 150mA Embedded Host with A Connector
- SHIP Programming Port

Wide Operating Range

- -20 to 70°C operating temperature range
- 3.6 to 5.5 VDC Input Power



SIM243 Variants	A01	A03
Renesas Synergy S7G2 MCU	●	●
MCU RAM	640kB	
DRAM (MB)	16	8
Serial FLASH (MB)	32	16
Ambient Light Sensing	●	●
Front LED	RGB	
Piezo Sounder	●	
RTCC w/Battery Backup	●	
USB2.0 HS Device Logic	●	●
USB2.0 HS Device Micro B Connector	●	
USB2.0 FS Host with A Connector	●	
16-Pin Wire-to-Board Power/I/O Connector	●	●
SHIP Programming Port	●	●
60-Pin Serial/Power Expansion	●	●
Touch	Capacitive	
LCD Resolution	480 x 272	
NITs	400+	
Backlight Life (Hours)	20k	
Viewing Technology	MVA	
Color Depth (bits)	24	
Temp Range (°C)	-20/+70	

RENESAS synergy™

Product Brief
SIM243_PB_ENUS-A

Get Serious with Your New, Connected Front Panel

The SIM243 family is the perfect choice for professional and cost-effective graphic/touch front panels in industrial, medical, and commercial OEM equipment. Suitable for rapid prototyping and volume production, the SIM243 is supported by extensive GUI development capabilities from *Serious*, Renesas, and other partners. Industrial networking and Internet of Things (IoT) connectivity is made simple through a variety of Serious Communications Modules with capabilities including RS232/485, CAN, WiFi, Bluetooth, Ethernet, and more.

Easier to Develop

Fast GUI Development with SHIP

Are you looking for a comprehensive PC-based WYSIWYG rapid-GUI development environment with minimal coding? Every Serious Integrated Module includes no-cost Serious Human Interface™ Platform (SHIP) GUI development tools, production programming tools, and out-of-the-box firmware. Create a complete, communicating, and functioning GUI in just *hours*. See seriousintegrated.com/SHIP for more details.



Renesas Synergy Framework

Use the Renesas Synergy framework with the SIM243 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.



Micrium®



Development Kits

Preorder a development kit today, which contains everything you need to start working with SIM243 using SHIP*, including:

- SIM243-A01-C42ALM module
- Demo enclosure
- AC power adapter and sample 16-pin cable
- SHIP Programming Adapter 200 (SPA200) Kit

SIM243-A01-DEV-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.

Easier to Connect

The SIM243 includes UART and SPI connectivity via the 16- and 60-pin expansion connectors for simple in-chassis connectivity to your control system. *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.

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.

Easier to Deploy

The SIM243 is a production-worthy module designed for low and high volume OEM applications.

Visit www.seriousintegrated.com/buy for ordering information, or contact an authorized *Serious* distributor:



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

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