

REMOTE INFRASTRUCTURE MANAGEMENT (RIM-750)

KEY FEATURES

- Remote monitoring of sensors in your computer and network equipment rooms
- Simple installation and setup
- Web-accessible with a clean, easy to use, mobile-friendly web interface that displays sensor readings and trends
- Monitors eight digital inputs and four temperature or temperature/humidity sensors, plus one zone of leak detection with up to 200 feet (60 meters) of Sensor Rope
- USB power inlet allows you to power RIM-750 with the included wall adapter or a USB port on a server or other device, such as the eConnect® PDU
- Multiple alarm notification configurations including audible and visible indicators, email messaging and/or relay activation
- Relay output allows for simple control of an external device upon alarm condition
- Modbus or SNMP output enables simple integration with other facility management systems (BMS)
- Integrated logging and trending, including CSV downloadable trending data

APPLICATIONS

- Continuous environmental and security monitoring for a single server cabinet or a small computer or telecommunications equipment room
- Interconnectivity with other building management systems

USE WITH

- CPI Cabinet and Enclosure Systems
- CPI Rack Systems
- CPI Wall-Mount Systems

RELATED ACCESSORIES

- CPI Aisle Containment Solutions
- CPI Thermal Management Solutions
- CPI Power Management Products
- CPI Electronic Locking System
- CPI Power Management Tool
- CPI eConnect® PDUs



RIM-750 (P/N 60100-001)

The Remote Infrastructure Management (RIM-750) System from Chatsworth Products (CPI) provides remote monitoring of environmental sensors for a single server cabinet or a small computer or telecommunications equipment room. RIM-750 is easy to setup and use, providing web access to a dashboard for monitoring real-time conditions and email notifications when conditions exceed user-defined thresholds. Use RIM-750 to provide critical early warning when site conditions change.

The RIM-750 is a compact appliance that has multiple inputs for monitoring a wide range of conditions. There are four inputs for temperature and temperature/humidity sensors, eight digital inputs for dry contact sensors, and a single input for leak detection. Use the digital inputs to monitor magnetic door sensors, motion sensors, a smoke detector, or summary alarms from other equipment. The leak detection connection supports a single zone with up to 200 feet (60 meters) of Sensor Rope. There is also a single relay output (NO/NC) that can be triggered by one of the inputs.

RIM-750 has a simple, intuitive web based interface for easy setup and monitoring. The main dashboard displays all sensor conditions in a single view: temperature data in gauges, digital inputs as red/green status buttons, a checkmark or warning for leak detection, an open/close status of the relay, and a window for displaying images from up to four web cameras. RIM-750 also summarizes events and logs and displays temperature and humidity sensor data in a line graph on the main page so you can see trends. For sensors and inputs, you select the alarm condition and how to respond to an alarm with a sound, light, email and/or by enabling the relay. For leak detection, you can also set sensitivity and monitor for both leak and cable break. You can also export temperature and humidity sensor log data with a single click as a text file with comma-separated values.

For notifications, you can designate a single email address for alarms, which are sent through your SMTP server, or forward alarms as SNMPv2 traps or Modbus/TCP to other facility management systems. RIM-750 is an excellent choice for monitoring a single cabinet or a small equipment room. Consider the RIM-1000 if you need to monitor more sensors or a larger space.

See inside for product details or contact CPI Technical Support for configuration assistance.

