Advanced

Axis AX

Configured Command Centers

The Axis AX Series Configured Command Centers from Advanced have been designed to support a wide variety of applications. The command centers are fully compatible with the Axis AX Series Intelligent Fire Alarm Control Panels and the Axis AX “V” Series Intelligent Fire Alarm Control Panels with Integrated Audio.

Axis AX Series Configured Command Centers come in 3 variations: CAX-CC1-16 (Single Loop), CAX-CC2-16 (Two Loops) and CAX-CC4-16 (Four Loops). Each command center comes in a 22.6”H x 20.3”W x 5.5”D cabinet and includes: one CAX-DSP, keyboard display, one main base card (configured for 1,2 or 4 SLC loops), one CAX-ACB, AC input board, a CAV-AMP-80, audio amplifier (two 40 Watt speaker outputs), one CAX-PSU-6, amplifier power supply and one CAX-ASW-16, switch LED module.

The command center cabinet has been designed to support a wide range of additional option modules to suit specific application requirements. The option modules provide the following capabilities: DACT, city tie, networking, modem, I/O drivers, switch and relay modules, as well as many others. Consult with the factory for more details on the Axis AX Series module range.

In order to simplify installation, programming, troubleshooting, training and support, all of the Axis AX Series fire panels & command centers can be programmed using the same Windows based programming tools. In addition, a “family” consisting of all of the Axis AX Series main PCBs, option modules, peripherals and intelligent devices are fully compatible across the full range of Axis AX Series fire panel & command center products.

In order to simplify control and operation of a large, networked, wide area or high rise system, each command center will support up to 252 individually assignable switches through use of up to sixteen CAX-ASW-16, Switch LED Modules. These modules mount to the inner doors of the command centers. The switch action may be either toggle, on/off or push button. Each switch is associated with 3 LEDs that are red, yellow and green. These LEDs are each fully programmable and can be set to turn on steady and/or to blink. A large area is made available per switch and LED for user defined text that may clearly identify the intended function. With such versatility, operation and control is simplified, status is readily available and quickly identified.

Examples of switch operations include: Fan and HVAC control, paging area select, message select, telephone control, purging, zone/area/point bypass, etc. The total number of switches supported across a maximum configured network is 51,200. A key feature is that individual switch and LED response time is not affected by the size of the network and each switch and LED can be assigned to network functions as well as individual panel functions.



Features

- 1, 2 and 4 SLC Loop Options
- Integral 80 Watt Amplifier
- Built-in Paging Microphone
- Configured with One CAX-ASW-16 Switch LED Module
- Networkable – up to 200 Intelligent Panels
- Integrated 80 Watt Digital Audio Features include:
  - 2 Class A or B, 40 Watt, 25 Vrms Outputs
  - Programmable 16 Channel Message Generator
  - Automatic one-to-one Backup Capability
- Local internally mounted Microphone and Switches provide:
  - All call, Alert and Selective Messaging and Paging by Zone or Area
- Up to 504 Analog Addressable Points
- Multiple Command Centers w/Control Options
- Mass Notification Programming Options
- Synchronized Audio and Visual Control (Panel or Network Wide)
- CAV-VB Boosters expand Audio Wattage (16 per panel)

Listings and Approvals

- CAN/ULC-S527-11 & CAN/ULC-S559-04 Listed: 100780709NYM-001

Supplied with a single CAV-AMP-80, Amplifier Module, with associated CAX-PSU-6, Power Supply Charger, and CAV-MIC, Microphone Module, each command center can expand audio wattage with the addition of Advanced CAV-VB, Audio Boosters. Each CAV-AMP-80 and CAV-VB's have two 40 Watt speaker circuits (may be programmed as 1:1 backup). Through either manual or automatic controls, live or recorded audio messages can be sent to any location in a facility.

Control functions can include: All Call, All Evac, All Alert, Message Select and Area Select. For instant control of paging to all areas, press the All Call button. To generate and play an evacuation message or an alert message throughout a facility press the All Evac or All Alert button. To play a specific message (up to 16 messages) in specific areas, use the individual message selection buttons followed by the individual area selection buttons.

