

# HDM-U-CPU-DH-UC BASIC

KVM extenders, Article number A2320233



Front



Back

The matrix-compatible KVM extenders of the HDM-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 HDM-CPU series supports HDMI 1.4 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        | Audio-M/M-2-ferrite cable 2m             | A6300083       |
| 1        | HDM-Cable-M/M-2 S1 cable HDM-SupraLok 2m | A6300141       |
| 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
- 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 330MPixel/s.
  - The second video channel supports up to 165MPixel/s.
  - This corresponds, for example, to a resolution of up to  
1920 × 1200 @ 60 Hz,  
1920 × 1080 @ 60 Hz or  
1280 × 1024 @ 60 Hz.
  - If the resolution on the second video channel is lower, the main channel can transmit a higher resolution.
  - Exceeding the total pixel rate of 330MPixel/s may result in a loss of quality.

### 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 140 meters over CAT

### 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)                      |
|               | Max. total bandwidth DualHead   | 330 MPixel/s                                   |
|               | 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 | 1                                              |
|               | Redundant transmission channels | Redundant KVM transmission available           |
|               | Range                           | 140 m (AWG22)<br>100 m (AWG24)<br>80 m (AWG26) |
|               | Medium                          | CAT5e<br>CAT6<br>CAT7                          |
|               | Data rate                       | 1 Gbit/s                                       |
|               |                                 |                                                |
| Video input 1 | Quantity                        | 1                                              |
|               | Format                          | HDMI 1.4                                       |

|               |                              |                                                                                                                                                                                                             |
|---------------|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|               | 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>4096 × 2160 (30 Hz)<br>3840 × 2160 (24 Hz)<br>3840 × 2160 (25 Hz)<br>3840 × 2160 (30 Hz)<br>2048 × 2160 (60 Hz)<br>2048 × 2048 (60 Hz)<br>2560 × 1600 (60 Hz) |
|               | General Notes                | Further VESA and CTA standardised resolutions possible within pixel rate and horizontal/vertical frequency.                                                                                                 |
|               | Supported industry standards | Display Data Channel (DDC)<br>Display Data Channel Command Interface (DDC/CI)                                                                                                                               |
|               |                              |                                                                                                                                                                                                             |
| Video input 2 | Quantity                     | 1                                                                                                                                                                                                           |
|               | Format                       | HDMI 1.4                                                                                                                                                                                                    |
|               | Colour depth                 | 24 bit                                                                                                                                                                                                      |
|               | Pixel rate ca.               | 25 MPixel/s to 165 MPixel/s                                                                                                                                                                                 |
|               | Vertical frequency           | 24 Hz to 120 Hz                                                                                                                                                                                             |
|               | Horizontal frequency         | 25 kHz to 135 kHz                                                                                                                                                                                           |
|               | Exemplary resolutions        | 640 × 480 (60 Hz)<br>1920 × 1200 (60 Hz)                                                                                                                                                                    |

|         |                              |                                                                                                             |
|---------|------------------------------|-------------------------------------------------------------------------------------------------------------|
|         | General Notes                | Further VESA and CTA standardised resolutions possible within pixel rate and horizontal/vertical frequency. |
|         | Supported industry standards | Display Data Channel (DDC)<br>Display Data Channel Command Interface (DDC/CI)                               |
| Audio 1 | Transmission type            | Bidirectional<br>Stereo                                                                                     |
|         | Resolutions                  | 24 bit digital                                                                                              |
|         | Sampling rate                | up to 96 kHz                                                                                                |
|         | Bandwidth                    | 22 kHz                                                                                                      |
|         | Audio support                | Analog                                                                                                      |
| Audio 2 | 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     | Specification                | USB 2.0                                                                                                     |
|         | Medium                       | Embedded                                                                                                    |
|         | Transmission rate            | max. 16 Mbit/s (app. Full Speed)                                                                            |
|         | Range                        | max. 140 m                                                                                                  |
|         | Power (output)               | 500 mA (HighPower)                                                                                          |
|         | 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.                                 | 26 mm                                                                                                                                                                                                                                                             |
|                      | Depth ca.                                  | 164 mm                                                                                                                                                                                                                                                            |
|                      | IP protection class                        | IP20                                                                                                                                                                                                                                                              |
|                      | Weight ca.                                 | 0.4 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                                       | 280,000 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    | 0.7 A    |
|              | Power consumption max. | 8.4 W    |
|              | Heat output max.       | 7.4 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>HDM-Cable-M/M-3 S1 cable HDM-SupraLok 3m</b><br>Single cable to connect a HDMI video channel with 1 SupraLok connector         | A6300139       |
|    | <b>HDM-Cable-M/M-5 S1 cable HDM-SupraLok 5m</b><br>Single cable to connect a HDMI video channel with 1 SupraLok connector         | A6300140       |
|  | <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-105-26 mounting bracket</b><br>Screws & brackets for mounting devices with dimensions 105x26mm in DeviceCarriers | A7000020       |

## MORE VARIANTS

| Description                                                                                                                                                                                    | Article number |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| <b>HDM-CPU Basic</b><br>Computer module to extend HDMI signals via CAT cable                                                                                                                   | A2320247       |
| <b>HDM-CPU Incl. PowerPack</b><br>Computer module to extend HDMI signals via CAT cable                                                                                                         | A2320246       |
| <b>HDM-CPU-DH-UC Basic</b><br>Dual head splitter computer module for transmission of HDMI signals to 2 different counterpart stations (extenders or matrix switches) via CAT cable             | A2320249       |
| <b>HDM-CPU-DH-UC Incl. PowerPack</b><br>Dual head splitter computer module for transmission of HDMI signals to 2 different counterpart stations (extenders or matrix switches) via CAT cable   | A2320248       |
| <b>HDM-U-CPU Basic</b><br>Computer module to extend HDMI signals via CAT cable                                                                                                                 | A2320231       |
| <b>HDM-U-CPU Incl. PowerPack</b><br>Computer module to extend HDMI signals via CAT cable                                                                                                       | A2320230       |
| <b>HDM-U-CPU-DH-UC Incl. PowerPack</b><br>Dual head splitter computer module for transmission of HDMI signals to 2 different counterpart stations (extenders or matrix switches) via CAT cable | A2320232       |

# 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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