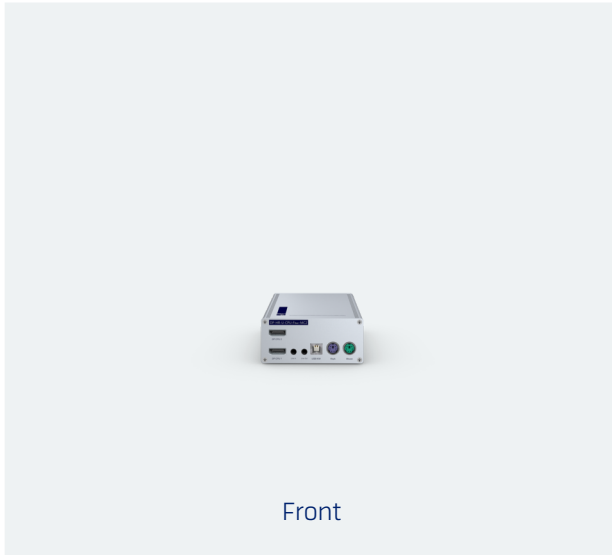
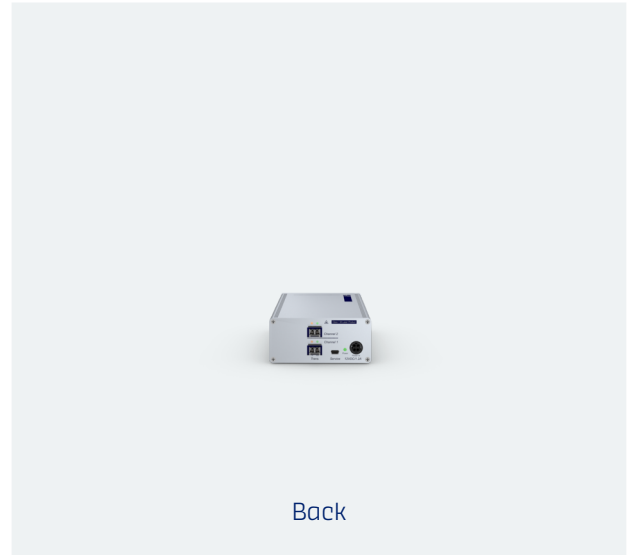


# DP-HR-U-CPU-FIBER(S+)-MC2 3.0 BASIC

KVM extenders, Article number A2320479



Front



Back

The matrix-compatible KVM extenders of the DP-HR-CPU 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 DP-HR-CPU 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 |
|----------|-----------------------------------------|----------------|
| 1        | USB-AM/BM-2 cable USB 2m                | A6300113       |
| 2        | DP1.4-Cable-M/M-2 SK13357 2m            | A6300173       |
| 2        | Audio-M/M-2-ferrite cable 2m            | A6300083       |
| 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)
- Use of a monitor profile optimized for the computer module (EDID profile)
- Flexible use of the EDID data of the workplace monitor as required
- Resolution up to  
2560 × 1600 @ 60 Hz,  
4096 × 2160 @ 30 Hz

### SIGNALS

- Bidirectional audio signals (stereo)
- Embedded stereo audio (Digital, 2 channel LPCM)
- Embedded USB 2.0 with Full Speed, transparent, all USB classes

### TRANSMISSION

- The transmission distance is up to 10,000 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
- 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 for Basic variants
- UC variant: computer module with two transmission lines for redundancy
  - These modules can be connected to various counterparts, such as compatible console modules or KVM matrix switches
- MultiChannel variants (MC): Modules for multi-monitor workplaces with multi-channel video
  - MC mode uses the full bandwidth for each video channel, whereby a separate transmission line is required for each channel

### WARRANTY

- A 3-year, free of charge product guarantee

- For an additional fee guarantee extension possible

## FEATURES

### 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
- 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 RackMount sets, TableMount sets 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.

## TECHNICAL DATA

|               |                                 |                               |
|---------------|---------------------------------|-------------------------------|
| General       | Product group                   | KVM extenders                 |
|               | Product Family                  | MTX-CPU/CON                   |
|               | Number of sources               | 1                             |
|               | KVM matrix system component     | Computer module (digital)     |
|               | Power Supply                    | no redundancy                 |
| Input options | USB mouse                       | yes                           |
|               | USB keyboard                    | yes                           |
|               | PS/2 mouse                      | yes                           |
|               | PS/2 keyboard                   | yes                           |
| Transmission  | Number of transmission channels | 2                             |
|               | Redundant transmission channels | no redundant KVM transmission |
|               | Range                           | 10,000 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 135 kHz                                                                                                                                                                                                                  |
|         | Exemplary resolutions        | 4096 × 2160 (24 Hz)<br>4096 × 2160 (25 Hz)<br>2048 × 2048 (60 Hz)<br>4096 × 2160 (30 Hz)<br>3840 × 2160 (24 Hz)<br>3840 × 2160 (25 Hz)<br>3840 × 2160 (30 Hz)<br>2560 × 1600 (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.                                                                                                                        |
| Audio 1 | Supported industry standards | Display Data Channel (DDC)<br>Display Data Channel Command Interface (DDC/CI)<br>Extended Display Identification Data (EDID)                                                                                                       |
|         | Transmission type            | Bidirectional<br>Stereo                                                                                                                                                                                                            |
|         | Resolutions                  | 24 bit digital                                                                                                                                                                                                                     |
|         | Sampling rate                | up to 96 kHz                                                                                                                                                                                                                       |
|         | Bandwidth                    | 22 kHz                                                                                                                                                                                                                             |
| Audio 2 | Audio support                | Analog                                                                                                                                                                                                                             |
|         | Transmission type            | Stereo<br>2-channel LPCM                                                                                                                                                                                                           |

