LINDY

4K HDMI & USB Over IP Extender

User Manual

English



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Introduction

Thank you for purchasing the 4K HDMI & USB Over IP Extender system. 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 4K HDMI & USB Over IP Extender system allows the extension of a 4K video source such as a PC or DVR over long distances using a Gigabit IP network. The Extender can also carry USB, bi-directional IR and RS-232 signals allowing connected devices to be remotely controlled or integrated within a larger control system, making it suited to professional AV and KVM applications.

The transmitter unit (No.38266) can be connected to one or more receiver units (No. 38267) to create a standard point to point or point to multipoint control system, allowing a single device to be controlled from different consoles via any of the connected receivers. Additionally, for retail, hospitality and recreation environments a regular Video Wall installation can be created using a single transmitter and multiple receivers via a dedicated Gigabit network or port based VLAN.

Package Contents

No. 38266

- 4K HDMI & USB Over IP Extender Transmitter
- 1 x IR Emitter
- 1 x IR Receiver
- Power Supply with UK, US, AU and Euro adapters
- Lindy Quick Installation Guide

No. 38267

- 4K HDMI & USB Over IP Extender Receiver
- 1 x IR Emitter
- 1 x IR Receiver
- Power Supply
- C13 Power Cable
- Lindy Quick Installation Guide

Features

- Extends HDMI 4K@60 4:2:0, VGA, USB, RS-232, IR and audio signals over a gigabit network
- Supports point to point (direct and via network), point to multi-point and daisy-chain configurations
- Supports Power over Ethernet (PoE) for integration into PoE networks, removing the need for external PSUs
- Video Wall scaling Create a regular video wall using a single transmitter with multiple receivers
- Controlled and configured via the Video Over IP Controller (No.38263) or via WebGUI, Telnet and control panel buttons

Specifications

- Supports HDMI 2.0, DVI 1.0, HDCP 2.2 & 1.4 specification
- Max Input Resolutions: HDMI 4K@60Hz (4:2:0 8 bit) / VGA 1920x1200@60Hz (WUXGA)
- Converts HDMI 4K@60Hz (4:2:0 8 bit) input signals to a 4K@30Hz (4:4:4 8 bit) output signal
- Supports Audio pass-though (LPCM Stereo and Multichannel) over HDMI
- Features VGA Input and Output ports for legacy connections (no HDCP)
- Dedicated USB HID (KVM) and USB 2.0 (Peripheral) ports
- Supports Bi-directional RS-232 extension
- Supports Bi-directional IR extension
- Max distance: 100m using direct Point to Point configuration
- Supports regular Video Wall setup with 0° or 90° orientation

Please Note: To achieve the best performance mainly in the multicast configuration be sure to use these devices with a Gigabit Ethernet Switch with 8K Jumbo frame and IGMP snooping support

Please Note: due to bandwidth limitations of many 1GbE network switches, a maximum of 4 x 38266 units can be used in a single installation. To overcome this, please cascade 2 x network switches using a SFP/Mini GBIC

1000Base-SX Gigabit LC module, or alternatively use a network switch which can handle 2Gbps per port.

Overview

No. 38266 – Transmitter Unit - Front Panel



- 1. **Power LED** Flashes during power up and stays illuminated whilst the unit is operating.
- 2. Link LED Stays dark when there is no network connection present. Flashes whilst connecting to a receiver unit and stays illuminated once the connection is established.
- 3. **RS-232 port** To be connected to a PC or control system to control an RS-232 device connected to the receiver unit(s).
- 4. **ISP SEL** Must stay switched to the left to enable the RS-232 port. The right position function is reserved for future use.
- 5. **IR OUT** IR Emitter connection port.
- 6. **IR IN** IR Receiver connection port.
- 7. **IR Eye** Receives the IR signal directly from a standard IR remote control and delivers it to the device(s) connected to the receiver unit(s).
- 8. **LB / LINK** Press this button to toggle the VGA loopback port on or off. Press and hold this button for 3 seconds to disable or enable the video link. Keep pressed during the powering up phase until the Power and Link LEDs start blinking to reset the unit to factory defaults.
- 9. AD / MODE Press this button to switch between Graphic and Video modes. Graphic mode is designed to improve the detail in static images (such as a PC Desktop) whilst Video mode is for use with full motion video applications. Pressing the button for 3 seconds enables the Anti-Dither mode, it toggles between 1 bit, 2bit and off each time you perform this action.
- 10. ISP Reserved.
- 11. **RESET** Push this button using a clip to reboot the unit (settings won't be lost).
- VGA LOOPBACK port Connect a VGA monitor to monitor non-HDCP content connected to the HDMI or VGA input ports.



Rear Panel

- 1. **DC Power socket** Attach the supplied PSU here.
- USB Input Port Use an USB A/B cable (not supplied) to connect the PC or device to be controlled on the remote side.
- 3. LAN (PoE) Use a standard Cat.6 cable to connect to an Ethernet Gigabit Switch, if the switch is POE 802.3af

compliant it can power the unit avoiding the need to use the supplied PSU. Alternatively, this port can be used to create a direct point to point connection to a receiver.

- 4. VGA IN port Connect an analog video signal source using a standard VGA cable (not included).
- 5. HDMI IN port Connect a digital video signal source using a High Speed HDMI cable (not included).
- 6. **LINE IN port** Connect an analog audio source to be delivered on the LINE OUT on the receiver side. Please note this audio signal will replace the embedded audio stream of the HDMI signal.
- 7. LINE OUT port Connect an active speaker set or an audio amplifier to reproduce the signal coming from the MIC IN audio port on the receiver side.



No. 38267 – Receiver Unit - Front Panel

- 1. **Power LED** Flashes during power up and stays illuminated whilst the unit is operating.
- 2. Link LED Stays dark when there is no network connection present. Flashes whilst connecting to a transmitter unit and stays illuminated once the connection is established.
- 3. USB 2.0 ports Used to connect high speed devices like USB flash drives.
- 4. USB 1.1 ports Used to connect HID devices like mouse and keyboard.
- 5. RESET Push this button using a clip to reboot the unit (settings won't be lost).
- SWITCH / MODE Press this button to switch between VGA and HDMI sources. Press and hold this button for 3 seconds to switch between Graphic and Video modes. Graphic mode is designed to improve the detail in static images (such as a PC Desktop) whilst Video mode is for use with full motion video applications.
- CH+ / LINK Press this button to switch to the next stream channel on the network (if available). Press and hold this button for 3 seconds to disable or enable the video link. Keep pressed during the powering up phase until the Power and Link LEDs start blinking to reset the unit to factory defaults.
- 8. **CH** / **USB** Press this button to switch to the previous stream channel on the network (if available). If the unit is integrated in a multicast installation press and hold the button for 3 seconds disable or enable the USB link with the transmitter.
- 9. **IR Eye** Receives the IR signal directly from a standard IR remote control and delivers it to the device connected to the transmitter unit.
- 10. **IR IN** IR Receiver connection port.
- 11. IR OUT IR Emitter connection port.
- 12. **ISP SEL** Must stay switched to the left to enable the RS-232 port. The right position function is reserved for future use.
- 13. **RS232 port** Connect a serial device to be controlled from the transmitter side of the installation.

