DP1.2-VISION-IP-FIBER(S)-AR-CPU

KVM extenders, Article number A1110248

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The matrix-compatible KVM-over-IP extenders of the DP1.2-Vision-IP series extend keyboard, video, and mouse signals, as well as other peripheral data (e.g., audio and USB), via a standardized IP network infrastructure with 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 DP1.2-Vision-IP series supports DisplayPort1.2 for ultra-high-resolution video up to 4096 × 2160 (60 Hz) or 5120 × 2160 (50 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
1	USB-AM/BM-2 cable USB 2m	A6300113
1	DP1.4-Cable-M/M-2 SK13357 2m	A6300173
1	RS232-M/F-2 cable RS232 2m	A6300023
2	Audio-M/M-2-ferrite cable 2m	A6300083
1	Safety instructions flyer - FCC class B	A9100371

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 KVM-over-IP 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
  5120 × 2160 @ 50 Hz,
  5120 × 1440 @ 60 Hz,
  4096 × 2160 @ 60 Hz,
  2560 × 1440 @ 144 Hz,
  1920 × 1080 @ 240 Hz
- Resolution up to
  5120 × 2160 @ 50 Hz,
  5120 × 1440 @ 60 Hz,
  4096 × 2160 @ 60 Hz,
  2560 × 1440 @ 144 Hz,
  1920 × 1080 @ 240 Hz

SIGNALS

- Transparent audio signals (stereo, analog)
- Embedded stereo audio (Digital, 2 channel LPCM)
- Transparent RS232 (max. 115,200 bps)
- GenericUSB support for USB classes HID (Human Interface Device), SmartCard and mass storage
- The product allows the use of a GenericUSB devices via a console module. For this, both the used console module and the used computer module must support the use of a GenericUSB device.

TRANSMISSION

- At least one Layer-2-managed switch with Gigabit Ethernet is required, offering features such as QoS and VLAN. Additionally, adequate performance (forwarding bandwidth, switching bandwidth, forwarding performance, and uplinks) must be ensured, especially when using multiple network switches
- KVM-over-IP™ over IP-based networks (layer 3)
- The transmission distance between two active network components is up to 10,000 meters over fiber singlemode 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
- Internal power pack for main power supply
- The devices are compatible with the ControlCenter-IP and ControlCenter-IP-XS series (matrix operation) and other KVM-over-IP end devices for computer and workplace connections (extender operation)

WARRANTY

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

FEATURES

SECURITY FEATURES

- Permanent encryption of all communication and data transmissions, as well as sensitive information such as login credentials and passwords, guarantees a high level of security in critical environments
  - AES256-GCM for keyboard/mouse and control data
  - AES128-CTR for video, audio, GenericUSB and RS232
- Bootloader, operating system, and firmware form a "Trusted Computing Platform" with automatic integrity checks during system startup
- Integrated Trusted Platform Module (TPM) protects all access and configuration data from being spied on or tampered with by third parties
- 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
- The optional UID-Locking restricts the usable end devices, ensuring that no additional devices can be added or replaced after activation
- 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 in direct connection. IP address configuration and pairing are required when using multiple modules in a network setup
- 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
- additional, independent management network interface for configuration
- manual bandwidth management to adjust the required bandwidth
- 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.
- With the integrated IP-MUX functionality the console modules offer the possibility to access different computer modules (one after the other). To use this function, you can connect a maximum of 20 computers to separate computer modules. The computer modules are configurated as targets in the console module and can be connected via the local on-screen display.

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

SECURITY FEATURES

- SecureCert feature – premium software feature that ensures compliance with the strict security standards FIPS 140-3, DoDIN APL, and CC EAL2+
  - Federal Information Processing Standard (FIPS) 140-3 is a U.S. government standard designed to protect sensitive and valuable data in IT systems. It defines security requirements for cryptographic modules and provides a secure framework for cryptographic operations in IT infrastructures
  - The Department of Defense Information Network Approved Products List (DoDIN APL) is a consolidated list of products approved for use in the technology infrastructure of U.S. government agencies. To be listed, products must meet specific requirements within defined categories, including technical, functional, and security-related criteria
  - Common Criteria (CC) is an internationally recognized standard for evaluating and certifying the security of IT products. It ensures that products meet defined security requirements and are protected against identified threats. Certification is granted at Evaluation Assurance Level (EAL) 2+, an internationally acknowledged level that guarantees a fundamental and reliable security assessment

SYSTEM EXTENSION

- You can integrate the matrix-compatible KVM-over-IP extenders into a complete installation with a ControlCenter-IP or ControlCenter-IP-XS, 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.

