DP KVM extenders

DP-Vision 1.0

KVM extenders
Extender systems to bridge IT-distances

G&D IF IT'S KVM

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.

DP-Vision - transmission of DisplayPort™ signals via CAT or fibre optics

The DP-Vision transmits the following signals:

- DisplayPort™ 1.1
- bidirectional audio and RS232
- PS/2 and USB keyboard/mouse support
- Integrated USB 2.0 (ARU variant)
- Transparent transmission of USB 2.0 (ARU2 variant)
- Generic USB-HID interface

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.

DP-Vision uses CAT-x cables or fibre optics to transmit signals up to 10,000 m. The devices use DisplayPort video and are available as variants displaying 1, 2, 3 or 4 video channels. It is also possible to transmit transparent USB 2.0, RS232 and audio signals.

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

DP-Vision - back view

DP-Vision - front view

Highlights

Video

- Highly developed compression algorhythm of the latest generation for best video quality and latency-free transmission - The High-Dynamic-Image-Processing level 3
- DisplayPort 1.1a signals
- Resolutions per channel up to 2560×1600 @ 60 Hz (more VESA and CEA standardized resolutions within the video bandwith and the horizontal / vertical frequency are possible, e.g. 1600 x 1200 @ 60 Hz)
- Hz to 120 Hz
- 24 bit colour mode
- Transparent forwarding of E-DDC information
- Single- and multi-channel variants

Signals

- Transmission of bidirectional audio and RS232
- PS/2 and USB keyboard/mouse support
- Integrated USB 2.0 transmission with Full Speed (ARU variant)
- Transparent transmission of USB 2.0 with Hi-Speed 480 MBit/s (ARU2 variant)
- Generic USB-HID interface for connecting any HID device, e.g. touchscreens or tablets

Operation

- At both modules console with all video channels
- via Web-Interface or OSD
- Competing or exclusive operation via local or remote workplace

Transmission

- Distances up to 140 meters at maximum resolution over CAT-x cable (x = 5e, 6, 7; depending on cable)
- 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

- Supports PS/2 and USB keyboard/mouse; allows mixed operation
- Permanent keyboard/mouse emulation
- Redundant, external power supply (optional)
- Ident LED helps finding the device in complex installations
- Shipped as desktop variant (Twin devices and sets for rack- or tablemounting are seperately available)

System 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 the display receives an active video signal.

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 SNMP. The web interface lets you monitor the device manually.

The Monitoring function of the DP-Vision queries the following values:

- Proactive monitoring of device states
- Event reporting function (Syslog or SNMP traps)
- Status power supply unit (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

Transmission medium

- **DP-Vision-CAT variants:** transmission via CAT-x cables
- **DP-Vision-Fiber variants:** transmission via multimode or singlemode fiber optics

Video channels

- Single-channel
- Multi-channel 2, 3 or 4

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

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

KVM-NetWork-Center

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.

Digital matrix system

DP-Vision Extender

Mix & Match

Installation

// DP-V 5
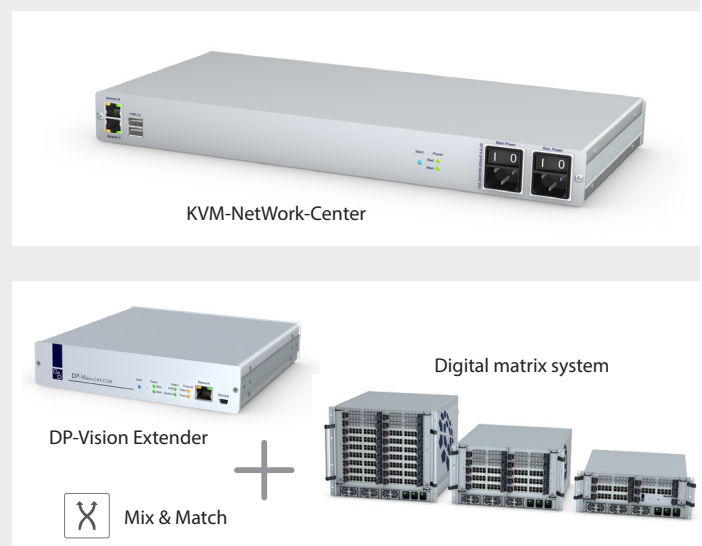
Link the computer to the back of the DP-Vision transmitter. Distinctive cables connect the computer's keyboard, video, mouse, audio, RS232, and USB interfaces to the DP-Vision computer module.

