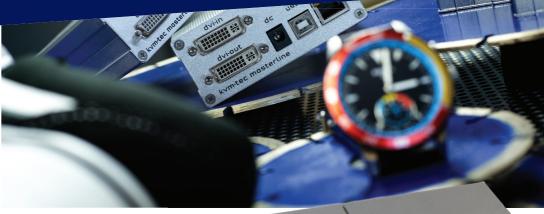


USER-MANUAL

Smartline DUAL KVM Extender over IP

www.kvm-tec.com



Smartline Dual SVX2 650 SET Smartline 6502L CPU/LOCAL 6502R CON/REMOTE



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Congratulations on the purchase of your new Smartline SVX2 KVM Extender. You have bought a high quality extender. These instructions are part of this product. They contain important information regarding safety, use and disposal for every user of the Smartline SVX2 KVM Extender. Please familiarise yourself with the information within prior to using your product. Use the product only in the manner as described and for the areas of application as stated. When passing the product to a third party be sure to also supply all instructions and other relevant documentation. Following proper use and maintenance, your Smartline SVX2 KVM Extender will bring you joy for many years to come.

1.1 INTENDED USE

This product is intended to be used as a device to increase the distance that a keyboard, monitor and mouse can be placed from a computer. This product is intended for professional use. The product should not be used in potentially explosive environments.

The product may only be used according to the instructions as described in this manual. All use, other than that described in this manual, is seen as unintended use. Modifications in the course of technological progress are reserved. In these user instructions the Smartline SVX2 KVM Extender is referred to as 'product' or 'extender'. The SVX2/PC is referred to as the 'local unit / CPU, and the SVX1/Monitor is referred to as the 'remote unit'/CON.

1.2 SAFETY INSTRUCTIONS

WARNING! Read and understand all safety instructions.

- Follow all the instructions. This will avoid accidents, fire, explosions, electric shocks or
 other hazards that may result in damage to property and/or severe or fatal injuries.
 Please ensure that everyone who uses the product has read and followed these warnings
 and instructions.
- Keep all safety information and instructions for future reference and pass them on to subsequent users of the product.
- The manufacturer is not liable for cases of material damage or personal injury caused by incorrect handling or non-compliance with the safety instructions. In such cases, the warranty will be voided.
- This product is not intended for use by persons (including children) with restricted
 physical, sensory or intellectual capability or lack of experience and/or knowledge, unless
 they are supervised by a person who is responsible for their safety or provides them with
 instructions on how to use the product.
- **DANGER!** Not for use in potentially explosive environments.
- DANGER! Be vigilant at all times, and always take care around this product. Do not use
 electrical equipment if you are lacking in concentration or awareness, or are under the
 influence of drugs, alcohol or medication. Even a moment of inattentiveness can lead to
 serious accidents and injuries when using electrical equipment. Check the product and
 the cables for any damage before use. If there is any visible damage, a strong odour, or
 excessive overheating of components unplug all the connections immediately and stop
 using the product.
- If the product is not installed and used in accordance with this manual, it may cause disruptive interference with radio or television reception or affect other electronic products in residential areas.
- Use shielded cables only to connect the components in order to avoid such interference.

 Non-compliance invalidates the permission to operate this product.
- Only the mains adapter included with the product should be used as the power supply.
 Do not use other adapters.
- Prior to connecting to the mains, make sure your local mains voltage matches the rating indicated on the product.
- The product must be connected to a permanent and earthed AC wall socket.
- Protect cables from being strained, pinched or buckled and place them in a way to prevent people from tripping over the cord.

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- In particular, ensure to avoid damage to the mains adapter.
- Use the product with a suitable, properly installed and easily accessible mains power socket. Make sure the product can be disconnected from the power socket at all times.
- Unplug the product during electrical storms or when not in use.
- **DANGER!** Never touch the adapter with wet hands.
- Use the product within the specified performance limits.
- Keep the product away from flammable materials such as curtains and drapes.
- Protect the mains adapter from use by third parties (particularly children). Keep the unused mains adapter in a dry, elevated or locked location away from children.
- Do not place the product near heaters.
- Do not drop or hit the product.
- Unplug all connections before cleaning the product. Do not use wipes or chemicals as these could damage the surface. Wipe the housing with a damp cloth. Electrical/ electronic parts must not be cleaned.
- Alterations to the product and technical modifications are not permitted.

1.3 TECHNICAL SPECIFICATIONS

Type: KVM Extender (local/CPU unit and remote/CON unit)

Model: Smartline SVX2 KVM Extender

Power supply input voltage: 100 - 240 V; 50/60 Hz AC

Power supply output: 12V; 1A (external power supply)

Power requirement: 12W per extender (excluding attached USB devices)

Operating temperature range: $0 \, ^{\circ}\text{C}$ to $45 \, ^{\circ}\text{C}$ / $32 \, ^{\circ}\text{F}$ to $113 \, ^{\circ}\text{F}$

Storage temperature range: -25 °C to 80 °C / -13 °F to 176 °F

Relative humidity: max. 80% (non-condensing)

Storage humidity: max. 80% (non-condensing)

Casing Material: Anodized aluminum

Dimensions: approx. 198 x 41 x 103,5 mm / 7.79 x 1.57 x 4.07"

Weight: Local 604g/1.33lbs Remote 582g/1,28 lbs

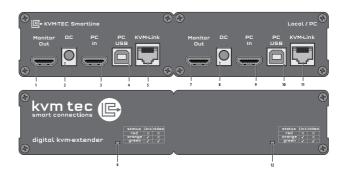
Shipment weight Set 2,45kg / 4.96 lbs

Expected product life: 82 820 hours / 9.5 years

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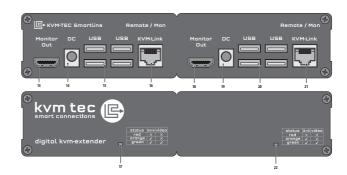
1.4 PRODUCT ELEMENTS

Local/CPUExtender



Nr.	Name	Function
1	Monitor Out	Connection to Monitor
2	DC	Connection for 12 V power supply
3	PC In	Connection to PC
4	PC USB	USB connection to PC
5	KVM-Link/ RJ45 socket	Connection for CAT5/6/7 cable
6	Power/Status LED	Displays the status of the extender
7	Monitor out	Connection to monitor
8	DC	Connection for 12 V power supply
9	DVI From PC	Videosingal from PC
10	PC USB	USB connection to PC
11	KVM Link/Rj45 socket	Connection for CAT5e/6/7 cable
12	Power/Status LED	Displays the status of the extender

Remote/CON Extender



Nr.	Name	Function
13	Monitor Out	Connection to monitor
14	DC	Connection for 12 V power supply
15	USB	USB connection (e.g. for keyboard or mouse)
16	KVM-Link/ RJ45	Socket connection for CAT5e/6/7 cable
11	Power/Status LED	Displays the status of the extender
18	Monitor Out	Connection to monitor
19	DC	Connection for 12 V power supply
20	USB	USB connection (e.g. for keyboard or mouse)
21	KVM Link/ RJ45 socket	Connection for CAT5e/6/7 cable
22	Power/Status LED	Displays the status of the extender

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1.5 MEANING OF LED INDICATORS

The Status LED (8/15) can light red, orange or green. Table 1 shows the meaning of each colour. Also see chapter *Troubleshooting*.

