



# DP1.2-Vision

# DP KVM extenders v 1.0

## KVM extender

Extender systems to bridge IT-distances



G&D IF IT'S KVM



The company

Experience the whole world of

KVM

## G&D IF IT'S KVM

Guntermann & Drunck is regarded as a leading manufacturer of digital and analogue KVM equipment used in control rooms in air traffic control, broadcast studios, on ships and to monitor industrial processes.

With a powerful portfolio consisting of KVM extenders, switches and matrix switches, G&D's users get real added value. G&D provides the broadest KVM product portfolio at the market. Even with different features, all G&D products are compatible and can be combined. Our KVM solutions optimise the application of IT equipment and improve the working conditions for humans and computers.

No matter where KVM devices are installed, there's always one main requirement - robust, reliable, user-friendly and easy to operate KVM systems that can be adapted to future requirements and grow with your demands.

By short lines of communication G&D is able to solve challenging requirements and tailor systems to our customers' needs. We keep direct contact to our customers and are personally available. We are proactive and always keep an eye on the trends in the industry. Functionalities required by our customers are quickly implemented into our products. Our success can only be measured with our customers' satisfaction.

Trust in G&D for your optimal KVM solution.

### DP1.2-Vision - transmission of DisplayPort™ 1.2 signals via CAT or fibre optics

The system consists of a computer module (transmitter) and a user module (receiver) and enables you to operate a computer on a local or remote console.

- Distances up to 140 meters at maximum resolution over CAT-x cable (depending on cable: x = 5e, 6, 7)
- Distances up to 400 metres at maximum resolution with multimode fiber optics
- Distances up to 5,000 (S) or 10,000 m (S+) metres at maximum resolution with singlemode fiber optics

DP1.2-Vision uses CAT-x cables or fibre optics to transmit signals up to 140 m (CAT) or up to 10,000 m (Fiber). The devices use DisplayPort™ 1.2 video and are available as single and multi channel variant (in preparation). It is also possible to transmit transparent USB 2.0, RS232 and audio signals.



DP1.2-Vision-Fiber-ARU-CPU front view

With its network port, the web interface and monitoring functions, the DP1.2-Vision system offers important features for mission-critical applications.

## Details

### Video

- Support of DisplayPort™ 1.2a video
- Support of 4K and ultra HD resolutions at 60 Hz
- Transmission is compressed, pixel perfect, with low latency and ideal hand eye coordination
- Pixel encoding RGB 4:4:4 with 24bpp / 8bpc
- Resolution with pixel rates between 25 MPixel/s and 600 MPixel/s at the computer module, at the local console and at the user module
- 24 bit colour depth
- Exemplary resolutions: 4096x2160/60Hz (4Kp60Hz), 3840x2160/60Hz (Ultra-HD/60Hz), 1920x1200/60Hz, 2560x1600/60Hz, 2048x2048/60Hz (2Kx2K)
- Further VESA and CEA standardized resolutions with refresh rates within the range of the maximum pixel rate as well as horizontal and vertical frequency possible
- Horizontal frequency: 25kHz - 180kHz
- Vertical frequency: 24Hz - 200Hz

### Operation

- Can be operated in extender or matrix mode
- Ident LED to quickly find devices in complex installations
- Web interface for configuration, monitoring and updates
- SNMP (trap and agent)
- Permanent keyboard and mouse emulation
- Permanent monitor emulation
- E-EDID support
- Local console at computer module
- Freeze function at remote console

### Signals

- Embedded audio on DisplayPort™ up to stereo PCM
- Audio stereo bidirectional
- RS232 transparent
- Support of PS/2 and USB keyboard/mouse (even in mixed mode). On computer side, PS/2 keyboard only
- Optional transparent USB2.0 (16Mbit/s) transmitted on primary KVM transmission channel
- Optional transparent USB2.0 (HiSpeed, 480Mbit/s) transmitted on additional transmission channel

### Transmission

- Distances up to 140 meters at maximum resolution over CAT-x cable (depending on cable: x = 5e, 6, 7)
- Distances up to 400 metres at maximum resolution with multimode fiber optics
- Distances up to 5,000 (S) or 10,000 m (S+) metres at maximum resolution with singlemode fiber optics

