

# AX SERIES

## Hands-Free Video Security Intercom with Integration



**Versatile Intercom Communication  
for *any* Security Demand**

# COMPLETE SECURITY

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



COMMERCIAL



HEALTHCARE



EDUCATIONAL



GOVERNMENT

# SYSTEM LAYOUT: STANDARD

CEU (AX-084C shown)

## 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.

CAT-5e

IE-SSR



## Monitor Interior Doorways

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

AX-DVF



CAT-5e

## Safeguard All Exterior Entrances

Protect front and rear doorways, loading docks, and service entries with video door stations.

CAT-5e

## Scan Monitoring

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

CAT-5e

## Vandal Resistant Door Stations

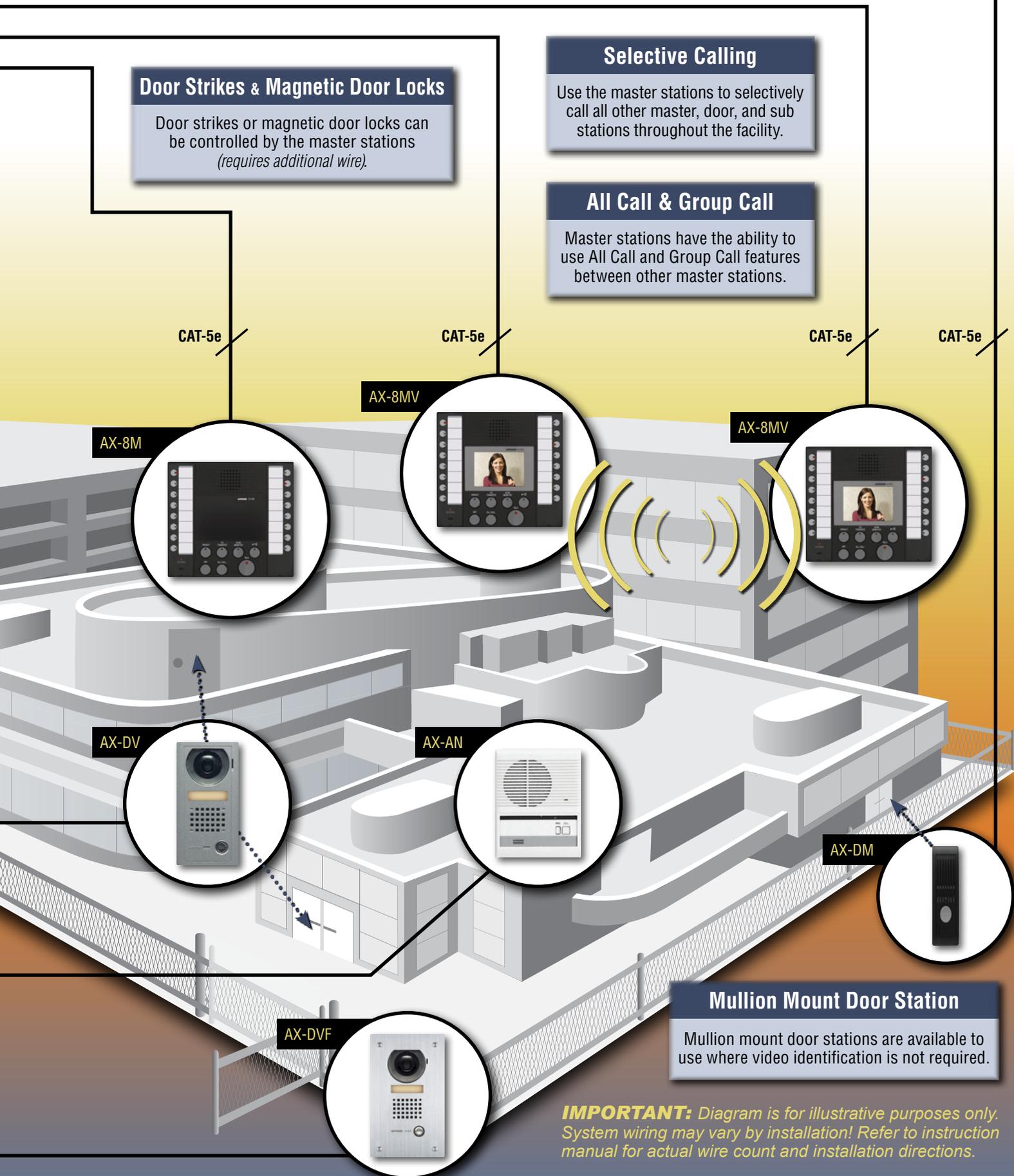
Enhance overall building security with vandal resistant video door stations at perimeter gates and outdoor entrances.

