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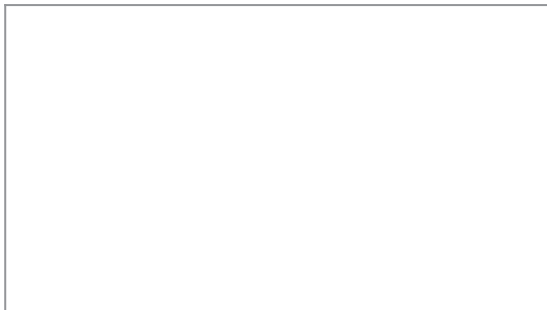
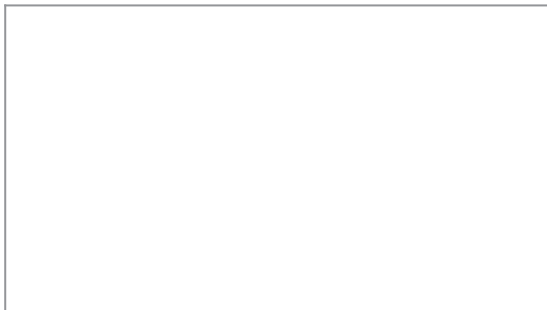
DP-Vision-Fiber(M)-MC4-ARU2-CPU

KVM extenders, Article number A1410188



Front



Back

The matrix-compatible KVM extenders of the DP-Vision series extend keyboard, video, and mouse signals, as well as other peripheral data (e.g., audio and USB), via a dedicated CAT or fiber connection (up to 10,000 m). An extender system consists of a computer module (CPU) and a compatible console module (CON). Computers can be controlled in near real-time – both in extender and matrix applications. The DP-Vision series supports DisplayPort 1.1 for high-resolution video up to 2560 × 1600 (60 Hz) or 4096 × 2160 (30 Hz). Video data is processed pixel-perfectly and offers excellent hand-eye coordination, thanks to bluedec™ – G&D's advanced, multi-stage, lossless compression technology.

Scope of delivery

Quantity	Description	Article number
1	PowerCable-2 Standard cable 2m	A6300057
4	DP1.4-Cable-M/M-2 SK13357 2m	A6300173
2	USB-AM/BM-2 cable USB 2m	A6300113
1	RS232-M/F-2 cable RS232 2m	A6300023

Quantity	Description	Article number
2	Audio-M/M-2-ferrite cable 2m	A6300083
1	19" RM-Set-436-1RU	A7000003

Details

Video

- bluedec™ – advanced developed multi-stage compression for best video quality and practically latency-free transmission. This method enables pixel-perfect video transmission with efficient bandwidth use.
- The end devices can be flexibly combined with each other, even if they process different video signals (Mix & Match)
- EDID data utilization from the workplace monitor
- Flexible EDID profile options for optimized monitor settings
- Resolution up to
  2560 × 1600 @ 60 Hz,
  4096 × 2160 @ 30 Hz
- Resolution up to
  2560 × 1600 @ 60 Hz,
  4096 × 2160 @ 30 Hz

Signals

- Embedded stereo audio (Digital, 2 channel LPCM)
- Transparent audio signals (stereo, analog)
- Transparent RS232 (max. 115,200 bps)
- USB 2.0 with Hi-Speed (separate transmission line, transparent, all USB classes)

Transmission

- The transmission distance is up to 400 meters over fiber multimode optics, incl. transmission module(s)/SFP transceiver(s)

Device

- Improved security through physical separation between workplaces and computers
- Access to standard interfaces of the computer, with no software installation required
- The devices are compatible with the ControlCenter-Digital and ControlCenter-Compact series (matrix operation) and other end devices for computer and workplace connections (extender operation)

- Internal power pack for main power supply

- CON-2 variant: console module with two transmission lines for redundancy
    - These modules can be connected to various counterparts, such as compatible computer modules or KVM matrix switches, whereby switching is carried out via pushbuttons, hotkeys or automatically, depending on the configuration

