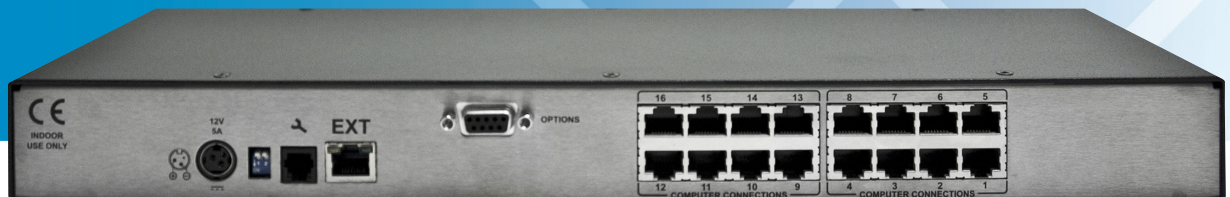


## KVM Modules for ServView Rack Tray

# High specification KVM switches that interface precisely with the Black Box ServView Rack Tray series.

Sophisticated KVM switching that use Server Access Module technology to simplify cabling and avoid occupying a further rack slot



### Customer Support Information

Order toll-free in the U.S.: Call 877-877-BBOX (outside U.S. call 724-746-5500)  
FREE technical support 24 hours a day, 7 days a week: Call 724-746-5500 or fax 724-746-0746  
Mailing address: Black Box Corporation, 1000 Park Drive, Lawrence, PA 15055-1018  
Web site: [www.blackbox.com](http://www.blackbox.com) • E-mail: [info@blackbox.com](mailto:info@blackbox.com)

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### Federal Communications Commission and Industry Canada Radio Frequency Interference Statements

This equipment generates, uses, and can radiate radio-frequency energy, and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio communication. It has been tested and found to comply with the limits for a Class A computing device in accordance with the specifications in Subpart B of Part 15 of FCC rules, which are designed to provide reasonable protection against such interference when the equipment is operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference, in which case the user at his own expense will be required to take whatever measures may be necessary to correct the interference.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This digital apparatus does not exceed the Class A limits for radio noise emission from digital apparatus set out in the Radio Interference Regulation of Industry Canada.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe A prescrites dans le Règlement sur le brouillage radioélectrique publié par Industrie Canada.

## Instrucciones de Seguridad

### (Normas Oficiales Mexicanas Electrical Safety Statement)

1. Todas las instrucciones de seguridad y operación deberán ser leídas antes de que el aparato eléctrico sea operado.
2. Las instrucciones de seguridad y operación deberán ser guardadas para referencia futura.
3. Todas las advertencias en el aparato eléctrico y en sus instrucciones de operación deben ser respetadas.
4. Todas las instrucciones de operación y uso deben ser seguidas.
5. El aparato eléctrico no deberá ser usado cerca del agua—por ejemplo, cerca de la tina de baño, lavabo, sótano mojado o cerca de una alberca, etc..
6. El aparato eléctrico debe ser usado únicamente con carritos o pedestales que sean recomendados por el fabricante.
7. El aparato eléctrico debe ser montado a la pared o al techo sólo como sea recomendado por el fabricante.
8. Servicio—El usuario no debe intentar dar servicio al equipo eléctrico más allá a lo descrito en las instrucciones de operación. Todo otro servicio deberá ser referido a personal de servicio calificado.
9. El aparato eléctrico debe ser situado de tal manera que su posición no interfiera su uso. La colocación del aparato eléctrico sobre una cama, sofá, alfombra o superficie similar puede bloquea la ventilación, no se debe colocar en libreros o gabinetes que impidan el flujo de aire por los orificios de ventilación.
10. El equipo eléctrico deber ser situado fuera del alcance de fuentes de calor como radiadores, registros de calor, estufas u otros aparatos (incluyendo amplificadores) que producen calor.
11. El aparato eléctrico deberá ser conectado a una fuente de poder sólo del tipo descrito en el instructivo de operación, o como se indique en el aparato.
12. Precaución debe ser tomada de tal manera que la tierra física y la polarización del equipo no sea eliminada.
13. Los cables de la fuente de poder deben ser guiados de tal manera que no sean pisados ni pellizcados por objetos colocados sobre o contra ellos, poniendo particular atención a los contactos y receptáculos donde salen del aparato.
14. El equipo eléctrico debe ser limpiado únicamente de acuerdo a las recomendaciones del fabricante.
15. En caso de existir, una antena externa deberá ser localizada lejos de las líneas de energía.
16. El cable de corriente deberá ser desconectado del cuando el equipo no sea usado por un largo periodo de tiempo.
17. Cuidado debe ser tomado de tal manera que objetos líquidos no sean derramados sobre la cubierta u orificios de ventilación.
18. Servicio por personal calificado deberá ser provisto cuando:
  - A: El cable de poder o el contacto ha sido dañado; u
  - B: Objetos han caído o líquido ha sido derramado dentro del aparato; o
  - C: El aparato ha sido expuesto a la lluvia; o
  - D: El aparato parece no operar normalmente o muestra un cambio en su desempeño; o
  - E: El aparato ha sido tirado o su cubierta ha sido dañada.

