



ZMX *plus*

**ZMX+EXP32 Expander
Installation Instructions**

IMPORTANT

The first few pages of these instructions contain important information on safety and product conformity. Please read, and ensure that you understand this information before continuing.

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IMPORTANT SAFEGUARDS

This product is exclusively for use in CCTV applications and has no other purpose.

Read and Retain these instructions - All the safety and operating instructions should be read before the unit is operated and should be retained for future reference.

Cleaning - Unplug the unit from the supply outlet before cleaning. Use a damp cloth for cleaning. Do not use liquid cleaners or aerosol cleaners.

Attachments - Do not use attachments that have not been recommended by the product manufacturer as they may cause hazards.

Water and Moisture - Do not use this unit near water. For example, near a bathtub, wash bowl, kitchen sink, or laundry tub, in a wet basement, near a swimming pool, in an unprotected outdoor installation, or any area that is classified as a wet location.

Accessories - Do not place this unit on an unstable stand, tripod, bracket, or mount. The unit may fall, causing serious injury to a person and serious damage to the unit. Any mounting of the unit should follow the manufacturer's instructions, and should use a mounting accessory recommended by the manufacturer.

Ventilation - Openings in the enclosure are provided for ventilation to ensure reliable operation of the unit and to protect it from overheating, these openings must not be blocked or covered. This unit should not be placed in a built-in installation unless proper ventilation is provided. Do not place directly on other hot equipment, because this may increase its operating temperature.

Power Sources - This unit should be operated only from the class 2 isolated power supply provided.

Plugs - This unit may be equipped with a 3 wire grounding type plug, i.e. a plug having a third (grounding) pin. This plug will only fit into a grounding type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician. Do not defeat the safety purpose of the plug.

Power-cord Protection - Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them. Pay particular attention to cords at plugs, and the point where they exit from the appliance.

Overloading - Do not overload outlets and extension cords as this can result in a risk of fire or electric shock.

Object and Liquid Entry - This equipment must be protected from the ingress of foreign materials. Never push objects of any kind into this unit through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the unit.

Servicing - There are no user-serviceable parts. Do not remove the covers as this may expose you to dangerous voltages or other hazards. Refer all servicing to qualified service personnel.

Replacement Parts - When replacement parts are required, be sure the service technician has used the replacement parts specified by the manufacturer. The use of unauthorised substitute components may result in fire, electric shock or other hazards.

Safety Check - Upon completion of any service or repairs to this unit, ask the service technician to perform safety checks to determine that the unit is in proper operating condition.

Coax Grounding - If an outside cable system is connected to the unit, be sure the cable system is grounded.

Lightning - For added protection of this unit during a lightning storm, or when it is left unattended and unused for long periods, unplug it from the wall outlet and disconnect the cable system. This will prevent damage to the unit due to lightning and power-line surges.

SAFETY

If you have any problems contact Baxall Security Ltd.

⚠ WARNING

- **Installation is only to be carried out by competent, qualified and experienced personnel in accordance with the country of installation's National Wiring Regulations.**
- **This unit contains no user-serviceable parts inside.**
- **This unit must not be used in a medical and/or intrinsically safe application.**
- **Do not exceed the voltage and temperature limits given in the specification. Only operate this unit in a clean, dry, dust-free environment.**

DAMAGE REQUIRING SERVICE

Unplug the unit from the mains outlet and refer servicing to qualified service personnel under the following conditions:

- **When the power supply cord or plug is damaged.**
- **If liquid has been spilled into the unit, or objects have fallen into the unit.**
- **If the unit has been exposed to rain or moisture.**
- **If the unit does not operate normally when following the operating instructions.**
- **If the unit has been dropped or the casing has been damaged.**
- **If the unit exhibits a distinct change in performance.**
- **If the unit has no power even when the power supply appears to operate correctly. If this is the case then ask a service engineer to test the internal fuse.**

ELECTROMAGNETIC COMPATIBILITY (EMC)

⚠ WARNING

This is a Class A product. In a domestic environment this product may cause radio interference, in which case, the user may be required to take adequate measures.