A typical high rise application may be configured with an CAV-VB, Audio Booster, per floor. The boosters are controlled by the Control-by-Event logic at the command center to generate specific messages upon specific conditions. It is easy to program for example a typical fire floor, floor above, floor below evacuate message simultaneous with adjacent alert floor messages, while simultaneously providing the capability to override automatic messages at any time with manual paging to all or selective areas.

Simplifying and reducing initial system set-up, Axis AX Series Configured Command Centers are equipped with an installer-friendly "Auto-Learn/Loop Detection" feature that permits the rapid recognition of all signaling line circuits' devices. This rapid recognition, simplifies the assignment of critical life safety functions immediately. Assignments include: intelligent detector type and operation criteria, addressable input device recognition as an alarm input, and addressable output control on a general alarm basis.

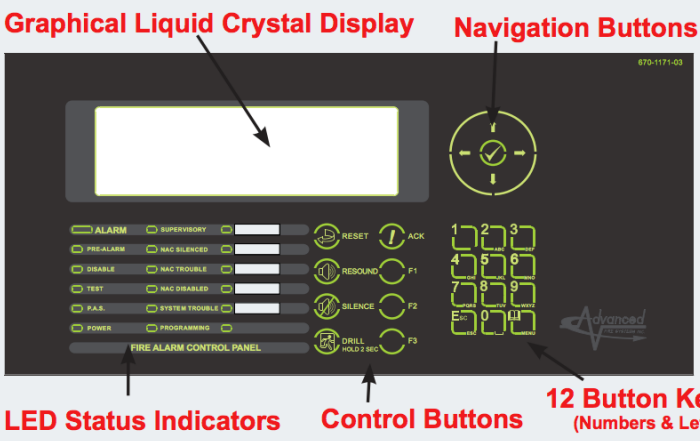
Designed with built-in powerful installation and customization tools, the Axis AX Series Configured Command Centers can adapt to virtually any application requirement.

With DynamiX programming, typical time consuming complexities associated with I/O relationship programming such as two-stage, multi-pattern NAC control, intelligent detector drift compensation, precision response/sensitivity mode settings, flexible timing functions, and more, are sharply reduced.

The Axis AX Series Configured Command Centers are fully field programmable via the onboard graphical LCD display and alphanumeric keypad (CAX-DSP). Front panel programming may encompass defining input to output relationships, configuring output circuit characteristics, entering zone, device, and other text descriptions, and configuring multiple user-access passwords.

To maximize the capability and flexibility of the Axis AX Series Configured Command Centers, and expand upon the customization of an installation, the Advanced Windows based PC-NeT field configuration tool is available. The PC-NeT field configuration tool is a powerful, user-friendly programming tool that allows users to perform virtually any I/O relationship with multiple criteria. Simple drop-down menus with point-and-click operation makes project commissioning and troubleshooting fast and efficient.

Designed with the technician in mind, each module of the Axis AX Series Configured Command Center is easy to install and service. The integral power supply offers status LEDs, temperature compensated charging, and the ability to operate directly from the batteries when AC supply is not yet available at the installation site. A unique built-in intelligent multi-meter allows technicians to interrogate any input and/or output and diagnose potential time consuming trouble issues with virtually no complications or aggravation. With an Axis AX Series Configured Command Center, servicing a customer after installation can be as simple as using the Advanced Remote Diagnostic Virtual Panel Simulator and/or ipGateway (CAX-LAN). The ipGateway (CAX-LAN) provides real time text and email alerts of system status.



Advanced User Interface w/Graphical LCD:

Designed to be user-friendly and easy to operate, the Advanced User Interface w/Graphical LCD (backlit 240 x 64) is the information and control center for the Axis^{AX} Series Intelligent Fire Alarm Control Panel(s).

The unit incorporates a graphical LCD display, LED status indicators, control buttons (including 3 programmable buttons), navigation buttons, and a 12 button keypad for complete system status, interrogation, and control.

