AX SERIES
Hands-Free Video Security Intercom with Integration

Versatile Intercom Communication for any Security Demand
Over half of all medium to large sized business establishments limit access into their building.

- Bureau of Labor Statistics
AX SERIES gives you the power to...

• **CONTROL**
  entry security and regulate access into a building

• **COMMUNICATE**
  easily and efficiently while keeping your facility secure

• **CONFIRM**
  identity with crisp audio and clear, up-close video
AX Series: Versatile System

Flexible system allows expansion up to 8 master stations and 120 door/sub/adaptor stations for complete building security.

Protect Remote Areas
Reduce exposure to risk in remote locations by adding door stations to parking garages, stanchions, gates, etc.

Monitor Interior Doorways
Secure access to restricted areas within a building by using the video door stations at interior locations.

Safeguard All Exterior Entrances
Protect front and rear doorways, loading docks, and service entries with video door stations.

Scan Monitoring
Systematically listen to programmed door or sub stations, saving on labor and ensuring security.

Vandal Resistant Door Stations
Enhance overall building security with vandal resistant video door stations at perimeter gates and outdoor entrances.
Door Strikes & Magnetic Door Locks
Door strikes or magnetic door locks can be controlled by the master stations (requires additional wire).

Selective Calling
Use the master stations to selectively call all other master, door, and sub stations throughout the facility.

All Call & Group Call
Master stations have the ability to use All Call and Group Call features between other master stations.

Selective Calling
Use the master stations to selectively call all other master, door, and sub stations throughout the facility.

Mullion Mount Door Station
Mullion mount door stations are available to use where video identification is not required.

IMPORTANT: Diagram is for illustrative purposes only. System wiring may vary by installation! Refer to instruction manual for actual wire count and installation directions.
AX Series: Mainstream Integration

Integrate the AX Series into existing security components including CCTV systems, electronic access control, and telephone transfer.

CCTV Cameras
Monitor parking garages and other remote areas by integrating with a CCTV system.

Electronic Access Control
Authorize or deny access into a building, or areas within a building, using the electronic access control function (may require additional wire).

Keyless Entry
HID® embedded door stations are ideal for any location where keyless entry is wanted or required (host controller required for card readers - not supplied by Aiphone).

Increase Wire Distance
If a perimeter gate exceeds 980 ft., use the AXW-AVT and AXW-AVR along with fiber optic or other devices to extend the distance (see page 11 for a current list of compatible devices).

Utilize Infrastructure
The AXW-AVT and AXW-AVR allows the use of a facility’s existing technologies and wiring systems.

AX Series:
Mainstream Integration

CAT-5e
CAT-5e
CAT-5e

AXW-AZ

Variable Wire (determined by product used)

AXW-AVT

AXW-AVR

Variable Wire (determined by product used)

CCTV Camera

Viking Model K-1900-5 Programmable Dialer

Outside telephone line

Telephone wire

HID® embedded door stations are ideal for any location where keyless entry is wanted or required (host controller required for card readers - not supplied by Aiphone).

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The AXW-AVT and AXW-AVR allows the use of a facility’s existing technologies and wiring systems.
Composite video output allows the video to be recorded or seen on a larger screen.

Contact roaming guards with the telephone transfer option (requires Viking Model K-1900-5 Programmable Dialer).

Broadcast important announcements through a paging system using the AXW-PA1.

* Products not supplied by Aiphone

**IMPORTANT:** Diagram is for illustrative purposes only. System wiring may vary by installation! Refer to instruction manual for actual wire count and installation directions.
When the need is for basic and affordable security communication, the AX Series is ideal. Its easy installation and user-friendly programming will not only save on time, but cost as well. A wide variety of door and sub stations, combined with sleek and sturdy master stations, will provide a system that is versatile, comprehensible, and simple to use.

**System Software**

Features and functions are programmed using the custom software, included with the CEU. It is intuitive to use and allows you to set individual door stations’ call-in length (10 seconds to 10 minutes, or infinite), call-in priority levels, scan monitoring inclusion, and door release relay activation and timing. In addition, the software features an easy to use interface for gathering log data, setting the communication method at the master (VOX or PTT), and data up/down loading.

