



8x8 HDMI 18G Matrix with Audio

User Manual
Benutzerhandbuch
Manuel Utilisateur
Manuale

English
Deutsch
Français
Italiano



No. 38248

lindy.com

Safety Instructions

! WARNING !

Please read the following safety information carefully and always keep this document with the product.

Failure to follow these precautions can result in serious injuries or death from electric shock, fire or damage to the product.

Touching the internal components or a damaged cable may cause electric shock, which may result in death.

To reduce risk of fire, electric shocks or damage:

- Do not open the product. There are no user serviceable parts inside.
- Qualified servicing personnel must only carry out any repairs or maintenance.
- Never use damaged cables.
- Do not expose the product to water or places of moisture.
- This product is intended for indoor use only.
- Do not place the product near direct heat sources. Always place it in a well-ventilated place.
- Do not place heavy items on the product or the cables.
- Please ensure any adapters are firmly secured and locked in place before inserting into a wall socket



Introduction

Thank you for purchasing the Lindy 8x8 HDMI 18G Matrix with Audio. This product has been designed to provide trouble free, reliable operation. It benefits from both a LINDY 2-year warranty and free lifetime technical support. To ensure correct use, please read this manual carefully and retain it for future reference.

The Lindy 8x8 HDMI Matrix Switch supports HDMI 2.0 18G signals, allowing for the transmission of clear 4K Ultra HD 60Hz resolutions. Additional support for High Dynamic Range ensures video content is displayed with enhanced brightness, greater contrasts and a much wider colour gamut, perfect for digital signage displays in retail, creating informational multi-display setups in education, or distributing content in commercial installations such as cinemas.

Package Contents

- 8x8 HDMI 18G Matrix with Audio
- 12VDC 3A Multi-country Power Supply (UK, EU, US & AUS Adapters), Barrel Size: 5.5/2.1mm Screw Type Jack
- IR remote with CR2025 Battery
- IR Receiver Cable, 1.5m
- RS-232 Extension Cable, 1.5m
- Lindy Manual

Features

- Supports resolutions up to 3840x2160@60Hz 4:4:4 8bit, with support for High Dynamic Range
- HDMI audio pass-through, audio extraction up to 5.1CH from SPDIF
- HDCP 2.2
- OLED Display
- EDID Management
- CEC Pass-through
- Push button, IR, Web Gui, Telnet/IP control
- Rack mountable

Specification

- **Input:** 8 x HDMI (Female), **Output:** 8 x HDMI (Female), 8 x SPDIF (Female),
Control: RS-232 (Female), RJ45 (Female), 3.5mm (Female)
- Supported Audio Formats: LPCM 2/5.1/7.1CH, Dolby Digital, DTS 5.1, Dolby Digital+, Dolby TrueHD, DTS-HD Master Audio, Dolby Atmos, DTS:X
- IR Support: 20~60kHz
- Black, metal housing
- Operating Temperature: 0°C - 40°C (32°F - 104°F)
- Storage Temperature: -20°C - 60°C (-4°F - 140°F)
- Humidity: 20 -90% RH (non-condensing)
- Power Consumption: 26.5W
- ESD Protection: Human Body Model: ±8kV (Air-gap discharge) , ±4kV (Contact discharge)

Installation & Operation

Front Panel



1. **OLED Display:** Displays the Input and Output status of the matrix. Also displays the EDID management and the matrix's IP address when required.
2. **IR Receiver:** Receives the IR signal from the included IR remote for control over the entire installation.
3. **Push Button Controls:** On power up, the OLED display will show the input/output status of the previous setup. These buttons can then be used for a variety of instructions:
 - After power up, press the Left or Right buttons first to select the required output. Press the Up or Down buttons to select the required input. Press the Menu button to confirm the selection.
 - After power up, press the Up or Down buttons first to check the EDID setting of the input. Press Menu to return to the initial display.
 - After power up, press the Menu button first. This will allow for a range of options. Press Up or Down to cycle through the Menu options and press Right to select an option. Press Left to return from the options to the original menu

Select EDID: Press Up or Down to select the required EDID. The full EDID table can be found under EDID Management. Once the required EDID has been selected, press the Right button and follow with Up or Down to cycle through which Input port to copy the EDID to. It is also possible to copy to all Inputs. Press the Right button to confirm selection.

