SeaConnect 370W Wi-Fi IIoT Edge Device

Part: 370W-A | **Model:** SeaConnect 370W

The SeaConnect 370W is an Industrial Internet of Things (IIoT) edge device that allows you to remotely monitor and control the status of real-world I/O processes. The module features a powerful, integrated event engine that is configured using an intuitive web-based interface to send alerts and trigger actions when specific conditions are met.

The 370W is designed to work with the Sealevel SeaCloud IIoT platform. For example, the event engine can log data to SeaCloud, which sends an alert if a measurement crosses a defined threshold. These alerts help automation engineers, technicians, production managers and network operators make informed, critical decisions. The 370W is ideal for a variety of applications, including facility management, environmental monitoring, water and wastewater treatment as well as broadcast automation.

The 370W features a TI SimpleLink™ CC3200 ARM Cortex-M4 microcontroller unit (MCU) with a certified Wi-Fi (802.11bgn) interface and WPA2 encryption for a secure connection to your wireless network. The module includes a variety of I/O interfaces, including two Form C relays, four digital inputs (wet or dry contact) and two 12-bit A/D converters (ADC). Each ADC can be software-configured for either 0-10 V voltage or 0-24 mA current measurement mode. There is a convenient interface for connecting up to ten 1-Wire® temperature probes. An optional QuickStart module is available for demonstration and testing purposes.

The Sealevel SeaCloud service is a secure, robust, scalable, IIoT platform designed to track, monitor, analyze and control data from Sealevel I/O devices. Our Software as a Service (SaaS) cloud application works out-of-the-box and includes many IIoT features that allow immediate use without additional programming. At its heart, SeaCloud is designed as a Platform as a Service (PaaS) that can be private-labeled and modified by Sealevel to meet your specific requirements. The 370W also supports the free Dweet.io service, or it can be customized to work with your cloud platform of choice.

To experience the powerful features of the SeaCloud IIoT platform on your 370W device, sign up for a SeaCloud Wi-Fi subscription.

The 370W is powered by 5 VDC via a removable 2-pin terminal block. I/O connections to field wiring are simplified via removable 3.5mm terminal blocks. The module is housed in a small, rugged plastic enclosure that is ideal for mounting to a variety of surfaces or inside panels. Standard operating temperature range is -20C to +70C (-4F to +160F). LEDS on the face of the module show device status and data activity.

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The 370W is feature and connectivity compatible with Sealevel eI/O and SeaI/O modules. Your applications that are designed for those products can be adapted to work with the 370W. Additionally, the module can be used on a Wi-Fi network without requiring connectivity to a cloud service. Communicate with the 370W module using industry standard Modbus TCP protocol or use the Sealevel SeaMAX API software libraries from your application program. Sealevel's SeaMAX software drivers and utilities make installation and operation easy using Microsoft Windows operating systems.

The Sealevel Modbus Connect app for iOS allows you to access the registers, coils and discrete I/O of your Sealevel Modbus devices and is available on the App Store. Use the app to remotely access I/O in the field or for testing and troubleshooting during application development. The Sealevel Mod+ Connect app is an easy-to-use diagnostic utility that allows you to monitor, test and troubleshoot Sealevel SeaConnect, eI/O and SeaI/O modules using your iPhone, iPod touch or iPad mobile device.

Do you need an application-specific IIoT device and cloud solution? Sealevel can provide a number of services from design, application-specific cloud instances, cellular data plans and even billing services for a complete solution. Call us to see how Sealevel can help you realize your IIoT vision.

Features & Specifications
SeaConnect 370W Wi-Fi IIoT Edge Device

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Features

- Features a TI CC3200 ARM Cortex-M4 MCU
- Integrated and certified 2.4 GHz Wi-Fi (IEEE 802.11b/g/n) connectivity
- Supported wireless protocols: Modbus/TCP, TCP/IP, UDP, DHCP and HTTP TCP/IP Stack
- Supports simultaneous TCP, UDP or RAW sockets
- Supports simultaneous SSL 3.0 sockets
- Crypto engine with 256-bit encryption for secured WLAN connections
- (2) 12-bit differential A/D inputs, each software configurable for 0-10 VDC or 0-24 mA mode
- (2) Form C relay outputs, each rated for 30 VDC @ 1A max
- (4) Digital inputs (wet or dry contact)
- Convenient 1-Wire® bus interface supports up to ten temperature probes
- Field wiring is simplified via removable 3.5mm terminal blocks compatible with 16-30 AWG wire
- Requires 5 VDC input power @ 2A max via 2-pin removable terminal block
- Operating temperature range of -20 to +70C (-4 to +160F)
- Status LEDs for power and data activity
- Compact, plastic enclosure with mounting flanges

SeaCloud Features (Optional)

- Manage devices, provision fielded units and configure trigger actions
- Data can be automatically pushed to the cloud
- Monitor connectivity status over time and diagnose issues remotely
- Receive email and SMS alarms whenever something needs attention
- Web configuration accessible by mobile device
- Control available relay and digital outputs from virtually anywhere
- Private-label and brand your instance

What's In the Box?

- SeaConnect 370W Wi-Fi multifunction I/O edge module
- 100-240 VAC to 5 VDC @ 4 A desktop power supply with US power cord (TR151-US)
- 10 Insulated Jumper Wires (CA603)
- Optional QuickStart demonstration module, wiring harness & battery pack (QSM100-KT)
- Additional items available as accessories

Specifications

Family	SeaConnect
Host Interface(s)	Wi-Fi (802.11bgn)
Modbus	Modbus TCP
Power Requirement	5 VDC @ 10 W max.
Field Wiring	16 – 30 AWG
RoHS Compliant	Yes
Number of Inputs/ Outputs	2 Form C Relays, 4 Digital Inputs (Dry or Wet), 2 A/D Inputs
Output Type	SPST Form A Reed relays
ADC Impedance	900 kΩ
ADC Sampling Rate	Fixed 16 µs / channel (Equivalent to 62.5 kS/s / channel)
Digital I/O	Form C Relay Outputs, Isolated Inputs
Contact Voltage	60VDC max.
Contact Release Time	5 ms max.
Contact Operate Time	5 ms max.
Contact Current	2 A max.
Output Isolation	1500 Vrms
Analog I/O	A/D Inputs
A/D Resolution	12-bit (10-bit effective)
A/D Range	0-10 V or 0-24 mA (software configurable)
A/D Inputs	2 Differential
Dimensions	4.00 (L) x 2.03 (W) x 1.14 (H)(5.10 (L) Including mounting flanges)
Operating Temperature	-20°C to 70°C (-4°F to 158°F)
Storage Temperature	-50°C to 105°C (-58°F to 221°F)
Humidity Range	10 – 90% Relative Humidity, Non-Condensing