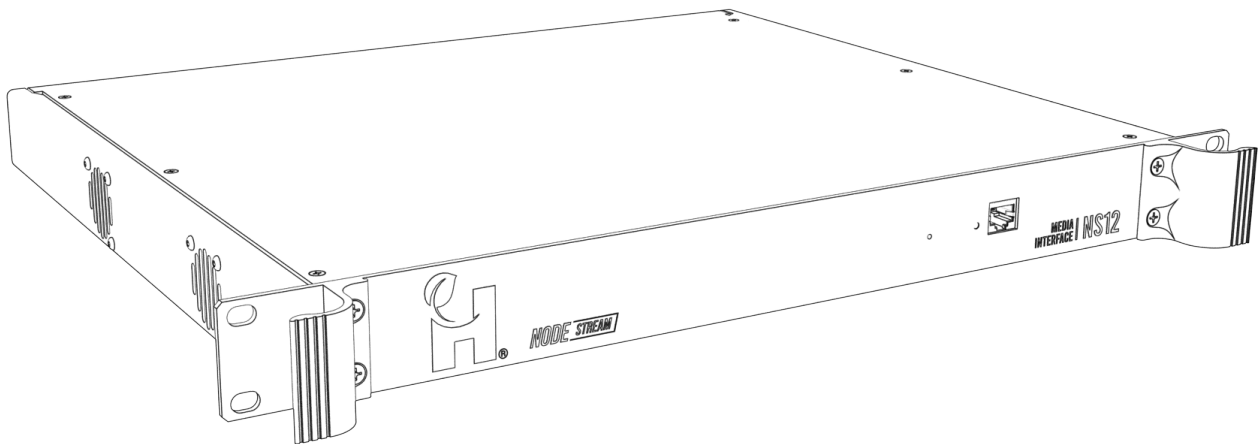


MEDIA INTERFACE | NSX

User Manual



Please read these instructions carefully before using this product



Information for your safety

The device should only be serviced and maintained by qualified service personnel. Improper repair work can be dangerous. Do not attempt to service this product yourself. Tampering with this device may result in injury, fire, or electric shock, and will void your warranty.

Be sure to use the specified power source for the device. Connection to an improper power source may cause fire or electric shock.



Operation Safety

Before using the product, ensure all cables are not damaged and connected correctly. If you notice any damage, contact the support team immediately.

- To avoid short circuits, keep metal or static objects away from the device.
- Avoid dust, humidity, and temperature extremes. Do not place the product in any area where it may become wet.
- Operating environment temperature and humidity:
Temperature: Operating: 0°C to 35°C Storage: -20°C to 65°C
Humidity (non-condensing): Operating: 0% to 90% Storage: 0% to 95%
- Unplug the device from the power outlet before cleaning. Do not use liquid or aerosol cleaners.
- Contact the support team support@harvest-tech.com.au if you encounter technical problems with the product.

Symbols



Warning or caution to prevent injury or death, or damage to property.



Extra notes on the topic or steps of the instructions being outlined.



Further information to content outside the scope of the user guide.



Extra pointers or suggestions in executing instructions.



Contact and Support
support@harvest-tech.com.au



User Resources

Harvest Technology Pty Ltd
7 Turner Avenue, Technology Park
Bentley WA 6102, Australia
harvest.technology

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Warranty

The warranty for this product can be found online at:
<https://harvest.technology/terms-and-conditions/>

FCC Compliance Statement



NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the user manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at their own expense.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

In order to maintain compliance with compliance regulations, shielded HDMI cables must be used with this equipment

CE/UKCA Compliance Statement



Marking by the (CE) and (UKCA) symbol indicates compliance of this device with the applicable directives of the European Community and meets or exceeds the following technical standards.

- Directive 2014/30/EU - Electromagnetic Compatibility
- Directive 2014/35/EU - Low Voltage
- Directive 2011/65/EU - RoHS, restriction of the use of certain hazardous substances in electrical and electronic equipment

Warning: Operation of this equipment is not intended for a residential environment and could cause radio interference.

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Getting Started

Introduction

Welcome to your Nodestream 1U system. The Nodestream 1U device family comprises of 3 devices, NS4, NS8 & NS12. All devices can operate as a decoder or encoder and accept varied input types.

MEDIA INTERFACE | NS4 4CH HDMI, HD-SDI or Network inputs



MEDIA INTERFACE | NS8 8CH HD-SDI or Network inputs



MEDIA INTERFACE | NS12 12CH Network inputs



Modular Operation

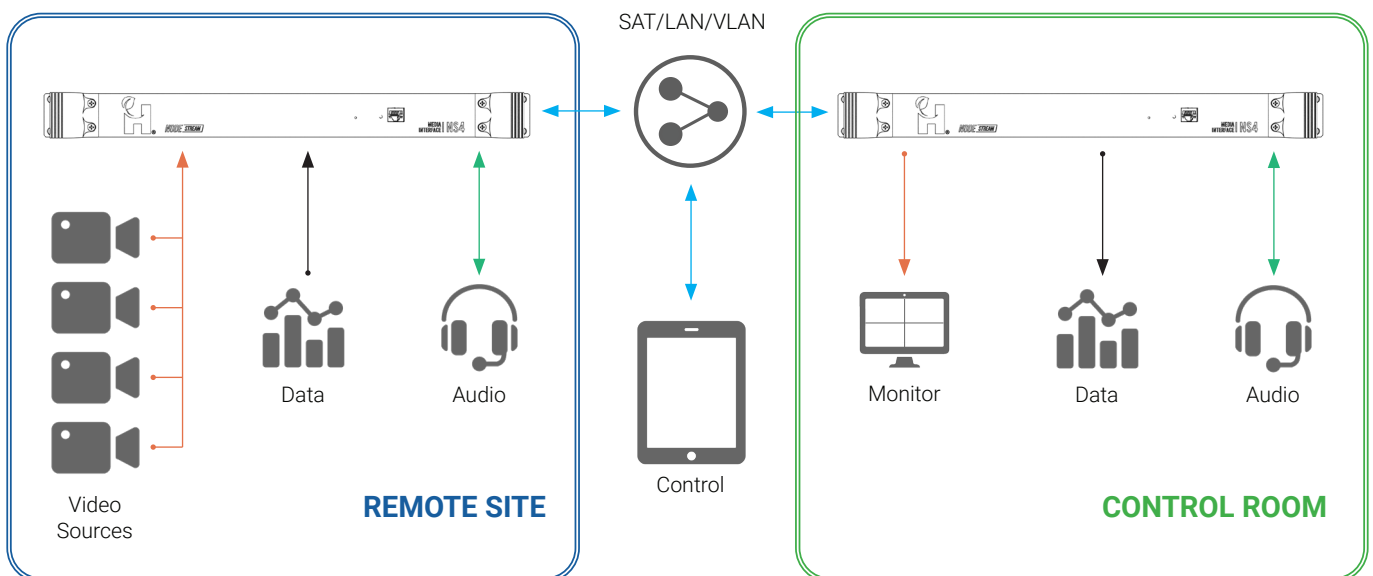
NSX devices are designed to operate as multiples of 4 channel "modules". This allows for flexibility in connection to other Nodestream encoders or decoders.