Button (Keys)

	Reset
	Ack (panel buzzer acknowledge)
	Resound (resound signals)
	Silence (silence signals)
	Fire Drill
	Function Keys (3 - programmable control buttons)
	Navigation Keys (up, down, left, right, and tick [enter])
	12 Button Keypad (numbers, letters, esc, and menu)

LED Indicators

Alarm	Red
Pre-Alarm	Red
Disable	Yellow
Test	Yellow
P.A.S.	Yellow
Power	Green
Supervisory	Yellow
NAC Silenced	Yellow
NAC Trouble	Yellow
NAC Disabled	Yellow
System Trouble	Yellow
Programming	Yellow
Programmable LED 1	Red
Programmable LEDs 2-5	Yellow

Wiring Diagram

Specification

Operating Voltage	120 VAC (1.4A) - 240 VAC (0.7A), 50/60Hz
System-Brown-Out	98 VAC nominal
Battery Circuit	
Charging Voltage	27.4 VDC nominal
Temp. Compensated	
Charging Current	2 Amp
Battery Derating Factor	0.83A
Battery Capacity	7 Ah (minimum), 48 Ah (maximum)
Battery Fuse	5A @ 240 VAC, Time Delayed, Ceramic, High Breaking (In-line Wire Link)
Fire Supervisory, and Trouble Relays	(Power Limited - When utilizing system power)
Type	Form "C"
Rating	1A @ 30 VDC/VAC
Trouble Relay	Normally Active (fail-safe operation)
Auxiliary Power Outputs	(Power Limited)
Resettable	
Voltage	24 VDC
Current	0.5A
Reset Time	10-15 Seconds
Non-Resettable	
Voltage	24 VDC
Current	0.5A
Humidity	85% RH
Temperatures	Operating: 32ºF - 120ºF (0ºC - 49ºC) Recommended Room: 60ºF - 86ºF (15ºC - 27ºC)
Enclosure Dimensions	
Back Box	22.6"H X 20.3"W X 5.5"D
Housing	24.1"H X 21.5"W X 6.3"D
SLC Loop	(Power Limited)
Class (Style)	Class A or B (Style 4, 6 or 7)
Voltage	24 VDC
Minimum Return Voltage	17 VDC
Current	0.5A
NAC Circuits	(Power Limited)
Class (Style)	Class A or B
Voltage	24 VDC (filtered and regulated)
Minimum Return Voltage	16 VDC
Current	2A (each)
Maximum Voltage Drop	3 VDC
Maximum Line Impedance	1.5Ω
RS232	Supervised, Optically Isolated
Baud Rate	9600
Parity	None
Data Bits	8
Stop Bits	1
Base Card Operating Current	Quiescent Alarm
CAX-CTL-1PCB	110 mA 195 mA
CAX-CTL-2PCB	110 mA 195 mA
CAX-CTL-4PCB	175 mA 260 mA
CAV-AMP-80	
Input Voltage (DC)	24 VDC (operating range 15-30 VDC)
Amplifier #1 Output	40 Watts @ 25 Vrms, Class A or B Wiring
Amplifier #2 Output	40 Watts @ 25 Vrms, Class A or B Wiring
Activation	RS-485 (PBus) or Contact Closure
CAV-MIC	Supervised Microphone Input

*Refer to Axis AX Series module data sheets for optional modules specifications.

Order Codes and Options

CAX-CC1-16	Axis AX Series Command Center with cabinet, 2 power supply's/chargers, 1 SLC, 2 NACs, two 40 watt speaker circuits, 1 AXASW-16 switch LED module and microphone (126 addressable points)
CAX-CC2-16	Axis AX Series Command Center with cabinet, 2 power supply's/chargers, 2 SLC, 2 NACs, two 40 watt speaker circuits, 1 AXASW-16 switch LED module and microphone (252 addressable points)
CAX-CC4-16	Axis AX Series Command Center with cabinet, 2 power Supply's/Chargers, 4 SLC, 4 NACs, two 40 watt speaker circuits, 1 AXASW-16 switch LED module and microphone (504 addressable points)
	CAX-CTL base card option modules**:
CAX-LPD	2 SLC, 2 NAC expander card
CAX-NAC	2 NAC expander card
CAX-PSU	5 Amp expansion power supply module
CAX-NET4	Network interface card (Style 4)
CAX-NET7	Network interface card (Style 7)
CAX-012	Thermal strip printer
CAX-SEB/D9068P	Serial expansion board and serial digital alarm communicator
	CAV-AMP-80 amplifier option module:
CAV-V70	Universal audio converter (Converts 25 Vrms to 70 Vrms)

* Refer to Axis AX data sheets for peer to peer network and peripheral bus modules.

