AIPHONE®

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

DOORS / SUBS / ADAPTORS	MASTERS
120 ▶	8

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.

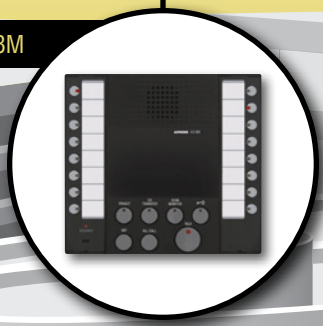
CAT-5e

CAT-5e

CAT-5e

CAT-5e

AX-8M



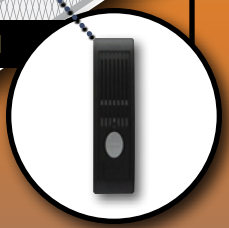
AX-8MV

AX-8MV

AX-DV

AX-AN

AX-DM



AX-DVF

Mullion Mount Door Station

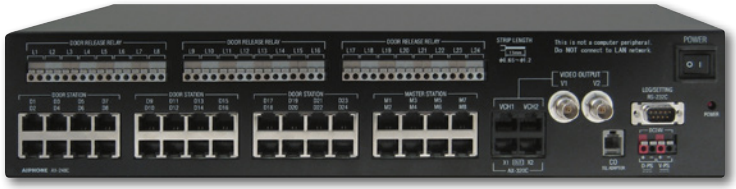
Mullion mount door stations are available to use where video identification is not required.

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

CCTV Camera *

IE-SSR

CCTV Cameras

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

CAT-5e

CAT-5e

CAT-5e

AXW-AZ

CAT-5e

Variable Wire
(determined by product used)

AXW-AVR

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).*

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

DOORS/SUBS/ADAPTORS 120 ▶ MASTERS 8

CAT-5e

Paging

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

DVR*

COAX

AXW-PA1

CAT-5e

Video Output

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

2 Cond.

DMA2120 Paging Amplifier

Monitor*

AX-8MV

Variable Wire
(determined by product used)