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## 1. Power Adapter Specifications

Power: DC jack (power adapter included)

Input: 100–240 VAC, 50/60 Hz

Output: 12VDC, 60W

## 2. Introduction

Thank you for choosing this KVM module which provides full function 8 or 16 port KVM switching without occupying a further rack slot. The module is designed to fit at the rear of the Black Box ServView Rack Tray so that all circuitry is concealed behind the slide out screen and keyboard.

Thanks to the use of Black Box Server Access Modules (SAMs) the rear connection panel of the KVM module is neat and uncluttered. See Figure 2-1.

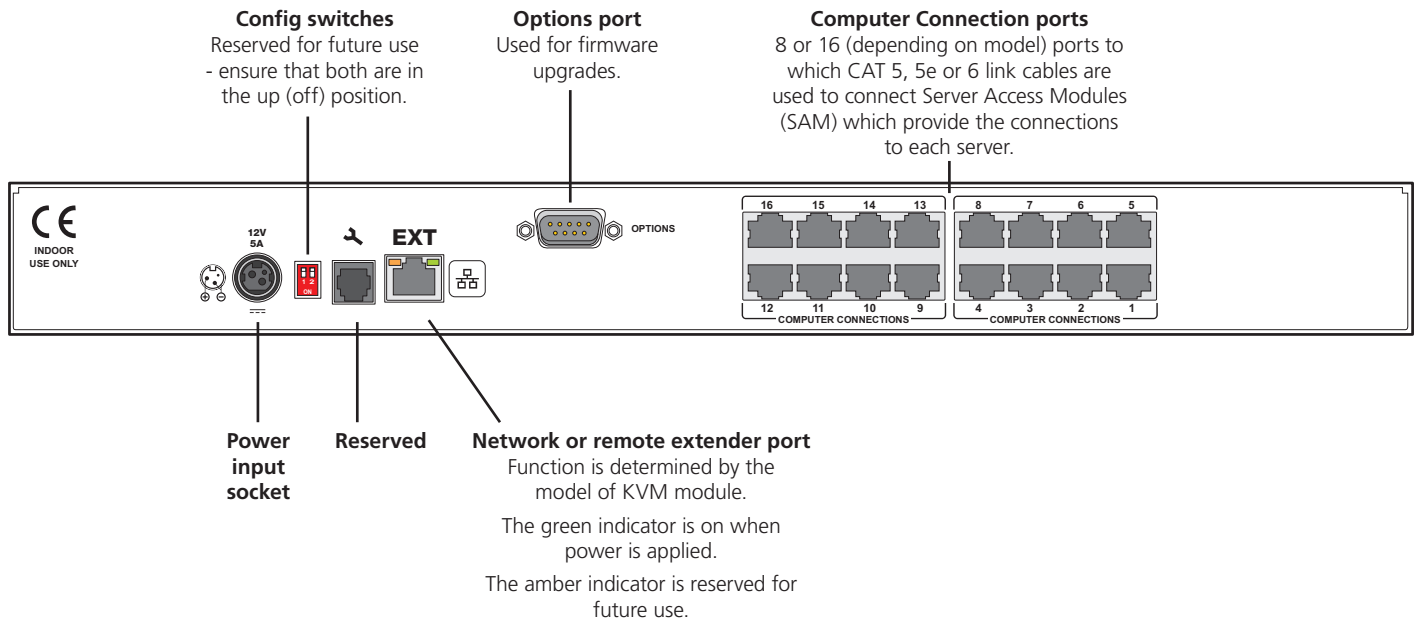


Figure 2-1. The rear panel of the KVM module.

