

# VISIONXS-CPU-F(S)-DP-HR-DH-U 2.0

KVM extenders, Article number A1110821



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 x 1600 (60 Hz) or 4096 x 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 5,000 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
- 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.

## INTERFACES

### 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
All USB CPU	USB-C socket	Connection to computer - USB
K/M USB CPU	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	5,000 m (9/125µm, OS1)
	Laser class	Class 1
	Type of interface	LC-Duplex
	Wavelength	1,310 nm
	Medium	Fiber SM
	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	Separate USB transmission port	no
	Specification	USB 2.0
	Medium	Embedded
	Transmission rate	max. 16 Mbit/s (app. Full Speed)
	Range	max. 5,000 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 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 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
<b>VisionXS-CPU-2F(S)-DP-HR 2.0</b> Redundant Computer module for the transmission of DisplayPort signals to 2 different counterpart stations via fiber singlemode	A1110881
<b>VisionXS-CPU-2F(S)-DP-HR-DH 2.0</b> Redundant Computer module for the transmission of DisplayPort signals to 2 different counterpart stations via fiber singlemode	A1110841
<b>VisionXS-CPU-2F(S)-DP-HR-DH-DT 2.0</b> Redundant Computer module for the transmission of DisplayPort signals to 2 different counterpart stations via fiber singlemode	A1110833
<b>VisionXS-CPU-2F(S)-DP-HR-DH-U 2.0</b> Redundant Computer module for the transmission of DisplayPort signals to 2 different counterpart stations via fiber singlemode	A1110817
<b>VisionXS-CPU-2F(S)-DP-HR-DH-U-DT 2.0</b> Redundant Computer module for the transmission of DisplayPort signals to 2 different counterpart stations via fiber singlemode	A1110809
<b>VisionXS-CPU-2F(S)-DP-HR-DT 2.0</b> Redundant Computer module for the transmission of DisplayPort signals to 2 different counterpart stations via fiber singlemode	A1110873
<b>VisionXS-CPU-2F(S)-DP-HR-U 2.0</b> Redundant Computer module for the transmission of DisplayPort signals to 2 different counterpart stations via fiber singlemode	A1110857
<b>VisionXS-CPU-2F(S)-DP-HR-U-DT 2.0</b> Redundant Computer module for the transmission of DisplayPort signals to 2 different counterpart stations via fiber singlemode	A1110849
<b>VisionXS-CPU-F(S)-DP-HR 2.0</b> Computer module for the transmission of DisplayPort signals via fiber singlemode	A1110885
<b>VisionXS-CPU-F(S)-DP-HR-DH 2.0</b> Computer module for the transmission of DisplayPort signals via fiber singlemode	A1110845
<b>VisionXS-CPU-F(S)-DP-HR-DH-DT 2.0</b> Computer module for the transmission of DisplayPort signals via fiber singlemode	A1110837
<b>VisionXS-CPU-F(S)-DP-HR-DH-U-DT 2.0</b> Computer module for the transmission of DisplayPort signals via fiber singlemode	A1110813
<b>VisionXS-CPU-F(S)-DP-HR-DH-U2 2.0</b> Computer module for the transmission of DisplayPort signals via fiber singlemode	A1110829

Description	Article number
<b>VisionXS-CPU-F(S)-DP-HR-DH-U2-DT 2.0</b> Computer module for the transmission of DisplayPort signals via fiber singlemode	A1110825
<b>VisionXS-CPU-F(S)-DP-HR-DT 2.0</b> Computer module for the transmission of DisplayPort signals via fiber singlemode	A1110877
<b>VisionXS-CPU-F(S)-DP-HR-U 2.0</b> Computer module for the transmission of DisplayPort signals via fiber singlemode	A1110861
<b>VisionXS-CPU-F(S)-DP-HR-U-DT 2.0</b> Computer module for the transmission of DisplayPort signals via fiber singlemode	A1110853
<b>VisionXS-CPU-F(S)-DP-HR-U2 2.0</b> Computer module for the transmission of DisplayPort signals via fiber singlemode	A1110869
<b>VisionXS-CPU-F(S)-DP-HR-U2-DT 2.0</b> Computer module for the transmission of DisplayPort signals via fiber singlemode	A1110865

# 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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