### Device

- Redundant power supply
- Internal power pack for main power supply
- Ventilation concept for the use in cold/hot aisle installations
- Support through KVM-NetworkCenter
- Galvanic separation of transmitter and receiver with fiber optics, resistant against interference radiation
- High reliability

### System update

- Update over the config panel

## Features

### Screen-Freeze Function

If the console module loses the video signal due to a broken connection or a problem with the computer's graphics card, the Screen-Freeze function „freezes“ the last displayed image of the monitor. This state is highlighted by a red semi-transparent frame. The function is automatically cancelled when an active video signal exists again.

### Easier access with SNMP tool Zabbix

For customers who are not yet using extensive SNMP tools, G&D offer a simple way to use the functions included in the devices. Templates for the open source tool Zabbix are provided here. The program lets users monitor SNMP-capable devices in a network and, among other things, issues warning notifications about critical device states, which have been received via SNMP trap.

### Monitoring

With the Monitoring function, you can auto-output device status messages to Syslog servers or via SNMP. The web interface lets you monitor the device manually. The Monitoring function of the DP1.2-Vision queries the following values:

- Proactive monitoring of device states
- Event reporting function (Syslog or SNMP traps)
- Status power supply units (on/off)
- Status temperature threshold device (in/over limit)
- Status connection cables (ok/nok)
- Status computer (on/off)
- Status image signal graphics card computer (available/not available)
- Status network
- Fan monitoring
- Status SFP modules (in fiber variants)
- Status interfaces (CPU and CON modules)
- Freeze status (all channels)
- Type of display (local and remote)

## Variants

### Video channels

- Single-channel
- Multi channel (in preparation)

### Transmission medium

- **DP1.2-Vision-CAT variants:** transmission via CAT-x cables
- **DP1.2-Vision-Fiber variants:** transmission via multi-mode or singlemode fiber optics

### USB transmission

- **„U“ variants:** integrated USB 2.0 transmission without an additional transmission cable. This variant offers transfer speed up to 16 Mbit/s.
- **„U2“ variants:** USB 2.0 transmission with an additional cable. This solution reaches the HiSpeed transfer rate of 480 Mbit/s.

## Expansion

### Communication with KVM-NetworkCenter

DP1.2-Vision uses the network to communicate with the appliance KVM-NetworkCenter. When deploying more than one DP1.2-Vision, you can query and configure the devices by using the KVM-NetworkCenter.

### Embedding extenders in digital matrix systems

To be prepared for growing installations, the integrated matrix support turns the DP1.2-Vision into a future-proof investment.

This way, it is possible to include extenders at a later point into one of the digital G&D matrix systems within an existing installation. Thus, users benefit from more flexibility through distributed access - and any existing components can still be used as before.



## Installation

Link the computer to the back of the DP1.2-Vision transmitter. Distinctive cables connect the computer's keyboard, video, mouse, audio, RS232, and USB interfaces to the DP1.2-Vision computer module.

Installing the user console is just as easy: simply connect the operating hardware and monitor with the corresponding interfaces of the DP1.2-Vision receiver.

Use the existing cabling structure to link transmitter and receive.

