

# VISIONXS-CPU-F(S)-DP-HR-DH-A-U2

KVM extenders, Article number A1110596



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 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 |
|----------|---|----------------|
| 1        | Safety instructions flyer - FCC class B | A9100371       |
| 1        | Power supply usage flyer                | A9100409       |
| 1        | DP1.4-Cable-M/M-2 SK13357 2m            | A6300173       |
| 1        | USB-AM/BM-2 cable USB 2m                | A6300113       |
| 1        | Audio-M/M-2-ferrite cable 2m            | A6300083       |

## 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 audio signals (stereo, analog)
- 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.
- USB 2.0 with Hi-Speed (separate transmission line, 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 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.

## PANELS AND CONNECTORS

### FRONT



| Aperture designation | Design               | Description                    |
|----------------------|----------------------|--------------------------------|
| USB CPU              | USB-B socket 2.0     | Connection to computer - USB   |
| Line In              | Jack socket - 3,5 mm | Connection to computer - Audio |
| 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  | Separate USB transmission to console module (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                     |
|              | Product Family                  | VisionXS                          |
|              | KVM matrix system component     | Computer module (digital)         |
|              | Power Supply                    | Redundancy without load balancing |
| Transmission | Number of transmission channels | 2                                 |
|              | 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)<br>4096 × 2160 (25 Hz)<br>4096 × 2160 (24 Hz)<br>3840 × 2160 (30 Hz)<br>3840 × 2160 (25 Hz)<br>3840 × 2160 (24 Hz)<br>2560 × 1600 (60 Hz)<br>2048 × 2048 (60 Hz)<br>1920 × 1200 (60 Hz)<br>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)<br>Extended Display Identification Data (EDID)   |
| Audio 1 | Transmission type            | 2-channel LPCM<br>Stereo<br>DTS<br>AC3   |
|         | Resolutions                  | 24 bit<br>20 bit<br>16 bit   |
|         | Sampling rate                | up to 192 kHz  |
|         | Audio support                | Digital Embedded   |
| Audio 2 | Transmission type            | Stereo<br>Transparent  |
|         | 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)<br>Human Interface Device (HID)<br>SmartCard |
| USB 2       | Separate USB transmission port | yes   |
|             | Specification                  | USB 2.0   |
|             | Medium                         | Fiber SM  |
|             | Transmission rate              | max. 480 Mbit/s (Hi-Speed)  |
|             | Range                          | max. 5,000 m  |
|             | Power (output)                 | 500 mA (HighPower)  |
|             | USB classes                    | All   |
| Network     | Quantity                       | 1   |
|             | Medium                         | CAT5<br>CAT6<br>CAT7  |
|             | Data rate                      | 10 Mbit/s<br>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 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                               | FCC compliant (see manual)<br>TAA compliant (see downloads)<br>EAC compliant (see downloads)<br>RoHS compliant (see downloads)<br>WEEE (reg. no. DE30763240)<br>REACH compliant (see downloads)<br>CE compliant (see downloads)<br>UKCA compliant (see downloads) |
| Power supply 1       | Quantity                                   | 1   |
|                      | Type                                       | External  |
|                      | Input voltage                              | 12 VDC  |

|                |                     |             |
|----------------|---------------------|-------------|
|                | Current consumption | 1.1 A       |
| Power supply 2 | Quantity            | 1           |
|                | Type                | Internal    |
|                | Input voltage       | 100-240 VAC |
|                | Input frequency     | 60-50 Hz    |
|                | Current consumption | 0.4-0.3 A   |