Rear Panel

English



- 1. **MIC IN** In a point to point installation connect a standard Microphone to send audio to the line out port of the transmitter (active only when an analog source is connected to the Line In port of the receiver).
- 2. LINE OUT port Connect a stereo active speaker set or an audio amplifier to reproduce the signal coming from LPCM 2.0 sources connected to the transmitter's LINE IN or embedded in HDMI stream.
- 3. **OPT OUT port** Connect a stereo active speaker set or an audio amplifier to reproduce the signal coming from LPCM 2.0 and bitstream sources connected to the transmitter's LINE IN or embedded in HDMI stream.
- 4. **HDMI OUT port** Connect a digital display or TV using a High Speed HDMI cable (not included).
- 5. VGA OUT port Connect an analog VGA display using a standard VGA cable (not included).
- 6. ISP Reserved
- 7. LAN 2 & 3 ports Connect Ethernet devices or more receivers to create a daisy chain installation
- 8. LAN 1 (PoE) Use a standard Cat.6 cable to connect to an Ethernet Gigabit Switch, if the switch is POE 802.3af compliant it can power the unit avoiding the need to use the supplied PSU. Alternatively, this port can be used to create a direct point to point connection to the transmitter.
- 9. **DC Power socket** Attach here the supplied PSU

IR Receivers and Emitter (Included with both No.38266 and 38267)



Installation

IMPORTANT!

As the extender uses the Broadcast protocol please ensure that you are using a dedicated network or a port based VLAN before connecting the extender, otherwise you may flood the network causing disruption for other connected devices.

Please follow the following steps to install the 4K HDMI & USB Over IP Extender system:

- 1. Please be sure that all the devices included in the installation are shut down
- Transmitter Unit 38266: Connect the PCs, servers or video signal source to be controlled through this extender system to the HDMI IN port or VGA IN port depending on the signal standard using a High Speed HDMI or Standard VGA cable.
 Receiver Unit No. 38267: Connect the HDMI or VGA display to the HDMI OUT or VGA OUT using a High

Speed HDMI or Standard VGA cable.

- 3. Connect, as required, the USB, Serial and Audio ports on the transmitter unit to the devices you want to control or extend with this system using standard cables. On the receiver unit No.38267 be sure to use the USB 1.1 ports only for HID devices like keyboards and mice.
- 4. Connect, as required, the IR receivers to the IR IN ports
- 5. Connect, as required, the IR emitters to the IR OUT ports

- 6. Connect the RJ45 Ethernet cable to the "LAN (PoE)" ("LAN 1 (PoE)" on the No.38267) port. If you are connecting the units to a Gigabit PoE (IEEE 802.3af compliant) switch you can skip the next step and avoiding using the supplied PSU.
- 7. Connect (if required) the supplied PSU DC plug to the DC 5V ports
- 8. Turn on all the connected devices.

Now all the connections are made and the system is ready to be configured and distribute the managed signals. Please refer to the Full manual published on this product page of the Lindy website (<u>www.lindy.com</u>) to proceed with a detailed configuration.

Note: The units, as factory default, are set in "Auto IP" mode getting an IP address from the 169.254.xxx.xxx range following the APIPA protocol to set a unique address in the network. This helps to quickly set up the signal distribution in a dedicated network. You can also get the IP configuration of both the transmitter and receiver units by pressing and holding the LB/LINK button on the transmitter unit or the CH+/LINK button the receiver unit for 3 seconds. This will stop (if working) the video link and shows (in 640x480 resolution) the IP settings of the units.

Operation

Please refer to the following section to control the device through the integrated WebGUI or with RS232 serial interface

WebGUI Control

All major functions of the unit, including status, streaming method, streaming channel selection, output resolution, video wall configuration, EDID management, Ethernet settings, and reset/firmware functions are controllable via multiple tabs in the WebGUI interface allowing for reasonably intuitive operation.

Each Transmitter and Receiver is controlled by its own WebGUI interface which may be accessed by opening a standard web browser on a PC and typing in the IP address of the unit you wish to connect to. If you do not already know the IP addresses of the units in your system, you can discover the IP addresses by disabling the streaming link on either the Transmitter or Receiver units in a connected system and connecting an HDMI display to each Receiver. This is done by pressing and holding the "LINK" button on the front of the unit for 3 seconds (The LINK light will blink rapidly, then turn off).

Once the link is broken, each connected Receiver will output 640×480 black screen with OSD text at the bottom identifying its own IP address (Local IP), as well as the IP address of the Transmitter (Remote IP) that shares the same broadcasting channel with it (channel 0 by default). After obtaining the IP address information, press and hold the "LINK" button again for 3 seconds to return the unit to normal operation (The LINK light will light up solid yellow).

Once you have connected to a unit's WebGUI, you will be presented with a screen containing multiple tabs for each functionality area of the unit. To view the contents of a tab, click on the appropriate button at the top of the window. The individual tabs and functions will be introduced in the following sections.

Video over IP streaming uses a large amount of bandwidth (especially at higher resolutions) and requires a Gigabit Ethernet network switch with jumbo frame support and IGMP snooping like the Lindy No.25047 or 25048. These units are professional managed switches with VLAN support and are strongly recommended for these applications. Please note that most consumer-grade routers are not able to handle the high traffic rates generated by multicast mode, so using a router directly as your network switch is discouraged. It is strongly suggested to avoid mixing your regular network traffic with VoIP streaming traffic and the VoIP traffic should exist within a separate subnet, at the minimum.

TRANSMITTER UNIT (No.38266) – Detailed WebGUI description

System Tab

The System tab of the transmitter unit WebGUI contains 4 windows that provide access to firmware version information, a firmware update interface, utilities for rebooting and resetting the unit, basic EDID management, Telnet command entry, and a variety of statistics and information about the operational state of the unit.

Version Information



This window displays detailed information about the current firmware version.

Update Firmware

System Video Wall Network Functions Sender
Version Information:
Vpdate Firmware:
Choose File No file chosen
Upload
Warning: Stop any service by disconnecting from the peer before you proceed to upgrade firmware.
Utilities:
Statistics:

Provides a way to update the Transmitter's firmware. Click "Choose File" to select the firmware update file from the local PC (*.bin format). After selecting an appropriate file, click the "Upload" button to begin the update process.

Utilities

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System Video Wall Network Functions Sende	r
Version Information:	
Update Firmware:	
* Utilities:	
Commands	
Factory Default Reboot	
Reset EDID to Default Value:	
Apply	
Console API Command	
Apply	
Output	
Statistics:	

The Utilities window allows users to reset the unit back to the factory defaults by clicking "Factory Default". The unit may be rebooted (without resetting settings) by pressing the "Reboot" button.

If the EDID received from the primary Receiver unit (selected via a checkbox on the preferred Receiver in Multicast mode) has compatibility issues with the connected HDMI source, the internal HDMI EDID (up to 4K30 w/audio) or VGA EDID (up to WUXGA wo/ audio) can be selected. Please press "Apply" after making the selection.

Note: This EDID setting will be reset if the unit is rebooted.

Finally, individual Telnet commands may be sent to the unit by using the "Console API Command" text entry field and pressing "Apply". Any responses from the unit will be displayed in the "Output" field.

Statistics

ystem	Video Wall	Network	Functions		Sende
 Versi 	on Information:				
 Upda 	te Firmware:			 	
 Utiliti 	es:				
 Statis 	stics:				
S	tate Machin	e			
St	ate: s_srv_on				
N	etwork				
ID	(Host Name):	0			
IP	Address: 192.1	68.1.21			
Su	ibnet Mask: 259	5.255.255.0			
De	fault Gateway:	192.168.1.2	54		
M	AC Address: F82	228500077E			
Ca	sting Mode: Mu	Iticast Mode			
Lir	nk Status: on				
Lir	nk Mode: 1G				
S/	N: "sn" not defi	ned			

The Statistics window shows all available information about the operational status of the unit, including current Host ID Name, Ethernet information, MAC address, unicast/multicast mode, link status and mode.