## DP1.2-Vision-CAT/-Fiber



DP1.2-Vision-CAT-ARU-CON rear view



DP1.2-Vision-Fiber-ARU-CON rear view

### General features of the series DP1.2-Vision

Technical data	
<b>Interfaces for computers</b>	
Video:	see specific features
PS/2 keyboard:	1 × PS/2 socket
USB keyboard/mouse:	1 × USB-B socket
Audio:	3.5-mm jack plug (Line In) 3.5-mm jack plug (Line Out)
USB 2.0	<b>Variant -ARU:</b> Shared transmission of signals of USB devices as well as keyboard and mouse via USB-B socket.  <b>Variant -ARU2:</b> 1 × USB-B socket
RS232:	1 × RS232 socket
<b>Interfaces for remote console</b>	
Monitor:	see specific features
PS/2 keyboard/mouse:	1 × PS/2 socket
USB keyboard/mouse:	2 × USB-A socket
Generic-HID:	1 × USB-A socket
Audio:	3.5-mm jack plug (Speaker) 3.5-mm jack plug (Line In)
USB 2.0: (Variant -ARU)	2 × USB-A socket
USB 2.0: (Variant -ARU2)	4 × USB-A socket
RS232:	1 × RS232 plug
<b>Interfaces for local console</b>	
Monitor:	see specific features
PS/2 keyboard:	1 × PS/2 socket
USB keyboard/mouse:	2 × USB-A socket
<b>Other interfaces</b>	
Connection to network:	1 × RJ 45 socket (10/100 MBit/s)
Service:	1 × Mini-USB socket (type B)
<b>Audio (DisplayPort™ Digital)</b>	
Transmission type:	2 channel LPCM, stereo
Resolutions:	16/20/24 bit
Sampling rates:	up to 48 kHz

## DP1.2-Vision-CAT/-Fiber

### General features of the series DP1.2-Vision

Technical data	
<b>Audio</b>	
Transmission type:	transparent, bidirectional
Resolution:	24 bit digital, Stereo
Sampling rate:	96 kHz
Bandwidth:	22 kHz
<b>Graphics</b>	
Format:	DisplayPort™(DP 1.2a)
Colour depth:	24 Bit
Pixel encoding:	RGB 4:4:4 with 24bpp/8bpc
Videobandwidth:	max. 600 MP/s, DisplayPort™ 4 Lanes, LBR, HBR, HBR2, SingleStreamTransport (SST)
Max. resolution per video channel:	2560 × 1600 @ 60Hz, 4096 × 2160 @ 60 Hz (4Kp60Hz)
Exemplary resolutions:	per video channel: 1920 × 1200 @ 60Hz, 2048 × 2048 @ 60Hz (2K × 2K) 2560 × 1600 @ 60Hz 3840 × 2160 @ 60 Hz (Ultra HD/60Hz) 4096 × 2160 @ 60 Hz (4Kp60Hz)  further standardised resolutions possible
Vertical frequency:	24 Hz to 200 Hz
Horizontal frequency:	25 kHz to 185 kHz
<b>RS232</b>	
Transmission type:	transparent
Transmission rate:	max. 115.200 bit/s
Supported signals:	RxD, TxD, RTS, CTS, DTR, DSR, DCD
<b>USB 2.0 full speed (-ARU variant)</b>	
Specification:	USB 2.0
Transmission type:	transparent
Supported devices:	high power devices (up to 500 mA)
Range <b>CAT modules</b>	max. 140 meters
Range <b>Fiber modules</b>	max. 10,000 meters
<b>USB 2.0 high speed (-ARU2 variant)</b>	
Specification:	USB 2.0
Transmission type:	transparent
Transmission rate:	max. 480 Mbit/s
Supported devices:	high power devices (up to 500 mA)
Range <b>CAT modules</b>	max. 100 meters
Range <b>Fiber modules</b>	max. 10,000 meters
<b>Main power supply</b>	
Type:	internal power pack
Connector:	IEC plug (IEC-320 C14)
Voltage:	AC100-240V/60-50Hz
<b>Redundant power supply</b>	
Type:	external power pack
Connector:	miniDIN-4 Power socket
Voltage:	+12VDC

