



## DIP-20

4K60 4:2:0 HDMI & VGA Auto  
Switcher/Transmitter over Extended-Reach  
PoE over HDBaseT with Maestro Room  
Automation

| HDMI | Ethernet - RJ-45 | HDCP Compliant  
| HDBaseT | 4K/60 UHD (4:2:0)



DIP 20 is a high-performance multi-format switcher transmitter of 4K video signals over extended-reach HDBaseT. Offering intelligent Maestro application, with priority and last-connected switching options, it automatically switches and operates room according to the selected switching scheme based on active video signal detection

## FEATURES

**Simple and Powerful Maestro Room Automation** - Intuitive user interface enables you to fully automate your meeting room elements. Configure lights, shades, devices and more to be activated by an extensive range of triggers, including input/output connectivity, routing, and button pressing. By minimizing user intervention, Maestro room automation saves meeting prep time and minimizes human error before presentations

**High Performance Switcher Transmitter** - Professional HDBaseT Switcher transmitter for providing extended reach signals over twisted pair copper infrastructures. This switcher transmitter is a standard transmitter that can be connected to any market available HDBaseT compliant extension product

**BYOD Plug & Play Auto Switcher** - Automatically plays the switched user device source signal on the connected display according to user configured preferences, such as priority or last connected input. When the user manually switches, by pressing a button, the auto switching is overridden

**Simple Switching Operation** - Local buttons or remotely connected contact closure buttons for flexible user input selection and switching control

**HDMI™ Signal Switching** - HDCP compliant, supporting deep color, x.v.Color™, lip sync, HDMI uncompressed audio channels, Dolby TrueHD, DTS HD, 2K, 4K, and 3D as specified in HDMI 2.0

**I EDIDPro™ Kramer Intelligent EDID Processing™** - Intelligent EDID handling, processing, locking and pass through algorithm ensures plug & play operation for HDMI source and display systems

**Multi channel Audio Switching** - Up to 32 channels of digital stereo uncompressed signals for supporting studio grade surround sound

**Audio Embedding** - An auto-detected analog stereo audio input, per user selection, is converted into a digital signal and embedded in the output HDMI signal, replacing the source HDMI audio input signal. This enables, for example, a presenter to temporarily override the playing source audio with speech description

**Audio De embedding** - The digital audio signal passing through to the output, is de embedded, converted to an analog signal and sent to the stereo analog audio output. This enables playing the audio on locally connected speakers, in parallel to playing it on the speakers connected to the AV acceptor device (such as TVs with speakers)

**Ethernet Extension** - Ethernet interface data flows in both directions, allowing extension of up to 100Mbps Ethernet connectivity for LAN communication and device control

**Bidirectional RS-232 Extension** - Serial interface data flows in both directions, allowing data transmission and device control

**Reliable PoE (Power over Ethernet) Powering** - Provides power via the extension line to a remote PoE acceptor device, such as a PoE receiver

**Cost-effective Maintenance** - Status LED indicators for HDMI, VGA and HDBT ports facilitate easy local maintenance and troubleshooting. Remote IP-driven device management via built in web pages and RS-232 connection. Local and remote firmware upgrade via RS-232 or Ethernet connection tool ensure lasting, field proven deployment

**Easy Installation** - Single cable connectivity for both HDBaseT signals and power. Compact MegaTOOLS™ fan-less enclosure for flexible table mounting



## TECHNICAL SPECIFICATIONS

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|                          |                                                                                                                                                 |
|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| Inputs                   | 2 HDMI: On HDMI connectors                                                                                                                      |
|                          | 1 VGA: On a 15-pin HD (F) connector                                                                                                             |
|                          | 1 Unbalanced Stereo Audio 1V RMS (nominal): On a 3.5mm jack                                                                                     |
| Outputs                  | 1 HDBaseT On an RJ-45 connector                                                                                                                 |
|                          | 1 Unbalanced Stereo Audio 1V RMS (nominal): On a 3.5mm jack                                                                                     |
| Ports                    | 1 RS-232: On a 3-pin terminal block for serial link extension                                                                                   |
|                          | 1 RS-232: On a 3-pin terminal block for device serial control                                                                                   |
|                          | 1 100BaseT Ethernet: On an RJ-45 connector                                                                                                      |
|                          | 1 USB: On mini USB connector                                                                                                                    |
|                          | 4 Contact-Closure Switches: On a 5-pin terminal block for remote device operation                                                               |
| Video                    | Max. Data Rate: 10.2Gbps (3.4Gbps per graphic channel)                                                                                          |
|                          | Max. Resolution: 4K@60Hz (4:2:0) 24bpp resolution                                                                                               |
|                          | HDMI Support: Deep color, x.v.Color™, lip sync, HDMI uncompressed audio channels, Dolby TrueHD, DTS HD, 2K, 4K, and 3D as specified in HDMI 2.0 |
|                          | Compliance: HDCP 1.4                                                                                                                            |
| Extension Line           | Up to 100m (330ft): At 4K@60Hz (4:2:0)                                                                                                          |
|                          | Up to 130m (430ft): At full HD (1080p @60Hz 36bpp)                                                                                              |
|                          | Up to 180m (590ft): At HDBaseT ultra mode and full HD (1080p @60Hz 24bpp)                                                                       |
|                          | Note: When using Kramer HDBaseT cables                                                                                                          |
|                          | Compliance: HDBaseT 1.0                                                                                                                         |
| Audio                    | Max. Level: 3.1 Vpp                                                                                                                             |
|                          | THD: 0.013%                                                                                                                                     |
|                          | SNR: -70dB                                                                                                                                      |
| Extended Ethernet        | Line rate bandwidth: Up to 100Mbps                                                                                                              |
| Extended RS-232          | Baud rate: 300 to 115200                                                                                                                        |
| Power                    | Source: 48V DC, 1.36A                                                                                                                           |
|                          | PoE Provider                                                                                                                                    |
|                          | Consumption: 630mA (includes 200mA for PoE over HDBaseT)                                                                                        |
| Environmental Conditions | Operating Temperature: 0° to +40°C (32° to 104°F)                                                                                               |
|                          | Storage Temperature: -40° to +70°C (-40° to 158°F)                                                                                              |
|                          | Humidity: 10% to 90%, RHL non-condensing                                                                                                        |
| Enclosure                | Cooling: Convection                                                                                                                             |
|                          | Type: Aluminum                                                                                                                                  |

Size: MegaTools®

|                     |                                                              |
|---------------------|--------------------------------------------------------------|
| REGULATORY          | Environmental RoHs, WEEE, and CE                             |
| Accessories         | Included: Power adapter 48V DC 1.36A                         |
| Product Dimensions  | 18.80cm x 0.15cm x 2.50cm (7.40" x 0.06" x 0.98" ) W, D, H   |
|                     | 19.00cm x 11.60cm x 2.70cm (7.48" x 4.57" x 1.06" ) W, D, H  |
| Product Weight      | 0.0kg (0.0lbs) approx                                        |
|                     | 0.5kg (1.0lbs) approx                                        |
| Shipping Dimensions | 28.50cm x 10.50cm x 5.90cm (11.22" x 4.13" x 2.32" ) W, D, H |
|                     | 34.50cm x 16.50cm x 5.20cm (13.58" x 6.50" x 2.05" ) W, D, H |
| Shipping Weight     | 0.6kg (1.2lbs) approx                                        |
|                     | 1.2kg (2.6lbs) approx                                        |



## CONFIGURATIONS

DIP-20

4K60 4:2:0 HDMI & VGA Step-In PoE Transmitter with Ethernet, RS-232 & Stereo Audio over Extended-Reach HDBaseT

