



Relio R1 Industrial Computer - Compact, Rugged, and Configurable

Part: R1-Config | **Model:** Relio R1

The Relio™ R1 compact rugged industrial computer is designed for applications that demand powerful processing capabilities, wide operating temperature range, and DIN Rail compatibility, while designed to exceed military specifications for shock & vibration.

Sealevel takes COM Express architecture to extremes with the Relio R1 industrial computer, featuring your choice of quad, dual and single-core Intel Atom® (Bay Trail) processor with up to 8 GB of DDR3L RAM, or powerful dual-core Intel Core i5-6300U (Skylake-U) processor with 8 GB of DDR4 RAM, in a virtually indestructible, DIN Rail compatible enclosure. The R1 is Sealevel's most rugged computer to date, designed to exceed military specifications for shock and vibration.

The Relio R1 achieves an impressive operating temperature range of -40°C to 71°C, while requiring low power consumption from your 18-36 VDC source. Standard features include two software-selectable serial ports, dual Gigabit Ethernet, four SeaLATCH™ locking USB ports, digital and analog video interfaces. The 802.11 b/g/n dual-band wireless network option enables convenient connectivity at data rates up to 300 Mbps. CAN bus 2.0b and GPS options are also available.

Inside the R1, a CFast SATA II card slot 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 is perfect for harsh industrial environments including military, oil & gas, transportation, energy, and process control applications.

The COM Express design allows easy technology migration as processor technology evolves. As a result, the COM module can be upgraded to increase performance over the life of the application.

To quickly get started with your application development, check out the Relio R1 QuickStart kit that includes the most popular configuration options and accessories.

Features & Specifications

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Features

- Compact, extreme rugged, anodized aluminum enclosure
- Zero maintenance – silent, solid-state design with no fans or other moving parts
- Designed to exceed military shock and vibration specifications
- Wide temperature operation from -40°C to 71°C (-40°F to 160°F) ambient
- COM Express Type 6 Compact Module supports single, dual and quad-core Intel Atom (Bay Trail) processors
- Up to 8 GB DDR3L RAM
- Internal CFast slot is perfect for solid-state disk (SSD) applications
- Internal Mini PCI Express full-length slot supports optional CAN, wireless, GPS and other expansion options
- Integrated 7th generation Intel graphics hardware
- Choice of digital (DVI-D, HDMI or DisplayPort) and analog (VGA) display options
- Two 10/100/1000BaseT RJ45 Gigabit Ethernet ports with status LEDs
- One SeaLATCH locking USB 3.0 port
- Pushbutton LED power switch
- One High-Retention, SeaLATCH Locking USB 2.0 Port
- 18-36 VDC power input via 2-pin removable terminal block
- Enclosure Right
- Two High-Retention, SeaLATCH locking USB 2.0 ports
- Two serial ports via 6-pin removable terminal block (Supports 2-wire RS-232 or RS-485)
- Enclosure Rear
- Optional, rugged shock & vibration resistant DIN Rail bracket
- Threaded mounting holes for additional mounting options

Specifications

Family	Relio
CPU Type	Intel Atom, Intel Core i5
CPU	1.46 GHz Dual-Core Intel Atom E3826, 1.46 GHz Single-Core Intel Atom E3815, 1.91 GHz Quad-Core Intel Atom E3845, 2.4/3.0 GHz Dual-Core Intel Core i5-6300U
BIOS	AMI EFI with CMOS Backup in 8 MB SPI Flash
Serial Ports	Two 2-Wire RS-232 or RS-485
USB 2.0 Ports	Three High-Retention, SeaLATCH Locking USB
USB 3.0 Ports	One SeaLATCH Locking USB
Networking	Dual Gigabit Ethernet, Optional Wi-Fi (802.11 b/g/n, only approved for US & Canada)
Display Support	•Choice of Digital (DVI-D, HDMI or DisplayPort 1.1) and Analog (VGA)
Max Video	WQHD 2560x1600 @ 60Hz
Expansion Slots	Mini PCI Express Full-Length Card for Optional CAN Bus 2.0b, Wireless 802.11 b/g/n, GPS or Other Capabilities
Expansion Slots	18-36 VDC (12W Typical; Max 25W)
Operating Temperature	-40°C to 71°C (-40°F to 160°F)
Expansion Slots	10 – 90% Relative Humidity, Non-Condensing
Humidity Range	10 – 90% Relative Humidity, Non-Condensing
Shock Rating	Meets/exceeds military standards
Vibration	Meets/exceeds military standards
Dimensions	6.64" (L) x 5.19" (W) x 1.90" (H)