## DP1.2-Vision-CAT



DP1.2-Vision-CAT-ARU2-CON rear view



DP1.2-Vision-CAT-ARU2-CPU rear view

### Specific features of single-channel devices

	DP1.2-VISION-CAT-CPU	DP1.2-VISION-CAT-CON
<b>Interfaces for local console</b>		
Monitor:	1 × DisplayPort™ jack	-
<b>Interfaces for computer</b>		
Video:	1 × DisplayPort™ jack	-
<b>Interfaces to computer module</b>		
KVM, Audio und RS232: (When using the -ARU variant the signals of USB 2.0 devices are transmitted via this cable.)	1 × RJ 45 socket	-
USB 2.0 ( -ARU2 variant)	1 × RJ 45 socket	-
<b>Interfaces for remote console</b>		
Monitor:	-	1 × DisplayPort™ jack
<b>Interface to computer module</b>		
KVM, Audio und RS232: (When using the -ARU variant the signals of USB 2.0 devices are additionally transmitted via this cable.)	-	1 × RJ 45 socket
USB 2.0 ( -ARU2 variant)	-	1 × RJ 45 socket
<b>Casing</b>		
Material:	anodised aluminium	
Dimensions (W × H × D):	210 × 44 × 210 mm (Desktop) 19" × 1 U × 210 mm (Rackmount)	
Weight:	approx. 1.3 kg	
<b>Operating environment</b>		
Temperature:	+5 to +45 °C	
Air humidity:	< 80 %, non-condensing	



## DP1.2-VISION-FIBER



DP1.2-Vision-Fiber-ARU2-CON rear view



DP1.2-Vision-Fiber-ARU2-CPU rear view

### Specific features of single-channel devices (DP1.2-Vision-Fiber)

	DP1.2-Vision-FIBER-CPU	DP1.2-Vision-FIBER-CON
<b>Interfaces for local console</b>		
Monitor:	1 × DisplayPort™ jack	-
<b>Interfaces for computer</b>		
Video:	1 × DisplayPort™ jack	-
<b>Interfaces to user module</b>		
KVM, Audio and RS232: (When using the -ARU variant the signals of USB 2.0 devices are transmitted via this cable.)	1 × LC duplex socket	-
USB 2.0: (-ARU2 variant)	1 × LC duplex socket	-
<b>Interfaces for remote console</b>		
Monitor:		1 × DisplayPort™ jack
<b>Interface to computer module</b>		
KVM, Audio and RS232: (When using the -ARU variant the signals of USB 2.0 devices are additionally transmitted via this cable.)	-	1 × LC duplex socket
USB 2.0: (-ARU2 variant)	-	1 × LC duplex socket
<b>Casing</b>		
Material:	anodised aluminium	
Dimensions (W × H × D):	210 × 44 × 210 mm (Desktop) 19" × 1 U × 210 mm (Rackmount)	
Weight:	approx. 1,3 kg	
<b>Operating environment</b>		
Temperature	+5 to +45 °C	
Air humidity:	< 80 %, non-condensing	

## DP1.2-Vision-Fiber

### Features of transmission modules

MULTIMODE TRANSMISSION MODULE	
<b>Data transmission</b>	
Type:	Optical fibres (2 fibres)
Type of interface:	LC duplex
<b>Cable length (max.)</b>	
Multimode 62,5/125 µm:	100 meters
Multimode 50,0/125 µm, Class OM2:	200 meters
Multimode 50,0/125 µm, Class OM3:	400 meters
<b>Performance data</b>	
Wavelength (λ):	850 nm (830 nm to 860 nm)
Optical power output (P <sub>OUT</sub> ) in 50 oder 62,5 µm MMF:	-9,0 dBm to -2,5 dBm
Receiving sensitivity (P <sub>MIN</sub> ):	-15 dBm (OMA)
Sensitivity – Stressed (P <sub>S</sub> ):	138µW (50 µm MMF)

SINGLEMODE (S) TRANSMISSION MODULE	
<b>Data transmission</b>	
Type:	Optical fibres (2 fibres)
Type of interface:	LC duplex
<b>Cable length (max.)</b>	
Singlemode 9/125µm, Class OS1:	5 Kilometer
<b>Leistungsdaten</b>	
Wavelength (λ):	1310 nm (1260 nm to 1350 nm)
Optical power output (P <sub>OUT</sub> ) in 9 µm MMF:	-9,5 dBm to -3,0 dBm
Receiving sensitivity (P <sub>MIN</sub> ):	-18 dBm (OMA)