## 2.1 What's Included

Your package should include the following items. If anything is missing or damaged, contact Black Box at 724-746-5500 or [info@blackbox.com](mailto:info@blackbox.com).

- KVM module
- Power adapter and power cord
- CD-ROM containing this user manual in PDF format
- Safety leaflet - Please carefully read this leaflet.

## 2.2 Additional Items You May Need

- Upgrade (serial null modem) cable (6.5 feet) (P/N: EYN257T-XXXX-FF)





## 3. Installation

### 3.1 Mounting

The KVM module is designed to interlock precisely with the rear of the ServView rack tray.

- 1 If the ServView rack tray is already fitted, either remove it or carefully gain access to the rear of the rack mount unit.
- 2 Locate the connection plate at the rear of the rack tray and orientate the KVM module so that its universal Centronics® 36-pin connector aligns with the socket on the connection plate. See Figure 3-1.

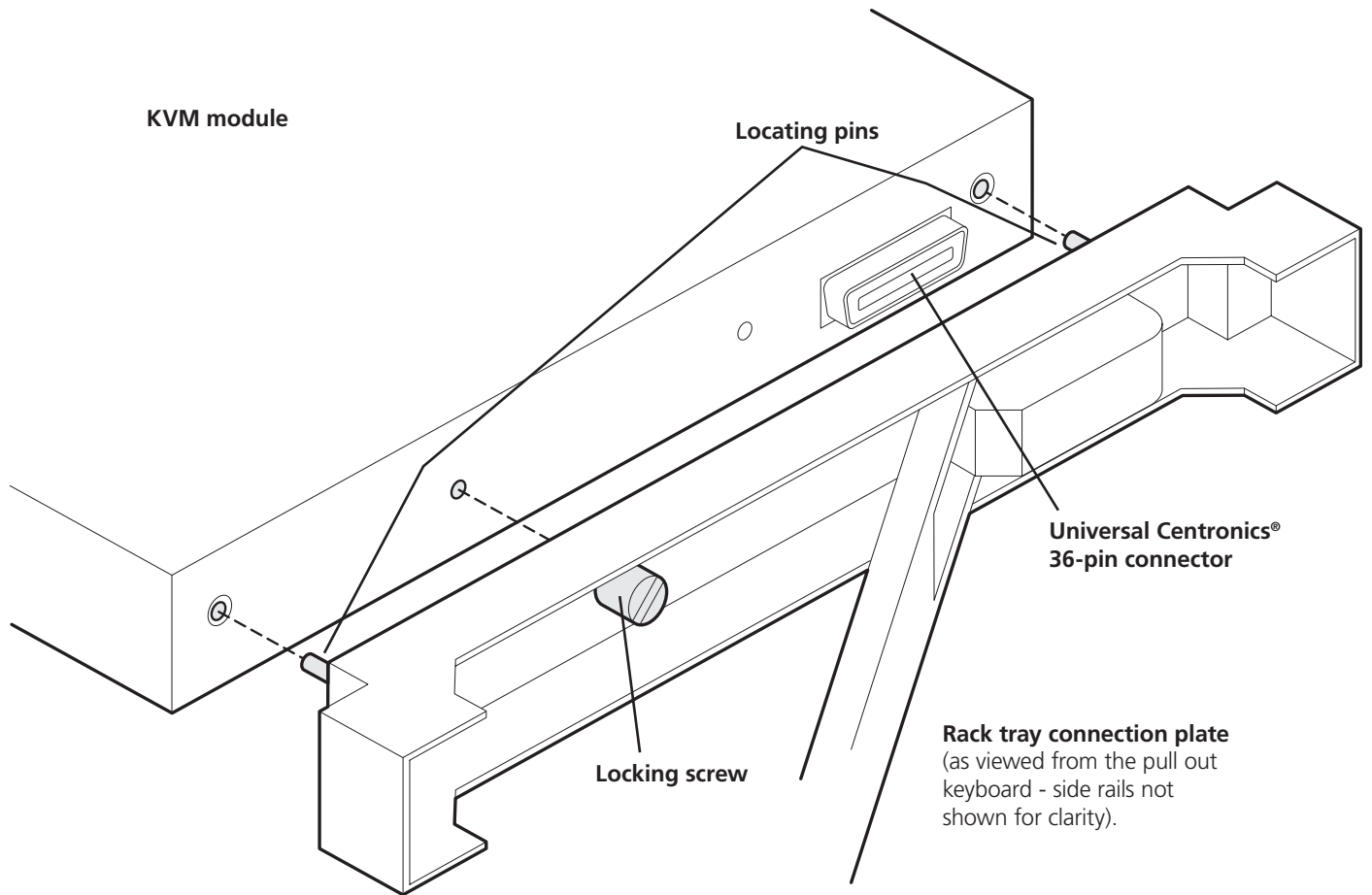


Figure 3-1. Aligning the KVM module with the connection plate of the rack tray.

- 3 Carefully slide the KVM module in so that its connector and two locating holes mate correctly with the corresponding connector and locating pins on the connection plate.
- 4 Tighten the locking screw until it is finger tight.

## 3.2 Connections

Connections to the rack tray video display, keyboard and trackpad are all handled by the single link that is made when the KVM module is attached to the tray. Therefore, all server, network and power connections are located at the rear of the unit.

