



DATA SHEET (Version 1.0)

VisionXS-IP-DP-UHR



NEW: VisionXS-IP-DP-UHR



Discover G&D's new high-end extender product range with the VisionXS. Following the motto „smaller, more compact, more powerful“, G&D developed a new compact multi-purpose KVM tool. The main idea: a wide range of functions in the smallest possible housing. The new VisionXS systems are high-performance KVM extenders with a bandwidth of 10G and video transmission for resolutions up to 4K. Users can expect the best video quality and an even better performance. Despite the smaller housing, G&D offers numerous powerful features. Thanks to the versatility and combinability of the VisionXS systems, G&D will find the best possible solution by taking into account your individual application, the existing IT structures and the project requirements.

Small housing, great performance

The VisionXS-IP-DP-UHR is a matrix-compatible extender and much smaller than previous IP extender variants. Thanks to the new concept, the devices require no active cooling. Instead, the housing is used to dissipate the heat (passive cooling). The space available (especially in the rack) can be optimally used thanks to the considerably lower space requirement and the appropriate mounting solutions.

In contrast to previous versions (DP1.2-Vision-IP, transmission with up to 1Gbit/s), the VisionXS-IP-DP-UHR uses standard networks with up to 10Gbit/s. This has the big advantage that it needs way less compression, thus providing a greatly improved user experience. Thanks to the bandwidth management, the new variants are of course also compatible with the predecessor variants with 1Gbit technology.

Mix & Match – 1:1 connection and matrix mode

Due to predefined IP addresses, console and computer modules can be used in a 1:1 connection via existing network infrastructures. Within the KVM-over-IP product family, the different extender variants are compatible with each other.

The KVM-over-IP extenders can be operated in matrix mode using an additional control unit, the ControlCenter-IP. This allows the distribution and sharing of signals within a LAN infrastructure.

Transmission over IP-based networks up to 10Gbit/s

VisionXS-IP-DP-UHR extenders use G&D's KVM-over-IP technology to transmit signals. Signals are transmitted in compressed form over IP-based networks on layer 3 (1Gbit/s up to 10Gbit/s).

The extender transmits the following signals:

- DisplayPort 1.2a
Image data is processed in lossless video quality, pixel-perfect and with very good hand-eye coordination. The possible image resolution corresponds to a pixel rate of 25MPixel/s up to 600MPixel/s.
- Keyboard/mouse (USB)
- Embedded Audio
- USB HID Generic
- Audio analog (optional)
- RS232 and RS422 (optional)

Bandwidth management for more flexibility

By means of manual bandwidth management, transmission can be flexibly adapted to a wide range of bandwidth requirements and the video settings actually required.

Integrated Transmission Redundancy (optional with feature key)

No additional hardware is required to use transmission redundancy. Instead, the devices (console and computer modules) are already prepared for this. The function can be

activated, even later, via a software feature key. Additional redundancy modules (SFP transceiver fiber) are available for the fiber variants.

Security and configuration

Video, keyboard, mouse and control data is encrypted with AES-128. The devices include a network interface for transmitting data, WebIF, configuration, monitoring, SNMP and updates. They are also equipped with a management network interface that provides all of the above functions in addition to data transmission. The system can be configured by an on-screen display as well.

New and efficient mounting solutions – space saving and less screws

In conjunction with the appropriate mounting solutions, the existing space (especially in the rack) can be optimally used with VisionXS. In addition, with the new mounting solutions, mounting is much easier and faster. The new DeviceCarrier requires almost no screws, since it uses slide-in elements. The screws are used for locking.



Example DeviceCarrier (Changes reserved)

PRODUCT DETAILS - HIGHLIGHTS

Video

- Support of DisplayPort 1.2a video
- Resolution with pixel rates between 25 MPixel/s and 600 MPixel/s
- Horizontal frequency: 25 kHz - 295 kHz
- Vertical frequency: 24 Hz - 240 Hz
- Support of 4K and UltraHD resolutions @ 60 Hz
- Pixel encoding of RGB 4:4:4 with 24bpp/8bpc
- Compressed transmission, pixel perfect, lossless video quality, near-zero latency, ideal hand-eye coordination
- E-EDID support
- Support for DDC/CI protocol

Exemplary resolutions:

- 4096 x 2160 @ 60 Hz (4K @ 60 Hz)
- 3840 x 2160 @ 60 Hz (Ultra-HD @ 60 Hz)
- 2560 x 1600 @ 60 Hz
- 2560 x 1440 @ 144 Hz
- 2048 x 2048 @ 60 Hz (2K x 2K)
- 1920 x 1200 @ 60 Hz
- 1920 x 1080 @ 240 Hz

Further VESA and CEA standardized resolutions can be used within the scope of the pixel rate and the horizontal and vertical frequency.