- UC variant: computer module with two transmission lines for redundancy
    - These modules can be connected to various counterparts, such as compatible console modules or KVM matrix switches

- MultiChannel variants (MC): Modules for multi-monitor workplaces with multi-channel video
    - MC mode uses the full bandwidth for each video channel, whereby a separate transmission line is required for each channel

Warranty

- A 3-year, free of charge product guarantee
- For an additional fee guarantee extension possible

Features

Security features

- Console modules do not store security-relevant information such as login credentials, which could be extracted in the event of device loss

- Early detection of security incidents or unusual activities through continuous monitoring via Syslog, monitoring, and SNMP

- Comprehensive rights management and user administration, allowing precise control over which user can access which resources
- Option for activatable access protection (default operating mode in matrix systems), in which authentication is required before accessing computer sources

- Support for external directory services (Active Directory, Radius, LDAP) to meet company security policies

- To comply with individual password policies and improve security, password complexity can be configured system-wide

- Configurable login options, such as displaying terms of use or setting the maximum acceptable number of failed login attempts, can enhance system security

- Auto Backup Function: Automates backups at user-defined intervals and replaces manual intervention – ensuring reliable, timely data protection without the need for continuous monitoring

- Freeze function: If the video signal is lost, the last displayed image is frozen and highlighted with a colored frame and timer

- 2-Factor-Authentication (2FA) – is integrated by default in KVM extenders and enhances security by requiring a second, possession-based factor during user authentication:
    - The traditional password authentication is combined with a time-limited, single-use code (Time-Based-One-Time-Password - TOTP)
    - You can choose between using the internal authentication server provided in the device or an external directory service
    - Authenticator apps or hardware token can be used
    - This additional layer of protection prevents unauthorized access and ensures the highest level of security, particularly in sensitive IT environments

Operation features

- Ready for operation out of the box, no additional configuration required
- Permanent keyboard/mouse emulation ensures a stable system
- Compatibility with special USB-HID input devices
- Operation via multilingual on-screen display (OSD) and hotkeys
- Configuration and update via the multilingual HTML5 web interface “Config Panel 21” (Java-free)
- Support of DDC/CI (Display Data Channel / Command Interface) to enable centralized software-side control of monitor settings such as brightness
- Local console at the computer module allows on-site operation, including all video channels
- Exclusive or concurrent operation: The KVM extender allows computer control both remotely and locally. When an input is detected, the extender automatically locks the competing console. The lock is lifted after a preset timeout if no further input is detected. A key combination can activate exclusive operation, immediately disabling the competing console. Another key combination restores shared control.

Extensions

Device

- External power supply via external 12V power pack or G&D-MultiPower, providing a central and redundant power supply
- Device mounting via RackMount sets, TableMount sets or other mounting tools

System extension

- You can integrate the matrix-compatible extenders into a complete installation with a ControlCenter-Compact or ControlCenter-Digital, even at a later point in time. This provides you with even greater flexibility through the possibility of distributed access – and the existing components can continue to be used.

Interfaces

Front

Aperture designation	Design	Description
Network	RJ45 socket	Network connection
Service	Mini USB socket	Connection for service purpose