- NS4** 1 x 4ch module
- NS8** 2 x 4ch modules
- NS12** 3 x 4ch modules

Key Features

- Low bandwidth, low latency HD streaming of up to 12 video channels from 8Kbps to 5Mbps
- Slimline 1U rack mount form factor
- Supports a wide range of industry standard video formats
- Multiple input types - HDMI, SDI, USB and network streams
- Low power consumption with redundant power supplies
- Low bandwidth integrated Nodecom audio
- Up to 10 channels of serial, TCP or UDP data
- Military grade security - 384-bit encryption

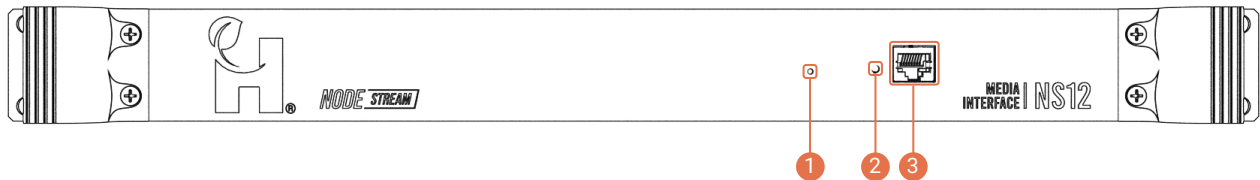
Typical System Setup



Connections

Front Panel

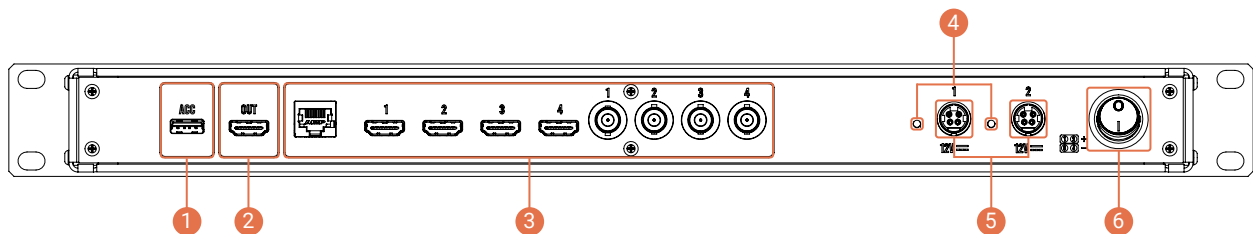
The front panel provides a gigabit Ethernet port for connection to the customer network. A reset button allows for restarting and factory resetting of the device, and an RGB LED displays feedback on system status.



- 1 Reset Button**
Press to reset the system, press and hold to factory reset.
- 2 Status LED**
RGB LED to indicate system status.
BLUE - Power on (Idle) **GREEN** - Streaming **RED** - Network Issue
- 3 Gigabit Ethernet**
An RJ45 connection used to connect to the customer network.

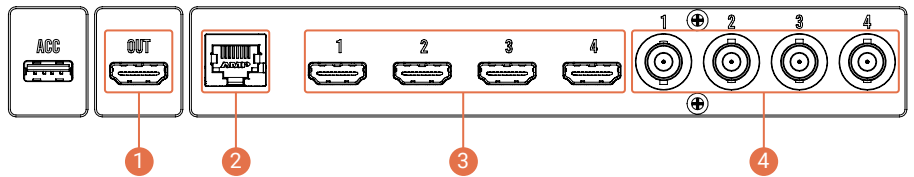
Rear Panel

The rear panel provides ports for connection for USB accessories, HDMI output(s) and input sources. A pair of DC power inputs allow for redundancy (where required) with LED indication of power status. The system can be isolated via the power switch.



- 1 Accessory Port**
USB A accessory port for use with WiFi, video input or audio devices, i.e. keyboard or speakerphone. (WiFi and video input devices only compatible with Rev2 devices)
- 2 Display Output(s)**
HDMI 2.0 display outputs for connection to monitor.
- 3 Inputs**
For connection of hardware and/or network inputs. Input types vary between devices, refer individual rear panel types on next page.
- 4 Power Indicators**
LED power available indicator.
- 5 Power Inputs**
4 pin Mini DIN 12VDC power connection. (pin out engraved on panel)
- 6 Power Switch**
Isolates device power.

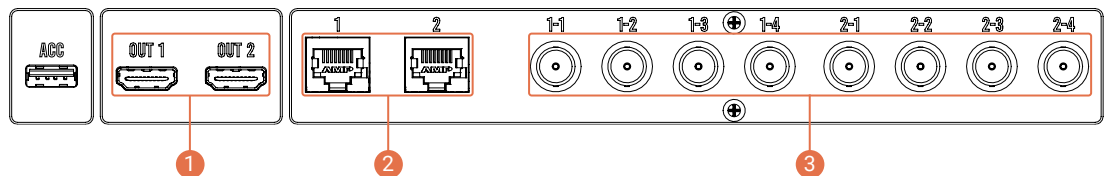
NS4



- 1 **Display Output**
HDMI 2.0 display output for connection to a monitor.
- 2 **Gigabit Ethernet**
For connection to networks containing network streams.
- 3 **HDMI Inputs**
For connection of HDMI video sources.
- 4 **SDI Inputs**
For connection of SDI video sources.

