

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

KVM extenders, Article number A1110531



The matrix-compatible KVM extenders of the VisionXS-DP-HR 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 VisionXS-DP-HR 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	USB-AM/BM-2 cable USB 2m	A6300113

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
- The DualHead variant (DH) allows the transmission of two separate video signals via one transmission cable. Both video channels support embedded audio.
 - Two-channel operation supports a guaranteed total pixel rate of up to 600MPixel/s.
 - Both video channels supports up to 300MPixel/s.
 - Exceeding the total pixel rate of 600MPixel/s may result in a loss of quality.

SIGNALS

- Embedded stereo audio (DisplayPort Digital, 2 channel LPCM, AC3, DTS, sampling rate up to 192 kHz)
- 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
- Compact design for space-saving installation within a VisionXS 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: Optional redundant power supply via an internal power unit for high reliability
- Fanless variant: fanless model

WARRANTY

- A 3-year, free of charge product guarantee
- For an additional fee guarantee extension/guarantee renewal 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 external 12V power pack or G&D-MultiPower, providing a central and redundant power supply
- Device mounting via G&D 19” DeviceCarrier for VisionXS (1 or 3 RU)

SYSTEM EXTENSION

- Transm. Redundancy Option (comparable to UC/CON-2): Devices are prepared for transmission redundancy without additional hardware and can be activated via software feature key.
 - 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
 - U2 variants do not support the Transm. Redundancy Option as the 2nd transmission interface is used for the transmission of USB 2.0 data
- 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
USB CPU	USB-B socket 2.0	Connection to computer - USB
DP CPU 1	DisplayPort socket	Connection to computer - Video
DP CPU 2	DisplayPort socket	Connection to computer - Video

BACK



Aperture designation	Design	Description
Transmission 1	LC-Duplex socket	Data transmission to console module or matrix switch (FIBER)
Transmission 2	LC-Duplex socket	Data transmission to console module or matrix switch redundant (FIBER)
Service	Micro-USB socket	Port for service purposes
Network	RJ45 socket	Port for IP network
Power	Mini-DIN 4 socket	Power supply DC

TECHNICAL DATA

General	Product group	KVM extenders KVM matrix systems
Transmission	Number of transmission channels	1
	Redundant transmission channels	optional redundant KVM transmission
	Range	5000 m (9/125µm, OS1)
	Laser class	Class 1
	Type of interface	LC-Duplex
	Wavelength	1310 nm
	KVM matrix system component	Computer module
	Medium	Fiber SM
	Data rate	2.5 Gbit/s
Video input	Number of video channels	1
	Format	DisplayPort 1.1 (HBR)
	Colour depth	24 bit
	Pixel rate	ca. 25 MPixel/s to ca. 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) 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 input 2	Number of video channels	1
	Format	DisplayPort 1.1 (HBR)
	Quantity	1
	Colour depth	24 bit
	Pixel encoding	RGB 4:4:4 (24 bpp / 8 bpc)
	Pixel rate	ca. 25 MPixel/s to ca. 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) 1920 × 1080 (60 Hz) 1920 × 1200 (60 Hz) 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	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
USB	Specification	USB 2.0
	GenericUSB support	1 device
	Medium	Embedded
	Transmission rate	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	16 Mbit/s (app. Full Speed)
	Range	max. 5000 m
	USB classes	All
Network	Medium 1	CAT5 CAT6 CAT7
	Data rate 1	10 MBit/s 100 MBit/s
Maintenance	Update via	ConfigPanel (Network)
	Serviceport settings	115200bps (8/N/1)
Housing	Material	anodised aluminium
	Width	ca. 109 mm
	Height	ca. 31 mm
	Depth	ca. 184 mm
	IP protection class	IP20
Operating conditions	Operating temperature	5 °C to 45 °C
	Operating air humidity	20 % to 80 %, non-condensing
	Area of application	Interior
	Maximum operating altitude	3048m above sea level
	Storage temperature	-20 °C to 60 °C

