Advanced

Axis AX

High-performance fire system
for UL Standard compliance

Contents

Now approved to UL 864 10th Edition

Whatever your fire protection challenge, Advanced brings you unrivalled solutions

Effectively protecting people and property from fire can be complex. Advanced simplifies the challenge without compromising on safety.

Whether you need powerful networking, smoke control and fire audio for large-scale UL projects; extinguishing control and fire system redundancy for critical sites; or fast, fuss-free EN solutions for smaller, wireless installations, Advanced brings you fire safety peace of mind.

Creating a safer future

Advanced – made in the UK. Trusted around the world.
Discover more: advancedco.com | enquiries@advancedco.com | +44 (0)345 894 7000

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Advanced – Made in the UK.
Trusted around the world

At Advanced, we're committed to creating a safer future. We deliver fire protection and life safety solutions that protect people and property in more than 80 countries across the globe.

Our products are shaped by decades of research and development expertise as well as ongoing investment in new technologies. This ensures they provide years of high performance and reliability – for ultimate peace of mind.

Everything we deliver is rigorously tested and approved to exacting quality standards – which is why Advanced products are trusted by customers the world over and synonymous with **quality, performance** and **ease of use**.

Advanced Headquarters, Newcastle, UK

We understand that few fire protection challenges are the same, so as well as our mass-customised ranges, we also offer fully-customised solutions. This flexibility gives you complete control over the functions, format and finish of products to suit your site's unique specification.

We are dedicated to providing excellent service and have an international network of offices and agents to help you access sales support with ease – wherever you are in the world.

In addition, our training and technical services are free of charge to all our direct customers and consistently rated as excellent.

For added reassurance, Advanced is part of the safety sector of FTSE 100 company Halma plc. This global group of life-saving technology companies has a clear purpose to grow a safer, cleaner, healthier future for everyone, every day.
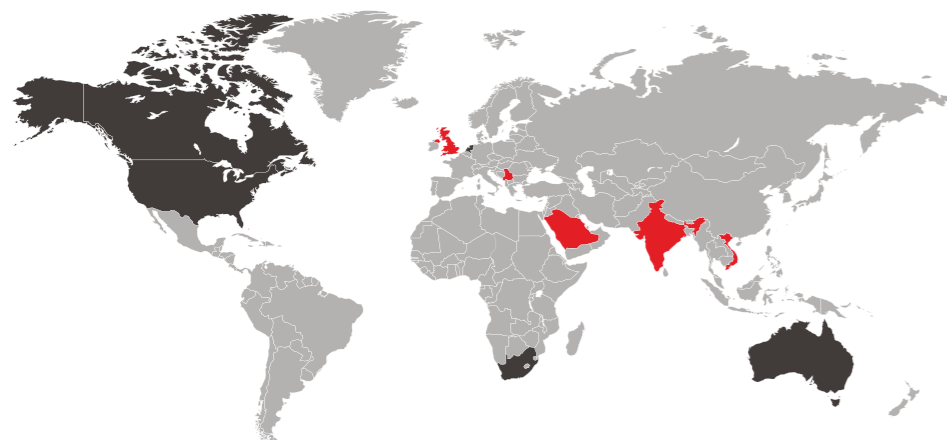
- ● Advanced & Halma sales representatives
- ● Strategic and OEM partners
- ● Distributors and system integrators in key locations worldwide

A **Halma** company

Jebel Ali M-Station, Dubai

Abu Dhabi Airport Fuel Depot, Abu Dhabi

Axis^AX protects...

Marassi Al Bahrain Resort, Kingdom of Bahrain

Sands Pointe Miami, Florida

The High-Performance UL Fire System

Axis AX

- is our complete solution for customers demanding a versatile, high-performing fire system. Panels are approved to UL 864 10th Edition and detectors are approved to UL 268 7th Edition

- combines addressable panels with audio systems, command centres and a versatile and comprehensive range of wired devices to bring you performance, quality and ease of use

- includes intuitive programming, powerful networking, comprehensive cause and effect and unique diagnostic features that put you in complete control of your fire protection and provide that all-important peace of mind

- can be manufactured with either red or grey fire panels to suit your needs

- is a modular system, offering a wide variety of configurations and applications

- is designed to go anywhere you need high quality, reliable and easy-to-use fire detection and control, from mass transportation and industrial complexes to landmark developments, historic buildings and public services.

Easy to install and use

Axis AX is built on Advanced's outstanding pedigree of fire alarm and detection experience to bring you a range of UL 864-approved fire panels that are simple to install, configure and use.

- Easy-fix removable chassis and in-built software make Axis AX fire panels quick and easy to set up

- Powerful networking, extensive configuration options and comprehensive cause and effect put you in complete control

- Intuitive controls and menus, with simple click-and-select programming for simple and easy commissioning

- The panels support intelligent annunciators, I/O drivers and BMS interface for integration with building management systems

- All panels and Command Centres are manufactured in the UK

- Our highly rated technical support team can help with advice, tips and training.

Versatility and choice

We know that sites can expand, and fire protection requirements change and evolve over time. That's why we've designed Axis AX to be scalable and flexible, able to adapt as required with minimal fuss or disruption.

- Standalone control panels in one, two and four SLC formats so you can choose the panel size that meets your requirements and budget

- Command centres in modular format, offering a wide variety of configurations and applications

- Remote annunciators available

- Each 500mA digital signalling line circuit supports up to 126 intelligent devices

- Up to 200 zones per panel and 25,000 devices per network.

Leisure and hospitality

Commercial and retail

Transport and infrastructure

High-rise and residential

Schools and education

Hospitals and healthcare

Manufacturing and technology

Powerful, flexible service reporting

Every Axis AX panel includes an inbuilt easy-to-use, windows-based service tool which saves you time and money by providing easy, instant access to historic and real-time device data, and shows proof of servicing at a glance.

- Demonstrate proof of servicing, download service reports, inspect the device history and keep track of service schedules
- Customisable data filters make it easy to focus on potential trouble spots and ensure they're checked and tested during servicing
- Predict which devices are becoming contaminated so you can clean/replace them before they cause a false alarm
- Customise reports to show the data you need and export it as PDF, Excel or HTML files to prove compliance simply and efficiently.

## Packed with premium features

Every Axis AX panel and command centre comes with a host of advanced features built in as standard, giving you peace of mind that you won't need to buy expensive add-ons in the future.

