USER MANUAL

VERSION: V1.0.6

CTP-1301

Connectivity and Transport Kit - Presentations

AV FOR AN IT WORLD®

IMPORTANT SAFETY INSTRUCTIONS

1. READ these instructions.
2. KEEP these instructions.
3. HEED all warnings.
4. FOLLOW all instructions.
5. DO NOT use this apparatus near water.
6. CLEAN ONLY with dry cloth.
7. DO NOT block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. DO NOT install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. DO NOT defeat the safety purpose of the polarized or grounding type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wider blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. PROTECT the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where they exit from theapparatus.
11. ONLY USE attachments/accessories specified by the manufacturer.

12. USE ONLY with a cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. UNPLUG this apparatus during lightning storms or when unused for long periods of time.
14. REFER all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. DO NOT expose this apparatus to dripping or splashing and ensure that no objects filled with liquids, such as vases, are placed on the apparatus.
16. To completely disconnect this apparatus from the AC Mains, disconnect the power supply cord plug from the AC receptacle.
17. Where the mains plug or an appliance coupler is used as the disconnect device, the disconnect device shall remain readily operable.
18. DO NOT overload wall outlets or extension cords beyond their rated capacity as this can cause electric shock or fire.

The exclamation point, within an equilateral triangle, is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electrical shock to persons.

ESD Warning: The icon to the left indicates text regarding potential danger associated with the discharge of static electricity from an outside source (such as human hands) into an integrated circuit, often resulting in damage to the circuit.

WARNING: To reduce the risk of fire or electrical shock, do not expose this apparatus to rain or moisture.
WARNING: No naked flame sources - such as candles - should be placed on the product.
WARNING: Equipment shall be connected to a MAINS socket outlet with a protective earthing connection.
WARNING: To reduce the risk of electric shock, grounding of the center pin of this plug must be maintained.

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LIABILITY NOTICE

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AMX WARRANTY AND RETURN POLICY

The AMX Warranty and Return Policy and related documents can be viewed/downloaded at www.amx.com.

ESD WARNING

To avoid ESD (Electrostatic Discharge) damage to sensitive components, make sure you are properly grounded before touching any internal materials.

When working with any equipment manufactured with electronic devices, proper ESD grounding procedures must be followed to make sure people, products, and tools are as free of static charges as possible. Grounding straps, conductive smocks, and conductive work mats are specifically designed for this purpose. These items should not be manufactured locally, since they are generally composed of highly resistive conductive materials to safely drain static discharges, with-out increasing an electrocution risk in the event of an accident.

Anyone performing field maintenance on AMX equipment should use an appropriate ESD field service kit complete with at least a dissipative work mat with a ground cord and a UL listed adjustable wrist strap with another ground cord.

WARNING: Do Not Open! Risk of Electrical Shock. Voltages in this equipment are hazardous to life. No user-serviceable parts inside. Refer all servicing to qualified service personnel.
Place the equipment near a main power supply outlet and make sure that you can easily access the power breaker switch.

WARNING: This product is intended to be operated ONLY from the voltages listed on the back panel or the recommended, or included, power supply of the product. Operation from other voltages other than those indicated may cause irre- versible damage to the product and void the products warranty. The use of AC Plug Adapters is cautioned because it can allow the product to be plugged into voltages in which the product was not designed to operate. If the product is equipped with a detachable power cord, use only the type provided with your product or by your local distributor and/or retailer. If you are unsure of the correct operational voltage, please contact your local distributor and/or retailer.

FCC AND CANADA EMC COMPLIANCE INFORMATION:

This device complies with part 15 of the FCC Rules.

Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Approved under the verification provision of FCC Part 15 as a Class A Digital Device. Caution

Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate this device. CAN ICES-3 (B)/NMB-3(B)

EU COMPLIANCE INFORMATION:

Eligible to bear the CE mark; Conforms to European Union Low Voltage Directive 2006/95/EC; European Union EMC Directive 2004/108/EC; European Union Restriction of Hazardous Substances Recast (RoHS2) Directive 2011/65/EU; European Union WEEE (recast) Directive 2012/19/EU; European Union Radio and Telecommunications Terminal Equipment (R&TTE) Directive 1999/5/EC

WEEE NOTICE:

This appliance is labeled in accordance with European Directive 2012/19/EU concerning waste of electrical and electronic equipment (WEEE). This label indicates that this product should not be disposed of with household waste. It should be deposited at an appropriate facility to enable recovery and recycling.

Table of Contents

Overview

The CTP-1301 is an advanced switching extender kit featuring four inputs and includes a UHD scaler. The TX offers two HDMI inputs and one VGA input with stereo audio, and the RX offers an HDMI input, enabling an additional AV source to be connected at the display location. The TX supports HDBT output up to 70m/230ft at 1080P and up to 40m/130ft at 4K@60Hz (YUV 4:2:0) over a Shielded Cat 6a/7 cable. The RX supports the stereo audio de-embedding output from the HDMI output and connection with an audio system, such as an amplifier. Built-in scaler with resolutions supported up to 4K@60Hz YUV 4:4:4 ensures the optimal image quality for video signal output, and matching the native resolution of the display.

The CTP-1301 allows automatic and manual switching among all inputs. It supports Telnet/Web UI control through NetLinx Studio, including CEC control to turn On/Off the display and Relay control to raise/lower a projector screen. PoH enables the TX to receive power from the power-on RX, requiring the use of only one power supply.

The CTP-1301 simplifies system integration in classrooms and small offices, and facilitates installation under conference tables and in lecterns, providing localized presentation switching support over long distances.

Features

- Two HDMI input and one VGA input included on TX
- One HDMI input, one HDMI output, and one analog audio output included on RX
- HDMI inputs support resolutions up to 4K@60Hz YUV 4:2:0 and HDCP 2.2; VGA input supports resolutions up to 1920 x 1200@60Hz
- Built-in 4K@60Hz YUV 4:4:4 scaler included to match the native resolution of the display
- Supports automatic and manual switching among all inputs
- Via a Shielded Cat 6a/7 cable, HDBT transmits 4K@60Hz (YUV 4:2:0) up to 40m/130ft and 1080P up to 70m/230ft
- HDMI analog audio de-embedded output, supports volume control
- Supports Telnet/Web UI control and configuration through NetLinx Studio
- Supports CEC control to turn On/Off the display and Relay control to raise/lower the projector screen by input signal status detection
- One-way PoH enables the RX to power remote TX (no additional power adapter required at TX)

Package Contents

- 1 x CTP-1301 TX
- 1 x CTP-1301 RX
- 1 x DC 12V Power Adapter (with US, UK and EU Power Cords)
- 5 x Phoenix Male Connector (3.5mm, 3 Pins)
- 4 x Mounting Bracket (with Screws)

Specifications

Technical	
Input	2 x HDMI, 1 x VGA
Input Signal Type	• HDMI with 4K@60Hz YUV 420, HDCP 2.2 • VGA
Input Resolution Supported	1280 x 1024 @ 75 Hz 1152 x 870 @ 75 Hz 1024 x 768 @ 60 Hz, 70 Hz, 75 Hz, 87 Hz 832 x 624 @ 75 Hz 800 x 600 @ 56 Hz, 60 Hz, 72 Hz, 75 Hz 720 x 400 @ 70 Hz, 88 Hz 640 x 480 @ 60 Hz, 67 Hz, 72 Hz, 75 Hz CEA Video Information Code (VIC) Formats: VIC = 1, 640 x 480p 59.94/60 Hz 4:3 VIC = 2, 720 x 480p 59.94/60 Hz 4:3 VIC = 3, 720 x 480p 59.94/60 Hz 16:9 VIC = 4, 1280 x 720p 59.94/60 Hz 16:9 VIC = 5, 1920 x 1080i 59.94/60 Hz 16:9 VIC = 6, 720(1440) x 480i 59.94/60 Hz 4:3 VIC = 7, 720(1440) x 480i 59.94/60 Hz 16:9 VIC = 14, 1440 x 480p 59.94/60 Hz 4:3 VIC = 15, 1440 x 480p 59.94/60 Hz 16:9 VIC = 16, Native 1920 x 1080p 59.94/60 Hz 16:9 VIC = 17, 720 x 576p 50 Hz 4:3 VIC = 18, 720 x 576p 50 Hz 16:9 VIC = 19, 1280 x 720p 50 Hz 16:9 VIC = 20, 1920 x 1080i 50 Hz 16:9 VIC = 21, 720(1440) x 576i 50 Hz 4:3 VIC = 22, 720(1440) x 576i 50 Hz 16:9 VIC = 29, 1440 x 576p 50 Hz 4:3 VIC = 30, 1440 x 576p 50 Hz 16:9 VIC = 31, 1920 x 1080p 50 Hz 16:9 VIC = 32, 1920 x 1080p 23.97/24 Hz 16:9 VIC = 33, 1920 x 1080p 25 Hz 16:9 VIC = 34, 1920 x 1080p 29.97/30 Hz 16:9 VIC = 39, 1920 x 1080i 50 Hz 16:9 VIC = 41, 1280 x 720p 100 Hz 16:9 VIC = 42, 720 x 576p 100 Hz 4:3 VIC = 43, 720 x 576p 100 Hz 16:9 VIC = 44, 720(1440) x 576i 100 Hz 4:3 VIC = 45, 720(1440) x 576i 100 Hz 16:9 VIC = 47, 1280 x 720p 119.88/120 Hz 16:9 VIC = 48, 720 x 480p 119.88/120 Hz 4:3 VIC = 49, 720 x 480p 119.88/120 Hz 16:9 800x600[8], 1024x768[8], 1280x720[8], 1280x768[8], 1280x800[8], 1280x960[8], 1280x1024[8], 1360x768[8], 1366x768[8], 1440x900[8], 1600x900[8], 1600x1200[8], 1680x1050[8], 1920x1080[8], 1920x1200[8], 2560x1440[8], 2560x1600[8], 3840x2160P[2,3,5,8](YUV4:2:0), 4096x2160P[2,3,5,8](YUV4:2:0) 1 = at 23.98 Hz, 2 = at 24 Hz, 3 = at 25 Hz, 4 = at 29.97 Hz, 5 = at 30 Hz, 6 = at 50 Hz, 7 = at 59.94 Hz, 8 = 60 Hz
Input Audio Supported	• HDMI: Supports all audio formats in HDMI 2.0 specification • Audio embedded with VGA: PCM2.0
Output	1 x HDMI
Output Signal Type	HDMI with 4K@60Hz YUV 420, HDCP 2.2
Output Resolution Supported	VESA: 800x600[8], 1024x768[8], 1280x768[8], 1280x800[8], 1280x960[8], 1280x1024[8], 1360x768[8], 1366x768[8], 1440x900[8], 1600x900[8], 1600x1200[8], 1600x1050[8], 1920x1200[8], 3840x2160[2,3,5,8], 4096x2160[2,3,5,8] and Auto Scaler SMPTE:

Technical	
	1280x720P[6,8], 1920x1080P[6,8] 1 = at 23.98 Hz, 2 = at 24 Hz, 3 = at 25 Hz, 4 = at 29.97 Hz, 5 = at 30 Hz, 6 = at 50 Hz, 7 = at 59.94 Hz, 8 = at 60 Hz
Output Audio Supported	• HDMI: PCM 2.0 • Analog Audio Out: PCM2.0
Control Method	• Button • LAN control (Telnet/Web UI) • NetLinx control

General	
Operating Temperature	0°C to 50°C (32°F to 122°F)
Storage Temperature	-10°C to 60°C (14°F to 140°F)
Humidity	5% to 85%, non-condensing
ESD Protection	Human-body Model: ±10Kv (Air-gap discharge)/±5kV(Contact discharge)
Power Supply	DC 12V 3A
Power Consumption (Max)	27W
Device Dimension (W x H x D)	• TX: 194.7mm x 25mm x 94mm/ 7.67" x 0.98" x 3.70" • RX: 223.2mm x 25mm x 153.2mm/8.79" x 0.98" x 6.03"
Product Weight	• TX: 0.5kg/1.10lbs • RX: 0.94kg/2.07lbs
Certification	CE, FCC, ETL, PSE, RCM

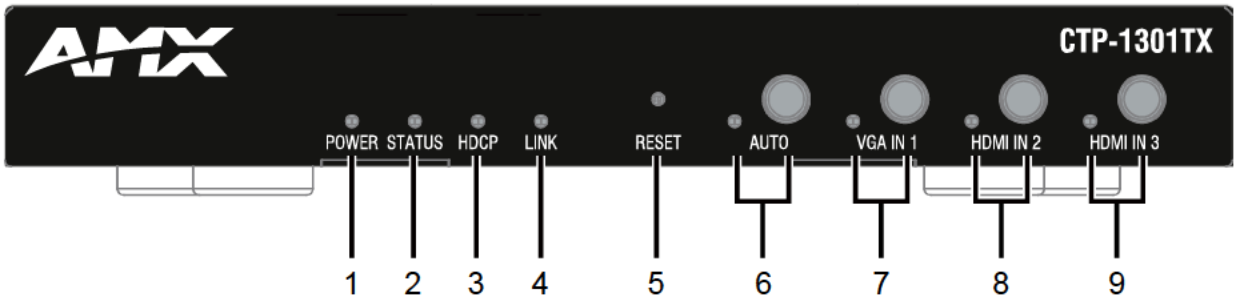
Transmission Distance

Note: Straight-through category cable wired to T568B standard is recommended.

Cable Type	Range	Supported Video
Shielded Cat 6a/7	70m/230ft	1080P@60Hz 36bpp
	40m/130ft	1080P@60Hz 48bpp 4K@60Hz 4:2:0
HDMI	Input: 15m/50ft Output: 10m/33ft	1080P@60Hz
	Input: 10m/33ft	4K@60Hz 4:2:0
	Output: 5m/16ft	4K@60Hz 4:4:4

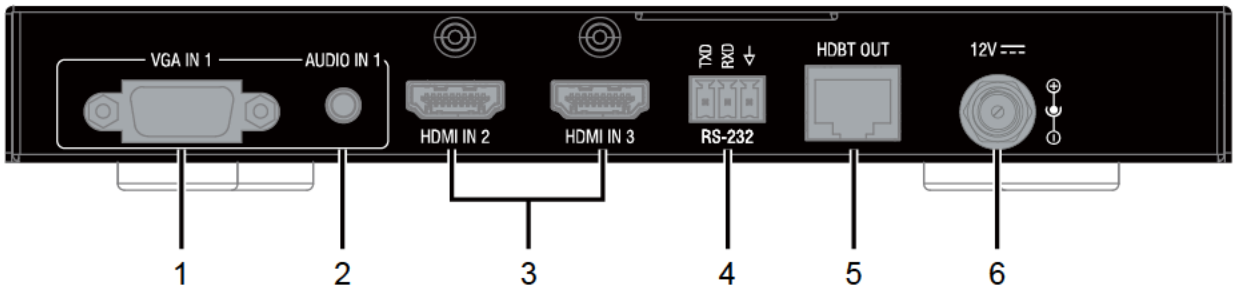
Panel Description

Transmitter Front Panel Description



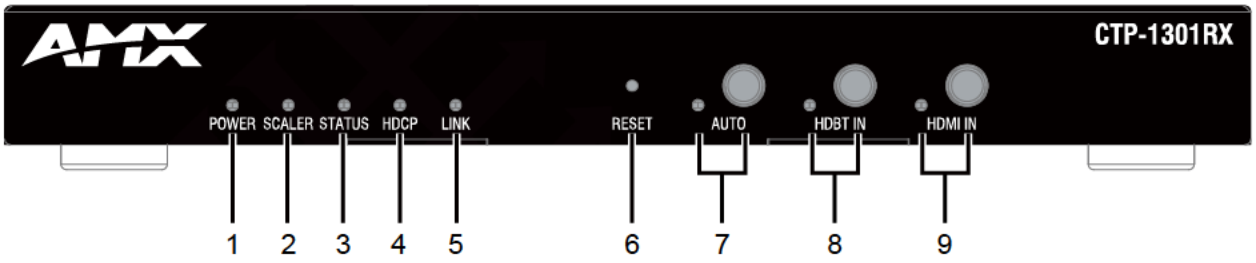
No.	Name	Description
1	POWER LED (Green)	**On:** CTP-1301 TX is powered on. **Off:** CTP-1301 TX is powered off.
2	STATUS LED (Green)	**Blinking:** CTP-1301 TX is working properly. **Off:** CTP-1301 TX is not working properly.
3	HDCP LED (Yellow)	**Blinking:** Signal is being transmitted. **Off:** No signal is being transmitted.
4	LINK LED (Green)	**On:** CTP-1301 TX and RX are linked. **Blinking/Off:** Link error or no link.
5	RESET	With the CTP-1301 TX powered on, use a pointed stylus to hold down the RESET button for three or more seconds, and then release it. The unit will reboot and restore to its factory defaults.
6	AUTO	**Auto Button:** press to enable/disenable the Auto Switching function (Auto switching is enabled by default). **LED (Blue):** LED is located on the left of the button. • **On:** Input Auto Switching function is enabled. • **Off:** Input Auto Switching function is disabled.
7	VGA IN 1	**VGA IN 1 Button:** press to select VGA IN 1 as input. **LED:** LED is located on the left of the button. • **Green:** The input has signal and is selected. • **Yellow:** The input has signal but is not selected. • **Red:** The input has no signal but is selected. • **Off:** The input has no signal and is not selected.
8	HDMI IN 2	HDMI IN 2 Button: press to select HDMI IN 2 as input. LED: LED is located on the left of the button. • **Green:** The input has signal and is selected. • **Yellow:** The input has signal but is not selected. • **Red:** The input has no signal but is selected. • **Off:** The input has no signal and is not selected.
9	HDMI IN 3	HDMI IN 3 Button: press to select HDMI IN 3 as input. LED: LED is located on the left of the button. • **Green:** The input has signal and is selected. • **Yellow:** The input has signal but is not selected. • **Red:** The input has no signal but is selected. • **Off:** The input has no signal and is not selected.