SINGLEMODE (S+) TRANSMISSION MODULE	
<b>Data transmission</b>	
Type:	Optical fibres (2 fibres)
Type of interface:	LC duplex
<b>Cable length (max.)</b>	
Singlemode 9/125µm, Class OS1:	10 Kilometer
<b>Performance data</b>	
Wavelength (λ):	1310 nm (1260 nm to 1360 nm)
Optical power output (P <sub>OUT</sub> ) in 9 µm MMF:	-8,4 dBm to -1,0 dBm
Receiving sensitivity (P <sub>MIN</sub> ):	-18 dBm (OMA)

## DP1.2-Vision-CAT

### Current and power consumption

Main power supply		
Device variant	Current consumption	Power consumption(max.)
AR-CPU	100-240V/60-50Hz/0.5-0.2A	21,0 W
AR-CON	100-240V/60-50Hz/0.5-0.2A	23,2 W
ARU-CPU	100-240V/60-50Hz/0.5-0.2A	21,6 W
ARU-CON	100-240V/60-50Hz/0.7-0.3A	36,0 W
ARU2-CPU	100-240V/60-50Hz/0.5-0.2A	24,0 W
ARU2-CON	100-240V/60-50Hz/0.7-0.3A	38,0 W

Redundant power supply		
Device variant	Current consumption	Power consumption(max.)
AR-CPU	12VDC/1.8A	19,4 W
AR-CON	12VDC/1.9A	21,4 W
ARU-CPU	12VDC/1.8A	19,9 W
ARU-CON	12VDC/2.9A	33,1 W
ARU2-CPU	12VDC/2A	22,1 W
ARU2-CON	12VDC/3.1A	34,9 W

## DP1.2-VISION-FIBER

### Current and power consumption

Main power supply		
Device variant	Current consumption	Power consumption (max.)
AR-CPU	100-240V/60-50Hz/0.5-0.2A	21,5 W
AR-CON	100-240V/60-50Hz/0.5-0.2A	23,6 W
ARU-CPU	100-240V/60-50Hz/0.5-0.2A	22,1 W
ARU-CON	100-240V/60-50Hz/0.7-0.3A	36,4 W
ARU2-CPU	100-240V/60-50Hz/0.5-0.2A	24,4 W
ARU2-CON	100-240V/60-50Hz/0.7-0.3A	38,4 W

Redundant power supply		
Device variant	Current consumption	Power consumption (max.)
AR-CPU	12VDC/1.8A	19,8 W
AR-CON	12VDC/2.0A	21,8 W
ARU-CPU	12VDC/1.8A	20,3 W
ARU-CON	12VDC/3.0A	33,5 W
ARU2-CPU	12VDC/2.0A	22,5 W
ARU2-CON	12VDC/3.1A	35,3 W

## List of item numbers CAT Single-Channel

Item No.	Description	USB 2.0	Design
A1120300	DP1.2-Vision-CAT-AR-CON		Desktop
A1110207	DP1.2-Vision-CAT-AR-CPU		Desktop
A1120302	DP1.2-Vision-CAT-ARU-CON	U2	Desktop
A1110209	DP1.2-Vision-CAT-ARU-CPU	U2	Desktop
A1120304	DP1.2-Vision-CAT-ARU2-CON	U2	Desktop
A1110211	DP1.2-Vision-CAT-ARU2-CPU	U2	Desktop

## List of item numbers CAT Multi-Channel 2

Item No.	Description	USB 2.0	Design
A1220240	DP1.2-Vision-CAT-MC2-AR-CON		Desktop
A1210204	DP1.2-Vision-CAT-MC2-AR-CPU		Desktop
A1220241	DP1.2-Vision-CAT-MC2-ARU-CON	U2	Desktop
A1210205	DP1.2-Vision-CAT-MC2-ARU-CPU	U2	Desktop
A1220242	DP1.2-Vision-CAT-MC2-ARU2-CON	U2	Desktop
A1210206	DP1.2-Vision-CAT-MC2-ARU2-CPU	U2	Desktop

