VISIONXS-CPU-F(M)-DP-HR-DH-U 2.0

KVM extenders, Article number A1110820

The matrix-compatible KVM extenders of the VisionXS-DP-HR 2.0 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 5,000 m – optionally extendable). 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 VisionXS-DP-HR 2.0 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
2	DP1.4-Cable-M/M-2 SK13357 2m	A6300173
1	TypeC-Service-Cable-M/M-2, 2m, USB Type-A / Type-C	A6200112
2	Audio-M/M-2-ferrite cable 2m	A6300083
1	Audio adapter cable, 1x 3.5mm jack plug to 2x 3.5mm jack socket	A3110017
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 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

SIGNALS

- Embedded stereo audio (DisplayPort Digital, 2 channel LPCM, AC3, DTS,
  sampling rate up to 192 kHz)
- Transparent bidirectional audio signals (stereo)
- GenericUSB support for USB classes HID (Human Interface Device), SmartCard and mass storage
- The product allows the use of a GenericUSB device via a console module. For this, both the used console module and the used computer module must support the use of a GenericUSB device.
- Embedded USB 2.0 with Full Speed, 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
- New enclosure design with improved cooling, optimized interface placement, and robust surface finishing – for higher reliability and long service life even in demanding environments
- Compact design for space-saving installation within a VisionXS 2.0 DeviceCarrier (1 or 3 RU)
- 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)
- PowerPack not included in the scope of delivery
- DT variant:
  - Power supply via internal power supply unit

  - In combination with an external power supply, a redundant power supply can be established
  - RS232 is provided as standard
- 2C/2F variant (comparable to UC/CON-2): Two transmission paths (CAT or Fiber) for redundancy
  - Computer modules can connect to various counterparts, such as compatible console modules or KVM matrix switches
  - Console modules can connect to different counterparts, such as compatible computer modules or KVM matrix switches, with switching controlled via hotkey or automatically depending on configuration
  - 2C/2F variants are never available with U2, since the second transmission interface is used for transmitting USB 2.0 data.
- Extended USB input side with TypeC and separate USB K/M interface – enables the optional physical separation of keyboard/mouse signals and USB data stream for enhanced security.

WARRANTY

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

FEATURES

SECURITY FEATURES

- 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
- 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

EXTENSIONS

DEVICE

- External power supply via an external USB Type-C PD power pack or via the G&D MultiPower-12-TypeC, which ensures centralized and redundant power supply.
- Device mounting via RackMount sets, TableMount sets, G&D 19" DeviceCarrier for VisionXS 2.0 or other mounting tools

SYSTEM EXTENSION

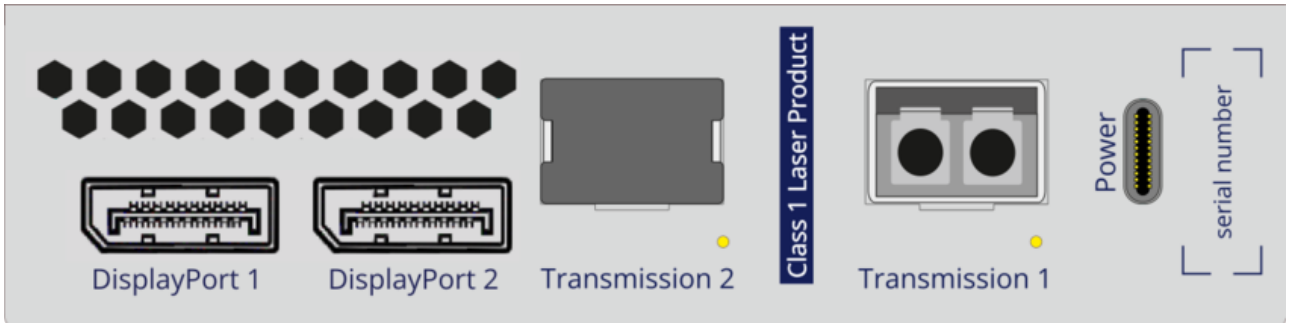
- You can integrate the matrix-compatible extenders into a complete installation with a ControlCenter-Compact or ControlCenter-Digital, even at a later point in time. This provides you with even greater flexibility through the possibility of distributed access – and the existing components can continue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

