



Section 273000: Area of Refuge/Elevator Landing - Two-Way Communication System

- IP Command Center (Base Station & Distribution Module), Call Boxes and Signage

Part 1 - General

1.0 Summary

- 1.1 The *IP Command Center* is to be located at a central control point on the first floor or as determined by local Authority Having Jurisdiction. RATH® *Command Center IP Call Boxes* are to be located on all floors above and below the first floor, ideally next to a stairwell emergency exit or elevator landing on each floor.
- 1.2 The *IP Command Center* must be capable of connecting to an existing Network and providing inputs for the *IP Call Boxes*. Visual indicators on the *IP Command Center* allow rescue personnel to know which *IP Call Box* needs assistance. The *IP Command Center* must allow rescue personnel to speak to each *IP Call Box* individually. The *IP Command Center* must include both a handset and speakerphone to communicate back to the *IP Call Boxes*.
- 1.3 The emergency communication hardware shall comply with the Americans with Disabilities Act (ADA). The *IP Call Box* shall have the ability to be programmed with up to 2 emergency phone numbers (either both off-site or *Base Station* and off-site). Upon activation of the emergency push button, a call will be automatically placed to the *IP Command Center*. If no one answers at the *IP Command Center*, the *IP Call Box* must dial a secondary location outside the building to activate **two-way off-site person to person voice communications**.

2.0 Submittals

- 2.1 Submit product data sheets. Include operation manuals.
- 2.2 Wiring or shop diagrams detailing wiring schematics, cabling.

3.0 Construction

- 3.1 The *IP Command Center* (2500 series) shall include both the *Base Station* and *Distribution Module*. The *Base Station* must have a powder coated steel housing (surface or flush mount) or be desk mounted, include a black handset with coil cord and be powered from the *Distribution Module*.
- 3.2 *Distribution Module* must be a surface mount enclosure, include connections for the *IP Call Boxes* and power the *Base Station*. The *Distribution Module* shall be powered from 120vac power with a battery backup that provides power for a minimum of 4 hours (RATH® part # RP7700104).
- 3.3 The *IP Call Boxes* (2100 Series) must be in full compliance with the ADA. *IP Call Boxes* require a hands-free speakerphone with an LED to indicate status of call.

- 3.4 The *IP Call Boxes* must allow the programming in of a specific location message of the unit. This allows rescue personnel to know the location of the activated *IP Call Box*.
- 3.5 The *IP Call Boxes* are to be located no higher than 48” front reach or 54” side reach to the center of the push button above ground level to ensure conformance with the ADA requirements.
- 3.6 The *IP Call Boxes* must have a Braille face plate to ensure conformance with the ADA requirements.
- 3.7 The *IP Command Center* must provide an audible and visual indicator that an *IP Call Box* has been activated.
- 3.8 The 120vac *Power Supply* RATH® part # RP7700104 must be capable of supplying power to a minimum of one *Base Station* and one *Distribution Module*.

4.0 Mounting

- 4.1 The *IP Command Center* is to be mounted on a flat wall surface or a desktop.
- 4.2 The *IP Call Boxes* are to be wall surface or flush mounted.

5.0 Electrical

- 5.1 The *IP Command Center* is to be powered by the *Distribution Module*. The *IP Call Boxes* are to be powered by PoE at 802.3af or a separate battery backed up 12v source.
- 5.2 *Distribution Module* shall be powered by the RATH® part # RP7700104 *Power Supply*. It shall require 120vac power and provide battery backup capable of providing a minimum of 4 hours of electrical backup in case of building power failure.
- 5.3 The *Base Station* shall connect to the *Distribution Module* with a single wire pair (10 zone), two wire pairs (16-64 zone) or three wire pairs (80 zone and up).
- 5.1 Each *IP Call Box* shall connect to a local Network Switch directed to the *Command Center Distribution Module*. Wiring from the *IP Call Box* to the Network Switch shall be a minimum of Cat 5e or 6. If CI cable is required, utilize RATH® cable part # RP6600300M4.
- 5.2 System shall be in compliance with all state and local electrical codes.
- 5.3 If protective covers are required on the *Call Boxes* per local municipal codes, use RATH® part # 2100-XXXIPC2.
- 5.4 If the monitoring of system integrity is required per NFPA 72, use RATH® Supervisor part # 2500-VOIPM.

6.0 Communications

- 6.1 The *IP Call Boxes* shall be an ADA compliant and vandal resistant speakerphone.
- 6.2 The *IP Call Boxes* shall be hands-free and be a push-button-once to talk system. Once the button has been pushed, the *IP Call Box* will call the *Base Station*. If no answer at the *Base Station*, it will automatically call a preprogrammed emergency number. The *IP Call Box* must be capable of being programmed with up to 2 emergency phone numbers (either both off-site or *Base Station* and off-site).
- 6.3 The *IP Call Box* shall have location message capability. The *IP Call Box* must have a minimum 18 second recordable message capability, programmable to play 1 or 2 times. *IP Call Box* shall notify called party of the location of the call upon being received at the emergency dispatch center.
- 6.4 The *IP Call Box* shall be capable of allowing the called party to replay the location message if necessary to ensure an understanding of the caller location.
- 6.5 If system is not attended to 24 hours a day, the *IP Call Box* must dial a secondary location outside the building to activate **two way off-site person to person voice communications**.
- 6.6 Once call has been made (button pushed), the call can only be terminated by the called party.
- 6.7 The *IP Call Box* must have a red LED that will light up upon push of the button. The light shall be a solid color when the *IP Call Box* is activated and will flash when call has been answered.
- 6.8 The *IP Call Box* must be capable of being programmed and reprogrammed on-site.
- 6.9 Standard *IP Call Box* features:
 - 6.9.1 Two number programming (either both off-site or *Base Station* and off-site).
 - 6.9.2 Operating temperature of between -40°F to +150°F (-40° to + 65° C).
 - 6.9.3 On-site programmable.
 - 6.9.4 Powered from PoE at 802.3af or separate battery backed up 12v source.
 - 6.9.5 EEPROM memory to protect programming.

7.0 Signage

- 7.1 System shall consist of a minimum of one 120/277vac edge light sign (part # 7050 or 7050E), and a “location” and “instruction” sign (part # 7049SS) to clearly indicate location of designated area. A tactile sign (part # 7043/7044 or 7087) with raised letter and Braille shall be located at entrance to area.

8.0 Graphics

- 8.1 *IP Command Center* must include wording identifying the location of each *IP Call Box* and light an LED when a particular *IP Call Box* has been activated.

8.2 The *IP Call Box* wording must include “Emergency Phone”, International Phone symbol and raised Braille lettering.

9.0 Cabling

9.1 Cabling for two-way communication system shall meet the applicable requirements for pathway survivability. Cabling installation shall consist of the following:

9.1.1 2 hour fire-rated circuit integrity (CI) cable – RATH® part # RP6600300M4.

9.1.2 2 hour fire-rated cable system.

9.1.3 2 hour fire-rated enclosure or protected area.

10.0 Warranty

10.1 The *IP Command Center* and *IP Call Boxes* shall be warranted for a period of three years.

11.0 Manufacturer

The manufacturer shall be:
RATH® Communications
N56 W24720 North Corporate Circle
Sussex, WI 53089
800-451-1460
Website: www.rathcommunications.com