

Owner's Manual

HDMI Matrix Switch/Splitters with Audio Extractor, IP Access and Multi- Resolution Support

Model: B302-4HX4H-4K, B302-8HX8H-4K

Este manual esta disponible en español en la página de Tripp Lite: tripplite.com

Ce manuel est disponible en français sur le site Web de Tripp Lite : tripplite.com

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Package Contents

- B302-4HX4H-4K or B302-8HX8H-4K HDMI Matrix Switch/Splitter
- IR Remote Control
- IR Receiver Cable, 4 ft.
- International Power Supply (Input: 100–240V)
- (x4) International Plug Adapters (North America, U.K., Europe, Australia)
- Mounting Hardware
- Driver CD
- Owner's Manual

Optional Accessories

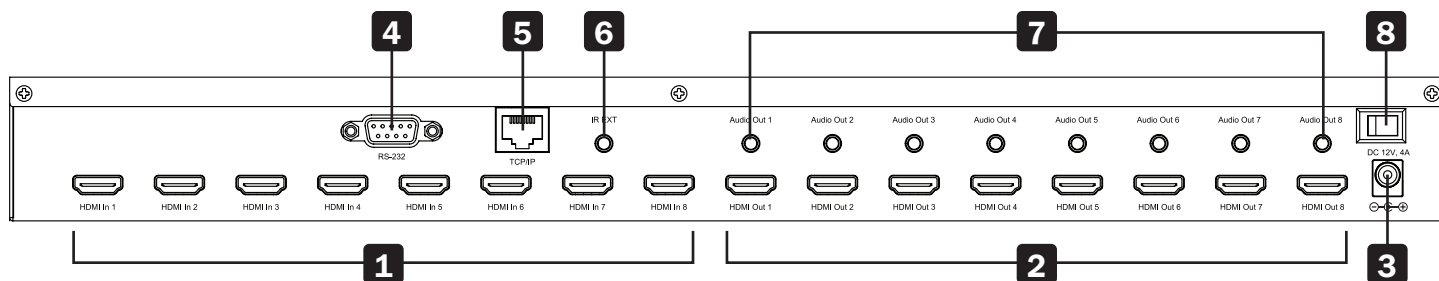
- P569-XXX-CERT High-Speed HDMI 2.0 Cables
- P312-Series 3.5 mm Audio Cables
- N202-Series Cat6 24 AWG Solid-Wire Patch Cables

Product Features

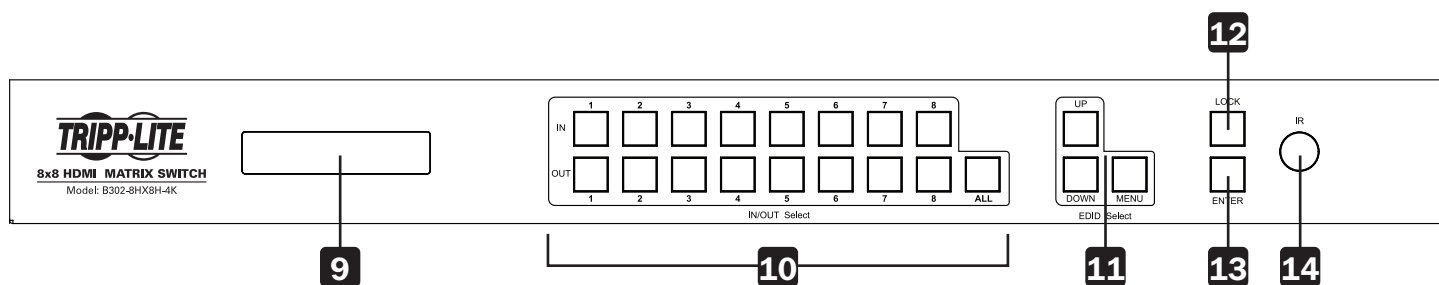
- Shares true 4K video from 4 different HDMI sources among 4 separate displays (B302-4HX4H-4K) or 8 different HDMI sources among 8 separate displays (B302-8HX8H-4K)
- Displays any audio/video signal on any display or the same signal on all displays
- Supports true 4K resolutions up to 4096 x 2160 @ 60 Hz
- Transmits analog stereo audio
- Switches between sources and displays via front-panel pushbuttons, IR remote control, RS-232 serial commands or control software
- Multi-resolution support allows mixing and matching of monitors of various resolutions
- HDR (High Dynamic Range) offers richer contrast and expanded color accuracy
- Audio extraction allows connection of speakers, amplifiers or sound bars
- Remotely access the software GUI by configuring your network to match the pre-assigned IP address

