Mohave RRC

■ Agenda
  ▪ Overview
  ▪ Features
  ▪ Connections
  ▪ Target Market
  ▪ Part Number & Pricing
  ▪ Sales Collateral
  ▪ Questions
What is RRC?

Remote Refrigeration Control

Monitor & control your system remotely
RRC Evolution

- RRC
  - Beacon II 2012
  - Mohave 2016
RRC Key Features

- Control room temp remotely
- Real-time 24/7 remote monitoring & control via internet
- Email & text alarm notifications
- Manage multiple locations with one account
- Collect & store system data
RRC Value Propositions

- Save time by logging in from anywhere
- Detect issues before they become a problem
- Reduce service calls with system alerts
- Longer product life
- Improved product integrity
- Lower operational costs
RRC Overview
RRC Connections for Beacon II and QRC

- Up to 4 systems
- Up to 4 evaps per system

Beacon II or QRC Equipment  Smart Controller  RRC Gateway  Internet

1 Gateway per smart controller
RRC Connections for Mohave

Mohave Modem

Mohave Modem

Mohave Modem

RRC Gateway

LAN

Internet

1 Gateway per Site
# Site Summary: Mohave

<table>
<thead>
<tr>
<th>System Description</th>
<th>Operating Mode</th>
<th>State</th>
<th>Box Temp</th>
<th>Box Temp Set Point</th>
<th>Alarms</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLR1 CU1</td>
<td>Off</td>
<td>Room temperature sensor</td>
<td>35.00°F</td>
<td>35.00°F</td>
<td>None</td>
</tr>
<tr>
<td>CLR1 CU2</td>
<td>Off</td>
<td>Room temperature sensor</td>
<td>35.00°F</td>
<td>35.00°F</td>
<td>None</td>
</tr>
<tr>
<td>CLR5 CU1</td>
<td>Off</td>
<td>Room temperature sensor</td>
<td>50.00°F</td>
<td>50.00°F</td>
<td>Persistent input sensor failure alarm, High CU Aux (Room) Temperature alarm</td>
</tr>
<tr>
<td>CLR6 CU1</td>
<td>Off</td>
<td>Room temperature sensor</td>
<td>35.00°F</td>
<td>35.00°F</td>
<td>None</td>
</tr>
<tr>
<td>CLR7 CU1</td>
<td>Off</td>
<td>Room temperature sensor</td>
<td>34.00°F</td>
<td>35.00°F</td>
<td>Persistent input sensor failure alarm</td>
</tr>
<tr>
<td>CLR7 CU2</td>
<td>Cooling</td>
<td>Room temperature sensor</td>
<td>36.00°F</td>
<td>35.00°F</td>
<td>None</td>
</tr>
<tr>
<td>CLR7 CU4</td>
<td>Cooling</td>
<td>Room temperature sensor</td>
<td>35.00°F</td>
<td>35.00°F</td>
<td>Persistent input sensor failure alarm</td>
</tr>
</tbody>
</table>

- Chart displays box temp

![Temperature Chart](image-url)
# System Data

**Selected Control Board:** CLR1 CU1

**Last Modified:** Jan-25-2016 21:26 Central

<table>
<thead>
<tr>
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<th></th>
</tr>
</thead>
<tbody>
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<td>System</td>
<td>CLR1 CU1</td>
</tr>
<tr>
<td>Operating Mode</td>
<td>Off</td>
</tr>
<tr>
<td>Software Version</td>
<td>2.05 vers</td>
</tr>
<tr>
<td>Alarms</td>
<td>None</td>
</tr>
<tr>
<td>Box Temp</td>
<td>38.00 °F</td>
</tr>
<tr>
<td>Compressor Cycles</td>
<td>55</td>
</tr>
<tr>
<td>Compressor Run Time</td>
<td>900 min.</td>
</tr>
<tr>
<td>Service Switch</td>
<td>off</td>
</tr>
<tr>
<td>Safety Switch</td>
<td>off</td>
</tr>
<tr>
<td>CU Suction Pressure Switch</td>
<td>on</td>
</tr>
<tr>
<td>T-Stat Contacts</td>
<td>off</td>
</tr>
<tr>
<td>Refrigerant Type</td>
<td>R-404A</td>
</tr>
<tr>
<td>Application Type</td>
<td>Medium temp</td>
</tr>
<tr>
<td>Model Number</td>
<td>1502</td>
</tr>
</tbody>
</table>

