

REFCON Wireless Hub

Automating Site Monitoring with Full Coverage

- Next generation reefer monitoring infrastructure
- Supporting all reefer types in the field
- Bluetooth 5 technology with high security and range
- Supports 300 reefers per Wireless Hub
- Enable real time monitoring of data (>3min)
- Connects to existing TCP/IP infrastructure IP4/IP6



Description

The REFCON Wireless Hub is a device used to collect data from all current reefer types through the REFCON Portable Modem and Bluetooth enabled devices. All data is collected automatically and sent to the local REFCON system enabling onsite technicians to obtain a clear and precise overview of the status of all reefers within the site. This type of monitoring solution helps to improve efficiency given that the crew on site can focus on exception handling instead of walking the site looking for alarms on the reefers. The improved efficiency and documentation will lead to better reaction time for critical issues that potentially could have been missed and lead to damage of the cargo.

The REFCON Wireless Hub is to be installed near the reefers that are to be monitored. Usually one Hub would be needed per stack or bay, as the range of the wireless communication out to the reefers is 100 meters in line of site. However in a dense metal environment such as a bay below deck on a vessel this range would be limited to 40 meters. The system is designed to, but not limited, to gather data from 300 reefers per Wireless Hub which is more than enough to manage a standard size stack or bay.

In addition to collecting data from reefers The REFCON Wireless Hub also supports commands such as setpoint changes and changing the container ID through the REFCON user interface. Given the potential risks by enabling a wireless system to change setpoints etc. on reefers with high value cargo our solution is build on the newest security standards within this area. This ensures all communication is encrypted with key protection leaving it impossible for external threats to be able to penetrate the system.

REFCON Portable Modem:



Environmental Specifications

Operation temp.	-30°C to +55°C
Humidity	Max 95%RH non-condensing
Ingress Protection	IP21
Shock	10G @10ms (60068-2-27 Ea) 50G non-operating
Vibration	5 – 500 Hz, 2g, 3 axes

Physical dimensions

Length	87 mm
Width	69 mm
Height	62 mm
Weight	175 g

Certifications

CE - Europe	EMC Directive 2014/30/EC Low Voltage Directive 2014/35/EC RED Directive 2014/53/EC RoHS Directive 2011/65/EC WEE Directive 2002/96/EC
FCC - USA	Contains FCC-ID: 2ARHA-C0001
KC - Korea	Contains R-G-E45-8214-100

Electrical Specifications

Power supply	24Vac RMS + 10/-30% 16-37 Vdc
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Supported reefer Controllers

Carrier	Microlink 2i Microlink 3
Daikin	DECOS III (3), c, d, e, f, g, h, j DECOS V (5)
Star Cool	RCCU5 SCC-6
Thermo King	MP-3000 MP-4000

Installation types

The wireless hub can be installed into existing electrical cabinets with external bluetooth antenna.

Full solution with stainless steel or polycarbonat electrical cabinet including ready for installation on site and 400V power supply