Relio R1 I/O Controller Industrial Computer - Configurable

Part: R1-IOConfig | **Model:** Relio R1 I/O Controller

The Relio™ R1 SeaI/O Controller is a compact, rugged industrial computer designed for I/O-intensive applications that demand powerful processing capabilities, DIN Rail compatibility, and versatile I/O expansion capabilities.

The Relio R1 I/O Controller offers your choice of single, dual or quad-core Intel® Atom™ Bay Trail processor with up to 8 GB of DDR3L low-voltage RAM. Standard I/O features include two software-configurable serial ports, dual Gigabit Ethernet, seven USB ports, and choice of digital and analog display options. The system includes two convenient digital inputs, available on a 3-pin terminal block, that are addressable by the standard Windows LPT driver.

Expand the capabilities of the I/O Controller by adding SeaI/O data acquisition modules. Connectivity options include wireless, Ethernet, USB, RS-485 and RS-232 to meet a specific application. Each host SeaI/O module can support an additional 246 expansion modules for exponential I/O possibilities. Serial ports can be easily added using SeaI/O and SeaLINK USB serial adapters. Together the Relio R1 I/O Controller and SeaI/O modules create an incredibly robust remote I/O control and monitoring network.

Inside the enclosure, an mSATA interface provides solid-state storage that can be preloaded with 32-bit or 64-bit versions of Microsoft Windows or Linux operating systems. The optional, rugged DIN Rail bracket allows secure mounting to 35mm DIN Rail located inside panels, vehicles or even heavy equipment and drilling rigs. The optional VESA bracket supports 75mm or 100mm installation to industrial and commercial displays and also doubles as a wall or table mount.

The system achieves an impressive operating temperature range of -40°C to 71°C, while requiring low power consumption from your wide 9-36 VDC source. The R1 SeaI/O Server is ideal for harsh, industrial environments. With a solid-state, zero-maintenance, compact footprint this I/O controller is ideal for mobile, embedded control, test and measurement, and I/O intensive applications.

As processor technology evolves, the COM Express design allows the COM module to be upgraded to increase system performance over the life of the application.

Optional Wi-Fi, CAN bus and GPS interfaces are not available on the I/O Controller; however, they are available on the extremely rugged Relio R1 industrial computer. Or, call us to discuss a custom system design that perfectly matches your application requirements.

Delivering Design & Manufacturing Excellence Since 1986

SEALEVEL®

Features & Specifications
Relio R1 I/O Controller Industrial Computer - Configurable

Part: R1-IOConfig | **Model:** Relio R1 I/O Controller

Features

- Compact, rugged, anodized aluminum enclosure
- Zero maintenance — silent, solid-state design with no fans or other moving parts
- COM Express Type 6 Compact Module supports single, dual and quad-core Intel Atom (Bay Trail) processors
- Up to 8 GB DDR3L RAM
- Internal mSATA slot available for solid-state disk (SSD) applications
- Integrated 7th generation Intel graphics hardware
- Wide temperature operation

Enclosure Front
- DisplayPort and analog VGA standard display options; with DVI-D or HDMI options available
- Two 10/100/1000BaseT RJ45 Gigabit Ethernet ports with status LEDs
- Two high-retention, SeaLATCH locking USB 2.0 ports
- One SeaLATCH locking USB 3.0 port
- Push-button LED power switch

Enclosure Left
- One high-retention, SeaLATCH locking USB 2.0 Port
- RS-485 COM port accessible via RJ45 and 4-pin removable terminal block provides easy Seal/O expansion interfaces
- Two digital inputs via 3-pin terminal block are addressable by standard Windows LPT (Printer) driver
- Wide 9-36 VDC power input via 2-pin removable terminal block

Enclosure Right
- Three High-Retention USB 2.0 ports (Two are SeaLATCH locking USB ports)
- Two software-configurable RS-232/422/485 serial ports via DB9M connectors

Enclosure Rear
- Optional, rugged shock & vibration resistant DIN Rail bracket
- Threaded mounting holes for additional mounting options

What's In the Box?
- Relio R1 I/O Controller industrial computer
- Optional DIN Rail mounting bracket or VESA mounting bracket available
- Optional cables, power supplies and other items available as accessories

Specifications

Family	Relio
CPU Type	Intel Atom
CPU	1.91 GHz Quad-Core Intel Atom E3845, 1.46 GHz Intel Dual-Core Intel Atom E3826, 1.46 GHz Single-Core Intel Atom E3815
BIOS	AMI EFI with CMOS Backup in 8 MB SPI Flash
Max RAM	4 GB Non-ECC DDR3L 1067 MHz (E3815 CPU), 8 GB Non-ECC DDR3L 1067 MHz (E3826 CPU), 8 GB Non-ECC DDR3L 1333 MHz (E3845 CPU)
Display Support	DisplayPort 1.1 and VGAOptional DVI-D or HDMI
Networking	Dual Gigabit Ethernet via RJ45
USB 3.0 Ports	One SeaLATCH Locking USB
USB 2.0 Ports	Six High-Retention (Three are SeaLATCH Locking USB)
Serial Ports	Two Software-Configurable RS-232/422/485 DB9M
Power Requirement	18-36 VDC (12W Typical; Max 25W)
Operating Temperature	Single Core CPU: -40°C to 71°C (-40°F to 160°F), Dual and Quad Core CPU: -40°C to 60°C (-40°F to 140°F)
Storage Temperature	-40°C to 85°C (-40°F to 185°F)
Humidity Range	10 – 90% Relative Humidity, Non-Condensing
Dimensions	6.64" (L) x 5.19" (W) x 1.90" (H)