**4K@60/HDCP 2.2 HDBaseT Extender**

# HDC-TH100-D/HDC-RH100-D

The IDK HDC-TH100-D/HDC-RH100-D are extender for a long-haul transmission of HDMI signal over one single category cable.
The image quality will not be deteriorated, since video signal is transmitted at a resolution up to 4K@60 without compression.
You can also control external devices that are connected to the HDC-TH100-D/HDC-RH100-D over RS-232C and LAN by registering external control commands.
Input video signal is converted to HDBaseT signal and sent up to 328 ft. (100 m).

## ■ Specification

| Item | | HDC-TH100-D (Transmitter) | HDC-RH100-D (Receiver) |
|---|---|---|---|
| Input | | 1 input<br>HDMI (*1)/DVI 1.0<br>TMDS signal link<br>HDCP 1.4/2.2 (Pass-through) (*2)<br>CEC (Pass-through)<br>Connector: Female HDMI Type A (19-pin) (*3) | 1 input<br>HDBaseT<br>RS-232C, LAN<br>Connector: RJ-45 |
| Output | | 1 output<br>HDBaseT<br>RS-232C, LAN<br>Connector: RJ-45 | 1 output<br>HDMI (*1)/DVI 1.0<br>TMDS signal link<br>HDCP 1.4/2.2 (Pass-through) (*2)<br>CEC (Pass-through)<br>Connector: Female HDMI Type A (19-pin) (*3) |
| Format | | VGA to 4K (*4)<br>480i / 480p / 576i / 576p / 720p / 1080i / 1080p / 4K (*4) | |
| Color depth | | 24 bit, 30 bit, 36 bit Deep Color (*5) | |
| Dot clock | | 25 MHz to 600 MHz | |
| TMDS clock | | 25 MHz to 340 MHz | |
| TMDS data rate | | 0.75 Gbps to 10.2 Gbps | |
| Plug & Play | | Pass-through | |
| Digital audio input/output | | Multi-channel LPCM up to 8 channels<br>Sampling frequency: 32 kHz to 192 kHz, Sample size: 16 bit to 24 bit | |
| Cable for extension | Cable (*6) | CAT.5E HDC, Cat5e UTP/STP, Cat6 UTP/STP cable | |
| | Maximum transmission distances (*7) | 328 ft. (100 m) (For 4K format, CAT.5E HDC, Cat5e STP, or Cat6 STP cable is used)<br>492 ft. (150 m) (Long reach mode is used) | |
| External control | RS-232C | 1 port/male D-sub (9 pin), full duplex, up to 115.2 kbps | |
| | LAN | 1 port/RJ-45 10Base-T/100Base-TX (Auto Negotiation), Auto MDI/MDI-X | |
| General | Power | DC 5 V 0.8 A | DC 5 V 1.4 A |
| | Power consumption | About 4 W | About 7 W |
| | Dimensions | 4.2 (W) × 1.1 (H) × 3.9 (D)" (106 (W) × 27.5 (H) × 100 (D) mm)<br>(Quarter rack wide, thin type) (Excluding connectors and the like) | |
| | Weight | 0.4 lbs. (0.2 kg) | |
| | Temperature | Operating : 32°F to 104°F (0°C to +40°C)<br>Storage : -4°F to +176°F (-20°C to +80°C) | |
| | Humidity | Operating/Storage: 20% to 90% (Non Condensing) | |