Transmitter Rear Panel Description



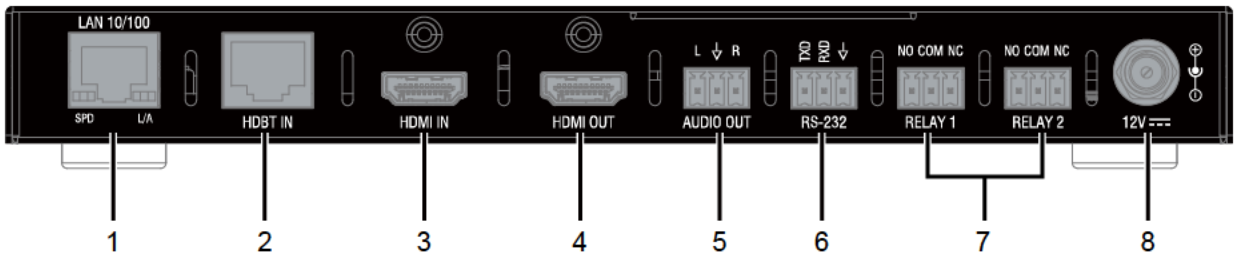
No.	Name	Description
1	VGA IN 1	Connect to the VGA source.
2	AUDIO IN 1	Audio input, embedded with the VGA source.
3	HDMI IN 2-3	Connect to HDMI sources.
4	RS-232	Connect to an RS232 client device (such as a projector). Send commands to the client device via NetLinx Studio.
5	HDBT OUT	Connect to the CTP-1301 RX via a Shielded Cat 6a/7 cable.
6	DC 12V	Connect to the provided DC 12V power adapter. **Note:** When the CTP-1301 RX is powered on, the CTP-1301 TX requires no additional power supply.

Receiver Front Panel Description



No.	Name	Description
1	POWER LED (Green)	**On:** CTP-1301 RX is powered on. **Off:** CTP-1301 RX is powered off.
2	SCALER LED (Blue)	**On:** The scaler module is working properly. **Off:** The scaler module is not working properly.
3	STATUS LED (Green)	**Blinking:** CTP-1301 RX is working properly. **Off:** CTP-1301 RX is not working properly.
4	HDCP LED (Yellow)	**Blinking:** Signal is being transmitted. **Off:** No signal is being transmitted.
5	LINK LED (Green)	**On:** CTP-1301 TX and RX are linked. **Blinking/Off:** Link error or no link.
6	RESET	When CTP-1301 RX is powered on, use a pointed stylus to hold down the RESET button for three or more seconds, and then release it, it will reboot and restore to its factory defaults
7	AUTO	Auto Button: press to enable/disenable the Auto Switching function (Auto switching is enabled by default). • **LED (Blue):** LED is located on the left of the button. • **On:** Input Auto Switching function is enabled. • **Off:** Input Auto Switching function is disabled.
8	HDBT IN	**HDBT IN Button:** press to select HDBT IN as input. **LED:** LED is located on the left of the button. • **Green:** The input has signal and is selected. • **Yellow:** The input has signal but is not selected. • **Red:** The input has no signal but is selected. • **Off:** The input has no signal and is not selected.
9	HDMI IN	HDMI IN Button: press to select HDMI IN (on RX) as input. LED: LED is located on the left of the button. • **Green:** The input has signal and is selected. • **Yellow:** The input has signal but is not selected. • **Red:** The input has no signal but is selected. • **Off:** The input has no signal and is not selected.

Receiver Rear Panel Description



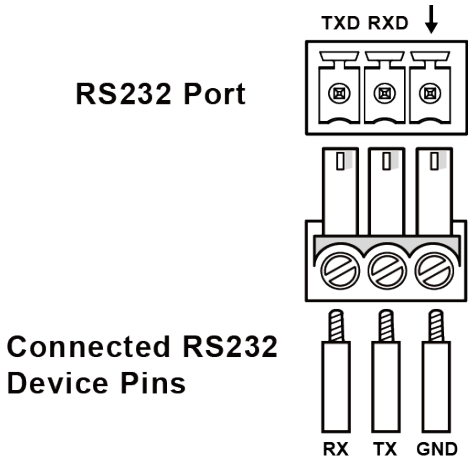
No.	Name	Description
1	LAN	Connect to an Ethernet device.
2	HDBT IN	Connect to the CTP-1301 TX via a Cat 5e/6/7 cable.
3	HDMI IN	Connect to an HDMI source.
4	HDMI OUT	Connect to an HDMI display.
5	AUDIO OUT	Connect to an audio receiver for HDMI audio de-embedding output (e.g. amplifier).
6	RS-232	Connect to an RS232 client device (such as a projector). Send commands to the client device via NetLinx Studio.
7	RELAY 1-2	Connect to the projector screen for Relay control (turn on or off the projector screen).
8	DC 12V	Connect to DC 12V power adapter pro-vided.

Pinout Information

The following figures show the pinouts of the Phoenix Connectors.

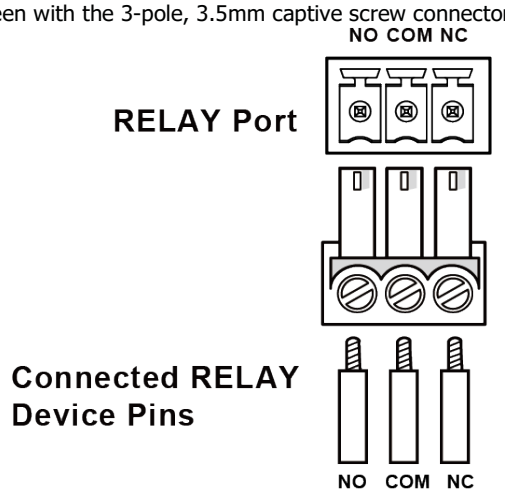
RS232

Connects to an RS232-enabled device with the 3-pole, 3.5mm captive screw connectors. Wire as shown below:



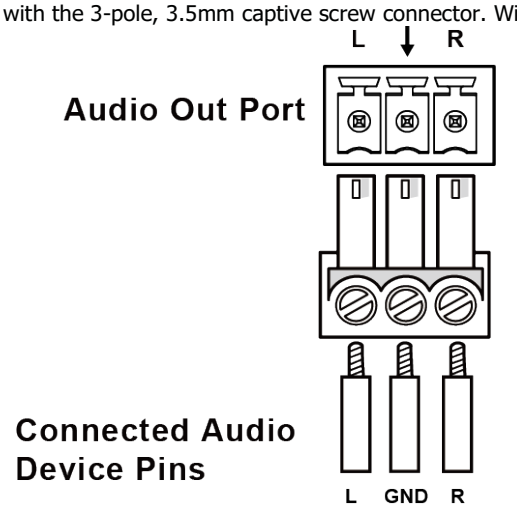
RELAY

Connects to a projector screen with the 3-pole, 3.5mm captive screw connectors. Wire as shown below:.



Audio Out

Connect to an audio device with the 3-pole, 3.5mm captive screw connector. Wire as shown below:

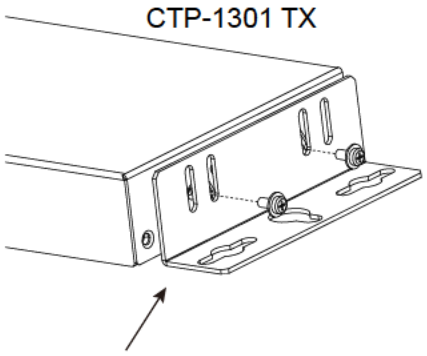


Installation and Wiring

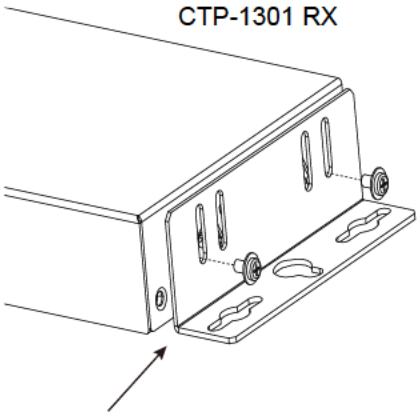
Warning: Before installation, ensure the device is disconnected from the power source.

Installation

1. Attach the installation bracket to the enclosure of CTP-1301 TX using the screws provided.
2. The bracket is attached to the enclosure as shown.



3. Repeat steps 1-2 for the other side of the unit.
4. Attach the brackets to a surface or suitable location with user supplied screws.
5. Repeat steps 1-4 for the CTP-1301 RX.

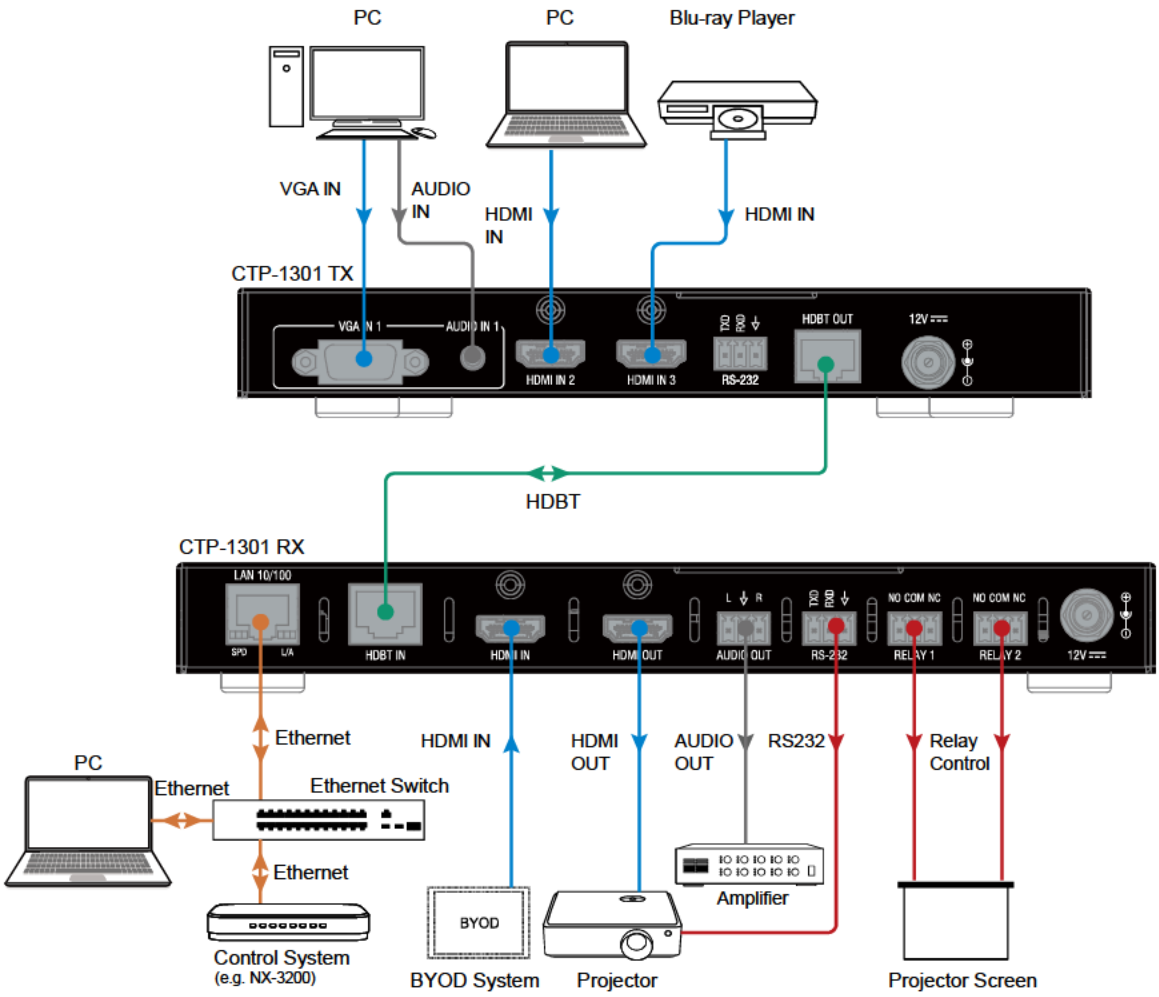


Wiring

Warning:

- Before wiring, disconnect the power from all devices.
- Connect and disconnect the cables with care.

