

LBS-44H2

**LINK BRIDGE™ 4x4
4K 6G HDMI 2.0
MATRIX SWITCH**

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SAFETY INSTRUCTIONS AND COMPLIANCE DECLARATIONS

PLEASE OBSERVE THE FOLLOWING SAFETY PRECAUTIONS

SURGE PROTECTION DEVICE RECOMMENDED

This product contains sensitive electrical components that may be damaged by electrical spikes, surges, electric shock, lightning strikes, etc. Use of surge protection systems is highly recommended in order to protect and extend the life of your equipment.

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1.0 PRODUCT DESCRIPTION

The LBS-44H2 is a high performance Link Bridge™ Matrix Switcher System that supports the transmission of video with resolutions up to 4K@60/444, and HDCP 2.2 supported from four high definition sources to four outputs. Multi-control via IR, RS-232, Telnet or WebGUI for users to choose.

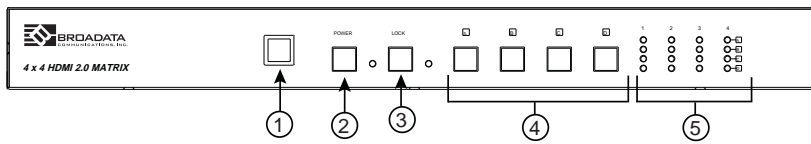
It supports high resolution digital audio formats Bypass such as LPCM 7.1CH, Dolby TrueHD, Dolby Digital Plus, Dolby Atmos and DTS-HD Master Audio with up to 192kHz as well as 3D content that can be displayed when connecting a 3D TV and 3D source.

Features include:

- HDMI with 4K@60/444 supported, HDCP 2.2 and DVI compliant
- Supports PC resolution up to WUXGA and HDTV resolution up to 4K2K (3840x2160@24/25/30/50/60_YUV444, 4096x2160@24/25/30/50/60Hz_YUV444)
- Supports 3D signal bypass
- Supports Bypass audio LPCM 2/5.1/7.1CH, Dolby Digital 2~5.1CH, DTS 2~5.1CH, Dolby TrueHD and DTS-HD Master Audio
- Supports IR Extension
- Supports RS-232, remote control, on-panel control and IP control (Telnet & WebGUI)
- 2U size design

2.0 OPERATION CONTROLS AND FUNCTIONS

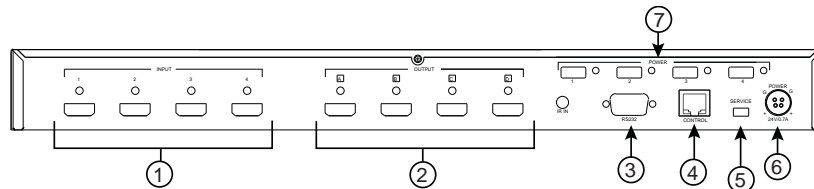
2.1 Front Panel



1. **POWER LED:** The LED will illuminate green when the power is on, red when it is in 'Standby' mode.
2. **POWER:** Press this button to power the device on/standby.
3. **LOCK:** Press and hold this button for 4 seconds to lock and unlock all the buttons on the panel. The LED will illuminate blue when locked.
4. **A~D:** Press output A~D to select input sources.
5. **LED1~4:** The LED will indicate current input sources corresponds to A~D output sources.

Example: Set input 1 to output A, then the top LED on 1 row will illuminate, set input 2 to output B, the second LED on 2 row will illuminate.

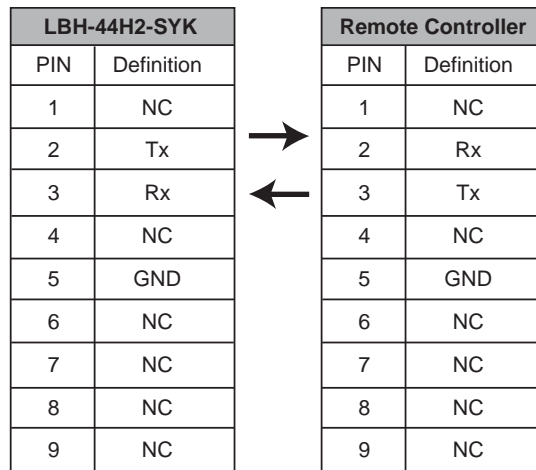
2.2 Rear Panel



1. **INPUT 1~4:** Connect to the HDMI equipment sources such as PC/laptop, a DVD player or a Set-top Box.
2. **OUTPUT A~D:** Connect to HDMI TV / display or HD amplifier for output image and audio or audio display.
Warning: Please do not connect this port directly to the PC/ Laptop as the Telnet function will not work.
3. **RS232:** Connect to a PC or control system with D-Sub 9-pin cable for the transmission of RS-232 commands.
4. **Control:** Connect to an active network for Telnet and Web GUI control Telnet and WebGUI control.(please refer Section 3.4 and 3.5)
5. **SERVICE:** For manufacturer use only.
6. **DC 24V:** Plug the 24V DC power supply into the unit and connect the adaptor to an AC outlet.
7. **Power:** USB Power 1-4.

