

RTE offers the Refrigerated Shipping Industry the most complete and comprehensive line-up of Remote Reefer Monitoring Solutions available.

The PCT system, in conjunction with RTE's GRASP 3.0 software, gives you the ability to monitor reefer containers in real-time with the following capabilities:

- Collection & Display of operating parameters - *Temperature, CA Information, Power Information*
- Clear text description of alarms using manufacturers code & text
- Downloads of - *Temperatures, Events, Alarms, PTI, USDA logs, etc.*
- Remote control of - *Set-points, PTI, Defrost, CA, etc.*
- Graphical Bay/Yard View

All reefer container information is electronically stored and can be retrieved in the event of a claim.

## Key Features:

**Connects to PCT Modem on the reefer container**

**Minimal equipment is installed at each transformer**

**Ideal for terminals with a large percentage of modems**

**Communicates by injecting high frequency signals on the power-line**

**Allows user to monitor the operating condition of a reefer container**

**Change the operating parameters**

**Retrieve historical data**

**4-Pin Monitoring Solution**

	Container ID	Ret	Sup	SetP	Mode	Alarms	Booking SetP	USDA				CA		
								1	2	3	4	Amb	Hum	Hum SP
1	APRU502527-1	-17.9	-15.9	-18.0	Idle	----	---	---	---	---	28.7	100.0	---	
2	APRU575431-3	4.4	2.2	2.2	Cool	----	---	---	---	---	31.4	90.9	---	
3	BMOU970253-0	1.7	-0.2	0.0	Modulation	----	---	---	---	---	29.6	81.1	75.0	
4	CHIU900229-5	1.9	-0.5	0.0	Thermo Off	----	---	---	---	---	30.1	98.8	65.0	
5	CHIU900367-1	14.2	12.9	13.3	Thermo Off	----	---	---	---	---	29.8	98.8	65.0	
6	CRLU162342-8	14.7	13.1	13.3	Thermo Off	----	---	---	---	---	29.6	96.1	75.0	
7	CXRU113220-2	-18.2	-21.1	-18.0	Full Cool	----	---	---	---	---	31.6	48.8	75.0	
8	HJCU610043-7	-19.9	-24.1	-20.0	Thermo Off	----	---	---	---	---	24.8	39.0	65.0	
9	MORU020122-9	14.6	13.2	13.3	Modulation	----	---	---	---	---	30.6	---	75.0	



RRCE-T



WRAD



RRCE-Z



GRIP

PCT

**RTE**

**REFRIGERATED  
TRANSPORT  
ELECTRONICS, INC.**

# Powerline Cable Transmission

Datasheet V2014-1

## HARDWARE SPECIFICATIONS

**Standard:** System complies with ISO 10368 standard for Power Cable Transmission

**Operating Frequency:** **55KHz, +/-2.2% for Narrow Band; 140 to 400KHz for Wide Band**

### Typical Enclosure (NBCCU/Signal I/O and WBCCU/Signal I/O)

**Dimensions:** 12.0”L x 10.1”W x 6.4”H  
(305 mm x 257 mm x 163 mm)

**Input Voltage:** 220VAC or 440VAC, 50-60 Hz nominal, single phase and ground

**Power Consumption:** 50VA

**Operating Temperature:** -40 to 70C (-40 to 158F)

**Storage Temperature:** -50 to 100C (-58 to 212F)

**Humidity:** 95%

### Typical Enclosure (NB and WB Power Transceiver)

**Dimensions:** 12.0”L x 10.1”W x 6.4”H  
(305mm x 257mm x 163mm)

**Input Voltage:** 220VAC or 440 VAC, 50-60 Hz nominal, three phase and ground

**Power Consumption:** 100VA

**Operating Temperature:** -40 to 70C (-40 to 158F)

**Storage Temperature:** -50 to 100 C (-58 to 212F)

**Humidity:** 95%

## SYSTEM COMPONENTS

**Central Communication Unit (CCU)** - The CCU is the main electronic communication device (Master Modem), which processes all the signals being injected onto the 3-phase system. It will inject command signals, generated at the computer, onto the 3-phase and waits for a response. The CCU communicates to the GRASP 3.0 software via a data cable, which provides an RS-232A serial link. Other connection methods are available.

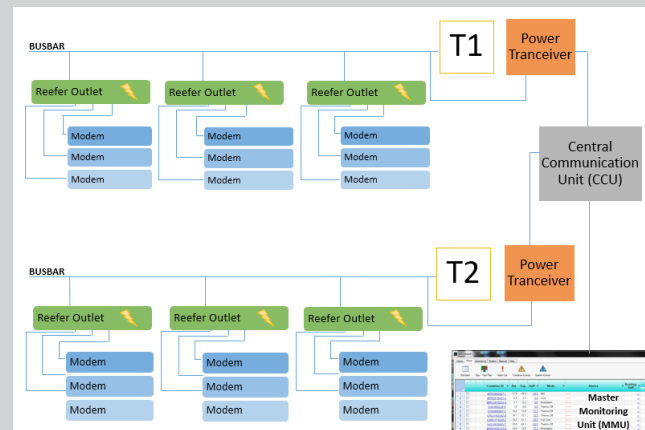
**Signal I/O** - Each signal I/O card provides for the distribution of signals to 4 remotely located device boards. Typically these are power transceiver cards at the signal insertion point. The signal I/O card contains circuitry for driving the communication and control signals over long twisted pair transmission lines.

## CONNECTION OPTIONS

The CCU can be connected to the GRASP server via the following options:

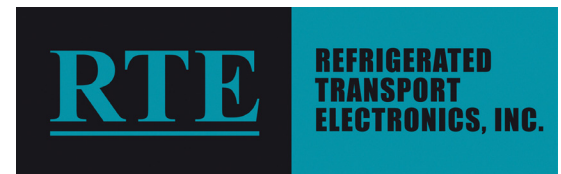
- Direct Serial Connection RS-232A
- LAN Connection (RJ-45, Fiber Optic)
- Wireless Connection

**\* Different enclosures might be used and different components might be grouped in enclosures depending on system configuration**



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