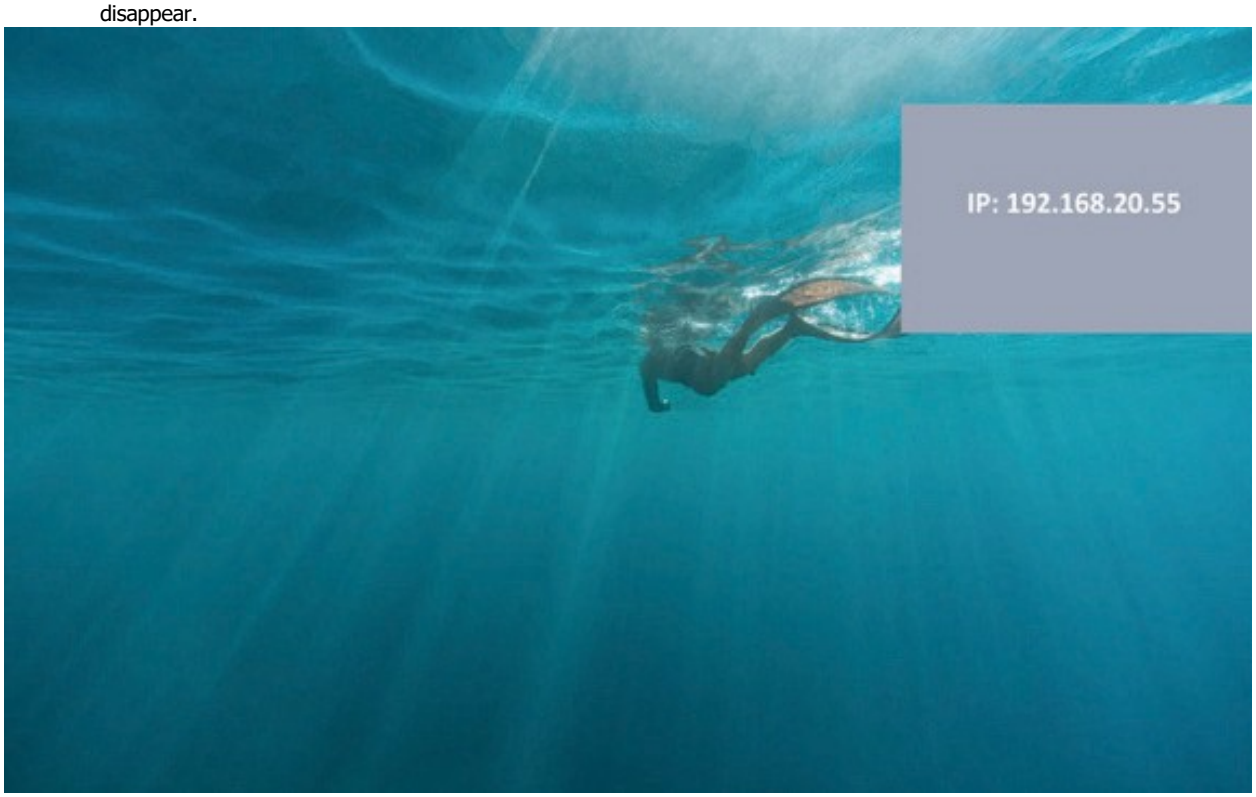
1. Connect video source
   Connect the VGA and HDMI sources (such as PC, Blu-ray player, Apple TV, 4K media player, etc) to the VGA IN and HDMI IN ports of the CTP-1301 TX respectively.
2. Connect HDBT OUT
   Connect HDBT OUT of the CTP-1301 TX to HDBT IN of the CTP-1301 RX with a Shielded Cat 6a/7 cable.
3. Connect HDMI IN
   Connect an HDMI source (such as BYOD system) to the HDMI IN port of the CTP-1301 RX.
4. Connect HDMI OUT
   Connect an HDMI display device (such as a projector) to the HDMI OUT of the CTP-1301 RX.
5. Connect AUDIO OUT
   Connect an audio receiver to the AUDIO OUT of the CTP-1301 RX.
6. Connections for additional control options:
   - LAN Control (through NetLinx/Telnet/Web UI): Connect CTP-1301 RX to the same network as the control PC or control system (e.g. NX-3200) via its LAN port.
   - RS232 Control: Connect an RS232 client device (e.g. projector) to the RS232 port of the CTP-1301 RX, and connect the projector screen to RELAY port (1-2); send commands through NetLinx Studio to control the projector and screen.
7. C7. Connect the power adapter provided to the CTP-1301 RX.
   One-way PoH enables the power to be sent from CTP-1301 RX to TX along a single Cat X cable; no additional power adapter is required for the TX.
8. Power on all attached devices
   When all connections are made and power is ON, check if all LED indicators on the CTP-1301 TX and RX are normal to ensure the installation is successful. For LED indication, please refer to the Panel Description section.


PC
PC
Blu-ray Player
VGA IN
AUDIO IN
HDMI IN
HDMI IN
CTP-1301 TX
VGA IN 1
AUDIO IN 1
HDMI IN 2
HDMI IN 3
RS-232
HDBT OUT
12V
HDBT
CTP-1301 RX
LAN 10/100
HDBT IN
HDMI IN
HDMI OUT
AUDIO OUT
RS-232
RELAY 1
RELAY 2
12V
Ethernet
HDMI IN
HDMI OUT
AUDIO OUT
RS232
Relay Control
PC
Ethernet
Ethernet Switch
Ethernet
Amplifier
Control System
(e.g. NX-3200)
BYOD
BYOD System
Projector
Projector Screen

OSD

The CTP-1301 supports OSD (On Screen Display) to display its IP address. Follow these steps to initiate OSD:

1. Press and Hold the front panel buttons **Input 1** and **Input 2** for at least 3 seconds.
2. The IP address of the CTP-1301 will display on the upper right of the connected display's screen for about 15s and then disappear.



Input Source Switching

The CTP-1301 Kit supports Auto and Manual Switching between the HDBT (HDMI, VGA) and HDMI inputs.

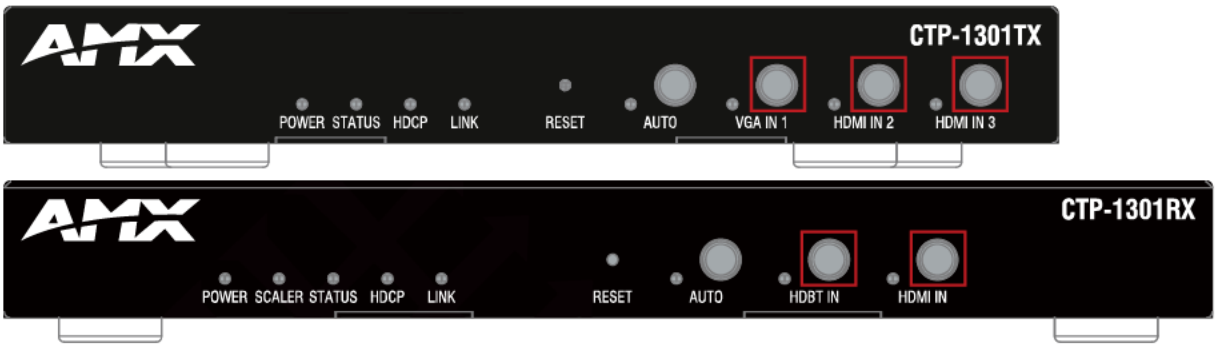
Auto Switching

1. When multiple sources are inserted, and power is ON for all devices, the input will be switched to the active source with the highest priority.
   Priority: VGA IN 1 > HDMI IN 2 > HDMI IN 3 > RX HDMI IN
2. When a new source is inserted, the input will be switched to it automatically, following the Last-In-First-Out rule.
3. When the currently selected source is removed, the input will first be switched to the most recently selected port. If the port has no active source, the input will be switched to the active source with the highest priority.
4. When there is no source inserted, HDMI IN of RX will be selected as input.

Note:

- The Auto Switching function is enabled by default once all devices are powered on.
- Auto Switching can be set to Enabled or Disabled through NetLinx Studio and with the front panel button.

Manual Switching



Press the AUTO Button (to ensure AUTO LED is off) or the specific input button in red frames above to enable Manual Switching.

In Manual Switching mode,

1. When the input port without an active source is selected, CTP-1301 will output no signal.
2. Power cycle CTP-1301, the Manual Switching function will stay enabled.

Note: Manual switching is enabled when auto switching is off, and allows switching among inactive input ports.

NetLinx Control

Controlling the CTP-1301 through NetLinx Studio.

Before launching NetLinx Studio, connect the CTP-1301 RX, PC, control system (e.g. NX-3200) to the same network.

Note: IDs and IP addresses in the following illustrations are examples. Check the Online Tree in NetLinx Studio to find the correct addresses for your device.

Device Number and Ports

Each CTP-1301 has its own Device Number (which is assigned when the unit is bound to a Control System) and the following ports.

For CTP-1301 TX:

Port 1: RS-232

Port 7: VGA IN1 (Audio in1)

Port 8: HDMI IN 2

Port 9: HDMI IN 3

For CTP-1301 RX:

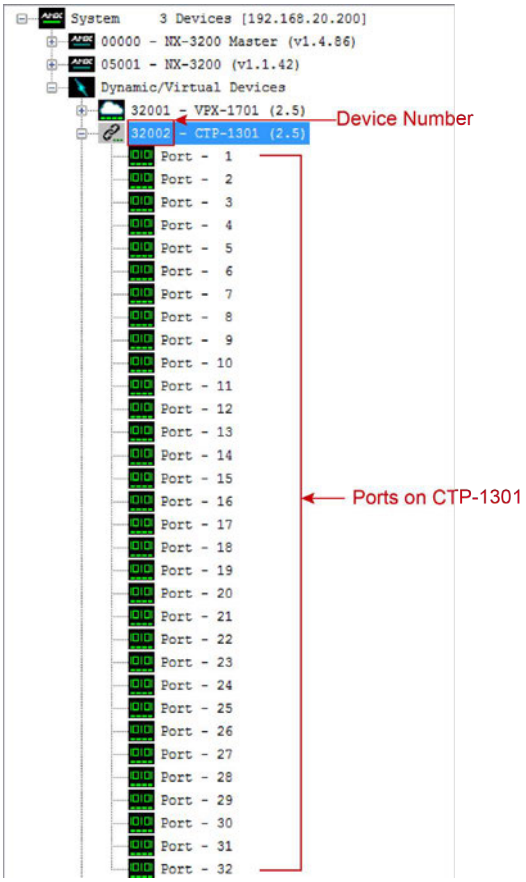
Port 21: RS232

Port 26: HDMI OUT, AUDIO OUT

Port 27: HDMI IN 1

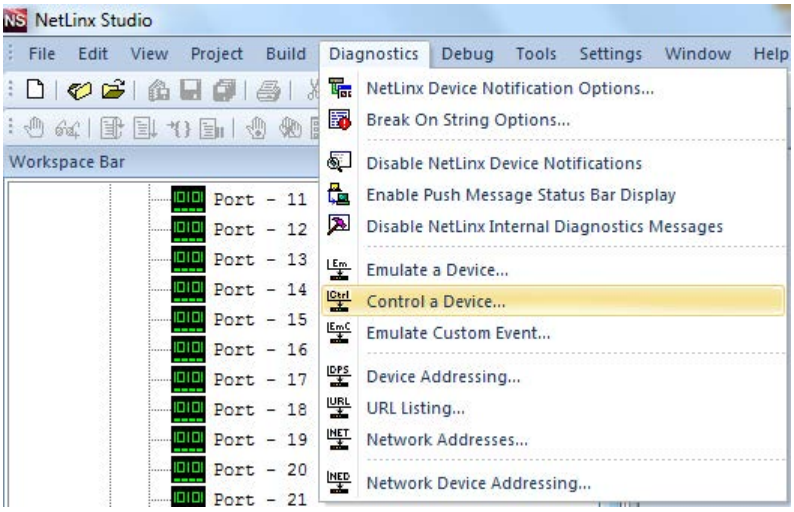
Port 32: RELAY 1-2

In NetLinx Studio's Online Tree, the CTP-1301 module displays its ports.

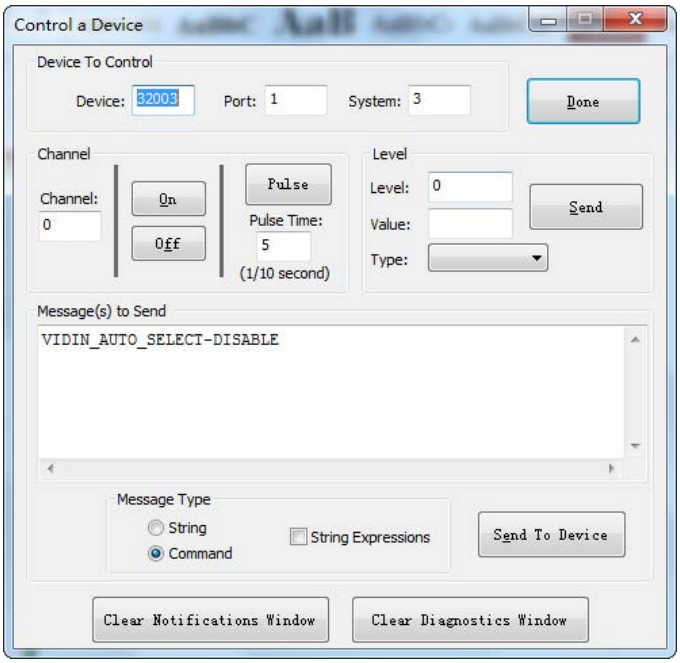


Send command to control a device

Click **"Diagnostics"** on the menu bar, select **"Control a Device"**.



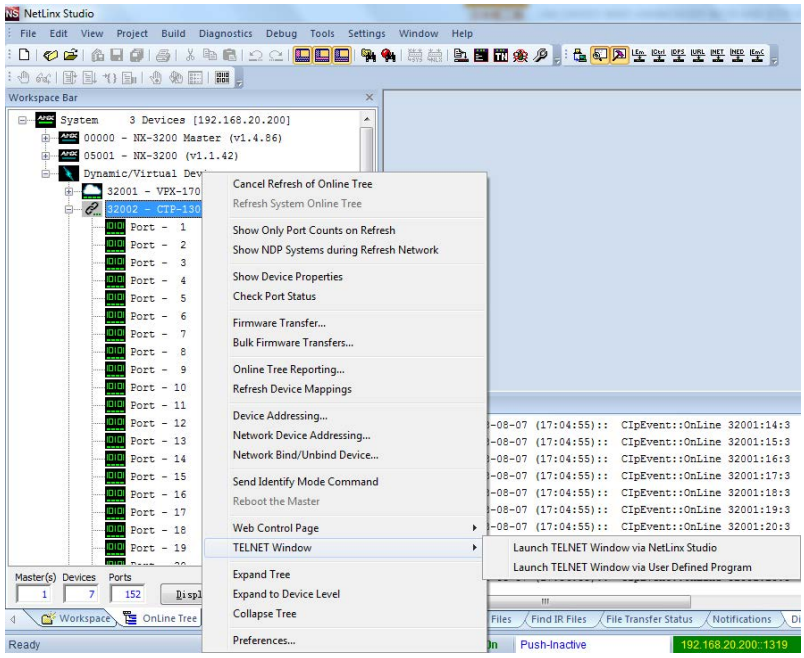
A window will display as follows, type the Device number, System and command respectively, and click "Send To Device". (For additional NetLinx API commands, see **API NetLinx Command Set**.)



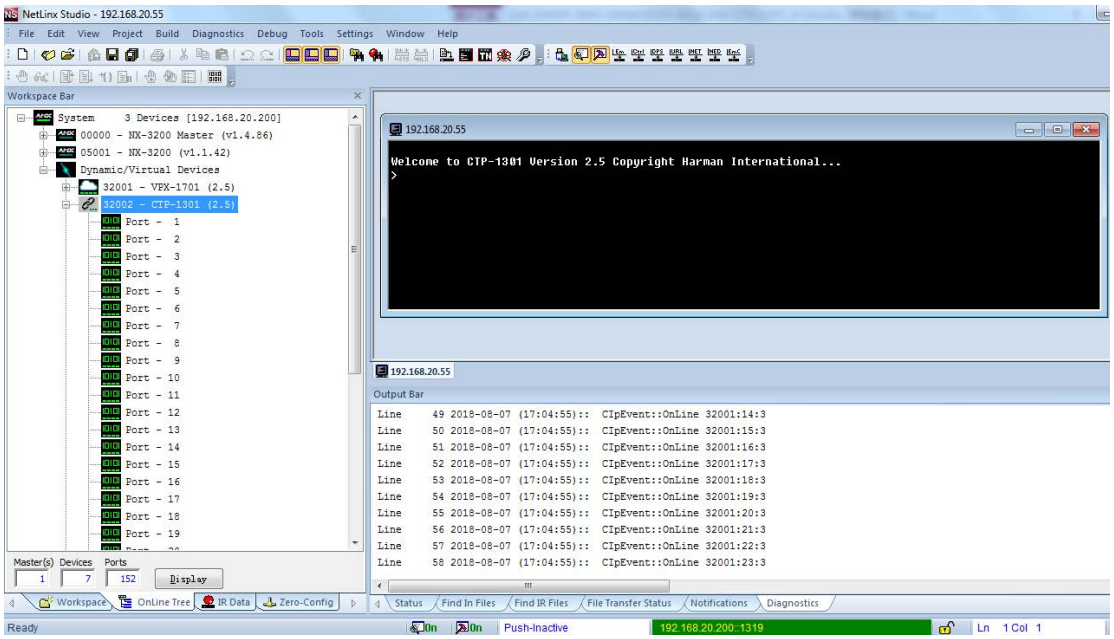
Telnet Control

To launch Telnet Window,

1. Right click the Device Number in NetLinx Studio's Online Tree, select **"TELNET Window" – "Launch TELENT Window via NetLinx Studio"** (or **"Launch TELENT Window via User Defined Program"**)*.



