# KRAMER

## DIP-20

4K60 4:2:0 HDMI & VGA Auto Switcher and PoE Provider over HDBaseT with Maestro Room Automation

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

DIP-20 is an extended reach 4K@60Hz (4:2:0), HDBaseT transmitter and Step-in commander for VGA video, HDMI, and unbalanced stereo audio embedding and de-embedding. DIP-20 accepts HDMI and VGA video input, an Ethernet signal, serial data, and an unbalanced stereo audio input (that is embedded into the output signal). It transmits the signal to an HDBaseT (twisted pair) cable to a compatible receiver (for example, the TP-588D or TP-580RXR). DIP-20 is a PoE (Power over Ethernet) provider and can power compatible PoE acceptors (for example, TP-588D)

## 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

**Max. Data Rate** - 10.2Gbps (3.4Gbps per graphic channel)

**Max. Resolution** - 4K@60Hz (4:2:0) and WUXGA

**HDTV Compatible**

**HDCP Compliant** - Works with sources that support HDCP repeater mode

**HDMI Support** - Deep Color, x.v.Color™ and 3D

**HDBaseT Certified**

**Automatic Live Input Detection** - Based on video clock presence

**Automatic Input Selection** - Based on manual selection or last connected input

**Automatic Analog Audio Detection & Embedding**

**EDID Pass–through** - Pass–through algorithm ensures Plug and Play operation for HDMI source and display systems

**System Range** - Up to 130m (430ft) at normal mode (2K), up to 100m at normal mode (4K); up to 180m (590ft) ultra mode (1080p @60Hz @24bpp) when using BC-UNIKAT cables

**Data Equalization and Reclocking**

**Local Balanced Audio De-Embedding**

**Support for Digital Audio Formats**

**Lockable EDID**

**Local Step-In Switching** - Button & contact closure

**Power Supply** - Supports PoE to power a remote receiver (such as TP-588D). Requires independent power supply

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## TECHNICAL SPECIFICATIONS

| | |
|---|---|
| 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 mini jack |
| OUTPUTS: | 1 HDBaseT on an RJ-45 connector, 1 unbalanced stereo audio 1V RMS (nominal) on a 3.5mm mini jack |
| PORTS: | 1 Ethernet on an RJ-45 connector, 1 RS-232 3-pin terminal block control port, 1 RS-232 3-pin terminal block data port, 1 USB on mini USB connector |
| CONTROLS: | Remote switches for input switching, step-in, volume control, and device reset switch |
| STANDARDS: | HDMI with Deep Color, x.v.Color™ and 3D; HDCP—works with sources that support HDCP repeater mode; HDBT certified |
| MAXIMUM ANALOG AUDIO LEVELS: | 3.1Vpp |
| THD: | 0.013% |
| SNR: | −75dBu |
| Room Automation | Kramer Maestro V1.0 |
| SUPPORTED WEB BROWSERS: | Windows 7 and higher: Internet Explorer (32/64 bit) version 11, Firefox version 30, Chrome version 35;<br>MAC:Chrome version 35, Firefox version 27, Safari version 7; Android OS: Chrome version 35; iOS:Chrome version 35, Safari version 7 |
| MAXIMUM TRANSMISSION DISTANCE: | 180m (590ft) up to 1080p @60Hz @24bpp in extended mode, 130m (430ft) up to 1080p @60Hz @36bpp in normal mode |
| POWER CONSUMPTION: | 48V DC, 630mA |
| 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 |
| COOLING: | Convection |
| ENCLOSURE TYPE: | Aluminum |
| ENVIRONMENTAL REGULATORY COMPLIANCE: | Complies with appropriate requirements of RoHs and WEEE |
| INCLUDED ACCESSORIES: | Power adapter 48V DC 1.36A, ADC-DPM/HF DisplayPort (M) to HDMI (F) adapter cable, power cord, DIP-20BP black panel |
| WARRANTY: | 7 years parts and labor |
| Product Dimension | 18.80cm x 0.15cm x 2.50cm (7.40" x 0.06" x 0.98" ) W, D, H |
| | 18.75cm x 11.50cm x 2.54cm (7.38" x 4.53" x 1.00" ) W, D, H |
| Product Weight | 0.0kg (0.0lbs) approx |
| | 0.5kg (1.0lbs) approx |
| Shipping Dimension | 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 |
|---|---|
| DIP-20/JP | 4K60 4:2:0 HDMI & VGA Step–In PoE Transmitter with Ethernet, RS–232 & Stereo Audio over Extended–Reach HDBaseT - JP |
| DIP-20BP | Black Front Panel for DIP-20 |