Video Wall Tab

The Video Wall tab allows user to design, edit and manipulate a video wall system created using multiple Receiver units connected to identical displays. The bezel and video size of the displays being used, as well as the horizontal and vertical monitor count, is defined here. Video stretch and rotation can also be controlled on this tab. Receivers in the video wall group (all Receivers sharing the same channel) can be controlled by any other unit within the same group. The Video Wall tab is accessible on both Transmitters and Receivers, however video wall settings may only be applied to Receiver units.

When saving changes on the Video Wall tab, remember to select the appropriate "Apply To:" target unit before pressing the "Apply" button. To make changes to the unit you are currently connected to, select "This" as the target. Otherwise, select the IP address of the Receiver (Client) you want to apply changes to from the "Apply To:" drop down.

Notes:

While it is possible to create small video walls using unicast mode, in order to more efficiently use the available network bandwidth, it is strongly recommended to only use multicast mode when creating video walls.

The Video Wall tab is optional, and will not show up in the WebGUI tab list unless the "Enable Video Wall" checkbox on the Functions tab is checked. It is not required to activate the Video Wall tab on Transmitters used within video wall systems.

	Vall Network	Functions	Send
lasic Setup:			
Bezel and	i Gap Compen	sation	
ow-			
1		H	ow
OH:		Full-surren Snip	T
1			
VW:			호 · · · · · · · · · · · · · · · · · ·
1		vw.	
VH:			± 7
1		UNIT: 0.1mm	I
Apply To: ".	All" device(s) in	the list	
All	•	Apply	
Wall Size	and Position	Layout Horizontal M	Noritor Count
Wall Size Vertical Mo 1 Horizontal 1	and Position onitor Count: Monitor Count:	Layout	forther Count
Wall Size Vertical Mo 1 Horizontal 1 Row Positi	and Position onitor Count: • Monitor Count: • •	Layout	Norther Count
Wall Size Vertical Mo 1 Horizontal 1 Row Positi 0	and Position onitor Count: Monitor Count: on:	Layout	Norther Count
Wall Size Vertical Mo 1 Horizontal 1 Row Positi 0 Column Po	and Position onitor Count: Monitor Count: v ion: v sition:	Layout	hortor Count
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Wall Size Vertical Mo 1 Morizontal Row Positi 0 Column Po 0 Preference Stretc Clockwise	and Position onitor Count: Monitor Count: on: sition: sition: ces ch Type: Fit In Rotate: 0	Layout	Norfor Court
Wall Size Vertical Mo 1 Horizontal 1 Row Positi 0 Column Po 0 Preference Stretc Clockwise	and Position onitor Count: Monitor Count: on: on: on: on: on: on: on: on: on: on	Layout	Norfor Court
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Bezel and Gap Compensation

This section of the Video Wall tab is used to define the physical dimensions of each display being used in the video wall. Accurate measurements are needed of the monitor's outer frame (OW, OH) and the video screen (VW, VH). The measurements may be made using any unit of measurement (inches, mm, cm, etc.) as long as ALL measurements in the same wall are made using the exact same units and the numbers are integers.

- OW (Outer Width): This is the horizontal measurement of the displays outer case.
- OH (Outer Height): This is the vertical measurement of the displays outer case.
- VW (Video Width): This is the horizontal measurement of the displays video screen.
- VH (Video Height): This is the vertical measurement of the displays video screen.

Note: Typically all monitors in a video wall are identical and have the same dimensions, but it is possible to use differently sized displays as long as the same measurement units are used to measure each display and the displays are still arranged in a normal rectangular layout with corners meeting at the same place.

Wall Size and Position Layout

This section of the Video Wall tab is used to define the number of displays used in the video wall as well as the location of the specific display within the video wall. A typical video wall consists of an equal number of horizontal and vertical monitors (for example: 2x2 or 3x3), however it is possible to create video walls using this system with a wider variety of dimensions as long as the end result is still a rectangle (for example: 5x1 or 2x3). Both horizontal and vertical dimensions are limited to a maximum of 8 displays.

- Vertical Monitor Count: Define the number of displays in the video wall, measured vertically. (Maximum is 8 displays)

- Horizontal Monitor Count: Define the number of displays in the video wall, measured horizontally. (Maximum is 8 displays)

- Row Position: Set the vertical location of the currently controlled display. (Counts top to bottom, from 0 to 7)
- Column Position: Set the horizontal location of the currently controlled display. (Counts left to right, from 0 to 7)

Preferences

This section of the Video Wall tab provides additional controls over how the source video is displayed on the video wall as well as providing a drop down to determine which Receiver to apply changed settings to.

- Stretch Type: Set the video stretch method.

- Selecting "Fit In" will expand the video to exactly fit the dimensions of the video wall regardless of the source's original aspect ratio.

- Selecting "Stretch Out" will zoom the video until the video wall is filled in all 4 dimensions while maintaining the aspect ratio of the original source.

- Clockwise Rotate: Set the rotation of the video output in 90 degree increments.
- Apply To: Select which unit(s) to send updated settings to when "Apply" is pressed.

- Selecting "All" will direct updates to the video wall settings of all units in the current video wall group (Transmitter and Receivers).

-Selecting "This" will direct updates to the video wall settings of the unit whose WebGUI you are currently connected to.

- Selecting an IP address from the "Hosts" list will direct updates to the video wall settings of the Transmitter with that IP address.

- Selecting an IP address from the "Clients" list will direct updates to the video wall settings of the Receiver with that IP address.

- Show OSD: Enables or disables the OSD display of the current channel selection.

Note: When setting up a new video wall, or changing the configuration of an existing one, remember to update the configuration of each Receiver in the system.

Network Tab

The Network tab provides controls over the Transmitter's broadcast channel, IP configuration, and network broadcast mode. Changes made to the network settings will require a reboot of the unit. After clicking on "Apply" please follow the reboot instructions in the WebGUI.

Note: If the IP address is changed then the IP address required for WebGUI access will also change accordingly. If the new address is assigned via "Auto IP" or "DHCP" it might be necessary to temporarily disable the Video Link between the Receiver and Transmitter in order to display the units' new IP addresses on the Receiver's HDMI output. Press and hold the LINK button for 3 seconds to enable or disable the Video Link.

vstem Video Wall	Network Functions	Send
Channel Setup		
Channel Selection	. 0 •	Apply
IP Setup		
IP Mode	Auto IP DHCP Static	
IP Address	192.168.1.21	
Subnet Mask	255.255.255.0	
Default Gateway	192.168.1.254	
Find Your Device:	Hide Me Show Me	
		Apply
Casting Mode		
Multicast	Unicast	
		Apply
	Reboot	

Channel Setup

Use the dropdown to select the broadcast channel for the Transmitter. All Receivers on the local network that are set to the same channel will receive video from this Transmitter. The available channel range is from 0 to 255.

Note: Every Transmitter within the same local network must be assigned a different broadcast channel in order to avoid conflicts.

IP Setup

This section allows for configuration of the IP acquisition mode and Ethernet settings of the unit. It also provides an easy way to find the physical unit when installed with many other similar units.