Panel Descriptions

The following panels depict the 8x8 HDMI Matrix Switch/Splitter. It is identical to the 4x4 model, except with 4 more input and output ports.



- 1 HDMI Inputs** – Connect up to 8 HDMI source devices.
- 2 HDMI Outputs** – Connect up to 8 HDMI display devices.
- 3 DC 12V** – Connect the included 12V DC power supply.
- 4 RS-232 Port** – Connect a PC or laptop to send RS-232 serial commands to the unit via terminal.
- 5 TCP/IP Port** – Connect a PC or laptop via Cat6 cable to remotely control the unit via GUI.
- 6 IR EXT** – Connect the included IR Receiver Cable for IR signal reception from the included IR Remote Control.
- 7 Audio Outputs** – Connect up to 8 sets of speakers or amplifiers.
- 8 Power** – Switch to turn the unit on and off.

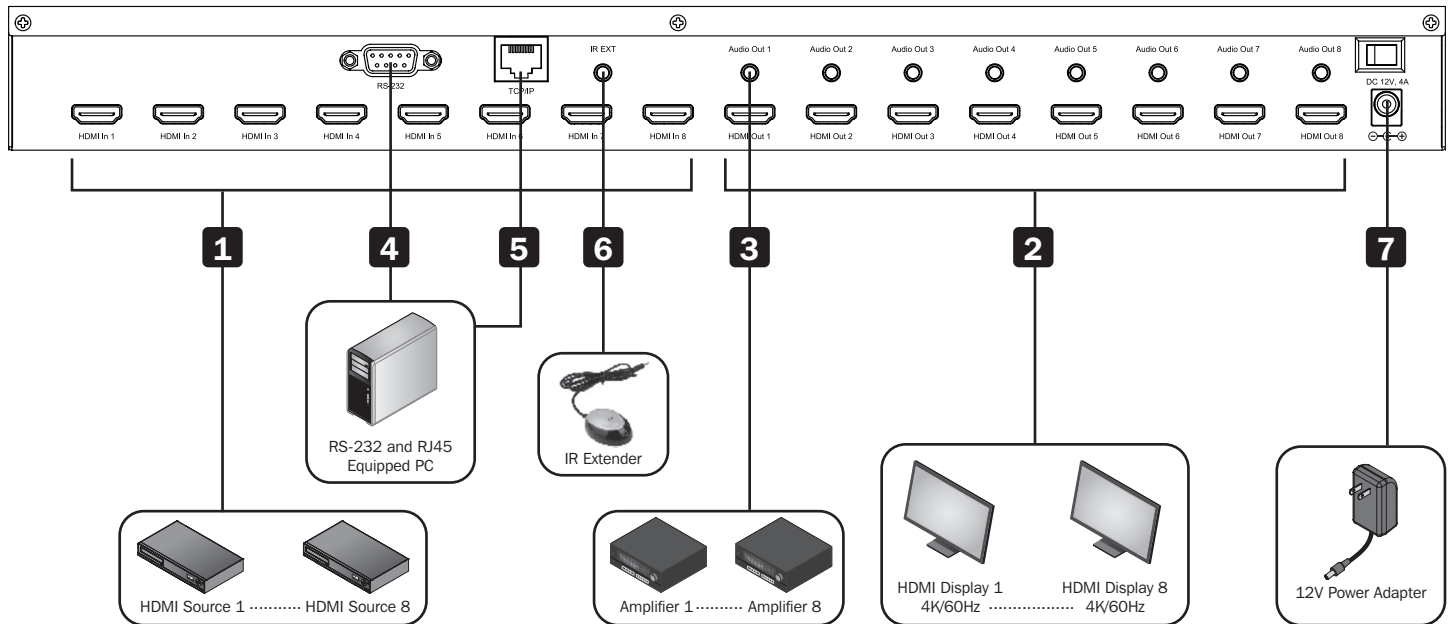


- 9 LCD Screen** – Displays the unit's information and settings.
- 10 In/Out Select** – Let you mix and match any input to any output. Press "ALL" to send one input to all connected displays.
- 11 EDID Select** – Let you set EDID information for the Input and Output ports.
- 12 Lock** – Locks all front-panel buttons to prevent accidental changes. Press "LOCK" again to unlock buttons.
- 13 Enter** – Press to confirm commands.
- 14 IR** – IR signal receptor for the included remote control.

Installation

Refer to the following steps and diagram to set up your HDMI matrix switch installation.

Note: Before making any connections, make sure power to all devices connected to the switch is turned off.



- 1** Connect up to 8 (B302-8HX8H-4K) or 4 (B302-4HX4H-4K) HDMI sources to the switch with user-supplied cables.
- 2** Connect up to 8 (B302-8HX8H-4K) or 4 (B302-4HX4H-4K) HDMI displays to the switch with user-supplied cables.
- 3** (Optional) Connect up to 8 (B302-8HX8H-4K) or 4 (B302-4HX4H-4K) speakers or amplifiers to the switch with user-supplied 3.5 mm audio cables.
- 4** (Optional) Connect a PC or laptop to the RS-232 port to control the switch via RS-232 commands.