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As our policy is one of constant product improvement the right is therefore reserved to modify product specifications without prior notice.

Advanced

Axis AX

Modular Command Center

The Axis AX Series Modular Command Centers from Advanced have been designed to support a wide variety of applications. The Modular Command Centers are fully compatible with the Axis AX Series Intelligent Fire Alarm Control Panels and the Axis AX “V” Series Intelligent Fire Alarm Control Panels with Integrated Audio.

In order to simplify installation, programming, troubleshooting, training and support, all of the Axis AX Series Fire Panels & Modular Command Centers can be programmed using the same Windows™ based programming tools. In addition, a “family” consisting of all of the Axis AX Series main PCBs, option modules, peripherals and intelligent devices are fully compatible across the full range of Axis AX Series Fire Panel & Modular Command Center products.

In order to simplify control and operation of a large, networked, wide area or high rise system, each Modular Command Center will support up to 252 individually assignable switches through use of up to sixteen CAX-ASW-16, Switch LED Modules. These modules mount to the inner doors of the Modular Command Centers. The switch action may be either toggle, on/off or hold for 2 seconds. Each switch is associated with 3 LEDs that are red, yellow and green. These LEDs are fully programmable and can be set to turn on steady and or to flash. A large area is made available per switch LED for user defined text that may clearly identify the intended function. With such versatility, operation and control is simplified, status is readily available and quickly identified.

Examples of switch operations include: fan and HVAC control, paging area select, message select, purging, zone/area/point bypass, etc. The total number of switches supported across a maximum configured network is 51,200. A key feature is that individual switch and LED response time is not affected by the size of the network and each switch and LED can be assigned to network functions as well as individual panel functions.

A CAV-AMP-80, Audio Amplifier Module, with associated CAX-PSU-6 Power Supply/Charger and CAV-MIC, Microphone Assembly installed in a Modular Command Center adds audio capability at the head end of a fi re system. Each CAV-AMP-80 has two 40 Watt speaker circuits (may be programmed as 1:1 Backup) and can play up to 16 different messages, allowing for easy adaptation to mass notifi cation requirements. Through either manual or automatic controls, live or recorded audio messages can be sent to any location in a facility.



Features

- 1, 2 and 4 Loop Command Centres
- Mass Notification Functionality
- Audio/Visual Synchronization (Panel & network wide)
- Two Standard Sizes (3x3 and 3x5)
- Up to 200 Networked Panels
- Multiple Command Center Control Options

Listings and Approvals

- ETL ANSI/UL 864 Listed: 101564744NYM-001
- CSFM Approved: 7165-1713:0101
- NYCFD COA #6105

Control functions include: All Call, All Evac, All Alert, Message Select and Area Select. For instant control of paging to all areas, press the All Call button. To generate and play an Evacuation, Alert or Mass Notifi cation message throughout a facility press the All Evac, All Alert or Message button. To play a specific message in specific areas, use individual message selection buttons followed by the individual area selection buttons.

A typical high rise application may be configured with Advanced CAV-VB Audio Booster's on a per floor (area) basis. The boosters are controlled by the Control-by-Event logic at the Command Center to generate specific messages upon specific conditions. It is easy to program for example a typical fire floor, floor above and floor below evacuate message simultaneously with adjacent floor alert messages, while also simultaneously providing the capability to override automatic messages at any time with manual paging to all or selective areas. While providing all of this power and flexibility the audio and visual signals maintain full synchronization when required to.

The Modular Command Centers are available in two basic enclosure sizes. The smaller of the two enclosures (also referred to as 3x3 modular command center) measures 22.6"H x 20.3"W x 5.5"D. The larger of the two enclosures (also referred to as 3x5 modular command center) measures 35.9"H x 20.3"W x 5.5"D. The enclosures may be either surface or flush mounted.

Selecting the right components to create a customized Modular Command Center is straightforward. Follow steps 1-6 below.