- Unique diagnostic features provide readings on the panel from any loop, making it easy to identify and investigate any issues
- Comprehensive network diagnostic tool prevents fires and faults from being transmitted across the network
- Built-in multimeter measures all voltages and currents across the system, so you can speed up the commissioning process by identifying voltage/current levels in real time
- Standard peripherals include direct USB and RS232 PC connections, and peripheral expansion is built in for added peace of mind
- Modular in construction, with the ability to program your own company logo to appear on the fire panel screen
- 19 built-in LEDs as standard, 5 of which are freely programmable
- Unique auto-test of battery cell integrity
- Easy to synchronise audio and strobes
- Command centres are intuitive and easy for firefighters to operate
- Integrated control of fans and dampers, with unique spreadsheet-style programming matrix
- Built-in false alarm management technology.

Axis AX

Axis AX – 1 SLC Compact
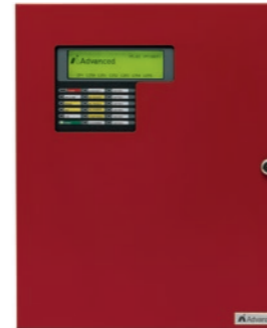
- Class X (A) or B operation
- 126 addressable intelligent points
- Available in a compact enclosure
- 2 x 2 Amp Class A or Class B programmable NAC circuits
- 3 x on-board relays. 1 trouble, 2 programmable
- System keys for reset, acknowledge, silence, resound and drill
- 3 freely programmable system keys
- 19 on-board LED indicators, 5 of which are freely programmable

Axis AX 1, 2 or 4 SLC

- Class X (A) or B operation
- 126, 252 or 504 intelligent addressable points SLC dependent
- 2 x 2 Amp Class A or Class B programmable NAC circuits as standard, expandable to a total of 4 NAC circuits, 2 Amps each
- 3 x on-board relays. 1 trouble, 2 programmable
- System keys for reset, acknowledge, silence, resound and drill
- 3 freely programmable system keys
- 19 on-board LED indicators, 5 of which are freely programmable
- 5 to 10 Amp system power

Axis AX – Remote Annunciators

- Class X (A) or B operation network interface
- C version has annunciation and programmable control
- D version annunciation only
- On-board USB programming port
- Peer-to-peer, cross-node operation
- Monitored external trouble input
- Info displayed fully configurable to any combination of fires, troubles, supervisory or other alarms
- Both models include programmable status LEDs
- Model ANN-C provides 3 freely programmable function keys
- Optional tamper-proof and weather-proof enclosures
- Surface or flush mount

Axis AX – with Integrated Audio

- Standalone or networked integrated audio
- Fully scalable – up to 200 intelligent panels
- AV-VB audio booster with synchronised audio
- Remote microphone channel
- Powerful yet simple I/O relationship programming
- AV-VB boosters expand audio wattage (16 per panel)
- Integrated 80 Watt digital audio
- Local internally-mounted microphone and switches

PENN

Axis AX panels can be customised with a large range of peripheral cards wired directly to the panel, or via the PENN network device, anywhere on the network:

- Integrated and/or networked audio options (see following pages)
- Conventional zone module (8 Class B or 4 Class A) – up to 16 modules per panel
- 4- or 8-way high-current relay modules
- Dual NAC expander
- Class X (A) or B operation
- Fibre optic network converter module
- 48-way I/O switch/LED driver
- Panel-mounted printer
- 16-way switch/48 LED module

Axis AX – Local Operating Consoles
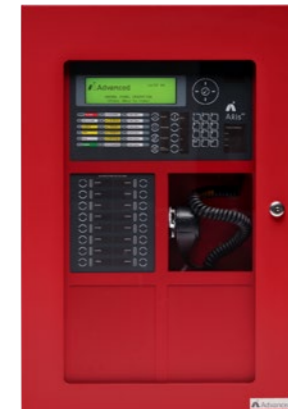
- User-friendly annunciation and control, identical to FACP
- Installation configurable operations and controls
- Class X (A) or B operation
- Programs with standard Advanced PC-NeT software
- Supports up to 32 peripheral bus modules
- Multi-channel audio configurations
- Optional printer support

Axis^AX Sample System Diagram

SA5050-350ADV
XP95A Multi Detector

SA5500-450ADV
XP95A Heat Detector

SA5050-250ADV
XP95A Smoke Detector

SA5150-750ADV
Enhanced Multi Detector c/w Isolator

SA5800-450ADV
Enhanced Heat Detector

SA5150-650ADV
Enhanced Photoelectric Smoke Detector c/w Isolator

55000-765ADV
Mini Monitor Module (DIN Rail Mount)

SA4705-600ADV
Mini Input Switch Monitor Module

SA4705-706ADV
NAC Module

SA4705-701ADV
Relay Output Module (240VAC)

SA4705-700ADV
Input Switch Monitor Module

SA4705-720ADV
Dual Input Switch Monitor Module

SA4705-703ADV
Input/Relay Output Switch Monitor Module

55000-750ADV
X95A Isolator Module

AX-APS2-F2
Manual Dual Action Pull Station

AX-APS2-F1
Manual Single Action Pull Station

56000-005ADV
Dual Action Pull Station

Master Warden's Fire Fighter Telephones

All SA4705 modules have in-built isolators

Signal Line Circuit No. 1

Signal Line Circuit No. 4
Each 500mA digital signalling line circuit supports up to 126 intelligent devices

Signal Line Circuit No. 3
Each 500mA digital signalling line circuit supports up to 126 intelligent devices

Signal Line Circuit No. 2
Each 500mA digital signalling line circuit supports up to 126 intelligent devices

AX-RL4
4-Way Relay Module

AX-ASW16
16 Switches c/w 48LED Module

AX-AMP80
Audio Amplifier Module

AX-IO48
16 Switches Inputs c/w 48LED Module

AX-ACM6
Fan/Damper Control Module

AX-RL8
8-Way Relay Module

AX-CZM
Conventional Zone Module

AX-PENN
Peripheral Expansion Network Node

AX-CC4-16
4-SLC Panel c/w Audio/ Mic/Switch Module

AX-NET7
Class X (A) Network Card

AX-NET4
Class B Network Card

AX-LPD
2 SLCs/2NACs Expander Card

AX-NAC
2 NACs Expander Card

AX-PRN
Printer Module

AdSpecials
Bespoke MIMIC Control Panel

AX-CTL-1C
1-SLC Fire Control Panel

AX-ANN-C
Remote Control Annunciator

Amplifier Circuits
2 x 2 Amp Class A or Class B programmable NAC circuits that can be used for speakers

AX-MOXA

Conventional NAC Circuits
2 x 2 Amp Class A or Class B programmable NAC circuits that can be used for horn/strobe and strobe

AX-MOXA

AX-CTL-2
2-SLC Fire Control Panel

AX-BMS
BMS or Graphics Interface (Boxed)

MXP-642
Commander

AX-CTL-4
4-SLC Fire Control Panel

AX-ANN-D
Remote Display Annunciator

Modbus

BACnet
INTEREST GROUP EUROPE

Axis^{AX}

Integrated Audio and Firefighter Telephones

Axis AX comes ready for complete audio configuration. With the addition of an Advanced audio module (AV-AMP-80), any Axis AX control panel or command centre becomes fully audio capable.

