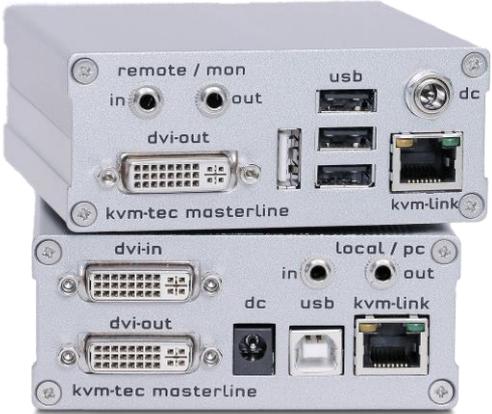
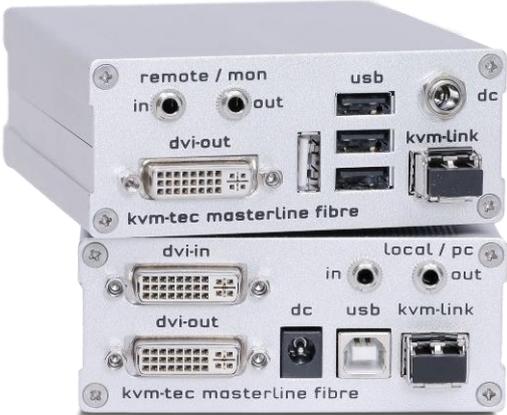




smart connections



Part.No: 6701
Masterline MVX1



Part.No: 6801
Masterline MVX1-F

Masterline MVX1/MVX1-F KVM Extender Instruction Manual

1 MVX1 Package contents

1x MVX1 / PC	1x USB cable
1x MVX1 / Monitor	1x Quick Start Guide
2x Power supply 12V 1A	4x Mounting Pads
1x DVI-cable	4x Rubber Feet

2 Specifications

Max. ambient temperatur: 45° Celsius

Dimensions: 98 x 41 x 106mm

Weight: 540 g per Set

Power input: 5 W per device

Material: anodized aluminium

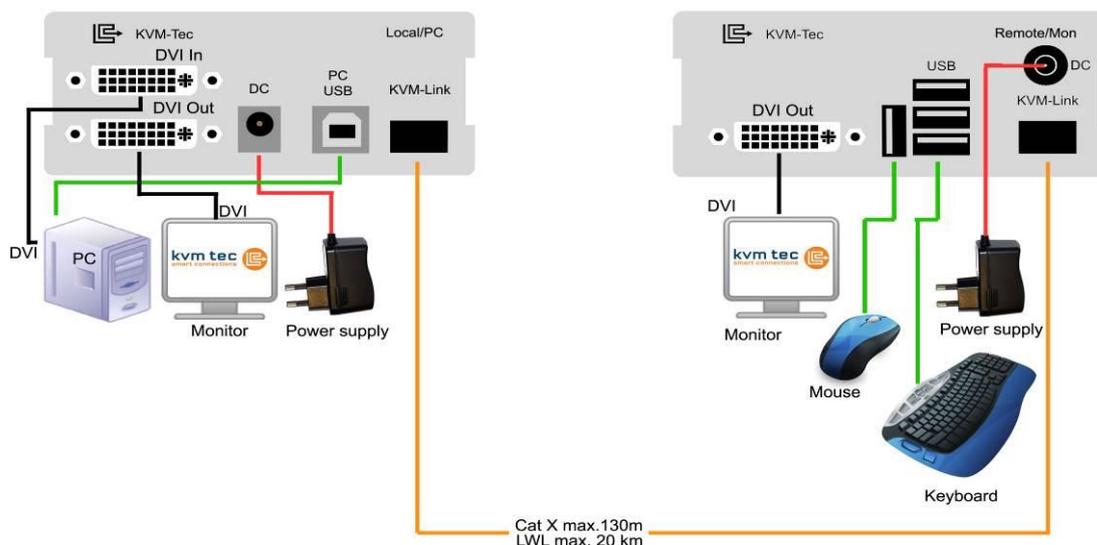
Power supply: 12V 1A external power supply

Fibre model:

Class 1 Laser Product 1 according to DIN 40008/EN and VDE 0837

3 Installation

Connect all the cables from your PC as shown in the following diagram.



