# MSD-501 & MSD-502

## Presentation Switcher (with built-in scan converter)

**IDK** — *with your vision, Always.*

The IDK MSD-501 and MSD-502 are simple-to-use presentation switchers with 3 digital (HDMI) and 2 analog inputs. The MSD-501 includes an HDMI output and an HDBaseT output that can output simultaneously. The MSD-502 has 2 pairs of this simultaneous output. These switchers have a built-in scan converter, Seamless switching, Aspect ratio control, and other features for applications with the most demanding quality requirements.

## FRONT & REAR PANEL (MSD-502)



## FEATURES

**Video:**
- Up to QWXGA (RB)* or 1080p          *(RB) = Reduced Blanking
- **Built-in digital cable EQ**
    - INPUT   : Up to 33 ft. to 99 ft. approx. (10 m to 30 m)
    - OUTPUT: Up to 33 ft. to 165 ft. approx. (10 m to 50 m)
- Extends output signal up to 330 ft. approx. (100 m) using a Cat6 twisted pair cable
- **Front panel LCD menu for setup and signal status check**
- **Simultaneous output from an HDMI output and an HDBaseT output**
- **Aspect ratio control**
- **Seamless switching**
- **Anti-snow**

**Audio:**
- Volume adjustment
- Lip sync

**Control:**
- Input: RS-232C, LAN
- Output: RS-232C, LAN, CEC

**Others:**
- **Front panel HDMI input**
- **Connection Reset**
- EDID emulation
- Audio breakaway enables independent audio and video switching
- Preset memory, Last memory, and Cross-point memory
- Front panel security lockout
- Internal test patterns for calibration and setup

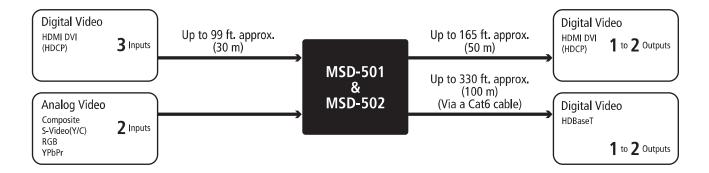## PRODUCT SELECTION

| Model Number | Digital Input | Analog Input | Digital Output* |
|---|---|---|---|
| MSD-501 | 3 | 2 | 1 |
| MSD-502 | 3 | 2 | 2 |

* Digital output can output both an HDMI output and an HDBaseT output simultaneously

## CONNECTION DIAGRAM

**Digital Video**
HDMI DVI
(HDCP)
**3** Inputs

Up to 99 ft. approx.
(30 m)

**Analog Video**
Composite
S-Video(Y/C)
RGB
YPbPr
**2** Inputs

**MSD-501 & MSD-502**

Up to 165 ft. approx.
(50 m)

Up to 330 ft. approx.
(100 m)
(Via a Cat6 cable)