- IP Mode & Settings: The IP mode may be switched between "Auto IP", "DHCP" or "Static IP". When the unit is set to Auto IP mode it will automatically assign itself an APIPA address from the 169.254.xxx.xxx range. When the unit is set to DHCP mode it will attempt to automatically obtain an IP address from a DHCP server. When the IP mode is set to static IP, you can manually set the IP address, netmask and gateway address. Click the "Apply" button to save changes made to the IP Mode or Configuration.

Note: The default network setting for this unit is "Auto IP".

- Find Your Device: Selecting "Show Me" will cause the unit to immediately begin flashing the LEDs on the front of the unit to make it easy to find. Selecting "Hide Me" returns the LEDs to their normal behaviour. This setting is useful when troubleshooting an installation with a large number of units in a rack.

Casting Mode

Allows for the selection of the broadcasting mode used by the Transmitter. Click the "Apply" button to save changes made to the broadcasting mode.

Note: Receivers must be set to the same mode as the Transmitter in order to receive video.

- Multicast: This mode sends a single video stream that can be viewed simultaneously by multiple receivers without increasing bandwidth usage. This mode is ideal for video wall or matrixing scenarios. Multicast mode requires a network switch with IGMP snooping enabled.

Note: The 3 port network switch built into the Receiver units supports IGMP snooping and may be used to distribute a multicast stream.

- Unicast: This mode uses a discrete video stream for every connected Receiver and is ideal for simple, pointto-point, streaming setups. This mode uses considerably more bandwidth than Multicast mode when multiple Receivers are being used, however it does not require a network switch that supports IGMP snooping.

Functions Tab

The Functions tab provides control over the Transmitter's video source selection, streaming bandwidth/quality settings, as well as a wide variety of optional features and functions, including USB and Serial control extension. Changes made to these settings typically require a reboot of the unit. After clicking on "Apply" please follow the reboot instructions in the WebGUI, if necessary.

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HDMI	VGA	
Maximum Bit Rate:	Unlimited	
Maximum Frame Ra	te: Capture up to 100% of frames	
USB over IP		
Operation Mode: Auto select m Active on link	ode (Recommanded, choose per network casting mode) (Unicast network's default mode) uset (Multicast network's default mode)	
Compatibility Mode Mouse not res K/M over IP (sponding well (Check when USB mouse responding is slow and queer) Uncheck when mouse/keyboard/touch panel not working as expecte Apply) :d)
Compatibility Mode	sponding well (Check when USB mouse responding is slow and queer) Uncheck when mouse/keyboard/touch panel not working as expecte Aoply) :d)
Compatibility Mode Mouse not res K/M over IP	sponding well (Check when USB mouse responding is slow and queer) Uncheck when mouse/keyboard/touch panel not working as expecte Apply) d)
Compatibility Mode Mouse not res K/M over IP (Serial over IP Baudrate: Data bits:	sponding well (Check when USB mouse responding is slow and queer) Uncheck when mouse/keyboard/touch panel not working as expecte Apply) :d)
Compatibility Mode Mouse not res K/M over IP (Serial over IP Baudrate: Data bits: Parity:	sponding well (Check when USB mouse responding is slow and queer) Uncheck when mouse/keyboard/touch panel not working as expecte Apply) d)
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Compatibility Mode Mouse not re K/M over IP Serial over IP Baudrate: Data bits: Parity: Stop bits:	sponding well (Check when USB mouse responding is slow and queer) Uncheck when mouse/keyboard/touch panel not working as expecte) .d)

Video over IP

This section allows control over many critical functions of the Transmitter including: selection of the input source, enabling/disabling the VoIP stream, enabling access to the Video Wall tab, and controlling the streaming bit rate and quality.

- HDMI/VGA: Switch between the HDMI or VGA input on the Transmitter.

- Enable Video over IP: Unchecking this checkbox will disable the VoIP stream completely. This option should always remain checked unless troubleshooting is being performed.

- Enable Video Wall: Checking this box will enable the Video Wall tab in the WebGUI.

Note: It is not required to enable this on the Transmitter to set up a video wall. Only Receiver units require this to be enabled.

- Maximum Bit Rate: Set the maximum bit rate that can be used by a single video stream. Available options are: Unlimited, 400 Mbps, 200 Mbps, 100 Mbps, 50 Mbps. Selecting "Unlimited" will use up to the maximum available bandwidth in order to maintain a full framerate video stream.

Note: While it is generally suggested to select "Unlimited" when streaming 4K video sources, the amount of bandwidth required can be very large and will limit the number of concurrent video streams.

- Maximum Framerate: Adjusting this slider will set the percentage of frames from the source video to encode (2–100%). This is ideal for reducing the bandwidth requirements of high-resolution, but limited motion, sources such as power point presentations or information screens.

Note: If the framerate is lowered too far with motion video sources, the video will become noticeably choppy.

USB over IP

This section provides controls for the USB over IP extension functionality, including enabling/disabling USB support, changing the USB operational mode, and enabling special compatibility modes.

- Enable USB over IP: Unchecking this checkbox will completely disable support for USB over this stream. This option should generally remain checked, but, if USB support is not required, disabling this feature can save some bandwidth.

- Operation Mode: Sets the USB extension mode. Available options are Auto, Active on link (Unicast optimized), and Active per request (Multicast optimized). Auto mode is set by default and will automatically select the correct mode depending on the broadcast mode of the unit.

- Compatibility Mode: These troubleshooting options enable specialized optimizations to solve issues when a mouse or touch panel is not responding properly. They should normally be left unchecked.

Serial over IP

This section provides controls for the Serial over IP extension functionality, including enabling/disabling Serial support and setting the RS-232 data configuration.

- Enable Serial over IP: Unchecking this checkbox will completely disable support for sending RS-232 commands over this stream. This option should generally remain checked, but, if serial support is not required, disabling this feature can save a very small amount of bandwidth.

- Serial Settings: Set the desired baud rate, data bits, parity, and stop bit for the RS-232 signal to extend.

Note: The Transmitter and Receiver must have the same serial settings.

RECEIVER UNIT (No.38267) – Detailed WebGUI description

System Tab

The System tab contains 4 windows that provide access to firmware version information, a firmware update interface, utilities for rebooting and resetting the unit, Telnet command entry, and a variety of statistics and information about the operational state of the unit.

Version Information

System Video Wall Network Functions	Receiver
Version Information:	
Fri, 30 Nov 2018 16:55:44 +0800 1220018624 204988 u-boot_c.bin 407376008 318220 uUTmage 2960867393 14612480 initro12m Kernel Version : 47.3.0 Application Version : V3.11	
Update Firmware:	
Utilities:	
Statistics:	

This window displays detailed information about the current firmware version.

Update Firmware

LINDY
System Video Wall Network Functions Receiver
Version Information:
Update Firmware:
Choose File No file chosen
Upload
Warning: Stop any service by disconnecting from the peer before you proceed to upgrade firmware.
→ Utilities:
Statistics:

Provides a way to update the Receiver's firmware. Click "Choose File" to select the firmware update file from the local PC (*.bin format). After selecting an appropriate file, click the "Upload" button to begin the update process.

Utilities

.

System Video Wall Network Functions	Receiver
Version Information:	
Update Firmware: Utilities:	
Commands	
Factory Default Reboot	
Console API Command	
	Apply
Output	
Statistics:	

The Utilities window allows users to reset the unit back to the factory defaults by clicking "Factory Default". The unit may be rebooted (without resetting settings) by pressing the "Reboot" button.