				Norma	l Operation			
Colour	Blinking	Physical Link		Video Extended	USB Initialisation	UBS Data Received	Identify Command	Autoupdate Mode
Main LED								
Red	-	Yes	No	No				Update Failed
Red	Slow	No	No	No				
Orange	-	Yes	Yes	No				
Orange	Fast							Update in Progress
Green	-	Yes	Yes	Yes				Update Succedded
Green	V. fast				Yes**			
Red/Green	V. fast						Yes	
RJ45 Socket	LEDs *							
Yellow	-	No						
Yellow	Slow	Yes						
Green	-			Yes				
Green	V. fast					Yes		

^{*} MVX only ** Rem. Only

Table 1: Meaning of LED indicators

2.1 UNPACKING AND CHECKING THE CONTENTS

Before using the product for the first time it should be checked for damage. In case of damage due to transport inform the carrier immediately. Before delivery the product is checked for its function and its operating safety.

Make sure that the packaging contains the following content:

Local / CPU Unit

- 1x SVX2 local/CPUextender
- 1 x Power supply 12V; 1A EU plug or INT.plug
- 2 x DVI -HDMI cable 1.8m / 5.9ft
- 2 x USB cable 1,8m/5.9ft
- 4 x Mounting Pads
- 4 x Rubber Feet

Remote/CON Unit

- 1x SVX2 remote/CON extender
- 1 x Power supply 12V; 1A EU plug or INT plug
- 2 x DVI -HDMI cable 1,8m / 5.9ft
- 4 x Mounting Pads
- 4 x Rubber Feet

2.2 MOUNTING OPTIONS

2.2.1 MOUNTING PADS AND RUBBER FEET

The mounting pads and rubber feet can be used to hold the extenders in place and prevents them from sliding and falling.

To attach the mounting pads or rubber feet:

- 1. Remove the protection layer from the **mounting pads** or **rubber feet** (G).
- 2. Attach the **mounting pads** or **rubber feet** (G) to the bottom the units.

2.2.2 MOUNTING KITS (OPTIONAL)

The following mounting kits are available:

Rack Mounting Kit RMK-F - Part No. 6130

The rack mounting kit RMK-F is for assembling kvm-tec Smartline SVX and Masterline MVX extenders. It consists of 19" rack shelf and an alu-faceplate.

Rack Mounting Kit RMK-FN - Part No. 6131

The rack mounting kit RMK-FN is for assembling kym-tec Smartline SVX and Masterline MVX extenders. It consists of 19" Rack Shelf, alu-faceplate and power supply.

Rack Mounting Kit RMK-FRN - Part No. 6132

The rack mounting kit RMK-FRN is used to mount kym-tec Smartline SVX and Masterline MVX extenders. It is equipped with rack shelf, faceplate and 2 power supply units, which are summarized in a redundancy module.

Under Desk Mounting Kit - Part No. 6937

The Under Desk Mounting kit is for underdesk mounting of the SVX and MVX extender.

Din Rail Mounting Kit - Part No. 6136

The DIN rail mounting is used for space-saving installation in control cabinets or on DIN rails. The attachment to the SVX and MVX extenders is possible in several ways.

2.3 INSTALLING THE EXTENDER

WARNING! Read and understand all safety information before installing the product.

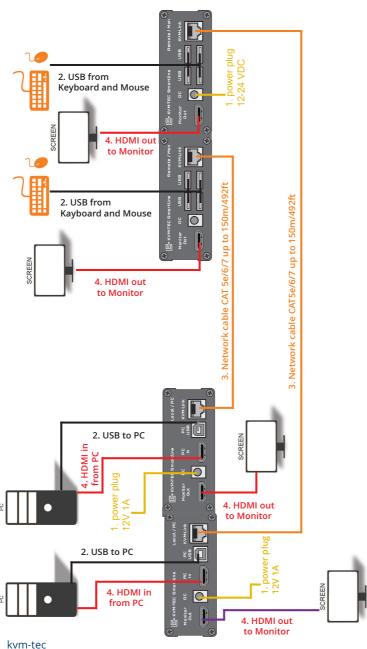
The units can be set up to access one host computer, or to access numerous host computers. In the case of the latter, an additional Network Switch must be installed. With a Network Switch, each user can gain quick access to any of the required computers.



point to point connection



Set up with swtching System up to 48 endpoints



Quick Installation SVX2 SMARTLINE local / CPU - remote/ CON

Connect the CON / Remote and the CPU / Local Unit with the included 12V 2A power supply.

Now connect the USB cable to a USB port on your PC and connect the other end of the USB cable to the CPU / Local Unit. Connect keyboard and mouse to the CON / Remote Unit.

Connect the CPU / Local and the CON / Remote Unit with two network cables.

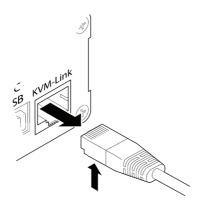
Now connect the HDMI-DVI cable to the DVI socket of the PC and the other end to the HDMI socket of the CPU / Local Unit (PC-in). Then connect the monitor with the HDMI-DVI cable to the CON / Remote Unit.

HAVE FUN - your kvm-tec Extender is now in use for many years (MTBF approx 10 years)

2.5 REMOVING A CATX CABLE

To remove a CATx cable:

Press the latch down and slowly pull the cable out.



3.1 HOW TO ACCESS THE MAIN MENU

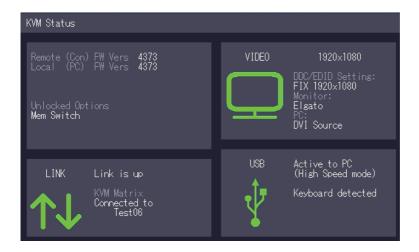
Use the monitor and keyboard to get access to the main menu.

To access the main menu:

- 1. Make sure the extenders, the monitors and the computer are switched on.
- 2. Press the **Scroll Lock** key on your keyboard quickly five times. The **main menu** appears with an overview of the sub-menus.
- 3. To access a sub-menu press the applicable key.

```
KVM Home
T = Status Overview
U = Update Flash FW
U = Update Flash FW
M = Option Overview
0 = DDC Option (FIX 1920×1080)
W = Network Settings
C = Extender Settings
L = Switching List
U = Exit
Remote (Con) FW Ver = 4373
Local (PC) FW Ver = 4373
```

3.2 STATUS MENU



In the "Status Menu" the current status of the extender connection is displayed. It provides information on the connection itself as well as resolution of the video channel, and USB-status.