- 5** (Optional) Connect a PC or laptop to the TCP/IP port with a user-supplied Cat6 cable to control the switch via the GUI.
- 6** (Optional) Connect the included IR Receiver Cable to the IR EXT port.
- 7** Connect the included power supply to the 12V DC port and turn on the power using the power switch. Within 20–30 seconds, each input signal will be displayed with its corresponding output port.

Operation

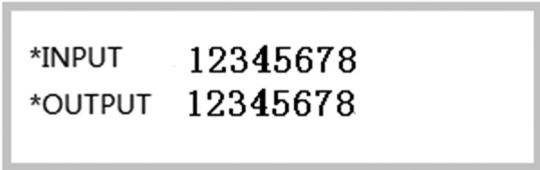
The following instructions are for the 8x8 HDMI Matrix Switch/Splitter, but apply equally to the 4x4 model.

The B302-Series HDMI Matrix Switch/Splitter features three different methods of control:

- 1) Front-panel pushbuttons
- 2) IR remote control
- 3) TCP/IP or RS-232 control via PC or laptop


Front-Panel Pushbuttons

The following section describes how to change the inputs and outputs manually.




*INPUT 12345678
*OUTPUT 12345678

- 1) To change an input to a specific output, press the desired input (IN 1–8), then the desired output (OUT 1–8). Press “ENTER” to confirm the new settings.
- 2) If you wish to send one input to more than one output display, press the desired input (IN 1-8), then the desired outputs (OUT 1–8). Once you have selected all the desired outputs, press “ENTER” to confirm the setting changes. To select all the outputs at once, press “ALL.”
- 3) To preset the output EDID settings of one or all inputs, press the desired input (IN 1–8), then “EDID MENU.” The LCD screen will display the input source settings as shown below. Press “UP/DOWN” to select a preset EDID. Please see EDID Table for a list of all the preset resolutions. Hit “ENTER” to confirm the setting.




*IN : 1
4KX2K (444) /60Hz

- 4) To enter the output mode selection menu, press “UP.” In the menu, users can choose between Default and Smart mode.
 - a) Default: All displays are defaulted to output 4K x 2K @ 60 Hz or the user-defined EDID setting.
 - b) Smart: Outputs the lowest capable resolution of the connected displays.



MODE:
Default



MODE:
Smart

To switch the mode, press “DOWN.” By default, the unit comes preset in Default mode.