Individual Telnet commands may also be sent to the unit by using the "Console API Command" text entry field and pressing "Apply". Any responses from the unit will be displayed in the "Output" field.

Statistics

ystem	Video Wall	Network	Functions		Receive
 Versio 	n Information:				
 Updat 	e Firmware:			 	
 Utilitie 	25:				
 Statist 	tics:				
St	ate Machin	e			
Sta	ate: s_srv_on				
Ne	etwork				
ID	(Host Name):	F8228500078	31		
IP	Address: 192.:	168.1.14			
Sul	bnet Mask: 25	5.255.255.0			
Def	fault Gateway:	192.168.1.2	54		
MA	C Address: F8	2285000781			
Cas	sting Mode: Mu	ulticast Mode			
Lin	k Status: on				
Lin	k Mode: 1G				
S/N	N: "sn" not def	ined			

The Statistics window shows all available information about the operational status of the unit, including current Host ID Name, Ethernet information, MAC address, unicast/multicast mode, link status and mode.

Video Wall Tab

The Video Wall tab allows user to design, edit and manipulate a video wall system created using multiple Receiver units connected to identical displays. The bezel and video size of the displays being used, as well as the horizontal and vertical monitor count, is defined here. Video stretch and rotation can also be controlled on this tab. Receivers in the video wall group (all Receivers sharing the same channel) can be controlled by any other unit within the same group. The Video Wall tab is accessible on both Transmitters and Receivers, however video wall settings may only be applied to Receiver units.

When saving changes on the Video Wall tab, remember to select the appropriate "Apply To:" target unit before pressing the "Apply" button. To make changes to the unit you are currently connected to, select "This" as the target. Otherwise, select the IP address of the Receiver (Client) you want to apply changes to from the "Apply To:" drop down.

Notes:

While it is possible to create small video walls using unicast mode, in order to more efficiently use the available network bandwidth, it is strongly recommended to only use multicast mode when creating video walls.

The Video Wall tab is optional, and will not show up in the WebGUI tab list unless the "Enable Video Wall" checkbox on the Functions tab is checked.

asic Setup: Bezel and Gap Compensation OW: 9000 OH: 5120 VW: 8890 VW: 8890 VH: 5009 Apply To: "All" device(s) in the list	OW
Bezel and Gap Compensation OW: 9000 OH: \$120 VW: 8890 VH: \$009	OW Market Street VW MUT: & time
OW: 9000 OH: 5120 VW: 8890 VH: 5009	000
9000 0H: 5120 VW: 8890 VH: 5009 0	OW T VW VW LWTC.6.tmm
000 OH: \$120 VW: 8590 VH: 5009	VW Statem
S120 VW: 8890 VH: 5009	vw i ····································
VW: 8890 VH: 5009 Apply To: "All" device(s) in the list	VW
8890 VH: S009 Apply To: "All" device(s) in the list	VW
VH: S009 Apply To: "All" device(s) in the list	UNIT: 0. fmm
S009 Apply To: "All" device(s) in the list	UNIT: 0.1mm
Apply To: "All" device(s) in the list	
Horizontal Monitor Count:	
Row Position:	· · ·
0	
Column Position:	···· Ĩ
0 ·	UNIT: Penel

Bezel and Gap Compensation

This section of the Video Wall tab is used to define the physical dimensions of each display being used in the video wall. Accurate measurements are needed of the monitor's outer frame (OW, OH) and the video screen (VW, VH). The measurements may be made using any unit of measurement (inches, mm, cm, etc.) as long as ALL measurements in the same wall are made using the exact same units and the numbers are integers.

- OW (Outer Width): This is the horizontal measurement of the displays outer case.
- OH (Outer Height): This is the vertical measurement of the displays outer case.
- VW (Video Width): This is the horizontal measurement of the displays video screen.
- VH (Video Height): This is the vertical measurement of the displays video screen.

Note: Typically all monitors in a video wall are identical and have the same dimensions, but it is possible to use differently sized displays as long as the same measurement units are used to measure each display and the displays are still arranged in a normal rectangular layout with corners meeting at the same place.

Wall Size and Position Layout

This section of the Video Wall tab is used to define the number of displays used in the video wall as well as the location of the specific display within the video wall. A typical video wall consists of an equal number of horizontal and vertical monitors (for example: 2x2 or 3x3), however it is possible to create video walls using this system with a

wider variety of dimensions as long as the end result is still a rectangle (for example: 5×1 or 2×3). Both horizontal and vertical dimensions are limited to a maximum of 8 displays.

- Vertical Monitor Count: Define the number of displays in the video wall, measured vertically. (Maximum is 8 displays)

- Horizontal Monitor Count: Define the number of displays in the video wall, measured horizontally. (Maximum is 8 displays)

- Row Position: Set the vertical location of the currently controlled display. (Counts top to bottom, from 0 to 7)
- Column Position: Set the horizontal location of the currently controlled display. (Counts left to right, from 0 to 7)
- Preferences

This section of the Video Wall tab provides additional controls over how the source video is displayed on the video wall as well as providing a drop down to determine which Receiver to apply changed settings to.

- Stretch Type: Set the video stretch method.

- Selecting "Fit In" will expand the video to exactly fit the dimensions of the video wall regardless of the source's original aspect ratio.

- Selecting "Stretch Out" will zoom the video until the video wall is filled in all 4 dimensions while maintaining the aspect ratio of the original source.

- Clockwise Rotate: Set the rotation of the video output in 90 degree increments.

Apply To:

Select which unit(s) to send updated settings to when "Apply" is pressed.

- Selecting "All" will direct updates to the video wall settings of all units in the current video wall group (Transmitter and Receivers).

- Selecting "This" will direct updates to the video wall settings of the units WebGUI that you are currently connected to.

- Selecting an IP address from the "Hosts" list will direct updates to the video wall settings of the Transmitter with that IP address.

- Selecting an IP address from the "Clients" list will direct updates to the video wall settings of the Receiver with that IP address.

Show OSD

Enables or disables the OSD display of the current channel selection.

Note: When setting up a new video wall, or changing the configuration of an existing one, remember to update the configuration of each Receiver in the system.

Network Tab

The Network tab provides controls over the Receiver's broadcast reception channel, IP configuration, and network broadcast mode. Changes made to the network settings will require a reboot of the unit. After clicking on "Apply" please follow the reboot instructions in the WebGUI.

Note: If the IP address is changed then the IP address required for WebGUI access will also change accordingly. If the new address is assigned via "Auto IP" or "DHCP" it might be necessary to temporarily disable the Video Link between the Receiver and Transmitter in order to display the units' new IP addresses on the Receiver's HDMI output. Press and hold the LINK button for 3 seconds to enable or disable the Video Link.

stem Video Wall	Network Functions	Receiv
Channel Setup		
Channel Selection:	0 •	Apply
IP Setup		
IP Mode:	Auto IP DHCP Static	
IP Address:	192.168.1.14	
Subnet Mask:	255.255.255.0	
Default Gateway:	192.168.1.254	
Find Your Device:	Hide Me Show Me	
		Apply
Casting Mode		
Multicast	Jhicast	
		Apply
	Debas	
	Reboot	

Channel Setup

Use the dropdown to select the broadcast reception channel for the Receiver. The Receiver will display the video stream from the Transmitter using the selected broadcast channel. The available channel range is from 0 to 255.

IP Setup

This section allows for configuration of the IP acquisition mode and Ethernet settings of the unit. It also provides an easy way to find the physical unit when installed with many other similar units.