Step One: Enclosure Selection - Small Enclosure

Backbox – CCM-01-BB. Dimensions: 22.6"H x 20.3"W x 5.5"D

Provides 3x3 module support. May be surface or flush mounted. Supports one AxisAX Series main PCB (base card), one expandable CAX-PSU power supply, one CAV-AMP-80 Amplifier, one CAX-PSU-6 Power Supply Charger, or one of either CAX-RL4 or CAX-RL8 Relay Module or CAX-MDM Modem Module and one D9068P Communicator.Inner Door Options – CCM-01-ID1, CCM-01-ID2, CCM-01-ID3.

C-CCM-01-ID1: 1 double aperture and 7 single aperture openings. Attaches to C-CCM-01-BB back box. Has 1 double aperture, which supports mounting of CAX-DSP (FRCAX-DSP) Display/Keyboard Module or CAX-DAP blank plate, and 7 single aperture openings. Single aperture openings support: CAX-SAP, CAX-I/O-48, CAX-ASW-16, CAX-012 and CAV-MIC modules. Metalwork and mounting hardware only.

C-CCM-01-ID3: 9 Single aperture openings. Attaches to C-CCM- 01-BB back box. Has 9 single aperture openings. Single aperture openings support: CAX-SAP, CAX-I/O-48, CAX-ASW-16, CAX- 012 and CAV-MIC modules. Metalwork and mounting hardware only.

Outer Door – CCM-01-OD: Attaches to C-CCM-01-BB back box. Metalwork, plexiglass, key lock and mounting hardware only.

Step One: Enclosure Selection - Large Enclosure





Backbox – CCM-02-BB. Dimensions: 35.9”H X 20.3”W X 5.5”D

Provides 3x5 module support. May be surface or flush mounted. Supports one AxisAX Series main PCB (base card), one expandable CAX-PSU power supply, two CAV-AMP-80 Amplifi ers, two CAXPSU-6 Power Supply Chargers, one of either CAX-RL4 or CAXRL8 Relay Modules or CAX-MDM Modem Module and one D9068P Communicator.Inner Door Options – CCM-02-ID1, CCM-02-ID2, CCM-02-ID3

C-CCM-02-ID1: 1 double aperture and 13 single aperture openings. Attaches to C-CCM-02-BB back box. Has 1 double aperture opening, which supports mounting of CAX-DSP (FRCAX-DSP) Display/Keyboard Module or CAX-DAP blank plate, and 13 single aperture openings. Single aperture openings support: CAX-SAP, CAX-I/O-48, CAX-ASW-16, CAX-012 and CAV-MIC modules. Metalwork and mounting hardware only.

C-CCM-02-ID3: 15 Single aperture openings. Attaches to C-CCM- 02-BB back box. Has 15 single aperture openings. Single aperture openings support: CAX-SAP, CAX-I/O-48, CAX-ASW-16, CAX-012 and CAV-MIC modules. Metalwork and mounting hardware only. Outer Door – C-CCM-02-OD Attaches to C-CCM-02-BB back box. Metalwork, plexiglass, key lock and mounting hardware only.

Outer Door

Outer Door – C-CCM-02-OD Attaches to C-CCM-02-BB back box. Metalwork, plexiglass, key lock and mounting hardware only.

Step 2: Main PCB's

Standard System Modules, select one each:

- CAX-ACB: AC input power interface PCB. Required for CAX-CTL-1PCB and CAX-CTL-2PCB
- CAX-DSP: AX Series Display/Keyboard PCB. Comes with mounting plate, membrane switch, cables and mounting hardware.

System Base Card, select one of the following:

- CAX-CTL-1PCB (Base Card): Single Loop Control Board with internal PSU. Cannot expand system power with CAX-PSU.
- AX-CTL-2PCB (Base Card): Two Loop Control Board with internal PSU.
- Optional expansion power supply for CAX-CTL-2PCB: Add CAX-PSU Expansion Power Supply Module, 5.0A @ 24VDC, filtered and regulated, if required.

SLC and/or NAC Expansion for CAX-CTL-2PCB (Base Card) ONLY, select one of the following:

- CAX-LPD: Includes 2 SLCs and 2 NACs
- CAX-NAC
- Includes 2 NACS

Optional Network Module, select one if networking Remote Annunciators, Command Centers, Axis AX Series Intelligent Fire Alarm Panels and/or Axis AX"V" Series Intelligent Integrated Audio Panels. (For fiber optic networking refer to AX-MOXA data sheet):

- CAX-NET4: Ad-NeT-PluS Network Interface Module (Style 4). Maximum 64 nodes; panels and/or remote annunciators.
- CAX-NET7: Ad-NeT-PluS Network Interface Module (Style 7). Maximum 200 nodes; panels and/or remote annunciators.