The enabled options and the current FW-version is displayed in the left top corner.

Link status shows whether there is a physical connection available. Connection indicates if kvm data is currently able to be transmitted.

Video and USB show if data is currently being transmitted.

3.3 HOW DETERMINE THE CURRENT FIRMWARE VERSION

To view the firmware version:

Make sure the **main menu** is open. The currently installed firmware versions of the remote and local units are displayed below (e.g. '4267')

```
KVM Home
T = Status Overview
U = Update Flash FW
M = Option Overview
O = DDC Option (FIX 1920×1080)
W = Network Settings
G = Extender Settings
L = Switching List
Q = Exit
 Remote (Con) FW Ver = 4373
Local (PC) FW Ver = 4373
```

3.4 HOW TO PERFORM A FIRMWARE **UPDATE**

The latest version of the firmware can be downloaded from http://www.kvm-tec.com/en/ support/firmware-download.html. Each update file is accompanied by a detailed description of the update process.

you have 3 possibilitiese for an update

- update with Bimap Image
- 2. automatic update
- networkupdate 3.

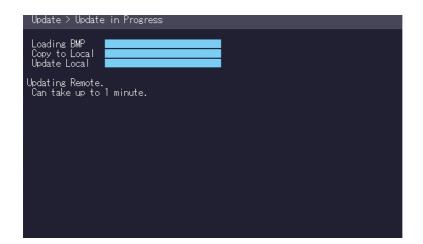
```
KVM Update
Basic Update:
 U = Quick Update from Bitmap
Advanced:
 A = Automatic Update
N = Network Update
Remote unit. Firmware vers. 4373
Local unit. Firmware vers. 4373
     Return to Main Menu
```

To perform a firmware update:

- 1. Make sure the **main menu** is open.
- 2. Press the **U** key. The **Update** menu appears.
 - Press the **N** key to do a network update.
 - Press the **A** key to do an automatic update.
 - Press the **U** key to do a direct update.
 - Press the **Q** key to return to the main menu.

3.4.1 UPDATE WITH BITMAP IMAGE

The file is output from an image and saved in the currently connected extenders.



Wait until all 3 phases of the update have been completed and make sure that you do not disconnect or plug in the devices during the update.

3.4.2 PERFORMING AN AUTOUPDATE

You can set in the menu which part should be updated.

As soon as the devices are connected, the firmware is copied from one unit to the other.

```
KVM Update > Autoupdate
Console module running 4373
Console module has saved 4373
Console set to automatically update
C Con Autoupdate
Esc Return to Update Menu
```

The flashing of the light emitting diodes indicates when the update process is finished (the light emitting diodes are then green)

3.4.3 PERFORMING A NETWORK UPDATE

In the network update the devices that are updated can be marked.

KVM Update > Update Network	K		
Module	Active	Saved	
> (PC) <untitled> (PC) <untitled> (PC) benq (PC) z400 (PC) <untitled> (PC) Test06 (PC) SmatPCB TestPC (Con) <untitled> (Con) Samsung \$240300 (Con) shuffle (Con) illyama</untitled></untitled></untitled></untitled>	4372.14 4372.14 4373.08 4373.08 4373 4373 4373 4373 4373.08 4373.08 4373.08	none	
A (Un)mark All Space M L Load new Version from B S Send Saved Version to m U Update All Marked Modulé Esc Return to Update Menu	itmap arked modules		

The information is then sent to the marked units. During this process the devices can still be in operation. As soon as all updates have been transmitted, the marked devices can be restarted and start with the new firmware.

3.5 HOW TO UNLOCK AN OPTION

- 1. Make sure the **main menu** is open.
- 2. Press the **M** key. The **Options Overview** menu opens. The **device ID** will be shown.
- 3. Order the unlock code from your supplier by providing them with the 9-character device ID and the serial number of your KVM-extender.
- 4. Press M key to enter the unlock code.
- 5. Enter the unlock code your supplier provided.
- 6. The extender will automatically restart.
- 7. To confirm the Option has been unlocked return to the **Options Overview** menu and check that the relevant Option is now displayed in green.

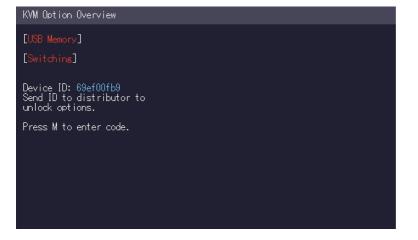
```
KVM Option Overview
[USB Memory] - Enabled
(1 - enable, 0 - disable)
[Switching]
Device ID: 69ef00fb9
Send ID to distributor to
unlock options.
Press M to enter code.
```

3.6 HOW TO ENABLE OR DISABLE THE **USB MEMORY OPTION**

The USB Memory Option allows the user to enable or disable the memory option. When the USB Memory Option is enabled, USB flash storage and external storage devices can be accessed via the extender. If your extender was provided with the USB Memory Option you can enable and disable at any time.

To enable or disable the USB Memory Option:

- 1. Make sure the **main menu** is open.
- 2. Press the M key. The Options Overview menu opens. The current USB Memory status is displayed (Enabled or Disabled).
- 3. Press 1 to enable or 0 to disable the USB Memory Option.



3.7 DEFINITION OF THE DDC INFORMATION OF THE PC

In the DDC Information menu, the user can define which DDC information is used by the PC. Definition of the DDC information used in the PC:

- 1. make sure that the main menu is opened.
- 2. Press the **O** button and the DDC Option Menu will be displayed.
- 3. Press 0 to display the DDC information of the monitor connected to the Remote (CON) Extender is connected to the unit.
- 4. Press 2 to save the current DDC information. The system is not applies the same settings after restarting the Extender
- 5. Press the buttons 4 to 8 to use a predefined resolution, the is stored in the memory.
- 6. Press **ESC** to return to the main menu.

```
DDC/FDID Settings
0 = Remote Monitor

2 = Last DDC Fixed

4 = FIX 1024x768

5 = FIX 1280x1024

6 = FIX 1680x1050

7 = FIX 1920x1080

8 = FIX 1920x1200
```

3.8 CHANGING THE NETWORK SETTINGS

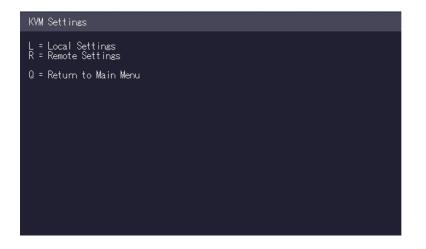
see chapter "Switching Menu settings".

3.9 HOW TO CHANGE THE EXTENDER **SETTINGS**

The Extender Settings menu allows the user to change a range of further preferences, which can be enabled or disabled by pressing the applicable key.