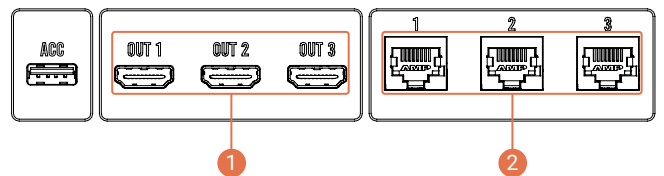
Only 1 hardware input can be connected at a time for each channel, i.e. HDMI or SDI

NS8



- 1 **Display Outputs**
HDMI 2.0 display outputs for connection to monitors (1 per "module").
- 2 **Gigabit Ethernet**
For connection to networks containing network streams (1 per "module").
- 3 **SDI Inputs**
For connection of SDI video sources (4 per "module")

NS12



- 1 **Display Outputs**
HDMI 2.0 display outputs for connection to monitors (1 per "module").
- 2 **Gigabit Ethernet**
For connection to networks containing network streams (1 per "module").

Nodestream devices are supplied with a Quick Start Guide for installation. Scan the User Resources QR code on the last page for access

Configuration

Overview

Configuration of your Nodestream device is performed via the system Web Interface. From here you can:

- View system information
- Configure network(s)
- Set user login credentials
- Enable/Disable remote support
- Set device function
- Manage Enterprise Server settings
- Manage updates

Access

The Web Interface can be accessed locally on the device, or via a web browser of a PC connected to the same network. Follow the steps below to log in.

Default username = admin

Default password = admin



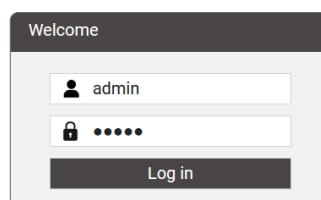
Web Interface is not available until the Nodestream software has started

Local Access

1. Connect the front panel network of your device to your LAN, monitor, USB keyboard/mouse and power it up.

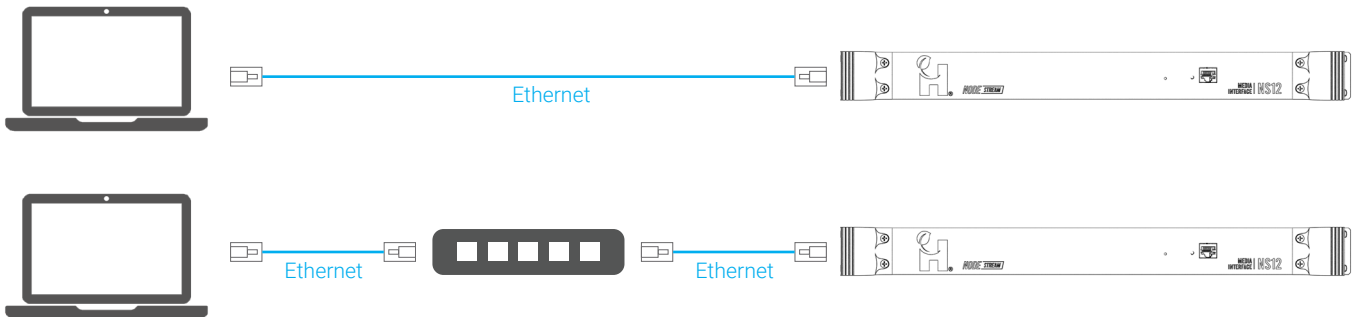


2. Wait for the software to start and press alt+F1 on your keyboard or right click and select configuration.
3. When prompted, enter your login details.



Web Access

Connect your computer to the same network as your device or directly to the device via an Ethernet cable.



DHCP Enabled Network

1. Connect the front panel network of your device to your LAN and power it up.
2. From a web browser of a computer connected to the same network, enter the device IP address or `http://serialnumber.local`, e.g `http://au2234ns4x1a014.local`
3. When prompted, enter your login details.



Serial number can be found on the rear of the top panel of your device

Non DHCP Enabled Network

When a device is connected to a non DHCP enabled network, and its network has not been configured, the device will fall-back to a default IP address of 192.168.100.101.

1. Connect the front panel network of your device to your LAN and power it up.
2. Configure the IP settings of a computer connected to the same network to:

IP	192.168.100.102
Subnet	255.255.255.252
Gateway	192.168.100.100
3. From a web browser, enter 192.168.100.101 in the address bar.
4. When prompted, enter your login details.



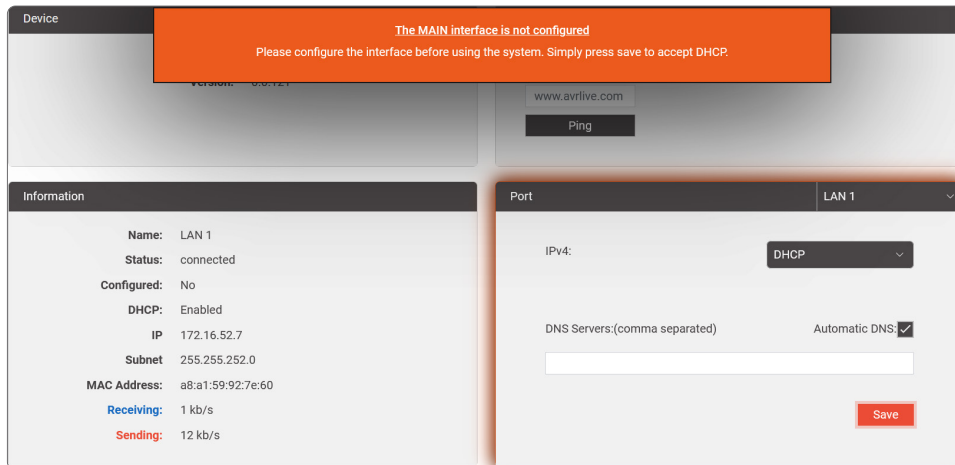
When configuring multiple devices on a non DHCP enable network, due to IP conflicts, only 1 device can be configured at a time. Once a device has been configured, it may be left connected to your network



Initial Configuration

The primary network of your Nodestream device must be configured to ensure a stable connection and prevent the device from setting its IP address to default static, refer ["Non DHCP Enabled Network"](#) on page 5 for further information.