- IP Mode & Settings: The IP mode may be switched between "Auto IP", "DHCP" or "Static IP". When the unit is set to Auto IP mode it will automatically assign itself an APIPA address from the 169.254.xxx.xxx range. When the unit is set to DHCP mode it will attempt to automatically obtain an IP address from a DHCP server. When the IP mode is set to static IP, you can manually set the IP address, netmask and gateway address. Click the "Apply" button to save changes made to the IP Mode or Configuration.

Note: The default network setting for this unit is "Auto IP".

- Find Your Device: Selecting "Show Me" will cause the unit to immediately begin flashing the LEDs on the front of the unit to make it easy to find. Selecting "Hide Me" returns the LEDs to their normal behaviour. This setting is useful when troubleshooting an installation with a large number of units in a rack.

Casting Mode

Allows for the selection of the network broadcast mode supported by the Receiver. Click the "Apply" button to save changes made to the broadcast mode.

Note: Receivers must be set to the same mode as the Transmitter in order to receive video.

- Multicast: This mode sends a single video stream that can be viewed simultaneously by multiple receivers without increasing bandwidth usage. This mode is ideal for video wall or matrixing scenarios. Multicast mode requires a network switch with IGMP snooping enabled.

Note: The 3 port network switch built into the Receiver units supports IGMP snooping and may be used to distribute a multicast stream.

- Unicast: This mode uses a discrete video stream for every connected Receiver and is ideal for simple, point-topoint, streaming setups. This mode uses considerably more bandwidth than Unicast mode when multiple Receivers are being used, however it does not require a network switch that supports IGMP snooping.

Functions Tab

The Functions tab provides control over the Receiver's output resolution, video loss settings, as well as a wide variety of optional features and functions, including USB and Serial control extension. Changes made to these settings typically require a reboot of the unit. After clicking on "Apply" please follow the reboot instructions in the WebGUI, if necessary.

Video Wall Network Functions Recci deo over IP Enable Video over IP Enable Video over IP Copy EDID from this Video Output (Default disabled under multicast mode) Image: Copy EDID from this Video Output (Default disabled under multicast mode) meout for Detecting Video Lost: ID seconds Image: Copy EDID from this Video Output (Default disabled under multicast mode) meout for Detecting Video Lost: ID seconds Image: Copy EDID from this Video Copy EDID from	Lauran Marine		
teo over IP Enable Video over IP Enable Video over IP Enable Video over IP Enable Video Output (Default disabled under multicast mode) Fide and Space over and the space over a	Video Wall	Network Function	Recei
table Video over IP Copy EDID from this Video Output (Default disabled under multicast mode) For any Second Secon	eo over IP		
Copy EDID from this Video Output (Default disabled under multicast mode) Record for Detecting Video Lost [D seconds Frum off screen on video lost Appl Appl Appl Appl Appl Appl Appl Ap	nable Video over 1	P	
neout for Detecting Video Lost: 10 seconds Furn off screen on video lost App App App App App App App App App A	opy EDID from thi	s Video Output (Def	ault disabled under multicast mode)
Appl Appl Appl Appl Appl Appl Appl Appl	eout for Detecting urn off screen on	Video Lost: 10 seco video lost	nds •
Aler Output Mode: HD(1080p)@60 Heo Select Lock for Device Button: Lock Unlock Bover IP aration Mode: Auto select mode (Recommanded, choose per network casting mode) Active per request (Multicast network's default mode) Active per request (Multicast network's default mode) Active per request (Multicast network's default mode) Inputibility Mode: K/M over IP (Uncheck when mouse/keyboard/touch panel not working as expect Inputibility Mode: K/M over IP (Uncheck when mouse/keyboard/touch panel not working as expect Acpo rial over IP Baudrate: I15200			Apply
leo Select Lock for Device Button: Lock Unleck B over IP anable USB over IP Auto select mode (Recommanded, choose per network casting mode) Active on link (Unleast network's default mode) Active per request (Multicast network's default mode) npatibility Mode: K/M over IP (Uncheck when mouse/keyboard/touch panel not working as expect	ler Output Mode:	HD(1080p)@60	•
iB over IP inable USB over IP aration Mode: Auto select mode (Recommanded, choose per network casting mode) Active on link (Unicast network's default mode) mpatibility Mode: K/M over IP (Uncheck when mouse/keyboard/touch panel not working as expect rial over IP mable Serial over IP Baudrate: 115200	eo Select Lock for	Device Button:	Lock Unlock
mpatibility Mode: If K/M over IP (Uncheck when mouse/keyboard/touch panel not working as expect rial over IP inable Serial over IP Baudrate: 115200	nable USB over IP		
Appl rial over IP Baudrate: 115200	nable USB over IP rration Mode: atu o select mod Active on link (1 Active per requi	le (Recommanded, c Jnicast network's de 1911 (Multicast netwo	hoose per network casting mode) ifault mode) rk's default mode)
Enable Serial over IP Baudrate: 115200	Auto select mod Auto select mod Active on link (1 Active per requi Active per requi Ipatibility Mode: K/M over IP (U	le (Recommanded, c Inicast network's d est (Multicast netwo	huose per network casting mode) ifault mode) ifs default mode) /keyboard/touch panel not working as expected
Baudrate: 115200 🔻	ration Mode: * Auto select mod Active on link (1 Active per requiring upatibility Mode: K/M over IP (U)	e (Recommanded, c inicast network's d est (Multicast netwo hcheck when mouse	hoose per network casting mode) fault mode) rk's default mode) /keyboard/touch panel not working as expected Apply
	ration Mode: * Auto select mod Active on link (1 Active per reque apatibility Mode: K/M over IP (U) ial over IP	e (Recommanded, Arter Stevensen) Inicast network's de set (Multicast netwo Incheck when mouse	hoose per network casting mode) fault mode) rk's default mode) /keyboard/touch panel not working as expected Apply
Data bits: 8 -	ration Mode: * Auto select mod Active on link (1 Active per requi- apatibility Mode: K/M over IP (U) tal over IP nable Serial over 1 Baudrate:	le (Recommanded, de Inicast network's de set (Multicast netwo ncheck when mouse p	hoose per network casting mode) fault mode) rk's default mode) /keyboard/touch panel not working as expected keyboard/touch panel not working as expected
Parity: None +	able USB over IP ration Mode: Auto select mol Active on link Active per requ apatibility Mode: K/M over IP rational over IP nable Serial over I Baudrate: Data bits:	e (Recommanded, e Inicast network's de set (Hulticast netwo scheck when mouse p p 15200	hoose per network casting mode) fault mode) rk's default mode) /keyboard/touch panel not working as expected Apply
Stop bits: 1 -	able USB over IP ration Mode: Auto select mod Active on link (Active per requ apatibility Mode: K/M over IP (U lial over IP nable Serial over I Baudrate: Data bits: Parity: P	e (Recommanded, de la commanded, de la commanded, de la commanded, de la commanded, de la commande de la commande de la comman	hoose per network casting mode) fault mode) rk's default mode) /keyboard/touch panel not working as expected Apply

Video over IP

This section allows control over many critical functions of the Receiver including: enabling/disabling the VoIP stream, enabling access to the Video Wall tab, controlling the scaler/output resolution, and controlling the behaviour upon signal loss.

- Enable Video over IP: Unchecking this checkbox will disable the VoIP stream completely. This option should always remain checked unless troubleshooting is being performed.

