# VISIONXS-CPU-F(M)-DP-UHR-U

KVM extenders, Article number A1110315



Front



Back

The matrix-compatible KVM extenders of the VisionXS-DP-UHR 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-UHR 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 | DP1.4-Cable-M/M-2 SK13357 2m | A6300173 |
| 1 | USB-AM/BM-2 cable USB 2m | A6300113 |
| 1 | Safety instructions flyer - FCC class B | A9100371 |
| 1 | Power supply usage flyer | A9100409 |

# 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
  5120 × 2160 @ 50 Hz,
  5120 × 1440 @ 60 Hz,
  4096 × 2160 @ 60 Hz,
  2560 × 1440 @ 144 Hz,
  1920 × 1080 @ 240 Hz

## 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 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
- 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
- Monitoring of system states such as status, power supply, temperature and computer modules and console modules are monitored as well
- Each monitoring value can be enabled individually; critical states raise an alarm, which authorized users can acknowledge to downgrade it to warning level
- Syslog logging locally and to up to two servers, via TCP or UDP, with configurable port, eight severity levels per the syslog standard and ISO 8601 timestamps
- Logged events include user logins, failed login attempts, changes to user rights, connections to remote targets and failed backups
- SNMP agent supporting SNMPv2c and SNMPv3; for SNMPv3, authentication via SHA-1 through SHA-512, encryption with AES128, AES192 or AES256, and security levels up to authPriv
- Access to the SNMP agent can be restricted to defined source IP addresses or network segments (IPv4 and IPv6)
- SNMP notifications to multiple receivers, sent either as traps or as acknowledged informs, with a configurable severity threshold
- 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

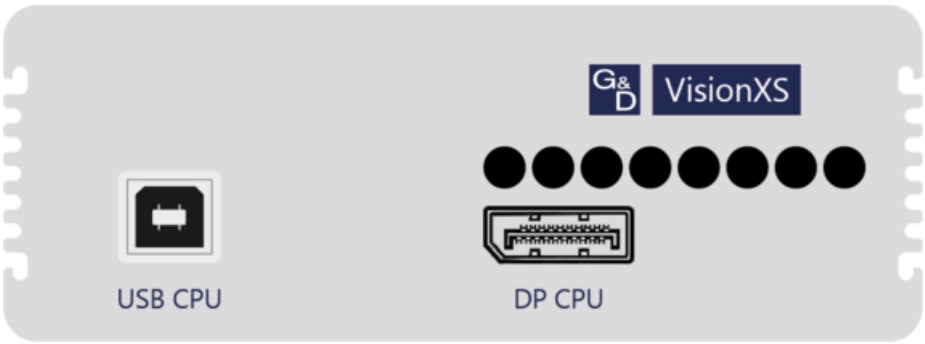
- External power supply via external 12V power pack or G&D-MultiPower, providing a central and redundant power supply
- Device mounting via G&D 19” DeviceCarrier for VisionXS (1 or 3 RU)

