SECTION 28 13 53

IP MULTI-TENANT ENTRY SECURITY SYSTEM

(IXG Series)

Display hidden notes to specifier. (Don't know how? [Click Here](https://www.arcat.com/sd/display_hidden_notes.shtml))

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\*\* NOTE TO SPECIFIER \*\* Aiphone Corp.; security and communication systems and products.  
This section is based on the products of Aiphone Corp., which is located at:  
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Web:<http://www.aiphone.com>  
[[Click Here](https://www.arcat.com/arcatcos/cos30/arc30204.html)] for additional information.  
Aiphone has become the most respected and reliable brand of communication systems in the world. Aiphone Co. Limited in Nagoya, Japan exports to over 60 countries. Our North American marketing and sales distribution center near Seattle, Washington, was established in 1970.  
Aiphone products range from simple do-it-yourself door answering units to sophisticated video entry security systems, complex microprocessor-based commercial systems, and luxury condo/apartment security and communication systems. Our products are unrivaled in design simplicity, technical excellence and reliability. With over 25 standard systems, and additional manufacturing by special order, we can create a system for virtually any intercom application.  
Every Aiphone system is the result of painstaking attention to detail, with contemporary European style design and the finest quality hardware and circuitry. All of our products are engineered and tested with reliability in mind.

1. GENERAL
   1. SECTION INCLUDES

\*\* NOTE TO SPECIFIER \*\* Delete items below not required for project..

* + 1. IP Multi-tenant security video system. (Aiphone IXG Series)
       1. IP video tenant station. (IXG-2C7)
          1. Flush mount kit for tenant station. (IXG-FMK-2C7)
       2. Video master stations. (IX-MV7)
       3. IPVideo entrance station. (IXG-DM7-HID)
          1. Flush mount box for entrance station. (IXG-DM7-BOX)
          2. Surface mount box for entrance station. (SBX-IXGDM7)
       4. Audio Video Stations. (IX-DV) (IX-DVF) (IXDVF-P) (IX-DVF-RA) (IX-DVF-2RA)
       5. Audio Stations. (IX-SSA) (IX-FA) (IX-SSA-RA) (IX-SSA-2RA)
       6. Lift control adapter. (IXGW-LC)
       7. Gateway adapter mobile application. (IXGW-GW)
  1. RELATED SECTIONS
     1. Section 28 18 00 - Security Access Detection Equipment.
     2. Section 28 13 53.10 - Security Video Intercom System.
  2. REFERENCES

\*\* NOTE TO SPECIFIER \*\* Delete references from the list below that are not actually required by the text of the edited section.

* + 1. American National Standards Institute (ANSI/TIA/EIA) 568 - Commercial Building Telecommunications Cabling Standard.
    2. International Organization for Standards (ISO) 9001:2000 - Quality Management Systems - Requirements.
  1. SUBMITTALS
     1. Submit under provisions of Section 01 30 00 - Administrative Requirements.
     2. Product Data: Manufacturer's data sheets on each product to be used, including:
        1. Preparation instructions and recommendations.
        2. Storage and handling requirements and recommendations.
        3. Installation methods.
     3. Shop Drawings: Submit the following:
        1. Wiring Diagrams: Indicate wiring for each item of equipment and interconnections between items of equipment.
        2. Include manufacturer's names, model numbers, ratings, power requirements, equipment layout, device arrangement, complete wiring point-to-point diagrams, and conduit layouts.
     4. Installation and Operation Manuals:
        1. Submit manufacturer's installation and operation manual, including operation instructions and component wiring diagrams.
        2. Provide detailed information required for Owner to properly operate equipment.
     5. Warranty: Submit manufacturer's standard warranty.

\*\* NOTE TO SPECIFIER \*\* Delete selection samples if colors have already been selected.

* + 1. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.
    2. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square, representing actual product, color, and patterns.
  1. QUALITY ASSURANCE
     1. Manufacturer Qualifications: ISO 9001: 2008 certified company.
     2. Installer Qualifications: Factory trained and experienced with system installations of scope and size required for the Project.

\*\* NOTE TO SPECIFIER \*\* Include a mock-up if the project size and/or quality warrant taking such a precaution. The following is one example of how a mock-up on a large project might be specified. When deciding on the extent of the mock-up, consider all the major different types of work on the project.

