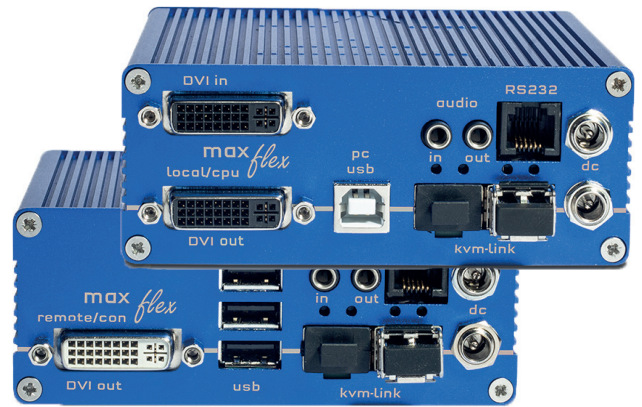


FLEXline

max

flex



SINGLE REDUNDANT / FIBER FULL HD  
KVM EXTENDER OVER IP

KVM Extender over IP in DVI, DVI-D,  
KVM Extender USB in Fiber

Maxflex single redundant is a highly optimized KVM Extender over IP for distances up to 160km at a resolution of 1920x1200@60Hz and is available in Fiber. Maxflex extenders feature an ultra slim chassis - 4 dual/single units in 1U (8 video streams), have embedded sound and are compatible with standard network components. Video sharing, USB sharing, multihead.

... Maxflex single FIBER

- DVI-D/ USB2.0 Extender over IP
- dual in fiber
- max resolution
- 1920 x 1200 @60 Hz
- max distance 160km
- 4 single Maxflex 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)
- PoE version opt (PoE capable network switch)
- Switching Manager basic version included
- RS 232 interface

USB 2.0 in house development

The in-house developed USB 2.0 implementation supports typical USB devices like touch screens, sound modules, printers and alike components. On top the support for memory devices such as thumb-drives and USB HDDs can be enabled or disabled on demand providing another layer of security. And of course keyboards and mice are supported, too.

Infrastructure

MAXflex locals and remotes are small form factor devices. They fit easily underneath a desk and up to four units can be mounted on a 19"- shelf. Single-sided interface orientation provides easy access in setup and service. They provide two power inputs for redundant feeding. MAXflex is designed fanless and with that noiseless for silent and ergonomic work spaces.

Bandwidth reduction

MAXflex allows limiting the transmission bandwidth limitation in nine fix steps. This allows to managed network utilization by reducing operational performance. Depending on the use case, this might not even have a recognizable impact (e.g. static image monitoring).

Mouse glide &Switch

up to 16 can be operated with one mouse and one Keyboard





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### Upgrades INCLUDED

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

## Matrix Switching System

Combining multiple MAXflex fiber extender locals and remotes together via a L3 network switch requires a central Switching Manager creating a multi-point matrix switching system with access control and other administrative and operational functionality.

## Audio and RS-232

The MAXflex KVM extender provides two ways of transmitting stereo audio signals. The video embedded 2-channel – L-PCM standard and unbalanced analog bi-directional audio using 3.5mm jacks for Line input and speakers. An additional RS-232 interface extends data with up to 155kBits along the link as well.

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

## Compatibility

MAXflex extenders are compatible to ECOsmart, SMARTflex and MASTERflex extenders. In matrix setups they can be combined with media4Kconnect and Scalableline extenders lining up to a homogeneous system managed by Switching Manager.

## Mouse glide & Switch

In matrix applications like control rooms the MAXflex series built-in Mouse, Glide & Switch feature allows operators with multi-monitor setups connected to multiple sources single keyboard and mouse control by simply crossing the borders of a screen performing smooth background switching. Such an operator setup may consist of up to 16 monitors



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## Technical Specifications

		MA1-Local/CPU	MA1 Remote/CON
Interfaces	Video	1 x DVI in 1x DVI out	1x 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 (Speaker) 2x10mW@32Ohm
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 / embedded 16bit, 44kHz, 2ch	analogue/embedded 16 bit, 44kHz, 2ch
USB	Specification Type Rate	USB 2.0 transparent max. 480 Mbit/s mass storage devices & camera	USB 2.0 transparent max. 480 Mbit/s mass storage devices & camera
RS 232 interface		transparent up to 115200 baud +/-5V,CTS/DTR handshake	transparent up to 115200 baud +/-5V,CTS/DTR handshake
Network Interface		Duplex LC	Duplex LC
Video Compression		3.5 depending on frame content	3.5 depending on frame content
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 43x 107,5 mm 4.25 x 1.69 x 4.29 inch 295 g/ 0.65 lb shipment weight 890 g/ 1.96lb
Power Supply	Type	wall power supply unit 12 VDC 1A redundant max 35V barrel connector 2.1mm	wall power supply unit 12 VDC 1A redundant max 35V barrel connector 2.1mm
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 SFP module Mounting Manual	1 x MA1-F local (CPU)  1 x wall power supply unit 12V 1A (EU-plug or INT plug)  1 x DVI - DVI cable 1,8m (5.9ft) 1 x USB cable 1,8m (5.9ft)  2 x SFP module multimode up to 500 m /1640ft duplex LC  4 x rubber feet  Quickinstallation manual download: <a href="http://www.kvm-tec">www.kvm-tec</a>	1 x MA1-F remote (CON)  1 x wall power supply unit 12V 1A (EU-plug or INT plug)    2 x SFP module multimode up to 500m /1640ft duplex LC  4 x rubber feet



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Part No.: KT- 6016

## Part Number & Short description

Part No.	Order No.	Short description
KT - 6016	MA1-F	Maxflex Extender Single Fiber – Set EAN 0798190109312 UPC 051497113094
KT - 6016L	MA1-FL	Maxflex Extender Single Fiber –Local Unit /CPU EAN 0798190109329 UPC 051497113100
KT - 6016R	MA1-FR	Maxflex Extender Single Fiber –Remote Unit /CON EAN 0798190109336 UPC 051497113117
KT - 9003 KT - 9002	GV5JU GV5J	Warranty extension flexible per UNIT Warranty extension flexible 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 KT - 6236	DINMK-FLEX VH -FLEX	Din Rail Mounting for FLEXline EAN 0798190109510 UPC 051497113292 Vesa Mounting Kit for Flexline EAN 0798190109527 UPC 051497113308
KT - 6835 KT-7070 KT-7080	AL MV-F-SM TNT40 TNT1120	Alternativ Single Mode Module up to 20km/12mi DIN Rail power supply DN40-12 Din Rail Power suipply DN100-12



point to point



switching system

KVM-TEC Gewerbepark Mitterfeld 1 A 2523 Tattendorf Austria www.kvm-tec.com	KVM-TEC ASIA p +9173573 20204 sales.apac@kvm-tec.com  KVM-TEC CHINA P + 86 1360 122 8145 chinasales@kvm-tec.com www.kvm-tec.com	IHSE GmbH Benzstr.1 88094 Oberteuringen Germany www.ihse.com	IHSE USA LLC 1 Corp.Dr.Suite Cranbury NJ 08512 USA www.ihseusa.com	IHSE GMBH Asia 158Kallang Way,#07-13A 349245 Singapore www.ihse.com	IHSE China Co.,Ltd Room 814 Building 3, Kezhu Road Guangzhou PRC www.ihse.com.cn
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