CAT-5e

**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.



**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.

# SYSTEM LAYOUT: INTEGRATED

CEU (AX-248C shown)

## AX Series: Mainstream Integration



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

Telephone wire

Viking Model K-1900-5 Programmable Dialer \*



Outside telephone line

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

## CCTV Cameras

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

IE-SSR



CCTV Camera \*



AXW-AZ



CAT-5e

Variable Wire

(determined by product used)

## 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).

AXW-AVR



Variable Wire

(determined by product used)

## Increase Wire Distance

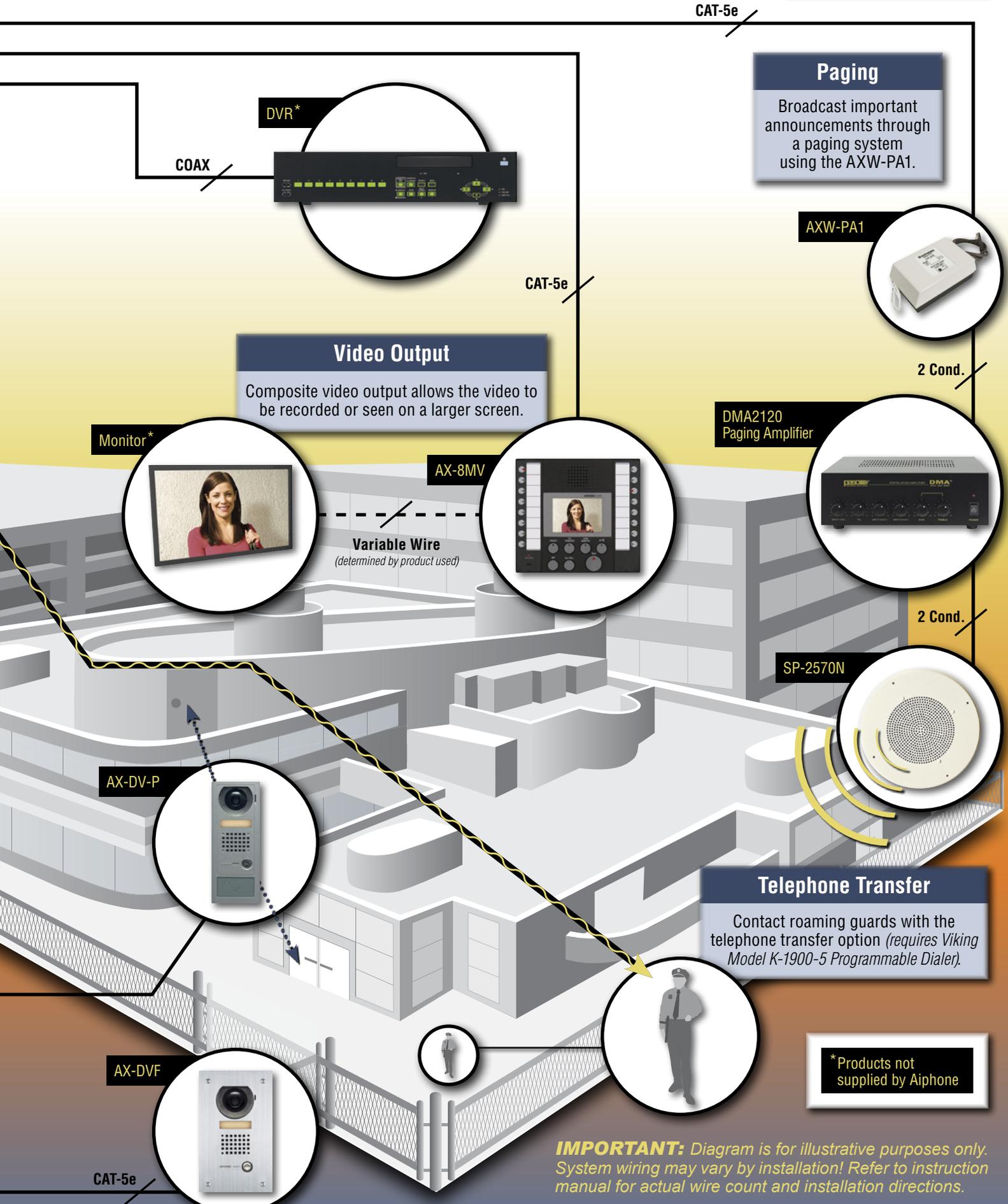
If a perimeter gate exceeds 980 ft., use the AXW-AVT and AXW-AVR along with fiber optic or other devices to extend the distance (see page 11 for a current list of compatible devices).

