FLEXline

master *flex*

DUAL/ Fiber FULL HD KVM EXTENDER OVER IP

KVM Extender over IP in DVI, DVI-D, USB2.0

Masterflex dual is a highly optimized KVM Extender over IP for distances up to 160km at a resolution of 1920x1200@60Hz and is available in copper. Masterflex extenders convince by an ultra flat housing - 4 dual units in 1 U (8 video streams), have embedded sound and are compatible with standard network components. network components. Video sharing, USB sharing, multihead.

... Masterflex dual Fiber/ CATx

- DVI-D/ USB2.0 Extender over IP
- dual in Fiber/CATx
- max resolution
- 1920 x 1200 @60 Hz
- max distance 160km
- 4 dual Masterflex KVM Extender in 1U
- Sound embedded

- Full HD videos in real time
- USB transfer rate max 480Mbit/s
- only one cable for USB & Video
- DVI extension without quality loss
- Feature - freeze last image
- Local/CPU -Remote/CON Monitor Output
- point to point - matrix switching system with switch (Layer3)
- Switching Manager basic version included

USB 2.0 in house development

The in-house developed USB 2.0 implementation supports typical USB devices such as touch screens, sound modules, printers and similar components. In addition, support for storage devices such as thumb drives and USB HDDs can be enabled or disabled as needed, adding another layer of security. And of course, keyboards and mice are also supported.

Infrastructure

Masterflex Local and Remote Units have a slim form factor. They fit easily under a desk and up to four units can be mounted in a 19" rack. The single-sided orientation of the interfaces allows for easy access during setup and maintenance. Flexline has a fanless design for quiet and ergonomic workspaces.

Bandwidth reduction

Masterflex enables transmission bandwidth to be limited in nine fixed stages. This enables controlled network utilization by reducing the operating power. Depending on the application, this can even be done without any noticeable effects (e.g. static image monitoring).

www.kvm-tec.com

V10522

Full HD over IP

kvm-tec over IP
on ihse.company

master *flex*

Part No.: KT- 6023

Upgrades opt
- USB Memory
- Interlaced Mode
- Sound analog
- Analog VGA - transmitted as DVI

Matrix Switching System

To interconnect multiple Masterflex Extender Locals and Remotes via an L3 network switch, a central switching manager is required to create a multipoint matrix switching system with access control and other administrative and operational functions.

Compatibility

Masterflex extenders are compatible with ECOsmart, all extenders of the Flexline series. In matrix setups, they can be combined with media4Kconnect and Scalableline extenders to form a homogeneous system managed by the Switching Manager.

Audio

Masterflex KVM Extender offers two options for transmitting stereo audio signals. The video embedded 2-channel - L-PCM standard and unbalanced analog bi-directional audio via 3.5mm jack sockets for line input and speakers.
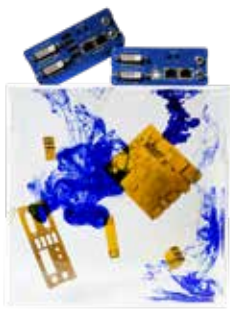
Latency (encoding/decoding)
<1,38 ms

For each meter of transmission additional 5ns of signal propagation need to be added. 200km result in 1ms accordingly. Latencies caused by network switch topologies vary by type and manufacturer and overall configuration and need to be counted on top!

9-Step bandwidth fix reduction (1: no – 9: max reduction)

Image Change (Frame to Frame) (%)	average bandwidth [Mbit/s] with fix r eduction
5	50
10	100
25	250
50	470
75	950
100	950

With bandwidth reduction the frame rate is reduced.
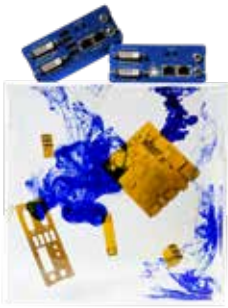Via level 5, the color accuracy is additionally the color accuracy is slightly reduced