A variety of firefighter telephones and telephone accessories are compatible with all Axis AX command centre panels. Addressable telephones make control, supervision and identification superior to older technological solutions. Command centres come with easy-to-operate LED or LCD telephone switchboard monitoring and control displays.

Audio Booster Panel

- Easy and fast configuration with audio configuration wizard
- Designed to operate as a node on the Axis AX network
- Provides increased digital audio signalling during an emergency situation
- Each amplifier has two independent 40W, 25Vrms outputs
- Each amplifier contains an independent 16 channel digital message/tone generator
- Unique amplifier booster/cascading option
- Superb sound quality
- Simple programming via USB
- Two (2) Class A or B speaker circuits
- External AC power and trouble LEDs
- Internal service diagnostic and status indicators
- Each amplifier may be programmed for 1 to 1 backup
- Powerful CBE logic programming
- All amplifier audio output signals are synchronised across the AX network

Firefighter/Warden Page Telephone

- Magnetic, keylock or glass break door options
- Standard or coil cord phone cable
- Background noise cancellation module (option)
- Integrated dial, ring, busy and hold tones with connected LED indication

Command Centre Firefighter Phone

- Compatible with Axis AX command centres
- Class A or B riser
- Background noise cancellation module (optional)
- Easy installation
- Supports up to 500 field phones
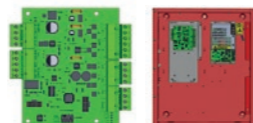
Telephone Riser Module

- Each riser supports up to 250 phones, (two risers max)
- Live analogue audio, no digitisation
- Up to 5 telephones per riser may be active simultanteously
- Easy to configure with DynamixTools telephone wizard
- May be located remotely in separate enclosure or integrated into command centre enclosure
- Supports fire warden remote paging feature
- Class A or B configuration

Conventional Firefighter Phone Jack

- A conventional firefighter phone jack for use with portable firefighter handsets
- Interfaces a portable firefighter handset to a master addressable firefighter emergency phone
- Up to four (4) AV-CJACKS can be connected to a single master addressable firefighter emergency phone
- Requires AV-TEL2-MWPB module (primary firefighter phone interface PCB) to communicate to the master addressable firefighter emergency phone

Portable Firefighter Phone Handset

- Used with any Axis AX addressable telephone jack
- Tip and sleeve connection
- Built-in noise filter
- Background noise cancellation module (optional)

Axis^{AX}

Command Centres

Axis AX command centres are built on the backbone of our Axis intelligent fire panels to support a wide variety of configurations and applications.

All command centres are supplied in modular format for easy expansion and customisation. Our smaller command centres can be ordered as fully configured. All of our command centres are fully compatible with Axis AX audio and telephone options. The Advanced telephone riser module can be mounted inside the command centre or remotely within a separate telephone node for added security.

Axis AX Command Centres

- Order fully factory configured or in modular format for configuration on installation
- 1, 2 or 4 SLC
- 126, 252 or 504 addressable points SLC dependent

2 Cabinet Sizes

- 2 cabinet sizes (3x3 and 3x5)
- Layout: 3 horizontal x 3 vertical or 3 horizontal x 5 vertical

Network Nodes and Accessories:

- AX-BMS module – provides interface to building automation system
- Ad-View graphics
- AX-LOCs – local operating consoles
- Smoke control panel
- Graphic annunciator(s)
- AX-VB distributed audio panels
- Telephone node
- Fibre converters

Features

- PerfectSync synchronisation of audio and strobes across entire 200-node network
- DynamixSmoke dedicated/non-dedicated smoke control
- 520Hz audio support
- Failsafe operation if loss of master command centre
- Supports multiple true peer-to-peer command centre operations
- Intuitive and easy for firefighters to operate
- Supports request/control/deny command centre operation
- Audio confirmation LEDs indicate when speaker zones are active
- All call, page evacuate, page alert and page inactive and selective paging features
- Manual activation of any message to any zone or group of zones
- No performance degradation as the number of network nodes expands
- DynamixSmoke smoke control
- Multiple emergency and non-emergency messages
- Integrated telephone annunciation (LED or LCD) and controls
- Software wizard provides default telephone and audio options making set-up easy and fast
- Powerful control-by-event programming with intelligent system test facilities provides superior system diagnostic and test functions
- Built-in network, AC power, aux power, battery and field wiring diagnostics
- Colour-coded slide-in labels with large text to identify system functions
- Fire warden page
- PAS, 2-stage, alarm verification and event mode
- Zone and point disable/enable
- 1,000 system zones

Axis ᴬˣ

Intelligent Detectors

Axis AX Enhanced Range

The new Axis AX range of detectors has been specifically developed to meet the demanding requirements of the latest UL standard. Fully compliant with UL 268 7th Edition, they offer swift and accurate fire detection using Purelight® sensing technology and high immunity to false alarms. The integrated smart isolator provides the exact location of any wiring faults and in-built drift compensation monitors the long-term drift of smoke sensors and automatically adjusts to maintain detector sensitivity. The new range is backwardly compatible with existing Discovery protocol installations.

Enhanced Photoelectric Smoke Detector

- Approved to UL268 7th edition
- Built-in isolator
- Purelight® optical technology for enhanced smoke detection and false alarm management
- Drift compensation
- Base locking mechanism
- In-built self test
- XPERT card addressing
- Backwards compatible

Enhanced Heat Detector

- Approved to UL521
- Electronic temperature sensing
- Alarm flag for fast alarm responding
- Easy installation
- Unaffected by wind or atmospheric pressure
- Ideal for environments that are dirty or smoky under normal circumstances

Enhanced Multi-Criteria Detector (Smoke & Heat)

- Approved to UL268 7th edition
- Built-in isolator
- Purelight® optical technology for enhanced smoke detection and false alarm management
- Drift compensation
- Base locking mechanism
- In-built self test
- XPERT card addressing
- Dual heat sensors

Advanced XP95A Range

For XP95A protocol users, the latest range of detectors is fully compliant with UL 268 7th Edition.