**Digital Video**
HDMI DVI
(HDCP)
**1** to **2** Outputs

**Digital Video**
HDBaseT
**1** to **2** Outputs

## SPECIFICATIONS

| | | | | |
|---|---|---|---|---|
| Input | Video | Digital | Number / Signal | 3 inputs / HDMI, DVI 1.0 (HDCP 1.4)    TMDS single link, TMDS clock: 25 MHz to 225 MHz |
| | | | Connector | 3 female HDMI Type A |
| | | Universal Analog | Number / Signal | 2 inputs / Composite video, S-Video, Analog RGB/Analog YPbPr (auto-recognition) |
| | | | Connector | 2 female 15-pin HD |
| | | Formats | | NTSC/PAL |
| | | | | 480i / 480p / 576i / 576p / 720p / 1080i / 1080p |
| | | | | VGA to QWXGA: Dot clock 25 MHz to 165 MHz * WUXGA / QWXGA: Reduced Blanking |
| | | Others | | Built-in Digital Cable EQ, EDID emulation |
| | Audio | Digital | Number / Signal | 3 inputs / Multi-channel linear PCM up to 8 channels |
| | | | | Sampling frequency: 32 kHz to 192 kHz, Sample size: 16 bit to 24 bit * IN1 to 3: can be selected digital or analog audio. |
| | | | Connector | 3 female HDMI Type A |
| | | Analog | Number / Signal | 5 inputs / Stereo LR unbalanced signals * IN1 to 3: can be selected digital or analog audio. |
| | | | Connector | 5 RCA pin jack |
| Output | Video | Digital | Number / Signal | 1 or 2 outputs / HDMI, DVI 1.0 (HDCP 1.4)    TMDS single link * Output video can be distributed to an HDMI/DVI and HDBaseT simultaneously. |
| | | | Connector | 1 or 2 female HDMI Type A |
| | | | Others | Built-in Digital Cable EQ |
| | | HDBaseT | Number / Signal | 1 or 2 outputs / HDMI, DVI 1.0 (HDCP 1.4)    TMDS single link * Output video can be distributed to an HDMI/DVI and HDBaseT simultaneously. |
| | | | Connector | 1 or 2 RJ-45    Cable: Cat5e / Cat6 (STP / UTP straight cable) |
| | | Formats | | 480i / 480p / 576i / 576p / 720p / 1080i / 1080p |
| | | | | VGA / SVGA / XGA / WXGA (1280x768) / WXGA (1280x800) / Quad-VGA / SXGA/WXGA (1360x768) / WXGA (1366x768) / SXGA+ / WXGA+ / WXGA++ / UXGA / WSXGA+ / |
| | | | | VESA1080 / WUXGA / QWXGA * VESA1080 / WUXGA / QWXGA: Reduced Blanking |
| | Audio | Digital | Number / Signal | 1 or 2 outputs / Multi-channel linear PCM up to 8 channels |
| | | | | Sampling frequency: 32 kHz to 192 kHz, Sample size: 16 bit to 24 bit * Audio can be distributed to an HDMI output and an HDBaseT output simultaneously. |
| | | | Connector | 1 or 2 female HDMI Type A |
| | | Digital Twisted pair extension | Number / Signal | 1 or 2 outputs / Multi-channel linear PCM up to 8 channels |
| | | | | Sampling frequency: 32 kHz to 192 kHz, Sample size: 16 bit to 24 bit * Audio can be distributed to an HDMI output and an HDBaseT output simultaneously. |
| | | | Connector | 1 or 2 RJ-45 |
| | | Analog | Number / Signal | 1 or 2 outputs / Stereo LR unbalanced signals |
| | | | Connector | 1 or 2 RCA pin jack |
| | | Lip Sync | | Up to 17 frames |
| Functions | Analog video processing unit | | | 3D Y/C separation |
| | Scan Converter | | | Aspect ratio control, Picture adjustment, Seamless Switching, Motion adaptive I/P conversion |
| | Others | | | Volume adjustment, Audio breakaway enables independent audio and video switching, Cross-point memory,Preset memory, Last memory, Anti-snow, |
| | | | | Connection Reset, External control commands (32 commands), Front panel security lockout |
| External control | Serial control port | | Number / Signal | 1 port / RS-232C |
| | | | Connector | 1 male 9-pin D-Sub |
| | LAN control port | | Number / Signal | 1 port / 10Base-T (Auto Negotiation), 100Base-TX (Auto Negotiation), Auto MDI/MDI-X |
| | | | Connector | 1 RJ-45 |
| | Command outputs to external device | | | RS-232C, LAN, CEC (controls power of monitor), PJLink (class1) |
| Others | Power | | | 100 - 240 VAC ± 10%, 50 Hz / 60 Hz ± 3 Hz |
| | Power consumption | | | About 35 Watts to 43 Watts |
| | Dimensions | | | 16.93(W) x 1.73(H) x 13.88(D)″ approx. (430(W) × 44(H) × 350(D)mm) (EIA rack 1U, not including projections) |
| | Weight | | | 9.26 lbs. approx. (4.2 kg) |
| | Temperature | | | Operating temperature: 32°F to 104°F (0°C to +40°C)    Storage temperature: -4°F to +176°F (-20°C to +80°C) |
| | Humidity | | | Operating / Storage humidity: 20% to 90% (Non Condensing) |