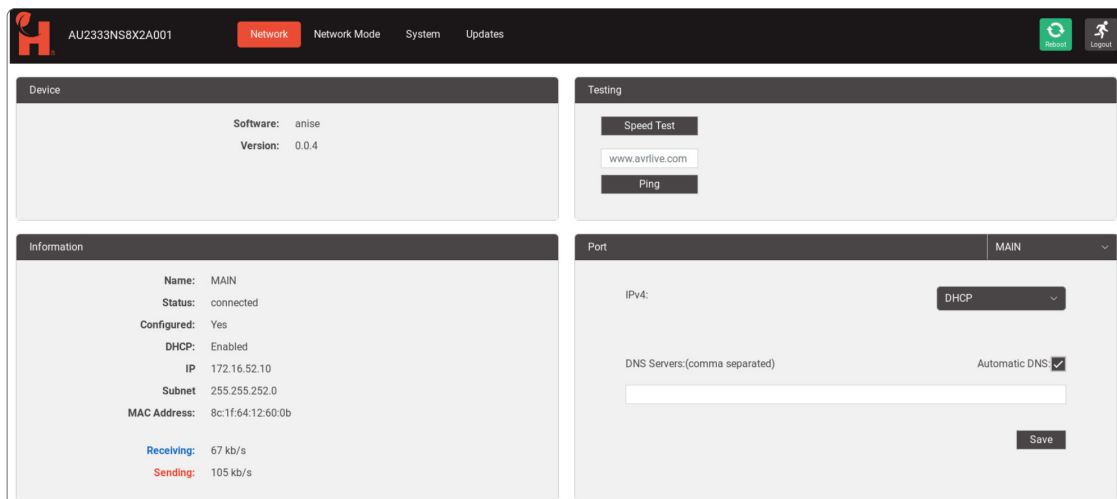
1. Login to the Web Interface.
2. Once logged in, you will notice an orange prompt to configure the MAIN interface.



3. If connected to a DHCP enabled network click save in the "Port" window. Refer to ["Port Configuration"](#) on page 8 for configuration of static IP settings.
4. If your device is managed by an Enterprise Server, enter details on the System page. Refer to ["Enterprise Server Settings"](#) on page 13.

Network

This section of the Web Interface provides information on device software version, network information, testing, and configuration of device network adapters.





Information

Displays information related to the selected port (port can be selected from the drop down in the "Port" section)

Name

Name of the port

Status

Displays connection status of the port - connected or down (unplugged)

Configured

If "Yes", the port has been configured to either DHCP or manual

SSID (WiFi only)

Displays connected WiFi network SSID

DHCP

Shows if DHCP has been enabled or disabled

IP

Current port IP address

Subnet

Current port subnet

MAC Address

Port hardware MAC address

Receiving

Live port receiving throughput

Sending

Live port sending throughput

Information	
Name:	LAN 1
Status:	connected
Configured:	Yes
DHCP:	Enabled
IP:	172.16.52.10
Subnet:	255.255.252.0
MAC Address:	a8:a1:59:92:7d:ca
Receiving:	12 kb/s
Sending:	34 kb/s

Testing

Helpful network testing tools for confirmation of network settings and capabilities.

Speed Test

For testing available upload and download bandwidth.

Ping

For testing connection to the Nodestream server (www.avrlive.com) or to confirm connection to other devices on your network, i.e. IP cameras.

- Enter IP address to ping.
- Click Ping button.
- Notification will display followed by either:
 - Ping time in ms successful
 - Could not reach the IP address unsuccessful

Testing

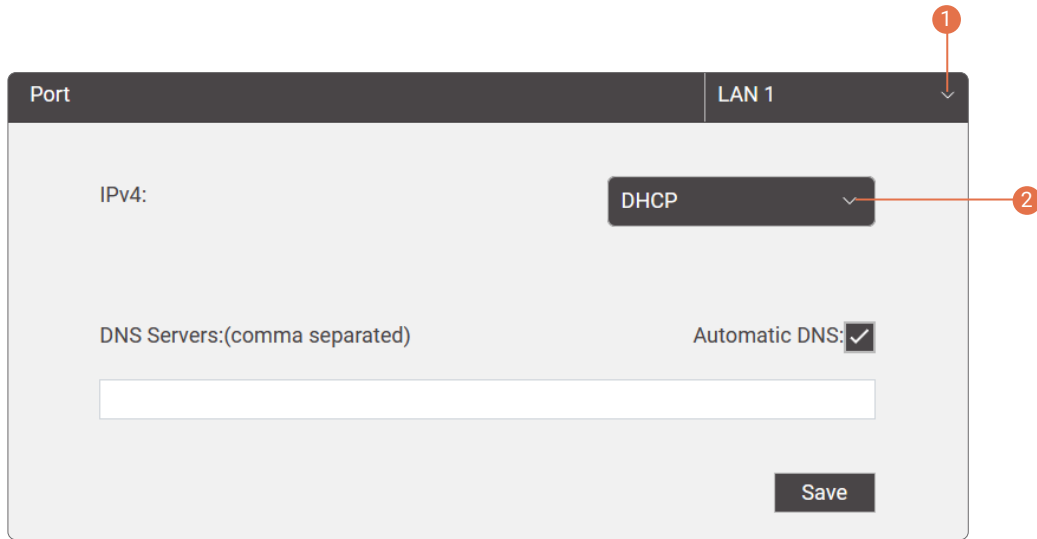
Speed Test

www.avrlive.com

Ping

Port Configuration

Configuration section for device networks. Ports can be configured to DHCP or Manual (static IP)



- 1 **Port Selection**
Drop down, displays available network ports. Select for configuration.
- 2 **Configuration Type**
Drop down, select either DHCP or manual.

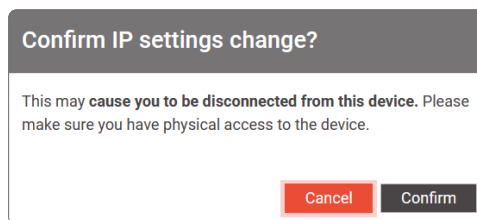
 Only IPv4 networks are supported

Ethernet

1. Select the port you'd like to configure from the "Port" drop down.

DHCP

1. Select "DHCP" from the "IPv4" drop down, if not already selected, then save.
2. When prompted, confirm IP settings change. Network setting applied prompt will be displayed.



3. Confirm network information is correct.

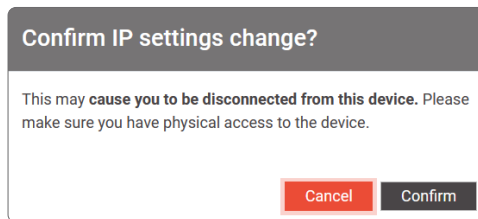


Manual

1. Select "Manual" from the "IPv4" drop down and enter network details as provided by your Network Administrator, then save.



2. When prompted, confirm IP settings change. Network setting applied prompt will be displayed.



3. Enter the new IP address or http://serialnumber.local in your web browser to log back into the Web Interface.
4. Confirm network information is correct.