**System Wiring Diagram**

The diagram shows the basic installation setup for the AX Series, including the CEU, door release relays, and various sub stations. It illustrates how CAT-5e wire is used throughout the system, with notes on the use of variable wire (determined by product used). The diagram also highlights the requirement for a 3rd party access control panel (not supplied by Aiphone). The system wiring is designed to be fully integrated, as indicated by the “REQUIRES” note on the diagram.
Utilizing the serial interface and custom software, the AX Series is capable of total integration. This allows interaction with electronic access control devices, CCTV cameras, DVRs, event logging, and site management systems. Door stations with embedded HID® readers are available for keyless entry with access control hardware, eliminating the need for separate card readers.

NOTE: Power supplies not shown.
Central Exchange Units

AX-084C
Central Exchange Unit
- Supports up to 4 master stations and 8 door/sub stations

AX-248C (not shown)
Central Exchange Unit
- Supports up to 8 master stations and 24 door/subs stations

AX-320C (not shown)
Add-On Central Exchange Unit
- Supports up to 32 door/sub stations

AX-8MV
Video Master Station
- Wall or desk mount

AX-8MV-W
Video Master Station (recommended for an 8 x 8 system only)
- White finish
- Wall or desk mount

AX-8M
Audio Master Station
- Wall or desk mount

AX-16SW
16-Call Add-On Selector for AX-8MV or AX-8M
(max. 7 per master)
- Provides channels for additional door stations
- Aesthetically matches AX-8M and AX-8MV
(not recommended for AX-8MV-W)

Component Matrix

<table>
<thead>
<tr>
<th>Number of door stations, sub stations, or adaptors</th>
<th>Number of master stations</th>
<th>Number of add-on selectors per master</th>
<th>Number of central exchange units AX-084C</th>
<th>AX-248C</th>
<th>Number of add-on exchange units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 8</td>
<td>Up to 4</td>
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<td>1</td>
<td>—</td>
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</tr>
<tr>
<td>Up to 24</td>
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<td>—</td>
<td>1</td>
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<td>1</td>
<td>—</td>
<td>1</td>
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<td>—</td>
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<td>1</td>
<td>—</td>
<td>2</td>
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<td>Up to 88</td>
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<td>—</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Up to 104</td>
<td>Up to 4</td>
<td>6</td>
<td>1</td>
<td>—</td>
<td>3</td>
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<tr>
<td>Up to 120</td>
<td>Up to 8</td>
<td>7</td>
<td>—</td>
<td>1</td>
<td>3</td>
</tr>
</tbody>
</table>

NOTES: Use the AX-248C for systems with more than 4 master stations (may change the required quantity of AX-320Cs).
Two PS-2420UL power supplies are required per system.
**Door Stations**

**Weather & Vandal Resistant Video Door Stations – Surface Mount**

- **AX-DV**: Video Door Station
  - Fixed camera
  - Aluminum die cast
  - Surface mount

- **AX-DV-P**: Card Access Video Door Station
  - HID® ProxPoint® Plus Proximity Card Reader
  - Fixed camera
  - Aluminum die cast
  - Surface mount

**Weather & Vandal Resistant Video Door Stations – Flush Mount**

- **AX-DVF**: Video Door Station
  - Fixed camera
  - Stainless steel
  - Flush mount
  - Back box included

- **AX-DVF-P**: Card Access Video Door Station
  - HID® ProxPoint® Plus Proximity Card Reader
  - Fixed camera
  - Stainless steel
  - Flush mount
  - Back box included

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**Weather Resistant Audio Door Stations – Surface Mount**

- **AX-DM**: Audio Door Station
  - Plastic cover
  - Mullion surface mount

**Weather Resistant Audio Door Stations – Flush Mount**

- **IF-DA**: Audio Door Station
  - Plastic cover
  - Surface mount

**Weather Resistant Audio Door Station – Flush Mount**

- **IE-JA**: Audio Door Station
  - Stainless steel
  - Flush mount
  - Fits 2-gang box

**Weather & Vandal Resistant Audio Door Stations with CCTV Camera – Flush Mount**

- **IE-SSV**: Audio Door Station
  - Built-in CCTV camera (requires AXW-AZ)
  - Stainless steel
  - Flush mount
  - Fits 2-gang box

