Compact Relio R9-4100 ARM9 Embedded RISC Computer

Part: R9-4100 | **Model:** Relio R9-4100 ARM9 Embedded RISC Computer

The R9-4100 ARM9 embedded RISC computer combines RISC processing power with powerful serial and digital I/O capabilities in a rugged, compact form-factor. Packed with a wealth of I/O features and providing the latest embedded software environment, the system is based on a 400MHz Atmel processor boasting a 32-bit ARM instruction set for maximum performance. The R9-4100 is the perfect platform for embedded applications requiring small size, wide operating temperature range, and flexible I/O connectivity.

Equipped with 128MB RAM and 256MB Flash memory, the unmatched I/O features of the R9-4100 extend the possible uses beyond traditional ARM applications. Standard I/O features include dual Ethernet, USB host and USB device ports, and 12 optically isolated digital I/O signals.

For trouble-free, reliable serial communication in electrically noisy environments or over long distances, the R9-4100 offers eight high-speed, optically isolated RS-485 serial ports with 1.5KV port-to-port isolation. Each RJ45 two-wire RS-485 serial port is capable of 921.6K bps.

The system is housed in a rugged, small enclosure suitable for mounting almost anywhere and is rated for a full -20°C to 70°C operating temperature range. The Relio R9-4100 is powered from your 12VDC source, or choose from a variety of Sealevel power supply options.

To provide the fastest time to market, the Windows CE 6.0 BSP binary and low-level drivers for system I/O are included. Additionally, the Relio R9 software package is equipped with the Sealevel Talos I/O Framework, which offers a high-level, object-oriented .NET Compact Framework (CF) device interface. This interface provides an I/O point abstraction layer with built-in support for the specific needs of digital I/O such as debouncing and logic polarity.

For applications with specialized hardware requirements, developers can use the Relio R9-4100 as a platform for application development while Sealevel designs a customized target system specific to the user's application requirements.

From design specifications to project management to compliance and certification, rely on Sealevel's expertise and experience for your application needs. Learn more about our electrical, mechanical and software capabilities in our Custom Solutions portal or email sales@sealevel.com.

Features & Specifications

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Relio R9-4100 Features

- 400MHz Atmel AT91SAM9G45 ARM Thumb Processor
- Includes 128MB SDRAM and 256MB Flash memory
- (8) Optically isolated 2-wire RS-485 serial ports
- RJ45 serial ports provide 1.5KV port-to-port isolation
- Each isolated serial port is capable of 921.6K bps baud rate
- (9) Optically isolated dry contact digital inputs
- (2) Optically isolated digital outputs (5V biased, 30mA Max)
- (1) Optically isolated open-collector output (12VDC, 1A Max)
- (2) 10/100 BaseT Ethernet interfaces
- (1) USB 2.0 device port (Mini Type B)
- (1) USB 2.0 high-retention host port (Type A)
- Supports 12VDC input power via removable terminal block

What's In the Box?

- Relio R9-4100 ARM9 Embedded RISC Computer
- CE runtime image, Talos .NET Framework and documentation preloaded in on-board NAND Flash
- Microsoft Windows CE 6.0 Core license

Specifications

Family	Relio
Humidity Range	10 – 90% Relative Humidity, Non-Condensing
Storage Temperature	-60°C to 150°C (-76°F to 302°F)
Serial Ports	(8) RS-485 2-Wire RJ45 (1KV Port-to-Port Isolation)
SDRAM	128MB
Power Requirement	12 VDC
Operating Temperature	-20°C to 70°C (-4°F to 158°F)
Networking	(2) 10/100 BaseT Ethernet
Flash Memory	256MB
CPU Type	Atmel ARM9
Extended Temperature	Call for Details
Approximate Weight	~2 lbs
Dimensions	6.8" (L) x 5.1" (W) x 1.6" (H)
Digital I/O	(9) Opto-Isolated Dry Contact Inputs(2) Opto-Isolated Digital Outputs(1) Opto-Isolated Open-Collector Output
CPU	400MHz Atmel AT91SAM9G45
USB 2.0 Ports	(1) USB Device (Mini Type B)(1) USB Host (Type A)