Optional Digital Communicator, select both items below if required:

- D9068P: Digital Alarm Communicator FACP Powered, PCB only, serial port compatible, w/cables. Requires CAX-SEB board to interface to the Main PCB (Base Card).
- CAX-SEB: Axis AX Series RS-232 Serial Expansion Board. Use with D9068P Communicator.





Step 3: Audio Support

For systems requiring audio support, the following modules are required:

CAV-AMP-80: Audio Amplifier Module includes built-in 16 message generator, dual booster inputs and two 40 watt, 25 Vrms speaker outputs. Includes mounting plate and mounting hardware. The smaller Modular Command Center will support one amplifier, the larger Modular Command Center will support two amplifier modules.

CAX-PSU-6: Power Supply Charger Module, 5.0A @ 24VDC, filtered & regulated, for use with CAV-AMP-80 Amplifier. The smaller Modular Command Center will support one CAX-PSU-6, the larger Modular Command Center will support two CAX-PSU-6 modules.

CAV-MIC: Microphone with enclosure. Mounts to all Modular Command Center inner doors, in a single aperture location.





Step 4: Fire Fighter Telephone Support

For systems requiring firefighter telephone support, the AV-TEL or AV-TEL-MCCS module is required. The AV-TEL/AV-TELMCCS mounts in a double aperture location on the inner door.

AV-TEL: Is a firefighter phone with Telephone Riser Module and enclosure, providing one riser which supports up to 35 addressable or conventional firefighter telephones/jacks.

AV-TEL-MCCS: Is a firefighter phone for use with the AV-TELRISER6. The AV-TEL-RISER6 provides 6 risers each supporting 35 addressable or conventional firefighter telephones/jacks.

Step 5: Options Modules Mounted to Back Box

AX-RL4: Four Relay Output Card, Form C relays rated 1.0A @ 30 VDC/VAC, freely programmable. Cannot be installed if AV-AMP-80 is installed, however can be installed in a remote enclosure.

AX-RL8: Eight Relay Output Card with two (2) Form C and six (6) - Form A relays rated 1.0A @ 30 VDC/VAC, freely programmable. Cannot be installed if AV-AMP-80 is installed.

AX-MDM: 24 Volt DC, Modem Module. Cannot be installed if AV-AMP-80 is installed, however can be installed in a remote enclosure.

Step 6: Option Modules that Mount to Inner Doors

Each of the modules below mounts in a single aperture location on the inner door. Mounting hardware and cabling included.

AX-ASW-16: 16 Switches, with three integrated, programmable LED’s per switch (red, yellow, green).

AX-I/O-48: 16 Switch inputs and 48 LED driver outputs. Supports up to 5 optional AX-RL10 Relay Output Modules, for a total of 50 relay outputs. Each AX-RL10 module provides ten Form C A relays rated 1.0A @ 30 VDC/VAC. Comes with 1 foot long ribbon cable.

AX-012: AX Series Thermal Printer with mounting hardware.

AX-SAP: Single aperture blank metal plate. Comes with mounting hardware.

AX-DAP: Double aperture blank metal plate. Comes with mounting hardware.

Order Codes and Options

CCM-01-BB	22.6"H X 20.3"W X 5.5"D, 3X3 Back Box
CCM-01-ID1	Inner Door 1 Double and 7 Single Apertures
CCM-01-ID2	Inner Door 2 Double and 5 Single Apertures
CCM-01-ID3	Inner Door 9 Single Apertures
CCM-01-OD	Outer Door
CCM-02-BB	35.9"H X 20.3"H X 5.5"D, 3X5 Back Box
CCM-02-ID1	Inner Door 1 Double and 13 Single Apertures
CCM-02-ID2	Inner Door 2 Double and 11 Single Apertures
CCM-02-ID3	Inner Door 15 Single Apertures
CCM-02-OD	Outer Door

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As our policy is one of constant product improvement the right is therefore reserved to modify product specifications without prior notice.