The detectors are simple to install, easy to use and backwardly compatible with existing XP95A installations. They offer complete peace of mind with fast and accurate fire detection, and a high resistance to false alarms.

XP95A Photoelectric Smoke Detector

- Approved to UL268 7th edition
- Purelight® optical technology provides enhanced smoke detection and false alarm management
- Internal drift compensation
- Easy installation
- In-built self test
- XPERT card addressing
- XP95 protocol compatible

XP95A Heat Detetctor

- Approved to UL521 7th edition
- Reliable fire detection in areas with a wide temperature range from 32°F to 151°F
- Ideal for environments that are dirty or smoky under normal circumstances
- Electronic temperature sensing
- Alarm flag for fast alarm responding
- XPERT card addressing
- XP95 protocol compatible

XP95A Multi-Criteria Detector (Smoke & Heat)

- Fully approved to the latest UL268 7th edition and FM standards
- Purelight® optical technology provides enhanced smoke detection and false alarm management
- Dual heat sensors for additional fire condition assurance
- Internal drift compensation
- Easy installation
- In-built self test
- XPERT card addressing
- XP95 protocol compatible

Compatible Bases

Mounting Bases

The following bases are compatible with both Axis AX and XP95A detectors
- AX UL base 4"
- AX UL base 6"

Sounder Bases

High frequency and low frequency sounder bases and CO detector/sounder bases, compatible with AX enhanced and XP95A detectors

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Axis ᴬˣ

Audio Visual, Modules and Pull Stations

Loop-Powered Sounders & Beacons

Enhanced Open Area Sounder/Beacon

- UL464 certified
- 15 pairs of tones
- 7 volume levels
- Visual indicator beacon (red-flash)

XP95A Open Area Sounder

- UL864 certified
- Available in red or white
- Two programmable tones and volume settings
- Built-in signal synchronisation
- Individual and group addressing

Pull Stations

Manual Single/Dual Action Pull Station

- Single or dual action
- Low-profile, high-visibility design
- Visual indication of activation including red status LED
- Integrated Form C relay contact
- Surface or semi-flush mountable
- Available in special application colours
- Key lock for reset
- Die-cast metal construction

Dual Action Polycarbonate Pull Station

- Low-profile, high-visibility design
- Visual indication of activation including red status LED
- Internal access without alarm activation
- Lock reset
- Surface or semi-flush mountable
- Captive-screw terminals

Intelligent Modules

Mini Switch Monitor Module

- Built-in isolator
- Visible LEDs
- Loop powered
- Ground fault detection
- Selectable priority to monitor equipment where a fast response is required
- Interrupt facility
- Fits into equipment that has limited space
- Improved design for ease of mounting

Switch Monitor Module

- Built-in isolator
- Visible LEDs
- Loop powered
- Ground fault detection
- Selectable priority to monitor equipment where a fast response is required
- Interrupt facility
- Improved design for ease of mounting

Relay Output Module

- 240V rated volt-free relay output
- Built-in isolator
- Visible LEDs
- Loop powered
- Improved design for ease of wiring

Switch Monitor Input/Relay Output Module

- 240V rated volt-free relay output
- Built-in isolator
- Visible LEDs
- Loop powered
- Ground fault detection
- Improved design for ease of mounting

NAC Module

- Built-in isolator
- Visible LEDs
- Loop powered
- Can be used for public address speakers
- Power supply health monitoring
- Reverse polarity detection
- AC/DC monitoring (limited by wire length)
- Improved design for ease of wiring

Dual Switch Monitor Module

- Built-in isolator
- Visible LEDs
- Loop powered
- Ground fault detection
- Selectable priority to monitor equipment where a fast response is required
- Interrupt facility
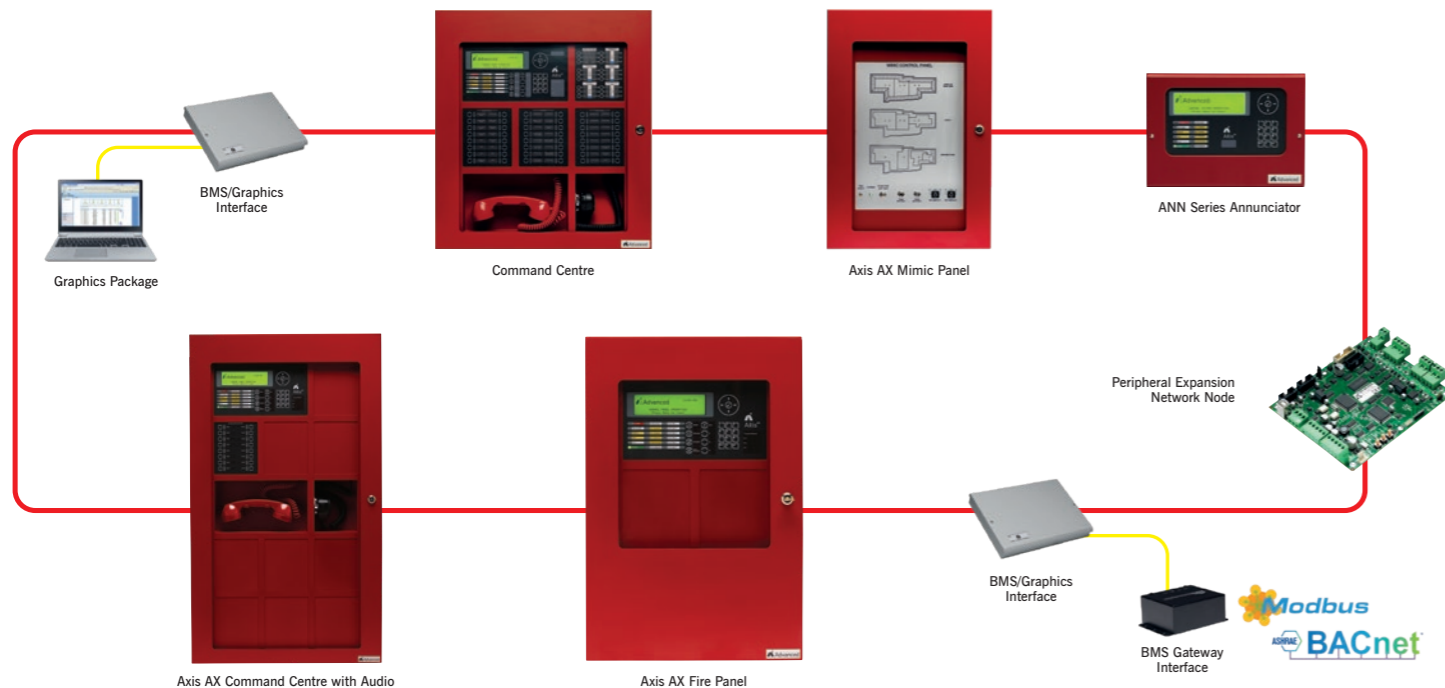- Improved design for ease of mounting

Advanced Networking

Advanced delivers fast, reliable, peer-to-peer communications from the smallest two-panel network up to a large 200-node network.