	Storage air humidity	15 % to 85 %, non-condensing
	MTBF	200000 h at 25°C
	Conformities	FCC compliant (see manual) TAA compliant (see downloads) EAC compliant (see downloads) RoHS compliant (see downloads) WEEE (reg. no. DE30763240) REACH compliant (see downloads) CE compliant (see downloads) UKCA compliant (see downloads)
Power supply	Input voltage	12 VDC
	Current consumption	1.1 A

MORE VARIANTS

Description	Article number
VisionXS-CPU-F(S)-DP-HR Computer module to extend DisplayPort signals via fiber singlemode	A1110288
VisionXS-CPU-F(S)-DP-HR-A Computer module to extend DisplayPort signals via fiber singlemode	A1110289
VisionXS-CPU-F(S)-DP-HR-A-U Computer module to extend DisplayPort signals via fiber singlemode	A1110290
VisionXS-CPU-F(S)-DP-HR-A-U2 Computer module to extend DisplayPort signals via fiber singlemode	A1110594
VisionXS-CPU-F(S)-DP-HR-AR-DT Computer module to extend DisplayPort signals via fiber singlemode	A1110292
VisionXS-CPU-F(S)-DP-HR-AR-U-DT Computer module to extend DisplayPort signals via fiber singlemode	A1110293
VisionXS-CPU-F(S)-DP-HR-AR-U2-DT Computer module to extend DisplayPort signals via fiber singlemode	A1110593
VisionXS-CPU-F(S)-DP-HR-DH Dual head computer module (fiber singlemode) to extend 2 DisplayPort signals using 1 transmission line	A1110528
VisionXS-CPU-F(S)-DP-HR-DH-A Dual head computer module (fiber singlemode) to extend 2 DisplayPort signals using 1 transmission line	A1110530
VisionXS-CPU-F(S)-DP-HR-DH-A-U Dual head computer module (fiber singlemode) to extend 2 DisplayPort signals using 1 transmission line	A1110529
VisionXS-CPU-F(S)-DP-HR-DH-A-U2 Dual head computer module (fiber singlemode) to extend 2 DisplayPort signals using 1 transmission line	A1110596
VisionXS-CPU-F(S)-DP-HR-DH-AR-DT Dual head computer module (fiber singlemode) to extend 2 DisplayPort signals using 1 transmission line	A1110533
VisionXS-CPU-F(S)-DP-HR-DH-AR-U-DT Dual head computer module (fiber singlemode) to extend 2 DisplayPort signals using 1 transmission line	A1110532

Description	Article number
VisionXS-CPU-F(S)-DP-HR-DH-AR-U2-DT Dual head computer module (fiber singlemode) to extend 2 DisplayPort signals using 1 transmission line	A1110595
VisionXS-CPU-F(S)-DP-HR-DH-DT Dual head computer module (fiber singlemode) to extend 2 DisplayPort signals using 1 transmission line	A1110535
VisionXS-CPU-F(S)-DP-HR-DH-U-DT Dual head computer module (fiber singlemode) to extend 2 DisplayPort signals using 1 transmission line	A1110534
VisionXS-CPU-F(S)-DP-HR-DH-U2 Dual head computer module (fiber singlemode) to extend 2 DisplayPort signals using 1 transmission line	A1110597
VisionXS-CPU-F(S)-DP-HR-DH-U2-DT Dual head computer module (fiber singlemode) to extend 2 DisplayPort signals using 1 transmission line	A1110598
VisionXS-CPU-F(S)-DP-HR-DT Computer module to extend DisplayPort signals via fiber singlemode	A1110294
VisionXS-CPU-F(S)-DP-HR-U Computer module to extend DisplayPort signals via fiber singlemode	A1110291
VisionXS-CPU-F(S)-DP-HR-U-DT Computer module to extend DisplayPort signals via fiber singlemode	A1110295
VisionXS-CPU-F(S)-DP-HR-U2 Computer module to extend DisplayPort signals via fiber singlemode	A1110599
VisionXS-CPU-F(S)-DP-HR-U2-DT Computer module to extend DisplayPort signals via fiber singlemode	A1110600

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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