PTP Set: This will allow a Point to Point setup i.e. Input 1 to Output A, Input 2 to Output B.

Save Pre-set: Once this option has been selected, this will automatically save the current layout as a pre-set. Press the Up or Down buttons to select a storage location then press the Right button to confirm the selection.

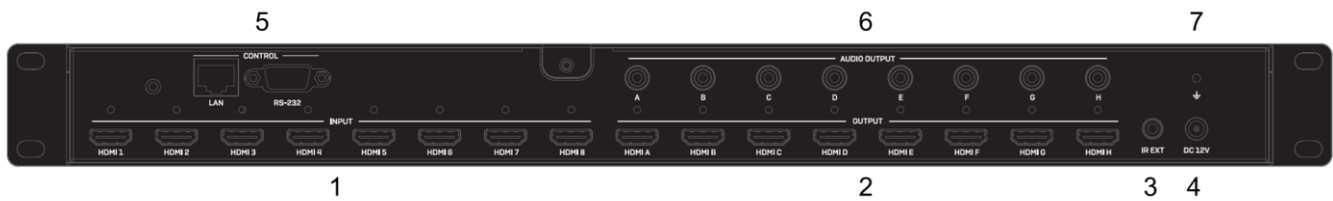
Recall Pre-set: Once this option has been selected, the previously used pre-set will be re-called. Press the Up or Down button to select the required pre-set and press the Right button to confirm the selection.

View IP: View the IP address and status of the DHCP.

Select Baud: Press the Up or Down button to cycle through the baud rate. Press the Right button to confirm the selection

Factory Reset: Once this option has been selected the unit can be reset to its factory settings and then press the Right button to confirm this selection.

4. **Power and the Power LED:** Hold down this button to power the matrix on or off. The LED will be illuminated green when the matrix is powered on. The LED will be illuminated red when the matrix is in standby.



Rear Panel

1. **HDMI Inputs:** Connect to an HDMI source device using an high quality HDMI cable.
2. **HDMI Outputs:** Connect to an HDMI display, splitter or extender using an high quality HDMI cable.
3. **IR Extension (3.5mm Female):** Using the included IR extension cable, please place the IR eye in a clear line of sight. For use when the matrix's main IR eye is out of sight.
4. **Screw Type 12V DC Jack:** Connect to the included 12VDC 3A PSU and screw to secure. Plug into an AC wall outlet to power the matrix.
5. **Control Ports:**
LAN: Connect to a network or network switch using a Cat. X cable.
RS-232: Connect to a PC or control system using an RS-232 cable.
6. **Audio Outputs:** Extract HDMI output audio to separate amplifiers or speakers.
7. **Ground Port:** Connect the GND to the ground reference point.

