CYP

CH-1109TXC & RXC
HDMI to CAT5e/ CAT6 with LAN/ PoE/ IR Extender

Operations Manual
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SAFETY PRECAUTIONS

Please read all instructions before attempting to unpack, install or operate this equipment and before connecting the power supply.

Please keep the following in mind as you unpack and install this equipment:

- Always follow basic safety precautions to reduce the risk of fire, electrical shock and injury to persons.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture or install this product near water.
- Never spill liquid of any kind on or into this product.
- Never push an object of any kind into this product through any openings or empty slots in the unit, as you may damage parts inside the unit.
- Do not attach the power supply cabling to building surfaces.
- Use only the supplied power supply unit (PSU). Do not use the PSU if it is damaged.
- Do not allow anything to rest on the power cabling or allow any weight to be placed upon it or any person walk on it.
- To protect the unit from overheating, do not block any vents or openings in the unit housing that provide ventilation and allow for sufficient space for air to circulate around the unit.

REVISION HISTORY

<table>
<thead>
<tr>
<th>VERSION NO.</th>
<th>DATE (MM/DD/YYYY)</th>
<th>SUMMARY OF CHANGE</th>
</tr>
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<tbody>
<tr>
<td>VR0</td>
<td>08/03/2011</td>
<td>Preliminary Release</td>
</tr>
<tr>
<td>VR1</td>
<td>01/11/2011</td>
<td>Sec. 7 &amp; 9's Placement &amp; Connection</td>
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1. INTRODUCTION
The device that can make your home or office more efficient, the CH-1109TXC & RXC is capable of sending HDMI (uncompressed audio/video), 3 Ethernet connections and control (through the built-in RS-232 and IR ports) over a single CAT5e/CAT6 up to a distance of 100m (300 ft.). Even more, it is adaptor free at the receiver end.
Further, with the HDMI bypass is designed to allow instant display at the control point. So, if you wish to make your home or office more efficient, get the HDMI over Single CAT5e/CAT6 with LAN/PoE & IR Extender and prepare to be amazed.

2. APPLICATIONS
- Household entertainment media sharing and control
- Lecture room display and control
- Showroom display and control
- Meeting room presentation and control
- Classroom display and control

3. PACKAGE CONTENTS
- HDMI to CAT5e/CAT6 with LAN/PoE/IR Transmitter
- CAT5e/CAT6 to HDMI with LAN/PoE/IR Receiver
- 1× IR Blaster
- 1× IR Receiver
- 24V DC Power Adaptor
- Operation Manual

4. SYSTEM REQUIREMENTS
- Input HDMI source equipment such as DVD/Blu-ray player and output display with HDMI input.
- RS232 controlled device
- Ethernet equipped device
5. FEATURES

- HDMI 1.4 compliant with 3D formats and 4k/2k resolution support
- Supports CEC bypass function
- Simultaneous transmission of uncompressed video and audio (1080p@60Hz/Deep Color) over a single CAT5e/CAT6 type cable for up to 100m (300 ft.).
  NOTE: Tested with CAT-6E/23AWG cables, using cables of another specification may result in a different operating distance.
- Audio support up to 7.1CH Dolby TrueHD and DTS-HD
- Connect and share up to 6 Ethernet connections at speeds up to 100 Mbps
- Various controls over HDMI, CEC, RS232 and IR
- 5Play™ convergence: HD video, audio & Control (IR and RS232)/LAN/PoE
- Installation friendly
- Single power supply powers both units, receiver unit is powered through the transmitter.
6. OPERATION CONTROLS AND FUNCTIONS

6.1 Transmitter

1. **Power LED**
   The red LED will illuminate when the 24 V DC Adaptor is connected to the AC outlet.

2. **DC 24V**
   This slot is where you plug the 24 V DC power supply into the unit and connect the adaptor to an AC outlet.

3. **IR 1 Blaster**
   Connect the IR blaster cables included in the package for IR signal transmission.

4. **IR 2 Extender**
   These slots are to connect with the IR receiver cables included in the package for IR signal reception.

5. **RS-232 In**
   This slot is to connect with PC/laptop with D-Sub 9-pin male cable for sending RS-232 commands.

6. **Link LED**
   This yellow LED will illuminate when the both CAT5e/6 input and output signals are connected.

7. **CAT5e/6 Out**
   Connect the transmitter and receiver via a single CAT5e/6 type cable for all data transmission.

8. **HDMI Bypass**
   Connect to a HDMI TV/monitor for instant display of the HDMI input source signal.
NOTE: When the HDMI bypass is connected, no signals will be transmitted to the receiver side. Therefore, unplug this connection after confirming that the correct image is displayed.

9 HDMI In
Connect to the HDMI equipped source equipment such as DVD or Blu-ray player.

10 LAN 1/2/3
The LAN connections can be used to connect and share up to 6 ethernet connections (3 at the receiver end, 3 at the transmitter end), including computers, routers and media servers.
6.2 Receiver

1. **Power LED**
   The red LED will illuminate when the 24V DC Adaptor is connected to the AC outlet.

2. **IR 1 Extender**
   These slots are to connect with the IR receiver cables included in the package for IR signal reception.

3. **IR 2 Blaster**
   Connect the IR blaster cables included in the package for IR signal transmission.