|                      |                                        |                                   |
|----------------------|----------------------------------------|-----------------------------------|
|                      | Resolutions                            | 24 bit<br>20 bit<br>16 bit        |
|                      | Sampling rate                          | up to 48 kHz                      |
|                      | Audio support                          | Digital Embedded                  |
| USB                  | Separate USB transmission port         | no                                |
|                      | Specification                          | USB 2.0                           |
|                      | Medium                                 | Embedded                          |
|                      | Transmission rate                      | max. 16 Mbit/s (app. Full Speed)  |
|                      | Range                                  | max. 10,000 m                     |
|                      | USB classes                            | All                               |
| Maintenance          | Update via                             | Update Wizard (service interface) |
|                      | Serviceport settings                   | 115200bps (8/N/1)                 |
| Housing              | Material                               | anodised aluminium                |
|                      | Width ca.                              | 105 mm                            |
|                      | Height ca.                             | 46 mm                             |
|                      | Depth ca.                              | 164 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                                       | 160,000 h at 25°C                                                                                                                                                                                                                                                 |
|              | Conformities                               | CE compliant (see downloads)<br>UKCA compliant (see downloads)<br>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) |
|              |                                            |                                                                                                                                                                                                                                                                   |
| Power supply | Quantity                                   | 1                                                                                                                                                                                                                                                                 |
|              | Type                                       | External                                                                                                                                                                                                                                                          |
|              | Input voltage                              | 12 VDC                                                                                                                                                                                                                                                            |
|              | Current consumption                        | 1 A                                                                                                                                                                                                                                                               |
|              | Power consumption idle                     | 8.7 W                                                                                                                                                                                                                                                             |
|              | Power consumption max.                     | 12 W                                                                                                                                                                                                                                                              |
|              | Heat output idle                           | 8.7 W                                                                                                                                                                                                                                                             |
|              | Heat output max.                           | 12 W                                                                                                                                                                                                                                                              |

## ACCESSORY PRODUCTS

| Image                                                                               | Description                                                                                                                       | Article number |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|----------------|
|    | <b>USB-Service-2 cable 2m</b><br>Cable for system updates and configuration                                                       | A6200103       |
|    | <b>Audio-M/M-3-ferrite cable 3m</b><br>Audio connection cable with ferrite core                                                   | A6300118       |
|    | <b>Audio-M/M-5-ferrite cable 5m</b><br>Audio connection cable with ferrite core                                                   | A6300085       |
|    | <b>DP-Cable-M/M-3 cable DP 3m</b><br>Single cable to connect a DisplayPort video channel                                          | A6300109       |
|    | <b>DP1.4-Cable-M/M-3 SK13358 3m</b><br>Single cable to connect a DisplayPort video channel (DP1.4)                                | A6300174       |
|  | <b>DP1.4-Cable-M/M-5 SK13359 5m</b><br>Single cable to connect a DisplayPort video channel (DP1.4)                                | A6300175       |
|  | <b>USB-AM/BM-3 cable USB 3m</b><br>USB cable, Type-A Plug/Type-B Plug                                                             | A6300114       |
|  | <b>USB-AM/BM-5 cable USB 5m</b><br>USB cable, Type-A Plug/Type-B Plug                                                             | A6300111       |
|  | <b>PowerPack 12 Type 3 12V/2A</b><br>24W power supply with 2m powercable                                                          | A4110013       |
|  | <b>CaseMount-Set-105-46 mounting bracket</b><br>Screws & brackets for mounting devices with dimensions 105x46mm in DeviceCarriers | A7000033       |