2 Cond.

SP-2570N

AX-DV-P

Telephone Transfer

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

AX-DVF

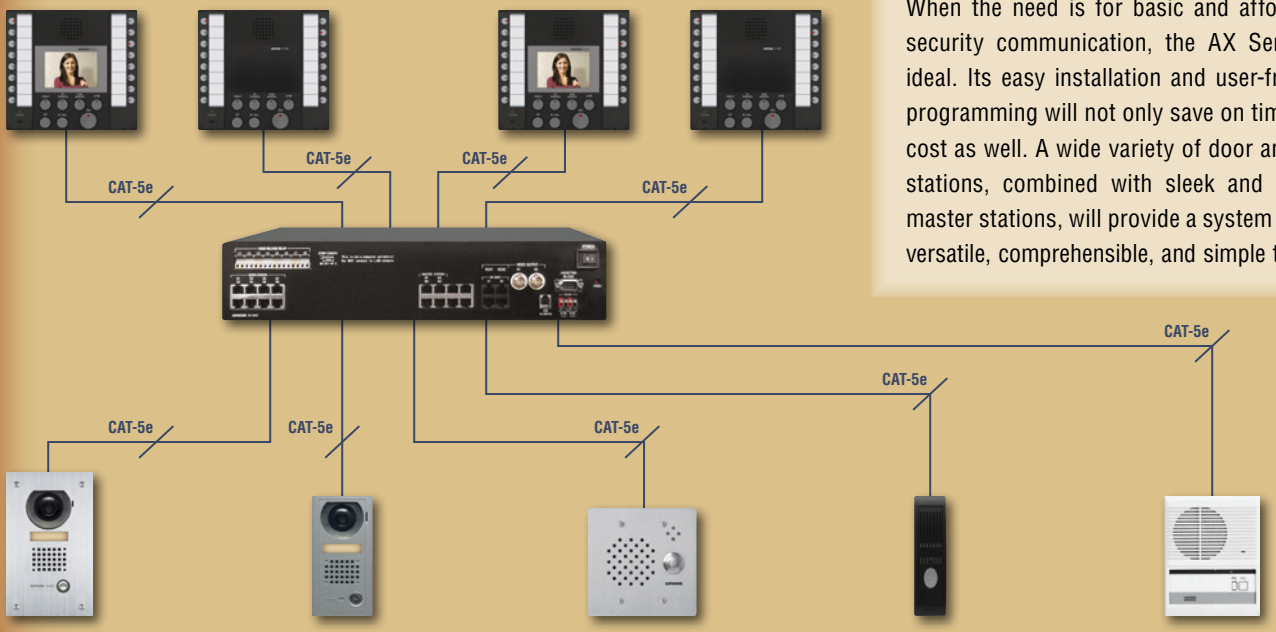
CAT-5e

*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.*

System Hardware Example

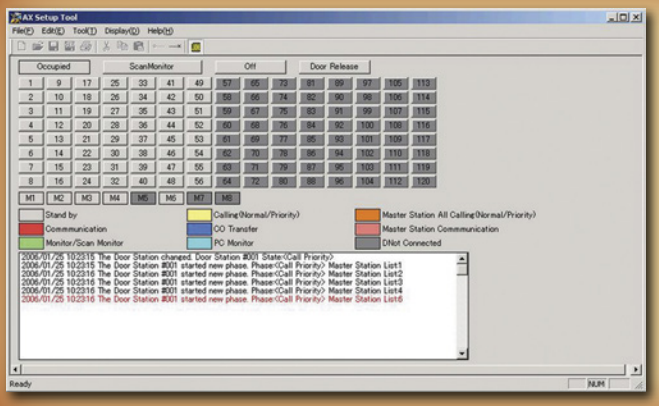
Basic Installation



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.

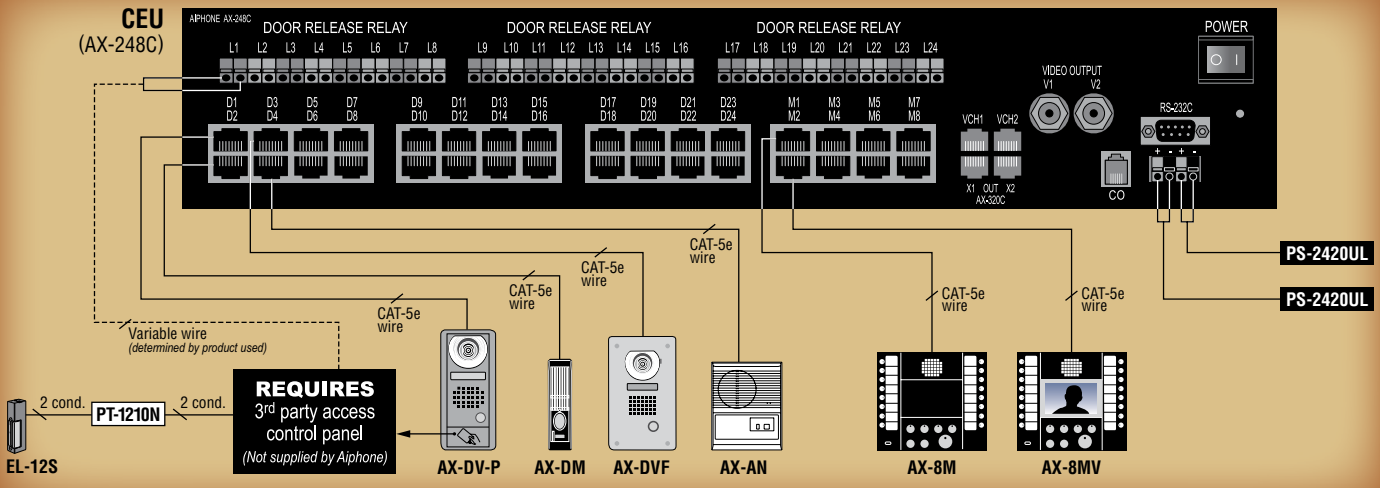
NOTE: Power supplies not shown. For a fully integrated installation, see the system software example on the next page.