To access the Extender Settings menu:

- 1. Make sure the **main menu** is open.
- 2. Press the **G** key. The **Extender Settings** menu appears.
- 3. The extender settings are distributed across two sub-menus: Remote Settings and Local Settings.



- 4.. View the local or remote Extender settings:
 - Press the **L** button to display the Local Setting menu.

```
KVM Settings > Local
U = USB Compatibility Mode (Disabled)
W = Enable USB Remote Wakeup (Disabled)
L = Compatibility with Linux (Disabled)
Q = Return to Main Settings
```

Press the **R** button to display the Remote Settings menu.

```
KVM Settings > Remote
S = Show Last Image (Disabled)
I = Monitor Sync (Disabled)
L = Menu Lock (Disabled)
P = Power Save (Disabled)
K = Keyboard Locale (EN)
0 = Keyboard Fallback Mode (0)
H = Keyboard Shortcuts
Q = Return to Main Settings
```

3.9.1 HOW TO ENABLE OR DISABLE THE USB **COMPATIBILITY MODE**

The USB compatibility mode can be enables or disabled.

To enable/disable the USB compatibility mode:

- 1. From the Extender Settings menu, press the L key. The Local Settings menu appears.
- 2. Press the **U** key to enable or disable the USB compatibility mode.

```
KVM Settings > Local
U = USB Compatibility Mode (Enabled )
W = Enable USB Remote Wakeup (Disabled)
L = Compatibility with Linux (Disabled)
Q = Return to Main Settings
```

3.9.2 HOW TO SHOW THE LAST RECEIVED IMAGE

This function lets you show the last image that is received instead of a black screen when the monitor extender is disconnected from the PC extender. To show that it is the last image received, the edges of the screen flash red.

To enable or disable the Last Image Received function:

- 1. From the **Extender Settings** menu, press the **R** key. The **Remote Settings** menu appears.
- 2. Press the **S** key to enable or disable the function.
- 3. Press **ESC** to go back to the main menu.

```
KVM Settings > Remote
S = Show Last Image (Enabled)
I = Monitor Sync (Disabled)
L = Menu Lock (Disabled)
E - Media Cour (Disabled)
P = Power Save (Disabled)
K = Keyboard Locale (EN)
O = Keyboard Fallback Mode (0)
H = Keyboard Shortcuts
Q = Return to Main Settings
```

3.9.3 HOW TO TURN ON OR OFF MONITOR SYNCHRONIZATION

The monitor synchronization can be turned on and off. When enabled, the refresh rate of the graphics card of the PC and that of the remote monitor are adjusted to match one another. The advantage of this is to ensure that transmission remains smooth when the screen content changes rapidly (e.g. When using multimedia applications). Not all monitors support this method so by default this option is disabled.

To turn on monitor synchronization:

- 1. From the Extender Settings menu, press the R key. The Remote Settings menu appears.
- 2. Press the I key to enable or disable the function.
- 3. Press **ESC** to go back to the main menu.

```
KVM Settings > Remote

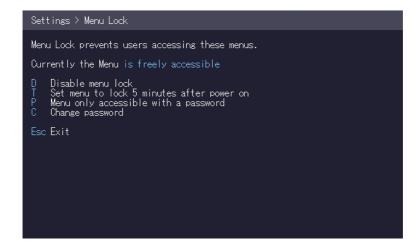
S = Show Last Image (Disabled)
I = Monitor Sync (Enabled)
L = Menu Lock (Disabled)
P = Power Save (Disabled)
K = Keyboard Locale (EN)
0 = Keyboard Fallback Mode (0)
H = Keyboard Shortcuts
Q = Return to Main Settings
```

3.9.4 HOW TO LOCK THE MAIN MENU

The extender menu can be locked. When enabled, the extender locks 5 minutes after start up to prevent unauthorized access.

To lock or unlock the menu:

- 1. From the **Extender Settings** menu, press the **R** key. The **Remote Settings** menu appears.
- 2. Press the **L** key. The **Menu Lock** Menu appears.



3.9.5 HOW TO USE POWER SAVING MODE

The power saving mode lets the extender turn off its video out when the remote extender does not receive a video signal for more than a minute.

To turn on or off the power saving mode:

- 1. From the Extender Settings menu, press the R key. The Remote Settings menu appears.
- 2. Press the **P** key to enable or disable the power saving mode.
- 3. When in power saving mode, press any key to return to the menu.

```
KVM Settings > Remote

S = Show Last Image (Disabled)
I = Monitor Sync (Disabled)
L = Menu Lock (Disabled)
P = Power Save (Enabled)
K = Keyboard Locale (EN)
0 = Keyboard Fallback Mode (0)
H = Keyboard Shortcuts
Q = Return to Main Settings
```

3.9.6 HOW TO SELECT YOUR TYPE OF KEYBOARD

The Keyboard Locale menu lets you switch between keyboard layouts for navigating the on screen display menu (OSD). You can choose between French (Azerty), English (Qwerty) and German (Qwertz).

To select a keyboard layout:

- 1. From the **Extender Settings** menu, press the **R** key. The **Remote Settings** menu appears.
- 2. Press the **K** key. The **Keyboard Locale** menu opens:
 - Press E to select English (QWERTY)
 - Press **D** to select German (QWERTZ)
 - Press F to select French (AZERTY)

```
Settings > Keyboard Locale
E = English (QWERTY)
Q = Return to Main Menu
```

3.9.7 HOW TO CHANGE THE KEYBOARD FALLBACK **MODE**

To change the keyboard fallback mode:

- 1. From the Extender Settings menu, press the R key. The Remote Settings menu appears.
- 2. Press the **O** key to change the keyboard fallback mode to 0, 1 or 2.

```
KVM Settings > Remote
      : = Show Last Image (Disabled)
= Monitor Sync (Disabled)
= Menu Lock (Disabled)
:= Power Save (Disabled)
:= Keyboard Locale (EN)
!= Keyboard Fallback Mode (1)
!= Keyboard Shortcuts
!= Return to Main Settings
```

3.9.8 HOW TO CHANGE KEYBOARD SHORTCUTS

The **Keyboard Shortcuts** menu lets you edit the preferred shortcuts for common commands.

To edit the shortcuts:

- 1. From the **Extender Settings** menu, press the **R** key. The **Remote Settings** menu appears.
- 2. Press the **H** key. The **Keyboard Shortcuts** menu opens.
- 3. Use the arrows to select a command.
- 4. Press **E** to edit the shortcut.

To edit:

- Press a single key. Edit the frequency with left and right arrows.
- · Press a key combination

```
KEYBOARD SHORTCUTS
> Main Menu 5x<scroll>
Switching List <L-Ctrl><L-Alt><F12>
Conn. Overview <L-Ctrl><L-Alt><F9>
Disconnect <L-Ctrl><L-Alt><F11>
    Disconnect
Favourites
                         <L-Ctrl><L-Alt><F1>
    Use arrows to scroll up and down.
    E = Edit
Q = Exit
```

3.9.9 HOW TO CLOSE THE EXTENDER SETTINGS MENU

To close the Extender Settings menu:

· Press Q to close the Extender Settings menu.