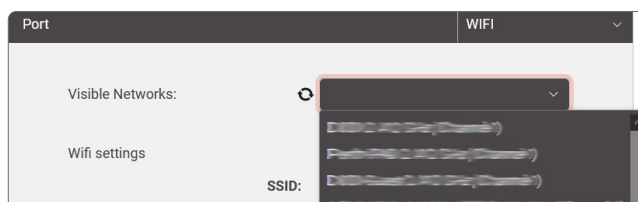
WiFi (Rev2 devices only)

WiFi is only available if an optional USB WiFi adapter is installed.

Verified compatible WiFi adapters:

- TP-Link T2U v3
- TP-Link T3U
- TP-Link T4U

1. Select "WiFi" from the "Port" drop down.
2. Select network from list of available networks from the "Visible Networks" drop down.





3. Confirm security type is correct and enter password.

DHCP

1. Select "DHCP" from the "IPv4" drop down, if not already selected, then save.
2. When prompted, confirm IP settings change, a network setting applied prompt will be displayed.

3. Select the WiFi port and confirm network information is correct.

Manual

1. Select "Manual" from the "IPv4" drop down and enter network details as provided by your Network Administrator, then save.

2. When prompted, confirm IP settings change a network setting applied prompt will be displayed.

3. Enter the new IP address in your web browser to log back into the Web Interface.
4. Select the WiFi port and confirm network information is correct.

Disconnect

1. Select WiFi from the “port” drop down.
2. Click the “Disconnect” button.

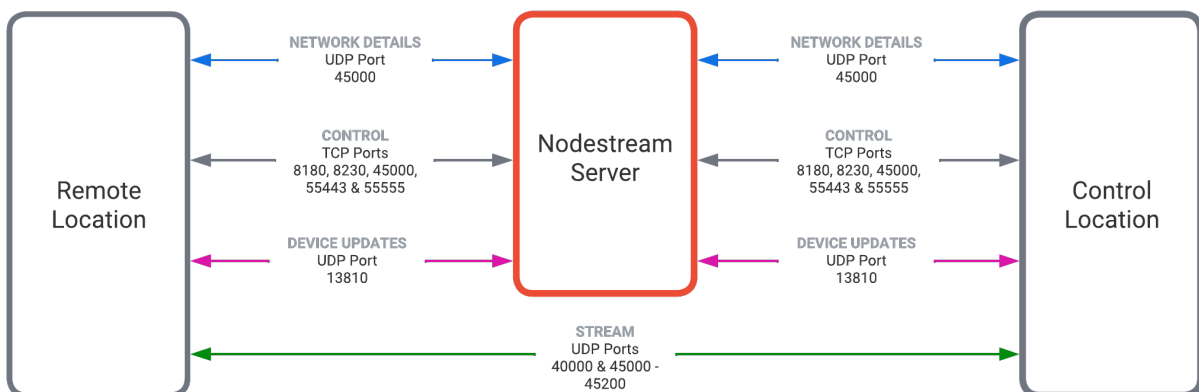


Firewall Settings

It is common for corporate network firewalls/gateways/anti-virus software to have strict rules in place that may require modification to allow Nodestream devices to function.

Nodestream devices communicate with each other via TCP/UDP ports, therefore permanent network rules must be in place as per below.

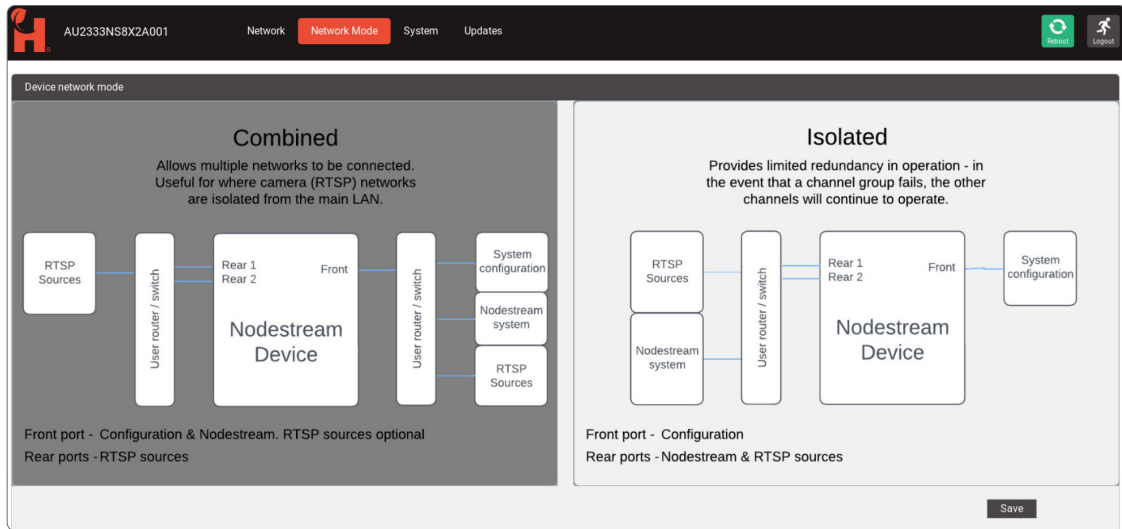
- Protocol is IPv4 ONLY
- Devices require either, access to Public network (Internet) for Harvest hosted servers, or Server IP for self hosted servers.
- Inbound/Outbound to Nodestream server:
 - TCP ports: 8180, 8230, 55443, 45000 & 55555
 - UDP ports: 13810 & 45000
- Devices must be able to send UDP packets between each other in the range of:
 - UDP ports: 40000 & 45000 - 45200



- All traffic is protected with 384-bit encryption with rolling keys
- All port ranges are inclusive
- Contact Harvest support for further information. support@harvest-tech.com.au

Network Mode (NS8 & NS12 Only)

This section of the Web Interface allows the user to change the configuration / behaviour of the LAN ports of a NS8 or NS12 device.



To access the Web Interface in either mode, the front LAN port of your device must be connected

Combined Mode

Combined mode is the default network configuration. It allows for multiple networks to be connected and is intended for use where network input sources, i.e. IP cameras, are connected to an isolated or separate network to the outgoing customer network.

Front port Configuration, Nodestream traffic & network streams
Rear ports Network input sources (optional)

Isolated Mode

Isolated mode provides limited redundancy in the event that an individual card fails within the device. All network input sources and Nodestream traffic is directed out the rear ports, therefore only 1 network can be connected to each card. Front port must be connected to allow access to the device web interface for configuration.