### 3.2.1 EXTERNAL link (Network or Remote User)

The single RJ-45 socket labeled as **EXT** is used to allow either global or remote users to login and control connected servers. The EXT port provides one of the following links (dependant on the model of KVM module):

- An ethernet network link, labeled ,
- or
- A remote extender link (to attach a ServSwitch CX R or CX R USB), labeled . Note: This port is NOT a network port.

- 1 Wherever possible, ensure that power is disconnected from the KVM module.
- 2 Connect a CAT 5, 5e or 6 link cable to the port labeled EXT. See Figure 3-2.

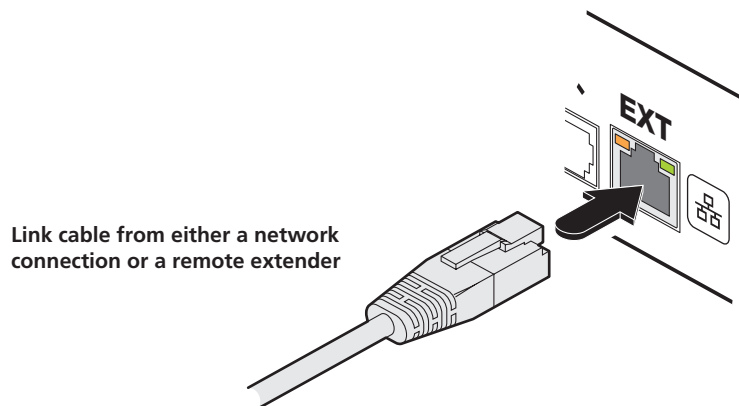




Figure 3-2. Connect a CAT 5, 5e or 6 link cable to the EXT port.

- 3 Connect the other end of the cable as follows:

- If the EXT port label shows  connect the link cable to a network switch/router.
- If the EXT port label shows  connect the link cable to a ServSwitch CX R or CX R USB.

## 3.2.2 Server Access Module Links

Dependant on the KVM module used, there will be either 8 or 16 RJ-45 sockets labeled as COMPUTER CONNECTIONS. Each socket supports a CAT 5, 5e or 6 link to an individual server system.

Note: The maximum length of the cable can be up to 10 metres (32 feet), however, for KVM modules KVT8CATUV and KVT16CATUV ensure that the overall distance between a remote user (connected to a remote extender) and any server must not exceed 300 metres (980 feet).

- 1 Wherever possible, ensure that power is disconnected from the KVM module.
- 2 Connect a CAT 5, 5e or 6 link cable to one of the COMPUTER CONNECTIONS ports. See Figure 3-3.