3.10 HOW TO SWITCH BETWEEN DIFFERENT COMPUTERS

The menu for switching between different computers is accessible via a USB keyboard connected to the remote unit.

- Press Ctrl+Alt+F12 (this is the default keyboard shortcut but may be changed. See "How to change keyboard shortcuts"). The switching menu opens. The switching menu lists all the local units connected to the switching network.
 - Blue indicates the computer with which you are currently connected. The status is listed as "conn'd".
 - White indicates a computer which is currently connected to by another work station (Remote unit). The status is listed as "in use".
 - Green indicates a computer in the switching network that isn't connected to any work station (Remote unit). The status is listed as "free".
 - Red indicates a computer which was once in the switching network but isn't currently available. This usually indicates that the Extender has been discon nected from the network. If this is the case the computer can be removed from the switching menu with the "delete" key.
- 2. Use the arrow up and arrow down keys, or PGUP and PGDOWN keys, to select a local extender. Press **enter**. The system switches to the selected computer.
 - The left column defines the favourites menu and provides each computer with a favourite number. Each favourite number corresponds to a hot-key combination that can be used to quickly connect to the desired computer without having to access the switching menu. For example favourite "1" has the hot-key combination "Ctrl+Alt+F1" For favourite "2" this is "Ctrl+Alt+F2" and so on up to favourite "8" with "Ctrl+Alt+F8". All other computers can still be accessed via the switching menu. To change the order of the computers in this list, select the computer then press a number key 1 through 8 to shift it to that number.
 - If the password system is active, the user currently logged in is displayed at the bottom. You can manually logout by pressing the "x" key or disconnect from the current PC by pressing the "d" key.

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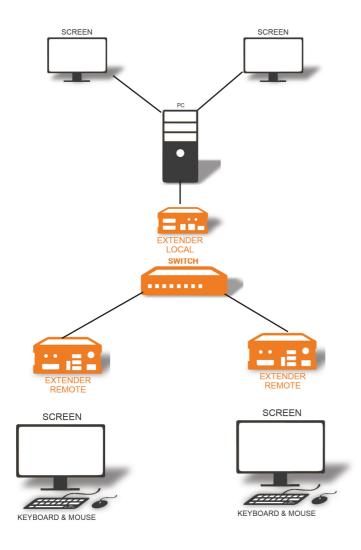
3.11 HOW TO SHARE VIDEOS

The Video Sharing option allows you to share your screen with other users on the network. Ensure that the switch you are using has IGMP Snooping capabilities, and that this is turned on (most switches have this off by default).

What happens with the control over the local extender depends on the initial state. There are two main use-cases which can both be controlled in the **MASTER VIEW connections overview menu**. Note that this capability is not available in combination with the password security system.

To share a video:

- 1. Make sure the **main menu** is open.
- 2. Press Ctrl+Alt+F10. The MASTER VIEW connections overview menu opens.
- 3. Choose one of the following:
 - · To mirror a screen to other consoles:
 - Press the P key on the keyboard of the extender that should display the user's
 screen. In this case "P" stands for "push to screen". Such a command is only valid
 if the console which initiates the mirroring is currently connected to a local unit
 and has video and the other remote unit is "free" (marked green).
 - To see the screen of other consoles on the network:
 - Press the **G** key on the keyboard of the extender that should display the user's screen. The key "G" stands for "get screen". If the console unit from which this command is executed currently has a partner, a disconnect is executed before the video of the other local unit is displayed. If the selected local extender currently isn't connected, a regular connection including USB, etc. is established.



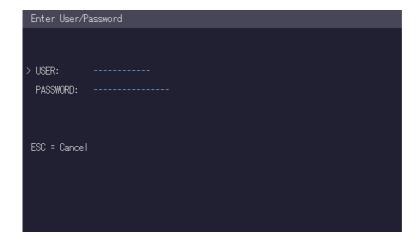
Videosharing

4.1 HOW TO ACCESS THE NETWORK **SETTINGS MENU (MASTER VIEW AND NETWORK MODE)**

The **Network Settings** menu includes the preferences and settings for the Switching Option. Note: this menu is only available when the Switching Option has been unlocked (see chapter "How to unlock an Option").

To access the Network Settings menu (Master View and Network Mode):

- 1. Make sure the **main menu** is open (see chapter "How to access the main menu")
- 2. Press the **W** key. The **Enter User/Password** window opens.



- 3. Log in with your user name and password. The **Network Setting** menu opens. Note: in order to prevent unauthorised access to the Network Settings, this option is protected by a user/password combination. Access is only allowed for users with administrator rights. The factory settings provide an administrator user with User: admin and Password: admin.
 - The Master View option allows the administrator to view, add, edit or remove user, console and computer information. Press the **V** key to access the Master View menu.
 - The Network Mode allows to define how you want the network system to operate.
 Each of the modes available may individually be activated or deactivated by pressing the appropriate key. You may have more than one selected depending on their function. Some modes require others, and others are incompatible with each other, but the system will automatically recognise this for you. Press the M key to access the Network Mode menu.

```
NETWORK SETTINGS

V = Master View (Device Configuration)
M = Network Mode

T = Set Timeout ( Immediately)

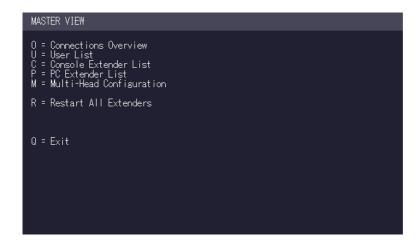
Q = Save and Exit
```

4.2 HOW TO FORCE DISCONNECT OR SELECT A WORKSTATION FROM THE **CURRENT CONNECTED DEVICES**

The Connection Overview provides an overview of the current connections as well as the free PCs and consoles on the network. You may break a connection remotely, or assign a PC a new console or vice versa.

To force disconnect or select a workstation from the current connected devices:

1. Make sure the Master View menu is open (see chapter "How to access the Network Settings menu (Master View and Network Mode)").



2. Press the **O** key. The **Connection Overview** menu opens.



- 3. Press the I key. The **Connection Details** window opens.
 - Press the **D** key to force disconnect the selected device/connection.
 - Press the **E** key or **Enter** key to select a PC or workstation to create or break a connection to that unit.
 - Press the **Q** key to exit.

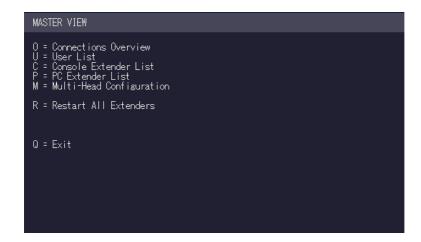


4.3 HOW TO MANAGE USER DETAILS, **RIGHTS AND GROUPS**

The Console Extender List allows you to manage user details, rights and groups.