**Relay Outputs: On/Off**

- Evap Heater: off
- Liquid Line Solenoid: off
- Evaporator Fans: on
- Condenser Fan 1: off
- Condenser Fan 2: off
- Condenser Fan 3: off
- Condenser Fan 4: off
- Alarm Relay: off
- Compressor: off
- ByPass Valve: off
- Suction Solenoid: off
- Defrost Solenoid: off
- 3-Way Valve: off

**Analog Inputs**

- Suction Temperature: 44.00 °F
- Ambient Temperature: 63.00 °F
- Box / Aux Temperature: 36.00 °F
- Suction Pressure: 38 psig
- Liquid Pressure: 170 psig
- Evap 1 Defrost Temp: 34.00 °F
- Evap 2 Defrost Temp: 34.00 °F
- Suction Superheat: 39.00 °F
- Regulator Valve Position: 0 steps
- AC Input Voltage: 26.9 vac
- Saturated Suction Temp: 5.00 °F
System Configuration

Ensure accuracy when modifying these settings.

- Low pressure switch high limit: 24 psig
- Low pressure switch low limit: 10 psig
- Evaporator re-freeze temperature threshold: 35.00°F
- Evaporator re-freeze time limit: 3 min
- E6/VFR valve manufacturer: CARL
- Pressure regulator full scale: 410 steps
- Normal valve update interval: 15
- PRUI (10 to 30 seconds) seconds
- Initial defrost pressure regulator opening: 100%
- Cooling mode LLS Pulling time limit: 2 min
- LLSP (10 to 15 minutes)
- Evaporator fan mode if not cooling: on
- EVPF (off, 1-on)
- High CU Aux Temp Alarm threshold: 40.00°F
- ALRH (above 100 degrees) if disabled: 127
- Low CU Aux Temp Alarm threshold: 30.00°F
- ALRL (above 100 degrees) if disabled: 128
- CU Aux Room Temperature control: AUXT (on/off, 1-pint)
- CU Aux Room Temperature setpoint: BOXT (-25 to +50 degrees F)
- Mod Bus Address: MSAD

Change Parameter

You are about to modify the following registry:

CU Aux Room Temperature setpoint
BOXT (-25 to +50 degrees F)

Location: Test Site
Gateway: Test Site
Selected Control Board: Test Site
System: Test Site

Set Point: 35

The last set 'Set Point' will match the current 'Set Point' when confirmation of the change is received.

Value Status User Date
Mohave RRC Target Market

- Large cold storage warehouses
- Food processing facilities
- Produce growers
- Pharmaceutical & medical storage
How to Order

- Mohave RRC factory installed (ProSelect)
  - Mounted option
  - Gateway kit
- Mohave RRC field retrofit – Order 2 kits
  - Modem kit
  - Gateway kit
  → Note: Firmware upgrade may be required
- Beacon II & QRC RRC – Order 1 kit
  - Gateway kit
- Monitoring service
  - 1st year free
# RRC Part Numbers and Pricing

## RRC for Mohave

<table>
<thead>
<tr>
<th>Description</th>
<th>Part Number</th>
<th>Price</th>
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<tbody>
<tr>
<td>Modem kit (factory installed)</td>
<td>59661501</td>
<td>$2100 List (1 per condensing unit)</td>
</tr>
<tr>
<td>Modem kit (field retrofit)</td>
<td>59661701</td>
<td>$2100 List (1 per condensing unit)</td>
</tr>
<tr>
<td>Gateway kit</td>
<td>59661801</td>
<td>$4200 List (1 per site)</td>
</tr>
<tr>
<td>Annual monitoring service</td>
<td>rrc_monitoring_svc</td>
<td>$1 (first year) List $200 NET (per condensing unit)</td>
</tr>
<tr>
<td>Mohave board firmware upgrade</td>
<td>STARTUP</td>
<td>$700 per day + expenses</td>
</tr>
</tbody>
</table>