SPECIFICATIONS

- Includes:
 - 1 x RIM-750
 - 1 x network cable, 3.3ft (1m) long
 - 1 x USB power adapter with USB mini B to USB A cable
- Power:
 - USB mini-B power inlet, (US) 5VDC @ 500mA max.
 - Includes a 110/240VAC 50/60Hz; Wall adapter to USB connector
 - Power with included wall adapter or from USB port with 5VDC @ 500mA max. output
- Wired Inputs:
 - Temperature/Humidity: 4 each, 1-wire digital temperature or 1-wire digital temperature/humidity sensor inputs; plug-and-play; configurable alarm points
 - Digital: 8 each, digital alarm points; configurable
 - Leak Detection: 1 each, zone leak detection, supports 200 ft (60 m) of conductive fluid Sensor Rope; Leak Detection Lead Cable and Sensor Rope(s) must be ordered separately
- Relay Output:
 - 1 each, Form C summary relay; 2A @ 30VDC, 0.5A @125VAC; configurable as summary alarm output or manual operation
- Alarm Notification:
 - Panel: Audible alarm, visible LED
 - Integrated Web Interface: Dashboard overview with alarm indicators
 - Email: up to 8 email recipients; email sent on alarm to all recipients, distribution list, or email-to-SMS
 - SNMP Traps: Multiple community strings
 - Relay: 1 Form C summary relay output
- Web Interface Login Security:
 - 8 password read only, 8 password read/write
- Communication Port:
 - Ethernet: 10/100 BaseT, RJ45 connector; 500VAC RMS isolation; DHCP enabled; Static IP-addressable
- Protocols:
 - TCP/IP: ARP; DNS; UDP; DHCP; ICMP
 - HTML: Supports multiple simultaneous connections
 - SMTP (email): SMTP authentication; SMTP relay; supports SSL; up to 8 recipients
 - Modbus TCP/IP: Modbus slave; TCP/IP transmission protocol
 - SNMP: V1; V2C MIB-2 compliant; NMS manageable with Get and Traps; V2C Get, V2C and V1 Traps
 - NTP: Custom server settings
- Logging: Logs 50 most recent alarm and return to normal events with date/time stamp.
- Trending: Records up to 86,400 points of sensor data. Sample interval set from 1 second to 1 day. CSV downloadable.
- Operating Environment
 - Temperature: -40°F to 185°F (-40°C to 85°C)
 - Humidity: 0% to 100% RH, non-condensing
 - Altitude: 15,000ft (4,572m) max.
 - Storage Environment: -40°F to 185°F (-40°C to 85°C)
- Dimensions: 1.00"H x 5.63"W x 2.63"D (25mm x 143mmW x 67mmD)
- Weight: 10.1 oz. (287g)
- Mounting: Stand alone; keyholes included for wall mount; rack-mount bracket available
- Certifications: CE; ETL listed: conforms to UL 61010-1, EN 61010-1; certified to CSA C22.2 NO. 61010-1; RoHS compliant

ORDERING INFORMATION

Part Number	Description	Shipping Weight
60100-001	RIM-750, with 4 Temperature/Humidity inputs, 8 digital inputs, 1 leak detection input, 1 relay output, black	2 (0.9)
60100-002	RIM-750 and Leak Detection Kit Bundle, includes 1 RIM-750 with a Leak Detection Lead Cable and 200' (60 m) of Leak Detection Sensor Rope	9 (4.1)

Note: Leak Detection Lead Cable and Leak Detection Sensor Ropes can also be ordered separately.



Front and back view.



ACCESSORIES



Rack Mount Bracket

- Holds two RIM-750 units
- 1U x 19"EIA x 3"D (76 mm)
- Black Finish

Part Number	Description	Shipping Weight lb (kg)
60107-001	Rack-Mount Bracket, 1U x 19"EIA x 3"D (76 mm)	1 (0.5)



Leak Detection Lead Cable

Leak Detection Lead Cable is used to attach Leak Detection Sensor Rope to the single leak detection input on the RIM-750. This kit includes a 15'L (4.57 m) cable that connects the RIM-750 to the Leak Detection Sensor Rope and an End-of-Line Terminator that is attached to end of the Sensor Rope. Sensor Ropes are available in several lengths and multiple Sensor Ropes can be attached end-to-end to create longer lengths. The RIM-750 can support up to 200 feet (60 m) of Sensor Rope. One Leak Detection Lead Cable is required to attach Sensor Rope(s) to each RIM-750.

- Includes one 15'L (4.57 m) leader cable for attaching Sensor Rope(s), and an End of Line Terminator for attachment to the Sensor Rope
- Leader Cable: 22 AWG, 4-conductor cable, .121" (.307 cm) nominal outside diameter
- Standards: NEC Article 725-CL2P, CMP, MPP
- Operating Temperature: 32°F to 122°F (0°C to 50°C)
- Operating Humidity: 5% to 95% RH, non-condensing
- Maximum Altitude: 15,000 ft (4,572m)
- Storage Temperature: -4°F to 158°F (-20°C to 70°C)
- Cable Length: 15 feet (4.57 meters)
- EOL Terminator Dimensions: 0.9"W x 2.0"L (22.9 mm x 50.8 mm)
- Weight: Cable-4.24 oz (120.2g); EOL-0.4 oz (11.3g)
- Material: Plastic housing
- Color: White/Black

Part Number	Description	Shipping Weight lb (kg)
60116-001	Leak Detection Lead Cable, 15'L (4.57 m) and End of Line Terminator	1 (0.5)

Note: Order Leak Detection Sensor Ropes separately.