3.1 Plug in/unplug the CATx cable

The Masterline MVX CATx Extender is delivered with an RJ45 socket. Plug the CATx cable with the corresponding RJ45 plug (see section 7 requirements for CATx cable) into the RJ45 socket. Check that the plug is latched in place to prevent faults.

To remove the CATx cable press the latch down and slowly pull the cable out.

3.2 Plug in/unplug the LWL cable

Fibre model:

Class 1 Laser Product 1 according to DIN 40008/EN and VDE 0837



Attention: Avoid exposure to the beam!

The Masterline MVX Fibre Extender is delivered with a multimode SFP module as standard. If a different SFP module is used, remove the black dust protector from the SFP module and pull the metal latch of the module forwards until it's at a right angle, then the SFP module may be removed. To plug in the new SFP module into the extender follow the same steps in reverse.

To connect the fibre cable check that dust protector has been removed and slot the fibre cable in until latch has clicked in to place. To remove the fibre cable press on the latch and slowly remove the cable.

4 Start up

Switch on all devices. Both Extender units will start an automated initialisation process, signified by a blinking red status light, this may take a few seconds. When the status light turns green, all signals will be transmitted.

SVX Status LED	Verbindung	Videosignal
rot	✘	✘
orange	✓	✘
grün	✓	✓

5 Mounting Options

5.1 Mounting Pads

Included. These can be used to hold the Extenders in place by preventing them from sliding and falling.

5.2 Rack Mounting Kit

Our rack mounting kits are optional extras, available in three varieties and make installation convenient.

Now available with a redundant power supply.

RMK-F Part No. 6130; RMK-FN Part No. 6131; RMK-FRN Part No. 6132

5.3 Under desk Mounting Kit

Optional (Part No. 6937)

5.4 Din Rail Mounting Kit

Optional (Part No. 6136)

5.5 Dual Mounting Kit

Optional (Part No. 6937)

6 Menu / Settings

To enter the menu, use a keyboard connected to the remote Extender and press the „Scroll Lock“ key five times in quick succession. The menu will be displayed (Fig.1). Sub-menus are accessed by pressing the appropriate key. The currently installed firmware version is displayed below the menu.

```
Menu USB High Speed Mem
U = Update Flash FW
M = USB Memory Option
L = Lock Menu disabled
S = Show last image disabled
O = DDC Opt remote monitor
V = VGA parameter
N = Audio Input Gain
P = Power save mode = 0
R = RS232 Baurate up to 9600
I = Monitor sync
Q = Exit
FW Version Rem = 1276 Loc = 1276
```

Fig. 1

6.1 Menu Item „U“ - Update Flash Firmware

Used to perform a firmware update. The latest version of the firmware can be downloaded from www.kvm-tec.com. Each update file is accompanied by a detailed description of the update process.

6.2 Menu Item „M“ - Memory Option

Allows the user to enable/disable the memory option. When activated USB flash storage and external storage devices may be used via the Extender.

If your Extender was provided with this functionality you can turn it on and off from this menu at any time. If the Extender didn't come with this functionality, it can be upgraded by your dealer.

```
USB High Speed Memory Option
Enable: send ID to distributor
ID    = 3fe687d5
Enter matching code
code = -----
```

Fig. 2

In this case, the menu displays the ID of the device (Fig. 2).

Consult your dealer and submit the ID of the device. They can send you the appropriate unlock code.

After entering the correct code the Extender will restart and will display “memory” in the title of the main menu. To return to the main menu press “ESC”.