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

Use the existing cabling structure to link transmitter and receiver.

DP-Vision-CAT

DP-Vision-CAT-ARU computer module

DP-Vision-CAT-ARU computer module

General features of the series DP-Vision-CAT

Technical data	
Interfaces for computers	
Video	--> see specific features
PS/2 keyboard/mouse:	2 × 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 variant -ARU	Shared transmission of signals of USB devices as well as keyboard and mouse via USB-B socket.
USB 2.0 variant -ARU2	1 × USB-B socket
RS232	1 × RS232 socket
Interfaces for remote console	
Monitor:	--> see specific features
PS/2 keyboard/mouse:	2 × 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 (Micro In)
USB 2.0 variant -ARU	2 × USB-A socket
USB 2.0 variant -ARU2	2 × USB-A socket (front panel) 2 × USB-A socket (back panel)
RS232	1 × RS232 plug
Interfaces for local console	
Monitor:	--> see specific features
PS/2 keyboard:	1 × PS/2 socket
USB keyboard/mouse:	2 × USB-A socket
Other interfaces	
Connection to network:	1 × RJ 45 socket
Service:	1 × Mini-USB socket (type B)
Audio	
Transmission type:	transparent, bidirectional
Resolution:	24 bit digital, Stereo
Sampling rate:	96 kHz
Bandwidth:	22 kHz

General features of the series DP-Vision-CAT

Technical data	
RS232	
Transmission type:	transparent
Transmission rate:	max. 115.200 bit/s
Supported signals:	RxD, TxD, RTS, CTS, DTR, DSR, DCD
Graphics	
Format:	DisplayPort (DP 1.1a)
Colour depth:	24 Bit
Video bandwidth:	25 to 300 MP / s, DisplayPort 4 Lanes, HBR 2.7 Gbps
Max. resolution:	2560 × 1600 (60 Hz) 4096 × 2160 (30 Hz)
Exemplary resolutions:	4096 × 2160 (24 od 25 Hz) 3840 × 2160 (24, 25 od 30 Hz) 2048 × 2160 (60 Hz) 2048 × 2048 (60 Hz) Further VESA and CEA standardised resolution possible for video bandwidth/ pixel rate and horizontal/vertical frequency.
Vertical frequency:	24 Hz to 120 Hz
Horizontal frequency:	25 kHz to 185 kHz
USB 2.0 Full Speed (-ARU variant)	
Specification:	USB 2.0
Transmission type:	transparent
Supported devices:	high power devices (up to 500 mA)
Range:	max. 140 meters
USB 2.0 high speed (-ARU2 variant)	
Specification:	USB 2.0
Transmission type:	transparent
Transmission rate:	max. 480 Mbit/s
Supported devices:	high power devices (up to 500 mA)
Range:	max. 100 meters
Main power supply	
Type:	internal power pack
Connector:	IEC plug (IEC-320 C14)
Voltage:	AC100-240V/60-50Hz
Redundant power suppply	
Type:	external power pack
Connector:	miniDIN-4 Power socket
Voltage:	+12VDC

DP-Vision-CAT

DP-Vision-CAT-ARU user module

DP-Vision-CAT-ARU user module

Specific features of single-channel devices

	DP-VISION-CAT-CPU	DP-VISION-CAT-CON
Interfaces for local console		
Monitor:	1 × DisplayPort jack	-
Interfaces for remote console		
Monitor:	-	1 × DisplayPort jack
Interfaces for computer		
Video:	1 × DisplayPort jack	-
Interfaces to console module		
KVM, Audio and 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 × RJ45-Buchse	-
Interface to computer module		
KVM, Audio and 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
Casing		
Material:	anodised aluminium	
Dimensions (B × H × T) -AR and -ARU variants	210 × 44 × 210 mm (Desktop) 19" × 1 HE × 210 mm (Rackmount)	-
Dimensions (B × H × T) -ARU2 variant	270 × 44 × 210 mm (Desktop) 19" × 1 HE × 210 mm (Rackmount)	-
Dimensionen (B × H × T)	-	210 × 44 × 210 mm (Desktop) 19" × 1 HE × 210 mm (Rackmount)
Operating environment		
Temperature:	+5 to +45 °C	
Air humidity:	< 80 %, non-condensing	