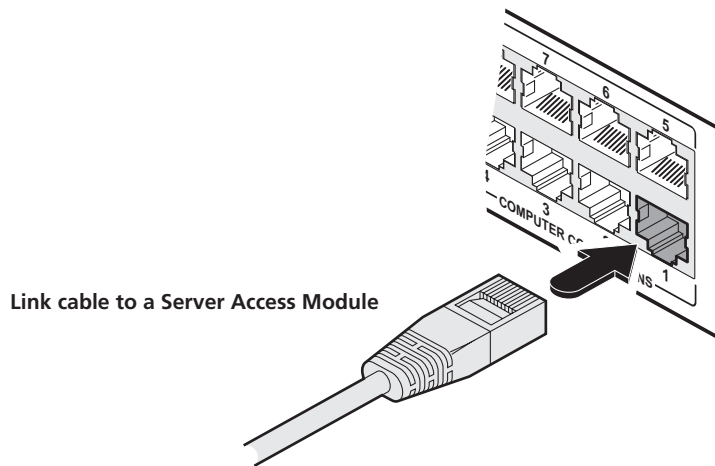


Figure 3-3. Connect a CAT 5, 5e or 6 link cable to a COMPUTER CONNECTIONS port.

- 3 Connect the other end of the cable to the Server Access Module (SAM) that is linked to the required server system. For more information about connecting SAMs, please refer to the appropriate ServSwitch user guide as appropriate to the KVM module being used:
  - KVT8CATUV or KVT16CATUV ---> use **KV0081A/KV0161A** (ServSwitch CX Uno) user guide,
  - KVT1IP8CATUV or KVT1IP16CATUV ---> use **KV1081A/KV1161A** (ServSwitch CX Uno IP) user guide,
  - KVT4IP16CATUV ---> use **KV4161A** (ServSwitch CX Quad IP) user guide.
- 4 Repeat steps 2 and 3 for each server system.

### 3.2.3 Power Connection

The KVM module is provided with a power adapter capable of supplying the display monitor, keyboard and KVM module.

**IMPORTANT:** You must only use the manufacturer approved power adapter with the KVM module.

**IMPORTANT:** Due to the length of the power cable, if the rack tray is mounted high in the rack it may not be possible to place the power adapter at floor level. In this case it is important to mount it securely and in such a manner that it is not suspended from its output cable.

- 1 Attach the output lead from the power adapter to the 12V socket on the rear panel of the KVM module. See Figure 3-4.

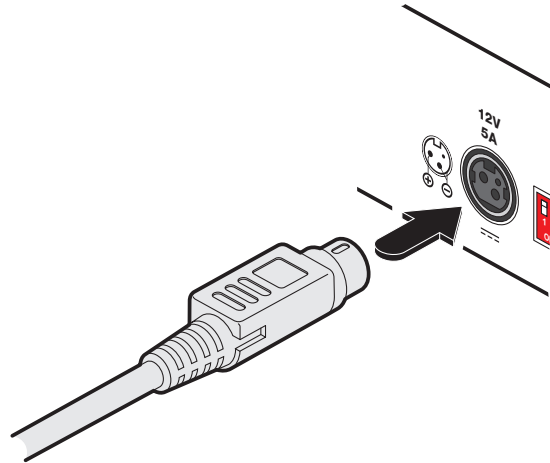


Figure 3-4. Connect the power adapter to the rear panel power socket.

- 2 Connect the IEC connector of the supplied country-specific power lead to the socket of the power adapter.
- 3 Connect the power cord to a nearby power outlet.

*Note: Both the KVM module and the power adapter generate heat when in operation and will become warm to the touch. Do not enclose them or place them in locations where air cannot circulate to cool the equipment. Do not operate the equipment in ambient temperatures exceeding 35°C. Do not place the products in contact with equipment whose surface temperature exceeds 35°C.*

#### 3.2.3.1 Disconnecting Power

When removing the power connection be aware that the plug has a locking mechanism to prevent accidental disconnects. To remove, pull back the flat top segment of the plug body to disengage the lock and gently pull the whole plug from the power socket. See Figure 3-5.

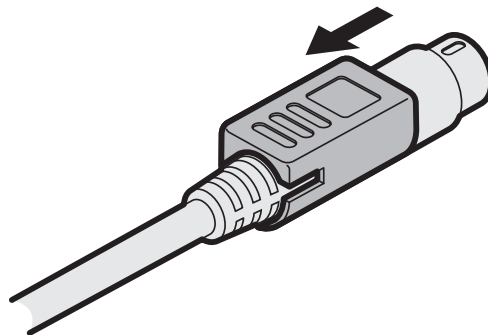


Figure 3-5. Disconnecting the power adapter.