Operation

IR Remote Control

The following section describes how to operate the remote. “N” indicates a number value (1–8). “+” indicates continuous pressing. There is no “+” button.

- 1) The format of switching channels (inputs to outputs) with the remote control is as follows:
Input (N) + Switch + Output (N), Input (N) + Switch + Output (N), + Enter.
For example: If you wish to send Input 1 to Output 2 and Input 2 to Output 4, the sequence will be: Input (1) + Switch + Output (2) + Input (2) + Switch + Output (4) + Enter.
- 2) To select multiple outputs for one input, an example would be:
Input (1) + Switch + Output (2) + Output (5) + Output (8) + Enter.
- 3) “ALL” is the shortcut button to select all output channels (displays).
It works in the following fashion: ALL + Input (N) + Enter.



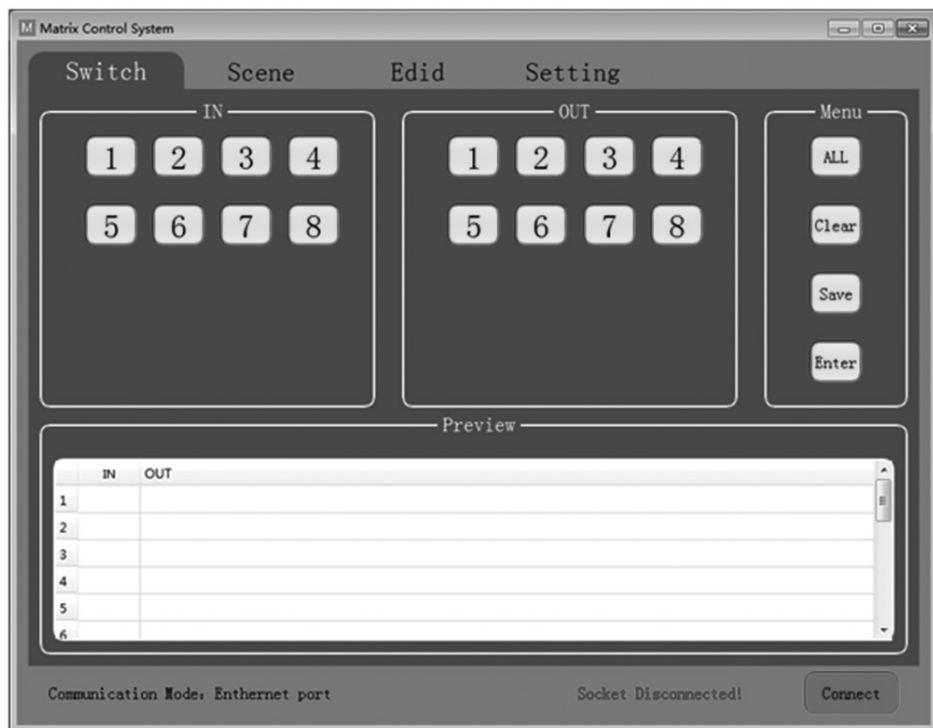
TCP/IP GUI Control

The GUI Control software is available on the included CD and at tripplite.com. GUI software is not compatible with macOS®.

- 1) Run the dedicated GUI software on the target computer to be used.
- 2) Set the correct COM port number and the following communication parameters: 9600 bps, 1 start bit, 1 end bit, no check bit. Set the data format as ASCII and open the serial port.
- 3) The Matrix Control System has four different tabs. Each one will be explained in the following steps.