Temperature Sensor

Use the Temperature Sensor to take temperature measurements close to the RIM-750. The Temperature Sensor attaches to one of the four Temperature/Humidity inputs on RIM-750.

- Sensor Type: Temperature
- Connector: RJ11
- Cable Length: 25'L (7.6 m)
- Operating Temperature: -67°F to 257°F (-55°C to 125°C)
- Temperature Accuracy: ±0.125°

Part Number	Description	Shipping Weight lb (kg)
60108-001	Temperature Sensor, RJ11, 25'L (7.6 m) cord	1 (0.5)



Leak Detection Sensor Rope

The Sensor Rope detects the presence of water. The Sensor Rope is constructed of a strong, durable, non-conductive polymer to reduce false alarms, while remaining highly flexible for easy placement around equipment. Sensor Ropes attach to the RIM-750 through the Leak Detection Lead Cable. Sensor Ropes are available in three lengths. Connect Sensor Ropes end-to-end to extend length.

- Plenum Rating: CL2P (UL)
- Sheer Strength: >180 lb (>81.65 kg)
- Cut Through Resistance: >40 lb (>18.14 kg) with .005" (0.127 mm) blade
- Abrasion Resistance: 60 cycles per UL 719
- Operating Temperature: 32°F to 167°F (0°C to 75°C)
- Operating Humidity: 5% to 95% RH, non-condensing
- Maximum Altitude: 15,000 ft (4,572m)
- Storage Temperature: -22°F to 185°F (-30°C to 85°C)
- Size: Rope not >0.25" (6.35 mm) diameter
- Connector: 4 pin, 0.96" (24.38 mm) diameter
- Weight: .02 lb/ft (29.74 g/m)
- Material: Composite polymer
- Color: Orange/Black
- Certifications: CE; UL CL2P; RoHS Compliant; Plenum Rated

Part Number	Description	Shipping Weight lb (kg)
60109-003	Sensor Rope, 10 ft L (3.0 m)	1 (0.5)
60109-004	Sensor Rope, 25 ft L (7.6 m)	1 (0.5)
60109-005	Sensor Rope, 50 ft L (15.2 m)	3 (1.4)

Note: A Leak Detection Lead Cable is required to attach Sensor Ropes to a RIM-750. Each RIM-750 can support up to 200 feet (60 meters) of Sensor Rope, or a mix of Sensor Rope and Leak Spot Detectors. Each Leak Spot Detector reduces the total length of Sensor Rope supported by 50 feet (30.2 meters). Use J-Clips (ordered separately) to install Leak Detection Sensor Rope.



Temperature and Humidity Sensor

Use the Temperature and Humidity Sensor to take temperature and humidity measurements close to the RIM-750. The Temperature and Humidity Sensor attaches to one of the four Temperature/Humidity inputs on RIM-750.

- Sensor Type: Temperature and humidity
- Connector: RJ11
- Cable Length: 25'L (7.6 m)
- Operating Temperature: -40°F to 185°F (-40°C to 85°C)
- Temperature Accuracy: ±0.125°
- Humidity: 5% to 95% RH, non-condensing

Part Number	Description	Shipping Weight lb (kg)
60108-002	Temperature and Humidity Sensor, RJ11, 25'L (7.6 m) cord	1 (0.5)

ACCESSORIES



J-Clips For Leak Detection Sensor Rope

Use J-Clips to install Leak Detection Sensor Rope. J-Clips are constructed of durable nylon with an adhesive backing for easy and secure installation.