DP-Vision-CAT-MC2

DP-Vision-CAT-MC2-ARU computer module

DP-Vision-CAT-MC2-ARU computer module

Specific features of multi-channel devices

	DP-VISION-CAT-MC2-CPU	DP-VISION-CAT-MC2-CON
Interfaces for local console		
Monitor:	2 × DisplayPort jack	-
Interfaces for remote console		
Monitor:	-	2 × DisplayPort jack
Interfaces for computer		
Video:	2 × DisplayPort jack	-
Interfaces to user module		
KVM, Audio and RS232 (When using the -ARU variant the signals of USB 2.0 devices are transmitted via this cable.)	2 × RJ 45 socket	-
USB 2.0 (-ARU2 variant)	1 × RJ 45 socket	-
Interfaces to computer module		
KVM, Audio and RS232 (When using the -ARU variant the signals of USB 2.0 devices are additionally transmitted via this cable.)	-	2 × RJ 45 socket
USB 2.0 (-ARU2 variant)	-	1 × RJ 45 socket
Casing		
Material:	anodised aluminium	
Dimensions (W × H × D):	270 × 44 × 210 mm	
Operating environment		
Temperature:	+5 to +45 °C	
Air humidity:	< 80 %, non-condensing	

DP-Vision-CAT-MC4

DP-Vision-CAT-MC4-AR computer module

DP-Vision-CAT-MC4-AR computer module

Specific features of multi-channel devices

	DP-VISION-CAT-MC4-CPU	DP-VISION-CAT-MC4-CON
Interfaces for local console		
Monitor:	4 × DisplayPort jack	-
Interfaces for remote console		
Monitor:	-	4 × DisplayPort jack
Interfaces for computer		
Video:	4 × DisplayPort jack	-
Interfaces to user module		
KVM, Audio und RS232 (When using the -ARU variant the signals of USB 2.0 devices are transmitted via this cable.)	4 × RJ 45 socket	-
USB 2.0 (Variante -ARU2)	1 × RJ 45 socket	-
Interfaces to computer module		
KVM, Audio und RS232 (When using the -ARU variant the signals of USB 2.0 devices are additionally transmitted via this cable)	-	4 × RJ 45 socket
USB 2.0 (-ARU2 variant)	-	1 × RJ 45 socket
Casing		
Material:	anodised aluminium	
Dimensions (W × H × D):	435 × 44 × 210 mm	
Operating environment		
Temperature:	+5 to +45 °C	
Air humidity:	< 80 %, non-condensing	

Current consumption

Device variant	Main power supply	Redundant power supply
AR-CPU	100-240V, 60-50Hz, 0.3-0.2A	12VDC/1.1A
AR-CON	100-240V, 60-50Hz, 0.3-0.2A	12VDC/1.3A
ARU-CPU	100-240V, 60-50Hz, 0.3-0.2A	12VDC/1.1A
ARU-CON	100-240V, 60-50Hz, 0.5-0.3A	12VDC/2.2A
ARU2-CPU	100-240V, 60-50Hz, 0.3-0.2A	12VDC/1.2A
ARU2-CON	100-240V, 60-50Hz, 0.5-0.3A	12VDC/2.3A
MC2-AR-CPU	100-240V, 60-50Hz, 0.4-0.2A	12VDC/1.7A
MC2-AR-CON	100-240V, 60-50Hz, 0.4-0.2A	12VDC/1.8A
MC2-ARU-CPU	100-240V, 60-50Hz, 0.4-0.2A	12VDC/1.7A
MC2-ARU-CON	100-240V, 60-50Hz, 0.6-0.3A	12VDC/2.8A
MC2-ARU2-CPU	100-240V, 60-50Hz, 0.4-0.2A	12VDC/1.8A
MC2-ARU2-CON	100-240V, 60-50Hz, 0.6-0.3A	12VDC/2.9A
MC4-AR-CPU	100-240V, 60-50Hz, 0.5-0.3A	12VDC/3.0A
MC4-AR-CON	100-240V, 60-50Hz, 0.6-0.3A	12VDC/3.0A
MC4-ARU-CPU	100-240V, 60-50Hz, 0.5-0.3A	12VDC/3.1A
MC4-ARU-CON	100-240V, 60-50Hz, 0.6-0.3A	12VDC/4.0A
MC4-ARU2-CPU	100-240V, 60-50Hz, 0.6-0.3A	12VDC/3.1A
MC4-ARU2-CON	100-240V, 60-50Hz, 0.6-0.4A	12VDC/4.1A