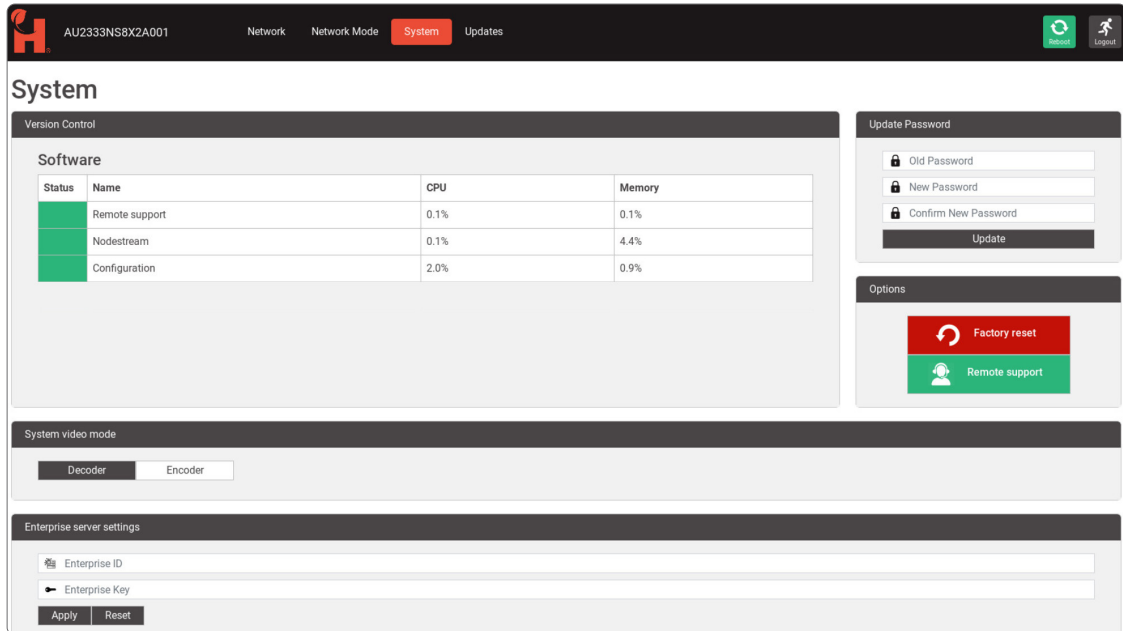
Front port Configuration
Rear ports Nodestream traffic & network input sources



Redundancy in isolated mode is limited. Situations may occur that affect the operation of the entire device.

System

This section of the Web Interface provides information for software, changing system video modes, Web Interface password management, factory reset, and remote support enable / disable.



Version Control

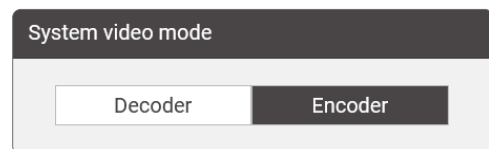
Displays information relating to software processes and their resource usage. This can be useful in diagnosing software and/or performance issues.

System Video Mode

Nodestream video streaming devices can be configured to operate as either a decoder or an encoder.

To change video mode:

1. Select desired video mode.
2. Nodestream software will restart.



Enterprise Server Settings

Nodestream devices can be managed via the Harvest server or a dedicated "Enterprise Server". If your Nodestream device is managed by an Enterprise Server, you will need to input its details in this section. Contact your company Nodestream administrator for further information.

Update Password

Allows you to change the Web Interface login password. If the password is unknown, perform a factory reset. Refer "Factory Reset" below.

Options

Factory Reset

Performing a factory reset of the device will reset:

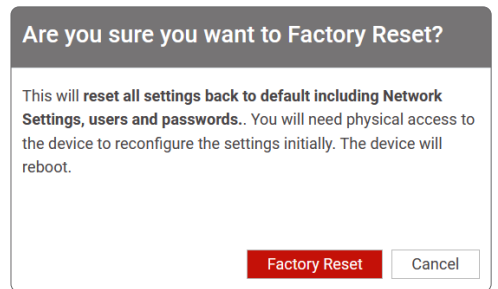
- Network settings
- System video mode (decoder)
- Web Interface login password
- Enterprise server settings

To perform a factory reset:

1. Initiate (a, b or c):
 - a. Press and hold the reset button on the front panel

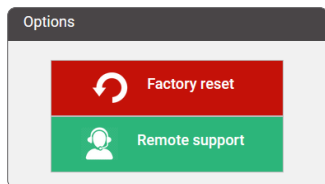


- b. Select "Factory Reset" from the System page in the Web Interface. When prompted select "Factory Reset" to confirm.
 - c. Press ctrl+alt+r on a connected keyboard. When prompted select "Yes" to confirm.
3. Device will reboot.
 4. Configure the network or your device. Refer "[Initial Configuration](#)" on page 6.

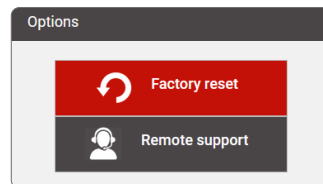


Remote Support

Remote support enables Harvest support technicians to access your device if advanced troubleshooting is required. To enable/disable remote support, click the "Remote Support" button.



Enabled



Disabled

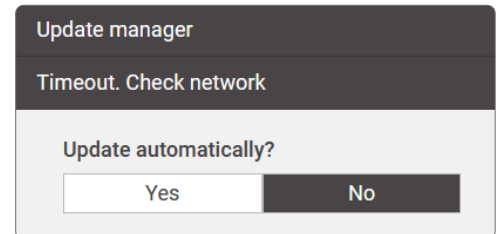
Remote support is enabled by default

Updates

This section of the Web Interface provides control and management of the device update system.

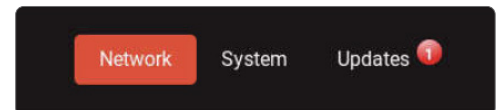
Automatic Updates

Automatic updates are enabled by default, downloading and installation occur in the background. During this process the device may restart. If this is not desired, disable automatic updates by setting "Update automatically?" to No.



Manual Updates

When an update is available for your device, an icon will be displayed next to the "Updates" tab.



To Install the available update(s):

1. Open the Updates section of the Web Interface.
2. If an update is available it will be shown. If no update is visible, click the "refresh" button to display available updates.
3. Select "Update (permanent install)" and accept the conditions when prompted.
4. The updated manager will proceed to download and install the update.
5. Once the update process is complete your device or the software may restart.



