**MMX4x2-HDMI-USB20-L**

4x2 Matrix Switcher for HDMI video and USB 2.0 peripherals

MMX4x2-HDMI-USB20-L is an integrator-friendly, 4x2 matrix switcher for HDMI video and USB2.0 peripherals.

It has four HDMI inputs and two independent HDMI outputs, as well as a USB 2.0 layer that provides the switching of four external USB peripherals (USB devices such as webcam, speakerphone, multitouch display, etc.) to four independent host computers or laptops. The Power Switch Delay that cuts power for 2 seconds when switching between hosts, allowing the device to recognize the change of USB host.

Unique USB functions allow seamless integration in Unified Communication and small Video Conference rooms. The USB "Host5vSense" function recognizes when a USB cable is connected and performs condition triggering for the Event Manager. For example, switch USB devices to the last connected USB laptop if configured accordingly. The "Device5vEnable" turns ON or OFF peripherals’ 5 Volt over the USB cable.

One of the USB-A type connectors is capable to power connected devices with 1000mA at 5V, such as the Huddly Go and Huddly IQ cameras, that require at least 900mA.

"HostSelect 0" disconnects Cisco Room Kit Mini and allows Touch 10 control unit to switch between Webcam and Webex video conferencing operation modes.

The device offers two individual RS-232 interfaces to allow independent control of two separate 3rd party devices, such as a Cisco Room Kit Mini or an external display.

MMX4x2-HDMI-USB20-L and built-in Event Manager automation makes the meeting room easy, intuitive and hassle-free; it detects powered computers, turns on the screen and camera, and prepares for the next call. Based on the specific configuration it allows auto-switch for USB and video signals. In other cases USB may not follow video, according to the application.

Audio can be de-embedded from the HDMI signal to a balanced 5-pole Phoenix (Euroblock) port and external audio signal can be embedded into the HDMI stream from another 5-pole Phoenix input port. The volume and gain properties of the audio signal can be modified at both input and output.

HDMI connectors are 4K capable and HDCP compliant and additional control options are served by the USB, RS-232, IR (in and out) and Ethernet ports.

**Features**

- 4 x 2 Matrix Switcher with HDMI 1.4 ports
- 4K/UHD (30Hz RGB 4:4:4, 60Hz YCbCr 4:2:0)
- USB 2.0 Host switching layer for external USB 2.0 peripherals (Camera; Touch sensor; Speakerphone, etc.)
- 4 x USB 2.0 Device peripherals
- 4 x USB 2.0 Host computers
- USB Host switching is compatible with Windows, MacOS and any other operating system
- "Host5vSense" triggers Event Manager
- "Device5vEnable" function turns ON or OFF peripherals’ 5 V USB power
- "HostSelect 0" disconnects Cisco Room Kit Mini’s webcam
- USB-C Laptop Support (With external adaptors)
- 1 x 5-pole Phoenix connector for balanced analog audio embedding
- 1 x 5-pole Phoenix connector for balanced analog audio de-embedding
- Analog audio volume control
- Event Manager
- Command injection on IR and RS-232 connections
- Advanced EDID Management
- Zero frame delay

**Applications**

- Meeting and conference rooms
- Huddle Rooms with Soft VC
Cisco Webex and MS Teams mixed Application

Wall-mounted
- Cisco Room Kit Mini
- Display
- Speaker
- Network and Monitoring
- HDMI–HDMI
- RS-232

Under-desk
- MMX4x2-HDMI-USB20-L
- Network & Monitoring
- HDMI–HDMI
- USB-A – USB-B
- USB-C – USB-A
- USB-C – USB-C
- HDMI–HDMI
- USB-A – USB-B

Desktop
- Cisco Touch 10
- Logitech Tap
- BYOD USB-C Laptop
- BYOD HDMI Laptop
- Wireless keyboard and mouse

- Cisco Room Kit Mini
- Network & Monitoring
- HDMI–HDMI
- RS-232
- Audio

Cisco Webex and MS Teams mixed Application

- USB
- HDMI
- CATx
- RS-232
- Audio

- USB-C – USB-A
- USB-C – USB-C
- HDMI–HDMI
- USB-A – USB-B

HP Elite Slice G2
MS Teams Computer

Logitech Tap

BYOD USB-C Laptop

BYOD HDMI Laptop

Wireless keyboard and mouse
The Camera Selector Icon on the top right corner of the screen provides access to the Camera Selector Menu.