## MORE VARIANTS

| Description  | Article number |
|--|----------------|
| <b>VisionXS-CPU-F(S)-DP-HR</b><br>Computer module to extend DisplayPort signals via fiber singlemode   | A1110288       |
| <b>VisionXS-CPU-F(S)-DP-HR-A</b><br>Computer module to extend DisplayPort signals via fiber singlemode   | A1110289       |
| <b>VisionXS-CPU-F(S)-DP-HR-A-U</b><br>Computer module to extend DisplayPort signals via fiber singlemode   | A1110290       |
| <b>VisionXS-CPU-F(S)-DP-HR-A-U2</b><br>Computer module to extend DisplayPort signals via fiber singlemode  | A1110594       |
| <b>VisionXS-CPU-F(S)-DP-HR-AR-DT</b><br>Computer module to extend DisplayPort signals via fiber singlemode   | A1110292       |
| <b>VisionXS-CPU-F(S)-DP-HR-AR-U-DT</b><br>Computer module to extend DisplayPort signals via fiber singlemode   | A1110293       |
| <b>VisionXS-CPU-F(S)-DP-HR-AR-U2-DT</b><br>Computer module to extend DisplayPort signals via fiber singlemode  | A1110593       |
| <b>VisionXS-CPU-F(S)-DP-HR-DH</b><br>Dual head computer module (fiber singlemode) to extend 2 DisplayPort signals using 1 transmission line          | A1110528       |
| <b>VisionXS-CPU-F(S)-DP-HR-DH-A</b><br>Dual head computer module (fiber singlemode) to extend 2 DisplayPort signals using 1 transmission line        | A1110530       |
| <b>VisionXS-CPU-F(S)-DP-HR-DH-A-U</b><br>Dual head computer module (fiber singlemode) to extend 2 DisplayPort signals using 1 transmission line      | A1110529       |
| <b>VisionXS-CPU-F(S)-DP-HR-DH-AR-DT</b><br>Dual head computer module (fiber singlemode) to extend 2 DisplayPort signals using 1 transmission line    | A1110533       |
| <b>VisionXS-CPU-F(S)-DP-HR-DH-AR-U-DT</b><br>Dual head computer module (fiber singlemode) to extend 2 DisplayPort signals using 1 transmission line  | A1110532       |
| <b>VisionXS-CPU-F(S)-DP-HR-DH-AR-U2-DT</b><br>Dual head computer module (fiber singlemode) to extend 2 DisplayPort signals using 1 transmission line | A1110595       |

| Description   | Article number |
|---|----------------|
| <b>VisionXS-CPU-F(S)-DP-HR-DH-DT</b><br>Dual head computer module (fiber singlemode) to extend 2 DisplayPort signals using 1 transmission line    | A1110535       |
| <b>VisionXS-CPU-F(S)-DP-HR-DH-U</b><br>Dual head computer module (fiber singlemode) to extend 2 DisplayPort signals using 1 transmission line     | A1110531       |
| <b>VisionXS-CPU-F(S)-DP-HR-DH-U-DT</b><br>Dual head computer module (fiber singlemode) to extend 2 DisplayPort signals using 1 transmission line  | A1110534       |
| <b>VisionXS-CPU-F(S)-DP-HR-DH-U2</b><br>Dual head computer module (fiber singlemode) to extend 2 DisplayPort signals using 1 transmission line    | A1110597       |
| <b>VisionXS-CPU-F(S)-DP-HR-DH-U2-DT</b><br>Dual head computer module (fiber singlemode) to extend 2 DisplayPort signals using 1 transmission line | A1110598       |
| <b>VisionXS-CPU-F(S)-DP-HR-DT</b><br>Computer module to extend DisplayPort signals via fiber singlemode   | A1110294       |
| <b>VisionXS-CPU-F(S)-DP-HR-U</b><br>Computer module to extend DisplayPort signals via fiber singlemode  | A1110291       |
| <b>VisionXS-CPU-F(S)-DP-HR-U-DT</b><br>Computer module to extend DisplayPort signals via fiber singlemode   | A1110295       |
| <b>VisionXS-CPU-F(S)-DP-HR-U2</b><br>Computer module to extend DisplayPort signals via fiber singlemode   | A1110599       |
| <b>VisionXS-CPU-F(S)-DP-HR-U2-DT</b><br>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.

### TECHNICAL SALES

Tel.: +1-833-928-1976  
Fax: +1-833-928-1976  
E-Mail: [sales.us@gdsys.com](mailto:sales.us@gdsys.com)

### HEADQUARTERS

Guntermann & Drunck GmbH Systementwicklung  
Obere Leimbach 9 | 57074 Siegen | NRW |  
Deutschland

Tel.: +49 271 23872-0  
Fax: +49 271 23872-120  
E-Mail: [sales@gdsys.com](mailto:sales@gdsys.com)

### US OFFICE

G&D North America Inc.  
4540 Kendrick Plaza Drive | Suite 100  
Houston, TX 77032 | United States

Tel.: +1-346-620-4362  
E-Mail: [sales.us@gdsys.com](mailto:sales.us@gdsys.com)

### MIDDLE EAST OFFICE

Guntermann & Drunck GmbH  
Dubai Studio City | DSC Tower  
12th Floor, Office 1208 | Dubai, UAE

Tel.: +971 4 5586178  
E-Mail: [sales.me@gdsys.com](mailto:sales.me@gdsys.com)

### APAC OFFICE

Guntermann & Drunck GmbH  
60 Anson Road #17-01  
Singapore 079914

Tel.: +65 9685 8807  
E-Mail: [sales.apac@gdsys.com](mailto:sales.apac@gdsys.com)