4. **RS-232 Out**
   Connect to a device that can be controlled (via D-Sub 9-pin female cable) by RS-232 commands.

5. **Link LED**
   This yellow LED will illuminate when the both CAT5e/6 input and output signals are connected.

6. **CAT5e/6 IN**
   Connect the transmitter and receiver via a single CAT5e/6 type cable for all data transmission.

7. **HDMI Out**
   Connect to a HDMI equipped TV or monitor to display the HDMI input source signal.

8. **LAN 1/2/3**
   The LAN connections can be used to connect and share up to 6 ethernet connections (3 at the receiver end, 3 at the transmitter end), including computers, routers and media servers.
### 6.3 D-Sub 9 Pin Definitions

<table>
<thead>
<tr>
<th>Pin</th>
<th>Define TX/RX</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>N/C</td>
</tr>
<tr>
<td>2</td>
<td>TxD / RxD</td>
</tr>
<tr>
<td>3</td>
<td>RxD / TxD</td>
</tr>
<tr>
<td>4</td>
<td>N/C</td>
</tr>
<tr>
<td>5</td>
<td>GND</td>
</tr>
<tr>
<td>6</td>
<td>N/C</td>
</tr>
<tr>
<td>7</td>
<td>N/C</td>
</tr>
<tr>
<td>8</td>
<td>N/C</td>
</tr>
<tr>
<td>9</td>
<td>N/C</td>
</tr>
</tbody>
</table>
7. CONNECTION DIAGRAM

- **Power DC 24V**
- **Extender Blaster RS232 In CAT5e/6 Out**
- **Link**
- **IR 2IR 1**
- **HDMI Bypass HDMI In**
- **LAN 1 LAN 2 LAN 3**

- **Power Extender Blaster**
- **IR 2IR 1**
- **RS232 Out CAT5e/6 In**
- **Link**
- **LAN 1 LAN 2 LAN 3**
- **HDMI Out**

- **PC with RS232 Control**
- **Blu-ray/DVD Player**
- **Modem/Router**
- **Media Server**
- **Transmitter**
- **Single CAT5e/6 Cable**
- **Receiver**
- **PC with RS232 Control**
- **Device**
- **RS232 Controlled Device**
- **Blu-ray/DVD Player**
- **Modem/Router**
- **Media Server**
- **Transmitter**
- **Single CAT5e/6 Cable**
- **Receiver**
- **PC**
- **TV/Display**
- **Media Player**
- **Notebook**
## 8. Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Maximum Data Rate</strong></td>
<td>10.2 Gbps</td>
</tr>
<tr>
<td><strong>Resolution Range</strong></td>
<td>Deep Color</td>
</tr>
<tr>
<td><strong>Ethernet Speed</strong></td>
<td>100 Mbps</td>
</tr>
<tr>
<td><strong>Transmitter</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Input</strong></td>
<td>1 × HDMI, 3 × Ethernet, 1 × RS-232, 1 × IR Extender</td>
</tr>
<tr>
<td><strong>Output</strong></td>
<td>1 × CAT5e/6, 1 × HDMI Bypass, 1 × IR Blaster</td>
</tr>
<tr>
<td><strong>Receiver</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Input</strong></td>
<td>1 × CAT5e/6, 1 × IR Extender</td>
</tr>
<tr>
<td><strong>Output</strong></td>
<td>1 × HDMI, 1 × RS-232, 3 × Ethernet, 1 × IR Blaster</td>
</tr>
<tr>
<td><strong>ESD Protection</strong></td>
<td>Human Body Model: <strong>±8kV</strong> (air-gap discharge)</td>
</tr>
<tr>
<td></td>
<td><strong>±4kV</strong> (contact discharge)</td>
</tr>
<tr>
<td><strong>IR Frequency Rate</strong></td>
<td>20~60 kHz</td>
</tr>
<tr>
<td><strong>Power Supply</strong></td>
<td>24 V/1.25 A DC (US/EU Standards, CE/FCC/UL certified)</td>
</tr>
<tr>
<td><strong>Dimensions</strong></td>
<td>125 mm (W) x 127 mm (D) x 30 mm (H) Each</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>Tx: 360 g, Rx: 382 g</td>
</tr>
<tr>
<td><strong>Chassis Material</strong></td>
<td>Aluminum</td>
</tr>
<tr>
<td><strong>Silkscreen Color</strong></td>
<td>Black</td>
</tr>
<tr>
<td><strong>Power Consumption</strong></td>
<td>Tx: 6 W; Rx: 8 W</td>
</tr>
<tr>
<td><strong>Operating Temperature</strong></td>
<td>0°C ~ 40°C / 32°F ~ 104°F</td>
</tr>
<tr>
<td><strong>Storage Temperature</strong></td>
<td>−20°C ~ 60°C / −4°F ~ 140°F</td>
</tr>
<tr>
<td><strong>Relative Humidity</strong></td>
<td>20~90% RH (non-condensing)</td>
</tr>
</tbody>
</table>
### 9. ACRONYMS

<table>
<thead>
<tr>
<th>ACRONYM</th>
<th>COMPLETE TERM</th>
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</thead>
<tbody>
<tr>
<td>CAT6</td>
<td>Category 6 Cable</td>
</tr>
<tr>
<td>HDMI</td>
<td>High Definition Multimedia Interface</td>
</tr>
</tbody>
</table>