Back

Aperture designation	Design	Description
Transmission 4	LC Duplex socket	Data transmission between modules
DP CPU 4	DisplayPort jack	Connection to the computer
DP Out 4	DisplayPort jack	Connecting a monitor
Transmission 3	LC Duplex socket	Data transmission between modules
DP CPU 3	DisplayPort jack	Connection to the computer
DP Out 3	DisplayPort jack	Connecting a monitor
Transmission 2	LC Duplex socket	Data transmission between modules
USB 2.0 CPU	USB B socket	Connection to the computer
DP CPU 2	DisplayPort jack	Connection to the computer
DP Out 2	DisplayPort jack	Connecting a monitor
Transmission 1	LC Duplex socket	Data transmission between modules
USB 2.0 Trans.	LC Duplex socket	Data transmission between modules
DP CPU 1	DisplayPort jack	Connection to the computer
DP Out 1	DisplayPort jack	Connecting a monitor
Line In	3,5-mm jack plug	Connection to the computer
Line Out	3,5-mm jack plug	Connection to the computer
Keyb./Mouse	PS/2 jack	Connection of a keyboard / mouse
Keyb./Mouse	USB A socket	Connection of a keyboard / mouse
Keyb. CPU	PS/2 jack	Connection to the computer
Mouse CPU	PS/2 jack	Connection to the computer
RS232	D-Sub 9 socket	Serial data transmission
USB CPU	USB B socket	Connection to the computer
Red. Power	Mini DIN 4 socket	Redundant power supply
Main Power	IEC plug (IEC-320 C14)	Stromversorgung

Technical data

General	Product group	KVM extenders
	Product Family	Vision
	KVM matrix system component	Computer module (digital)
	Power Supply	Redundancy without load balancing
Input options	USB mouse	yes
	USB keyboard	yes
	PS/2 mouse	yes
	PS/2 keyboard	yes
Transmission	Number of transmission channels	5
	Redundant transmission channels	no redundant KVM transmission
	Range	100 m (62.5/125µm) 200 m (50.0/125µm, OM2) 400 m (50.0/125µm, OM3) 70 m (62.5/125µm) 150 m (50.0/125µm) 400 m (50.0/125µm, OM4 - 4700MHz*km)
	Laser class	Class 1
	Type of interface	LC-Duplex
	Wavelength	850 nm
	Medium	Fiber MM
	Data rate	2.5 Gbit/s
	Quantity	4
Video input	Format	DisplayPort 1.1 (HBR)
	Colour depth	24 bit
	Pixel rate ca.	25 MPixel/s to 300 MPixel/s
	Vertical frequency	24 Hz to 120 Hz
	Horizontal frequency	25 kHz to 185 kHz
	Exemplary resolutions	4096 × 2160 (30 Hz) 4096 × 2160 (25 Hz) 4096 × 2160 (24 Hz) 3840 × 2160 (30 Hz) 3840 × 2160 (25 Hz) 3840 × 2160 (24 Hz) 2560 × 1600 (60 Hz) 2048 × 2048 (60 Hz) 1920 × 1200 (60 Hz) 1920 × 1080 (60 Hz)
	General Notes	Further VESA and CTA standardised resolutions possible within pixel rate and horizontal/vertical frequency.
	Supported industry standards	Display Data Channel Command Interface (DDC/CI) Extended Display Identification Data (EDID)

Video output	Quantity	4
	Format	DisplayPort 1.1 (HBR)
	Colour depth	24 bit
	Pixel rate ca.	25 MPixel/s to 300 MPixel/s
	Vertical frequency	24 Hz to 120 Hz
	Horizontal frequency	25 kHz to 185 kHz
	Exemplary resolutions	4096 × 2160 (30 Hz) 4096 × 2160 (25 Hz) 4096 × 2160 (24 Hz) 3840 × 2160 (30 Hz) 3840 × 2160 (25 Hz) 3840 × 2160 (24 Hz) 2560 × 1600 (60 Hz) 2048 × 2048 (60 Hz) 1920 × 1200 (60 Hz) 1920 × 1080 (60 Hz)
	General Notes	Further VESA and CTA standardised resolutions possible within pixel rate and horizontal/vertical frequency.
	Supported industry standards	Display Data Channel Command Interface (DDC/CI) Extended Display Identification Data (EDID)
Audio 1	Transmission type	Stereo 2-channel LPCM
	Resolutions	24 bit 20 bit 16 bit
	Sampling rate	up to 48 kHz
	Audio support	Digital Embedded
Audio 2	Transmission type	Stereo Transparent
	Resolutions	24 bit digital
	Sampling rate	up to 96 kHz
	Bandwidth	22 kHz
	Audio support	Analog
USB	Separate USB transmission port	yes
	Specification	USB 2.0
	Medium	Fiber MM
	Transmission rate	max. 480 Mbit/s (Hi-Speed)
	Range	max. 550 m
	Power (output)	500 mA (HighPower)
	USB classes	All
Serial	Standard	RS232
	Transparent transmission	yes
	Data rate	max. 115,200 bps
	Signals	TxD RxD