* + 1. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
       1. Finish areas designated by Architect.
       2. Do not proceed with remaining work until workmanship, color, and sheen are approved by Architect.
       3. Refinish mock-up area as required to produce acceptable work.
  1. DELIVERY, STORAGE, AND HANDLING
     1. Delivery: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
     2. Storage: Store materials in clean, dry area indoors in accordance with manufacturer's instructions.
     3. Handling: Protect materials during handling and installation to prevent damage.
  2. PROJECT CONDITIONS
     1. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

1. PRODUCTS
   1. MANUFACTURERS
      1. Acceptable Manufacturer: Aiphone Corp., which is located at: 6670 185th Ave. NE; Redmond, WA 98052 ; Toll Free Tel: 800-692-0200; Tel: 425-455-0510; Fax: 425-455-0071; Email:[request info (marketing@aiphone.com)](https://admin.arcat.com/users.pl?action=UserEmail&company=Aiphone+Corp.&coid=30204&rep=&fax=425-455-0071&message=RE:%20Spec%20Question%20(13711aic):%20%20&mf=); Web:<http://www.aiphone.com>

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs; coordinate with requirements of Division 1 section on product options and substitutions.

* + 1. Substitutions: Not permitted.
    2. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.
  1. MULTI-TENANT IP AUDIO/VIDEO ENTRY SECURITY SYSTEM
     1. Basis of Design: Aiphone IXG Series IP Multi-Tenant Video Intercom as manufactured by Aiphone Corporation. A complete network-based communication solution with unlimited possibilities for any multi-tenant security application.
        1. ADA compliant.
        2. CCTV integration.
        3. Systems with audio only components shall be configurable.
        4. Cloud-based app.
        5. All stations are PoE
        6. Touchscreen entrance panel.
        7. Updates can be programmed remotely.
        8. Built-in HID Reader.
        9. Compatible with IX Series 2 stations.
        10. Ask how to combine emergency stations with the IXG Series.
        11. Network Interface: 10 BASE-T / 100 BASE-TX Ethernet (RJ-45).
        12. Network Protocols: IPv4, IPv6, TCP, UDP, SIP, HTTP, HTTPS, RTSP, RTP.
        13. Wire Type: Cat-5e or Cat-6.
  2. COMPONENTS FOR MULTI-TENANT IP AUDIO/VIDEO ENTRY SECURITY SYSTEM
     1. IP Video Tenant Station: IXG-2C7. IP video tenant station.
        1. Quantity per Tenant: 8.
        2. Answer calls from an entry station, guard station, or individual door station.
        3. Power Source: PoE.
        4. Screen: 7 inch (178 mm) LCD TFT Touchscreen.
           1. Monitor resolution: 800 x 400.
           2. Communication: Full-duplex.
        5. Once answered communication is hands-free (VOX).
        6. Maintains call history. MicroSD card slot for added memory.
        7. Place calls to other stations with-in tenant. Communicate with other IXG-2C7's in same tenant or collectively call associated mobile Apps.
        8. Call concierge / guard.
        9. Call elevator to floor.
        10. Monitor door stations. Touching the key button will activate the door release associated with the connected entry station or door station.
        11. Consumption: Standby 1.9 W, Max 5.9 W.
        12. Audio Codec: G.711 (i-law, A-law).
        13. Video Codec: H.264, MJPEG.
        14. Protocol: IPv4/v6, TCP, UDP, SIP, HTTP, HTTPS, RTSP, RTP/RTCP, IGMP, MLD, SMTP, FTP, DHCP, NTP, DNS, TLS.
        15. Encryption: TLS 1.0, 1.1, 1.2.
        16. Operating Temperature: 32 to 104 degrees F (0 to 40 degrees C).
        17. Dimensions (HxWxD): 5-13/16 x 8-15/16 x 1 inch (148 x 227 x 25 mm).
        18. Flush Mount Kit for Tenant Station: IXG-FMK-2C7.
            1. Flush wall-mounted.
            2. Panel Material: Self-extinguishing resin.
            3. Frame and Back Box Material: Self-extinguishing plastic.
            4. Dimensions:

Panel and Frame (WxHxD): 11-7/16 x 7-13/16 x 1-3/16 inch (290 x 199 x 30 mm). Weight: 0.25 lbs (110 g).