System Software



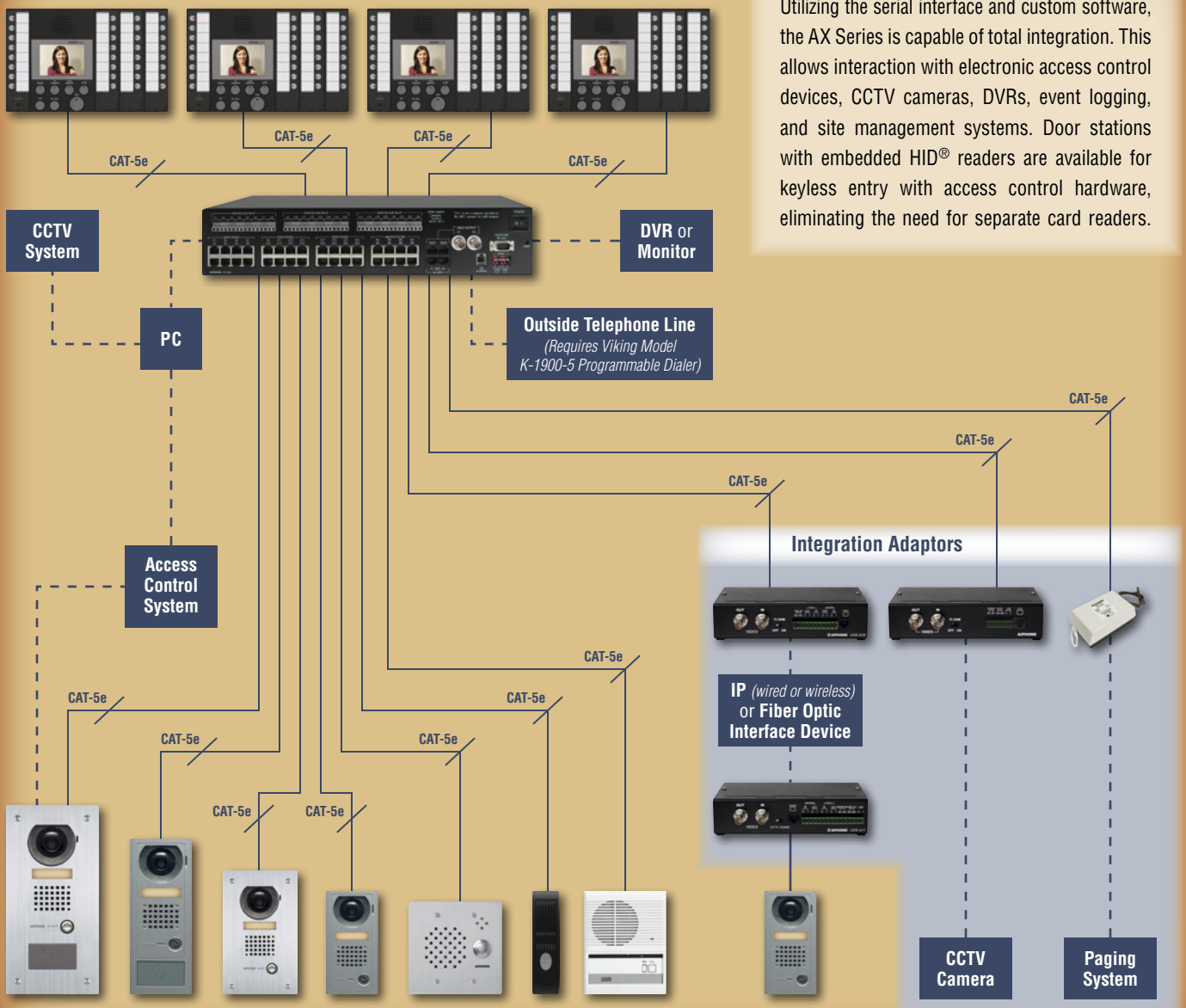
Features and functions are programmed using the custom software, included with the CEU. It is intuitive to use and allows you to set individual door stations' call-in length (10 seconds to 10 minutes, or infinite), call-in priority levels, scan monitoring inclusion, and door release relay activation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