## List of item numbers CAT Multi-Channel 3

Item No.	Description	USB 2.0	Design
A1320023	DP1.2-Vision-CAT-MC3-AR-CON		Desktop mit Rackmount-Kit
A1310032	DP1.2-Vision-CAT-MC3-AR-CPU		Desktop mit Rackmount-Kit
A1320024	DP1.2-Vision-CAT-MC3-ARU-CON	U2	Desktop mit Rackmount-Kit
A1310033	DP1.2-Vision-CAT-MC3-ARU-CPU	U2	Desktop mit Rackmount-Kit
A1320025	DP1.2-Vision-CAT-MC3-ARU2-CON	U2	Desktop mit Rackmount-Kit
A1310034	DP1.2-Vision-CAT-MC3-ARU2-CPU	U2	Desktop mit Rackmount-Kit

## List of item numbers CAT Multi-Channel 4

Item No.	Description	USB 2.0	Design
A1420244	DP1.2-Vision-CAT-MC4-AR-CON		Desktop mit Rackmount-Kit
A1410199	DP1.2-Vision-CAT-MC4-AR-CPU		Desktop mit Rackmount-Kit
A1420245	DP1.2-Vision-CAT-MC4-ARU-CON	U2	Desktop mit Rackmount-Kit
A1410200	DP1.2-Vision-CAT-MC4-ARU-CPU	U2	Desktop mit Rackmount-Kit
A1420246	DP1.2-Vision-CAT-MC4-ARU2-CON	U2	Desktop mit Rackmount-Kit
A1410201	DP1.2-Vision-CAT-MC4-ARU2-CPU	U2	Desktop mit Rackmount-Kit

### List of item numbers Fiber Multimode Single-Channel

Item No.	Description	USB 2.0	Design
A1120305	DP1.2-Vision-Fiber(M)-AR-CON		Desktop
A1110212	DP1.2-Vision-Fiber(M)-AR-CPU		Desktop
A1120307	DP1.2-Vision-Fiber(M)-ARU-CON	U2	Desktop
A1110214	DP1.2-Vision-Fiber(M)-ARU-CPU	U2	Desktop
A1120309	DP1.2-Vision-Fiber(M)-ARU2-CON	U2	Desktop
A1110216	DP1.2-Vision-Fiber(M)-ARU2-CPU	U2	Desktop

### List of item numbers Fiber Multimode Multi-Channel 2

Item No.	Description	USB 2.0	Design
A1220243	DP1.2-Vision-Fiber(M)-MC2-AR-CON		Desktop
A1210207	DP1.2-Vision-Fiber(M)-MC2-AR-CPU		Desktop
A1220244	DP1.2-Vision-Fiber(M)-MC2-ARU-CON	U2	Desktop
A1210208	DP1.2-Vision-Fiber(M)-MC2-ARU-CPU	U2	Desktop
A1220245	DP1.2-Vision-Fiber(M)-MC2-ARU2-CON	U2	Desktop
A1210209	DP1.2-Vision-Fiber(M)-MC2-ARU2-CPU	U2	Desktop

### List of item numbers Fiber Multimode Multi-Channel 3

Item No.	Description	USB 2.0	Design
A1320026	DP1.2-Vision-Fiber(M)-MC3-AR-CON		Desktop mit Rackmount-Kit
A1310035	DP1.2-Vision-Fiber(M)-MC3-AR-CPU		Desktop mit Rackmount-Kit
A1320027	DP1.2-Vision-Fiber(M)-MC3-ARU-CON	U2	Desktop mit Rackmount-Kit
A1310036	DP1.2-Vision-Fiber(M)-MC3-ARU-CPU	U2	Desktop mit Rackmount-Kit
A1320028	DP1.2-Vision-Fiber(M)-MC3-ARU2-CON	U2	Desktop mit Rackmount-Kit
A1310037	DP1.2-Vision-Fiber(M)-MC3-ARU2-CPU	U2	Desktop mit Rackmount-Kit

### List of item numbers Fiber Multimode Multi-Channel 4

Item No.	Description	USB 2.0	Design
A1420247	DP1.2-Vision-Fiber(M)-MC4-AR-CON		Desktop mit Rackmount-Kit
A1410202	DP1.2-Vision-Fiber(M)-MC4-AR-CPU		Desktop mit Rackmount-Kit
A1420248	DP1.2-Vision-Fiber(M)-MC4-ARU-CON	U2	Desktop mit Rackmount-Kit
A1410203	DP1.2-Vision-Fiber(M)-MC4-ARU-CPU	U2	Desktop mit Rackmount-Kit
A1420249	DP1.2-Vision-Fiber(M)-MC4-ARU2-CON	U2	Desktop mit Rackmount-Kit
A1410204	DP1.2-Vision-Fiber(M)-MC4-ARU2-CPU	U2	Desktop mit Rackmount-Kit