3.0 COMMANDS AND CONTROLS

3.1 RS-232 Protocols



Default Port Settings

Baud Rate: 57.6 Kbaud
Data Bits: 8
Parity Bits: None
Stop Bits: 1
Flow Control: None

3.2 Telnet Commands

Command Name	Description	Description of Parameter
An	Switch Output A to Input n	n=1~4
Bn	Switch Output B to Input n	n=1~4
Cn	Switch Output C to Input n	n=1~4
Dn	Switch Output D to Input n	n=1~4
In	Switch All Output to Input n	n=1~4
AB.....N	Switch Output AB.... to Input n	n=1~4
SETIP <x/x/x/x><x.x.x.x><x.x.x.x>	Setting IP, SubNet, GateWay (Static IP)	X=0~255
IPCONFIG	Display the current IP configuration	None
RSTIP	Set Ip Configuration to DHCP	None
P0	Power Off	None
P1	Power On	None
STOREN	Store Current I/O to Position N Position	N=1~4
PRESETN	Preset the store I/O Position N	N=1~4
NameN N1	Name port N as N1	N=1~4 N1=ABCDEFGH (Max Length=8)
ST	Show Unit Firmware Version	None
EMN	Setting EDID Mode N	N=1 (Standard), 2 (TV)
RS	Routing Resent to Default	None
USBISP	Update FW by USB	None
HELP(?)	Display all available commands	None
QUIT	Quit Telnet	None

Note: All the RS-232 commands will not be executed unless followed with a carriage return. All commands are insensitive.

3.3 Telnet Control

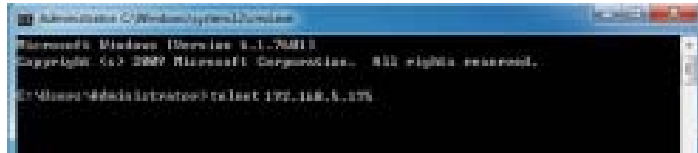
To access the telnet control in Windows 7, click on 'Start' menu and type "cmd" in the Search field then press enter.

Under Windows XP go to the 'Start' menu and click on "Run", type "cmd" and press enter.

Under Mac OS X, go to GoàApplicationàUtilitiesàTerminal



Once in the command line interface (CLI) type “telnet”, the IP address of the unit you wish to control, then hit enter.



This will bring us into the device which we wish to control. Type “HELP” to list the available commands.

3.4 Web GUI Control

On a PC/Laptop that is connected to the same active network as the Matrix, open a web browser and type device’s IP address on the web address entry bar. The browser will display the device’s status, control and User setting pages.



Type in username and password to entering interface. Switch page allows user to edit input and output settings, also allows setup or recalling preset.

username: admin
password: admin



Press one or multiple output buttons then press input to set the input to select output.



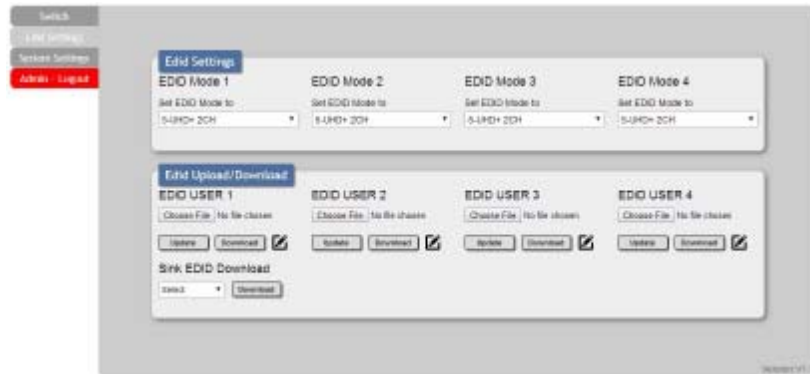
By clicking the edit button (which is marked by red column) on each output and input could edit output/input name.