The product must be installed in accordance with good installation practice, to enable the product to function as intended and to prevent problems. Refer to your agent for installation guidance.

Contact Baxall Security Ltd to obtain a specification defining the acceptable levels of product degradation with regard to EMC immunity.

MANUFACTURER'S DECLARATION OF CONFORMANCE

The manufacturer declares that the product supplied with this document is compliant with the essential protection requirements of the EMC directive 89/336 and the Low Voltage Directive LVD 73/23 EEC. Conforming to the requirements of standards EN 55022 for emissions, IEC801 parts 2, 3 and 4 for immunity and BS415 superseded by EN60950 for Electrical Equipment safety.

UNPACKING

You should keep the original packing for use when the unit has to be stored or transported. The packaging should contain the following items:

- The expander unit
- A class 2 mains power supply and cord
- Expander cable
- This manual

Carefully check the unit for signs of damage. If damage has occurred, please contact the supplier and the carrier immediately and do not attempt to use the equipment.

ASSOCIATED EQUIPMENT

A typical system, using this unit could contain the following components:

- A multiplexer
- Two to five monitors
- One or two VCRs (Standard or S-VHS)
- Cameras with 1V pk-pk composite video outputs
- 75 ohm BNC connectors and video coaxial cable for connecting the video signals.
- S-VHS connectors and leads if you are using an S-VHS VCR
- A mains power outlet for your multiplexer and expander unit which permits secure isolation in accordance with your national wiring regulations (your expander unit has no ON/OFF switch for security reasons).

LOCATION

Ensure that the site's AC power supply is stable and within the rated voltage of the external 12V DC power supply. If the site's AC power is likely to have spikes or power dips, use power line conditioning or an uninterruptable power supply (UPS).

Ventilation

Ensure that the location planned for the installation of the unit is well ventilated. Take note of the locations of the cooling vents in the unit's enclosure, and ensure that they are not obstructed.

Temperature

Observe the unit's ambient temperature specifications when choosing an installation space. Extremes of heat or cold beyond the specified operating temperature limits may cause the unit to fail.

Do not install the unit on top of other hot equipment.

Your expander unit may be placed on top of your multiplexer. Do not then place a monitor on top of the expander unit.

The product described in this manual is:

ZMX+EXP32 32 way expander unit

Your expander provides the following additional facilities:

- 16 camera inputs (17 - 32)
- 16 alarm inputs (17-32)
- Three analogue monitor outputs.

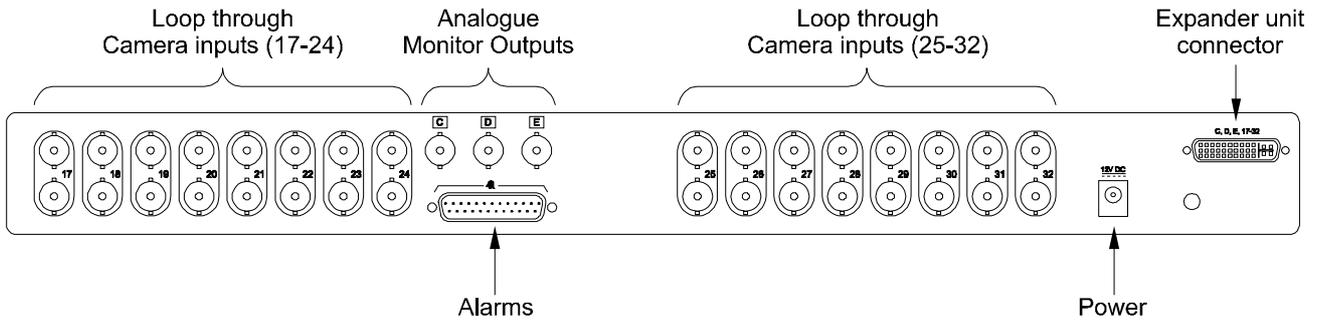


Fig 1. Rear Panel Layout

The rear panel of your expander unit has the following connections:

- 16 loop-through camera inputs with automatic termination
- Three analogue monitor outputs C, D and E. Monitor connections are via BNC connectors.
- 16 alarm-inputs via a 25-way D-type connector. Each alarm input can be configured to be normally open (N/O) or normally closed (N/C).
- Expander connector allowing connection to the ZMX+CT16M4 multiplexer.