## Utilize Infrastructure

The AXW-AVT and AXW-AVR allows the use of a facility's **existing** technologies and wiring systems.

AXW-AVT





### Paging

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

AXW-PA1



2 Cond.

DMA2120  
Paging Amplifier



2 Cond.

SP-2570N



### Telephone Transfer

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

\*Products not supplied by Aiphone

DVR\*

COAX

CAT-5e

CAT-5e

### Video Output

Composite video output allows the video to be recorded or seen on a larger screen.

Monitor\*



AX-8MV



Variable Wire  
(determined by product used)

AX-DV-P



AX-DVF

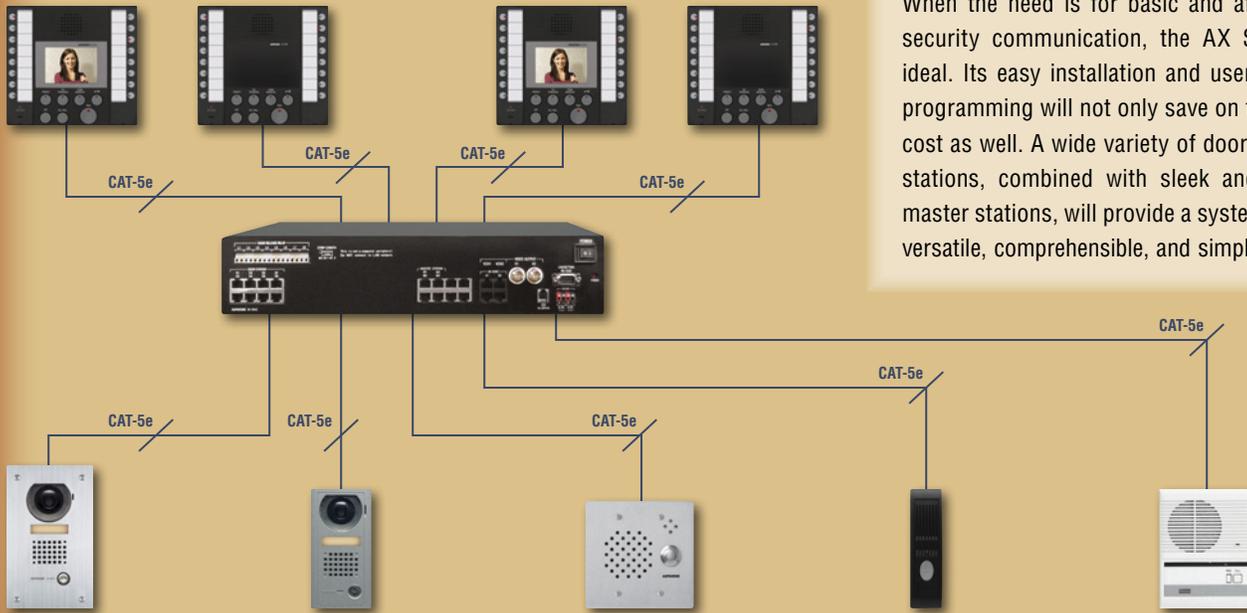


CAT-5e

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

# System Hardware Example

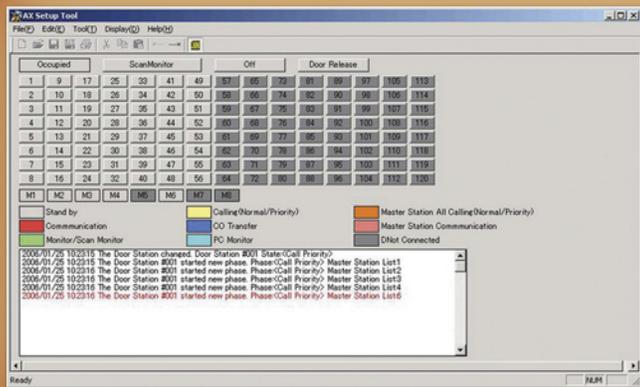
## Basic Installation



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.

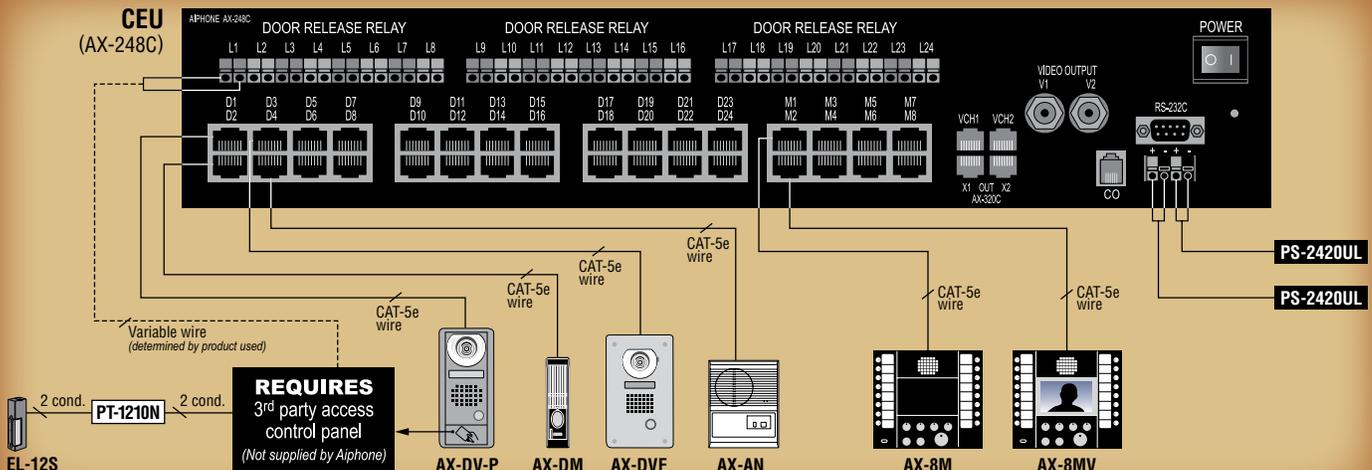
**NOTE:** Power supplies not shown. For a fully integrated installation, see the system software example on the next page.