Back Box (WxHxD): 10-7/16 x 6-5/8 x 1-9/16 inch (265 x 169 x 40 mm). Weight: 0.49 lbs (220 g).

* + 1. Video Master Station Series IX-MV7:
       1. Model IX-MV7-HB (Master Station - Black w/Handset).
       2. Model IX-MV7-HW (Master Station - White w/Handset).
       3. Model IX-MV7-B (Master Station - Black, Hands Free).
       4. Model IX-MV7-W (Master Station - White, Hands Free).
       5. An IP addressable video master station. 7 inch (178 mm) color LCD monitor. Wall or desk mounted; desk stand included. Handset (duplex) and hands-free (VOX/PTT) communication. Call up to 500 other IX stations. Connects directly to network using CAT-5e/6 cable. Requires a 802.3af compliant Power-over-Ethernet network.

\*\* NOTE TO SPECIFIER \*\* Modular towers are not sold in sections, but by model number which is a complete tower; then add top portion, lettering and mounting kit. Refer to the manufacturer's Tower Design Guide for information. Delete if not required.

* + - 1. Emergency and Assistance Modular Towers: TW-Series.
         1. Modular tower design available in three configurations:

Mid-Level Tower: 2-Module.

Dual Station Tower: 3-Module.

High Level Tower: 3-Module.

\*\* NOTE TO SPECIFIER \*\* Available in red, blue, black, yellow, and white), Custom color and lettering choices are available on request.

* + - * 1. Color: \_\_\_\_\_\_.

\*\* NOTE TO SPECIFIER \*\* Blue, black or red lettering for white or yellow towers. White or Yellow lettering for blue, black or red towers.

* + - * 1. Lettering Color: \_\_\_\_\_\_. For assistance and emergency signage.
        2. Top Cover:

Top plate, no light.

Light cage with blue beacon and strobe.

* + - * 1. UL Listed electrical box included in base module.
        2. Material: 0.25 inch (6.4 mm) zinc treated steel powder coated exterior.
        3. Camera arm module option with universal pipe threading (1.50 inch NPT Threading x 1 inch (25 mm) long).
        4. Elongated access panel on back of each module for easier installation and wiring.
        5. Mounting studs in both top and base modules for internal product (power supply, relay, etc.).
        6. Weather and vandal resistant.
        7. Mounting: L-brackets, anchor bolts to foundation meeting size requirements of manufacturer.
        8. Compatible with IX-Series emergency and assistance stations.
        9. Beacon / Strobe is always lit; flashes during emergency call-in (Requires 24 VDC).
        10. LED light for station illumination in middle module (Requires 24 VDC).
        11. Call button mounting height and signage meet ADA regulations.
        12. Compatibility: Use with IX-DVF-2RA, IX-DVF-RA, IX-SSA-2RA, IX-SSA-RA,.
        13. Compatibility with Non-Emergency Call Stations when using the TW-SPL: IX-DVF. IX-SS/A.
      1. Stainless Steel Security Lock Box Model LB-SDVF/A.
      2. Electric Door Strike Model EL-12S: The door strike is designed for wood framed wooden doors. The unit operates on 12 to 16 VAC.
      3. Stainless Steel Enclosure Model SBX-IDVF:
         1. Stainless Steel Surface Mount Box, 18-Guage: For IX-DVF designed for surface mounting door station.
         2. Size: 10-7/16 x 5-15/16 inches (265 x 151 mm).

Top: 3-5/16 inches (84 mm).

Bottom: 2-5/16 inches (59 mm).

* + - * 1. Weather resistant.
        2. Vandal-resistant.
        3. Inside space for cabling.
        4. Mounts to flat wall surface.
        5. Opening at bottom for drainage.
      1. Stainless Steel Enclosure Model SBX-IDVFRA:
         1. 18-Guage Stainless Steel Surface Mount Box for IX-DVF-RA, IX-DVF-2RA, IX-SSA-RA, IX-SSA-2RA, IX-DVF-P
         2. Size: 11-11/16 inches x 7 inches (297 mm x 178 mm).

Top: 3-5/16 inches (84 mm).

Bottom: 2-5/16 inches (59 mm).