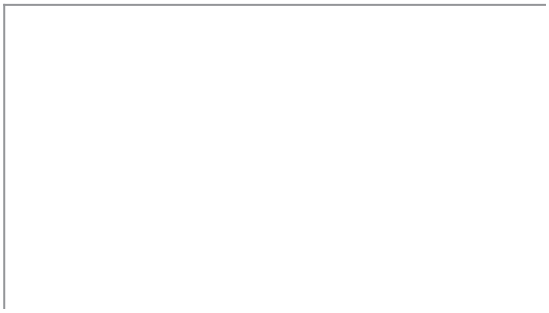
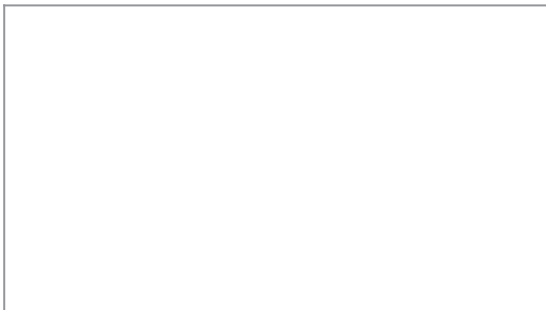
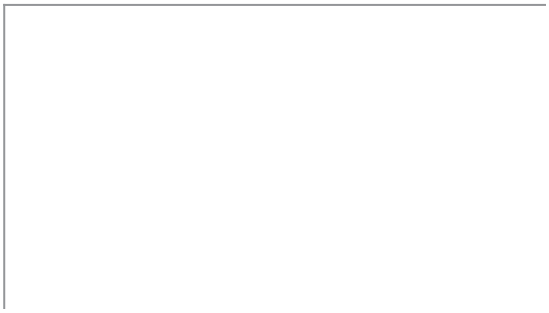
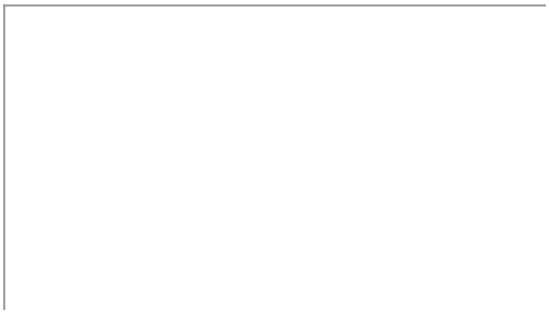
		DTR DSR RTS CTS DCD
Network	Quantity	1
	Medium	CAT5 CAT6 CAT7
	Data rate	10 Mbit/s 100 Mbit/s
Maintenance	Update via	ConfigPanel (Network)
	Serviceport settings	115200bps (8/N/1)
Housing	Material	anodised aluminium
	Width ca.	436 mm
	Height ca.	44 mm
	Depth ca.	210 mm
	IP protection class	IP20
	Weight ca.	2.52 kg
Operating conditions	Operating temperature	5 °C to 45 °C
	Operating air humidity, non-condensing	20 % to 80 %
	Area of application	Indoor use
	Maximum operating altitude above sea level	3,048 m
	Storage temperature	-20 °C to 60 °C
	Storage air humidity, non-condensing	15 % to 85 %
	MTBF	146,000 h at 25°C
	Conformities	CE compliant (see downloads) UKCA compliant (see downloads) UL compliant (see downloads) CB compliant (see downloads) FCC compliant (see manual) TAA compliant (see downloads) EAC compliant (see downloads) RoHS compliant (see downloads) WEEE (reg. no. DE30763240) REACH compliant (see downloads)
Power supply 1	Quantity	1
	Type	Internal
	Input voltage	100-240 VAC
	Input frequency	60-50 Hz
	Current consumption	0.7-0.4 A
	Power consumption max.	35.3 W
	Heat output max.	32.4 W