The Telnet window opens.



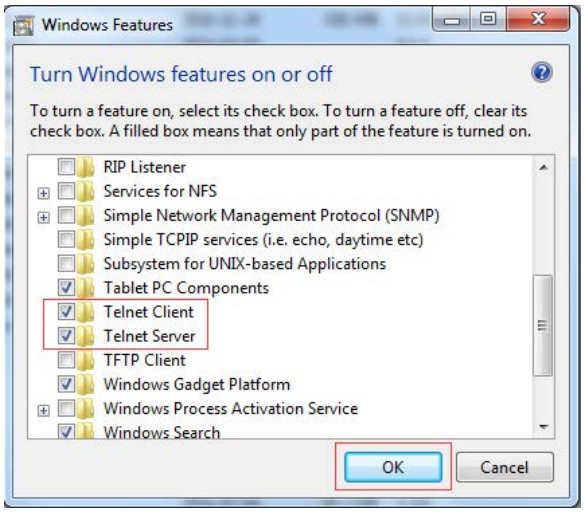
2. At the prompt (>), type the Telnet command and press Enter.

* Selecting **"Launch TELENT Window via User Defined Program"**, may require enabling Telnet by completing the following:

(1) go to Start/Control Panel/Programs and Features;

(2) on the left, select "Turn Windows features on or off";

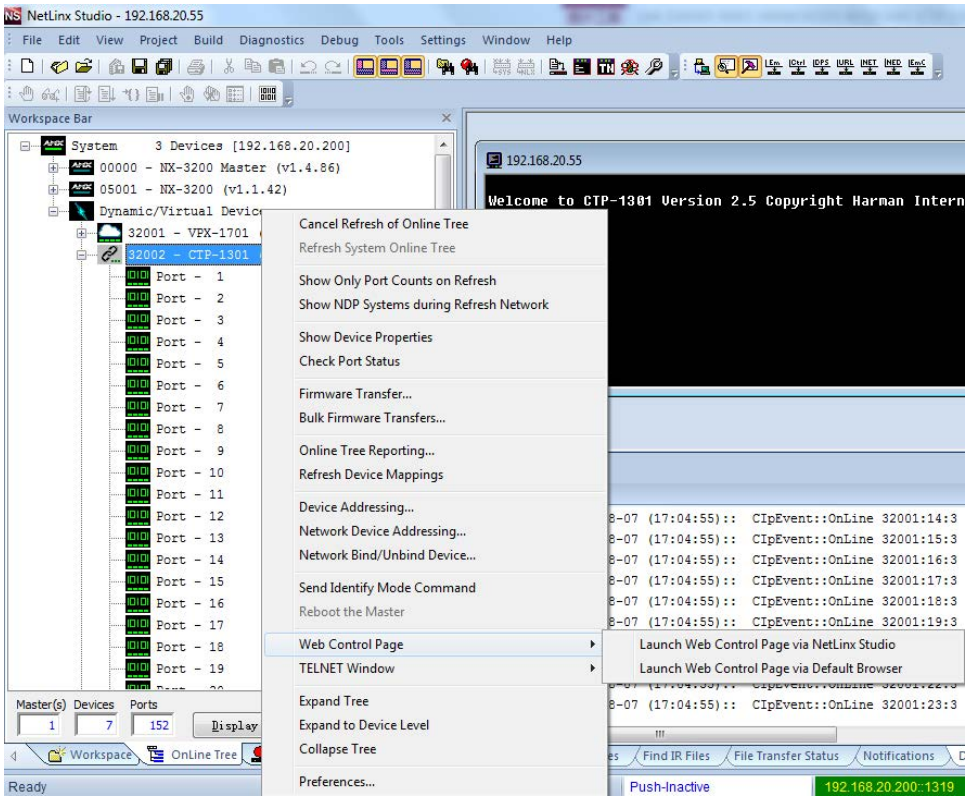
(3) select the check-boxes Telnet Client and Telnet Server, and click OK.



Web UI Control

To launch the Web control page,

Right click the Device Number in NetLinx Studio's Online Tree, select **"Web Control Page"** – **"Launch Web Control Page via NetLinx Studio"** or **"Launch Web Control Page via Default Browser"**.

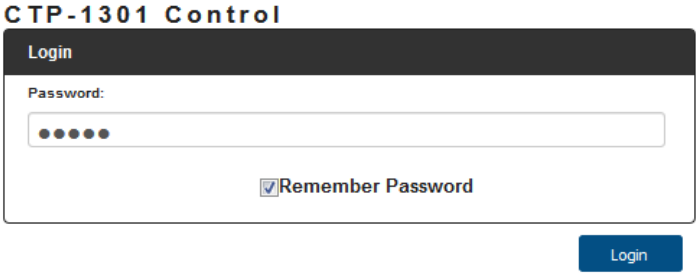


Web UI Control

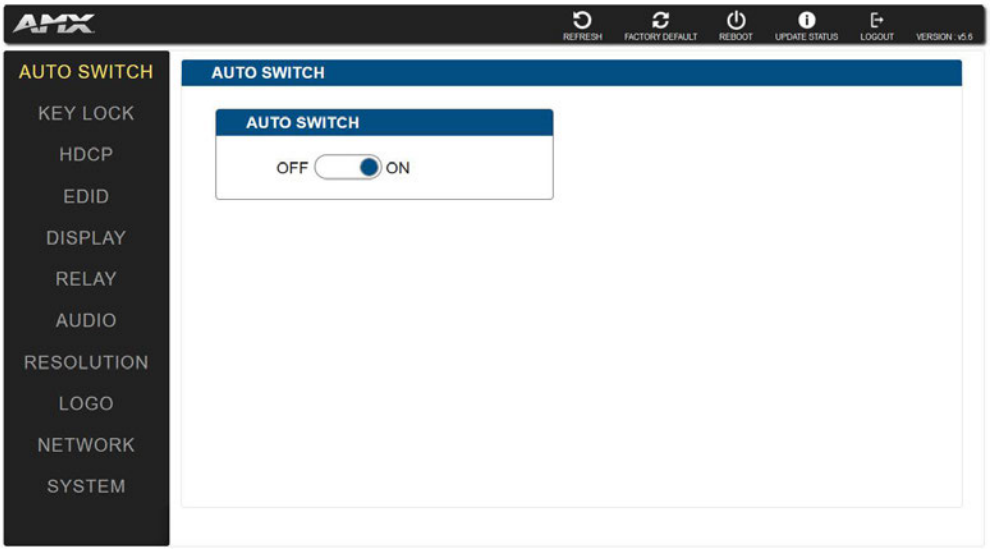
The Web UI designed for the CTP-1301 allows basic controls and advanced settings of the device. The Web UI page can be accessed through NetLinx Studio.

To access the CTP-1301 Web UI:

1. Connect your PC and the LAN port of the CTP-1301 RX to the same local area network.
2. In NetLinx Studio's Online Tree, select **"Web Control Page"** – **"Launch Web Control Page via Default Browser"** (or select **"Launch Web Control Page via NetLinx Studio"**).
   The following page will pop up. Enter the default password "admin" and click "Login".



The main screen displays as follows.



The Web UI page consists of header bar and navigation bar for basic and advanced settings, including Auto Switch, HDCP, EDID, Display, Resolution, Network, System, etc.

Header Bar

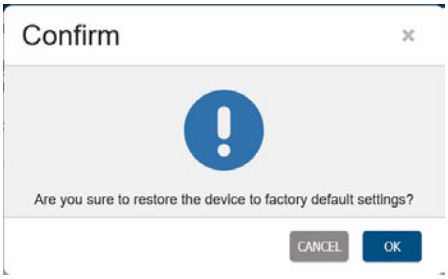
The header bar consists of logo, the following five buttons and version information.

: Refresh button, click to refresh the Web UI to the latest setting.

: Factory Default button, click to reset the device to factory default settings.

Steps to reset the device to factory default settings:

1. Click "Factory Default"button.
2. Click "OK" to proceed.

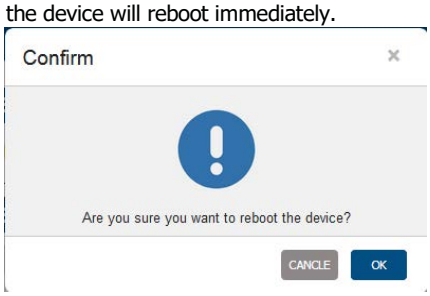


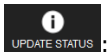
A successful reset will restore all the device settings to their factory defaults and the device will reboot automatically. Allow at least 2 minutes for the reboot to complete.

: Reboot button, click to reboot the device.

Steps to reboot the device:

1. Click "Reboot" button.
2. Click "OK" to proceed. Then the device will reboot immediately.





: Update status button, click to view the device's firmware upgrade status.

: Logout button, click to logout from the Web UI.

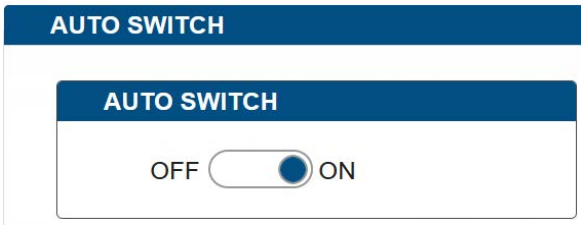
: Displays the device's firmware version information.

Navigation Bar

The navigation bar includes the following tabs: Auto Switch, Key Lock, HDCP, EDID, Display, Relay, Audio, Resolution, Logo, Network and System.

Auto Switch

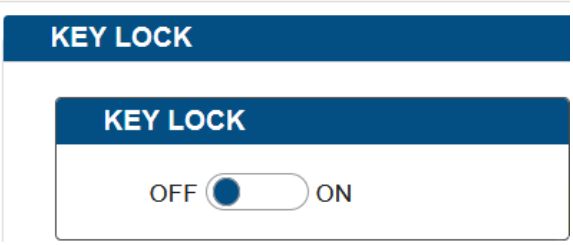
Auto Switch allows switching among multiple inputs without using the buttons on the front panel.



- **ON:** Click to enable Auto Switch (default setting).
- **OFF:** Click to disable Auto Switch.

Key Lock

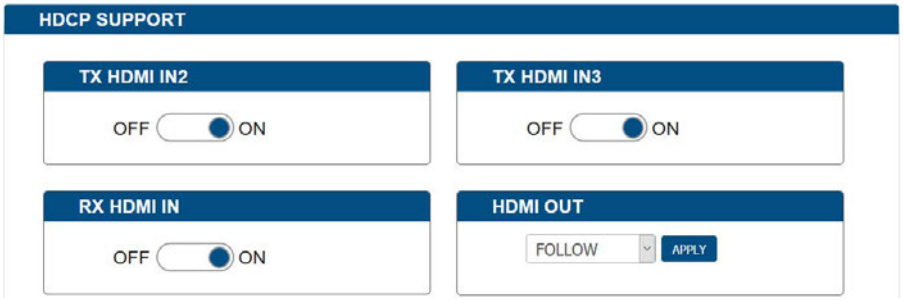
Key Lock allows locking of the buttons on the CTP-1301 to prevent accidental or unwanted switching.



- **ON:** Click to enable Key Lock.
- **OFF:** Click to disable Key Lock (default setting).

HDCP Support

HDCP Support allows enabling or disabling HDCP compatibility of each input and HDMI output.



- **ON:** Click to enable HDCP compatibility for the corresponding input, which will transmit HDCP protected content (default setting).
- **OFF:** Click to disable HDCP compatibility for the corresponding input, which will transmit non-HDCP protected content.

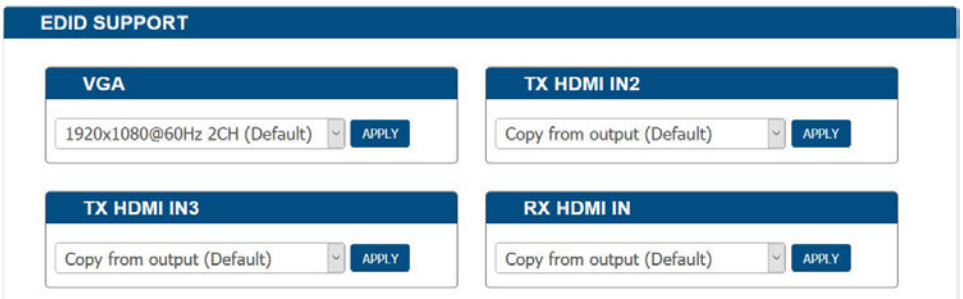
For HDMI Out:

- **FOLLOW:** Select to follow the output display's HDCP compatibility for the HDMI Out, which will transmit content with the same HDCP compatibility as that of the output display (default setting).
- **HDCP 2.2:** Select to transmit HDCP 2.2 protected content to the output display.
- **HDCP 1.4:** Select to transmit HDCP 1.4 protected content to the output display.
- **NO HDCP:** Select to transmit non-HDCP protected content to the output display. (Note: If "NO HDCP" is selected for HDMI OUT, when the HDCP protected signal is being input, the receiver will output no signal.)
- **Apply:** Click to make the selection to take effect.

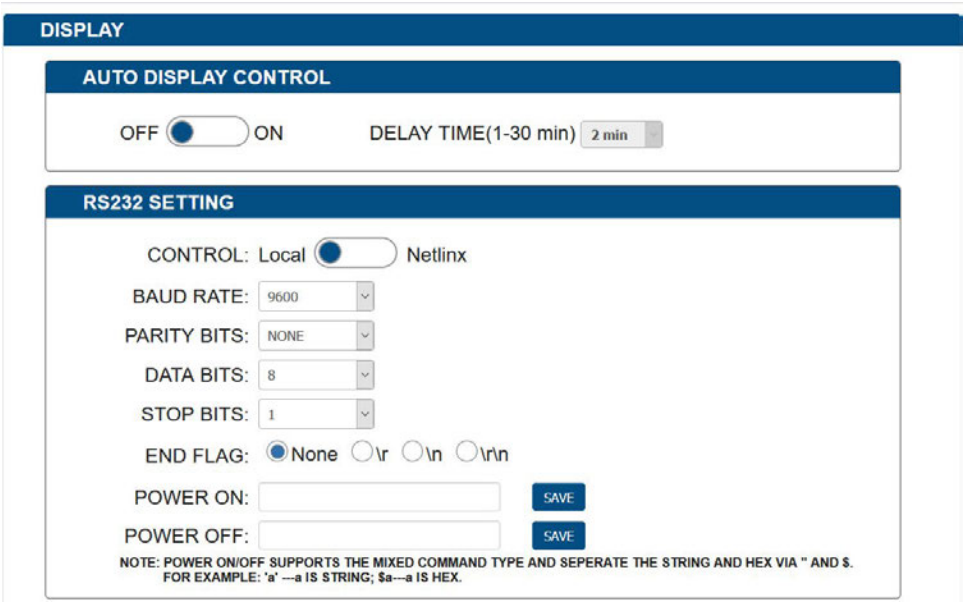
EDID Support

EDID Support allows configuration of the EDID setting of each input.

Locate the target input port and select specific EDID settings from the drop-down menu, then click "Apply" to perform the setting. The default EDID settings for all HDMI input ports are "Copy EDID from output display".



Display



Auto Display Control allows control of CEC-enabled displays connected to the CTP-1301 through HDMI.