## System Software



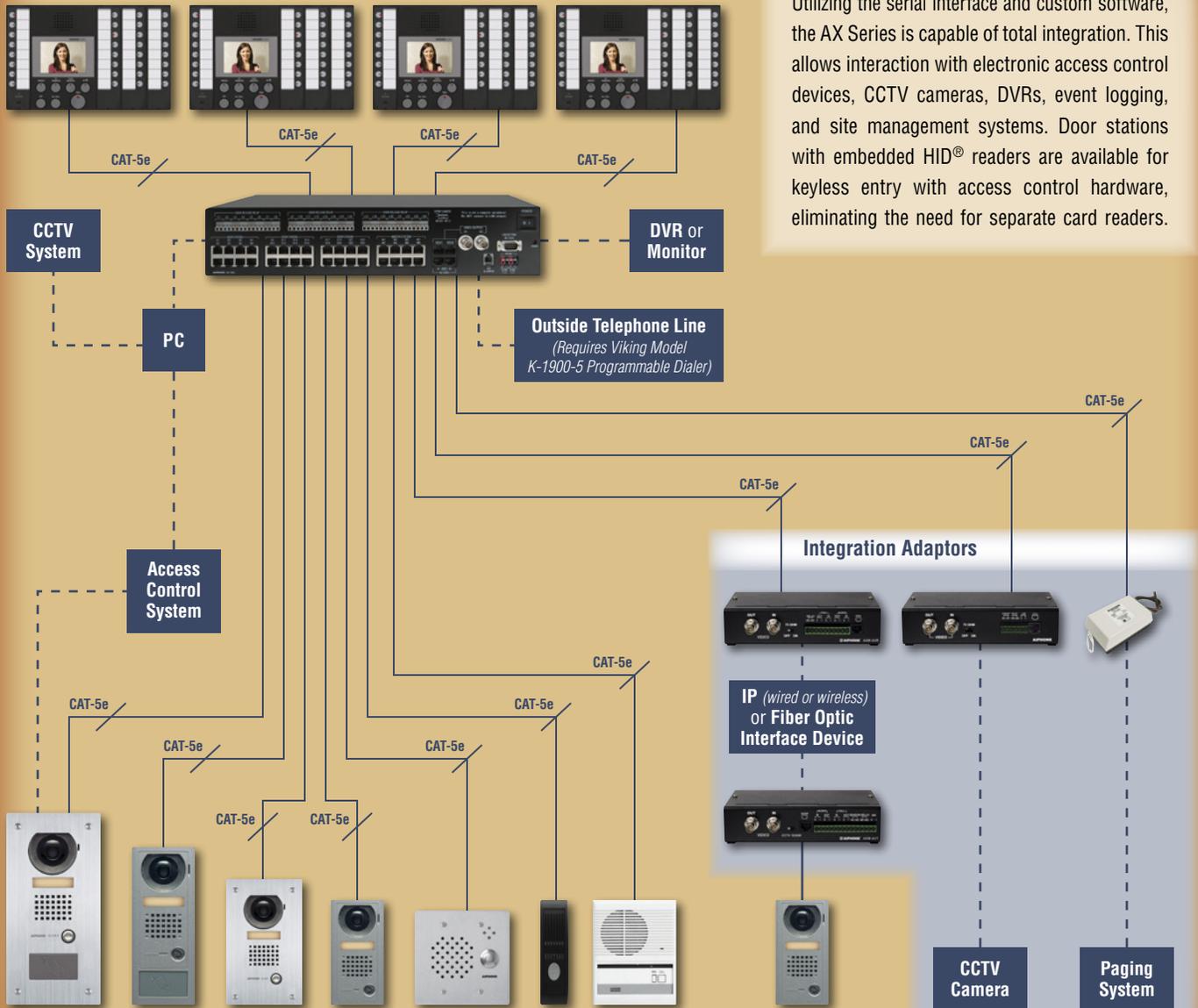
Features and functions are programmed using the custom software, included with the CEU. It is intuitive to use and allows you to set individual door stations' call-in length (10 seconds to 10 minutes, or infinite), call-in priority levels, scan monitoring inclusion, and door release relay activation 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



