

# Remote Monitoring Modem (RMM+)

- Real time container monitoring and GPS tracking — anytime and anywhere
- Features built-in GPRS/UMTS/ Positioning module for land based monitoring/tracking
- ISO 10368 Power Line interface for compliance with local reefer monitoring systems
- Easy installation as all brands of reefer containers are prepared for remote monitoring modem
- Minimize unexpected events such as container tampering, theft, diversion or holdups in transit.
- Improved safety of personnel
- Improve cargo documentation handling processes
- Optimization of reefer container operation with reduced risk of human errors
- Energy savings due to always updated reefer controller software, which enables the reefer container to run the latest energy efficient programs

## Description

The RMM+ is a remote communication device designed for refrigerated containers. The RMM+ combine industry standard ISO10368 communication with wireless technologies for fast data transfer, long distance communication and tracking.

When no local monitoring system is available, the RMM+ will via GPRS/UMTS forward all exceptions such as alarms and power on/off events as they occur, and will provide full set of data at preset scheduled intervals to the Global Monitoring Server.

The RMM+ is further the key component in ISO 10368 power-line communication for monitoring and control of reefer containers on-board vessels or terminals. Each container equipped with an RMM+ is able to send data on its operating conditions and alarms to a local monitoring system, such as the REFCON system.

Besides monitoring, the RMM+ can be used to remotely control various reefer container functions, which include update of controller firmware, changing the setpoint, initiating PTI or defrost.

The RMM+ offers a number of important benefits, such as:

- Full transparency in the cooling chain
- Improved utilization of container fleet
- Reduced risk of potential cargo damage
- Reduction of operational cost due to less time-consuming manual inspections

## Applications

Enables reefer containers for real time remote monitoring and tracking on vessels, in terminals and inland transportation

Centralized remote management of reefer container operating conditions, alarms, events, settings and positions.



### Environmental Specifications:

Operating temperature	-25°C < T < 70°C
Shock	20G operating, 50G non-operating
Vibration	Random (20Hz to 2kHz)

### Interfaces:

QUAD band GSM/GPRS (850/900/1800/1900 MHz) and TRI band UMTS (850/1900/2100 MHz) for long range wireless communication

ISO10368 compliant power line communication

32-channel fix embedded positioning system

RS232 interface toward host reefer container controller

Status LED's to indicate operating status

Mod-bus interface for optional external sensors

Digital input for optional door sensor

24VAC/DC power input

### Hardware:

FLASH memory for data and program storage, including controller firmware for automatic distribution

In-built 3-axis motion sensor

SIM card - Embedded

Self-contained rechargeable battery for container off-power operation

### Software:

Over-the-Air firmware upgrade to apply new features

Immediate notification of controller alarms and container power ON/OFF events

Remote setting of scheduled transmission intervals and other communications rules

Internal hourly condition logging until transmission is established

Maximum operation in container power off mode: 120 days

### Supported controllers:

Carrier	Microlink 3 Microlink 2i
Daikin	DECOS IIIe DECOS IIIId DECOS IIIc
Starcool	RCCU5 SCC6

Special version available for Thermo King controllers

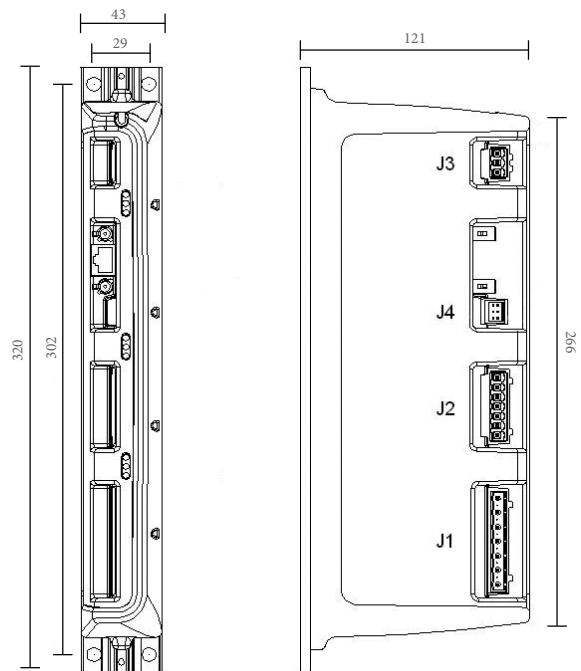
### Included items:

Installation instruction

Sticker "RMM+ modem installed"

### Max. physical dimensions:

Length	326 mm
Width	121 mm
Height	50 mm
Weight	750 g



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