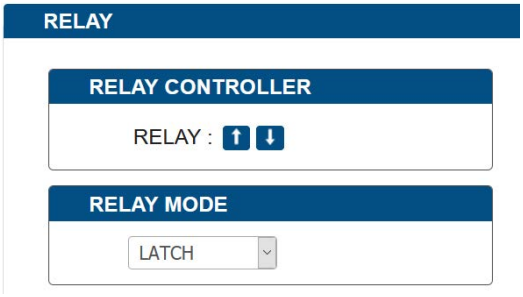
- **ON:** Click to enable the Auto Display Control.
- **OFF:** Click to disable the Auto Display Control. (Default setting)
- **DELAY TIME (1~30 min):** Click the down arrow to set the time for the display to power off automatically when no signal is present. Example: With the time set to 2 minutes, the output display will be powered off automatically when there is no signal input for 2 minutes.

  Note: The time range for Auto Display Control is 1-30 minutes.

RS232 Setting allows RS232 configuration for controlling a third-party device or passing though RS232 commands.

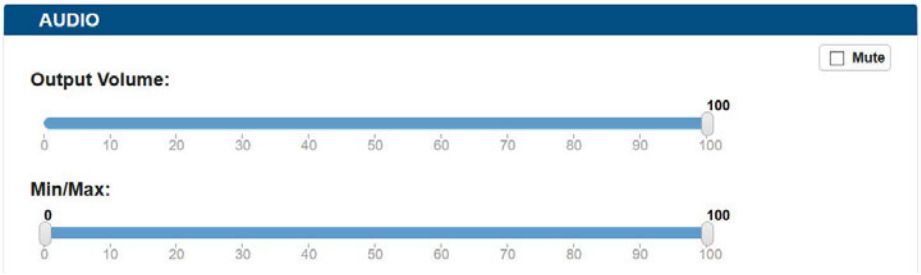
- **Control**:
  1) **Local**: Select to perform control on the third-party device connected. (Default setting)
  2) **NetLinx**: Select to perform RS232 command pass-through through NetLinx Studio.
- **Device**: When "NetLinx" is selected, click the down arrow to select TX or RX for RS232 configuration.
- **Baud Rate**: Click the down arrow to select the baud rate.
- **Parity Bits**: Click the down arrow to select the parity bits.
- **Data Bits**: Click the down arrow to select the data bits.
- **Stop Bits**: Click the down arrow to select the stop bits.
- **END FLAG**: Select the ending flag for each RS232 command.
- **POWER ON**: Enter the RS232 command for powering the display on.
- **POWER OFF**: Enter the RS232 command for powering the display off.
- **SAVE**: Click to save the setting changes.

Relay



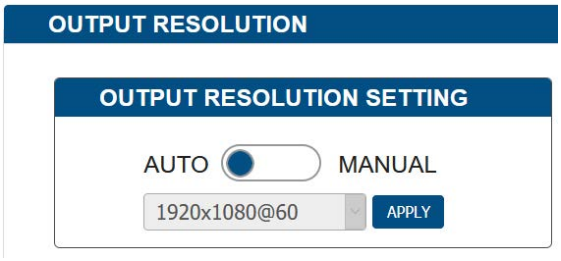
- **RELAY Controller:**
  : Click to raise the projector screen.
  : Click to lower the projector screen.
- **RELAY MODE**: Click the down arrow to select the Relay mode. Available modes are LATCH and MOMENTRAY. Default setting is LATCH.

Audio



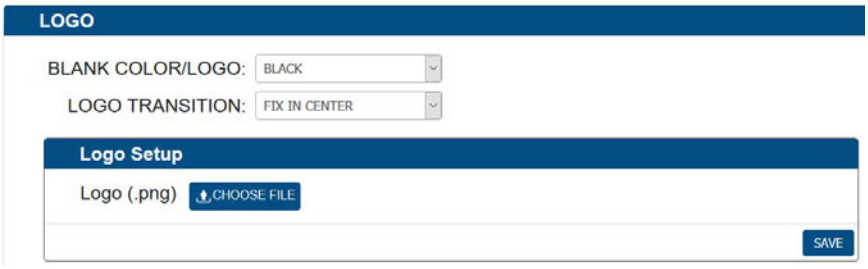
- **Output Volume:** Move the slider to set the output audio volume.
- **Min/Max:** Move the sliders at the left and right sides of the scale to set the minimum and maximum range of the audio volume.
- **Mute:** Check (or uncheck) to mute (or unmute) the audio.

Resolution Setting



- **AUTO:** Click to set the output resolution to Auto mode (default setting). The output resolution may vary based on the connected display's native resolution.
- **MANUAL:** Click to set the output resolution to Manual mode. In Manual mode, click the down arrow to select a specific output resolution as required.
- **APPLY:** Click to set the output resolution to the desired setting.

Logo



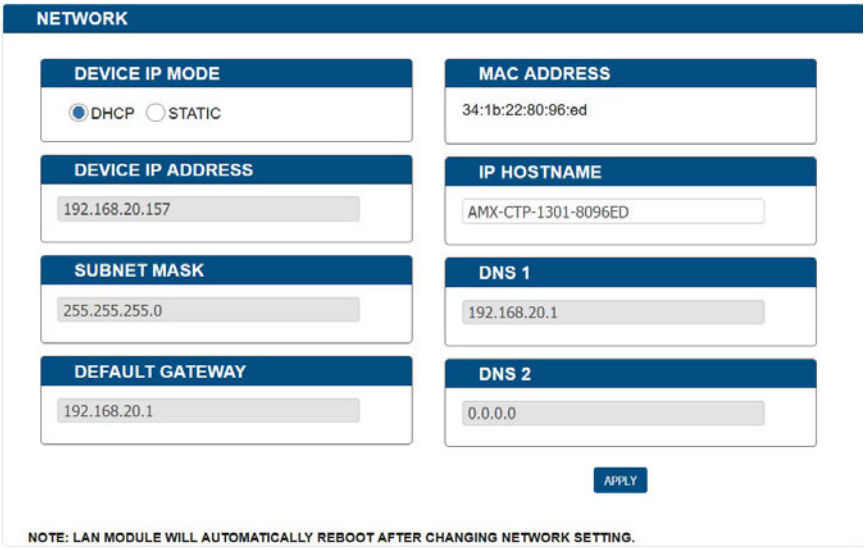
Logo section allows display content configuration for the display screen when there's no signal output to the display.

- BLACK COLOR/LOGO:
  1) **BLACK:** Select to set the display screen as black when there's no signal output to the display.
  2) **LOGO:** Select to set the display to show a logo picture when there's no signal output to the display.
- LOGO TRANSITION:
  1) **FIX IN CENTER:** Select to set the logo picture to be shown in the display screen's center when there's no signal output to the display. (Default setting)
  2) **DRAG TOP LEFT:** Select to set the logo picture to shuttle slowly between the center and the top left of the display screen when there's no signal output to the display.
  3) **DRAG TOP RIGHT:** Select to set the logo picture to shuttle slowly between the center and the top right of the display screen when there's no signal output to the display.
  4) **DRAG BOTTOM LEFT:** Select to set the logo picture to shuttle slowly between the center and the bottom left of the display screen when there's no signal output to the display.
  5) **DRAG BOTTOM RIGHT:** Select to set the logo picture to shuttle slowly between the center and the bottom right of the display screen when there's no signal output to the display.

- Logo Setup
  1) **CHOOSE FILE:** Click to upload a logo file to the CTP-1301 from your local computer.
  2) **SAVE:** Click to perform the logo file uploading.

  Note:
  - The logo file should be in .png format with size not larger than 1280x720, 60KB.
  - When the logo is loaded to the device successfully, the device will reboot immediately.

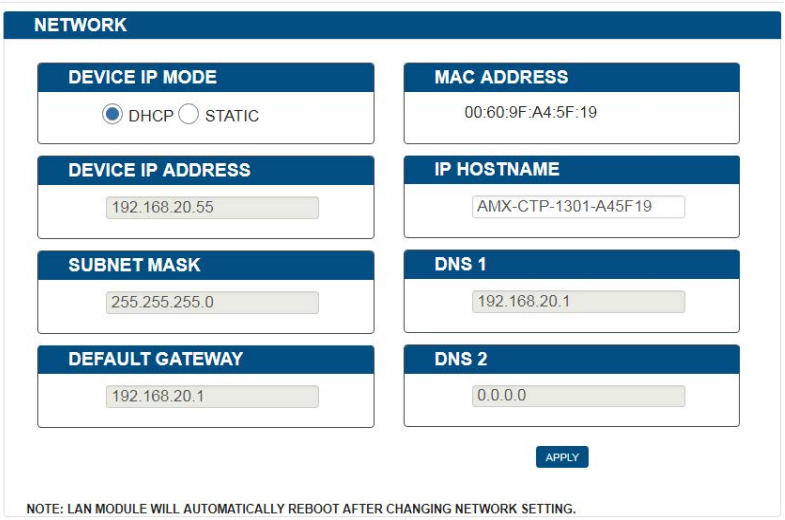
Network



Device IP Mode:

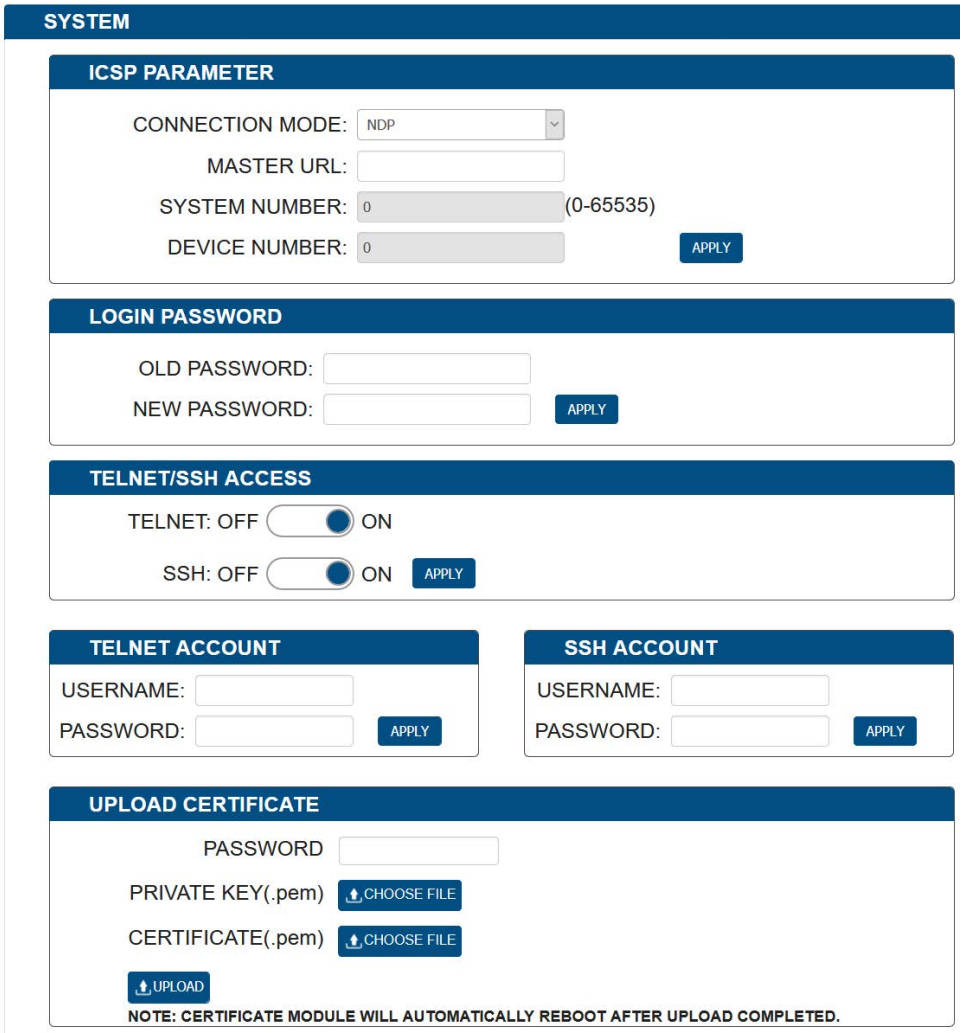
- **DHCP**: When enabled, the IP address of the CTP-1301 will be assigned automatically by the connected DHCP server.

- **Static:** When the CTP-1301 fails to obtain or detect an IP address from the network to which it is connected, select "Static" to set up the IP address manually.
- **APPLY:** Click to set the network setting.



Note: Allow 2-3 minutes for the device's LAN module to reboot and reconnect after the network setting is changed.

System



The system section is used to configure the ICSP Parameter, login password, Telnet/SSH account and upload certificate.

1. ICSP PARAMETER:

- **CONNECTION MODE**: includes four options: NDP, Auto IP, URL/TCP, URL/UDP. The default setting is NDP.
- **CONTROLLER URL**: Input the connected contoller's URL.
- **SYSTEM NUMBER**: Use the Online Tree to determine the system number. By default, it is disabled to be configured.
- **DEVICE NUMBER**: Use the Online Tree to determine it. By default, it is disabled to be configured.

2. LOGIN PASSWORD:
   LOGIN PASSWORD: Login Password can be changed. The default Login Password is **admin**.
3. TELNET/SSH ACCESS
   TELNET/SSH ACCESS is used to enable or disable Telnet/SSH capability. The default setting is **ON**.
   Note: Reboot the device for the setting change to take effect.
4. TELNET/SSH ACCOUNT
   TELNET/SSH ACCOUNT is used to configure the user name and password of the account.
   - **TELNET ACCOUNT**
     The default user name and password are null.
   - **SSH ACCOUNT**
     The default user name is admin, the default password is password. Note: Reboot the device for the SSH ACCOUNT setting change to take effect.
   - **APPLY:** Click to choose each of the settings.
5. Upload Certificate
   - **Password:** Enter the password of the certificate uploaded.
   - **Private Key (.pem):** Click "CHOOSE FILE" to browse for the private key in .pem format of the https certificate in your local computer.
   - **Certificate (.pem):** Click "CHOOSE FILE" to browse for the https certificate in .pem format in your local computer.
   - **Upload:** Click to upload the https certificate and its private key to the device.

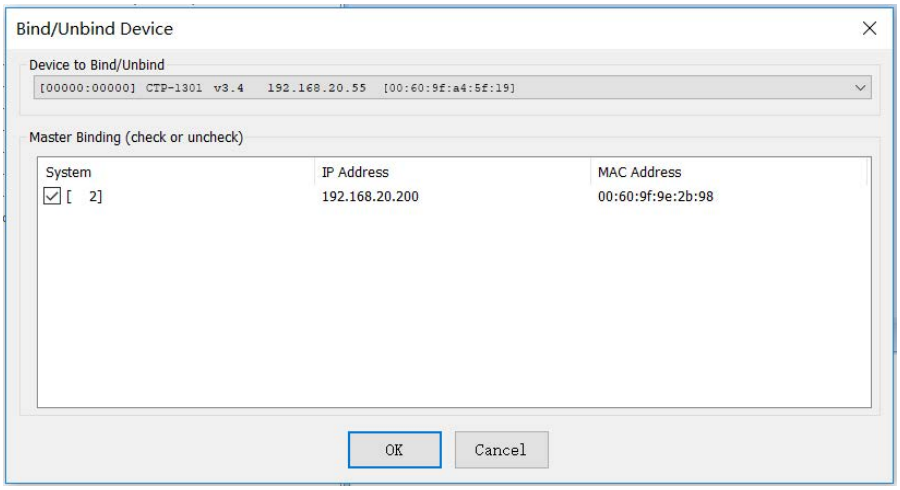
   Note: When certificate upload is completed, the certificate module will reboot automatically.

Firmware Upgrade

CTP-1301 uses KIT files for firmware upgrade.