# System Integration Example

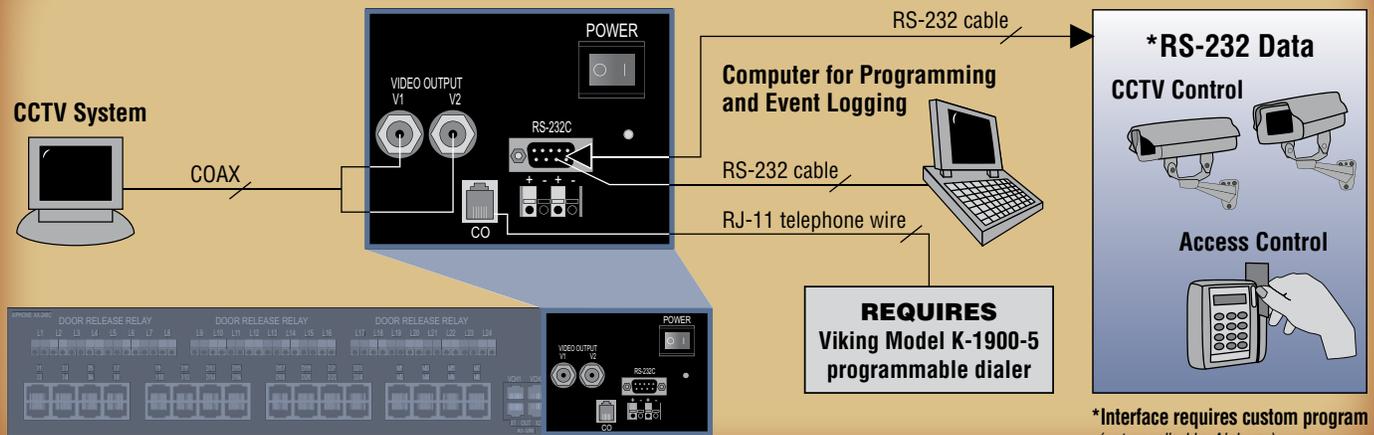
## Fully Integrated Installation



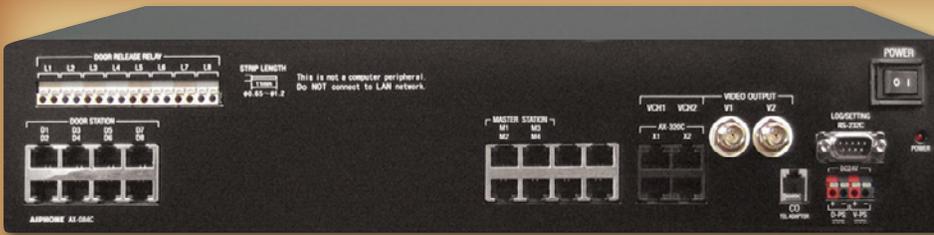
Utilizing the serial interface and custom software, the AX Series is capable of total integration. This allows interaction with electronic access control devices, CCTV cameras, DVRs, event logging, and site management systems. Door stations with embedded HID® readers are available for keyless entry with access control hardware, eliminating the need for separate card readers.

NOTE: Power supplies not shown.

## Integrated Wiring Diagram



# Central Exchange Units



### Additional CEU Features:

- **RJ-45 connectors for master and door stations**
- **Composite video output (BNC)**
- **RS-232 serial output**
- **Selective door release** (programmable to N/O or N/C)
- **CCTV and access integration**
- **PC programmed**
- **Rack mountable (2U)**

### 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

# Master 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)

### Additional Master Station Features:

- **3.5" color TFT LCD monitor (AX-8MV and AX-8MV-W)**
- **Hands-free (VOX) or push-to-talk (PTT) communication**
- **All Call to master stations**
- **Scan monitoring**
- **Selective door release**
- **Privacy and mute functions**
- **Connection for headset and footswitch**

# Component Matrix

Number of door stations, sub stations, or adaptors	Number of master stations	Number of add-on selectors per master	Number of central exchange units		Number of add-on exchange units
			AX-084C	AX-248C	
Up to 8	Up to 4	—	1	—	—
Up to 24	Up to 8	1	—	1	—
Up to 40	Up to 4	2	1	—	1
Up to 56	Up to 8	3	—	1	1
Up to 72	Up to 4	4	1	—	2
Up to 88	Up to 8	5	—	1	2
Up to 104	Up to 4	6	1	—	3
Up to 120	Up to 8	7	—	1	3

**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

\* HID® stations require a 3rd party host. Power for card reader and door strike require additional wire.