- Operating Environment (Adhesive): -4°F to 122°F (-20°C to 50°C)
- Size: 1.1”H x 1”W x 0.5”D (28 mm x 25 mm x 12 mm)
- Weight: 0.3 lb (0.1 kg)
- Material: UL94 V-1, RMS-05 Nylon
- Color: White

Part Number	Description	Shipping Weight lb (kg)
60109-006	J-Clips, Pack of 10	1 (0.5)
60109-007	J-Clips, Pack of 50	1 (0.5)

Note: Use J-Clips (ordered separately) to install Leak Detection Sensor Rope.



Smoke Detector

Surface-mount, wired, photoelectric smoke detector with two-piece construction that allows pre-wiring of the installation base with plug-in head. The Smoke Detector includes an external power supply and attaches to one of the eight digital inputs on the RIM-750.

- Input Power: 12/24V non-polarized (nominal); 8.5V (minimum); 35V (maximum)
- Maximum Ripple Voltage: 30% peak-to-peak of applied voltage
- Standby Current: 50µA maximum average
- Sensitivity: 2.5%/ft nominal
- Alarm Contact Ratings: 0.5A @ 30V AC/DC
- Maximum Alarm Current: 20mA @ 12V, 23mA @ 24V
- Operating Temperature Range: 32°F to 120°F (0°C to 49°C)
- Operating Humidity Range: 0 to 95% RH, non-condensing
- LED indicators: Red and Green indicate power up, normal, out of sensitivity, and alarm conditions
- Mounting: 3.5” octagonal back box, 4” octagonal back box, single-gang back box, 4” square back box with a plaster ring, direct mount to ceiling/wall
- Input Terminals: 14 to 22 AWG
- Size: 2.0”H x 5.3” diameter (51 mm x 127 mm diameter)
- Weight: 6.3 oz (178 g)
- Material: Housing, plastic
- Color: White

Part Number	Description	Shipping Weight lb (kg)
60113-002	Smoke Detector, Power Supply included	2 (0.9)



Leak Spot Detector

Leak Spot Detector is used to detect liquid in a specific spot, such as, inside of a condensation drip pan. The Spot Detector features a small enclosure with adjustable probes. It can be attached to a flat surface and submerged in water. Leak Spot Detector attaches to one of the eight digital inputs on the RIM-750. You can use up to four Leak Spot Detectors with RIM-750; however, each Leak Spot Detector counts as 50 feet (15.2 meters) of Sensor Rope and will reduce the total length of Leak Detection Sensor Rope supported by the RIM-750 by 50 feet (15.2 meters). For example, you could use two Leak Spot Detectors and 100 feet (30.4 meters) of Leak Detection Sensor Rope.

- Includes one spot detector sensor with an attached 14’L (4.27 m) non-sensing two-wire leader cable
- Solid State Output: 12-36VAC @ 0.01A min., 0.1A max. or 18-36VDC @ 0.01A min., 0.1A max.
- Operating Temperature: 32°F to 122°F (0°C to 50°C)
- Operating Humidity: 5% to 95% RH, non-condensing
- Maximum Altitude: 15,000 ft (4,572m) max.
- Storage Temperature: -4°F to 158°F (-20°C to 70°C)
- Dimensions: 2.0”H x 1.5”W x 1.0”D (51 mm H x 39.4 mm W x 25.4 mm D)
- Weight: 4 oz. (105 g)
- Material: Plastic housing
- Color: Black
- Certifications: CE; ETL listed: conforms to UL 61010-1, EN 61010-1, RoHS compliant

Part Number	Description	Shipping Weight lb (kg)
60109-001	Leak Spot Detector, with 14’L (4.2 m) cable	1 (0.5)

Note: RIM-750 can support a maximum of 4 Leak Spot Detectors. When using a mix of Sensor Rope and Leak Spot Detectors, each Leak Spot Detector reduces the total footage of Sensor Rope supported by 50 feet (15 m). For example, if you use two Leak Spot Detectors, the RIM-750 will support up to 100 feet (30 m) of Sensor Rope. Be sure to reduce the total Sensor Rope Length of 200 feet (60 meters) by 50 feet (15.2 meters) for each Leak Spot Detector that you use.



