



# SeaPAC-1420 12.1" Touchscreen Flat Panel Computer for Industrial Environments

**Part:** S1420-12R | **Model:** SeaPAC-1420-12.1R

The SeaPAC-1420-12.1R combines Sealevel's Relio R1420 embedded computer with a bright 12.1" TFT LCD and resistive touchscreen to create a powerful, ultra-reliable flat-panel computer system. Powered by a 1.6GHz Intel Atom® N450 CPU, the system includes 2GB of RAM and offers a variety of standard I/O including dual Gigabit Ethernet, six USB 2.0 ports, four serial ports, 8-bit GPIO, and audio output. The HMI system is perfect for a variety of operator interface, data acquisition, and process control applications.

SeaPAC systems can operate from optional CompactFlash. An optional 2.5" SATA solid-state disk (SSD) can be integrated and preloaded with Microsoft Windows or Linux operating systems. Designed to operate over a wide 0°C to 50°C ambient temperature range, the fanless design offers the ultimate in reliability with no moving parts. The SeaPAC-1420-12.1R is powered from an included 100-240VAC to 12VDC external power supply.

Designed for panel mount installation, the front bezel is NEMA 4/IP65 rated and can withstand sprayed water, humidity and extreme dust. The durable resistive touchscreen provides excellent accuracy and works with a stylus or gloved hand.

Local or remote I/O expansion is available using Sealevel Seal/I/O modules. Choose from a variety of I/O configurations including optically isolated inputs, Reed and Form C relay outputs, TTL interfaces, A/D and D/A. The SeaPAC connects to Seal/I/O modules via the system's RJ45 port and communicates using RS-485 Modbus RTU or Sealevel's SeaMAX API software libraries.

The modular design allows for maximum up-time with easy field maintenance and upgrades of the Relio computer and I/O without removing the LCD assembly from the panel.

## Features & Specifications

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### System Features Overview

- Bright 400 Nit 12.1" TFT LCD
- Durable resistive touchscreen with RS-232 controller
- Designed for panel mount installation
- NEMA4/IP65 Protection from sprayed liquid, humidity and dust
- Silent solid-state design with no fans or other moving parts
- System includes 1.6GHz Intel Atom N450 processor and 2GB RAM
- Maximum 2GB DDR2 667MHz RAM, 200-pin SODIMM (2GB Installed)
- Solid-state operation using optional CompactFlash or Solid-State Disk (SSD)
- CompactFlash module and 2.5" drive bay are accessible without opening the enclosure
- Integrated Intel Gen 3.5+ GFX Core graphics supports SXGA resolution up to 1400x1050 @ 75Hz (Native LCD resolution of 800x600 @ 60Hz)
- RJ45 Modbus RTU RS-485 pass-through port (supports N-series Seal/O expansion modules)
- 2-position removable screw terminal for system power
- 4-position removable screw terminal for 2-wire RS-485 interface
- Includes desktop power supply (100-240VAC to 12VDC @ 4.0A 48W max) with attached terminal block for computer and barrel connector for flat panel monitor
- Wide temperature operation from 0 – 50C ambient

### Enclosure Bottom

- Two 10/100/1000BaseT RJ45 (Intel 82567V, 82583V) Gigabit Ethernet ports with status LEDs
- One DB9M serial port (COM1, RS-232)
- Six USB 2.0 ports (Four use high-retention connectors)
- 8-bit general purpose I/O (GPIO) available on 10-position removable terminal block
- One analog VGA DB15 connector
- Type I/II CompactFlash bay accessible via removable plate
- LED status indicators for power and disk activity
- Recessed Reset switch

### Enclosure Left Side

- Three DB9M serial ports (COM2 = RS-232/422/485, COM3,4 = RS-232)
- COM2 port accessible via DB9F (RS-232), RJ45 port (RS-422/485), or removable terminal blocks (RS-422/485)
- Termination and biasing dipperswitches for RS-485 port
- Stereo audio out via standard 1/8" speaker connector

### Enclosure Right Side

- Supports 2.5" SATA Solid-State Disk (SSD), accessible via thumbscrews

### Specifications

<b>BIOS</b>	AMI 16 Mbit Flash
<b>Family</b>	SeaPAC
<b>Brightness</b>	400 Nit
<b>Contrast Ratio</b>	500:1
<b>CPU Type</b>	Intel Atom
<b>CPU</b>	1.6GHz Intel Aton N450
<b>Approximate Weight</b>	~9 lbs
<b>Extended Temperature</b>	Call for Options
<b>Humidity Range</b>	10 – 90% Relative Humidity, Non-Condensing
<b>Max RAM</b>	2GB DDR2 667MHz (Installed)
<b>Operating Temperature</b>	0°C to 50°C (32°F to 122°F)
<b>Power Requirement</b>	12VDC
<b>Native Resolution</b>	800x600 @ 60Hz
<b>Screen Size</b>	12.1" LCD
<b>Storage Temperature</b>	-10°C to 60°C (14°F to 140°F)
<b>Touchscreen</b>	Yes
<b>Touchscreen</b>	ResistiveRS-232 Controller
<b>Viewable Size</b>	12.1" Diagonal