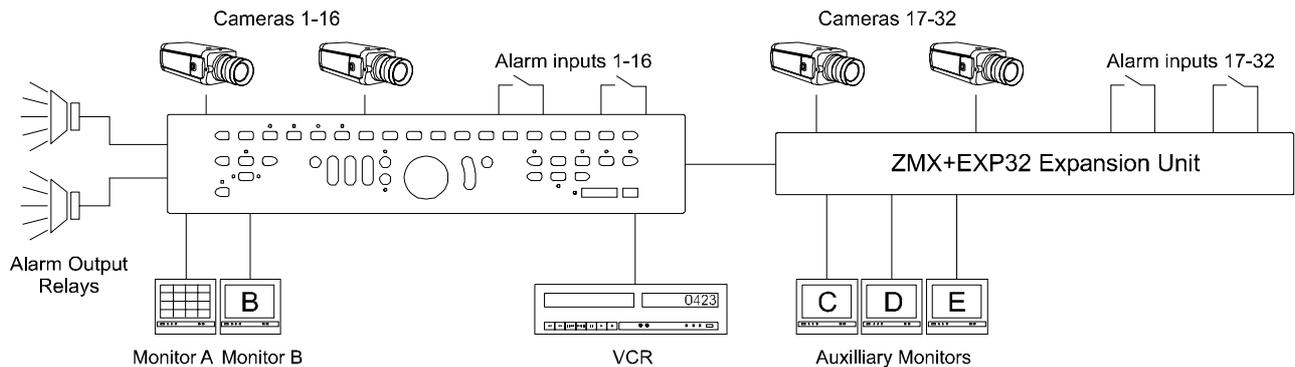


Fig 2. Typical connections

Camera Inputs

For each camera input there are a pair of BNC sockets, one for the camera input, the other for a looped through output. If you connect to both BNC sockets, your expander unit automatically removes the 75 ohm termination resistor. If you use the loop through facility make sure that your application (e.g. a monitor or VCR) provides 75 ohm termination at the end of the line.

Connect up to 16 camera inputs. You can use either the upper or the lower sockets. Connect your loop through outputs to the through or spare BNC socket in each pair. If you have less than 16 cameras, you can disable individual camera inputs in the menu system.

Monitors

Monitors C, D and E connect to the relevant 75 ohm BNC connectors. If you are connecting directly from the expander unit to the monitor then select the 75 ohm impedance setting on your monitor. **Note that when the 32 way expander unit is used, Monitors C, D and E attach directly to the BNC connectors provided on the expander unit and not the multiplexer. This is to ensure that the monitor signals are correctly terminated.**

Alarm Inputs

Provision for alarm inputs is by means of a 25 way D-type connector. Wire the connector as shown in Figure 3. Do not attempt to wire directly to the socket on the back-panel.

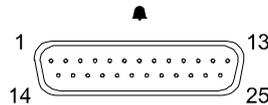


Fig 3. 25 way D-type Connector Numbering

Figure 3 above shows the connector, looking towards the rear panel. The numbers are labelled on the connector itself.

Pin Numbers	Connections
1 to 16	Alarm Inputs 17 to 32
18, 19	Alarm Input Ground

Each alarm input line can be triggered by the relay contact from a device such as a pressure-pad, a passive infrared detector, a smoke detector etc. (refer to the instructions provided with the device). You can configure the alarm inputs to be Normally Open (N/O) or Normally Closed (N/C) via the menu system. Normally open and normally closed configurations are shown in Figure 4. The alarms are disabled while the menu system is active.