*1  HEC and ARC are not supported.
*2  To transmit those signals, use an IDK's HDBaseT product supporting DVI signals.
   If DVI signals with HDCP is sent from the source device, video may not be output to the sink device. Please check the operation beforehand.
*3  Use 16 ft. (5 m) or shorter HDMI cables.
   For 4K format, use an 18-Gbps high speed cable.
*4  For 4K format, 24 Hz/25 Hz/30 Hz/50 Hz (4:2:0)/59.94 Hz (4:2:0)/60 Hz (4:2:0) are supported.
*5  For 4K format, the following color depths are supported.
   ・24 Hz/25 Hz/30 Hz     : 4 bit (RGB, YCbCr 4:4:4)
                     : 24 bit, 30 bit, 36 bit (YCbCr 4:2:2)
   ・50 Hz/59.94 Hz/60 Hz  : 24 bit (YCbCr 4:2:0)
*6  T568A or T568B straight. The CAT.5E HDC cable is developed by IDK and recommended by HDBaseT alliance.
*7  The maximum transmission distance was obtained when IDK's CAT.5E HDC cable was used. The distance may not be extended with some device combinations, cabling method, or other manufacturer's cable. Video may be disturbed or may not be output even if signals are within the range mentioned above. Operations may not be stable with some LCD devices; please check the operation beforehand or contact us.
   The maximum transmission distance is the shorter distance of connected HDBaseT product or sink device's maximum transmission distance.
   Up to 492 ft. (150 m): 1080p (24 bit) in Long reach mode. For Long reach mode, use IDK's HDBaseT products that supports 328 ft. (100 m) or longer.

## ■ Front & Rear Panels

### HDC-TH100-D

### HDC-RH100-D
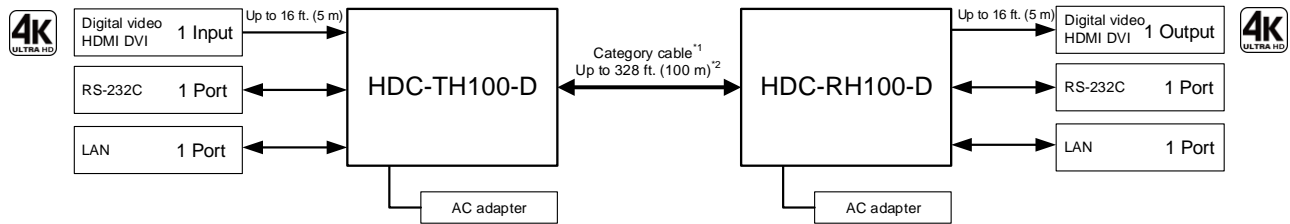
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# HDC-TH100-D/HDC-RH100-D

## ■ Application Example



*1 For Transmission distance longer than 164 ft. (50 m), CAT.5E HDC, Cat5e STP or Cat6 UTP/STP cables are recommended.
For 4K format longer than 230 ft. (70 m), CAT.5E HDC/Cat5e STP or Cat6 STP cables are recommended.
For Long reach model longer than 328 ft. (100 m), CAT.5E HDC/Cat5e STP or Cat6 STP cables are recommended.
*2 Maximum transmission distance:
The mentioned maximum value was obtained when IDK's CAT.5E HDC cable was used.
The distance can be up to 492 ft. (150 m) with Long reach mode supporting 1080p (24 bit). For Long reach mode, use HDC-TH100-D/HDC-RH100-D/
IDK's HDBaseT products that support 328 ft. (100 m) .

## [Features]

### ■ Video
- ・ Up to 4K@60 (4:2:0)
- ・ HDCP 1.4/2.2 (Pass-through)
- ・ Up to 328 ft. (100 m) 4K@60 over CAT.5E HDC/Cat5e STP/Cat6 STP cable
- ・ Transmission over Cat5e UTP cable[*1]
- ・ Up to 328 ft. (100 m) over Cat6 UTP cable[*2]
- ・ Up to 492 ft. (150 m) in Long reach mode (1080p 60 Hz 24 bit or less)[*3]
- ・ No actual extension delay (10 μs or less/328 ft. (100 m))

### ■ Others
- ・ CEC (Pass-through)
- ・ AC adapter with locking mechanism
- ・ Up to 4 units can be installed in a 1U rack

*1 For transmission distance longer than 164 ft. (50 m), CAT.5E HDC, Cat5e STP or Cat6 UTP/STP cables are recommended.
*2 For 4K format longer than 230 ft. (70 m), CAT.5E HDC/Cat5e STP or Cat6 STP cables are recommended.
*3 For Long reach mode 328 ft. (100 m) or longer (up to 492 ft. (150 m)), CAT.5E HDC/Cat5e STP or Cat6 STP cables are recommended. Use HDC-TH100-D/HDC-RH100-D/
IDK's HDBaseT products that support 328 ft. (100 m).

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