To manage user details, rights and groups:

1. Make sure the **Master View** menu is open (see chapter "How to access the Network Settings menu (Master View and Network Mode)").



- 2. Press the ${\bf U}$ key. The ${\bf User\ List}$ menu opens.
 - Press the **A** key to add a new user.
 - Press the **R** key to delete the selected user.
 - Press the I key to display details about the selected user which may be edited.



- 3. Press the **U** key. The **User List** menu opens.
 - · Press the A key to add a new user.
 - Press the **R** key to delete the selected user.
 - Press the I key to display details about the selected user which may be edited.

```
MASTER VIEW > user detail

> USER: admin
FULL NAME: admin
PASSWORD: *******
RIGHTS: +++ (admin)
GROUPS: 1
Bound PC: <None>

E = Edit
Q = Exit
```

- 4. To edit a user, press the I key. The **User Detail** menu opens.
- 5. Select the user detail you want to edit and press the **E** key.
 - **User**: Assign each user a login name with max. 12 characters.
 - **Full Name**: For clarity the full name of a user may be entered with max. 20 characters. This name is displayed when informing other users who interrupted their connection.
 - Password: Each user requires a password for the login. Max. 16 characters.
 - Rights: There are three types of rights: USER, MASTER and ADMIN.
 By pressing the + key the rights of the selected user can be changed. The rights control access to the Network Settings menu (only ADMIN), and which users may interrupt the connection of which other users.
 - Admin: May interrupt connections of Masters and Users. In the case that an Admin interrupts the connection of another Admin, the interrupted Admin may reclaim the original connection. Private connections can't be interrupted.
 - Master: May interrupt connections of Users. In the case that a Master interrupts the connection of another Master, the interrupted Master may reclaim the original connection. Admins and private connections can't be interrupted.

- **User**: In the case that a User interrupts the connection of another User, the interrupted User may reclaim the original connection. Admins, Masters and private connections can't be interrupted.
- **Groups**: Each user can join up to 8 user groups. Each computer is defined as belonging to one user group. By default all computers are in the same user group. This system makes it possible to allow or deny different users access to a computer. The user's group access is set by pressing the buttons 1 8.
- Bound PC: When in User-PC Binding mode (see 4.10) each user must have a PC bound to them. That user will only be able to connect to that PC. When selected the User Detail menu, press RETURN a list of PCs on the network will be displayed to select from.

4.4 HOW TO VIEW THE STATUS OF ALL REMOTE UNITS

The Console Extender List allows you to view all remote units in the switching network and their current status.

To view the status of all remote/CON extenders:

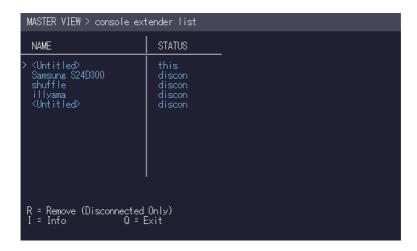
1. Make sure the **Master View** menu is open (see chapter "How to access the Network Settings menu (Master View and Network Mode)").

```
MASTER VIEW

0 = Connections Overview
U = User List
C = Console Extender List
P = PC Extender List
M = Multi-Head Configuration
R = Restart All Extenders

0 = Exit
```

- 2. Press the C key. The Console Extender List menu opens.
 - "this" defines the extender which you are currently using.
 - "in use" indicates that the extender is in use.
 - "free" indicates that this extender is not busy.

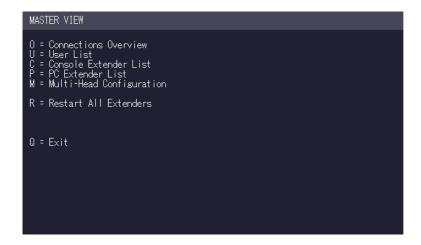


- 3. To edit the name of an extender, press the I key. The Console Extender Detail menu opens.
- 4. Press the **E** key to edit the name of the extender.

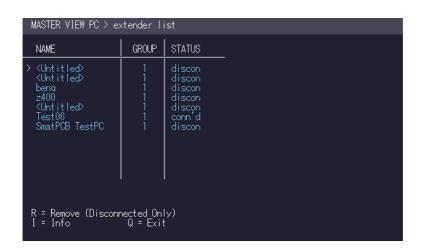
4.5 DISPLAYING THE STATUS OF ALL **LOCAL UNITS**

The PC Extender list allows you to view all local units in the switching network and their current status. Anzeigen des Status aller lokal Units (CPU)

1. Make sure that the **Master View menu** is open (see chapter "Network Settings - Master and Network Mode").



2. Press the **P** key to open the PC Extender List (CPU) menu.



- 3. To edit the name, groups or status of an extender, press the I key. The PC Extender Detail menu opens.
- 4. Use the Up and Down Arrow keys to select the name or group of the PC unit.
- 5. Press the **E** key to edit the selected parameter.

Example:

There are the following 3 PC's: Department PC, Team A PC and Team B PC. The users Alex, Blair and Charlie should have access to the Department PC and the Team A PC. The users Danny, Em and Frankie should have access to the Department PC and the Team B PC.

To achieve this we assign each PC a different group:

Department PC: Group 1 Team A PC: Group 2 Team B PC: Group 3

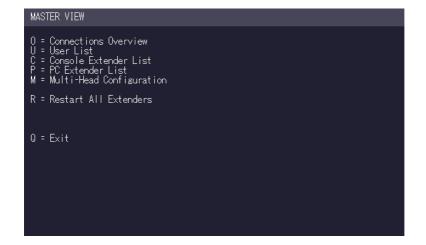
Alex, Blair and Charlie are assigned to be members of Group 1 and Group 2. Danny, Em and Frankie are assigned to be members of Group 1 and Group 3.

4.6 INSTALLATION DUAL-HEAD OR MULTI-HEAD SYSTEM

If you are using multiple monitors with one PC, you can combine individual local/CPU and remote/CON units in the multi-head menu so that they can be switched as one unit.

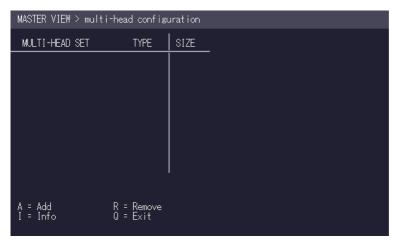
Individual grouping of local (CPU) and remote (CON) extenders:

Make sure that the **Master View menu** is open (see chapter "Network - Networking").
 Settings - "Master View and Network Mode")



2. Press ${\bf M.}$ The Multi Head configuration menu opens.

.