### List of item numbers Fiber Singlemode Fiber Single-Channel

Item No.	Description	USB 2.0	Design
A1120310	DP1.2-Vision-Fiber(S)-AR-CON		Desktop
A1110217	DP1.2-Vision-Fiber(S)-AR-CPU		Desktop
A1120312	DP1.2-Vision-Fiber(S)-ARU-CON	U2	Desktop
A1110219	DP1.2-Vision-Fiber(S)-ARU-CPU	U2	Desktop
A1120314	DP1.2-Vision-Fiber(S)-ARU2-CON	U2	Desktop
A1110221	DP1.2-Vision-Fiber(S)-ARU2-CPU	U2	Desktop

### List of item numbers Fiber Singlemode Multi-Channel 2

Item No.	Description	USB 2.0	Design
A1220246	DP1.2-Vision-Fiber(S)-MC2-AR-CON		Desktop
A1210210	DP1.2-Vision-Fiber(S)-MC2-AR-CPU		Desktop
A1220247	DP1.2-Vision-Fiber(S)-MC2-ARU-CON	U2	Desktop
A1210211	DP1.2-Vision-Fiber(S)-MC2-ARU-CPU	U2	Desktop
A1220248	DP1.2-Vision-Fiber(S)-MC2-ARU2-CON	U2	Desktop
A1210212	DP1.2-Vision-Fiber(S)-MC2-ARU2-CPU	U2	Desktop

### List of item numbers Fiber Singlemode Multi-Channel 3

Item No.	Description	USB 2.0	Design
A1320029	DP1.2-Vision-Fiber(S)-MC3-AR-CON		Desktop mit Rackmount-Kit
A1310038	DP1.2-Vision-Fiber(S)-MC3-AR-CPU		Desktop mit Rackmount-Kit
A1320030	DP1.2-Vision-Fiber(S)-MC3-ARU-CON	U2	Desktop mit Rackmount-Kit
A1310039	DP1.2-Vision-Fiber(S)-MC3-ARU-CPU	U2	Desktop mit Rackmount-Kit
A1320031	DP1.2-Vision-Fiber(S)-MC3-ARU2-CON	U2	Desktop mit Rackmount-Kit
A1310040	DP1.2-Vision-Fiber(S)-MC3-ARU2-CPU	U2	Desktop mit Rackmount-Kit

### List of item numbers Fiber Singlemode Multi-Channel 4

Item No.	Description	USB 2.0	Design
A1420250	DP1.2-Vision-Fiber(S)-MC4-AR-CON		Desktop mit Rackmount-Kit
A1410205	DP1.2-Vision-Fiber(S)-MC4-AR-CPU		Desktop mit Rackmount-Kit
A1420251	DP1.2-Vision-Fiber(S)-MC4-ARU-CON	U2	Desktop mit Rackmount-Kit
A1410206	DP1.2-Vision-Fiber(S)-MC4-ARU-CPU	U2	Desktop mit Rackmount-Kit
A1420252	DP1.2-Vision-Fiber(S)-MC4-ARU2-CON	U2	Desktop mit Rackmount-Kit
A1410207	DP1.2-Vision-Fiber(S)-MC4-ARU2-CPU	U2	Desktop mit Rackmount-Kit

### List of item numbers Fiber Singlemode+ Fiber Single-Channel

Item No.	Description	USB 2.0	Design
A1120315	DP1.2-Vision-Fiber(S+)-AR-CON		Desktop
A1110222	DP1.2-Vision-Fiber(S+)-AR-CPU		Desktop
A1120317	DP1.2-Vision-Fiber(S+)-ARU-CON	U2	Desktop
A1110224	DP1.2-Vision-Fiber(S+)-ARU-CPU	U2	Desktop
A1120319	DP1.2-Vision-Fiber(S+)-ARU2-CON	U2	Desktop
A1110226	DP1.2-Vision-Fiber(S+)-ARU2-CPU	U2	Desktop