Power supply 2	Quantity	1
	Type	External
	Input voltage	12 VDC
	Current consumption	2.6 A
	Power consumption max.	30.7 W
	Heat output max.	27.8 W

accessory products

Image	Description	Article number
	USB-Service-2 cable 2m Cable for system updates and configuration	A6200103
	PowerCable-3 Standard cable 3m Cable to connect the power supply type Germany	A6300066
	PowerCable-5 Standard cable 5m Cable to connect the power supply type Germany	A6300065
	Audio-M/M-3-ferrite cable 3m Audio connection cable with ferrite core	A6300118

Image	Description	Article number
	Audio-M/M-5-ferrite cable 5m Audio connection cable with ferrite core	A6300085
	DP1.4-Cable-M/M-3 SK13358 3m Single cable to connect a DisplayPort video channel (DP1.4)	A6300174
	DP1.4-Cable-M/M-5 SK13359 5m Single cable to connect a DisplayPort video channel (DP1.4)	A6300175
	RS232-M/F-3 cable RS232 3m Cable to connect a serial device	A6300024
	RS232-M/F-5 cable RS232 5m Cable to connect a serial device	A6300025

Image	Description	Article number
	**USB-AM/BM-3 cable USB 3m** USB cable, Type-A Plug/Type-B Plug	A6300114
	**USB-AM/BM-5 cable USB 5m** USB cable, Type-A Plug/Type-B Plug	A6300111
	**PowerPack 12 Type 2 12V/5A** 60W power supply with 2m powercable	A4110008
	**PowerPack 12 Type 2 12V/5A TAA** 60W power supply with 2m powercable, TAA compliant	A4110061

more variants

Description	Article number
DP-Vision-Fiber(M)-AR-CPU Computer module to extend DisplayPort signals via fiber multimode	A1110160
DP-Vision-Fiber(M)-AR-CPU-UC Splitter computer module for transmission of DisplayPort signals to 2 different counterpart stations (extenders or matrix switches) via fiber multimode	A1110201
DP-Vision-Fiber(M)-ARU-CPU Computer module to extend DisplayPort signals via fiber multimode	A1110162

Description	Article number
DP-Vision-Fiber(M)-ARU-CPU-UC Splitter computer module for transmission of DisplayPort signals to 2 different counterpart stations (extenders or matrix switches) via fiber multimode	A1110202
DP-Vision-Fiber(M)-ARU2-CPU Computer module to extend DisplayPort signals via fiber multimode	A1110161
DP-Vision-Fiber(M)-MC2-AR-CPU Computer module to extend DisplayPort signals via fiber multimode	A1210195
DP-Vision-Fiber(M)-MC2-ARU-CPU Computer module to extend DisplayPort signals via fiber multimode	A1210197
DP-Vision-Fiber(M)-MC2-ARU2-CPU Computer module to extend DisplayPort signals via fiber multimode	A1210196
DP-Vision-Fiber(M)-MC3-AR-CPU Computer module to extend DisplayPort signals via fiber multimode	A1310047
DP-Vision-Fiber(M)-MC3-ARU-CPU Computer module to extend DisplayPort signals via fiber multimode	A1310048
DP-Vision-Fiber(M)-MC3-ARU2-CPU Computer module to extend DisplayPort signals via fiber multimode	A1310049
DP-Vision-Fiber(M)-MC4-AR-CPU Computer module to extend DisplayPort signals via fiber multimode	A1410198
DP-Vision-Fiber(M)-MC4-ARU-CPU Computer module to extend DisplayPort signals via fiber multimode	A1410189

Contact

We are here for you!

If you have any further questions, we are looking forward to advising you on your individual project requirements.

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