PANELS AND CONNECTORS

FRONT

Aperture designation	Design	Description
Service	USB-C socket	Connection for service purpose
Network	RJ45 socket	Port for IP network
Audio	3,5-mm jack plug	Connection to computer - Audio
USB	USB-C socket	Connection to computer - USB
K/M only	USB-C socket	Optional connection to computer - USB, only for keyboard and mouse signals

BACK

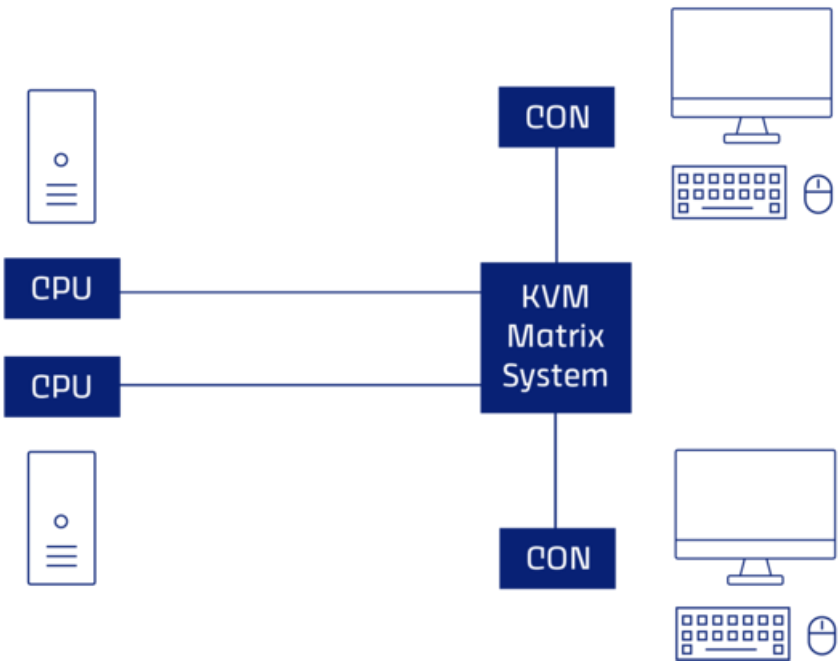


Aperture designation	Design	Description
DisplayPort 1	DisplayPort socket	Connection to computer - Video
DisplayPort 2	DisplayPort socket	Connection to computer - Video
Transmission 1	LC Duplex socket	Data transmission to console module or matrix switch (FIBER)
Power	USB-C socket	Power supply USB-PD (Power Delivery)

SCHEMATIC REPRESENTATION

Dedicated extender operation

Dedicated matrix operation



TECHNICAL DATA

General	Product group	KVM extenders
	Product Family	VisionXS 2.0
	KVM matrix system component	Computer module (digital)
Transmission	Number of transmission channels	1
	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
Video input	Quantity	2
	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	2-channel LPCM Stereo DTS AC3
	Resolutions	24 bit 20 bit 16 bit
	Sampling rate	up to 192 kHz
	Audio support	Digital Embedded
Audio 2	Transmission type	Stereo Transparent Bidirectional
	Resolutions	24 bit digital
	Sampling rate	up to 96 kHz
	Bandwidth	22 kHz

	Audio support	Analog
USB 1	Separate USB transmission port	no
	Specification	USB 2.0
	GenericUSB support	1 device
	Medium	Embedded
	Transmission rate	max. 25 Mbit/s (Full Speed)
	USB classes	Mass Storage (MSC / UMS) Human Interface Device (HID) SmartCard
USB 2	Specification	USB 2.0
	Medium	Embedded
	Transmission rate	max. 16 Mbit/s (app. Full Speed)
	Range	max. 400 m
	USB classes	All
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	Sheet steel, powder-coated