### 4. Configuration

#### 4.1 Initial Configuration

The precise details for configuration of the KVM module will depend on the model being used. For more information, please refer to the Configuration section of the appropriate ServSwitch user guide as appropriate to the KVM module being used:

- KVT8CATUV or KVT16CATUV ---> use **KV0081A/KV0161A** (ServSwitch CX Uno) user guide,
- KVT1IP8CATUV or KVT1IP16CATUV ---> use **KV1081A/KV1161A** (ServSwitch CX Uno IP) user guide,
- KVT4IP16CATUV ---> use **KV4161A** (ServSwitch CX Quad IP) user guide.

## 5. Operation

In operation, you can select server channels in a number of ways, including:

- On screen menu,
- Keyboard hotkeys,
- Control buttons on the ServView rack tray (see below).

For more information about the on screen menu and keyboard hotkey methods, please refer to the Operation section of the appropriate ServSwitch user guide as appropriate to the KVM module being used:

- KVT8CATUV or KVT16CATUV ---> use **KV0081A/KV0161A** (ServSwitch CX Uno) user guide,
- KVT1IP8CATUV or KVT1IP16CATUV ---> use **KV1081A/KV1161A** (ServSwitch CX Uno IP) user guide,
- KVT4IP16CATUV ---> use **KV4161A** (ServSwitch CX Quad IP) user guide.

Note: On screen menus will show the ServView name, not the ServSwitch CX name shown in the CX series user guides.

### 5.1 Selecting Server Channels With Rack Tray Buttons

With the rack tray keyboard exposed, you will see a control panel in the top right corner. See Figure 5-1.

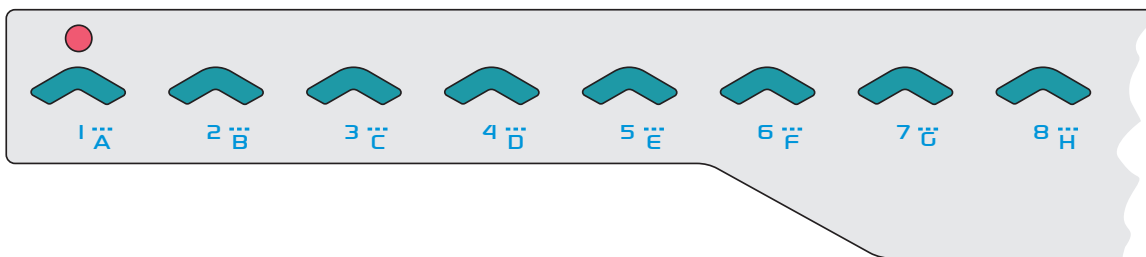


Figure 5-1. Control panel.

To select channels:

- Channels 1 to 8 - Press and release the appropriate channel button. The channel will be switched and the indicator above the pressed button will illuminate.
- Channels 9 to 16 - Press and hold the appropriate channel button (e.g. button 1 for channel 9, button 4 for channel 12, etc) for 2 to 3 seconds. The channel will be switched and the indicator above the pressed button will flash.

To display the on-screen menu:

- Press any two buttons simultaneously.

### Appendix A. Safety Information

- You must only use the manufacturer approved power adapter with the KVM module.
- For use in dry, oil free indoor environments only.
- The module and its power supply generate heat when in operation and will become warm to the touch. Do not enclose them or place them locations where air cannot circulate to cool the equipment. Do not operate the equipment in ambient temperatures exceeding 35 degrees Centigrade. Do not place the products in contact with equipment whose surface temperature exceeds 35 degrees Centigrade.
- Warning - live parts contained within power adapter.
- No user serviceable parts within power adapter - do not dismantle.
- Plug the power adapter into a socket outlet close to the module that it is powering.
- Replace the power adapter with a manufacturer approved type only.
- Do not use the power adapter if the power adapter case becomes damaged, cracked or broken or if you suspect that it is not operating properly.
- If you use a power extension cord with a unit, make sure the total ampere rating of the devices plugged into the extension cord does not exceed the cord's ampere rating. Also, make sure that the total ampere rating of all the devices plugged into the wall outlet does not exceed the wall outlet's ampere rating.
- Do not attempt to service the units yourself.

Please also carefully read the separate safety leaflet packed with this product.





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KVT8CATUV series, rev. 1