Updates are installed incrementally. When a manual update has completed, continue to refresh the update manager and install updates until your device is up to date.

Operation

Overlay

When a monitor is plugged into your device and the system is in standby mode (not streaming video), an overlay displays system information. This allows the user to view current system status and assists with diagnosing system issues.



- 1 Video Mode / Software Version**
Current video mode - encoder or decoder and Nodestream software version installed.
- 2 Device Serial**
Serial number of device.
- 3 Server IP**
IP address of your Nodestream server.
- 4 Network Status**
Displays current network status:

<i>IP address shown</i>	Network connected and configured.
<i>down (unplugged)</i>	Network not connected to device.
<i>not configured</i>	Network not configured - refer " Port Configuration " on page 8
- 5 Server Connection Status**

<i>Waiting for Nodestream connections</i>	Connected to server, ready to connect to another device.
<i>Connecting to Nodestream server</i>	Connecting to server.
<i>Server connection error</i>	There is a network issue preventing connection to the server. Refer " Troubleshooting " on page 23
- 6 Frame Rate & Resolution (encoder mode only)**
Frame rate and resolution of video that will be streamed to a decoder.

Video

Encoding

When your device is operating in encoder mode, inputs can be viewed by connecting a monitor. Inputs, as selected via a Harvest control application, will be displayed. This can be useful to diagnose issues with hardware and/or network stream video inputs.

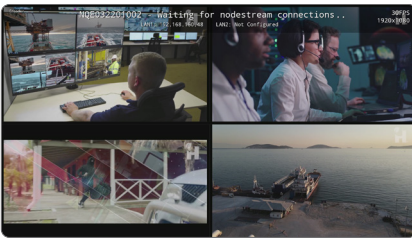


Displayed video is a direct reflection of what will be sent to a connected decoder. Changes to frame rate and resolution will be visible.

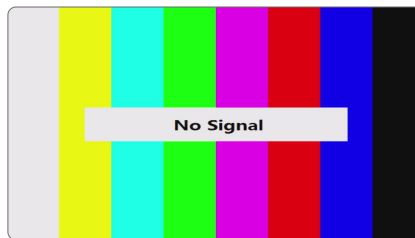
Hardware Inputs

Hardware inputs allow for connection of HDMI, SDI (NS4 & NS8 only) or USB video sources to be connected to your device for selection within the Harvest control application.

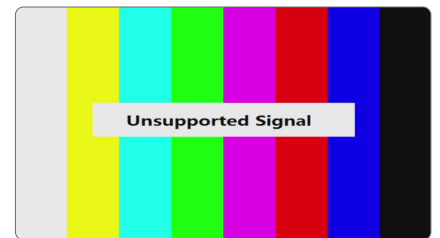
For a detailed list supported input types refer "[Technical Specifications](#)" on page 22.



Typical encoder display, 4 x video sources selected and waiting for Nodestream connections



No video source connected to selected input
Refer "[Troubleshooting](#)" on page 23



Video source not supported
Refer "[Troubleshooting](#)" on page 23



Due to copyright restrictions, HDCP (High-bandwidth Digital Content Protection) signals such as DVD players and media streamers cannot be captured.

Pro Mode

Enable Pro Mode, via your Harvest Control Application, to activate the following features:

Video

Increase video streams to 4 x 1080p at 60 frames per second.

Frame Synchronous Data

UDP data input on port 40000 is streamed, frame synchronous, with the accompanying video. This can be output to up to 4 network devices from your connected Nodestream X Decoder.



- Pro Mode can only be activated when hours are available on your account. To purchase hours, contact sales@harvest-tech.com.au.
- When hours have been depleted, all Pro Mode enabled streams will fall back to 1080/60.

Network Stream Inputs

Network streams associated with a connected Nodestream encoder, such as those from IP cameras, can be decoded and used as inputs. Inputs are added and managed via the Harvest control application.

RTSP

Real-Time Streaming Protocol is typically used for streaming IP cameras. They are unique to camera manufacturers and can differ between models. The URI of the source must be known before it can be used as an input. If authentication is enabled on the source device, the user name and password must be known and included in the URI address.

URI rtp://[user]:[password]@[Host IP]:[RTSP Port]/stream
Example URI rtp://**admin:admin**@192.168.1.56:554/s0

RTP

Real-Time Transport Protocol (RTP) is a network protocol for delivering audio and video over IP networks. RTP typically runs over User Datagram Protocol (UDP). RTP differs from RTSP in that the RTP source needs to know the IP address of the receiver beforehand, as it pushes the video stream to that designated IP.

URI rtp://[Receiver IP]:[RTP Port]
Example URI rtp://192.168.1.56:5004

UDP

Video data can also be transmitted and received over plain UDP. It acts similarly to RTP where the video source will push data to the receiver, requiring in advance to know the destination before streaming can occur. Generally, it's preferable to use RTP instead of plain UDP if the user has the choice due to inbuilt mechanisms like jitter compensation in RTP.

URI udp://[Receiver IP]:[UDP Port]
Example URI udp://192.168.1.56:5004

HTTP

HTTP streaming comes in several formats; Direct HTTP, HLS, and HTTP DASH. Currently only Direct HTTP is supported by Nodestream but it is not recommended.

URI http://[Host IP]:[Host Port]
Example URI http://192.168.1.56:8080

Multicast

Multicast is a one-to-one or more connection between multiple decoders and the source. Connected routers must be multicast enabled. The range of IP addresses reserved for multicast is 224.0.0.0 - 239.255.255.255. Multicast streaming can be delivered via RTP or UDP.

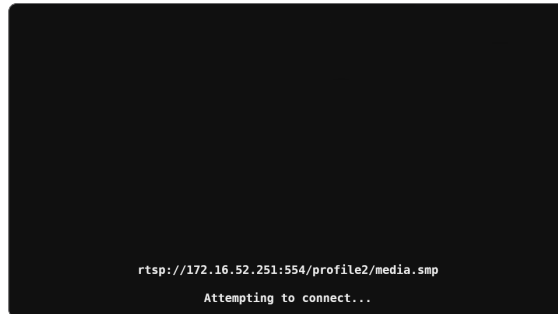
URI udp://[Multicast IP]:[Port]
Example URI udp://239.5.5.5:5000



Use of software such as VLC from a PC connected to the network can be helpful when diagnosing and /or confirming network stream URL's.

On-screen Diagnostics

On screen diagnostic information for network streams is shown when a stream is selected as an input and no video is displayed.