### List of item numbers Fiber Singlemode+ Multi-Channel 2

Item No.	Description	USB 2.0	Design
A1220249	DP1.2-Vision-Fiber(S+)-MC2-AR-CON		Desktop
A1210213	DP1.2-Vision-Fiber(S+)-MC2-AR-CPU		Desktop
A1220250	DP1.2-Vision-Fiber(S+)-MC2-ARU-CON	U2	Desktop
A1210214	DP1.2-Vision-Fiber(S+)-MC2-ARU-CPU	U2	Desktop
A1220251	DP1.2-Vision-Fiber(S+)-MC2-ARU2-CON	U2	Desktop
A1210215	DP1.2-Vision-Fiber(S+)-MC2-ARU2-CPU	U2	Desktop

### List of item numbers Fiber Singlemode+ Multi-Channel 3

Item No.	Description	USB 2.0	Design
A1320032	DP1.2-Vision-Fiber(S+)-MC3-AR-CON		Desktop mit Rackmount-Kit
A1310041	DP1.2-Vision-Fiber(S+)-MC3-AR-CPU		Desktop mit Rackmount-Kit
A1320033	DP1.2-Vision-Fiber(S+)-MC3-ARU-CON	U2	Desktop mit Rackmount-Kit
A1310042	DP1.2-Vision-Fiber(S+)-MC3-ARU-CPU	U2	Desktop mit Rackmount-Kit
A1320034	DP1.2-Vision-Fiber(S+)-MC3-ARU2-CON	U2	Desktop mit Rackmount-Kit
A1310043	DP1.2-Vision-Fiber(S+)-MC3-ARU2-CPU	U2	Desktop mit Rackmount-Kit

### List of item numbers Fiber Singlemode+ Multi-Channel 4





























Item No.	Description	USB 2.0	Design
A1420253	DP1.2-Vision-Fiber(S+)-MC4-AR-CON		Desktop mit Rackmount-Kit
A1410208	DP1.2-Vision-Fiber(S+)-MC4-AR-CPU		Desktop mit Rackmount-Kit
A1420254	DP1.2-Vision-Fiber(S+)-MC4-ARU-CON	U2	Desktop mit Rackmount-Kit
A1410209	DP1.2-Vision-Fiber(S+)-MC4-ARU-CPU	U2	Desktop mit Rackmount-Kit
A1420255	DP1.2-Vision-Fiber(S+)-MC4-ARU2-CON	U2	Desktop mit Rackmount-Kit
A1410210	DP1.2-Vision-Fiber(S+)-MC4-ARU2-CPU	U2	Desktop mit Rackmount-Kit

## Legend

### ABBREVIATIONS

CPU	=	Computer module	RM	=	For assembly in a 19" rack
PC	=	Computer module	DT	=	Desktop device
CON	=	User module	DP	=	DisplayPort™
REM	=	User module	A	=	Audio
MC2	=	Multi channel 2	R	=	RS232
MC3	=	Multi channel 3	U	=	integr. USB 2.0 up to 16 MBit/s
MC4	=	Multi channel 4	U2	=	transp. USB 2.0 Hi-Speed 480 Mbit/s
M	=	Multi mode	D	=	Delay
S	=	Single mode			
S+	=	Single mode+			

### EQUIPMENT FEATURES

	Audio		Modular setup
	CAT cable		Monitoring
	CrossDisplay-Switching		Multi user
	Delay		Multi channel Video
	DisplayPort™ 1.1		Network connection
	DVI Dual link video		Power switching
	DVI Single link video		Remote IP
	Expansion		RS 232
	Fiber optics		Screen Freeze
	Keyboard/Mouse		Separate local/remote user
	KVM over IP		Single user
	KVM-NetworkCenter-Support		USB 2.0
	Media control		VGA Video
	Mix & Match		Web interface