The IDK MSD-801UHD is a high-performance digital multi-switcher with a scan converter and up to 8 inputs and 1 output.

For video input, 8 digital and 2 analog inputs are included and the following signals are supported: HDMI, HDBaseT, DVI, composite video, Y/C, analog RGB, and analog YPbPr signals. Front panel HDBaseT input supports Power over HDBaseT (PoH) that can power the connected devices. Input video signals are converted to HDMI and HDBaseT signals (2 outputs) simultaneously, and output at a resolution up to 4K@60.

For audio input, 8 digital and 3 analog inputs are included. Selected audio signals are output to digital audio and analog audio. Audio level of each input can be set individually. The lip sync function corrects the gap between the video and audio.

This switcher also has RS-232C and LAN ports as communication ports for control to enable you to set menus remotely. You can also control external devices that are connected to the MSD-802UHD over RS-232C, LAN, CEC, or contact closure by registering external control commands. The waiting function helps you to send external commands after cooling time passes as power supply control of projectors or the like. External control commands can be executed from front keys, RS-232C, or LAN; they can also be executed when input channel selection keys or power supply key is operated.

### Specification

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>HDMI / DVI</td>
<td>2 inputs: HDMI Deep Color (*1) / DVI 1.0 TMDS single link, HDCP 1.4 / 2.2 TMDS clocks: 25 MHz to 300 MHz, TMDS data rate: 0.75 Gbps to 18 Gbps EDID emulation Connector: Female HDMI Type A (19-pin)</td>
</tr>
<tr>
<td>HDBaseT</td>
<td>5 inputs: *DVI connectors: Switch-selectable between digital and analog HDMI Deep Color (*1) / DVI 1.0 TMDS single link, HDCP 1.4 TMDS clocks: 25 MHz to 225 MHz, TMDS data rate: 0.75 Gbps to 6.75 Gbps EDID emulation Connector: 3 female HDMI Type A (19-pin), 2 female DVI-I (29-pin)</td>
</tr>
<tr>
<td>Video</td>
<td>1 input: HDBaseT (*1) HDCP 1.4 / 2.2 (*2) EDID emulation, PoH power supply (IEEE 802.3af) (*3) Connector: RJ-45 (*4) Cable: CAT.5E, CAT.5e UTP / STP, CAT.6 UTP / STP (*5)</td>
</tr>
<tr>
<td>Universal Analog</td>
<td>2 inputs: *Switch-selectable between digital and analog Composite video / Y/C / Analog RGB / Analog YPbPr (auto-recognition) Composite video (VBS Signal): 1.0 Vp-p / 75 Ω Y/C: 1.0 Vp-p(Y) / 0.286 Vp-p(C) / 75 Ω Analog RGB: 0.7 Vp-p(1.0 Vp-p Sync on Green) / 75 Ω HS/VS TTL level, CS TTL level, Sync on Green Analog YPbPr: 1.0 Vp-p(YPb) / 0.7 Vp-p(Pb/Pr) / 75 Ω EDID emulation Connector: Female DVI-I (29-pin)</td>
</tr>
<tr>
<td>Format</td>
<td>2 inputs: VGA to WUXGA (Dot clock: 25 MHz to 300 MHz) 480i / 480p / 576i / 576p / 720p / 1080i / 1080p / 4K (up to 4K@60 (4:4:4)) (*6)</td>
</tr>
<tr>
<td>HDMI / DVI</td>
<td>5 inputs: VGA to WUXGA (Dot clock: 25 MHz to 165 MHz) * For WUXGA / QWXGA, only Reduced Blanking is supported. 480i / 480p / 576i / 576p / 720p / 1080i / 1080p</td>
</tr>
<tr>
<td>HDBaseT</td>
<td>2 inputs: VGA to WUXGA (Dot clock: 25 MHz to 300 MHz) 480i / 480p / 576i / 576p / 720p / 1080i / 1080p / 4K (up to 4K@60 (4:2:0)) (*6)</td>
</tr>
<tr>
<td>Universal Analog</td>
<td>VGA to WUXGA (Dot clock: 25 MHz to 165 MHz) * For WUXGA / QWXGA, only Reduced Blanking is supported. NTSC / PAL 480i / 480p / 576i / 576p / 720p / 1080i / 1080p</td>
</tr>
<tr>
<td>Audio</td>
<td>8 inputs: *Switch-selectable between analog audio Multi-channel LPCM up to 8 channels Sampling frequency: 32 kHz to 192 kHz, Sample size: 16 bit to 24 bit Reference level: -20 dBFS, Max. input level: 0 dBFS Connector: 5 female HDMI Type A (19-pin), 2 female DVI-I (29-pin), 1 RJ-45</td>
</tr>
<tr>
<td>Analog</td>
<td>3 inputs: *Switch-selectable between digital audio Stereo L/R balanced / unbalanced Input impedance: 48k Ω Balanced / 24 kΩ Unbalanced Reference level: -10 dBu, Max. input level: +10 dBu Connector: 5-pin terminal block</td>
</tr>
</tbody>
</table>