DP-Vision-Fiber

DP-Vision-Fiber-AR computer module

DP-Vision-Fiber-AR computer module

General features of the series DP-Vision-Fiber

Technical data	
Interfaces for computers	
Video	--> see specific features
PS/2 keyboard/mouse:	2 × 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 variant -ARU	Shared transmission of signals of USB devices as well as keyboard and mouse via USB-B socket.
USB 2.0 variant -ARU2	1 × USB-B socket
RS232	1 × RS232 socket
Interfaces for remote console	
Monitor:	--> see specific features
PS/2 keyboard/mouse:	2 × 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 (Micro In)
USB 2.0 variant -ARU	2 × USB-A socket
USB 2.0 variant -ARU2	2 × USB-A socket (front panel) 2 × USB-A socket (back panel)
RS232	1 × RS232 plug
Interfaces for local console	
Monitor:	--> see specific features
PS/2 keyboard:	1 × PS/2 socket
USB keyboard/mouse:	2 × USB-A socket
Other interfaces	
Connection to network:	1 × RJ 45 socket
Service:	1 × Mini-USB socket (type B)
Audio	
Transmission type:	transparent, bidirectional
Resolution:	24 bit digital, Stereo
Sampling rate:	96 kHz
Bandwidth:	22 kHz

General features of the series DP-Vision-Fiber

Technical data	
RS232	
Transmission type:	transparent
Transmission rate:	max. 115.200 bit/s
Supported signals:	RxD, TxD, RTS, CTS, DTR, DSR, DCD
Graphics	
Format:	DisplayPort (DP 1.1a)
Colour depth:	24 Bit
Video bandwidth:	25 to 300 MP / s, DisplayPort 4 Lanes, HBR 2.7 Gbps
Max. resolution:	2560 × 1600 (60 Hz) 4096 × 2160 (30 Hz)
Exemplary resolutions:	4096 × 2160 (24 od 25 Hz) 3840 × 2160 (24, 25 od 30 Hz) 2048 × 2160 (60 Hz) 2048 × 2048 (60 Hz) Further VESA and CEA standardised resolution possible for video bandwidth/ pixel rate and horizontal/vertical frequency.
Vertical frequency:	24 Hz to 120 Hz
Horizontal frequency:	25 kHz to 185 kHz
USB 2.0 Full Speed (-ARU variant)	
Specification:	USB 2.0
Transmission type:	transparent
Supported devices:	high power devices (up to 500 mA)
Range:	max. 10.000 meters
USB 2.0 high speed (-ARU2 variant)	
Specification:	USB 2.0
Transmission type:	transparent
Transmission rate:	max. 480 Mbit/s
Supported devices:	high power devices (up to 500 mA)
Range:	max. 10.000 meters
Main power supply	
Type:	internal power pack
Connector:	IEC plug (IEC-320 C14)
Voltage:	AC100-240V/60-50Hz
Redundant power suppply	
Type:	external power pack
Connector:	miniDIN-4 Power socket
Voltage:	+12VDC