Operation

- Integrated matrix support for use in combination with Control-Center-IP
- On-screen display for configuration and operation (new: multi-lingual)
- Web application Config Panel 21 for configuration, monitoring and updates (new: in more languages)
- Screen-freeze function

Signals

- Encrypted video, keyboard, mouse and control data (AES-128)
- Support of USB keyboard/mouse
- Permanent keyboard and mouse emulation
- Permanent monitor emulation
- Embedded audio on DisplayPort up to stereo PCM
- Audio stereo analog (optional, unidirectional from the computer module to the console module)
- Generic USB HID interface

Transmission

- IP-based signal transmission over standard Ethernet networks Layer 3 (up to 10Gbit/s), CAT or optical fibers
- HDIP level 1-3
- Integrated Transmission Redundancy (optional with feature key)
- Secure and trouble-free operation through pairing and encryption with AES-128 (cannot be manipulated)
- Unlimited transmission distance, with up to 100 meters between two active network components when using CAT cabling and up to 10,000 metres when using optical fibres

Device

- Integrated Transmission Redundancy (optional with feature key)
- Power supply via an optional external power supply unit, desktop versions (-DT) with internal power supply unit
- Redundant, external power supply (only for desktop variants)
- Tube and desktop versions available
- Mounting solutions (sets for tablemounting and Device-Carriers) are separately available for all variants

System update

- Update via Config Panel 21 (new: in more languages, HTML, Java-free, optimised operation)

PRODUCT DETAILS - FEATURES

Configuration and security

- Encrypted video, keyboard, mouse and control data (AES-128)
- Support of Quality of Service (QoS), can be configured by users
- Users can configure network ports of the respective communication channels
- Additional, independent management interface
- Manual bandwidth management to adjust the required bandwidth
- SNMP (trap and agent)
- Galvanic separation of transmitter and receiver (only with fiber), less sensitive to interfering radiation
- High reliability

Screen-freeze function

If the receiver loses the video signal due to a broken connection or a problem with the computer's graphics card, the Screen-freeze function „freezes“ the image last displayed on the monitor. This status is highlighted by a red semi-transparent frame. The function is automatically cancelled when the display receives an active video signal.

Monitoring

With the Monitoring function, you can auto-output device status messages to Syslog servers or via SNMP. The web interface lets you monitor the device manually.

The monitoring function of the VisionXS-IP-DP-UHR queries the following values:

- Status power supply unit (on/off)
- Status temperature threshold device (in/over limit)
- Status connection cables (ok/nok)
- Status computer (on/off)
- Status image signal graphics card computer (available/not available)
- Status network
- Status SFP modules (fiber variant)
- Status interfaces transmitter and receiver
- Freeze status
- Type of display
- Proactive monitoring of device status
- Event reporting function (syslog or SNMP traps)

ARTICLE OVERVIEW

Computer modules

Art.-Nr.	Name	CAT/Fiber	Audio/RS232 + RS422	Design
A1110260	VisionXS-IP-CPU-C-DP-UHR	CAT	Embedded Audio	Tube
A1110261	VisionXS-IP-CPU-C-DP-UHR-A	CAT	+ Audio analog	Tube
A1110262	VisionXS-IP-CPU-C-DP-UHR-AR-DT	CAT	+ Audio analog + RS232/RS422	Desktop
A1110263	VisionXS-IP-CPU-C-DP-UHR-DT	CAT	Embedded Audio	Desktop
A1110264	VisionXS-IP-CPU-F(M)-DP-UHR	Fiber Multimode	Embedded Audio	Tube
A1110265	VisionXS-IP-CPU-F(M)-DP-UHR-A	Fiber Multimode	+ Audio analog	Tube
A1110266	VisionXS-IP-CPU-F(M)-DP-UHR-AR-DT	Fiber Multimode	+ Audio analog + RS232/RS422	Desktop
A1110267	VisionXS-IP-CPU-F(M)-DP-UHR-DT	Fiber Multimode	Embedded Audio	Desktop
A1110268	VisionXS-IP-CPU-F(S)-DP-UHR	Fiber Singlemode	Embedded Audio	Tube
A1110269	VisionXS-IP-CPU-F(S)-DP-UHR-A	Fiber Singlemode	+ Audio analog	Tube
A1110270	VisionXS-IP-CPU-F(S)-DP-UHR-AR-DT	Fiber Singlemode	+ Audio analog + RS232/RS422	Desktop
A1110271	VisionXS-IP-CPU-F(S)-DP-UHR-DT	Fiber Singlemode	Embedded Audio	Desktop

Console modules

Art.-Nr.	Name	CAT/Fiber	Audio/RS232 + RS422	Design
A1120391	VisionXS-IP-CON-C-DP-UHR	CAT	Embedded Audio	Tube
A1120392	VisionXS-IP-CON-C-DP-UHR-AR-DT	CAT	+ Audio analog + RS232/RS422	Desktop
A1120393	VisionXS-IP-CON-C-DP-UHR-DT	CAT	Embedded Audio	Desktop
A1120394	VisionXS-IP-CON-F(M)-DP-UHR	Fiber Multimode	Embedded Audio	Tube
A1120395	VisionXS-IP-CON-F(M)-DP-UHR-AR-DT	Fiber Multimode	+ Audio analog + RS232/RS422	Desktop
A1120396	VisionXS-IP-CON-F(M)-DP-UHR-DT	Fiber Multimode	Embedded Audio	Desktop
A1120397	VisionXS-IP-CON-F(S)-DP-UHR	Fiber Singlemode	Embedded Audio	Tube
A1120398	VisionXS-IP-CON-F(S)-DP-UHR-AR-DT	Fiber Singlemode	+ Audio analog + RS232/RS422	Desktop
A1120399	VisionXS-IP-CON-F(S)-DP-UHR-DT	Fiber Singlemode	Embedded Audio	Desktop

Additional articles Transmission Redundancy

Art.-Nr.	Name/Description
A8200043	Transm. Redundancy Feature VisionXS/VisionXS-IP
A8200049	Transm. Redundancy Module VisionXS-IP-F(M) UHR 10G
A8200050	Transm. Redundancy Module VisionXS-IP-F(S) UHR 10G



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