* + - * 1. Weather resistant.
        2. Vandal-resistant.
        3. Inside space for cabling.
        4. Mounts to flat wall surface.
        5. Opening at bottom for drainage.
    1. IP Video Entrance Station: IXG-DM7-HID. IP video entrance station for the IXG Series multi-tenant system. Once a call is placed, visitor is displayed on tenant station or app using an HD camera. Up to 10 entrance stations can be within a unit, interior or exterior, with multiple units allowed in system.
       1. Screen: 7 inch (178 m) TFT LCD display directory screen for calling a tenant or entering an access entry code.
          1. Monitor resolution: 800 x 400.
          2. Communication: Full-duplex.
       2. PoE compliant.
       3. On-board recording with microSD card.
       4. Simple user interface.
       5. Hands-free audio communication.
       6. 720p HD camera.
       7. Up to 9,999 names/numbers can be stored.
       8. Programmable contact inputs and outputs.
       9. Motion sensor to activate LCD.
       10. Built-in HID reader for card access. Supports Prox or iCLASS 26 bit cards.
       11. Stainless steel panel.
       12. Rugged IP65 and IK08 ratings.
       13. Power Source: PoE (IEEE 802.3af Class 0).
       14. Consumption: 5.3 W Standby, 11.6 W Max.
       15. Audio Codec: G.711(i-law, A-law).
       16. Video Codec: H.264.
       17. Protocol: IPv4/v6, TCP, UDP, SIP, HTTP, HTTPS, RTSP, RTP/RTCP, IGMP, MLD, SMTP, FTP, DHCP, NTP, DNS, TLS.
       18. Operating Temp: 14 to 140 degrees F (minus 10 to 60 C).
       19. Dimensions (HxWxD): 13-11/16 x 7-3/16 x 2 inch (348 x 183 x 51 mm).
       20. Flush Mount Box for IP Video Tenant Station: IXG-DM7-BOX. Used to mount IXG-DM7-HID.
           1. Steel construction.
           2. Conduit Knockouts: Back of Box: 2. Top of Box: 2. Bottom of Box: 2.
           3. Dimensions are (HxWxD) 12-1/2 x 6-1/8 x 2-3/8 inch (317 x 156 x 60 mm).
           4. Must be used to flush mounting the IXG-DM7-HID. Sold separately for pre-installation convenience.
       21. Surface Mount Box for IP Video Tenant Station: SBX-IXGDM7. Used to mount IXG-DM7-HID.
           1. Stainless steel construction.
           2. Conduit Knockouts: 1 in bottom of box.
           3. Dimensions are (HxWxD) 13-3/4 x 7-5/16 x 3-1/16 inch (349 x 186 x 78 mm).
           4. Mounting: 1 or 2-gang mounting hole pattern in back of box.
           5. Built in rain hood.
    2. Audio Video Stations:
       1. Model IX-DV: Video Door Station - Surface Mount - Hands Free.
       2. Model IX-DVF: Video Door Station - Flush Mount - Hands Free.
       3. Model IX-DVF-P: Video Door Station - Flush Mount - Hands Free.
       4. Model IX-DVF-RA: Video Door Station - Flush Mount - Emergency Call Button.
       5. Model IX-DVF-2RA: Video Door Station - Flush Mount - Hands Free - Emergency Call Button.
    3. Audio Only Door Stations:
       1. Model IX-SSA: Video Door Station - Flush Mount - Hands Free.
       2. Model IX-SSA-RA: Video Door Station - Flush Mount - Emergency Call Button.
       3. Model IX-SSA-2RA: Video Door Station - Flush Mount - Emergency Call Button.
       4. Model IX-SSA: Recessed Mount.
    4. Lift Control adapter: IXGW-LC. Allows for integration to elevator controls allowing elevators to be called to specific floors based on which tenant opened the door. Each relay can be configured and assigned to a specific entry, tenant station, or app. Individual relay contacts can be activated when a specific tenant activates door release on a specific entry panel allowing the elevator to open and go to a specific floor. Elevator recall button can be used to activate a contact to recall elevator to that specific floor.
       1. Power Source: PoE.
       2. 20 Form C relays and up to 16 adaptors per building.
          1. Relay Rating: 24 V AC/DC 500 mA.
       3. Consumption: Standby 2.1 W, Max 4.4 W.
       4. LAN: Ethernet (10 BASE-T, 100 BASE-TX).
       5. Packet Delivery: Unicast, Multicast.
       6. Protocol: IPv4/v6, TCP, UDP, HTTP, HTTPS, IGMP, MLD, FTP, DHCP, NTP, DNS, TLS.
       7. Encryption: TLS 1.0, 1.1, 1.2.
       8. Operating Temp: 14 to 122 degrees F (minus 0 to 50 degrees C).
       9. Dimensions (HxWxD): 4-1/4 x 8-1/4 x 2-3/8 inch (108 x 210 x 60 mm).
    5. Gateway Adapter: IXGW-GW. One gateway adaptor allowed per system. Allows system to call cloud-based mobile apps, giving users the ability to answer calls from visitors remotely and release the door. Compatible with iOS and Android mobile devices.
       1. PoE compliant.
       2. DIN rail mountable.
       3. Simultaneous Call Paths: 8.
       4. Supports up to 9,999 IXG apps.
       5. Power Source: PoE.
       6. Consumption: Standby 2.1 W, Max 2.9 W.
       7. LAN: Ethernet (10 BASE-T, 100 BASE-TX).
       8. Packet Delivery: Unicast, Multicast.
       9. Protocol: IPv4/v6, TCP, UDP, SIP, HTTPS, RTP, RTCP, SRTP, SRTCP, IGMP, MLD, SFTP, DHCP, NTP, DNS, MQTT, ICE, DTLS, SDP.
       10. Channel: 8.
       11. Encryption: TLS 1.0, 1.1, 1.2.
       12. Operating Temperature: 14 to 122 degrees F (minus 10 to 50 degrees C).
       13. Dimensions (HxWxD): 4-1/4 x 8-1/4 x 2-3/8 inch (108 x 210 x 60 mm).