⁻ Enable Video Wall: Checking this box will enable the Video Wall tab in the WebGUI.

- Copy EDID: When multiple Receivers are connected to a single Transmitter in multicast mode, this check box selects which of the Receivers should send its EDID to the Transmitter for use with the source.

Note: This option is only available in multicast mode.

- Scaler Output Mode: Use the drop down list to select the preferred output resolution for the scaler. Selecting one of the specific resolutions will output all video at that resolution. Selecting "Pass- Through" will output the source video at its original resolution.

Selecting "Native" will attempt to scale to the detected native resolution of the display connected to the HDMI output.

- Video Loss Options: Use the drop down to set the length of time to wait for a lost source to return before showing the Link Lost screen. Available options are: 3, 5, 10, 20, 30, 60 seconds, or Never Timeout. If the "Turn off screen" checkbox is checked, the HDMI output will be completely disabled, including sync, after the timeout time has passed.

USB over IP

This section provides controls for the USB over IP extension functionality, including enabling/disabling USB support, changing the USB operational mode, and enabling special compatibility modes.

- Enable USB over IP: Unchecking this checkbox will completely disable support for USB over this stream. This option should generally remain checked, but, if USB support is not required, disabling this feature can save some bandwidth.

- Operation Mode: Sets the USB extension mode. Available options are Auto, Active on link (Unicast optimized), and Active per request (Multicast optimized). Auto mode is set by default and will automatically select the correct mode depending on the broadcast mode of the unit.

- Compatibility Mode: These troubleshooting options enable specialized optimizations to solve issues when a mouse or touch panel is not responding properly. They should normally be left unchecked.

Serial over IP

This section provides controls for the Serial over IP extension functionality, including enabling/disabling Serial support and setting the RS-232 data configuration.

- Enable Serial over IP: Unchecking this checkbox will completely disable support for sending RS-232 commands over this stream. This option should generally remain checked, but, if serial support is not required, disabling this feature can save a very small amount of bandwidth.

- Serial Settings: Set the desired baud rate, data bits, parity, and stop bit for the RS-232 signal to extend.

Note: The Transmitter and Receiver must have the same serial settings.

TELNET CONTROL

Please refer to the following Telnet command list to setup your configuration through an IP or Serial RS-232 connection.

GENERAL COMMANDS - Valid for both the Transmitter (No.38266) and Receiver (No.38267) unit

COMMAND	COMMAND SINTAX	DESCRIPTION
CLASS		

HELP	HELP	Show the full command list.
	HELP N1	Show help details about command N1.
		N1 = {Any command name}
NETWORK	GET_IPCONFIG	Show the current IP configuration.
	SET_IP_MODE N1	Set the IP configuration mode.
		Available values for N1:
		0 [Static IP Mode]
		[DHCP Mode] [Auto IP Mode]
		2 [Auto in Mode].
		Show the current IP configuration mode.
	SET_IP_ADDRESS N1	Set the static IP address. N1 = X.X.X.X $[X = 0~255]$
	GET_IP_ADDRESS	Show the current IP address
	SET_NETMASK N1	Set the Ethernet netmask. N1 = X.X.X. $[X = 0~255]$
	SET_NETMASK N1	Set the Ethernet netmask. N1 = X.X.X. [X = 0~255]
	GET_NETMASK	Show the current Ethernet netmask.
	SET_GATEWAY N1	Set the IP gateway address. N1 = X.X.X.X [X = 0~255]
NETWORK	GET_GATEWAY	Show the current gateway address.
	SET_JUMBO_MTU N1	Enable/disable the jumbo frame MTU. Available values for N1: 0 [Disabled] 1 [Enabled]
	GET_JUMBO_MTU	Show the jumbo frame MTU state.
SYSTEM	GET_HARDWARE_VERSION	Show the current hardware version.
	FACTORY_RESET N1	Perform a factory reset on the unit and select the IP mode after the reset completes. Available values for N1: 0 [Reset into Static IP mode] 1 [Reset into Auto IP mode]
	REBOOT	Reboot the unit.
QEDIAL		Enable/diaphle Sarial hymans average
JEKIAL	SEI_SERIAL_ALLOW NI	Available values for N1: 0 [Disabled] 1 [Enabled]

English

	GET_SERIAL_ALLOW	Show the current Serial bypass support state.
	SET_SERIAL_BAUD N1	Set the Serial baud rate. Available values for N1: 0 [300] 1 [600] 2 [1200] 3 [2400] 4 [4800] 5 [9600] 6 [19200] 7 [38400] 8 [57600] 9 [115200]
	GET_SERIAL_BAUD	Show the current Serial baud rate.
	SET_SERIAL_BITS N1	Set the number of Serial data bits. Available values for N1: 0 [5 bits] 1 [6 bits] 2 [7 bits] 3 [8 bits]
	GET_SERIAL_BITS	Show the current number of Serial data bits.
	SET_SERIAL_PARITY N1	Set the Serial parity bit.Available values for N1:0[None]1[Odd]2[Even]
	GET_SERIAL_PARITY	Show the current Serial parity bit.
	SET_SERIAL_STOP N1	Set the Serial stop bits. Available values for N1: 0 [1] 1 [2]
	GET_SERIAL_STOP	Show the current Serial stop bits.
USB	SET_USB_ALLOW N1	Enable/disable USB support. Available values for N1: 0 [Disabled] 1 [Enabled]
	GET_USB_ALLOW	Show current USB support state.
VIDEO	VIDEO_SOURCE_HDMI	Select HDMI as the video input source.
	VIDEO_SOURCE_VGA	Select VGA as the video input source.

TRANSMITTER UNIT (No.38266) - Specific TELNET commands description

English

COMMAND SINTAX	DESCRIPTION
SET_TX_CHANNEL N1	Set the VoIP transmission channel. N1 = 0 ~255
GET_TX_CHANNEL	Show the current VoIP transmission channel.
SET_PQ_MODE N1	Set the Tx video optimization mode.
	Available values for N1:
	0 [Graphic optimized mode]
	1 [Video optimized mode]
GET_PQ_MODE	Show the current Tx video optimization mode.
SET_HDCP_ALLOW N1	Enable/disable HDCP encrypted source support.
	Available values for N1:
	0 [Disabled]
	1 [Enabled]
GET_HDCP	Show the current HDCP support state.
SET_USB_MOUSE N1	Set the USB mouse performance
	mode.
	Available values for N1:
	0 [High resolution mode]
	1 [Compatibility mode]
GET_USB_MOUSE	Show the current USB mouse
SET_BANDWIDTH N1	Set the broadcast stream bandwidth
	maximum.
	Available values for N1: 0 [50 Mbps]
	1 [100 Mbps]
	2 [200 Mbps]
	3 [400 Mbps]
	4 [Unlimited]
SET_FRAME_RATE N1	Set the percentage of frames from the source video to encode.
	N1 = 2~100 [Frame Percent]