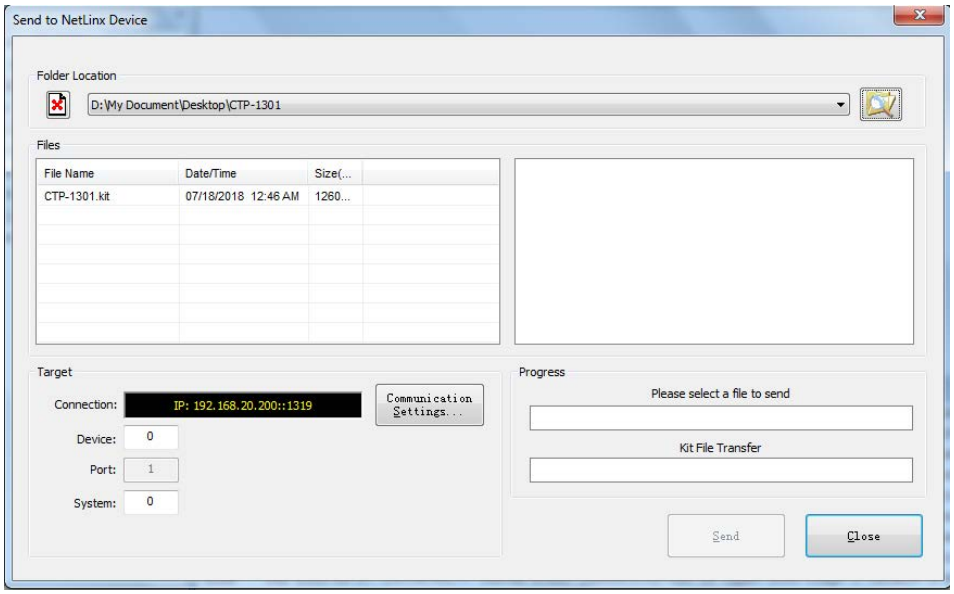
Before Starting

1. Verify that you have the latest version of NetLinx Studio on your PC.
2. Download the latest firmware (KIT) file to your PC. (Place KIT files on a local drive for the fastest throughput.)
3. Verify the following:
   a) Verify that an Ethernet/RJ-45 cable is connected from the CTP-1301 RX to the same network as the control system.
   b) Verify the CTP-1301 unit is powered ON.
4. Launch NetLinx Studio and open the Online Tree.
5. Bind the device to the integrated controller: select and right-click the CTP-1301; from the context sensitive menu, select Network Bind/Unbind Device (be sure the check box is selected); click OK.

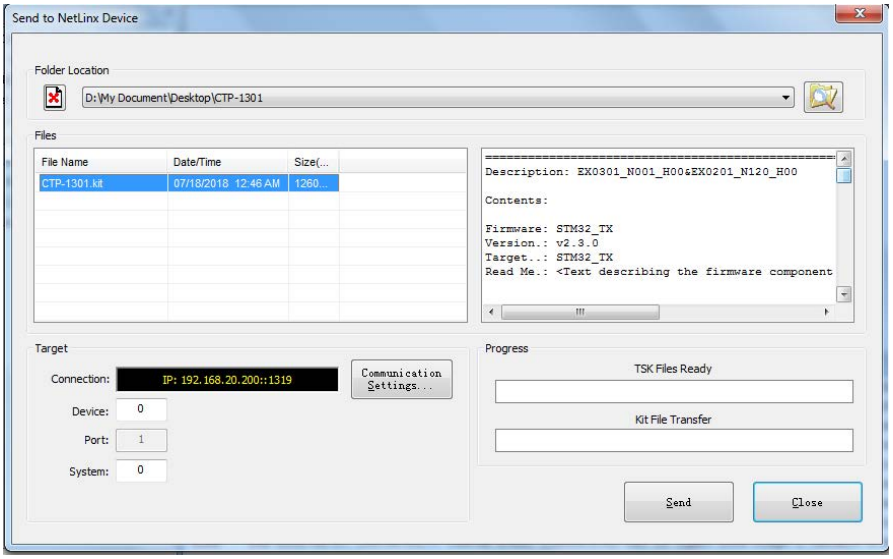


Transferring KIT Files

1. In NetLinx Studio, **choose Tools > Firmware Transfers > Send to NetLinx Device** to open the "Send to NetLinx Studio" dialog.
2. Click  to navigate to the target directory. The selected directory path is displayed in the Location text box. KIT files in the target directory display under File Name.



3. Select the appropriate KIT file from the File Name list.



4. Check the number of the Device to be upgraded in the Device text box.
   - The device number is 32002.
   - The system number is 3. (Use the Online Tree to determine the system number.)
5. Click “Send” to upgrade the firmware.

6. Click the 

button on Web UI page to check the upgrade status. When the process completes, the device will restart automatically.

Note:

- The upgrade process takes 1 hour.
- Do not power off the device until it has been successfully upgraded.
- The device will restart two times to resume normal operation.

Troubleshooting

1. **Power**: Ensure all devices are powered on.
2. **Indicator:** Ensure all LED indicators of the CTP-1301 are normal according to the user manual.
3. **Devices:** Ensure picture can be shown normally when directly connecting a source a display device.
4. **Cable:** Plug the HDMI/Cat X cable in and out or connect a different HDMI/Cat X cable. Ensure the specific cable length is within the available transmission range according to the Specifications Section.
5. **Compatibility:** Test other source and display devices to determine correct compatibility.

API Command Set

NetLinx Commands

Device Port Name and Port Number:

Model name		Port name	Port No.
CTP-1301	TX	VGA IN1(Audio in1)	7
		HDMI IN2	8
		HDMI IN3	9
		RS-232	1
		HDBT OUT	
	RX	HDBT IN	
		HDMI IN 1	27
		HDMI OUT	26
		Audio out	26
		RELAY1	32
		RELAY2	32
		RS232	21

NetLinx Command Set (cont.)

No.	Function Description	Syntax	Example
1	VIDIN_AUTO_SELECT	**Command:** SEND_COMMAND <DEV>,'"VIDIN_AUTO_SELECT-<ENABLE|DISABLE>"' **Return:** VIDIN_AUTO_SELECT-<ENABLE|DISABLE>	**Command:** SEND_COMMAND <DEV>,'"VIDIN_AUTO_SELECT-DISABLE"' **Return:** VIDIN_AUTO_SELECT-DISABLE **Description:** Set Auto Switch Status off.
2	?VIDIN_AUTO_SELECT To verify the Auto Switch Status	**Command:** SEND_COMMAND <DEV>, "'?VIDIN_AUTO_SELECT"' **Return:** VIDIN_AUTO_SELECT-<ENABLE|DISABLE>	**Command:** SEND_COMMAND SWITCHER,'"?VIDIN_AUTO_SELECT"' **Return:** VIDIN_AUTO_SELECT-ENABLE **Description:** Get Auto Switch Status. The Auto Switch Status is on.
3	FP_LOCKOUT To set Key Lock On/Off	**Command:** SEND_COMMAND <DEV>,'"FP_LOCKOUT-<ENABLE|DISABLE>"' **Return:** FP_LOCKOUT-<ENABLE|DISABLE>	**Command:** SEND_COMMAND <DEV>,'"FP_LOCKOUT-DISABLE"' **Return:** FP_LOCKOUT-DISABLE **Description:** Set Key Lock off.
4	?FP_LOCKOUT To verify the Key Lock Status	**Command:** SEND_COMMAND <DEV>, "'?FP_LOCKOUT"' **Return:** FP_LOCKOUT-<ENABLE|DISABLE>	**Command:** SEND_COMMAND SWITCHER,'"?FP_LOCKOUT"' **Return:** FP_LOCKOUT-ENABLE **Description:** Get Key Lock status. The Key Lock status is on.

5	CI<input>O<output>
	To execute a switch
		Command:
		SEND_COMMAND <DEV>,
		"'CI<input>O<output>"'
		Return:
		SWITCH-I#,OALL
		Description:
		<input>
		//{
		1: VGA- IN;
		2: TX_HDMI_IN1;
		3: TX_HDMI_IN2;
		4: RX_HDBT_IN;
		5: RX_HDMI IN;
		}
		<output>
		{ALL}
			Command:
			SEND_COMMAND SWITCHER,'"CI2OALL"'
			Return:
			SWITCH-I2,OALL
			Description:
			Switch HDMI IN1 to all outputs.

6	?INPUT
	To verify switch status
		Command:
		SEND_COMMAND <DEV>, "'?INPUT"'
		Return:
		SWITCH-L<sl>I<input>O<output>
		Description:
		<sl> : {ALL}.
		<input>
		//{
		1: VGA- IN;
		2: TX_HDMI_IN1;
		3: TX_HDMI_IN2;
		4: RX_HDBT_IN;
		5: RX_HDMI IN;
		}
		<output>
		{ALL}
			Command:
			SEND_COMMAND SWITCHER,'"?INPUT"'
			Return:
			SWITCH-ALL,I1,OALL.
			Description:
			HDMI IN1 routes to all outputs.

NetLinx Command Set (cont.)

No.	Function Description	Syntax	Example

7	?VIDIN_STATUS
	To verify Input signal status
		Command:
		SEND_COMMAND <DEV>,""?VIDIN_STATUS-<input>""
		Return:
		VIDIN_STATUS-<status string>
		Description:
		input port:
		//{
		VGA- IN;
		TX_HDMI_IN1;
		TX_HDMI_IN2;
		RX_HDBT_IN;
		RX_HDMI IN;
		}
		<status string>
		{
		NO SIGNAL;
		VALID SIGNAL;
		}
			Command:
			SEND_COMMAND VIDEO_INPUT_1,""?VIDIN_STATUS-7""
			Return:
			VIDIN_STATUS-NO SIGNAL
			Description:
			VGA IN Input has no signal.

8	CEC_DISP_POWER To execute a display control on/off	**Command:** SEND_COMMAND <DEV>,"CEC_DISP_POWER-<ON|OFF>"" **Return:** CEC_DISP_POWER-<ON|OFF>	**Command:** SEND_COMMAND <DEV>,""CEC_DISP_POWER-OFF"" **Return:** CEC_DISP_POWER-OFF **Description:** To execute a display control off.
9	CEC_DISP_AUTO To define the display control automatically	**Command:** SEND_COMMAND <DEV>,""CEC_DISP_AUTO-<ON|OFF>"" **Return:** 'CEC_DISP_AUTO-<ON|OFF>	**Command:** SEND_COMMAND <DEV>,""CEC_DISP_AUTO-OFF"" **Return:** CEC_DISP_AUTO-OFF **Description:** Define the display control automatically off.
10	?CEC_DISP_AUTO To verify the display control Status	**Command:** SEND_COMMAND <DEV>, "'?CEC_DISP_AUTO"" **Return:** CEC_DISP_AUTO-<ON|OFF>	**Command:** SEND_COMMAND SWITCHER,""?CEC_DISP_AUTO"" **Return:** CEC_DISP_AUTO-ON **Description:** Get the display control Status. The display control Status is on.
11	CEC_SLEEP_TIMEOUT To define a Delay Time to control the display off when on active signal	**Command:** SEND_COMMAND <DEV>,""CEC_SLEEP_TIMEOUT-<time>"" **Return:** CEC_SLEEP_TIMEOUT-<time> **Description:** time: {1 ~ 30}	**Command:** SEND_COMMAND <DEV>,""CEC_SLEEP_TIMEOUT-5"" **Return:** CEC_SLEEP_TIMEOUT-5 **Description:** Set Delay Time as 5 minutes.
12	?CEC_SLEEP_TIMEOUT To verify Delay Time to control the display off when on active signal	**Command:** SEND_COMMAND <DEV>, "'?CEC_SLEEP_TIMEOUT"" **Return:** CEC_SLEEP_TIMEOUT-<time> **Description:** time: {1 ~ 30}	**Command:** SEND_COMMAND SWITCHER,""?CEC_SLEEP_TIMEOUT"" **Return:** CEC_SLEEP_TIMEOUT-5 **Description:** Get Delay Time to control the display off when on active signal. The Delay Time is 5 Minutes.

NetLinx Command Set (cont.)

No.	Function Description	Syntax	Example

13	VIDIN_PREF_EDID
	To set input EDID
		Command:
		SEND_COMMAND <DEV>,'"VIDIN_PREF_EDID-<resolution>"'
		Return:
		VIDIN_PREF_EDID-<resolution>
		Description:
		Input port:
		//{
		VGA- IN;
		TX_HDMI_IN1;
		TX_HDMI_IN2;
		RX_HDMI IN;
		}
		<resolution>
		{
		For VGA Input
		1920x1200,60
		1920x1080,60
		1680x1050,60
		1600x900,60
		1440x900,60
		1360x768,60
		1280x768,60
		1024x768,60
		For HDMI Input
		3840x2160,30
		1920x1080,60
		1280x720,60
		1920x1200,60
		1680x1050,60
		1600x1200,60
		1600x900,60
		1440x900,60
		1400x1050,60
		1366x768,60
		1280x1024,60
		1280x960,60
		1024x768,60
		COPY
		}
			Command:
			SEND_COMMAND VIDEO_INPUT_2,'"VIDIN_PREF_EDID-1920x1200,60"'
			Return:
			VIDIN_PREF_EDID-1920x1200,60
			Description:
			Set fix EDID (1920x1200@60Hz 2CH).

NetLinx Command Set (cont.)

No.	Function Description	Syntax	Example

14	?VIDIN_PREF_EDID
	To verify input EDID
		Command:
		SEND_COMMAND <DEV>, "'?VIDIN_PREF_EDID'"
		Return:
		VIDIN_PREF_EDID-<resolution>
		Description:
		Input port:
		//{
		VGA- IN;
		TX_HDMI_IN1;
		TX_HDMI_IN2;
		RX_HDMI IN;
		}
		<resolution>
		{
		For VGA Input
		1920x1200,60
		1920x1080,60
		1680x1050,60
		1600x900,60
		1440x900,60
		1360x768,60
		1280x768,60
		1024x768,60
		For HDMI Input
		3840x2160,30
		1920x1080,60
		1280x720,60
		1920x1200,60
		1680x1050,60
		1600x1200,60
		1600x900,60
		1440x900,60
		1400x1050,60
		1366x768,60
		1280x1024,60
		1280x960,60
		1024x768,60
		COPY
		}
			Command:
			SEND_COMMAND VIDEO_INPUT_1,"'?VIDIN_PREF_EDID'"
			Return:
			VIDIN_PREF_EDID-1920x1200,60
			Description:
			The EDID of the Input is fix EDID 1920x1200@60Hz 2CH.

15	VIDIN_HDCP
	To set Input HDCP Compliant
		Command:
		SEND_COMMAND <DEV>, "'VIDIN_HDCP-<ENABLE | DISABLE>'"
		Return:
		VIDIN_HDCP-<ENABLE | DISABLE>
		Description:
		Input port:
		//{
		TX_HDMI_IN1;
		TX_HDMI_IN2;
		RX_HDMI IN;
		}
			Command:
			SEND_COMMAND VIDEO_INPUT_3,"'VIDIN_HDCP-ENABLE'"
			Return:
			VIDIN_HDCP-<ENABLE>
			Description:
			Set HDMI IN2 HDCP Compliant.

16	?VIDIN_HDCP
	To get Input HDCP Compliant Status
		Command:
		SEND_COMMAND <DEV>,"'?VIDIN_HDCP'"
		Return:
		VIDIN_HDCP-<ENABLE|DISABLE>
		Description:
		Input port:
		//{
		TX_HDMI_IN1;
		TX_HDMI_IN2;
		RX_HDMI IN;
		}
			Command:
			SEND_COMMANDVIDEO_INPUT_3,"'?VIDIN_HDCP'"
			Return:
			VIDIN_HDCP-ENABLE
			Description:
			HDMI IN2 is HDCP Compliant.

NetLinx Command Set (cont.)