DP-Vision-Fiber

DP-Vision-Fiber-AR user module

DP-Vision-Fiber-AR user module

Specific features of single-channel devices

	DP-VISION-FIBER-CPU	DP-VISION-FIBER-CON
Interfaces for local console		
Monitor:	1 × DisplayPort jack	-
Interfaces for remote console		
Monitor:	-	1 × DisplayPort jack
Interfaces for computer		
Video:	1 × DisplayPort jack	-
Interfaces to user module		
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	-
Interface to computer module		
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
Casing		
Material:	anodised aluminium	
Dimensions (B × H × T) -AR and -ARU variants	210 × 44 × 210 mm (Desktop) 19″ × 1 HE × 210 mm (Rackmount)	-
Dimensions (B × H × T) -ARU2 variant	270 × 44 × 210 mm (Desktop) 19″ × 1 HE × 210 mm (Rackmount)	-
Dimensionen (B × H × T)	-	210 × 44 × 210 mm (Desktop) 19″ × 1 HE × 210 mm (Rackmount)
Operating environment		
Temperature:	+5 to +45 °C	
Air humidity:	< 80 %, non-condensing	

DP-Vision-Fiber-MC2

DP-Vision-Fiber-MC2-AR user module

DP-Vision-Fiber-MC2-AR user module

Specific features of multi-channel devices

	DP-VISION-Fiber-MC2-CPU	DP-VISION-Fiber-MC2-CON
Interfaces for local console		
Monitor:	2 × DisplayPort jack	-
Interfaces for remote console		
Monitor:	-	2 × DisplayPort jack
Interfaces for computer		
Video:	2 × DisplayPort jack	-
Interfaces to user module		
KVM, Audio and RS232: (When using the -ARU variant the signals of USB 2.0 devices are transmitted via this cable.)	2 × LC duplex socket	-
USB 2.0 (-ARU2 variant)	1 × LC duplex socket	-
Interfaces to computer module		
KVM, Audio and RS232: (When using the -ARU variant the signals of USB 2.0 devices are additionally transmitted via this cable.)	-	2 × LC duplex socket
USB 2.0 (-ARU2 variant)	-	1 × LC duplex socket
Casing		
Material:	anodised aluminium	
Dimensions (W × H × D):	270 × 44 × 210 mm	
Operating environment		
Temperature:	+5 to +45 °C	
Air humidity:	< 80 %, non-condensing	

DP-Vision-Fiber-MC4

DP-Vision-Fiber-MC4-AR user module

DP-Vision-Fiber-MC4-AR user module

Specific features of multi-channel devices

	DP-VISION-Fiber-MC4-CPU	DP-VISION-Fiber-MC4-CON
Interfaces for local console		
Monitor:	4 × DisplayPort jack	-
Interfaces for remote console		
Monitor:	-	4 × DisplayPort jack
Interfaces for computer		
Video:	4 × DisplayPort jack	-
Interfaces to user module		
KVM, Audio und RS232: (When using the -ARU variant the signals of USB 2.0 devices are transmitted via this cable.)	4 × LC duplex socket	-
USB 2.0 (Variante -ARU2)	1 × LC duplex socket	-
Interfaces to computer module		
KVM, Audio und RS232: (When using the -ARU variant the signals of USB 2.0 devices are additionally transmitted via this cable)	-	4 × LC duplex socket
USB 2.0 (-ARU2 variant)	-	1 × LC duplex socket
Casing		
Material:	anodised aluminium	
Dimensions (W × H × D):	435 × 44 × 210 mm	
Operating environment		
Temperature:	+5 to +45 °C	
Air humidity:	< 80 %, non-condensing	

Current consumption

Device variant	Main power supply	Redundant power supply
AR-CPU	100-240V, 60-50Hz, 0.3-0.2A	12VDC/1.1A
AR-CON	100-240V, 60-50Hz, 0.3-0.2A	12VDC/1.3A
ARU-CPU	100-240V, 60-50Hz, 0.3-0.2A	12VDC/1.1A
ARU-CON	100-240V, 60-50Hz, 0.5-0.3A	12VDC/2.2A
ARU2-CPU	100-240V, 60-50Hz, 0.3-0.2A	12VDC/1.3A
ARU2-CON	100-240V, 60-50Hz, 0.5-0.3A	12VDC/2.4A
MC2-AR-CPU	100-240V, 60-50Hz, 0.4-0.2A	12VDC/1.8A
MC2-AR-CON	100-240V, 60-50Hz, 0.4-0.2A	12VDC/1.9A
MC2-ARU-CPU	100-240V, 60-50Hz, 0.4-0.2A	12VDC/1.8A
MC2-ARU-CON	100-240V, 60-50Hz, 0.6-0.3A	12VDC/2.9A
MC2-ARU2-CPU	100-240V, 60-50Hz, 0.4-0.2A	12VDC/1.9A
MC2-ARU2-CON	100-240V, 60-50Hz, 0.7-0.3A	12VDC/3.0A
MC4-AR-CPU	100-240V, 60-50Hz, 0.6-0.3A	12VDC/3.1A
MC4-AR-CON	100-240V, 60-50Hz, 0.6-0.3A	12VDC/3.2A
MC4-ARU-CPU	100-240V, 60-50Hz, 0.6-0.3A	12VDC/3.1A
MC4-ARU-CON	100-240V, 60-50Hz, 0.6-0.3A	12VDC/4.1A
MC4-ARU2-CPU	100-240V, 60-50Hz, 0.6-0.3A	12VDC/3.3A
MC4-ARU2-CON	100-240V, 60-50Hz, 0.6-0.4A	12VDC/4.3A