Power Fail Monitor

Power Fail Monitor plugs into a standard 120 VAC NEMA 5-15 outlet to monitor for power loss. Secures to the outlet to ensure it is not accidentally disconnected and signals power loss through a Form C output relay. Power Fail Monitor attaches to one of the eight digital inputs on the RIM-750.

- Input: NEMA 5-15 plug, 3-prong (with ground)
- Power: 120 VAC @ 15mA
- Output: Relay, 1 Dry Contact, Form C; 10A @ 120 VAC; 5A @ 30 VDC
- Operating Temperature: 32°F to 122°F (0°C to 50°C)
- Operating Humidity: 5% to 95% RH, non-condensing
- Maximum Altitude: 15,000 ft (4,572 m)
- Storage Temperature: -4°F to 158°F (-20°C to 70°C)
- Size: 3.5”H x 2.375”W x 2.25”D (89 mm x 60 mm x 57 mm)
- Weight: 0.21 lb (0.01 kg)
- Material: Housing, plastic
- Color: Black

Part Number	Description	Shipping Weight lb (kg)
60110-001	Power Fail Monitor, with 120 VAC, 15A connection	1 (0.5)

SPECIFICATIONS



Motion Detector

The Motion Detector is a surface-mounted, wired, passive infrared motion detector designed for wall-to-wall coverage across a wide temperature range. When wall-mounted around 10 feet (3 meters) high, Motion Detector covers a cone-shaped area with a maximum span of about 60 feet (18.2 m) and a maximum range of about 50 feet (15.2 meters). The Motion Detector includes an external power supply and attaches to one of the eight digital inputs on the RIM-750.

- Input Power: 9.5 VDC to 14.5 VDC
- Maximum Ripple Voltage: 3 V peak-to-peak @ 12 VDC
- Standby Current: 15 mA @ 12 VDC
- Current in Alarm: 18 mA @ 12VDC
- Contact Rating: 100mA @ 24VDC
- Alarm Contact Resistor in Common: 10 Ohm, 0.25W
- Operating Temperature Range: -4°F to 140°F (-20°C to 60°C)
- Operating Humidity Range: 0 to 95% RH, non-condensing
- RF Immunity: 50V/m from 0.01 to 1,200 MHz
- Static Immunity: 8kV Contact, 15kV Air
- Transient Immunity: 2.4 kV @ 1.2 joules
- White Light Immunity: 20,000 Lux @ Device
- Walk Detection Speed: 0.5 to 10 ft/s (0.15 to 3 m/sec)
- Alarm Duration: 2 to 3 seconds
- Coverage Angle: 90° Minimum
- Mounting Height Range: 6 to 10.5 ft (1.8 to 3.2 m)
- Mounting: direct mount to wall
- Size: 3.0"H x 2.5"W x 1.87"D (89 mm x 64 mm x 48 mm)
- Material: Housing, plastic
- Color: White

Part Number	Description	Shipping Weight lb (kg)
60114-002	Motion Detector, Power Supply included	2 (0.9)



Magnetic Door Sensor

The Magnetic Door Sensor is a surface-mounted, wired, magnetic proximity sensor used to detect when a door is opened and closed or when a cover panel is attached or removed. The Magnetic Door Sensor is designed for quick and easy installation as well as a long life (4 million operations). The Magnetic Door Sensor attaches to one of the eight digital inputs on the RIM-750.

- Contact Ratings: 3.0W max. @ 30 VDC or 30 VAC max. @ 0.3A max.; 1.0 msec. max. operate time (including bounce); 1.0 Amp max. carry current
- Contact Resistance: 100 mOhm max. initial
- Dielectric Strength: 200 VDC min.
- Electrical Circuit: SPST NO (contact Form A). Reed switch opens when magnet is removed from proximity. Contacts are held closed when magnet is in actuation range.
- Operating Temperature Range: -40°F to 212°F (-40°C to 100°C)
- Operating Distance/Alignment: 1.25" (31.8 mm) make gap; Operate (make) points are nominal values with ±10% tolerance. Release points are 110% to 150% of the operating points.
- Size: 2.5"H x 1.25"W x .625"D (63.5 mm x 31.8 mm x 15.9 mm)
- Material: Housing, plastic
- Color: White

Part Number	Description	Shipping Weight lb (kg)
60115-001	Magnetic Door Sensor	1 (0.5)