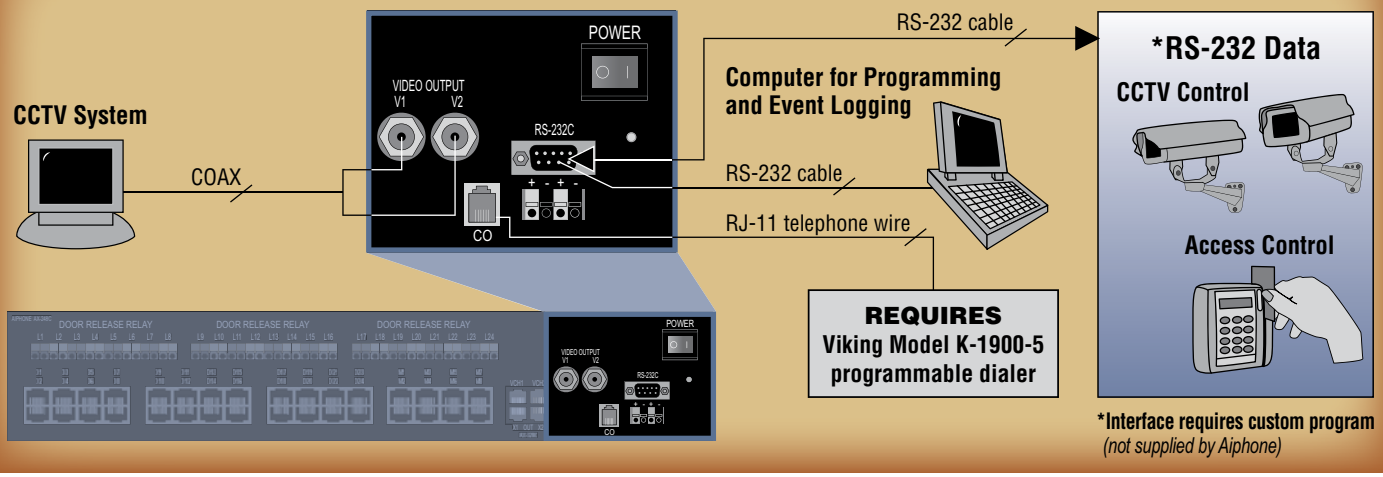
Fully Integrated Installation



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.

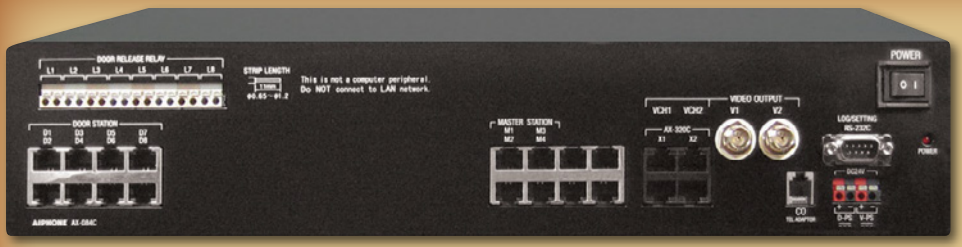
NOTE: Power supplies not shown.

Integrated Wiring Diagram



*Interface requires custom program (not supplied by Aiphone)

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

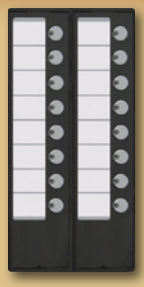
AX-320C *(not shown)*
Add-On Central Exchange Unit
- Supports up to 32 door/sub stations

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)*

Master Stations

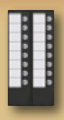
AX-8MV
Video Master Station
- Wall or desk mount

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 AX-084C	Number of central exchange units AX-248C	Number of add-on exchange units
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**.

AXW-AZ
CCTV Input Module

AXW-PA1
Paging Adaptor

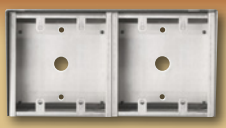
AXW-AVT
Audio/Video Transmitter

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

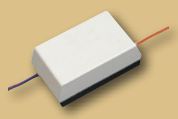
SBX-DVF-P
Surface Mount Box for AX-DVF-P

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

	INCHES				MILLIMETERS			
MODEL	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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GEBCO HAWAII
A Division of IdentiSys
415 Cooke Street
Honolulu, HI 96813
808.591.0889
808.591.0996 Fax
www.gebcohawaii.com

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