In the Camera Selector Menu users can choose from a list of pre-defined and per-configured camera options.

Once the required camera is selected, the Lightware matrix sets up the system to be immediately ready for collaboration on the chosen VC platform.

When the Webex RoomKit Mini is utilized as a USB camera, the 'Do-not-disturb' screen is displayed on the Touch10 to advise users about the current status.

Upon tapping the Touch10, users are presented with the Main Screen in Normal Mode where they can either initiate a call using the Cisco Webex platform or enter the Share Menu to choose from additional input options.

The desired input device can also be chosen inside the Share Screen Menu where all available options are displayed.

The currently active input device is highlighted in green and its content is displayed on the room’s main screen.
MMX4x2-HDMI-USB20-L

Dual Screen Application with Wireless Presenter
**Specification**

Resolution: Up to 4K UHD 3840×2160@30Hz, 1600x-1200@60Hz, FullHD 1920x1080@60Hz

Digital audio formats: Supports up to 8 channel PCM, Dolby TrueHD and DTS-HD Master Audio 7.1 formats

EDID emulation: Yes, Advanced EDID Management

EDID memory: 120 factory preset, 12 user programmable

HDCP compatibility: Yes

RS-232 pass-through: Yes, configurable

RS-232 (control option): 9600, 19200, 38400, 57600, 115200 Baud Rx,Tx (default: 57600)

Local power: DC Power supply 12V, 2A

Power consumption: 7W (max)

Enclosure: 1 mm metal

Dimensions: 221 W x 100.4 D x 42.5 H mm

Compliance: CE

Warranty: 3 years

*Depends on cable category and quality

**Connectors**

<table>
<thead>
<tr>
<th>Digital video inputs:</th>
<th>4 x HDMI connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital video outputs:</td>
<td>2 x HDMI connector</td>
</tr>
<tr>
<td>Balanced audio input:</td>
<td>5-pole Phoenix (Euroblock) connector</td>
</tr>
<tr>
<td>Balanced audio output:</td>
<td>5-pole Phoenix (Euroblock) connector</td>
</tr>
<tr>
<td>Ethernet:</td>
<td>3 x RJ45</td>
</tr>
<tr>
<td>USB device:</td>
<td>4 x USB-A</td>
</tr>
<tr>
<td>USB power:</td>
<td>1 x 1000 mA &amp; 3 x 500mA</td>
</tr>
<tr>
<td>USB host:</td>
<td>4 x USB-B</td>
</tr>
<tr>
<td>USB control:</td>
<td>mini-USB-B connector</td>
</tr>
<tr>
<td>Control:</td>
<td>6 x GPIO, 8-pole Phoenix (Euroblock)</td>
</tr>
<tr>
<td>IR in and out:</td>
<td>3.5 mm jack</td>
</tr>
<tr>
<td>Serial port:</td>
<td>2 x RS-232 Serial Port</td>
</tr>
<tr>
<td>Power:</td>
<td>Locking DC connector (2.1 / 5.5 mm)</td>
</tr>
</tbody>
</table>

**Supplied Accessories**

PSU-12VU Universal DC adaptor (Part No: 1180 0098)
Wall power adaptor with interchangeable plug for international use. Universal input: 100-240 V AC, 50-60 Hz, output: 12 V DC, 2 A

IR emitter and IR eye (Part No: 1374 0003 TX, 1374 0002 RX)
IR emitter is supplied with TPS-TX, IR eye is supplied with TPS-RX units. Needed for IR extension.

**Optional Accessories**

Rack shelf (Part No: 5240 0269)
The 1U high rack shelf provides mounting holes for fastening two half- rack or four quarter-rack sized units.