6.3 Menu Item „L“ - Lock Menu

Here the Extender menu can be locked. When enabled, access to the menu will be locked 5 minutes after start up. This prevents unauthorized access to the Extender menu. The Extender must be restarted to enter the main menu again (turn the power supply off and on).

The menu is enabled or disabled from this screen by pressing “0” or

```
Lock Menu 5 Min after
Power-On is disabled

Enter 1 for enable or
      0 for disable:
```

“1” respectively (Fig. 3). To return to the main menu press “ESC”.

Fig. 3

6.4 Menu Item „S“ - Show last Image

When this is enabled the console extender will not show a black screen when it is no longer connected to a PC extender. Instead it will keep the last image that it received. To indicate that this image is no longer current the edges of the screen will flash red.

To return to the main menu press “ESC”.

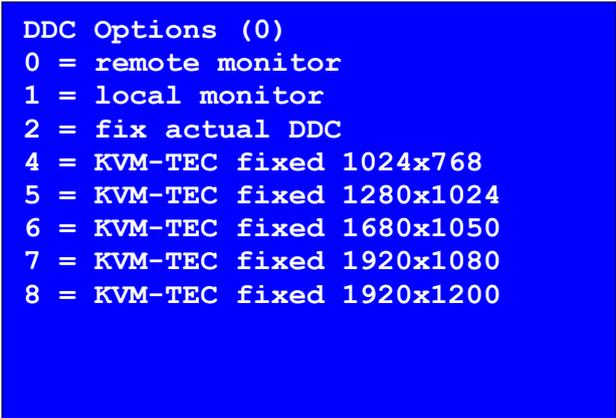
6.5 Menu Item „O“ - DDC Option

In this menu you can define DDC information is used by the PC. Pressing “0” specifies that the DDC information from the monitor attached to the remote Extender should be used. Pressing “1” specifies that the DDC information from the monitor attached to the local Extender should be used.

Pressing “2” saves the current DDC information allowing the system to continue on the same after the Extender has been restarted.

Using the keys “4” through “8” sets the system to use a predefined resolution which is saved (Fig. 4).

To return to the main menu press “ESC”.



```
DDC Options (0)
0 = remote monitor
1 = local monitor
2 = fix actual DDC
4 = KVM-TEC fixed 1024x768
5 = KVM-TEC fixed 1280x1024
6 = KVM-TEC fixed 1680x1050
7 = KVM-TEC fixed 1920x1080
8 = KVM-TEC fixed 1920x1200
```

Fig. 4

6.6 Menu Item „V“ - VGA Parameter

This is where VGA preferences can be set and optimised.

By pressing the “F1” and “F4” keys the display area can be moved up and down. “F2” and “F3” shift the display area left and right.

By using the “F5” and “F6” keys the display area can be reduced or enlarged to fit the display area of the monitor.

Press the “space bar“ to change the rate of change of the above settings.
By repeatedly pressing the “space bar“ this is set back to 1.

Use the “M“ button to switch the video mode between:

Auto – the mode is automatically detected and set by the Extender.

DVI – only DVI input is detected.

VGA – only VGA input is detected.

For automatic adjustment and positioning of the image area, press “K“.

Press “I“ to reset parameters to default values.

To save the settings and exit the menu press “S“ – for an exit without saving press “Q“.

```
Shift      up F1  F4 down  0
Shift      <- F2  F3 ->   0
Zoom       out F5  F6 in    2200
Pixelfine  -  F7  F8 +    0
```

```
Space = 1/10 steps
M = Video Mode Auto
K = Automatic seek
I = Init VGA Table
S = Save - exit
Q = Quit - no save
```

6.7 Menu Item „N“ - Audio Input Gain

This menu sets the volume of the audio input on the remote extender (microphone). Default value is „5“ and can be amplified up to „9“ and reduced down to „0“. At „0“ the audio input on the remote extender is disabled.

```
Audio Input Gain (5)
0      = Off
1 - 9 = Amplification Level
```

6.8 Menu item „P“- Power Save

When in power saving mode the remote extender will turn off its video out when it receives no video for more than a minute. This enables the monitor to enter sleep mode if supported. To wake press any key on keyboard.