English

SET_VW_OSD N1 {N2}	Enable/disable video wall OSD to display the Target Receiver number on the designated display.
	Available values for N1:
	0 [Disable]
	1 [Enable]
	N2 = 0~255 [Target Rx {Optional}]
SET_VW_LAYOUT N1 N2 {N3}	Set the video wall's total horizontal and vertical display count.
	N1 = 1~16 [Horizontal display count]
	N2 = 1~16 [Vertical display count]
	N3 = 0~255 [Target Rx {Optional}]
	Note: Target Receiver number can be obtained by turning on the Video Wall OSD. Omitting N3 makes the settings global to all Receivers.
SET_VW_POS N1 N2 {N3}	Set the display's position within the video wall. (Cannot exceed the video wall's
	N1 = 0.15 [Pow]
	NI = 0 - 15 [ROW]
	$N_2 = 0 - 15 [Column]$
	Note: Target Receiver number can be obtained by turning on the Video Wall OSD. Omitting N3 makes the settings global to all Receivers.
SET_VW_BC N1 N2 N3 N4 {N5}	Set the video wall display's bezel
	compensation values.
	N1 = 0~99999 [Video width]
	N2 = 0~99999 [Total display width] N3 = 0~99999 [Video height]
	N4 = 0~99999 [Total display height]
	N5 = 0~255 [Target Rx {Optional}]
	Note: Target Receiver number can be obtained by turning on the Video Wall OSD. Omitting N5 makes the settings global to all Receivers.
SET_VW_HSCALE N1 {N2}	Set the video wall display's horizontal zoom amount.
	N1 = 0~99999 [Zoom amount in 1 pixel units]
	N2 = 0~255 [Target Rx {Optional}]
	Note: Target Receiver number can be obtained by turning on the Video Wall OSD. Omitting N2 makes the setting global to all Receivers.

SET_VW_VSCALE N1 {N2}	Set the video wall display's vertical
	zoom amount.
	N1 = 0~99999 [Zoom amount in 1
	pixel units]
	N2 = 0~255 [Target Rx {Optional}]
	Note: Target Receiver number can be obtained by turning on the Video Wall OSD. Omitting N2 makes the setting global to all Receivers.
SET_VW_SHIFT N1 N2 {N3}	Set the video wall display's output shift.
	Available values for N1: U [Shift up]
	D [Shift down]
	L [Shift left]
	R [Shift right]
	$N2 = 0 \sim 80000$ [Pixel shift amount. Must be in increments of 8.]
	N3 = 0~255 [Target Rx {Optional}]
	Note: Target Receiver number can be obtained by turning on the Video Wall OSD. Omitting N3 makes the setting global to all Receivers.
SET_VW_DELAY N1 {N2}	Set the video wall display delay.
	N1 = 0~99999 [Delay inmicroseconds]
	N2 = 0~255 [Target Rx {Optional}]
	Note: Target Receiver number can be obtained by turning on the Video Wall OSD. Omitting N2 makes the setting global to all Receivers.

RECEIVER UNIT (No.38267) – Specific TELNET commands description

COMMAND SINTAX	DESCRIPTION
SET_EDID_COPY N1	Copy and use the EDID of the connected display. Available values of N1: 0 [Disabled] 1 [Enabled]
GET_EDID_COPY	Show the state of the EDID copy function.
R N1	Select the VoIP transmission channel to display. N1 = 0~255
GET_RX_CHANNEL	Show the currently selected VoIP transmission channel.

English

SET_OUTPUT_RES N1	Set the output resolution. Available values for N1:		
	0	[640×480@60Hz]	
	2	[800×600@60Hz]	
	4	[1024×768@60Hz]	
	6	[1280×768@60Hz]	
	7	[1280×800@60Hz]	
	8	[1280×1024@60Hz]	
	10	[1360x768@60Hz]	
	11	[1366x768@60Hz]	
	12	[1440×900@60Hz]	
	14	[1400×1050@60Hz]	
	15	[1600×900@60Hz]	
	16	[1600x1200@60Hz]	
	17	[1680×1050@60Hz]	
	20	[1920x1200@60Hz]	
	22	[Pvpass]	
	23	[Auto-Detect]	
	24	[480i@60H7]	
	25	[576i@50Hz]	
	26	[480n@60Hz]	
	28	[576n@50Hz]	
	29	[770n@60Hz]	
	31	[720n@50Hz]	
	32	[720p@30Hz]	
	34	[720n@25Hz]	
	35	[1080i@60Hz]	
	37	[1080i@50Hz]	
	38	[1080n@60Hz]	
	40	[1000p@50Hz]	
	41	[1080p@30Hz]	
	43	[1080p@25Hz]	
	44	[1080p@24Hz]	
	Note: Downs	scaling is limited to 1/2 of the horizontal/vertical pixels of the	
	source. For example: 3840×2160 (4K) to 1920×1080 (1080p) is OK, but		
SET VW N1	Enable/disable video wall functionality.		
_		Available values for N1:	
	0 [Disat	ble]	
	1 [Enab	le]	
	-	- Show video well functionality status	
SET_VW_OSD N1	Enable/disable video wall OSD to display the Target Receiver number on the connected display.		
		Available values for N1:	
	0 [Disat	ole]	
	1 [Enab	le]	
GET_VW_OSD		Show the current video wall OSD state.	

SET_VW_LAYOUT N1 N2	Set the video wall's total horizontal and vertical display count.
	N1 = $1 \sim 16$ [Horizontal display count]
	N2 = 1~16 [Vertical display count]
GET_VW_LAYOUT	Show the video wall's total horizontal and vertical display count.
SET_VW_POS N1 N2	Set the position within the video wall of the display connected to this Receiver. (Cannot exceed the video wall's horizontal and vertical display count.) N1 = 0~15 [Row] N2 = 0~15 [Column]
GET_VW_POS	Show the position within the video wall of the display connected to this Receiver.
SET_VW_BC N1 N2 N3 N4	Set the video wall bezel compensation values for the display connected to this Receiver. N1 = 0~99999 [Video width] N2 = 0~99999 [Total display width] N3 = 0~99999 [Video height] N4 = 0~99999 [Total display height]
GET_VW_BC	Show the video wall bezel compensation values for the display connected to this Receiver.
SET_VW_HSCALE N1	Set the horizontal zoom amount of the display connected to this receiver. N1 = 0~99999 [Zoom amount in 1 pixel units]
GET_VW_HSCALE	Show the horizontal zoom amount of the display connected to this receiver.
SET_VW_VSCALE N1	Set the vertical zoom amount of the display connected to this receiver. N1 = 0~99999 [Zoom amount in 1 pixel units]
GET_VW_VSCALE	Show the vertical zoom amount of the display connected to this receiver.
SET_VW_SHIFT N1 N2	Set the video output shift of the display connected to this receiver. Available values for N1: U [Shift up] D [Shift down] L [Shift left] R [Shift right] N2 = 0~80000 [Pixel shift amount. Must be in increments of 8]
GET VW SHIFT	Show the video output shift of the display connected to this receiver.
SET_VW_DELAY N1	Set the video delay of the display connected to this receiver. N1 = 0~99999 [Delay in microseconds]
GEI_VVV_DELAY	Show the video delay of the display connected to this receiver.

RS232 INTERFACES DESCRIPTION

Please refer to the following serial ports pin out description to connect correctly the interface to standard RS232 devices.

Transmitter Unit No. 38266 – Serial interface pin function

Pin	Function
1	NC
2	Тх
3	Rx
4	NC
5	GND
6	NC
7	NC
8	NC
9	NC

Receiver Unit No. 38267 - Serial interface pin function

Pin	Function
1	NC
2	Rx
3	Тх
4	NC
5	GND
6	NC
7	NC
8	NC
9	NC

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.

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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.

Germany / Deutschland Rücknahme Elektroschrott und Batterie-Entsorgung

Die Europäische Union hat mit der WEEE Direktive Regelungen für die Verschrottung und das Recycling von Elektround 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.

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.



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