- 3. Press the A key. The multi-head detail menu opens.
 - Press the **R** key to remove an extender from the multi-head set.
 - · Press the **Q** key to exit.



- 4. Press the A key to add individual extenders. The extender type is automatically determined once the first extender has been selected.
- 5. Press the **E** key to edit the multi-head set name of max. 16 characters.

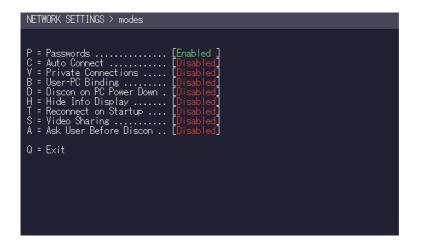
4.7 HOW TO ENABLE USER GROUPS AND RIGHTS AND LOGIN ACCESS

The Passwords option allows to activate user groups and rights and login access. For more information about user groups and rights see "How to manage user details, rights and groups".

Access to the network settings is always protected by a login and password, even when the password system is disabled.

To enable the password option:

- Make sure the **Network Mode** menu is open (see chapter "How to access the Network Settings menu (Master View and Network Mode)").
- 2. Press the **P** key to disable or enable the option.



4.8 HOW TO AUTO-CONNECT TO A FREE COMPUTER AFTER AN INTERRUPTION

The Auto Connect option allows you to connect automatically with a free computer if your connection is interrupted by another user. This function is unavailable while using the Password System.

To enable the auto-connect option:

- 1. Make sure the **Network Mode** menu is open (see chapter "How to access the switching menu Master View and Network Mode").
- 2. Press the **C** key to disable or enable the option.



4.9 INSTALLING A PRIVATE CONNECTION

With the Auto Connect option, you can establish a "private connection" with your PC, which can be accessed by cannot be interrupted by other users.

Activate a private connection:

- Make sure that the **Network Mode menu** is open (see chapter "Switches").
 Menu Master View and Network Mode").
- 2. Press V to enable or disable the option.
- 3. To establish a private connection, hold down the **Shift** key while selecting a new connection (you can either press 4 or press a key combination) see chapter "Switching between two PCs".

4.10 HOW TO ENABLE THE USER-PC **BINDING MODE**

To enable the User-PC Binding mode:

- 1. Make sure the **Network Mode** menu is open (see chapter "How to access the switching menu Master View and Network Mode").
- 2. Press the **B** key to disable or enable the option.

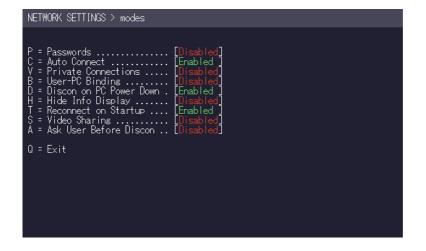


4.11 HOW TO ENABLE THE DISCONNECT ON PC POWER DOWN OPTION

The Auto Connect option allows you to break the connection of any local unit that is connected to a PC that is powered down, allowing the remote unit to find a different local extender to connect to.

To enable the PC Power Down option:

- Make sure the **Network Mode** menu is open (see chapter "How to access the switching menu Master View and Network Mode").
- 2. Press the **D** key to disable or enable the option.



4.12 HOW TO HIDE INFO DISPLAY

To hide the info display during startup:

- 1. Make sure the **Network Mode** menu is open (see chapter "How to access the switching menu Master View and Network Mode").
- 2. Press the **H** key to disable or enable the option.

```
NETWORK SETTINGS > modes
P = Passwords ... Disab
C = Auto Connect ... Disab
V = Private Connections ... Disab
B = User-PC Binding ... Disab
D = Discon on PC Power Down ... Disab
H = Hide Info Display ... Enabl
T = Reconnect on Startup ... Disab
S = Video Sharing ... Disab
A = Ask User Before Discon ... Disab
Q = Exit
```

4.13 HOW TO RECONNECT ON STARTUP

To reconnect on startup:

- 1. Make sure the **Network Mode** menu is open (see chapter "How to access the switching menu Master View and Network Mode").
- 2. Press the **T** key to disable or enable the option.

```
NETWORK SETTINGS > modes
   = Passwords
= Auto Connect
= Private Connections
= User-PC Binding
= Discon on PC Power Down .
= Hide Info Display
= Pocception Startup
    = Reconnect on Startup ... [Enabl
= Video Sharing .... [Disab
= Ask User Before Discon .. [Disab
Q = F \times i t
```

4.14 VIDEO SHARING

See chapter "How to share videos".

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4.15 HOW TO SET THE PASSWORD TIMEOUT

When the password system is activated you can define under what circumstances the user will be required to re-enter their login details when switching.

- I Immediately: User and password must be re-entered for each switch.
- N Never: User and password are not required to be re-entered until the current user logs out. See chapter "How to switch between different computers".
- T Time in min: You define the number of minutes since the last switch before the user and password details are required again to switch.

```
NETWORK SETTINGS > timeout
See product manual for explanation.
Press ESC to exit
```

5. MAINTENANCE AND CARE

CAUTION! Do not use solvent-containing cleansers. Do not use wipes, alcohols (e.g. spiritus) or chemicals as these could damage the surface.

To clean the product:

Clean the product with a maintenance product for synthetic material, which is available in specialized shops.

6. TROUBLESHOOTING

Error	Cause	Solution
LED is not lighting	The devices get no power	Is the power supply connected? (white box)
LED is lighting in red	No connection between Loc and Rem	Check if the RJ45/network cable is connected well. (Clicking noise when plugging in) Control both, if it does not work please send an e-mail to support@kvm-tec.com
LED is lighting in orange	No picture on the monitor	Check if the local/CPU (PC) cable is connected well. Check if the remote/CON (monitor) cable is connected well. If everything is connected well but no function appears, reconnect power supply again. If the menu is visible, press the O key and choose the resolution of the monitor. Then press the assigned number on your keyboard.
LED is lighting green	Screen occurs but the keyboard is not working	Plug out/in USB of keyboard and wait until driver is installed (after few seconds). Check all USB connections on both sides (Local and Remote) If it is still not working, plug out/in DC once more
LED is lighting green	No audio	Establish audio connection: plug stereo-jack to the audio output of the PC (green) connection with local: IN remote: headset OUT Establish microphone connection: plug stereo-jack to the microphone input of the PC (pink) connection with local OUT

Error	Cause	Solution
LED is lighting green	The screen flickers, has an incorrect display	Install current firmware from our homepage www.kvm-tec.com/support/firmware-download
LED is blinking green	Different firmware or USB is not compatible	e-mail to support@kvm-tec.com
LED are lighting differently	Different firmware	To enter on screen menu/check firmware version: To enter the On screen menu, press the Scroll Lock key five times in quick succession. The currently installed firmware version is displayed below the menu If firmware update does not work, please send an e-mail to support@kvm-tec.com

7. DISPOSAL



This symbol on the product, the accessories or packaging indicates that this product must not be treated as unsorted municipal waste, but must be collected separately! Dispose of the product via a collection point for the recycling of waste electrical and electronic equipment within the EU and in other European countries that operate separate collection systems for waste electrical and electronic equipment.