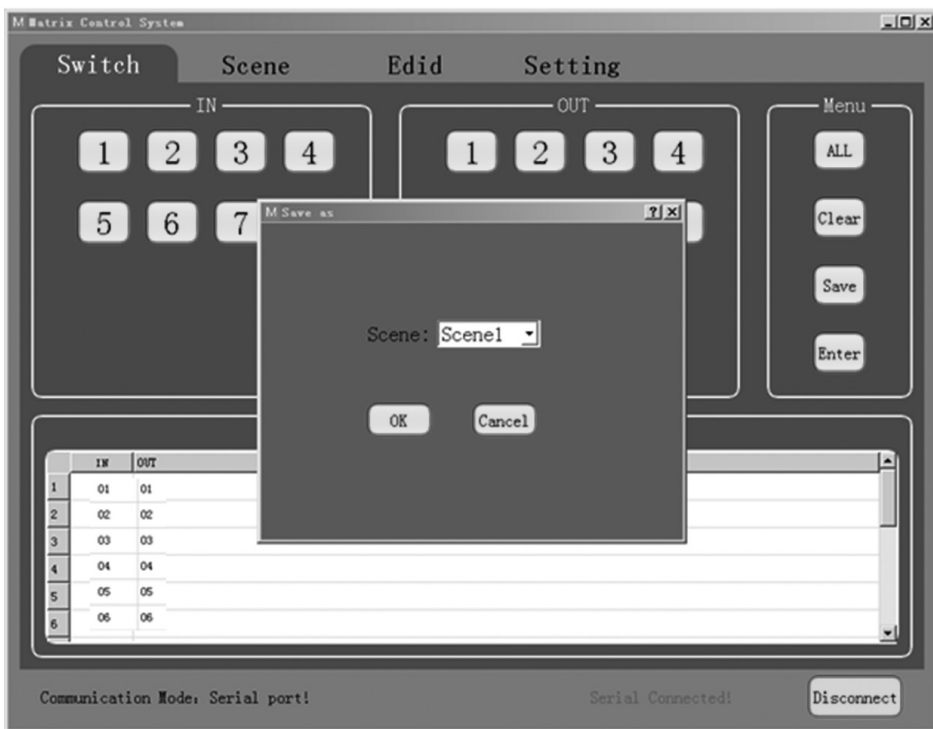
Operation

Switch Interface: Scene entering and configuring.



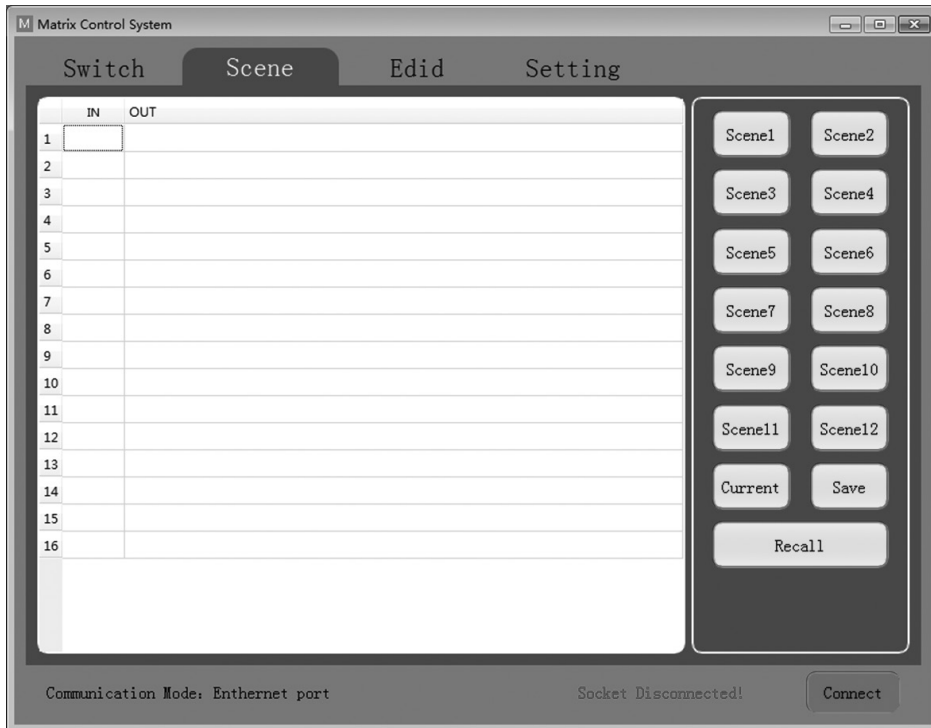
Select the inputs and outputs through the IN/OUT area. The selections will be displayed in the table below.