## Weather Resistant Audio Door Stations – Surface Mount



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



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

## Weather & Vandal Resistant Audio Door Stations – Flush Mount



- IE-SS/A**  
Audio Door Station
- Stainless steel
  - Flush mount
  - Fits 2-gang box



- IE-SSR**  
Audio Door Station
- Red mushroom call button
  - Stainless steel
  - Flush mount
  - Fits 2-gang box

## 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 Station 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

# 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

# Integration Adaptors

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

Manufacturer	Model	Type
AFI (American Fibertek)	MT / MR -1890	Fiber Optic
Infinova	N3732TA -M / N3732RA -M	Fiber Optic
Meridian Technologies	ST / SR -1W2A2C2G / 2A2C2G -X	Fiber Optic

**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](mailto:tech@aiphone.com).



**AXW-AZ**  
CCTV Input Module



**AXW-PA1**  
Paging Adaptor

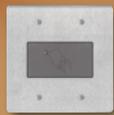


**AXW-AVT**  
Audio/Video Transmitter



**AXW-AVR**  
Audio/Video Receiver

# 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**  
Surface Mount Box for AX-DVF-P



**LB-XDVF**  
Security Lock Box for AX-DV or AX-DVF (lock not included)



**SBX-LSP**  
Security Lock Box for AX-DVF-P (lock not included)



**BBX-1E**  
Back Box for flush mounting AX-B or AX-BN



**EL-12S**  
Electric Door Strike (requires PT-1210N)



**RY-ES**  
External Signaling Relay



**RY-24L**  
Form C Door Release Relay (1 per door)



**IER-2**  
Call Extension Speaker



**MCW-S/A**  
Desk Stand for AX-8MV, AX-8MV-W, or AX-8M

## Unit Dimensions

MODEL	INCHES				MILLIMETERS			
	HEIGHT	WIDTH	DEPTH	RECESSED	HEIGHT	WIDTH	DEPTH	RECESSED
AX-084C, AX-248C, AX-320C	3-7/16"	18-7/8"	13-3/16"	-	88	480	335	-
AX-16SW	6-7/8"	3-3/8"	1-7/8"	-	175	86	48	-
AX-8MV, AX-8MV-W, AX-8M	6-7/8"	7-5/8"	2-9/16"	-	175	194	65	-
AX-A, AX-AN	7-1/16"	5-5/8"	2-1/8"	-	180	143	53.5	-
AX-B, AX-BN	8-3/16"	6"	2"	9/16"	208	153	50.5	15
AX-DM	6-5/16"	1-11/16"	7/8"	-	160	43	22.5	-
AX-DV	7-11/16"	3-15/16"	1"	-	195	100	25	-
AX-DVF	9-11/16"	5-3/4"	*	-	246	146	*	-
AX-DVF-P	11-5/8"	5-3/4"	*	-	295	146	*	-
AX-DV-P	9-5/8"	3-15/16"	1"	-	245	100	25	-
AXW-AZ, AXW-AVT, AXW-AVR	1-5/8"	7"	4"	-	41	178	102	-
IE-JA	4-1/2"	4-9/16"	*	-	115	116	*	-
IE-SS/A, IE-SSR, IE-SSV	4-3/4"	4-3/4"	*	-	121	121	*	-
IF-DA	5-1/8"	3-7/8"	1-1/8"	-	130	98	28.5	-

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

## 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

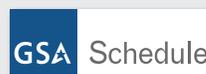
- Selective calling between masters, and from masters to door/sub stations
- Normal or priority call levels
- Data output on CEU provides custom integration capability with CCTV and access control systems\*
- PC programmable with a large variety of settings
- Transfer calls to an outside phone line (requires 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)

AX Series Brochure

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Deming Prize



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