No.	Function Description	Syntax	Example

17	VIDOUT_RES_REF
	To set output resolution
		Command:
		SEND_COMMAND <DEV>,"'VIDOUT_RES_REF-<horizontal>x<vertical>,<refresh-rate>'"
		Return:
		VIDOUT_RES_REF-<horizontal>x<vertical>,<refresh-rate>
		Description:
		Variables:
		horizontal = An integer value representing the horizontal.
		vertical = An integer value representing the vertical. May have an additional qualifier such as 'i' or 'p'.
		refresh-rate = An integer value representing the refresh rate.
		{
		4096x2160,60
		4096x2160,30
		4096x2160,25
		4096x2160,24
		3840x2160,60
		3840x2160,50
		3840x2160,30
		3840x2160,25
		3840x2160,24
		1920x1200,60
		1920x1080,60
		1920x1080,50
		1280x720,60
		1280x720,50
		1680x1050,60
		1600x1200,60
		1600x900,60
		1440x900,60
		1366x768,60
		1360x768,60
		1280x1024,60
		1280x960,60
		1280x800,60
		1280x768,60
		1024x768,60
		800x600,60
		}
			Command:
			SEND_COMMAND VIDEO_OUTPUT_1,"'VIDOUT_RES_REF-1280x1024,60'"
			Return:
			VIDOUT_RES_REF-1280x1024,60
			Description:
			Set HDMI out resolution is 1280x1024@60.

18	?VIDOUT_RES_REF
	To get output resolution
		Command:
		SEND_COMMAND <DEV>, "'?VIDOUT_RES_REF'"
		Return:
		VIDOUT_RES_REF-<horizontal>x<vertical>,<refresh-rate>
		Description:
		<horizontal>x<vertical>,<refresh-rate>
		{
		4096x2160,60
		4096x2160,30
		... ...
		1024x768,60
		800x600,60
		}
			Command:
			SEND_COMMAND VIDEO_OUTPUT_1,"'?VIDOUT_RES_REF'"
			Return:
			VIDOUT_RES_REF-3840x2160,60
			Description:
			HDMI out resolution is 3840x2160@60.

19	REBOOT To cause a warm reboot	**Command:** SEND_COMMAND <DEV>, "'REBOOT'" **Return:** REBOOT **Description:** Cause a warm reboot.	**Command:** SEND_COMMAND 5002: 1: 0, "'REBOOT'" **Return:** SEND_COMMAND 5002: 1: 0, "'REBOOT'" **Description:** Cause a warm reboot.

NetLinx Command Set (cont.)

No.	Function Description	Syntax	Example
20	?FWVERSION To determine the system's Application Code version	**Command:** SEND_COMMAND <DEV>,"'?FWVERSION"' **Return:** FWVERSION <version-string>	**Command:** SEND_COMMAND dvRX,"'?FWVERSION"' **Return:** FWVERSION-SCALER_V1.05 FWVERSION-STM32_V1.4
21	VIDOUT_SCALE Set the scaling mode for the video output port	**Command:** SEND_COMMAND <DEV>,"'VIDOUT_SCALE-<AUTO|MANUAL>"' **Return:** VIDOUT_SCALE-<AUTO|MANUAL>	**Command:** SEND_COMMAND VIDEO_OUTPUT_1,"'VIDOUT_SCALE-AUTO"' **Return:** VIDOUT_SCALE-AUTO **Description:** Set scale mode is auto
22	?VIDOUT_SCALE Get the scaling mode for the video output port	**Command:** SEND_COMMAND <DEV>, "'?VIDOUT_SCALE"' **Return:** VIDOUT_SCALE-<AUTO|MANUAL>	**Command:** SEND_COMMAND VIDEO_OUTPUT_1,"'?VIDOUT_SCALE"' **Return:** VIDOUT_SCALE-Auto **Description:** Scale mode is auto.
23	VIDOUT_MUTE Set the video mute mode for the video output port	**Command:** SEND_COMMAND <DEV>,"'VIDOUT_MUTE-<ENABLE|DISABLE>"' **Return:** VIDOUT_MUTE<ENABLE|DISABLE>	**Command:** SEND_COMMAND SWITCHER,"'VIDOUT_MUTE-ENABLE"' **Return:** VIDOUT_MUTE-ENABLE **Description:** Set Video mute mode as enable.
24	?VIDOUT_MUTE Gets the video mute mode for the video output port	**Command:** SEND_COMMAND <DEV>, "'?VIDOUT_MUTE"' **Return:** VIDOUT_MUTE<ENABLE|DISABLE>	**Command:** SEND_COMMAND SWITCHER,"'?VIDOUT_MUTE"' **Return:** VIDOUT_MUTE-DISABLE **Description:** Video mute mode is disable.
25	VIDOUT_RGB Set the video color space for the video output port	**Command:** SEND_COMMAND <DEV>,"'VIDOUT_RGB-<ENABLE|DISABLE>"' **Return:** VIDOUT_RGB-<ENABLE|DISABLE>	**Command:** SEND_COMMAND SWITCHER,"'VIDOUT_RGB-ENABLE"' **Return:** VIDOUT_RGB-ENABLE **Description:** Set Video out color space as RGB.
26	?VIDOUT_RGB Get the video color space for the video output port	**Command:** SEND_COMMAND <DEV>, "'?VIDOUT_RGB"' **Return:** VIDOUT_RGB-<ENABLE|DISABLE>	**Command:** SEND_COMMAND SWITCHER,"'?VIDOUT_RGB"' **Return:** VIDOUT_RGB-DISABLE **Description:** Video out color space is YUV.
27	AUDOUT_MUTE Set the audio mute mode for the audio output port	**Command:** SEND_COMMAND <DEV>,"'AUDOUT_MUTE-<ENABLE|DISABLE>"' **Return:** AUDOUT_MUTE-<ENABLE|DISABLE>	**Command:** SEND_COMMAND dxDev,"'AUDOUT_MUTE-DISABLE"' **Return:** AUDOUT_MUTE-DISABLE **Description:** Set Audio mute mode as disable.

NetLinx Command Set (cont.)

No.	Function Description	Syntax	Example
28	?AUDOUT_MUTE Get the audio mute mode for the audio output port	**Command:** SEND_COMMAND <DEV>,"'?AUDOUT_MUTE'" **Return:** AUDOUT_MUTE-<ENABLE|DISABLE>	**Command:** SEND_COMMAND dxDev, "'?AUDOUT_MUTE'" **Return:** AUDOUT_MUTE-disable **Description:** Audio mute mode is disable.
29	AUDOUT_MAXVOL Set the audio max vol for the audio output port	**Command:** SEND_COMMAND <DEV>, "'AUDOUT_MAXVOL-<value>'" **Return:** AUDOUT_MAXVOL-<value> **Description:** Variable: <value> = {0~100}	**Command:** SEND_COMMAND AUDIO_OUTPUT_1, "'AUDOUT_MAXVOL-75'" **Return:** AUDOUT_MAXVOL-75 **Description:** Set Audio max as 75.
30	?AUDOUT_MAXVOL Get the audio max vol for the audio output port	**Command:** SEND_COMMAND <DEV>, "'?AUDOUT_MAXVOL'" **Return:** AUDOUT_MAXVOL-<value> **Description:** <value> = {0~100}	**Command:** SEND_COMMAND AUDIO_OUTPUT_1, "'?AUDOUT_MAXVOL'" **Return:** AUDOUT_MAXVOL-<100> **Description:** Audio max is 100.
31	AUDOUT_MINVOL Set the audio min vol for the audio output port	**Command:** SEND_COMMAND <DEV>, "'AUDOUT_MINVOL-<value>'" **Return:** 'AUDOUT_MINVOL-<value> **Description:** <value> = {0~100}	**Command:** SEND_COMMAND AUDIO_OUTPUT_1, "'AUDOUT_MINVOL-5'" **Return:** AUDOUT_MINVOL-5 **Description:** Set Audio min as 5.
32	?AUDOUT_MINVOL Get the audio min vol for the audio output port	**Command:** SEND_COMMAND <DEV>, "'?AUDOUT_MINVOL'" **Return:** AUDOUT_MINVOL-<value> **Description:** <value> = {0~100}	**Command:** SEND_COMMAND AUDIO_OUTPUT_1, "'?AUDOUT_MINVOL'" **Return:** AUDOUT_MINVOL-0 **Description:** Audio min is 0.
33	AUDOUT_VOLUME Set the audio vol for the audio output port	**Command:** SEND_COMMAND <DEV>, "'AUDOUT_VOLUME-<VALUE>'" **Return:** AUDOUT_VOLUME-<VALUE> **Description:** <value> = {0~100}	**Command:** SEND_COMMAND AUDOUT_VOLUME_1, "'AUDOUT_VOLUME-50'" **Return:** AUDOUT_VOLUME-50 **Description:** Set Audio vol as 50.
34	?AUDOUT_VOLUME Get the audio vol for the audio output port	**Command:** SEND_COMMAND <DEV>, "'?AUDOUT_VOLUME'" **Return:** AUDOUT_VOLUME-<value> **Description:** <value> = {0~100}	**Command:** SEND_COMMAND AUDOUT_VOLUME_1, "'?AUDOUT_VOLUME'" **Return:** AUDOUT_VOLUME-50 **Description:** Audio volume is 50.

NetLinx Command Set (cont.)

No.	Function Description	Syntax	Example
35	SET BAUD Set BAUD command for the Serial port	**Command:** SEND_COMMAND <DEV>,'"SET BAUD <baud>,<parity>,<data>,<stop>' **Return:** SET BAUD <baud>,<parity>,<data>,<stop> **Description:** <baud> = baud rate with supported values of: 115200, 76800, 57600, 38400, 19200, 9600, 4800, 2400, 1200, 600, 300, 150. <parity> = N (none), O (odd), E (even), M (mark), S (space) <data> = 8 data bits <stop> = 1 or 2 stop bits	**Command:** SEND_COMMAND dxDev,'"SET_BAUD-9600,N,8,1' **Return:** SET_BAUD- 9600,N,8,1

Telnet/SSH Commands

No.	Command	Description	Example
1	**help**	Displays all of the supported commands	**>help** cpu usage Displays the total CPU usage date Display the current date. get ip Show the IP configuration of this device. ... ...
2	**cpu usage**	Displays the total CPU usage usage: cpu usage	**>cpu usage** CPU usage is 25%
3	**date**	Display the current date. Usage: date	**>date** The current date is: Thursday, January 1, 1970
4	**get ip**	Show the IP configuration of this device.	**>get ip** --- Current IP Settings --- Hostname: XXX IP Address: 192.168.2.201 Netmask: 255.255.240.0 DHCP: false
5	**ping**	Pings an address. Address may be an IP or URL.	**>ping 192.16.2.203** PING 192.16.2.203 (192.16.2.203): 56 data bytes
6	**reset factory**	Resets configuration back to factory defaults.	**>reset factory**
7	**set date**	Set the current date.	**>set date** Usage: set date [day] [month] [year] Arguments: day integer of day of the week between 1 and 31 month integer of month between 1 and 12 year integer value of year later than 1900 Example: set date 01 11 2016

Telnet/SSH Commands (cont.)

No.	Command	Description	Example
8	**set ip**	Setup the IP configuration of this device.	**>set ip** --- Enter New Values or just hit Enter to keep current settings --- Enter IP Address 192.168.2.201 192.168.2.202 Enter Netmask 255.255.240.0 255.255.255.0 --- New settings --- IP Address 192.168.2.202 Netmask 255.255.255.0 Would you like to save the new settings? Y/N -> y New settings were saved.
9	**set time**	Set the current time.	**>set time** Usage: set time [hours] [minutes] [seconds] Arguments: hours integer value of hours between 0 and 23 minutes integer value of minutes between 0 and 59 seconds integer value of seconds between 0 and 59 Example: set time 13 30 00
10	**show mem**	Displays the memory usage for all memory types.	**>show mem** RAM available: 349634560 bytes RAM total: 406167552 bytes
11	**time**	Display the current time.	**>time** The current time is: 11:57:09 PM
12	**show vs100 stats**	Displays DXLink transport information (MSE values, length, etc.).	**>show vs100 stats** VS100 STATS: 50.

Telnet/SSH Commands (cont.)

No.	Command	Description	Example
13	**echo**	Enables/disables echo of typed characters.	**>echo** Usage: echo [argument] Arguments: on Enable echo of typed characters off Disable echo of typed characters Example: echo on
14	**exit**	Close this terminal session.	**>exit**
15	**msg**	Enables/Disables extended diagnostic messages.	**>msg** Usage: msg [argument] This command allows system logs to be redirected to the terminal session. There are multiple log levels, which are described below. Arguments: on Enable default [warning] system log level debug Enable all system debug messages info Enable info system log level warning Enable warning system log level error Enable error system log level off Disable system log output to terminal session Example: msg on
16	**reboot**	Reboots the device.	**>reboot**
17	**set dns**	set DNS service	>set dns --- Enter new values or keep current settings at the prompts --- -- Current DNS #1 -- Change the current value? Y/N -> y Enter DNS #1 192.168.2.1 -- Current DNS #2 -- Change the current value? Y/N -> Y Enter DNS #2 192.168.3.1

Telnet/SSH Commands (cont.)

No.	Command	Description	Example
			Would you like to save the new settings? Y/N -> Y New settings were saved...
18	**dns list**	Display the current dns.	>dns list Domain Name: amx.com DNS List: DNS #1: 192.168.2.1 DNS #2: 8.8.8.8
19	**set friendlyname**	set friendlyname	>set friendlyname Please input friendlyname: Old friendlyname: New friendlyname: 111 Would you like to save this setting(Y/N) y Setting is ok , you should reboot that make it effective
20	**set location**	it's setting location.	>set location Please input location: Old location: New location: 333 Would you like to save this setting(Y/N) y Setting is ok , you should reboot that make it effective
21	**set connection**	Set the controller connection settings.	>set connection --- Enter New Values or just hit Enter to keep current settings --- Enter Mode Type T for TCP/URL, U for UDP/URL, N for NDP or A for Auto and then Enter: Icsp_Auto A Enter Controller System Number: 1 1 --- New settings --- System Number 1 Controller Port 1319

Telnet/SSH Commands (cont.)

No.	Command	Description	Example
			Is this correct? Type Y or N and Enter -> Y Changed && Saved
22	**get connection**	get the controller connection settings.	>get connection Connection Mode: Icsp_Auto System Number: 1 Controller Ip/URL Controller Port: 1319
23	**set telnet username**	set telnet service login username	>set telnet username Enter Telnet new username 123 Would you like to set this username (y/n) y (please set telnet password) Changed && Saved
24	**set telnet password**	set telnet service login password	>set telnet password Enter Telnet new password 456 Would you like to set this password (y/n) y Changed && Saved
25	**set ssh username**	set ssh service login username	>set ssh username Enter ssh new username admin admin Would you like to set this username (y/n) y Changed && Saved (you should reboot this device that make your setting active)
26	**set ssh password**	set ssh service login password	>set ssh password Enter ssh new password password pass Would you like to set this password (y/n) y Changed && Saved

Telnet/SSH Commands (cont.)

No.	Command	Description	Example
			(you should reboot this device that make your setting active)
27	**report firmware**	Display version infomation for stored firmware installation files.	>report firmware --- FWVERSION-SCALER_V5.8 --- --- FWVERSION-TX-STM32_V3.6 TX-VS_V2.31.0.3 TX-IN2_V2.3 TX-IN3_V2.3 --- --- FWVERSION-RX-STM32_V3.6 RX-VS_V2.31.0.3 RX-IN2_V2.3 ---
28	**set audout maxvol**	set the device audio output max volume.	>set audout maxvol --- Max Volume of Audio Output between 0 and 100 : 80
29	**get audout maxvol**	get audio output max volume of this device	>get audout maxvol --- Current Max Volume of Audio Output: 80 ----
30	**set audout minvol**	set the device audio output minimum volume.	>set audout minvol --- Minimum Volume of Audio Output between 0 and 100 : 20
31	**get audout minvol**	get audio output minimum volume of this device	>get audout minvol --- Current Minimum Volume of Audio Output: 20 ---
32	**set audout mute**	set the device audio output mute mode.	>set audout mute --- Audio Output Mute Mode Setting(Type Y for ON, N for OFF) : n
33	**set audout mute #param**	set the device audio output mute mode. #param: Y for ON, N for OFF	>set audout mute Y
34	**get audout mute**	get audio output mute mode of this device	>get audout mute --- Current Mute Mode of Audio Output: OFF ----
35	**set audout vol**	set the device audio output volume.	>set audout vol --- Volume of Audio Output between 0 and 100 : 50
36	**set audout vol #param**	set the device audio output volume. #param: Volume of Audio Output between 0 and 100	>set audout vol 50
37	**get audout vol**	get audio output volume of this device	>get audout vol

Telnet/SSH Commands (cont.)