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### Output Video
- **HDBaseT**
  - 1 output: Output video can be distributed to an HDMI / DVI and HDBaseT simultaneously.
  - Cable: CAT.5E HDC, Cat5e UTP / STP, Cat6 UTP / STP (*5)
  - Format: VGA / SVGA / XGA / WXGA (1280x768) / WXGA (1280x800) / Quad-VGA / SXGA / SXGA+ / WXGA (1366x768) / WXGA (1366x768) / SXGA+ / WXGA + WXGA++ / UXGA / WSXGA+ / VESAHD / WUXGA / QWXGA / WQHD / WQXGA
  - Sampling frequency: 32 kHz to 192 kHz, Sample size: 16 bit to 24 bit
  - Reference level: -8 dBu, Max. output level: 0 dBFS

### Digital Audio
- **Analog**
  - 1 output: Audio can be distributed to an HDMI output and an HDBaseT output simultaneously.
  - Multi-channel LPCM up to 8 channels
  - Sampling frequency: 32 kHz to 192 kHz, Sample size: 16 bit to 24 bit
  - Reference level: -12 dBu, Max. output level: 0 dBFS

### Maximum extension distance
- **Digital Input**
  - HDMI / DVI: up to 98 ft. (30m) (4K@60) (*8)
  - HDBaseT: up to 328 ft. (100 m), up to 492 ft. (150 m) (Long Reach Mode) (*9)

### External Control
- RS-232C 1 pin / 3-pin terminal block
- LAN 1 port / RJ-45 10Base-T / 100Base-TX (Auto Negotiation), Auto MDI / MDI-X
- Contact closure 3 ports / 6-pin terminal block
- Command control 3 ports / 7-pin terminal block

### Functions
- Scan Converter Motion adaptive I/P conversion, Aspect Ratio Control, Picture adjustment (brightness, contrast, display position, display size, etc.), Seamless Switching (*10)
- Others All function setting through browser, Automatic input detection and switching, Volume adjustment (volumes of input and output ports can be set separately), Lip Sync (Max. 16 frames), Audio breakout enables independent audio and video switching, Cross-point memory (9 settings), Preset memory (8 settings), Last memory, Anti-Snow (*11), Connection Reset (*12), External control commands (32 commands), Security lock

### General
- Power 100 - 240 VAC ±10%, 50 Hz / 60 Hz ±3 Hz
- Power consumption About 37 Watts
- Dimensions 16.9 (W) x 1.7 (H) x 13.8 (D) [430 (W) x 44 (H) x 350 (D) mm]
- Weight 11 lbs. (5.0 kg)
- Temperature Operating: 32°F to 104°F (0°C to 40°C), Storage: -4°F to +176°F (-20°C to +80°C)
- Humidity Operating / Storage: 20% to 90% (Non Condensing)