* Multiplier – use Mohave multiplier for that customer.
* Handle pricing deviations per standard process

## RRC for Beacon II and QRC

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<th>List Price</th>
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<td>Gateway kit (field retrofit)</td>
<td>28999401</td>
<td>$2600 List (1 per smart controller)</td>
</tr>
<tr>
<td>Annual Monitoring service</td>
<td>rrc_monitoring_svc</td>
<td>$1 (first year) List $365 NET (per Gateway)</td>
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* Multiplier – use Mohave multiplier for that customer.
* Handle pricing deviations per standard process
Choose:

- Systems
- Condensing Unit Options
- Loose Options
  - Gateway Kit
  - Monitoring Service
- Mounted options
  - Miscellaneous Options
  - Modem Kit
Mohave RRC

Launch Timing

- Sales Release Date: Monday, March 14, 2016
- First Order Date: Same Day

Support Items

- Sales Brochure – electronic & hardcopy 3/14
- RRC Installation Instructions
  - Available online 3/14
  - Hardcopy will ship with modem & gateway kits
- Revised Mohave I&O
  - Available online 3/14
  - Hardcopy will ship with product
- Price List – RRC will be added by 3/21
- ProSelect – factory install is included 3/7
- Website – Updated 3/14
Mohave RRC

- Warranty
  - 1 year warranty RRC components

- Replacement Parts
  - Replacement set up in Plano warehouse

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<tr>
<td>CONTROL ANTENNA-900MHZ-3DBI</td>
<td>28920901</td>
</tr>
<tr>
<td>CONTROL LIGHTNING PROTECTOR 0-3GHZ 90V</td>
<td>28920401</td>
</tr>
<tr>
<td>CABLE LMR 400-8 FEET</td>
<td>28920701</td>
</tr>
<tr>
<td>CABLE LMR 400-100 FEET</td>
<td>28920501</td>
</tr>
<tr>
<td>CONTROLLER INTERNET GATEWAY CONNECT X4 (Digi)</td>
<td>28920601</td>
</tr>
<tr>
<td>CONTROLLER INTERNET XBEE RF MODEM (Digi)</td>
<td>28920801</td>
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<tr>
<td>TRANSFORMER 100-240VAC IN / 24VDC OUT</td>
<td>22531001</td>
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Mohave RRC Sales Collateral

- Sales brochure
- RRC I&O
- Updated Mohave I&O
- Website landing page
- FAQ’s
- Sales presentation
Mohave RRC Sales Collateral

- Sales Brochure
  - Electronic version for launch
  - Printed copies for launch
Mohave RRC Sales Collateral

- **Price List**
  - Price sheet will show pricing by 3/21
  - Unbranded

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Mohave RRC Sales Collateral

- Installation and Operation Manual (RRC Portion)
  - Ships with Mohave RRC kits
  - Available on landing page
Mohave RRC Sales Collateral

- Installation and Operation Manual (Mohave CDU)
  - Updated with new AUXT / BOXT functionality
  - Ships with Mohave CDU
  - Available on web under literature
Mohave RRC Sales Collateral

- **Website**
  - Banner on main page
  - Product line landing page
    - Sales flyers, IOMs, FAQ
Mohave RRC Sales Collateral

- Sales Presentation

Mohave RRC
Product Training
March 14, 2016

Russ Jones
Product Manager
Mohave RRC Sales Collateral

- Post Launch – Trade Shows
  - IARW
  - RETA
  - NWFPA (NW Food Processing Assoc)
QUESTIONS?