- ALL: Shortcut button to select all outputs.
- Clear: Clear the contents of the table.
- Save: Save the current scene of the table.
- Enter: Enter the current scene.



Operation

Scene Interface: Scene selection, current scene and recall.

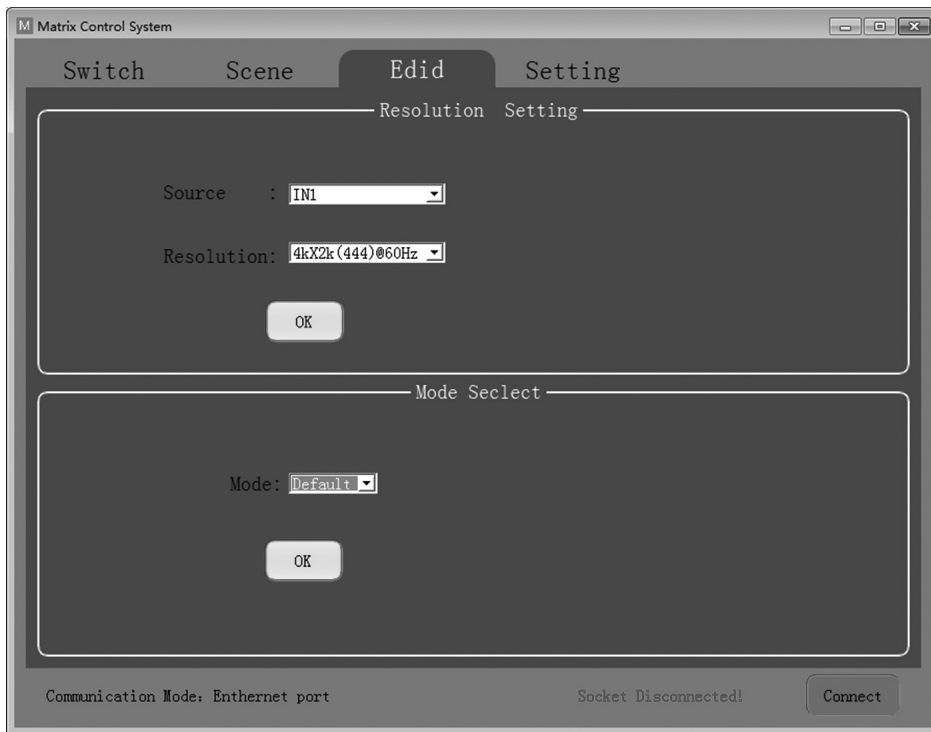


The table on the left side of the interface displays the current scene or the scene that is recalled.

- Scene1-12: User-saved scenes.
- Current: Obtain the current scene of the device.
- Save: Save the current obtained scene of the device.
- Recall: Recall the last scene selected.

Operation

EDID Interface: EDID management.



Set the output resolution of each input as well as the mode.

- Source: IN1-8 or IN1-4.
- Resolution: See EDID Table for a full list of available options to choose from.
- Mode: Set the output mode to either Default or Smart.

Operation

Setting Interface: RS-232 and TCP/IP Settings.

The screenshot shows a window titled "Matrix Control System" with four tabs: "Switch", "Scene", "Edid", and "Setting". The "Setting" tab is active. It contains two sections: "Rs232 Setting" and "Net Setting".

Rs232 Setting:

- COM :
- Rate:
-

Net Setting:

- IP :
- Port:
-

At the bottom of the window, there is a status bar with the following text: "Communication Mode: Ethernet port", "Socket Disconnected!", and a button.

The default communication mode is the RJ45 Ethernet port. Users can configure the communication mode through the RS-232 and Net Setting boxes. Click "OK" in the corresponding box to set the desired communication mode, then click "Connect" to connect. The status bar should change, as shown below.

The screenshot shows the status bar from the previous image, but with updated information: "Communication Mode: Serial port!", "Serial Connected!", and a button.