TECHNICAL DATA

General	Brand	G&D
	Product group	KVM extenders
	Product Family	Vision-IP
	Country of origin	Germany
	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	1
	Redundant transmission channels	no redundant KVM transmission
	Range	10,000 m (9/125µm, OS1)
	Laser class	Class 1
	Type of interface	LC-Duplex
	Wavelength	1,310 nm
	Medium	Fiber SM
	Data rate	1 Gbit/s
Video input	Quantity	1

	Format	DisplayPort 1.2 (LBR, HBR, HBR2, SingleStream-Transport (SST))
	Colour depth	24 bit
	Pixel encoding	RGB 4:4:4 (24 bpp / 8 bpc)
	Pixel rate ca.	25 MPixel/s to 600 MPixel/s
	Vertical frequency	24 Hz to 240 Hz
	Horizontal frequency	25 kHz to 295 kHz
	Exemplary resolutions	4096 × 2160 (60 Hz) 3840 × 2160 (60 Hz) 2560 × 1600 (60 Hz) 2560 × 1440 (144 Hz) 2048 × 2048 (60 Hz) 1920 × 1200 (60 Hz) 1920 × 1080 (240 Hz) 1920 × 1080 (60 Hz) 5120 × 1440 (60 Hz) 5120 × 2160 (50 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	1
	Format	DisplayPort 1.2 (LBR, HBR, HBR2, SingleStream-Transport (SST))
	Colour depth	24 bit
	Pixel encoding	RGB 4:4:4 (24 bpp / 8 bpc)

	Pixel rate ca.	25 MPixel/s to 600 MPixel/s
	Vertical frequency	24 Hz to 240 Hz
	Horizontal frequency	25 kHz to 295 kHz
	Exemplary resolutions	4096 × 2160 (60 Hz) 3840 × 2160 (60 Hz) 2560 × 1600 (60 Hz) 2560 × 1440 (144 Hz) 2048 × 2048 (60 Hz) 1920 × 1200 (60 Hz) 1920 × 1080 (240 Hz) 1920 × 1080 (60 Hz) 5120 × 1440 (60 Hz) 5120 × 2160 (50 Hz)
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	Supported industry standards	Display Data Channel Command Interface (DDC/CI) Extended Display Identification Data (EDID)
Audio 1	Transmission type	Stereo Transparent
	Resolutions	24 bit digital
	Sampling rate	up to 96 kHz
	Bandwidth	22 kHz
	Audio support	Analog
Audio 2	Transmission type	Stereo 2-channel LPCM
	Resolutions	24 bit 20 bit 16 bit

	Sampling rate	up to 48 kHz
	Audio support	Digital Embedded
USB	Separate USB transmission port	no
	Specification	USB 2.0
	GenericUSB support	1 device
	Medium	Embedded
	Transmission rate	8.5 Mbit/s (Full Speed)
	USB classes	Mass Storage (MSC / UMS) Human Interface Device (HID)
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
	Active cooling (fan)	yes
	Width ca.	210 mm
	Height ca.	44 mm
	Depth ca.	210 mm
	IP protection class	IP20
	Weight ca.	1.33 kg
Operating conditions	Operating environment 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 environment temperature	-20 °C to 55 °C
	Storage air humidity, non-condensing	15 % to 85 %
	MTBF	140,000 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	0.6-0.3 A
	Power consumption max.	21.5 W
	Heat output max.	15.5 W
Power supply 2	Quantity	1
	Type	External
	Input voltage	12 VDC
	Current consumption	2 A
	Power consumption max.	19.8 W
	Heat output max.	13.8 W

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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