	Width ca.	115 mm
	Height ca.	32 mm
	Depth ca.	222 mm
	IP protection class	IP20
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	200,000 h at 25°C
	Conformities	RoHS compliant (see downloads) REACH compliant (see downloads) FCC compliant (see manual) CE compliant (see downloads) UKCA compliant (see downloads) TAA compliant (see downloads) WEEE (reg. no. DE30763240)

MORE VARIANTS

Description	Article number
VisionXS-CPU-2F(M)-DP-HR 2.0 Redundant Computer module for the transmission of DisplayPort signals to 2 different counterpart stations via fiber multimode	A1110880
VisionXS-CPU-2F(M)-DP-HR-DH 2.0 Redundant Computer module for the transmission of DisplayPort signals to 2 different counterpart stations via fiber multimode	A1110840
VisionXS-CPU-2F(M)-DP-HR-DH-DT 2.0 Redundant Computer module for the transmission of DisplayPort signals to 2 different counterpart stations via fiber multimode	A1110832
VisionXS-CPU-2F(M)-DP-HR-DH-U 2.0 Redundant Computer module for the transmission of DisplayPort signals to 2 different counterpart stations via fiber multimode	A1110816
VisionXS-CPU-2F(M)-DP-HR-DH-U-DT 2.0 Redundant Computer module for the transmission of DisplayPort signals to 2 different counterpart stations via fiber multimode	A1110808
VisionXS-CPU-2F(M)-DP-HR-DT 2.0 Redundant Computer module for the transmission of DisplayPort signals to 2 different counterpart stations via fiber multimode	A1110872
VisionXS-CPU-2F(M)-DP-HR-U 2.0 Redundant Computer module for the transmission of DisplayPort signals to 2 different counterpart stations via fiber multimode	A1110856
VisionXS-CPU-2F(M)-DP-HR-U-DT 2.0 Redundant Computer module for the transmission of DisplayPort signals to 2 different counterpart stations via fiber multimode	A1110848
VisionXS-CPU-F(M)-DP-HR 2.0 Computer module for the transmission of DisplayPort signals via fiber multimode	A1110884
VisionXS-CPU-F(M)-DP-HR-DH 2.0 Computer module for the transmission of DisplayPort signals via fiber multimode	A1110844
VisionXS-CPU-F(M)-DP-HR-DH-DT 2.0 Computer module for the transmission of DisplayPort signals via fiber multimode	A1110836
VisionXS-CPU-F(M)-DP-HR-DH-U-DT 2.0 Computer module for the transmission of DisplayPort signals via fiber multimode	A1110812
VisionXS-CPU-F(M)-DP-HR-DH-U2 2.0 Computer module for the transmission of DisplayPort signals via fiber multimode	A1110828

Description	Article number
VisionXS-CPU-F(M)-DP-HR-DH-U2-DT 2.0 Computer module for the transmission of DisplayPort signals via fiber multimode	A1110824
VisionXS-CPU-F(M)-DP-HR-DT 2.0 Computer module for the transmission of DisplayPort signals via fiber multimode	A1110876
VisionXS-CPU-F(M)-DP-HR-U 2.0 Computer module for the transmission of DisplayPort signals via fiber multimode	A1110860
VisionXS-CPU-F(M)-DP-HR-U-DT 2.0 Computer module for the transmission of DisplayPort signals via fiber multimode	A1110852
VisionXS-CPU-F(M)-DP-HR-U2 2.0 Computer module for the transmission of DisplayPort signals via fiber multimode	A1110868
VisionXS-CPU-F(M)-DP-HR-U2-DT 2.0 Computer module for the transmission of DisplayPort signals via fiber multimode	A1110864

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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