EDID Management Table

EDID Mode	EDID Resolution
1	1280x720, 60Hz, 4:4:4, 8bit. 2 Channel audio, 24-bit, 48khz.
2	1920x1080, 60hz, 4:4:4, 8bit. 2 Channel audio, 24-bit, 48khz.
3	1920x1080, 60hz, 4:4:4, 8bit. 6 Channel audio, 24-bit, 192khz. Dolby Digital and DTS audio.
4	1920x1080, 60hz, 4:4:4, 8bit. 8 Channel audio, 24-bit, 192khz DTS audio, Dolby Digital Plus, DTS-HD, Dolby TrueHD, Dolby Digital.
5	1920x1080, 60hz, 4:4:4, 8bit. 2 Channel audio, 24-bit, 48khz.
6	1920x1080, 60hz, 4:4:4, 8bit. 6 Channel audio, 24-bit, 192khz. Dolby Digital and DTS audio.
7	1920x1080, 60hz, 4:4:4, 8bit. 8 Channel audio, 24-bit, 192khz DTS audio, Dolby Digital Plus, DTS-HD, Dolby TrueHD, Dolby Digital.
8	1920x1080, 60hz, 4:4:4, 8bit. 2 Channel audio, 24-bit, 48khz.
9	1920x1080, 60hz, 4:4:4, 8bit. 6 Channel audio, 24-bit, 192khz. Dolby Digital and DTS audio.
10	1920x1080, 60hz, 4:4:4, 8bit. 8 Channel audio, 24-bit, 192khz DTS audio, Dolby Digital Plus, DTS-HD, Dolby TrueHD, Dolby Digital.
11	3840x2160, 30Hz, 4:4:4, 8bit. 2 Channel audio, 24-bit, 48khz.
12	3840x2160, 30Hz, 4:4:4, 8bit. 6 Channel audio, 24-bit, 192khz. Dolby Digital and DTS audio.
13	3840x2160, 30Hz, 4:4:4, 8bit. 8 Channel audio, 24-bit, 192khz DTS audio, Dolby Digital Plus, DTS-HD, Dolby TrueHD, Dolby Digital.
14	3840x2160, 60Hz, 4:2:0, 8bit. 2 Channel audio, 24-bit, 48khz.
15	3840x2160, 60Hz, 4:2:0, 8bit. 6 Channel audio, 192khz. Dolby Digital and DTS audio.
16	3840x2160, 60Hz, 4:2:0, 8bit. 8 Channel audio, 24-bit, 192khz DTS audio, Dolby Digital Plus, DTS-HD, Dolby TrueHD, Dolby Digital.
17	3840x2160, 60Hz, 4:4:4, 8bit. 2 Channel audio, 24-bit, 48khz.
18	3840x2160, 60Hz, 4:4:4, 8bit. 6 Channel audio, 192khz. Dolby Digital and DTS audio
19	3840x2160, 60Hz, 4:4:4, 8bit. 8 Channel audio, 24-bit, 192khz DTS audio, Dolby Digital Plus, DTS-HD, Dolby TrueHD, Dolby Digital.
20	Copy HDMI Output A
21	Copy HDMI Output B
22	Copy HDMI Output C
23	Copy HDMI Output D
24	Copy HDMI Output E
25	Copy HDMI Output F
26	Copy HDMI Output G
27	Copy HDMI Output H

Control

IR Remote

The output must be selected first, then the input port to display the set layout.

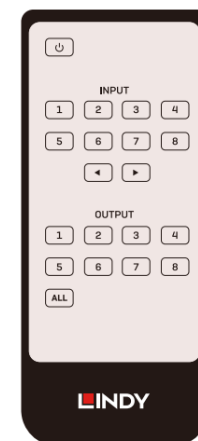
Power Button: Power on the matrix or press to set the matrix to standby.

Input 1/2/3/4/5/6/7/8: Press to select the required Input port.

< >: Press to select the previous or the following Input port.

Output 1/2/3/4/5/6/7/8: Press to select the required Output port.

All: Press to output to all Output ports simultaneously from the selected source.



Web-Gui

This matrix can be easily controlled via Web-Gui software. Please ensure the IP address of the matrix is noted. This can be found using the push buttons on the front panel, please refer to the Front Panel description above for this. The static IP address is 192.168.1.100.