Advanced network systems are fully scalable to suit virtually any application including 'campus' style and 'high-rise' style configurations. Built-in diagnostics and test facilities make installation and ongoing maintenance simple. Performance exceeds multiple international standards.

- Peer-to-peer performance for optimum distributed intelligence
- Consistent system performance independent of the number of nodes
- Synchonisation of audio and strobes across entire 200-node network
- Failsafe operation if loss of master command centre
- Supports multiple true peer-to-peer command centre operations
- Request/control/deny
- Sectoring feature allows customised operations per node
- Integrated or isolated high-rise telephone network option
- Offline test option isolates panels from network during testing without fear of false alarms

- Class X (A) (Style 7) wiring with redundant signal path. Max 200 nodes and 66000ft.

  Class X is resistant to an open circuit fault as well as a wire-to-wire short due to isolation of the short allowing uninterrupted network communication.
  Class A is resistant to an open circuit fault only, though a wire-to-wire short will mean total loss of network.

- Class B (Style 4) wiring without redundant path. Max 32 nodes and 5000ft
- Fibre cable – 16,404ft max between nodes
- AX-BMS interfaces to third-party building automation and controls solutions via standard BACnet or Modbus communications
- AdView graphics provides graphical user interface in single or multiple stations

- One configuration tool is required to program Axis AX panels. Diagnostic features prevent erroneous actions that may be detected prior to on-site installation and test
- Each intelligent audio node contains up to 16 digital messages which are synchronised across the entire 200-node network
- SLC power technology built into each panel provides tremendous application options
- Nodes may be customised to suit any application, reducing installation costs and maximizing performance. Nodes may (or may not) include SLC, displays, microphones, telephones, amplifiers, power supplies, switch modules, and any AX peripheral device.

BMS/Graphics Interface

Graphics Package

Command Centre

Axis AX Mimic Panel

ANN Series Annunciator

Peripheral Expansion Network Node

Axis AX Command Centre with Audio

Axis AX Fire Panel

BMS/Graphics Interface

BMS Gateway Interface

Modbus
BACnet

Type of network	Class B – no redundant path	Class X (A) – with redundant path
Setup	Class B network card	Class X (A) network card
Maximum cable length	Up to 1.5 km	Up to 1.5 km between nodes
No. of nodes	32	200
No. of zones	Up to 1,000	Up to 1,000
Typical time to communicate first event	1 second	3.5 seconds

DynamixSm✴ke
Complete Smoke Control

Integrated Fan and Damper Control

Advanced's Axis AX fire system features DynamixSmoke, dedicated and non-dedicated fan and damper control, for fire and life safety. As you'd expect from Advanced it's a high-performance solution that is easy to configure and maintain, even on the most complicated sites.

Simple Smoke Control Programming Matrix

Features

- Regulatory compliance assured
- Automatic and manual smoke control options in accordance with NFPA and National Building Code Standards
- Dedicated smoke control auto/manual controls and LED status indicators
- Customised FSCS firefighter smoke control (graphic) stations can be located locally or remotely
- Groundbreaking ease of use
- Simple spreadsheet-style programming matrix is a step change that makes even the most complex smoke control programming easy
- System divided into virtual smoke control compartments in software for automatic fan and damper control (cbe)
- Uses standard I/O modules for fan and damper interfacing. Software auto-configures outputs for run/stop and open/close, with feedback inputs if required
- All options configurable from one dedicated menu with the ConfigTool
- Interlocking feature to prevent over pressurisation of ducts
- Post-fire purge options with configurable priorities

- Auto stairwell pressurisation option
- Key switch enable/disable option
- Manual controls can be configured for one-to-one operation, or grouped one-to-multiple fans or dampers
- Duct probe option – will override auto settings if smoke detected
- The system can respond only to the first smoke compartment in alarm or priorities can be set so that devices respond dynamically to a spreading fire
- Dedicated smoke control reset function
- All manual controls take priority over automatic mode
- Adjustable feedback delay ensures fans are given time to run or a damper is allowed time to travel before any trouble conditions reported
- Fully programmable sequential fan restart to avoid power spikes
- Automatic testing of fans and dampers including scheduled 'holiday' dates
- Engineering test menu allows HVAC to be controlled using panel menu and provides current operation and status feedback
- Customisable intelligent graphic annunciators with simple connection and configuration via panel P-BUS/PENN.

Watch the DynamixSmoke video on YouTube: ▶ Advanced Fire

PerfectSync

Fire Audio Perfected

PerfectSync delivers best-in-class synchronisation of audio and strobes for fire and life safety applications. PerfectSync achieves a level of integrity and performance not seen before.

Features

- Synchronisation of audio and strobes across entire Axis AX network
- Dynamically adjusts as conditions change
- Prevents confusion during an emergency
- Aids in meeting intelligibility requirements
- No need for special programming or wiring
- Axis AX network capacity
  - 200 panels
  - 3200 distributed amplifiers
  - Each amplifier contains its own digital message generator
  - Each message generator can support 16 messages
  - 800 built-in NAC circuits
- Total synchronisation

  All speakers turn on and are fully synchronised even if the same message is played from different amplifiers connected to different panels on a large network. The maximum time to re-activate any speaker output following the first message played does not exceed 5 seconds.

  When a fire spreads, any new affected areas or higher priority messages will begin immediately. This may result in some areas

of the building being briefly out of sync. With PerfectSync these areas will quickly re-synchronise even on a large network system. Similarly paging operation may result in some areas of the building being temporarily out of sync as any automatic message must recommence from the beginning. With PerfectSync these areas will quickly re-synchronise.

- More audio flexibility

  Up to 16 digital pre-recorded messages per amplifier. Simple 3-channel audio (evacuate, alert, page) to complex multi-channel notification including individual message prioritisation.

  Unique audio engineering test feature confirms which amps are active, what message is playing, and can select and play a message in a specific area.

  Command centre audio control lockout with indication of who's in control.

Fire and Emergency Telephone System

Exceptional Clarity for Superior Performance

Providing robust telephone communication channels ensures maximum safety.