By disposing of the product in the proper manner, you help to avoid possible hazards for the environment and public health that could otherwise be caused by improper treatment of waste equipment. The recycling of materials contributes to the conservation of natural resources. Therefore do not dispose of your old electrical and electronic equipment with the unsorted municipal waste.

The packaging is made of environmentally friendly materials, which may be disposed through your local recycling facilities. By disposing of the packaging and packaging waste in the proper manner, you help to avoid possible hazards for the environment and public health.

8. WARRANTY

Warranty lasts 24 months from the date of purchase. The defect product has to be sent back to the manufacturer or your supplier within 2 weeks. The warranty becomes void in case of:

- External forceful impact
- · Inappropriate maintenance
- · Violating the operating instructions
- Damage by lightning

Always contact us first before sending back the product.

9. SUPPORT

If you have any questions about our products, please contact your dealer.

kvm-tec electronic gmbh Gewerbepark Mitterfeld 1A 2523 Tattendorf

Austria

Phone: 0043 (0) 2253 81 912 Fax: 0043 (0) 2253 81 912 99 Email: support@kvm-tec.com

Web: www.kvm-tec.com

kvm-tec Inc.

67 Camino Del Oro Rancho Santa Margerita

CA 92688

Email: officeusa@kvm-tec.com phone + 1 213 631 3663

toll free +1 866 586 8320 m +1 949 903 5271

Web: www.kvm-tec.com

Find our newest updates and FAQs on our homepage: http://www.kvm-tec.com/support

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10. DECLARATION OF CONFORMITY

EU DECLARATION OF CONFORMITY

Manufacturer: KVM-TEC Electronic GmbH

Gewerbepark Mitterfeld 1A, 2523 Tattendorf, Austria

Commercial register number: FN 272328h LG Wr. Neustadt

I hereby declare that the device

Product: Masterline SVX2

SVX2 - Digital KVM Extender Type:

fulfils following EU Directive and European standards listed within:

EMC/EMV - EU Directive 2014/30/EU and 2014/35/EU

2014/35/EU low voltage directive

2014/30/EU EMV directive

The device was tested in a typical application with a PC.

RoHS II - EU Directive 2011/65/EU

Certificate according to RoHS II Directive 2011/65 / EU

We hereby certify that all our products are manufactured and packaged in accordance with RoHS II 2011/65/EU and PFOS 2006/122EG directives.

REACH - Regulation (EG) No. 1907/2006

For our products, we only use commercially available, well-known components from wellknown manufacturers, which do not exceed the thresholds for Substances of Very High Concern (SVHC) and do not fall into the obligations for the production and placing on the market of substances / chemicals for pre-registration or registration (ECHA) fall.

10. DECLARATION OF CONFORMITY

Ecodesign Directive 2009/125/EC

In particular, the limits of the following standards are observed:

EN 55032:2012 Class A *

EN 55024:2010

EN 61000-3-2:2014

EN 61000-3-3:2013

EN 60950-1:2006+A2:2013, IEC 60950:2005

LASER CLASS 1: EN 60825-1:2007 compatible with IEEE 803.3z

Signed for and on behalf of: KVM-TEC Electronic GmbH

Place and date of issue: Tattendorf, 2018-05-09

Name, Function, Signature: Ing. Dietmar Pfurtscheller, CEO/Geschäftsführer

D. Plubseller

11. REQUIREMENTS FOR CABLES

11.1 REQUIREMENTS FOR CAT5E/6/7 CABLES

A Cat5e/6/7 cable should meet the following requirements:

- The pins are connected 1:1. **Caution:** the cable pairs must be twisted to EIA/TIA- 568A (rare) or EIA/TIA-568 B (common) pairs.
- Erroneous assignments cannot be found with a simple cable tester.
- The pins for the green pair of wires are not adjacent to one other.
- The cable must at the very least meet the CAT5 specifications and be suitable for Gigabit transmission.
- The cable should meet one of the following standards: Class D ISO/IEC 11801:2002 or EN 50173-1:2002. Schema EIA/TIA-568 B.
- Only use shielded installation cable with min. cross section of 24 AWG throughout the length.
- The shield should be contiguous and connected to both ends. A shielded patch cable is allowed for connection to the device.

Schema EIA/TIA-568 B



12. REQUIREMENTS NETWORK

12. REQUIREMENTS NETWORK SWITCH

The entire switching network system requires its own dedicated network. For security reasons it cannot be integrated into an existing company network.

The network switch must fulfil the following specifications:

1 Gigabit Switch, with true port to port transfer rates of 1 Gigabit/second

The following switches have all been tested and verified to work with all features of kvm-tec electronic's SVX Smartline and MVX Masterline KVM-extenders.

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12. REQUIREMENTS NETWORK

Recommended Switches



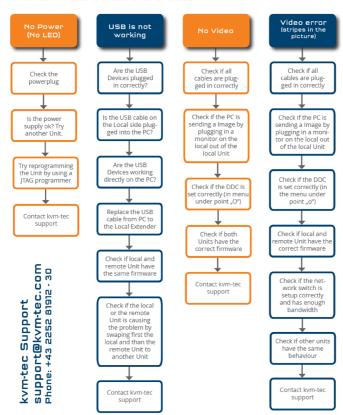
Art Nr	Item Nr	Product
	CATx SWITCHE	
6514	NS8RJ/2SFP	Network Switch 8x RJ45 1000 Base-T / 2x SFP 1G
6534	NS24RJ/4SFP	Network Switch 24x RJ45 1000 Base-T / 4x SFP 1G
6141	NS24RJ/2SFP/2SFP+	Network Switch 24x RJ45 1000 Base-T / 2x SFP 1G / 2x SFP+ 10G
6155	NS48RJ/4SFP+	Network Switch 48x RJ45 1000 Base-T / 4x SFP+ 10G
6171	NS48RJ+/2SFP+	Network Switch 48x RJ45 10G / 2x SFP+ 10G
	FIBER SWITCHE	
6146	NS24SFP/4SFP+	Network Switch 24x SFP/4x SFP+
6166	NS48SFP/4SFP+	Network Switch 48 x SFP/4x SFP+ with redundancy power supply
6151	NS32SFP+/2QSFP+	Network Switch 32 x SFP/2x QSFP+
6161	NS48SFP+/4QSFP+	Network Switch 48x SFP+ 10G / 4x QSFP+

13. FIRST AID





Your Extender....



14. EXTENDED WARRANTY



2 years standard warranty



Part nr 9003 Warranty extension to 5 years per UNIT Part nr 9002 Warranty extension to 5 years per SET

15. NOTES