1. Connect to a PC with a standard Cat.X cable.
2. Using the connected PC, select the following path:

Control Panel > Network and Internet > Network > Connections > Local Area Connections (Right Click) > Properties

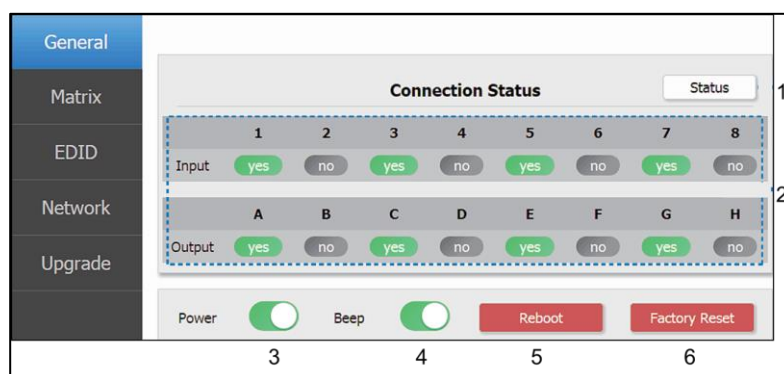
3. Double click Internet Protocol Version 4 (TCP/IPv4).
4. Select "Use the Following IP Address" and enter the IP address for example 192.168.1.200.
The IP address, 255.255.255.0 as the Subnet mask, and then select OK and OK again.

Please Note: The IP address of the PC and matrix should be in the same network segment. As the matrix's IP address is 192.168.1.100, the PC's IP should be 192.168.1.X (X can be 1~255 but not 100).

5. Input the IP address from the front panel of the matrix into a browser. This will open the Web Gui page.

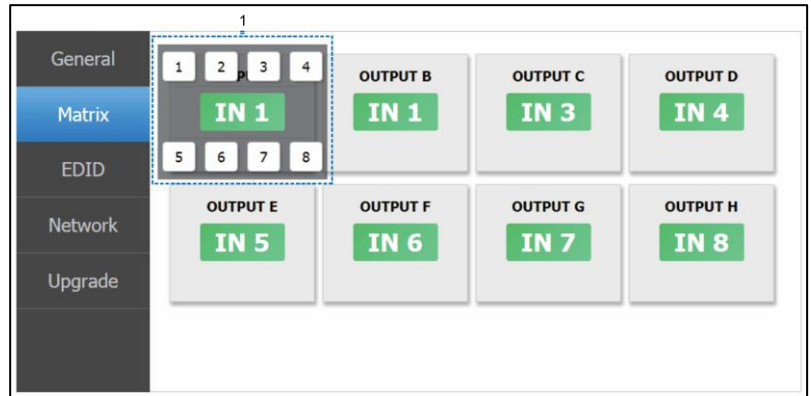
General

1. Status: Select to check the current status of the connection to the matrix.
2. Input/Output: Displays the current layout configuration of Input and Outputs. Yes, indicates an active connection. No, indicates no connection.
3. Power: Slide to On to ensure the matrix is switched on. Slide to Off to turn the matrix to standby.
4. Beep: Slide to On, the matrix's front panel will beep when in use. Slide to Off to mute the front panel when in use.
5. Reboot: Select to reboot the matrix.
6. Factory Reset: Select to reset the matrix to factory settings.



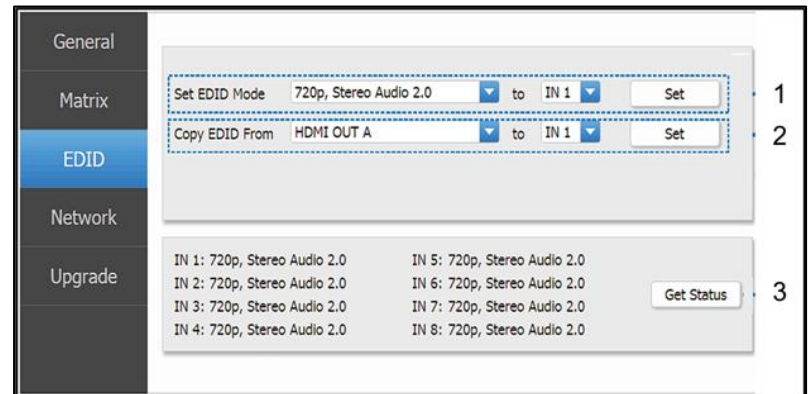
Matrix

1. Select within the Green Input area and then select Input to configure to Output A. All other Output ports follow the same rule.