The Advanced fire and emergency telephone system provides:

- **Addressability** – for precise identification of the location of field telephone users.
- **Flexibility** – so it can be configured as a standalone, independent system or completely integrated into the fire system.
- Crystal-clear live voice channels with no delays or echoing.
- Reassurance of communication channel status via dial, ring, busy and hold tones, as well as local LED indication at each addressable handset.

Quick and easy to install and configure.

Ideal for installations where local fire departments and emergency/facility personnel need access to fire/emergency telephone communications, e.g. in high and low-rise apartment buildings, hotels, universities, government and military sites.

As an entire telephone system can be installed and configured to operate standalone without panels, Advanced fire and emergency phones are also perfectly suited to any retrofit or non-fire application.

Technical support

Highly-rated support. Available by telephone and online.

As an Advanced customer, you have access to a host of helpful advice and support.

This includes a wealth of online information, from 'how to' videos to datasheets and detailed product manuals. Simply complete one of our online forms and you'll be able to access a range of additional services, previously available to those with an Advanced360 account.

Services include:

- **Technical support** – available by telephone and online by raising a support ticket, which one of our experienced technical support engineers will answer.

- **Training** – direct customers can book training online and will be sent training certificates by email. If you need to access a previous training certificate, simply complete an online request form. All non-direct customers should book training through their distributor.

- **Software** – download software and save your software packages by installation/site.

- **Literature** – download manuals, specifications, approved partner certificates, technical information and more.

- **Warranty** – download our warranty statement.

advancedco.com/training-support

Axis^AX Parts List

Product Code	Description
	Control Panels (Red) *(Also available in grey. Add **-G** to product code)*
AX-CTL-1C	1-SLC Fire Alarm Control Panel
AX-CTL-1L	1-SLC Fire Alarm Control Panel – 2x2
AX-CTL-2	2-SLC Fire Alarm Control Panel – 2x2
AX-CTL-4	4-SLC Fire Alarm Control Panel

Product Code	Description
	Control Panels with Audio/Micro (Red) *(Also available in grey. Add **-G** to product code)*
AX-CTL-1V	1-SLC Fire Alarm Control Panel – 2x3 with voice
AX-CTL-2V	2-SLC Fire Alarm Control Panel – 2x3 with voice
AX-CTL-4V	4-SLC Fire Alarm Control Panel – 2x3 with voice

Product Code	Description
	Control Panels with Audio/Micro/Switch Module (Red) *(Also available in grey. Add **-G** to product code)*
AX-CC1-16	1-SLC Command Centre FACP – 3x3 with voice
AX-CC2-16	2-SLC Command Centre FACP – 3x3 with voice
AX-CC4-16	4-SLC Command Centre FACP – 3x3 with voice
AX-CC1-16P	1-SLC Command Centre FACP – 3x3 encl. with voice and phone
AX-CC2-16P	2-SLC Command Centre FACP – 3x3 encl. with voice and phone
AX-CC4-16P	4-SLC Command Centre FACP – 3x3 encl. with voice and phone
AX-LCC1-16	1-SLC Command Centre FACP – 3x5 large encl. with voice
AX-LCC2-16	2-SLC Command Centre FACP – 3x5 large encl. with voice
AX-LCC4-16	4-SLC Command Centre FACP – 3x5 large encl. with voice
AX-LCC1-16P	1-SLC Command Centre FACP – 3x5 large encl. with voice and phone
AX-LCC2-16P	2-SLC Command Centre FACP – 3x5 large encl. with voice and phone
AX-LCC4-16P	4-SLC Command Centre FACP – 3x5 large encl. with voice and phone

Product Code	Description
	Local Operating Consoles (Red) *(Also available in grey. Add **-G** to product code)*
AX-LOC1/ST4	Local Operator Console 1 – 2x2 deep (class B network)
AX-LOC1/ST7	Local Operator Console 1 – 2x2 deep (class X (A) network)
AX-LOC2/ST4	Local Operator Console 2 – 2x2 deep (class B network)
AX-LOC2/ST7	Local Operator Console 2 – 2x2 deep (class X (A) network)
AX-LOC3/ST4	Local Operator Console 3 – 2x3 deep (class B network)
AX-LOC3/ST7	Local Operator Console 3 – 2x3 deep (class X (A) network)
AX-LOC4/ST4	Local Operator Console 4 – 2x3 shallow (class B network)
AX-LOC4/ST7	Local Operator Console 4 – 2x3 shallow (class X (A) network)

Product Code	Description
	Remote Annunciators (Red) *(Also available in grey. Add **-G** to product code)*
AX-ANN-C	Remote Control Annunciator (class B network)
AX-ANN-C/ST7	Remote Control Annunciator (class X (A) network)
AX-ANN-D	Remote Display Annunciator (class B network)
AX-ANN-D/ST7	Remote Display Annunciator (class X (A) network)

Product Code	Description
	Addressable LED Annunciators
AX-LED16RY	Addressable 32-LED Red/Yellow Module (16 Red, 16 Yellow)
AX-LED32R	Addressable 32-LED Red Module
AX-LED32Y	Addressable 32-LED Yellow Module

Product Code	Description
	Panel Networking
AX-NET4	Panel Network Card (style 4)
AX-NET7	Panel Network Card (style 7)
AX-DCI	24VDC - 24VDC Convertor/Isolator
AX-MOXA	MOXA fibre optic converter

Product Code	Description
	Modules/Peripherals
AX-SEB	Serial Expansion Board
AX-NAC	Plug-In 2 x NAC Extender
AX-LPD	Plug-In 2 x SLC 2 x NAC Extender
AX-PSU	PSU Module 5A for AX-NAC or AX-LPD
AX-CZM	Conventional Zone Monitor – 4 x class A or 8 x class B conventional zones, 3 relay outputs
AX-ASW16	16-Way Addressable Switch/LED Module
AX-IO48*	16 Inputs and 48 Outputs Module
AX-PSU	Power Supply Module
AX-RL4	4-Way Relay Output Card (programmable)
AX-RL8	8-Way Relay Output Card (programmable)
AX-RL10	10-Way Relay Output Card (programmable)
AX-ACM6	Fan Damper Switch Cards
AX-PRN*	Printer
AX-CTY	City Tie EOL Module
AX-KSW	2 Position 90° Key-Switch - CAT30 (C and K)
*Also available in grey. Add **-G** to product code.*	