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*30 bit / pixel (10 bit / component) Deep Color is supported while x.v.Color, 3D, ARC and HEQ are not supported.
*WQHD, WXGA, and 4K format: 24 bit / pixel (8 bit / component) is supported.
*2 HDBaseT input/output: DVI signals protected by HDCP are not supported. To transmit those signals, use an IDK's twisted pair cable extending supporter signals DVI signals.
*3 For PoH power feeding, please use an HDBaseT transmitter supporting IEEE 802.3af and AWG 24 twisted pair cable or thicker cable.
*4 RJ-45 (HDBaseT connector) is only for extending digital video and audio signals over a Cat5e / Cat6 twisted pair cable. Use it with IDK's twisted pair cable transmitter or receiver.
*5 Do not use for LAN devices.
*6 T568A or T568B straight. The CAT.5E HDC cable is developed by IDK and recommended by HDBaseT alliance.
*7 4K format: Only CEA-861 timing is supported.
*8 4K format of HDBaseT output: Up to 4K@30 is supported.
*10 Seamless switching with a black frame.
*11 Anti-snow feature automatically filters snow noise that is a specific symptom of HDCP-compliant signals and mainly occurs at start-up. This feature does not work when snow noise has already occurred during startup or when it occurs due to a bad condition of the transmission line.
*12 For digital systems, some problems, such as HDCP authentication error, can often be recovered by physically disconnecting and reconnecting the digital cables. However, the Connection Reset feature will fix these problems automatically without the need to physically plug and unplug the cables. It creates the same condition as if the cable were physically disconnected and reconnected. This feature only works for the MSD's output. If other devices are connected between the MSD's output and sink device, this feature may be invalid.
*13 The sink device must support CEC. Some sink devices cannot be controlled from the MSD through CEC.

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**IDK Corporation**

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**Ver.1.3.0 (180920)**
■ Front & Rear Panels
**Diagam**

- **Input**
  - 4K Ultra HD HDMI/DVI
  - Analog Video / VCG / YC / RGB / YPbPr
  - Digital video/audio communication for extension HDBaseT

- **Output**
  - 4K Ultra HD HDMI/DVI
  - Digital video/audio communication for extension HDBaseT

- **Transmitter**
  - Analog Audio / LR balanced/unbalanced

- **Switch**
  - Video matrix switch
  - Audio matrix switch

- **CPU**
  - Digital video/audio communication for extension HDBaseT

- **HUB**
  - Digital video/audio communication for extension HDBaseT

- **Front Panel**
  - Command
  - Control command execution button

- **Twisted pair cable transmitter**
  - Up to 4K@60 (4:4:4)

- **Twisted pair cable receiver**
  - Up to 4K@60 (4:4:4)

- **Power amp.**
  - Up to 4K@60 (4:4:4)

- **Speaker**
  - Up to 4K@60 (4:4:4)

- **Screen**
  - Up to 4K@60 (4:4:4)

- **Blu-ray players**
  - Up to 4K@60 (4:4:4)

- **Laptop**
  - Up to 4K@60 (4:4:4)

- **CD player**
  - Up to 4K@60 (4:4:4)

- **Front Panel**
  - Command

- **SWC-2000**
  - Up to 4K@60 (4:4:4)

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**Application Example**

- **Input**
  - HDMI/DVI
  - Analog Audio
  - RS-232C

- **Output**
  - HDMI/DVI
  - Analog Audio

- **Lane**
  - Up to 4K@60 (4:4:4)

- **Twisted pair cable transmitter**
  - Up to 4K@60 (4:4:4)

- **Twisted pair cable receiver**
  - Up to 4K@60 (4:4:4)

- **Power amp.**
  - Up to 4K@60 (4:4:4)

- **Speaker**
  - Up to 4K@60 (4:4:4)

- **Screen**
  - Up to 4K@60 (4:4:4)

- **Blu-ray players**
  - Up to 4K@60 (4:4:4)

- **Laptop**
  - Up to 4K@60 (4:4:4)

- **CD player**
  - Up to 4K@60 (4:4:4)

- **Front Panel**
  - Command

- **SWC-2000**
  - Up to 4K@60 (4:4:4)

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[Features]

■ Video
  • Up to 4K@60 (4:4:4)
  • HDCP 1.4 / 2.2
  • Motion adaptive I/P conversion
  • Scan conversion
  • Aspect ratio control
  • Seamless switching*1
  • A/D conversion
  • Anti-snow
  • Up to 492 ft. (150 m) over a Cat6 cable *2

■ Audio
  • A/D, D/A conversion
  • Volume adjustment
  • Lip sync

■ Control Input
  • RS-232C
  • LAN
  • Command control

■ Control output
  • Control command output (controlling projector, etc.)
  • PJLink
  • Power control of sink device over CEC
  • Contact closure

■ Others
  • Power over HDBaseT (PoH) power feeding (HDBaseT input)
  • EDID emulation
  • All functions setting through browser
  • Automatic input detection and switching
  • Audio breakaway enables independent audio and video switching
  • Cross point memory
  • Preset memory
  • Last memory
  • Connection Reset
  • Security lock

*1 Seamless switching with a black frame.
*2 For Long reach mode, up to 1080p (24 bit) resolutions are supported.