EDID

1. Select the required EDID setting and select Set to configure this to a required Input port.
2. Copy the EDID from a desired output port and select Set to confirm.
3. Display the desired Input ports current EDID status.



Network

Network Configuration

■ DHCP On/Off Switch

On – The matrix will obtain all network configuration information including the IP address, Subnet, gateway and MAC.

Off – User can set the IP address, Subnet, gateway and MAC. Once set, select Save Changes to confirm. The matrix will require powering down and back on again to ensure the IP address change has took place.

■ Net Status

Select to refresh the current network configuration information. The updated information will display in the Status Log.

Status Log

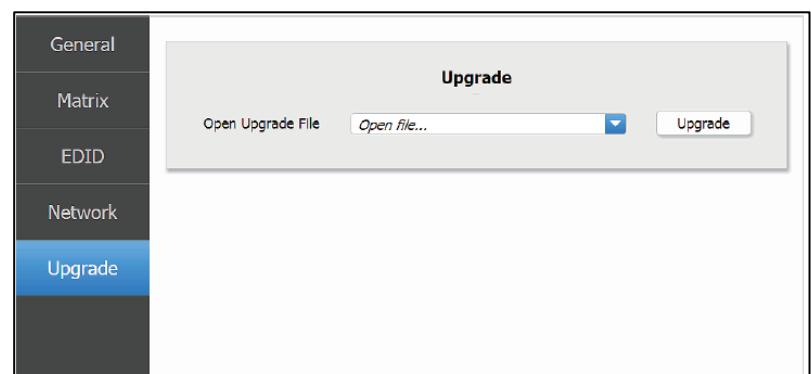
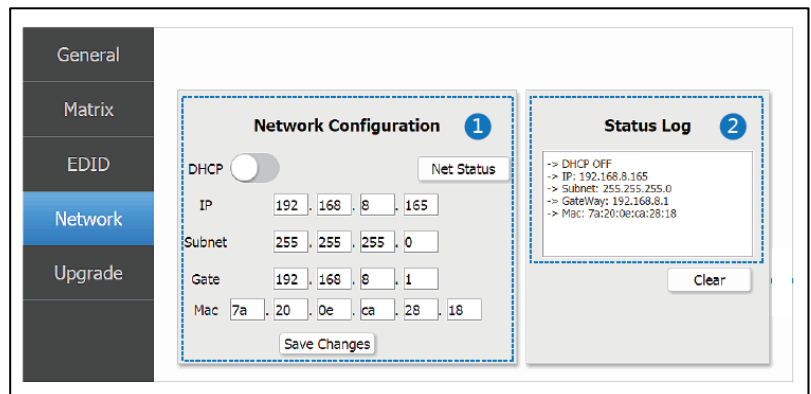
Displays the current network configuration information.

Clear

Clears the Status Log information.

Upgrade

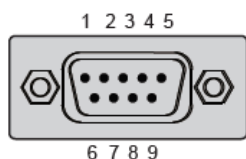
Open the Updated FW file from the user's PC and select Upgrade to start update.



RS-232 Control

This matrix also supports control over RS-232 using ASCII commands. Firstly, connect the matrix to a PC with a RS-232 to USB cable. Then open a serial command tool to enter all required commands. This can be found at the local Lindy website under Downloads of “38248”.