Product Code	Description
	BMS Interfaces
AX-BMS*	Graphics Interface – boxed (class B network)
AX-BMS/ST7*	Graphics Interface – boxed (class X (A) network)
AX-BMS-PCB	Graphics Interface – class B network – card and spares kit
AX-BMS-PCB/ST7	Graphics Interface – card and spares kit (class X (A) network)
MXP-642	Commander-BACnet/Modbus (IP) Interface (standard/basic)
MXP-642C	Commander-BACnet/Modbus (IP) Interface (configured)
23-PSU/250	Commander Power Supply – 12VDC 2.5A
*Red (RAL 3002). Add **-G** for Grey (RAL 7035).*	

Product Code	Description
	Graphics Software
PC-NET-005-L1	Graphical Control Software – standard version up to 3 panels
PC-NET-005-L2	Graphical Control Software – standard version up to 15 panels
PC-NET-005-L2P	Graphical Control Software – premium version up to 15 panels
PC-NET-005-L3	Graphical Control Software – standard version up to 200 panels
PC-NET-005-L3P	Graphical Control Software – premium version up to 200 panels
PC-NET-005-SWM	Smart Watch Module
PC-NET-005-SWM4R	Smart Watch Module – 4 inputs
PC-NET-005-SWM6	Smart Watch Module (4-6 panels)
PC-NET-005-SWM15	Smart Watch Module (7-15 panels)
PC-NET-005-SCU	Smart Cube Unit
PC-NET-005-L1R-L2R	Dongle Upgrade L1R to L2R
PC-NET-005-L2R-L3R	Dongle Upgrade L2R to L3R
PC-NET-005-L2R-L2P	Dongle Upgrade L2R to L2P
PC-NET-005-L2P-L3P	Dongle Upgrade L2P to L3P
PC-NET-005-L3R-L3P	Dongle Upgrade L3R to L3P

Product Code	Description
	Network Interfaces
AX-PENN/ST4	Peripheral Expansion Network Node (class B network)
AX-PENN/ST7	Peripheral Expansion Network Node (class X (A) network)

Axis^{AX} Parts List

Product Code	Description
Main PCBs	
AX-ACB	AC Interface Board for AX Series Panel
AX-DSP	AX-CTL Large Voice Display Module Assembly
AX-DSP/T	AX-CTL Telephone Extension Display Module
AX-CTL-1PCB	1-SLC Fire Alarm Control Panel Base Card PCB Kit
AX-CTL-2PCB	2-SLC Fire Alarm Control Panel Base Card PCB Kit
Enclosures – Medium 2x2 (inner door layout) and 2x3 (inner door layout) *(Also available in grey. Add* **-G** *to product code)*	
AX-01-BB	AX-CTL – 2x2 (inner door layout) Back Box / 2x3 (inner door layout) Back Box
AX-01-ID1	AX-CTL-x – 2x2 (inner door layout) Inner Door
AX-01-OD1	AX-CTL – 2x2 (inner door layout) Outer Door
AX-01-ID2	AX-CTL-x – 2x3 (inner door layout) Inner Door
AX-01-OD2	AX-CTL-x – 2x2 (inner door layout) Outer Door
Enclosures – Large 3x3 (inner door layout) and 3x5 (inner door layout) *(Also available in grey. Add* **-G** *to product code)*	
CCM-01-BB	Command Centre 3x3 (inner door layout) Back Box
CCM-01-ID1	Command Centre 3x3 (inner door layout) Inner Door – 1 double and 7 single apertures
CCM-01-ID2	Command Centre 3x3 (inner door layout) Inner Door – 2 double and 5 single apertures
CCM-01-ID3	Command Centre 3x3 (inner door layout) Inner Door – 9 single apertures
CCM-01-OD	Command Centre 3x3 (inner door layout) Outer Door
CCM-02-BB	Command Centre 3x5 (inner door layout) Back Box
CCM-02-ID1	Command Centre 3x5 (inner door layout) Inner Door – 1 double and 13 single apertures
CCM-02-ID3	Command Centre 3x5 (inner door layout) Inner Door – 15 x single apertures
CCM-02-ID4	Command Centre 3x5 (inner door layout) Inner Door – 2 double and 1 single aperture (double apertures on row 1 and 3)
CCM-02-OD	Command Centre 3x5 (inner door layout) Outer Door
Enclosures – Other Parts	
AX-SAP*	Single Aperture Blanking Plate
AX-SAP6*	Single Aperture Blanking Plate (pack of 6)
AX-DAP*	Double Aperture Blanking Plate
AX-DAP6*	Double Aperture Blanking Plate (pack of 6)
AX-1C-BP*	AX-CTL-1C Battery Cover Plate (red)
AX-BAT*	External Battery Enclosure – holds 2x 38Ah batteries
AX-KEYL	Spare AX Panel Door Keylock – 2 x CAT30 keys
AXM-006*	Spare Annunciator Back Box
AXM-007*	Spare Annunciator Cover
AXM-008*	Spare Annunciator Bezel - semi flush (red, no UL listing)
AXM-009*	AX Peripheral Card Enclosure
AXM-012*	Mounting Plate Kit for Penn and IO48 PCBs (red)
AX-HPIN	Hinge Pins Attaches Inner and Outer Doors to Back Box (pack of 6)
Also available in grey. Add **-G** *to product code. Change /RD to /GY.*	