List of item numbers CAT single-channel

Item No.	Description	USB 2.0	DT
A1120195	DP-Vision-CAT-AR-CON		Desktop
A1110166	DP-Vision-CAT-AR-CPU		Desktop
A1120187	DP-Vision-CAT-ARU2-CON	USB 2.0	Desktop
A1110158	DP-Vision-CAT-ARU2-CPU	USB 2.0	Desktop
A1120188	DP-Vision-CAT-ARU-CON	USB 2.0	Desktop
A1110159	DP-Vision-CAT-ARU-CPU	USB 2.0	Desktop

List of item numbers CAT multi-channel

Item No.	Description	USB 2.0	DT
A1220200	DP-Vision-CAT-MC2-AR-CON		Desktop
A1210169	DP-Vision-CAT-MC2-AR-CPU		Desktop
A1220202	DP-Vision-CAT-MC2-ARU-CON	USB 2.0	Desktop
A1210171	DP-Vision-CAT-MC2-ARU-CPU	USB 2.0	Desktop
A1220201	DP-Vision-CAT-MC2-ARU2-CON	USB 2.0	Desktop
A1210170	DP-Vision-CAT-MC2-ARU2-CPU	USB 2.0	Desktop
A1320035	DP-Vision-CAT-MC3-AR-CON		Desktop
A1310044	DP-Vision-CAT-MC3-AR-CPU		Desktop
A1320036	DP-Vision-CAT-MC3-ARU-CON	USB 2.0	Desktop
A1310045	DP-Vision-CAT-MC3-ARU-CPU	USB 2.0	Desktop
A1320037	DP-Vision-CAT-MC3-ARU2-CON	USB 2.0	Desktop
A1310046	DP-Vision-CAT-MC3-ARU2-CPU	USB 2.0	Desktop
A1420203	DP-Vision-CAT-MC4-AR-CON		Desktop/Rackmount-Kit
A1410172	DP-Vision-CAT-MC4-AR-CPU		Desktop/Rackmount-Kit
A1420199	DP-Vision-CAT-MC4-ARU-CON	USB 2.0	Desktop/Rackmount-Kit
A1410168	DP-Vision-CAT-MC4-ARU-CPU	USB 2.0	Desktop/Rackmount-Kit
A1420198	DP-Vision-CAT-MC4-ARU2-CON	USB 2.0	Desktop/Rackmount-Kit
A1410167	DP-Vision-CAT-MC4-ARU2-CPU	USB 2.0	Desktop/Rackmount-Kit