No.	Command	Description	Example
			--- Current Volume of Audio Output: 50 ---
38	**set auto switch**	set the device auto switch mode.	>set auto switch --- Auto Switch Setting(Type Y for ON, N for OFF) : y
39	**set auto switch #param**	set the device auto switch mode. #param: Y for ON, N for OFF	>set auto switch Y
40	**get auto switch**	get auto switch mode of this device	>get auto switch --- Current Auto Switch Mode: ON ---
41	**set cec auto**	set the device cec auto mode.	>set cec auto --- CEC Auto Setting(Y for ON, N for OFF) : y
42	**set cec auto #param**	set the device cec auto mode. #param: Y for ON, N for OFF	>set cec auto Y
43	**get cec auto**	get cec auto mode of this device	>get cec auto --- Current CEC Auto Mode: ON ---
44	**set cec control**	set the device display power on/off.	>set cec control --- Display Power Setting(Type Y for ON, N for OFF) : y
45	**set cec control #param**	set the device display power on/off. #param: Y for ON, N for OFF	>set cec control Y
46	**set cec delay**	set the delay time to control the display off when on active signal.	>set cec delay --- integer of Delay Time in Minutes between 1 and 30 : 2
47	**set cec delay #param**	set the delay time to control the display off when on active signal. #param: integer of Delay Time in Minutes between 1 and 30	>set cec delay 2
48	**get cec delay**	get the delay time to control the display off when on active signal	>get cec delay --- Current Delay Time in Minutes: 2 ---
49	**set key lock**	set the device key lock.	>set key lock --- Key Lock Setting(Type Y for ON, N for

Telnet/SSH Commands (cont.)

No.	Command	Description	Example
			OFF) : y
50	**set key lock #param**	set the device key lock. #param: Y for ON, N for OFF	>set key lock Y
51	**get key lock**	get key lock mode of this device	>get key lock --- Current Key Lock Mode: ON ---
52	**set vidin edid**	set the device video input edid.	>set vidin edid --- Video Input Port Select(Type 1 for VGA_IN, 2 for TX_HDMI_IN1, 3 for TX_HDMI_IN2, 5 for RX_HDMI_IN) : 1 --- VGA Input EDID Setting(<horizontal>x<vertical>,<refresh-rate>): --- 1: 1920x1200,60 --- 2: 1920x1080,60 --- 3: 1680x1050,60 --- 4: 1600x900,60 --- 5: 1440x900,60 --- 6: 1360x768,60 --- 7: 1280x768,60 --- 8: 1024x768,60 --- 3
53	**set vidin edid #param1 #param2**	set the device video input edid. #param1:Video Input Port Select(Type 1 for VGA_IN, 2 for TX_HDMI_IN1, 3 for TX_HDMI_IN2, 5 for RX_HDMI_IN) #param2:VGA Input EDID Setting(<horizontal>x<vertical>,<refresh-rate>): --- 1: 1920x1200,60 --- 2: 1920x1080,60 --- 3: 1680x1050,60 --- 4: 1600x900,60 --- 5: 1440x900,60 --- 6: 1360x768,60	>set vidin edid 1 1

Telnet/SSH Commands (cont.)

No.	Command	Description	Example
		--- 7: 1280x768,60 --- 8: 1024x768,60 or HDMI Input EDID Setting(<horizontal>x<vertical>,<refresh-rate>): --- 1: 3840x2160,30 --- 2: 1920x1080,60 --- 3: 1280x720,60 --- 4: 1920x1200,60 --- 5: 1680x1050,60 --- 6: 1600x1200,60 --- 7: 1600x900,60 --- 8: 1440x900,60 --- 9: 1400x1050,60 --- 10: 1366x768,60 --- 11: 1280x1024,60 --- 12: 1280x960,60 --- 13: 1024x768,60 --- 14: COPY	
54	**get vidin edid**	get the video input edid of this device	>get vidin edid --- Video Input Port Select(Type 1 for VGA_IN, 2 for TX_HDMI_IN1, 3 for TX_HDMI_IN2, 5 for RX_HDMI_IN) : 2 --- Current HDMI Video Input EDID: 3840x2160,60 ---
55	**set vidin hdcp**	set the device video input hdcp mode.	>set vidin hdcp --- Video HDMI Input Port Select(Type 2 for TX_HDMI_IN1, 3 for TX_HDMI_IN2, 5 for RX_HDMI_IN) : 3 --- HDCP Mode Setting(Type 0 for HDCP OFF, 1 for HDCP ON) : 1

Telnet/SSH Commands (cont.)

No.	Command	Description	Example
56	**set vidin hdcp #param1 #param2**	set the device video input hdcp mode. #param1: Video HDMI Input Port Select(Type 2 for TX_HDMI_IN1, 3 for TX_HDMI_IN2, 5 for RX_HDMI_IN) #param2: HDCP Mode Setting(Type 0 for HDCP OFF, 1 for HDCP ON)	>set vidin hdcp 3 1
57	**get vidin hdcp**	get video input hdcp mode of this device	>get vidin hdcp --- Video HDMI Input Port Select(Type 2 for TX_HDMI_IN1, 3 for TX_HDMI_IN2, 5 for RX_HDMI_IN) : 2 --- Current HDMI Video In HDCP Mode: HDCP ON ---
58	**get vidin status**	get the video input signal status of this device	>get vidin status --- Video Input Port Select(Type 1 for VGA_IN, 2 for TX_HDMI_IN1, 3 for TX_HDMI_IN2, 5 for RX_HDMI_IN) : 2 --- Current Video Input Signal Status: VALID SIGNAL ---
59	**set color space**	set the device video output color space.	>set color space --- Color Space Setting(Type R for RGB, Y for YUV) : r
60	**set color space #param**	set the device video output color space. #param: R for RGB, Y for YUV	>set color space r
61	**get color space**	get video output color space of this device	>get color space --- Current Video Output Color Space: RGB ---
62	**set logo pos**	set the device video output logo position.	>set logo pos --- LOGO Position Setting(Type C for FIX IN CENTER, TL for DRAG TOP LEFT, TR for DRAG TOP RIGHT, BL for DRAG BOTTOM LEFT, BR for DRAG BOTTOM RIGHT) : c
63	**get logo pos**	get video output logo position of this device	>get logo pos --- Current Video Output LOGO Position: FIX IN CENTER ---
64	**set vidout blank**	set the device video output blank.	>set vidout blank

Telnet/SSH Commands (cont.)

No.	Command	Description	Example
			--- Video Output Blank Setting(Type B for BLACK, L for LOGO) : l
65	**set vidout blank #param**	set the device video output blank. #param: B for BLACK, L for LOGO	>set vidout blank l
66	**get vidout blank**	get video output blank mode of this device	>get vidout blank --- Current Video Output Blank Mode: LOGO ----
67	**set vidout hdcp**	set the device video output hdcp mode.	>set vidout hdcp --- HDCP Mode Setting(Type 0 for HDCP OFF, 1 for HDCP 1.4, 2 for HDCP FOLLOW, 3 for HDCP 2.2) : 2
68	**set vidout hdcp #param**	set the device video output hdcp mode. #param: HDMI HDCP Mode Setting(Type 0 for HDCP OFF, 1 for HDCP 1.4, 2 for HDCP FOLLOW, 3 for HDCP 2.2)	>set vidout hdcp 2
69	**get vidout hdcp**	get video output hdcp mode of this device	>set vidout hdcp --- HDCP Mode Setting(Type 0 for HDCP OFF, 1 for HDCP 1.4, 2 for HDCP FOLLOW, 3 for HDCP 2.2) : 2
70	**set vidout mute**	set the device video output mute mode.	>set vidout mute --- Video Output Mute Mode Setting(Type Y for ON, N for OFF) : n
71	**set vidout mute #param**	set the device video output mute mode. #param: Y for ON, N for OFF	>set vidout mute n
72	**get vidout mute**	get video output mute mode of this device	>get vidout mute --- Current Video Output Mute Mode: OFF ---
73	**set vidout scale**	set the device video output scale mode.	>set vidout scale --- Video Output Scale Mode Setting(Type M for MANUAL, A for AUTO) : a
74	**set vidout scale #param**	set the device video output scale mode. #param: M for MANUAL, A for AUTO	>set vidout scale a
75	**get vidout**	get video output	>get vidout scale

Telnet/SSH Commands (cont.)

No.	Command	Description	Example
	scale	scale mode of this device	--- Current Video Output Scale Mode: AUTO ---
76	**set vidout res**	set the device video output resolution.	>set vidout res --- Video Output Resolution Setting(<horizontal>x<vertical>,<refresh-rate>): --- 1: 4096x2160,60 --- 2: 4096x2160,30 --- 3: 4096x2160,25 --- 4: 4096x2160,24 --- 5: 3840x2160,60 --- 6: 3840x2160,50 --- 7: 3840x2160,30 --- 8: 3840x2160,25 --- 9: 3840x2160,24 --- 10: 1920x1200,60 --- 11: 1920x1080,60 --- 12: 1920x1080,50 --- 13: 1280x720,60 --- 14: 1280x720,50 --- 15: 1680x1050,60 --- 16: 1600x1200,60 --- 17: 1600x900,60 --- 18: 1440x900,60 --- 19: 1366x768,60 --- 20: 1360x768,60 --- 21: 1280x1024,60 --- 22: 1280x960,60 --- 23: 1280x800,60 --- 24: 1280x768,60 --- 25: 1024x768,60 --- 26: 800x600,60 --- 11
77	**set vidout res #param**	set the device video output resolution. #param: Video Output Resolution Setting(<horizontal>x<vertical>,<refresh-rate>): --- 1: 4096x2160,60 --- 2: 4096x2160,30 --- 3: 4096x2160,25	>set vidout res 11

Telnet/SSH Commands (cont.)

No.	Command	Description	Example
		--- 4: 4096x2160,24 --- 5: 3840x2160,60 --- 6: 3840x2160,50 --- 7: 3840x2160,30 --- 8: 3840x2160,25 --- 9: 3840x2160,24 --- 10: 1920x1200,60 --- 11: 1920x1080,60 --- 12: 1920x1080,50 --- 13: 1280x720,60 --- 14: 1280x720,50 --- 15: 1680x1050,60 --- 16: 1600x1200,60 --- 17: 1600x900,60 --- 18: 1440x900,60 --- 19: 1366x768,60 --- 20: 1360x768,60 --- 21: 1280x1024,60 --- 22: 1280x960,60 --- 23: 1280x800,60 --- 24: 1280x768,60 --- 25: 1024x768,60 --- 26: 800x600,60	
78	**get vidout res**	get video output resolution of this device	>get vidout res --- Current Video Output Resolution: FIX_1920x1080,60 ---

Telnet/SSH Commands (cont.)

No.	Command	Description	Example
79	**switch video input**	execute a switch video input to all output.	>switch video input --- Video Input Port Select(Type 1 for VGA_IN, 2 for TX_HDMI_IN1, 3 for TX_HDMI_IN2, 4 for RX_HDBT_IN, 5 for RX_HDMI_IN) : 4
80	**switch video input #param**	execute a switch video input to all output. #param: 1 for VGA_IN1, 2 for HDMI_IN2, 3 for HDMI_IN3, 4 for HDMI_IN4	>switch video input 2
81	**get switch channel**	get video output logo position of this device	>get switch channel --- Current Video Input Channel: VGA-IN ---
82	**set relay control**	set the device relay control on/off.	>set relay control --- Relay Control On/Off Setting(Type Y for ON, N for OFF) : y
83	**set relay control #param**	set the device relay control on/off. #param: Y for ON, N for OFF	>set relay control y
84	**set relay mode**	set the device relay mode.	>set relay mode --- Relay Mode Setting(Type L for LATCH, M for MOMENTARY) : l
85	**set relay mode #param**	set the device relay mode. #param: L for LATCH, M for MOMENTARY	>set relay mode l
86	**get relay mode**	get relay mode of this device.	>get relay mode --- Current Relay Mode: LATCH ---
87	**set relay delay**	set the device relay momentary time.	>set relay delay --- integer of Delay Time in Seconds between 1 and 10 : 3
88	**set relay delay #param**	set the device relay momentary time. #param: integer of Delay Time in Seconds between 1 and 10	>set relay delay 3
89	**get relay delay**	get relay momentary	>get relay delay

Telnet/SSH Commands (cont.)

No.	Command	Description	Example
		time of this device.	--- Current Delay Time in Seconds: 3 ---
90	**set rs232 para**	set the device rs232 para of serial port.	>set rs232 para --- RS232 Baud Setting(Type 1: 115200, 2: 76800, 3: 57600, 4: 38400, 5: 19200, 6: 9600, 7: 4800, 8: 2400, 9: 1200, 10: 600) : 1 --- RS232 Parity Setting(Type N for PARITY_NONE, O for PARITY_ODD, E for PARITY_EVEN) : n --- RS232 Data Bits Setting(Type 8 for 8 Bits) : 8 --- RS232 Stop Bits Setting(Type 1 for 1 Bit, 2 for 2 Bits) : 1
91	**set rs232 para #param1 #param2 #param3 #param4**	set the device rs232 para of serial port. param1: RS232 Baud Setting(Type 1: 115200, 2: 76800, 3: 57600, 4: 38400, 5: 19200, 6: 9600, 7: 4800, 8: 2400, 9: 1200, 10: 600) param2: RS232 Parity Setting(Type N for PARITY_NONE, O for PARITY_ODD, E for PARITY_EVEN) param3: RS232 Data Bits Setting(Type 8 for 8 Bits) param4: RS232 Stop Bits Setting(Type 1 for 1 Bit, 2 for 2 Bits)	>set rs232 para 1 n 8 1
92	**get rs232 para**	get serial port rs232 para of the device.	>get rs232 para --- Current RS232 BaudRate: 115200 --- --- Current RS232 Parity: PARITY_NONE --- --- Current RS232 DataBit: 8Bits --- --- Current RS232 StopBit: 1Bits ---
93	**set rs232 string**	set the device rs232 sring of power on/off.	>set rs232 string --- RS232 String Type Select(Type 0 for POWER_OFF, 1 for POWER_ON) : 0 --- RS232 String (NOTE: POWER ON/OFF SUPPORTS THE MIXED COMMAND TYPE AND SEPERATE THE STRING AND HEX VIA '' AND $.FOR EXAMPLE: 'a' ---a IS STRING; $a---a IS HEX.) : $40$40'set pwr on'

Telnet/SSH Commands (cont.)

No.	Command	Description	Example
94	**set rs232 string #param1 #param2**	set the device rs232 sring of power on/off. #param1: RS232 String Type Select(Type 0 for POWER_OFF, 1 for POWER_ON) #param2: RS232 String (NOTE: POWER ON/OFF SUPPORTS THE MIXED COMMAND TYPE AND SEPERATE THE STRING AND HEX VIA '' AND $.FOR EXAMPLE: 'a' ---a IS STRING; $a---a IS HEX.)	>set rs232 string 0 $40$40'set pwr on'
95	**get rs232 string**	get rs232 power on/off sring of the device.	>get rs232 string --- Current RS232 POWER ON String: 'afgggahg' --- --- Current RS232 POWER OFF String: $40$40'set pwr on' ---
96	**set rs232 end**	set the device rs232 end flag of serial port.	>set rs232 end --- Video Output Scale Mode Setting(Type 0 for NONE, 1 for \r, 2 for \n, 3 for \r\n) : 3
97	**set rs232 end #param**	set the device rs232 end flag of serial port. #param: 0 for NONE, 1 for \r, 2 for \n, 3 for \r\n	>set rs232 end 3
98	**get rs232 end**	get serial port rs232 end flag of the device.	>get rs232 end --- Current RS232 End Flag: \r\n ---

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