## MORE VARIANTS

| Description                                                                                                                                                                                                                 | Article number |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| <b>DP-HR-CPU-Fiber(S+) 3.0 Basic</b><br>Computer module to extend DisplayPort signals via fiber singlemode+                                                                                                                 | A2320433       |
| <b>DP-HR-CPU-Fiber(S+) 3.0 Incl. PowerPack</b><br>Computer module to extend DisplayPort signals via fiber singlemode+                                                                                                       | A2320434       |
| <b>DP-HR-CPU-Fiber(S+)-DH 3.0 Basic</b><br>Dual head computer module (fiber singlemode+) to extend 2 DisplayPort signals using 1 transmission line                                                                          | A2320435       |
| <b>DP-HR-CPU-Fiber(S+)-DH 3.0 Incl. PowerPack</b><br>Dual head computer module (fiber singlemode+) to extend 2 DisplayPort signals using 1 transmission line                                                                | A2320436       |
| <b>DP-HR-CPU-Fiber(S+)-DH-UC 3.0 Basic</b><br>Dual head splitter computer module for transmission of DisplayPort signals to 2 different counterpart stations (extenders or matrix switches) via fiber singlemode+           | A2320437       |
| <b>DP-HR-CPU-Fiber(S+)-DH-UC 3.0 Incl. PowerPack</b><br>Dual head splitter computer module for transmission of DisplayPort signals to 2 different counterpart stations (extenders or matrix switches) via fiber singlemode+ | A2320438       |
| <b>DP-HR-CPU-Fiber(S+)-DH-UC Basic</b><br>Dual head splitter computer module for transmission of DisplayPort signals to 2 different counterpart stations (extenders or matrix switches) via fiber singlemode+               | A2320207       |
| <b>DP-HR-CPU-Fiber(S+)-DH-UC Incl. PowerPack</b><br>Dual head splitter computer module for transmission of DisplayPort signals to 2 different counterpart stations (extenders or matrix switches) via fiber singlemode+     | A2320206       |
| <b>DP-HR-CPU-Fiber(S+)-MC2 3.0 Basic</b><br>Computer module to extend DisplayPort signals via fiber singlemode+                                                                                                             | A2320439       |
| <b>DP-HR-CPU-Fiber(S+)-MC2 3.0 Incl. PowerPack</b><br>Computer module to extend DisplayPort signals via fiber singlemode+                                                                                                   | A2320440       |
| <b>DP-HR-CPU-Fiber(S+)-UC 3.0 Basic</b><br>Splitter computer module for transmission of DisplayPort signals to 2 different counterpart stations (extenders or matrix switches) via fiber singlemode+                        | A2320441       |
| <b>DP-HR-CPU-Fiber(S+)-UC 3.0 Incl. PowerPack</b><br>Splitter computer module for transmission of DisplayPort signals to 2 different counterpart stations (extenders or matrix switches) via fiber singlemode+              | A2320442       |
| <b>DP-HR-U-CPU-Fiber(S+) 3.0 Basic</b><br>Computer module to extend DisplayPort signals via fiber singlemode+                                                                                                               | A2320473       |

| Description                                                                                                                                                                                                                   | Article number |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| <b>DP-HR-U-CPU-Fiber(S+)-3.0 Incl. PowerPack</b><br>Computer module to extend DisplayPort signals via fiber singlemode+                                                                                                       | A2320474       |
| <b>DP-HR-U-CPU-Fiber(S+)-DH 3.0 Basic</b><br>Dual head computer module (fiber singlemode+) to extend 2 DisplayPort signals using 1 transmission line                                                                          | A2320475       |
| <b>DP-HR-U-CPU-Fiber(S+)-DH 3.0 Incl. PowerPack</b><br>Dual head computer module (fiber singlemode+) to extend 2 DisplayPort signals using 1 transmission line                                                                | A2320476       |
| <b>DP-HR-U-CPU-Fiber(S+)-DH-UC 3.0 Incl. PowerPack</b><br>Dual head splitter computer module for transmission of DisplayPort signals to 2 different counterpart stations (extenders or matrix switches) via fiber singlemode+ | A2320478       |
| <b>DP-HR-U-CPU-Fiber(S+)-DH-UC 3.0 Basic</b><br>Dual head splitter computer module for transmission of DisplayPort signals to 2 different counterpart stations (extenders or matrix switches) via fiber singlemode+           | A2320477       |
| <b>DP-HR-U-CPU-Fiber(S+)-DH-UC Basic</b><br>Dual head splitter computer module for transmission of DisplayPort signals to 2 different counterpart stations (extenders or matrix switches) via fiber singlemode+               | A2320208       |
| <b>DP-HR-U-CPU-Fiber(S+)-DH-UC Incl. PowerPack</b><br>Dual head splitter computer module for transmission of DisplayPort signals to 2 different counterpart stations (extenders or matrix switches) via fiber singlemode+     | A2320190       |
| <b>DP-HR-U-CPU-Fiber(S+)-MC2 3.0 Incl. PowerPack</b><br>Computer module to extend DisplayPort signals via fiber singlemode+                                                                                                   | A2320480       |
| <b>DP-HR-U-CPU-Fiber(S+)-UC 3.0 Basic</b><br>Splitter computer module for transmission of DisplayPort signals to 2 different counterpart stations (extenders or matrix switches) via fiber singlemode+                        | A2320481       |
| <b>DP-HR-U-CPU-Fiber(S+)-UC 3.0 Incl. PowerPack</b><br>Splitter computer module for transmission of DisplayPort signals to 2 different counterpart stations (extenders or matrix switches) via fiber singlemode+              | A2320482       |

# 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)