List of item numbers Fiber single-channel

Item No.	Description	USB 2.0	DT
A1120189	DP-Vision-Fiber(M)-AR-CON		Desktop
A1110160	DP-Vision-Fiber(M)-AR-CPU		Desktop
A1120191	DP-Vision-Fiber(M)-ARU-CON	USB 2.0	Desktop
A1110162	DP-Vision-Fiber(M)-ARU-CPU	USB 2.0	Desktop
A1120190	DP-Vision-Fiber(M)-ARU2-CON	USB 2.0	Desktop
A1110161	DP-Vision-Fiber(M)-ARU2-CPU	USB 2.0	Desktop
A1120192	DP-Vision-Fiber(S)-AR-CON		Desktop
A1110163	DP-Vision-Fiber(S)-AR-CPU		Desktop
A1120194	DP-Vision-Fiber(S)-ARU-CON	USB 2.0	Desktop
A1110165	DP-Vision-Fiber(S)-ARU-CPU	USB 2.0	Desktop
A1120193	DP-Vision-Fiber(S)-ARU2-CON	USB 2.0	Desktop
A1110164	DP-Vision-Fiber(S)-ARU2-CPU	USB 2.0	Desktop
A1110190	DP-Vision-Fiber(S+)-AR-CPU		Desktop
A1120282	DP-Vision-Fiber(S+)-AR-CON		Desktop
A1120284	DP-Vision-Fiber(S+)-ARU-CON	USB 2.0	Desktop
A1110192	DP-Vision-Fiber(S+)-ARU-CPU	USB 2.0	Desktop
A1120283	DP-Vision-Fiber(S+)-ARU2-CON	USB 2.0	Desktop
A1110191	DP-Vision-Fiber(S+)-ARU2-CPU	USB 2.0	Desktop

List of item numbers Fiber multi-channel multimode

Item No.	Description	USB 2.0	DT
A1220229	DP-Vision-F(M)-MC2-AR-CON		Desktop
A1210195	DP-Vision-F(M)-MC2-AR-CPU		Desktop
A1220231	DP-Vision-F(M)-MC2-ARU-CON	USB 2.0	Desktop
A1210197	DP-Vision-F(M)-MC2-ARU-CPU	USB 2.0	Desktop
A1220230	DP-Vision-F(M)-MC2-ARU2-CON	USB 2.0	Desktop
A1210196	DP-Vision-F(M)-MC2-ARU2-CPU	USB 2.0	Desktop
A1320038	DP-Vision-F(M)-MC3-AR-CON		Desktop
A1310047	DP-Vision-F(M)-MC3-AR-CPU		Desktop
A1320039	DP-Vision-F(M)-MC3-ARU-CON	USB 2.0	Desktop
A1310048	DP-Vision-F(M)-MC3-ARU-CPU	USB 2.0	Desktop
A1320040	DP-Vision-F(M)-MC3-ARU2-CON	USB 2.0	Desktop
A1310049	DP-Vision-F(M)-MC3-ARU2-CPU	USB 2.0	Desktop
A1420242	DP-Vision-F(M)-MC4-AR-CON		Desktop/Rackmount-Kit
A1410198	DP-Vision-F(M)-MC4-AR-CPU		Desktop/Rackmount-Kit
A1420232	DP-Vision-F(M)-MC4-ARU-CON	USB 2.0	Desktop/Rackmount-Kit
A1410189	DP-Vision-F(M)-MC4-ARU-CPU	USB 2.0	Desktop/Rackmount-Kit
A1420243	DP-Vision-F(M)-MC4-ARU2-CON	USB 2.0	Desktop/Rackmount-Kit
A1410188	DP-Vision-F(M)-MC4-ARU2-CPU	USB 2.0	Desktop/Rackmount-Kit

List of item numbers Fiber multi-channel singlemode

Item No.	Description	USB 2.0	DT
A1220233	DP-Vision-F(S)-MC2-AR-CON		Desktop
A1210198	DP-Vision-F(S)-MC2-AR-CPU		Desktop
A1220235	DP-Vision-F(S)-MC2-ARU-CON	USB 2.0	Desktop
A1210191	DP-Vision-F(S)-MC2-ARU-CPU	USB 2.0	Desktop
A1220234	DP-Vision-F(S)-MC2-ARU2-CON	USB 2.0	Desktop
A1210199	DP-Vision-F(S)-MC2-ARU2-CPU	USB 2.0	Desktop
A1320041	DP-Vision-F(S)-MC3-AR-CON		Desktop
A1310050	DP-Vision-F(S)-MC3-AR-CPU		Desktop
A1320042	DP-Vision-F(S)-MC3-ARU-CON	USB 2.0	Desktop
A1310051	DP-Vision-F(S)-MC3-ARU-CPU	USB 2.0	Desktop
A1320043	DP-Vision-F(S)-MC3-ARU2-CON	USB 2.0	Desktop
A1310052	DP-Vision-F(S)-MC3-ARU2-CPU	USB 2.0	Desktop
A1420236	DP-Vision-F(S)-MC4-AR-CON		Desktop/Rackmount-Kit
A1410192	DP-Vision-F(S)-MC4-AR-CPU		Desktop/Rackmount-Kit
A1420238	DP-Vision-F(S)-MC4-ARU-CON	USB 2.0	Desktop/Rackmount-Kit
A1410194	DP-Vision-F(S)-MC4-ARU-CPU	USB 2.0	Desktop/Rackmount-Kit
A1420237	DP-Vision-F(S)-MC4-ARU2-CON	USB 2.0	Desktop/Rackmount-Kit
A1410193	DP-Vision-F(S)-MC4-ARU2-CPU	USB 2.0	Desktop/Rackmount-Kit