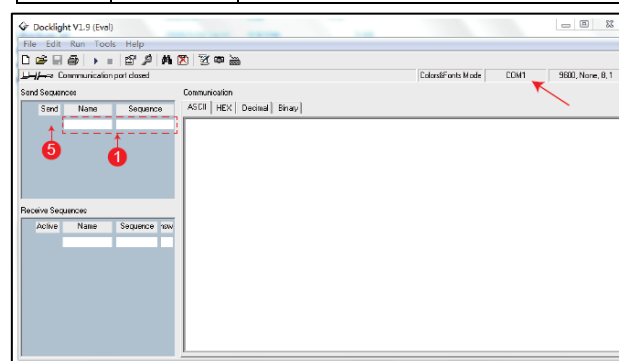
Please see below for the RS-232 Pin Out for reference:



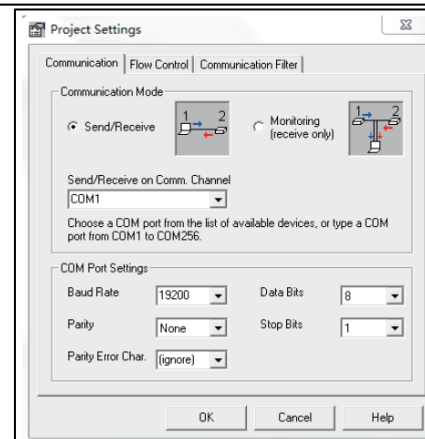
9-Pin Male DIN

PIN	Signal	Description
1	DCD	Data, Carry, Detect
2	SIN	Serial In or Receiver Data
3	SOUT	Serial out or Transmit Data
4	DTR	Data Terminal ready
5	GND	Ground
6	DSR	Data Set Ready
7	RTS	Request To Send
8	CTS	Clear to Send
9	RI	Ring Indicate

Once opening the RS-232 software the following page will show

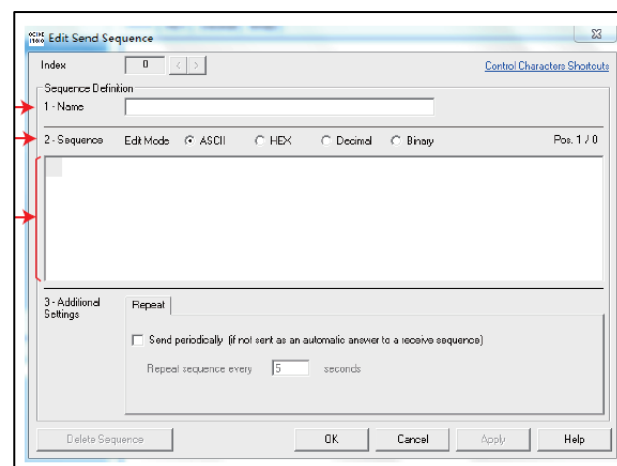


Select COM. This will open Project Settings. Select the COM port to connect the software then set the Baud Rate, data Bits, Parity and Stop Bits then select OK. Please see the page here (*Right*).



Double click the *Sequence* blank area. This will show the following page. Within *Name* the sequence definition can be entered. Within *Sequence* please choose the sequence mode. Within the blank area, please input the RS-232 command. Once set please select OK to confirm.

Select *Send* on the original page to send the command.