**Integration Adaptors**

**Approved Devices for AXW-AVT & AXW-AVR**

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Model</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFI (American Fibertek)</td>
<td>MT / MR - 1890</td>
<td>Fiber Optic</td>
</tr>
<tr>
<td>Infinova</td>
<td>N3732TA - M / N3732RA - M</td>
<td>Fiber Optic</td>
</tr>
<tr>
<td>Meridian Technologies</td>
<td>ST / SR - 1W2A2C2G / 2A2C2G-X</td>
<td>Fiber Optic</td>
</tr>
</tbody>
</table>

**NOTE:** This list of approved devices is subject to change. For an updated list, please contact Aiphone Technical Support (Mon. - Fri., 6:00am - 4:30pm) at (800) 692-0200 or e-mail tech@aiphone.com.

**Sub Stations**

- **AX-A**: (not shown) Audio Sub Station
  - Surface mount

- **AX-B**: (not shown) Audio Sub Station
  - Semi-flush mount

- **AX-AN**: Privacy Audio Sub Station
  - Privacy button
  - Surface mount

- **AX-BN**: (not shown) Privacy Audio Sub Station
  - Privacy button
  - Semi-flush mount

**AXW-AZ**: CCTV Input Module

**AXW-PA1**: Paging Adaptor

**AXW-AVT**: Audio / Video Transmitter

**AXW-AVR**: Audio / Video Receiver
### Unit Dimensions

<table>
<thead>
<tr>
<th>MODEL</th>
<th>HEIGHT</th>
<th>WIDTH</th>
<th>DEPTH</th>
<th>RECESSED</th>
<th>HEIGHT</th>
<th>WIDTH</th>
<th>DEPTH</th>
<th>RECESSED</th>
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<tbody>
<tr>
<td>AX-084C, AX-248C, AX-320C</td>
<td>3 7/16&quot;</td>
<td>18 7/8&quot;</td>
<td>13 3/16&quot;</td>
<td>-</td>
<td>88</td>
<td>480</td>
<td>335</td>
<td>-</td>
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<tr>
<td>AX-16SW</td>
<td>6 7/8&quot;</td>
<td>3 3/8&quot;</td>
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<td>-</td>
<td>175</td>
<td>86</td>
<td>48</td>
<td>-</td>
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<tr>
<td>AX-8MV, AX-8MV-W, AX-8M</td>
<td>6 7/8&quot;</td>
<td>7 5/8&quot;</td>
<td>2 9/16&quot;</td>
<td>-</td>
<td>175</td>
<td>194</td>
<td>65</td>
<td>-</td>
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<td>AX-A, AX-AN</td>
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<td>2 1/8&quot;</td>
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<td>143</td>
<td>53.5</td>
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<td>AX-B, AX-BN</td>
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<td>AX-DM</td>
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<tr>
<td>AX-DV</td>
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<td>3 15/16&quot;</td>
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<td>25</td>
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<tr>
<td>AX-DVF</td>
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<td>5 3/4&quot;</td>
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<td>246</td>
<td>146</td>
<td>*</td>
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<tr>
<td>AX-DVF-P</td>
<td>11 5/8&quot;</td>
<td>5 3/4&quot;</td>
<td>*</td>
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<td>295</td>
<td>146</td>
<td>*</td>
<td>-</td>
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<tr>
<td>AX-DVF-P</td>
<td>9 5/8&quot;</td>
<td>3 15/16&quot;</td>
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<td>245</td>
<td>100</td>
<td>25</td>
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<tr>
<td>AXW-AZ, AXW-AVT, AXW-AVR</td>
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<td>7&quot;</td>
<td>4&quot;</td>
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<td>41</td>
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<td>IE-JA</td>
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<td>115</td>
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<td>*</td>
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<tr>
<td>IE-SS/A, IE-SSR, IE-SSV</td>
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<td>4 3/4&quot;</td>
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<td>-</td>
<td>121</td>
<td>121</td>
<td>*</td>
<td>-</td>
</tr>
<tr>
<td>IF-DA</td>
<td>5 1/8&quot;</td>
<td>3 7/8&quot;</td>
<td>1 1/8&quot;</td>
<td>-</td>
<td>130</td>
<td>98</td>
<td>28.5</td>
<td>-</td>
</tr>
</tbody>
</table>

* Aiphone recommends a 2-1/2" minimum back box depth for all flush mount stations.