List of item numbers Fiber multi-channel singlemode +

Item No.	Description	USB 2.0	DT
A1220227	DP-Vision-F(S+)-MC2-AR-CON		Desktop
A1210192	DP-Vision-F(S+)-MC2-AR-CPU		Desktop
A1220232	DP-Vision-F(S+)-MC2-ARU-CON	USB 2.0	Desktop
A1210194	DP-Vision-F(S+)-MC2-ARU-CPU	USB 2.0	Desktop
A1220228	DP-Vision-F(S+)-MC2-ARU2-CON	USB 2.0	Desktop
A1210193	DP-Vision-F(S+)-MC2-ARU2-CPU	USB 2.0	Desktop
A1320044	DP-Vision-F(S+)-MC3-AR-CON		Desktop
A1310053	DP-Vision-F(S+)-MC3-AR-CPU		Desktop
A1320045	DP-Vision-F(S+)-MC3-ARU-CON	USB 2.0	Desktop
A1310054	DP-Vision-F(S+)-MC3-ARU-CPU	USB 2.0	Desktop
A1320046	DP-Vision-F(S+)-MC3-ARU2-CON	USB 2.0	Desktop
A1310055	DP-Vision-F(S+)-MC3-ARU2-CPU	USB 2.0	Desktop
A1420239	DP-Vision-F(S+)-MC4-AR-CON		Desktop/Rackmount-Kit
A1410195	DP-Vision-F(S+)-MC4-AR-CPU		Desktop/Rackmount-Kit
A1420241	DP-Vision-F(S+)-MC4-ARU-CON	USB 2.0	Desktop/Rackmount-Kit
A1410197	DP-Vision-F(S+)-MC4-ARU-CPU	USB 2.0	Desktop/Rackmount-Kit
A1420240	DP-Vision-F(S+)-MC4-ARU2-CON	USB 2.0	Desktop/Rackmount-Kit
A1410196	DP-Vision-F(S+)-MC4-ARU2-CPU	USB 2.0	Desktop/Rackmount-Kit

ABBREVIATIONS

CPU	=	Computer module
PC	=	Computer module
CON	=	User module
REM	=	User module
MC2	=	Multi channel 2
MC3	=	Multi channel 3
MC4	=	Multi channel 4
M	=	Multi mode
S	=	Single mode
S+	=	Single mode+

RM	=	For assembly in a 19" rack
DT	=	Desktop device
DP	=	DisplayPort™
A	=	Audio
R	=	RS232
U	=	integr. USB 2.0 up to 16 MBit/s
U2	=	transp. USB 2.0 Hi-Speed 480 Mbit/s
D	=	Delay

EQUIPMENT FEATURES

Icon	Feature	Icon	Feature
	Audio		Modular setup
CAT cable	CAT cable	Moni tor	Monitoring
CDS	CrossDisplay-Switching		Multi user
	Delay	Multi channel	Multi channel Video
DP™	DisplayPort™ 1.1	Remote IP	Network connection
DVI DL	DVI Dual link video		Power switching
DVI SL	DVI Single link video	LAN	Remote IP
Expansion	Expansion	RS 232	RS 232
Fiber optics	Fiber optics		Screen Freeze
	Keyboard/Mouse		Separate local/remote user
KVM over IP	KVM over IP		Single user
Network Center support	KVM-NetworkCenter-Support	USB 2.0	USB 2.0
Media Control	Media control	VGA	VGA Video
	Mix & Match	WEB If	Web interface