RS-232 / IP Command List

Serial Port Protocol: Baud rate(default): 19200 Data bits: 8 Stop bits: 1 Check bit: 0		
RS-232 Command	Function	Feedback
s x av y!	Switch x channel input to y channel output	AV x -> y
s x all!	Switch x channel input to all channel output	X to all
r all out!	Show the current configuration between all output ports and the input port	AV 1 -> 1, AV 2 -> 2...
r out 1!	Show the current configuration between the x output port and the input port	AV x -> x
s ptp!	One to one configuration between the input and output channel	Ptp
r link in x!	Show the connection status of the x input port	HDMI Inx: connect
r link out x!	Show the connection status of the x output port	HDMI OUTx: disconnect
r link all in!	Show the connections status of all input port	HDMI Inx: connect/disconnect
r link all out!	Show the connection status of all output ports	HDMI OUTx: connect/disconnect
s x off!	Switch off the x output	Out x on
s x on!	Switch on the x output	Out x on
s all off!	Switch off all output channels	All out off
s all on!	Switch on all output channels	All out on
s edid x c y!	Copy the EDID of the display connected to x output to the x input port	copy EDID from output x to input y
s edid x d y!	Copy the in-built EDID Y to the x input port	use default edid y to input x
s edid all c y!	Copy the EDID of the display connected to y output to all input ports	Copy edid from output y to all inputs
s edid all d y!	Copy the in-built EDID Y to all input ports	Use default edid y to all input
s edid default!	Restore all input ports the the default EDID (EDID 2)	Edid default
r edid x!	Show the EDID of X input port	IN1: 1080P, Stereo Audio 2.0
r edid all!	Query the EDID of all ports	IN1: 1080P, Stereo Audio 2.0
r hdcp in x!	Show the HDCP of X Input Port	A hdcp in
r hdcp out x!	Show the HDCP of X Output Port	A hdcp out
r hdcp all in!	Query all input port HDCP Status	A hdcp in all
r hdcp all out!	Query all Output port HDCP status	A hdcp out all
s beep on!	Allow the beep function	Beep on
s beep off!	Stop the beep function	Beep off
r beep!	Show the status of the beep function	A beep on
s lock on!	Lock the front panel push buttons	Lock on
s lock off!	Unlock the front panel push buttons	Lock off
r lock!	Show the status of the front panel push button lock	A lock on
s power on!	Turn on the matrix	Power on
s power off!	Shut down the matrix	Power off
r power!	Query the current power status	A power on

s reboot!	Reboot the matrix	Rboot
s factory reset!	Restore the matrix to factory settings	Factory reset
r type!	Query the model of the matrix	Lindy 38248
r version!	Query the firmware version	A aa.bb-aa.bb-aa.bb
r status!	Query the status of matrix	A aa.bb-aa.bb-aa.bb.cc.dd
s dhcp off!	Setup the network using a static IP	IP mode static
s dhcp on!	Setup the network using a dynamic IP	Ip mode DHCP
r dhcp!	Show the DHCP status of the network	A ip mode DHCP
s ip addr a.b.c.d!	Set the IP address of the network	a.b.c.d
s subnet a.b.c.d!	Set the subnet mask of the network	a.b.c.d
s gateway a.b.c.d!	Set up the network gateway	a.b.c.d
s port 8000!	Set Control port at 8000	8000
s network enable!	Once all network settings have been configured and executed, execute this command to reboot the network settings	
r ip addr!	Show the IP address of the connected network	A a.b.c.d <CR>
r mac addr!	Show the MAC address of the connected network	A a-b-c-d-e-f <CR>
r subnet!	Show the subnet mask of the connected network	a a.b.c.d <CR>
r gateway!	Show the gateway of the connected network	a a.b.c.d <CR>
r port!	Show the network port number	a 8000 <CR>
s net name ****!	Set the name of the connected network	*****
r net name!	Show the name of the connected network	A ***** <CR>

Please note: The table above shows all RS-232 commands for control of the matrix. The function shows the function of the command. The feedback table shows the information that will show if the command sent is successful.

CE/FCC Statement

CE Certification

LINDY declares that this equipment complies with relevant European CE requirements.

CE Konformitätserklärung

LINDY erklärt, dass dieses Equipment den europäischen CE-Anforderungen entspricht

UKCA Certification

LINDY declares that this equipment complies with relevant UKCA requirements.

FCC Certification

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

You are cautioned that changes or modification not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

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.

The enclosed power supply has passed Safety test requirements, conforming to the US American versions of the international Standard IEC 60950-1 or 60065 or 62368-1.

LINDY Herstellergarantie – Hinweis für Kunden in Deutschland

LINDY gewährt für dieses Produkt über die gesetzliche Regelung in Deutschland hinaus eine zweijährige Herstellergarantie ab Kaufdatum. Die detaillierten Bedingungen dieser Garantie finden Sie auf der LINDY Website aufgelistet bei den AGBs.