1. EXECUTION
   1. EXAMINATION
      1. Examine areas to receive integrated security and communication system.
      2. Notify Architect of conditions that would adversely affect installation or subsequent use.
      3. Do not begin installation until unacceptable conditions are corrected.
   2. PREPARATION
      1. Verify the following compliance before starting installation.
         1. All units, except for the entrance station and tenant station, are designed for indoor use only. Do not use outdoors.
         2. The unit turns inoperative during power failure.
         3. In areas where broadcasting station antennas are close by, intercom system may be affected by radio frequency interference.
         4. Keep the intercom wires at least 1 foot (30 cm) away from strong electrical wiring (AC 100-240 V) including, in particular, wiring for inverter electrical appliances. Noise and malfunction could result.
         5. Keep the unit more than 3.3 feet (1 m) away from radio or TV set.
         6. If a strong light shines on the main unit screen, the picture will turn white or only silhouettes will be visible.
         7. Other manufacturer's devices (such as sensor, detectors, door releases) used with this system, comply with the manufacturer's installation requirements.
         8. The LCD panel is manufactured with very high precision techniques, inevitably will have a very small portion of its picture elements always lit or not lit at all. This is not considered a unit malfunction. Please be aware of this in advance.
         9. The sensor of an entrance station (Integrated type) may activate due to moving shadows or moving tree branches, etc. and cause a message to display.
   3. INSTALLATION
      1. Install integrated security and communication system in accordance with manufacturer's instructions at locations indicated on the Drawings.
      2. Mount equipment plumb, level, square, and secure. For video entrance stations and video door stations, comply with manufacturer's design requirements to provide optimum picture quality of station monitoring.
   4. SET-UP AND ADJUSTING
      1. Adjust integrated security and communication system for proper operation in accordance with manufacturer's instructions.
   5. DEMONSTRATION AND TRAINING
      1. Demonstration:
         1. Demonstrate that integrated security and communication system functions properly.
         2. Perform demonstration at final system inspection by qualified representative of manufacturer.
      2. Instruction and Training:
         1. Provide instruction and training of Owner's personnel as required for operation of integrated security and communication system.
         2. Provide hands-on demonstration of operation of system components and complete system, including user-level program changes and functions.
         3. Provide instruction and training by qualified representative of manufacturer.
   6. PROTECTION
      1. Protect installed integrated security and communication system from damage during construction.

END OF SECTION