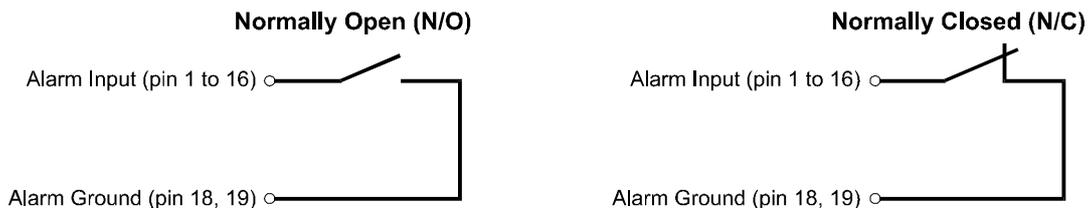


Fig. 4 Normally Open and Normally Closed Connections

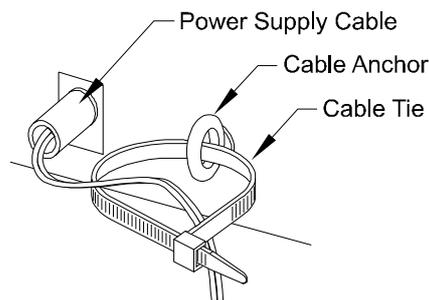
Power

The ZMX+EXP32 is supplied with a 12V DC class 2 output, auto-ranging: 110/230V AC (+6%, -10%) 50Hz, external power supply. **Do not use any other power supply.** Do not connect the power until you have read the section, **Powering Up your ZMX+EXP32** below.

Attach a suitable 3 pin plug following the wiring instructions on the label attached to the mains lead.

Note: The manufacturer accepts no responsibility for any damage caused by the use of any other power supply.

Plug the mini power connector from the 12V DC power supply into the socket marked 12V DC on the rear of your expander unit. Adjacent to the socket is a cable anchor. Use a small cable tie to attach the power supply cord to the cable anchor. This helps to prevent inadvertent power disconnection which may be caused by the power cable being pulled.



Expander cable

The expander unit and multiplexer are connected together by means of a special cable. Attach the cable and ensure the connector screws are tightened to prevent the cable being pulled out

POWERING UP YOUR ZMX+EXP32

Your expander unit must be powered up before the multiplexer. This is because the multiplexer polls the expander unit as part of its power-up sequence. After all the relevant connections have been made between the expander unit and multiplexer, perform the following sequence:

1. Disconnect the power from your multiplexer.
2. Connect the power to your expander unit
3. Reconnect the power to your multiplexer

SETTING THE MULTIPLEXER TO 32 WAY

Your multiplexer must be set to 32 way in order to gain access to various menu items for the expander unit. This is done as follows:

1. Enter the menu system of your ZMX+CT16M4 multiplexer.
2. Use the left/right arrow keys to select **Main**.
3. Use the up/down arrow keys to select **Camera Setup** and press the enter key.
4. Use the up/down arrow keys to select **Camera Selection 16/32** and press enter.
5. In the **Number of Cameras** field, use the left/right arrow keys to select **32**.
6. Use the up/down arrow keys to select **OK** and press enter.

NOTE: After selecting OK, the multiplexer will reset itself. Any parameters that were previously set up in the multiplexer will be lost. The multiplexer must be powered down and back on again in order for the new settings to take effect.

All Video Inputs and Outputs

75 Ohm BNC connectors

Video: 1V pk-pk composite (PAL compatible)

Power

Auto-ranging : 110/230V AC (10%, 50Hz, to 12V DC external power supply provided).

Power Consumption: Max : 10W

Physical Specifications

Operational temperature limits:

0° C to +40° C at 10% to 80% relative humidity (non-condensing)

Storage temperature limits:

-20° C to +60° C at 10% to 95% relative humidity (non-condensing)

Dimensions (mm) 443 (W) x 257 (D) x 44 (H)

Weight Unit: 3.5 kg Shipping: 6kg

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