### Accessories
- **HID-SS**: Card Access Station with HID® ProxPoint® Plus Proximity Card Reader
- **SBX-2G**: Surface Mount Box for IE-JA, IE-SS/A, IE-SSR, or IE-SSV
- **SBX-2BH**: Horizontal Surface Mount Box for HID-SS and one IE-SS/A, IE-SSR, or IE-SSV
- **SBX-AXDV30**: 30° Angle Box for AX-DV
- **SBX-AXDVF**: Surface Mount Box for AX-DVF
- **SBX-DVF-P**: Security Lock Box for AX-DVF-P (not included)
- **LB-XDVF**: Security Lock Box for AX-DVF (not included)
- **MCW-S/A**: Desk Stand for AX-6MV, AX-8MV-W, or AX-8M
- **BBX-1E**: Back Box for flush mounting AX-B or AX-BN
- **EL-12S**: Electric Door Strike (requires PT-1210N)
- **RY-24L**: Form C Door Release Relay (1 per door)
- **RY-ES**: External Signaling Relay
- **SBX-AXDV**: Surface Mount Box for AX-DVF
- **SBX-AXDVF**: Surface Mount Box for AX-DVF
- **SBX-LSP**: Security Lock Box for AX-DVF-P (lock not included)
- **SBX-2G**: Surface Mount Box for IE-JA, IE-SS/A, IE-SSR, or IE-SSV
- **IFER-2**: Call Extension Speaker
- **SBX-AXDVF**: Surface Mount Box for AX-DVF
- **MCW-S/A**: Desk Stand for AX-6MV, AX-8MV-W, or AX-8M
- **MCW-S/A**: Desk Stand for AX-6MV, AX-8MV-W, or AX-8M
- **MCW-S/A**: Desk Stand for AX-6MV, AX-8MV-W, or AX-8M
- **MCW-S/A**: Desk Stand for AX-6MV, AX-8MV-W, or AX-8M

### Specifications
- **Power Source**: 24V DC – use two PS-2420ULs
- **Communication**: Hands-free (VOX) or push-to-talk (simplex)
- **Video Display**: 3-1/2" color LCD
- **Camera**: Type: 1/4" color CCD
  - View Area: 2'1" vert. x 3'1" horiz. at 20'
- **Door Release**: Programmable dry contact, 24V AC/DC, 500mA – use EL-12S (use RY-24L for larger contact rating)
- **Wire Type**: Between Door/Sub Station, Master Station, and Central Exchange Unit: CAT-5e
  - Power Supply to Central Exchange Unit and Add-On Central Exchange Unit: 2-cond., overall shield – use Aiphone 821802
  - Distance Door/Sub Station to Central Exchange Unit and Add-On Central Exchange Unit: 980’
  - Central Exchange Unit to Master: 980’
  - Central Exchange Unit to Add-On Central Exchange Unit: 16’
  - Power Supply to Central Exchange Unit and Add-On Central Exchange Unit: 16’(22AWG) 33’(18AWG)

### Door Station Features
- Fixed camera provides clear visitor identification (video door stations)
- Card access door stations available

### Master Station Features
- Masters available with 3.5” color LCD screen
- Hands-free or push-to-talk communication
- Two talk channels
- Composite video output from CEU/video masters
- All Call or Group Call to master stations
- Scan monitoring

### System Features
- Up to 8 masters and 120 doors/subs/adaptors
- CAT-5e wiring homerun from each station
- Selective calling between masters, and from masters to door/sub stations
- Normal or priority call levels
- Data output on CEU provides custom integration capability with CCTV and access control systems*
- PC programmable with a large variety of settings
- Transfer calls to an outside phone line (requires Viking Model K-1900-5 programmable dialer)
- Optional features: headset, footswitch, call transfer to telephone, and PC remote control*

* Interface requires custom software (not supplied by Aiphone)