6.9 Menu Item “R” - RS232

The following signals are transferred, the pin numbers refer to a 9-pin D-sub plug. The remote interfaces are DTE.

Pin	Funktion
3	Transmit Data
2	Receive Data
4	DTR
8	CTS

The baudrate can be set in the menu. There is a universal setting for baudrates up to 9600 which transmits all different RS232 configurations transparently.

For higher baud rates the following settings are available via the menu:

Baudrate:	Parity:	Stopbits:
4800	No	1
9600	Odd	2
19200	Even	
38400	Mark	
57600	Space	
115200		
230400		

6.10 Menu item „I“ - Monitor Sync

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 activate simply press the "1" key in this menu. Should the monitor start to flicker, this option can be disabled again by pressing the "0" key. To return to the main menu press "ESC".

To close the extender menu press the "Q" key.

7 Requirements

Requirements for Cat5/6/7 cables:

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 can not 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.

Applicable standards: Class D ISO/IEC 11801:2002 or EN 50173-1:2002.

Schema EIA/TIA-568 B

Pin	Color
1	Orange/White
2	Orange
3	Green/White
4	Blue
5	Blue/White
6	Green
7	Brown/White
8	Brown

Shielded installation cable with min. cross section of 24AWG throughout the length, shield is contiguous and connected to both ends.

Shielded patch cable is allowed for connection to the device.

Requirements fibre

Multi-Mode (standard)

Included with the MVX1-F is a LWL Multimode – SFP Module which allows a transmission distance of up to 500m.

Requires dedicated fibre connection, cable type Duplex Multimode 50/125 μ (OM2), LC connector



Single-Mode (optional)

LWL Singlemode – SFP Module up to 20km transmission distance

Requires dedicated fibre connection, cable type Duplex Singlemode, LC connector

LWL Singlemode – SFP Modul BiDi up to 20km transmission distance

Requires dedicated fibre connection, cable type Singlemode, LC connector

Wavelength (λ) 850nm in multimode

1310nm TX – 1550nm RX in singlemode

8 Guidelines

KVM-TEC Electronic GmbH

Kulturstrasse 1, 2522 Oberwaltersdorf, Austria

Commercial register number: FN 272328h LG Wr. Neustadt

DOCUMENT OF CONFORMITY

CE KONFORMITÄTSERKLÄRUNG

I hereby declare that the device:

KVM-Extender Type/Model:

MVX Digital KVM Extender/PC and Digital KVM Extender/Mon

when used with a shielded CATx cable fulfils the requirements of EU Directive 2004/108/EC (EMV / EMC) "Electromagnetic Compatibility" and the harmonized European standards listed within.

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

Safety

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

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

EMC / EMV

EN 55022: 2010 Class A

EN 55024: 2010

EN 61000-3-2 2014

EN 61000-3-3 2013

EU Directive

2006/95/EC low voltage directive

EMC directive 2004/108/EC EMV guideline

EU directive 2011/65/EU (RoHS II)

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

Oberwaltersdorf, November 2015



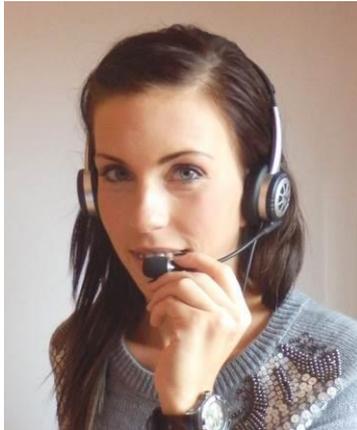
Dietmar Pfurtscheller
Geschäftsführer / CEO

Warning !

This is a Class A product. This product may cause radio interference in residential areas. In this case adequate counter measures may be requested from the operator.

9 Support:

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



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<http://www.kvm-tec.com/support>**