Product Code	Description
Enclosures – Local Zone Annunciators (Red)	
AX-LZA-CAB1*	1-Way Local Zone Annunciator Cabinet
AX-LZA-CAB2*	2-Way Local Zone Annunciator Cabinet
AX-LZA-CAB4*	4-Way Local Zone Annunciator Cabinet
AX-LZA-CAB1-TR*	Trim Ring – 1-Way Local Zone Annunciator Cabinet
AX-LZA-CAB2-TR*	Trim Ring – 2-Way Local Zone Annunciator Cabinet
AX-LZA-CAB4-TR*	Trim Ring – 4-Way Local Zone Annunciator Cabinet
Also available in grey. Add **-G** *to product code.*	
Audio Equipment	
AV-VB*	Audio Booster Panel
AV-AMP80	Audio Amplifier Module - 2x 40W 25Vrms speaker outputs
AX-PSU-6	PSU Module for AV-AMP-80
AV-V70*	70V Audio Converter and Cabinet
AV-V70KIT	70V Audio Converter PCB and XFMR
AV-ZS	Audio Zone Splitter - splits 1x 40W into 4 or 2x 40W into 2 each
AV-MIC	Microphone and Enclosure Assembly
Also available in grey. Add **-G** *to product code.*	
Software and Leads	
UP-001	RS232 9-Way to 3-Way Plug-In Connector – upload/download lead
UP-006	USB Upload/Download Lead for Config Software
UP-017	Serial to Ethernet Interface (MOXA)
Firefighter Emergency Phone – System	
AV-TEL2-REM*	Telephone Riser Panel incl. Riser and AX-PSU6 (red)
AV-TEL2-RISE	Telephone Riser Interface Card with Ring and Hold Tones
AV-TEL2-PPB	Plug-in Audio Module for AV-TEL2-RISE for Remote Phone Paging
AV-TEL2-MCCS*	Multi-Command Centre Firefighter Phone – supervision module and enclosure for interface to AV-TEL2-RISE module
AV-TEL2-MCCS-P	Multi-Command Center Fire Fighter PTT Phone – supervision module and enclosure for interface to AV-TEL2-RISE module
AV-TEL2-CAB*	Remote Cabinet Supports up to 2 AV-TEL2-RISE Modules and AX-PSU-6
CCM-MP-BP*	Mounting Plate Support for Two Riser Modules in a Command Centre
Also available in grey. Add **-G** *to product code.*	
Firefighter Telephones – System Accessories	
AV-SC-5	Firefighter Phone Cabinet – holds 5 phones
AV-TEL2-P	Portable Firefighter Handset – coiled cord, 1/4" plug (red)
AV-TEL2-PT	Portable Firefighter Handset, PTT – coiled cord, 1/4" plug (red)
AV-CJACK	Conventional Firefighter Phone Jack with Active LED
AV-TEL2-MWPB	Primary Firefighter Phone Interface PCB with Ring and Hold Tones
AV-TEL2-SWPB	Secondary Firefighter Phone Interface PCB with Ring and Hold Tones
AV-TEL2-MWP-BX	Plastic Enclosure and Chassis Plate – use to mount 1 x AV-TEL2-MWPB
CCM-MP-BP2	2 x Riser/Standard PBUS Card Mounting Plate

Product Code	Description
Firefighter Emergency Phone – Fully Assembled *(Also available in grey. Add* **-G** *to product code)*	
AV-TEL2-WD	Master, Breakglass and Keylock – standard cord
AV-TEL2-WDV	Master, Breakglass and Keylock – armored cord
AV-TEL2-WD2	Master with Keylock – standard cord
AV-TEL2-WD2V	Master with Keylock – armored cord
AV-TEL2-WD3	Master, Magnet Latch with Handle – standard cord
AV-TEL2-WD3V	Master, Magnet Latch with Handle – armored cord
Firefighter Emergency Phone – Modular Build	
AV-TEL2-CP1	Master Handset/Chassis Plate Assembly – coiled cord, mounting hardware (red)
AV-TEL2-CP3	Master Handset/Chassis Plate Assembly – armored cable, mounting hardware (red)
AV-TEL2-BB*	Back-Box Enclosure (red) – use with AV-TEL2-D1 keylock door
AV-TEL2-D1*	Keylock Door Assembly (red) – comes with key lock and mounting hardware – use with AV-TEL2-BB back box
AV-TEL2-LP*	Lock Plate, with Screws – use with AV-TEL2-BB back box and AV-TEL2-D1 door – (red)
AV-TEL2-BG*	Breakglass Assembly with Screws – use with AV-TEL2-BB back box and AV-TEL2-D1 keylock door assembly
AV-TEL2-BBM*	Back-Box Enclosure with Magnets – use with AV-TEL-D2 magnet latch door (red)
AV-TEL2-D2*	Magnetic Latch Door Assembly – comes with door handle, magnets and mounting hardware (red). Use with AV-TEL2-BBM
AV-TEL2-MB*	Semi-flush Trim Ring – mounts to all back boxes (red)
Also available in grey. Add **-G** *to product code.*	
Detectors and Bases	
SA5800-450ADV	AX Enhanced Heat Detector
SA5150-650ADV	AX Enhanced Photoelectric Smoke Detector
SA5150-750ADV	AX Enhanced Multi-Criteria (Smoke/Heat) Detector
SA5500-450ADV	XP95A Heat Detector
SA5050-350ADV	XP95A Multi-Criteria (Smoke/Heat) Detector
SA5050-250ADV	XP95A Photoelectric Smoke Detector
SA5000-210ADV	AX Base 4"
SA5000-230ADV	AX Base 6"
Sounder Bases	
SA5300-802APO	AX High Frequency Sounder Base 6"
SA5300-806APO	AX Low Frequency Sounder Base
SA5300-800APO	AX High Frequency CO Sounder Base
SA5300-805APO	AX Low Frequency CO Sounder Base
10-45681-292	White Base Cap

Product Code	Description
Duct Detection	
AX-STN-1.0	AX 10" Sampling Tube
AX-STN-2.5	AX 30" Sampling Tube
AX-STN-5.0	AX 5' Sampling Tube
AX-STN-10.0	AX 10' Sampling Tube
SL-DAA-P	Duct Smoke Detector – PHOTO – 2 wire
SL-DA4R-P	Duct Smoke Detector – PHOTO – 4 wire
Pull Stations	
AX-APS2-F1	Pull Station – single action fire alarm (red)
AX-APS2-F2	Pull Station – dual action fire alarm (red)
AX-APS-BB1	Pull Station Back Box – indoor (red)
AX-APS-BB1-D	Pull Station Back Box – deep interior (red)
AX-APS-BB2	Pull Station Back Box – weatherproof NEMA-3R (red)
AX-APS-BB2-D	Pull Station Back Box – deep weatherproof die-cast (red)
AX-APS-KEY	Pull Station lockset c/w 1 Key
56000-005ADV	Polycarbonate Dual Action Pull Station
56000-006ADV	Back Box for Polycarbonate Pull Station
Open Area Sounders/Beacons	
58000-011ADV	AX Open Area Sounder/Beacon – loop powered (red)
58000-012ADV	AX Open Area Sounder/Beacon – loop powered (white)
55000-041ADV	XP95A Open Area Sounder – loop powered (red)
55000-042ADV	XP95A Open Area Sounder – loop powered (white)
Modules	
55000-750ADV	Isolator Module
45681-211ADS	Isolator Module Base (fits 3" octagon electrical back box)
55000-765ADV	Mini Monitor Module (Din Rail Mount)
SA4705-600ADV	Enhanced Mini Switch Monitor Module
SA4705-700ADV	Enhanced Switch Monitor Module
SA4705-701ADV	Enhanced Relay Output Module
SA4705-703ADV	Enhanced Switch Monitor Input/Relay Output Module
SA4705-706ADV	Enhanced NAC Module
SA4705-720ADV	Enhanced Dual Switch Monitor Module

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Email: enquiries@advancedco.com
Web: www.advancedco.com

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