The IDK MSD-802UHD is a high-performance digital multi switcher with a scan converter and up to 8 inputs and 2 outputs.

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

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<th>Item</th>
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<tr>
<td><strong>Input</strong></td>
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</table>
| HDMI / DVI | 2 inputs  
HDMI Deep Color (*1) / DVI 1.0  
TMDS single link, HDBaseT 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) |
| HDBaseT | 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 UTP / CAT.6 UTP / CAT.6A UTP / STP (*5) |
| Universal Analog | 2 inputs  
Switch-selectable between digital and analog  
Composite video / Y/C / Analog RGB / Analog YPbPr (auto-recognition)  
Composite video (BS signal): 1.0 V[p-p] / 75 Ω  
Y/C: 1.0 V[p-p] / 75 Ω  
Analog RGB: 0.7 V[p-p] / 75 Ω  
HVS/S TTL level, CS TTL level, Sync on Green: 75 Ω  
EDID emulation  
Connector: Female DVI-I (29-pin) |
| **Format** | 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 |
| HDBaseT | 5 inputs  
VGA to QWXGA (Dot clock: 25 MHz to 165 MHz)  
* For WUXGA / QWXGA, only Reduced Blanking is supported.  
480i / 480p / 576i / 576p / 720p / 1080i / 1080p |
| Universal Analog | 5 inputs  
VGA to QWXGA (Dot clock: 25 MHz to 165 MHz)  
* For WUXGA / QWXGA, only Reduced Blanking is supported.  
NTSC / PAL  
480i / 480p / 576i / 576p / 720p / 1080i / 1080p |
| **Audio** | 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 |
| Analog | 3 inputs  
Switch-selectable between digital audio  
Stereo L/R balanced / unbalanced  
Input impedance: 48kΩ Balanced / 24 kΩ Unbalanced  
Reference level: -10 dBu, Max. input level: +10 dBu  
Connector: 5-pin terminal block |

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IDK Corporation

MSD-802UHD

Ver.1.3.0 (180920)
**Item** | **Description**
---|---

**Video**
 HDMI / DVI | 2 outputs  
Output video can be distributed to an HDMI / DVI and HDBaseT simultaneously.  
HDMI Deep Color (*1) / DVI 1.0  
TMDS single link, HDCP 1.4 / 2.2  
TMDS clocks: 25.175 MHz to 297 MHz, TMDS data rate: 0.755 Gbps to 17.82 Gbps  
Connector: Female HDMI Type A (19-pin)

HDBaseT | 2 outputs  
Output video can be distributed to an HDMI / DVI and HDBaseT simultaneously.  
HDBaseT (*1)  
HDCP 1.4 / 2.2 (*2)  
Connector: RJ-45 (*4)

Format | VGA / SVGA / XGA / WXGA (1280x768) / WXGA (1280x800) / Quad-VGA / SXGA / SXGA+ / WXGA+ / WXGA++ / UXGA / WUXGA+ / WUXGA / QWXGA / WQXGA  
For VESAHD / WUXGA / QWXGA / WQXGA, only Reduced Blanking is supported.  
480i / 480p / 576i / 576p / 720p / 1080i / 1080p / 4K (3840 x 2160) (*7) / 4K (4096 x 2160) (*7)

Digital | 2 outputs  
Audio can be distributed to an HDMI output and a HDBaseT output simultaneously.  
Multi-channel LPCM up to 8 channels

Maximum extension distance |  
HDMI / DVI: up to 98 ft. (30m) (1080p@60), up to 39 ft. (12 m) (4K@60) (*8)  
HDBaseT: up to 328 ft. (100 m), up to 492 ft. (150 m) (Long Reach Mode) (*9)

Audio |  
Analog  
2 outputs  
Stereo L/R balanced / unbalanced  
Output impedance: 100 O balanced / 50 O unbalanced

Speaker |  
Max. output level: +10 dBu  
Connector: 5-pin terminal block

Function |  
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 breakaway 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

External control |  
RS-232C  
1 port / 3-pin terminal block

LAN |  
1 port / RJ-45 10Base-T / 100Base-TX (Auto Negotiation), Auto MDI / MDI-X

Contact |  
3 ports / 6-pin terminal block  
Non-voltage contact input up to DC 24 V 500 mA

Command |  
3 ports / 7-pin terminal block  
Controlling keys and LED

External control |  
RS-232C, LAN, contact closure, PJLink (class1), CEC (power control of sink device) (*13)

General |  
Power | 100 - 240 VAC ±10%, 50 Hz / 60 Hz ±3 Hz

Power consumption | About 98 Watts

Dimensions | 16.9 (W) x 1.7 (H) x 13.8 (D) (430 W x 44 H x 350 D mm)  
(EIA 1U high, full rack wide) (Excluding connectors and the like)

Weight | 11.2 lbs. (5.1 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)

Video Deep Color is supported while x.v.Color, 3D, ARC and HEC are not supported.  
High-Definition Multimedia Interface, and the HDMI Logo are trademarks or registered trademarks of HDMI Licensing Administrator, Inc. in the United States and other countries.

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Front & Rear Panels
**Diagram**

- Two HDMI inputs (IN1 and IN2)
- Three HDMI inputs (IN3 to IN5)
- One HDBaseT input (IN6 to IN7)
- Two HDMI outputs (OUT1 and OUT2)
- Two HDBaseT outputs (OUT3 and OUT4)

**Application Example**

- **4K@60 and HDCP 2.2 supported Digital Multi Switcher**
- MSD-802UHD Diagram and Features

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**IDK Corporation**

MSD-802UHD

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[Features]

■ Video
  • Up to 4K@60 (4:4:4)
  • HDCP 1.4 / 2.2
  • Motion adaptive I/P conversion
  • Scan converter
  • 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.