RS-232 Setting

To control the switch using RS-232 commands, ensure the following communication parameters are set: 9600 bps, 1 start bit, 1 end bit, no check bit. Set the data format as ASCII and open the serial port.

Net Setting

The B302-4HX4H-4K and B302-8HX8H-4K come with a pre-assigned static IP address. They can be accessed remotely by configuring your network to match the pre-assigned IP address style. Simply connect a user-supplied RJ45 cable between the matrix switch and your target computer, and then configure your network settings (IPv4) accordingly.

Note: The pre-assigned IP address will never change even if you disconnect and reconnect the target computer.

Operation

RS-232 Control Commands:

- 1) In the table below, “a” represents Input and “b” represents Output. The number value range of “a” and “b” depends on the number of inputs and outputs of the controlled matrix. If out of range, it is considered a command input error, and the unit will not execute the command.
- 2) Please note there is a punctuation mark (.) at the end of every command. This cannot be omitted.
- 3) Note the uppercase and lowercase letters.

Control Command	Description	Instruction/Function
N.	Get the number of channels of the current matrix.	Send the command “N.” and the unit will return “N8.” with 8 representing 8x8 matrix.
C.	Get the current state of the matrix.	Send the command “C.” If the current state is 1→1,2→2,3→3,4→4,5→5,6→6,7→8,8→7, the unit will return C1X1, 2X2, 3X3, 4X4 ,5X5, 6X6, 7X8, 8X7.
SaXb.	Switch Input “a” to Output “b.”	Send the command “S1X2.” and the unit will switch Input 1 to Output 2.
Sa1Xb1, a2Xb2, a3Xb3.	Switch input a1, a2, a3 to corresponding output b1, b2, b3.	Send the command “S1X3, 1X4.” and the unit will switch Input 1 to Output 3, 4.
Mc.	Switch between Default and Smart EDID modes. “c” = 0 = Default mode “c” = 1 = Smart mode	Send the command “M1.” and the unit will switch EDID mode to Smart Mode.
IaEd.	Set EDID of Input “a” to EDID No. “d.”	Send the command “I2E4.” and the unit will set EDID of Input 2 as EDID No. 4 (See EDID Table)

Operation

EDID Table

No.	Preset EDID
1	800 x 600/60 Hz
2	1024 x 768/60 Hz
3	1152 x 864/75 Hz
4	1280 x 720/60 Hz
5	1280 x 768/60 Hz
6	1280 x 800/60 Hz
7	1280 x 1024/60 Hz
8	1360 x 768/60 Hz
9	1366 x 768/60 Hz
10	1600 x 900/60 Hz
11	1600 x 1200/60 Hz
12	1680 x 1050/60 Hz
13	1920 x 1080/60 Hz
14	1920 x 1200/60 Hz
15	1920 x 1440/60 Hz
16	2560 x 1080/60 Hz
17	2560 x 1600/60 Hz
18	4K x 2K (444)/30 Hz
19	4K x 2K (420)/60 Hz
20	4K x 2K (8b)/60 Hz
21	4K x 2K (444)/60 Hz

Specifications

Models	B302-4HX4H-4K / B302-8HX8H-4K
Input (Female)	(x4) HDMI / (x8) HDMI
Output (Female)	(x4) HDMI / (x8) HDMI
Maximum Resolution	4096 x 2160 @ 60 Hz (4K x 2K)
HDMI Bandwidth	18 Gbps
HDCP Specification	HDCP 2.2
Operating Temperature	32° to 113°F (0° to 45°C)
Storage Temperature	14° to 176°F (-10° to 80°C)
Operating Humidity	10% to 85% RH, Non-Condensing
Storage Humidity	5% to 90% RH, Non-Condensing
Power Input	DC 12V 3A / DC 12V 4A
Power Consumption	24.2W / 40.5W
Dimensions (H x W x D)	440 x 200 x 44 mm / 440 x 250 x 44 mm
Weight	2477 g / 3145 g

Warranty and Product Registration

3-Year Limited Warranty

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