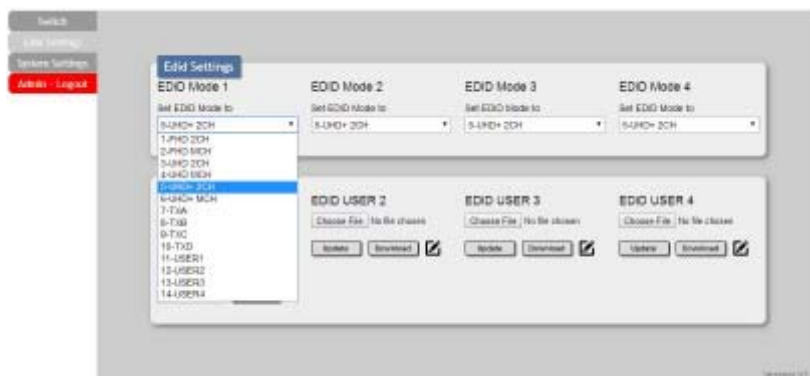
Clicking preset button (which is marked by red column), click any one set could save current setting as preset set. Press the edit button on preset (which is marked by blue column) to edit preset name.



Click preset recall button (which is marked by red column) and click any one set could recall pre-setting set.



On EDID setting page, allows user to setup EDID mode and to upload/download custom EDID or to download EDID from sink.



EDID setting could select EDID mode from the list, also it has four sets of "USER", allows user to upload custom EDID bin file.



For uploading custom EDID, first click button that red arrow is pointed, then select file from you PC/Laptop, then click update.



Click the edit button (which is marked by red column), allows to edit name of USER mode.



System setting page allows to power on/off, editing basic info as user name, password. Set up WebGUI timeout and network setting.



Place Routing Reset to reset routing to default setting; press Fdefault to set to factory default.

Note: You will need to click on save button once you've finished network parameters setting.

4.0 SPECIFICATIONS

Video Bandwidth	300MHz/9Gbps
Input Ports	4 x HDMI 1 x IR 1 x RS-232 1 x Mini USB (Service) 1 x RJ-45 (Control)
Output Ports	4 x HDMI
Supported Resolutions	480i~1080p@24/50/60 4K2K@24/25/50/60 YUV444 VGA~WUXGA
IR Frequency	30~50kHz
Baud Rate	57600 Baud Rate
Power Supply	+24Vdc/3.7A (US/EU Standards, CE/FCC/UL Certified)
ESD Protection	Human Body model: +/- 8kV (air-gap discharge)

Physical

Dimension (W x D x H)	17.17" x 6.30" x 1.73", Jacks excluded 17.17" x 6.59" x 1.89", Jacks included
Operating Temperature	0 to +40°C
Humidity	20 to 90% RH, non-condensing

5.0 SERVICE PROCEDURE

5.1 Replacement Policy

Standard products found defective on arrival (DOA) will be replaced, based on availability, within 24 to 48 hours anywhere in the U.S. Please call Customer Service at **800-214-0222** for information.

5.2 Return/Repair Service

The LBS-44H2 System contains no user serviceable components. If you have a problem with your unit, please contact the Customer Service Department. To facilitate our return/repair processing please contact Broadata Communications, Inc. to obtain a Return Material Authorization (RMA). Please include the following information:

- Product model number
- Serial Number
- Complete description of problem
- Hardware installation description

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Torrance, CA 90505
1-800-214-0222
(310) 530-1416
(310) 530-5958 (Facsimile)
e-mail: CustomerService@Broadatacom.com
Website: www.broadatacom.com

6.0 LIMITED WARRANTY

Broaddata Communications, Inc. (BCI) warrants, for a period of one year from date of shipment, each product sold shall be free from defects in material and workmanship. BCI will correct, either by repair, or at BCI's election, by replacement, any said products that in our sole discretion prove to be defective and are returned to the manufacturing location within 30 days after such defect is ascertained. All warranties are limited to defects arising under normal use and do not include malfunctions or failure resulting from misuse, abuse, neglect, alterations, electrical power problems, usage not in accordance with product instructions, improper installation, or damage determined by BCI to have been caused by the Buyer or repair made by a third party. Limited warranties granted on products are to the initial customer end-user and are not transferable. OUR LIABILITY UNDER THIS WARRANTY SHALL IN ANY CASE BE LIMITED TO THE INVOICE VALUE OF THE PRODUCT SOLD AND BCI SHALL NOT BE LIABLE TO ANYONE FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES ARISING FROM THE USE OF ITS PRODUCTS OR THE SALE THEREOF. We make NO WARRANTY AS TO THE MERCHANTABILITY OF ANY GOODS, OR THAT THEY ARE FIT FOR ANY PARTICULAR PURPOSE OR END APPLICATION NOR DO WE MAKE ANY WARRANTY, EXPRESSED OR IMPLIED OTHER THAN AS STATED ABOVE.

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