Hersteller / Manufacturer (EU):

LINDY-Elektronik GmbH
Markircher Str. 20
68229 Mannheim
Germany
Email: info@lindy.com , T: +49 (0)621 470050

Manufacturer (UK):

LINDY Electronics Ltd
Sadler Forster Way
Stockton-on-Tees, TS17 9JY
England
sales@lindy.co.uk, T: +44 (0)1642 754000

Recycling Information



WEEE (Waste of Electrical and Electronic Equipment), Recycling of Electronic Products

Europe, United Kingdom

In 2006 the European Union introduced regulations (WEEE) for the collection and recycling of all waste electrical and electronic equipment. It is no longer allowable to simply throw away electrical and electronic equipment. Instead, these products must enter the recycling process.

Each individual EU member state has implemented the WEEE regulations into national law in slightly different ways. Please follow your national law when you want to dispose of any electrical or electronic products. More details can be obtained from your national WEEE recycling agency.

Battery Remark:

Do not put empty batteries in your domestic waste bin as they will not be recycled. Empty batteries can be returned for recycling at our trade counter or at your local household recycling centre.

The raw materials enclosed in batteries such as Zinc, Iron and Nickel can be reused to a very large proportion. The recycling of batteries and disused/obsolete electronic equipment is one of the most efficient environment protection actions you can easily take.

Germany / Deutschland

Rücknahme Elektroschrott und Batterie-Entsorgung

Die Europäische Union hat mit der WEEE Richtlinie Regelungen für die Verschrottung und das Recycling von Elektro- und Elektronikprodukten geschaffen. Diese wurden im Elektro- und Elektronikgerätegesetz – ElektroG in deutsches Recht umgesetzt. Das Entsorgen von Elektro- und Elektronikgeräten über die Hausmülltonne ist verboten! Diese Geräte müssen den Sammel- und Rückgabesystemen zugeführt werden! Dort werden sie kostenlos entgegen genommen. Die Kosten für den weiteren Recyclingprozess übernehmen die Gerätehersteller.

LINDY bietet deutschen Endverbrauchern ein kostenloses Rücknahmesystem an, beachten Sie bitte, dass Batterien und Akkus den Produkten vor der Rückgabe an das Rücknahmesystem entnommen werden müssen und über die Sammel- und Rückgabesysteme für Batterien separat entsorgt werden müssen. Ausführliche Informationen zu diesen Themen finden Sie stets aktuell auf der LINDY Webseite im Fußbereich.

France

En 2006, l'union Européenne a introduit la nouvelle réglementation (DEEE) pour le recyclage de tout équipement électrique et électronique.

Chaque Etat membre de l' Union Européenne a mis en application la nouvelle réglementation DEEE de manières légèrement différentes. Veuillez suivre le décret d'application correspondant à l'élimination des déchets électriques ou électroniques de votre pays.

Remarque sur les piles et batteries

En tant que consommateur final, vous êtes tenus de restituer toutes les piles et batteries usagées. Il est clairement interdit de les jeter avec les ordures ménagères ! Les piles et batteries contenant des substances nocives sont marquées par le symbole ci-dessus. Vous pouvez déposer gratuitement vos piles ou batteries usagées dans les centres de collecte de votre commune, dans nos succursales ou dans tous les points de vente de piles ou batteries. Vous respecterez ainsi la loi et contribuerez à la protection de l'environnement !

Italy

Nel 2006 l'unione europea ha introdotto regolamentazioni (WEEE) per la raccolta e il riciclo di apparecchi elettrici ed elettronici. Non è più consentito semplicemente gettare queste apparecchiature, devono essere riciclate. Ogni stato membro dell' EU ha tramutato le direttive WEEE in leggi statali in varie misure. Fare riferimento alle leggi del proprio Stato quando si dispone di un apparecchio elettrico o elettronico.

Per ulteriori dettagli fare riferimento alla direttiva WEEE sul riciclaggio del proprio Stato.



Tested to comply with
FCC Standards
For Home and Office Use!



UK
CA

No. 38248

6th Edition, November 2021

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