### 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.

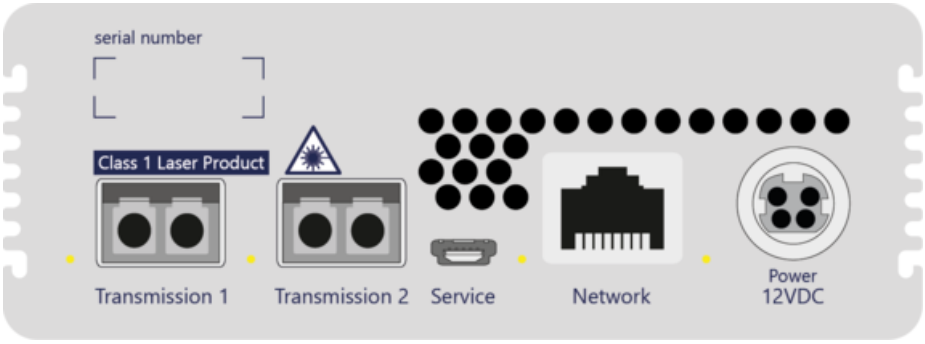
# INTERFACES

## FRONT




| Aperture designation | Design | Description |
|---|---|---|
| USB CPU | USB-B socket 2.0 | Connection to computer - USB |
| DP CPU | 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 | Brand | G&D |
| | Product group | KVM extenders |
| | Product Family | VisionXS |
| | Country of origin | Germany |
| | KVM matrix system component | Computer module (digital) |
| | Power Supply | no redundancy |
| Transmission | Number of transmission channels | 1 |
| | Redundant transmission channels | optional redundant KVM transmission |
| | Range | 100 m (62.5/125µm)<br>200 m (50.0/125µm, OM2)<br>400 m (50.0/125µm, OM3)<br>70 m (62.5/125µm)<br>150 m (50.0/125µm)<br>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 | 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)<br>3840 × 2160 (60 Hz)<br>2560 × 1600 (60 Hz)<br>2560 × 1440 (144 Hz)<br>2048 × 2048 (60 Hz)<br>1920 × 1200 (60 Hz)<br>1920 × 1080 (240 Hz)<br>1920 × 1080 (60 Hz)<br>5120 × 1440 (60 Hz)<br>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)<br>Extended Display Identification Data (EDID) |
| Audio | 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 |

| | | |
|---|---|---|
| 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 | 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<br>CAT6<br>CAT7 |
| | Data rate | 10 Mbit/s<br>100 Mbit/s |
| Maintenance | Update via | ConfigPanel (Network) |
| | Serviceport settings | 460800bps (8/N/1) |
| Housing | Material | Anodised aluminium |
| | Active cooling (fan) | yes |

| | | |
|---|---|---|
| | Width ca. | 109 mm |
| | Height ca. | 40 mm |
| | Depth ca. | 184 mm |
| | IP protection class | IP20 |
| | Weight ca. | 0.92 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 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>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 | Quantity | 1 |
| | Type | External |
| | Input voltage | 12 VDC |

| | |
|---|---|
| Current consumption | 1.5 A |
| Power consumption idle | 12.8 W |
| Power consumption max. | 16.2 W |
| Heat output idle | 12.8 W / 43.68 BTU/h |
| Heat output max. | 16.2 W / 55.28 BTU/h |

# MORE VARIANTS

| Description | Article number |
|---|---|
| **VisionXS-CPU-F(M)-DP-UHR**<br>Computer module to extend DisplayPort1.2 signals via fiber multimode | A1110312 |
| **VisionXS-CPU-F(M)-DP-UHR-A**<br>Computer module to extend DisplayPort1.2 signals via fiber multimode | A1110313 |
| **VisionXS-CPU-F(M)-DP-UHR-A-U**<br>Computer module to extend DisplayPort1.2 signals via fiber multimode | A1110314 |
| **VisionXS-CPU-F(M)-DP-UHR-A-U2**<br>Computer module to extend DisplayPort1.2 signals via fiber multimode | A1110614 |
| **VisionXS-CPU-F(M)-DP-UHR-AR-DT**<br>Computer module to extend DisplayPort1.2 signals via fiber multimode | A1110316 |
| **VisionXS-CPU-F(M)-DP-UHR-AR-U-DT**<br>Computer module to extend DisplayPort1.2 signals via fiber multimode | A1110317 |
| **VisionXS-CPU-F(M)-DP-UHR-AR-U2-DT**<br>Computer module to extend DisplayPort1.2 signals via fiber multimode | A1110613 |
| **VisionXS-CPU-F(M)-DP-UHR-DT**<br>Computer module to extend DisplayPort1.2 signals via fiber multimode | A1110318 |
| **VisionXS-CPU-F(M)-DP-UHR-U-DT**<br>Computer module to extend DisplayPort1.2 signals via fiber multimode | A1110319 |
| **VisionXS-CPU-F(M)-DP-UHR-U2**<br>Computer module to extend DisplayPort1.2 signals via fiber multimode | A1110615 |
| **VisionXS-CPU-F(M)-DP-UHR-U2-DT**<br>Computer module to extend DisplayPort1.2 signals via fiber multimode | A1110616 |

# 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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