kvm-tec overIP
an ihse.company

www.kvm-tec.com

master *flex*

Part No.: KT- 6023

		MV2-F Local/CPU	MV2-F Remote/CON
Interfaces	Video	2 x DVI in (no HCDP)	2x DVI-D out
	USB 2.0	1 x USB-B to PC	4 x USB-A (devices)
	Audio	1 x 3,5mm jack (Line In) 1 x 3,5mm jack (Line out)	1 x 3,5mm jack (Line In) 1Vpp 1 x 3,5mm lack (headphone) 2 x 10mW@320 Ohm
Video	Signal type Resolution (digital) Signal type Resolution (analog) (opt.) Color mode	DVI-D max. 1920x1200 @ 60Hz DVI-I max. 1920x1200 @ 60Hz 24bit	DVI-D max. 1920x1200 @ 60Hz
Audio	Type Bandwidth	analogue 16bit, 44kHz, 2ch	analogue 16 bit, 44kHz, 2ch
USB	Specification Type Rate	USB 2.0 transparent max. 480 Mbit/s mass storage devices & camera optional	USB 2.0 transparent max. 480 Mbit/s mass storage devices & camera optional
Casing	Material Dimension (w x H x D) Weight Shipping weight SET 1895 g /4.17 lb	anodized aluminum 108 x 43 x 107,5 mm 4.25 x 1.69 x 4,23 inch 295 g / 0.65 lb shipment weight 1005g/2,21 lb	anodized aluminum 108 x 43 x 107,5 mm 4.25 x 1.69 x 4.29 inch 295 g/ 0.65 lb shipment weight 890 g/ 1.96lb
Compression factor		3,5 depending on the image conten	3,5 depending on the image content
Network Interface		Duplex LC	Duplex LC
Power Supply	Type	wall power supply unit 12 VDC 2A max 35V	wall power supply unit 12 VDC 2A max 35 V
Power Input	Operation	6W	6W without USB devices Example: a typical keyboard has a power consumption of 0.2W
Operation environment	Temperature Humidity	0 to +45 °C /32 to 113 °F) < 80%, non -condensing	0 to +45 °C /32 to 113 °F) < 80%, non- condensing
Storage environment	Temperature Humidity	-25 to 80 °C /-13 to 176 F < 80%, non condensing	-25 to 80 °C /-13 to 176 F < 80%, non condensing
Cooling		free air convection	free air convection
MTBF		82.820 calculated hours approx. 10 years	82.820 calculated hours approx. 10 years
Conformity		CE, FCC	CE, FCC
Warranty		2 years (5 years optional)	2 years (5 years optional)
Delivery content	Devices Power Supply Cables Modules Mounting Manual	1 x MV2-F local (CPU) 1 x wall power supply unit 12V 1A (EU-plug or INT plug) 2 x DVI - DVI cable 1,8m (5.9ft) 1 x USB cable 1,8m (5.9ft) 2 x VGA-DVI cable 1,8m (5.9ft) opt 2 x Audio cable 1,8m (5.9ft) opt 2 x SFP module Multimode up to 500m/1640ft (alternativ with Single-mode up to 20km/12mi Item 6835 4 x rubber feet Quickinstallation manual download: www.kvm-tec	1 x MV2-F remote (CON) 1 x wall power supply unit 12V 1A (EU-plug or INT plug) 2 x SFP module Multimode up to 500m/1640 ft (alternativ with Single-mode up to 20km/12mi Item 6835 4 x rubber feet

Part No.	Short Name	Short description
KT - 6023	MV2-F	Masterflex Extender Dual Fiber – Set *EAN 0798190109160 UPC 051497112974*
KT - 6023L	MV2-FL	Masterflex Extender Dual Fiber –Local Unit /CPU *EAN 0798190109206 UPC 051497112981*
KT - 6023R	MV2-FR	Masterflex Extender Dual Fiber –Remote Unit /CON EAN 0798190109213 UPC 051497112998
KT - 6041	MV-SO	MASTERflex sound upgrade EAN 0798190109220 UPC 051497113001
KT - 6042	MV-VGA	Masterflex analog VGA upgrade EAN 0798190109237 UPC 051497113018
KT - 6043	MV-MO	MASTERflex USB memory upgrade EAN 0798190109244 UPC 051497113025
KT - 9003 KT - 9002	GV5JU GV5J	Warranty extension to 5 years per UNIT Warranty extension to 5 years per SET
ADD-ONS KT - 6231	UMK-FLEX	Rack Mounting Kit for under the table for FLEXline *EAN 0798190109466 UPC 051497113247*
KT - 6232	RMK-FLEX-F	Rack Mounting Kit with front panel for FLEXline EAN 0798190109473 UPC 051497113254
KT - 6233	RMK-FLEX-FN	Rack Mounting Kit with front panel and Power supply EAN 0798190109480 UPC 051497113261
KT - 6234	RMK-FLEX	Rack Mounting Kit with front panel and redundand Power supply for FLEXline EAN 0798190109503 UPC 051497113285
KT - 6235	DINMK-FLEX	Din Rail Mounting for FLEXline EAN 0798190109510 UPC 051497113292
KT - 6236	VH -FLEX	Vesa Mounting Kit for Flexline EAN 0798190109527 UPC 051497113308
KT - 6835	AL-MV2-F-SM	alternativ Single mode module up to 20km/12mi

point to point

switching system

KVM-TEC	IHSE GmbH	IHSE USA LLC	IHSE GMBH Asia	IHSE China Co.,Ltd
Gewerbepark	Benzstr.1	1 Corp.Dr.Suite	158Kallang	Room 814
Mitterfeld 1 A	88094 Oberteuringen	Cranburry NJ 08512	Way,#07-13A	Building 3, Kezhu Road
2523 Tattendorf	Germany	USA	349245 Singapore	Guangzhou PRC
Austria				
www.kvm-tec.com	www.ihse.com	www.ihseusa.com	www.ihse.com	www.ihse.com.cn

Misprints, errors and technical changes reserved