Attempting to connect

7) Could not open resource for reading and writing

Attempting to connect to stream URI shown.

IP incorrect and/or device not configured or connected to stream network.

Connection to resource lost

Stream source or network disconnected (shown for 10 seconds). Will continually attempt to reconnect.

Not authorized to access resource

IP correct & incorrect URI, username and/or password



Use the ping tool in the Web Interface to test connection to network streams. Refer "[Testing](#)" on page 7



There may be network security measures in place that could block physical ports on connected network devices when a "suspicious" IP, MAC address or UDP flood is detected. In this case, set device to "combined mode" and utilise rear ports.

Test Sources

Various test sources are build into the device for use as an input to assist with troubleshooting or network testing. These can be selected via the Harvest control application.

Test Source

Test video loop with time stamp for latency reference

Test Pattern

Simple low bandwidth loop

Colour Bars

Colour bars with white noise section for testing colour and high bandwidth



Direct cameras away from dynamic references where practical, i.e. water, trees. Reducing image pixel changes will decrease bandwidth requirements.

Decoding

When your device is operating in decoder mode, up to 4 video streams can be displayed on the monitor output of each module. Each stream can be individually displayed by changing what the connected encoder is sending via the Harvest Control Application.

When the system is idle, a screen saver will be displayed. Once a connection to a Nodestream encoder is established, video will be shown.



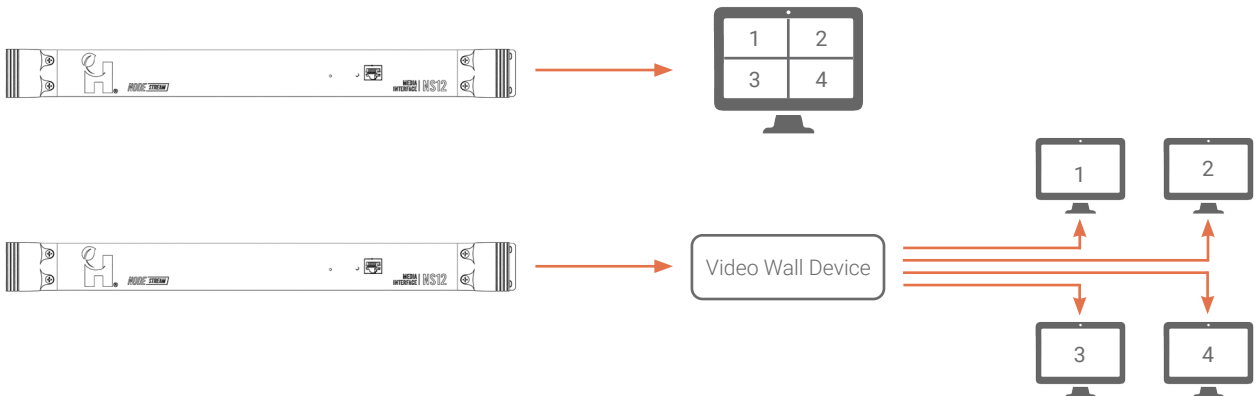
System idle



Active stream



A video wall device can be used to "split" the single quad output of a module for display on 4 x individual monitors.



Audio

Nodestream video devices include a single Nodecom audio channel for streaming two-way audio to other Nodestream devices in the your group. The following audio devices are supported:

- USB speakerphone or headset via the rear USB A accessory port
- HDMI outputs
- HDMI inputs (NS4 only)



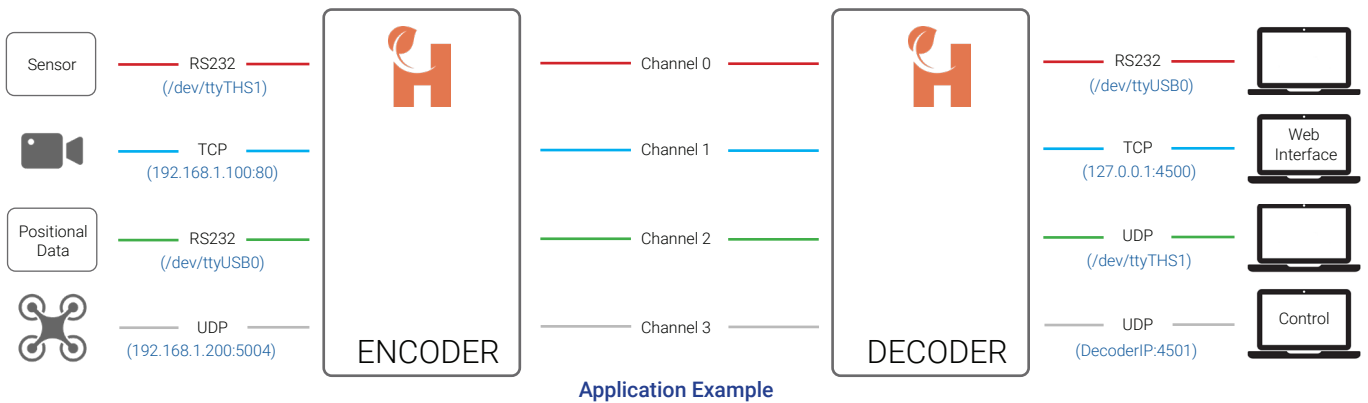
Audio devices are selected and configured via your Harvest control application.

Data

Up to 10 channels of serial, TCP or UDP data can be simultaneously streamed between Nodestream connected devices.

This versatile function enables:

- Transaction of telemetry/sensor data to/from remote sites.
- Control of remote systems .
- Ability to access remote device web interfaces, e.g. IP camera, IOT device.
- Pass data from your Nodestream Decoder to a 3rd party device and/or local network device.



- Data channels are connected and configured via your Harvest control application.
- Streamed data should not be relied upon for critical control applications.
- Data can also be streamed in Pro Mode, refer "[Pro Mode](#)" on page 17

Control Applications

Nodestream device connections and associated input/output configurations are managed via Harvest control applications.

Nodester

A control only iOS application developed for iPad. Typically used in control applications or when a customers Nodestream group comprises only of hardware devices.

Nodestream for Windows

Windows Nodestream decoder, audio, and control application.

Nodestream for Android

Android Nodestream decoder, encoder, audio, and control application.

Nodestream for iOS

iOS Nodestream decoder, encoder, audio, and control application.



Appendix

Technical Specifications

Physical

Physical dimensions (HxWxD)	44 x 482 x 365 mm (1.73" x 18.98" x 14.37")
Weight	3kg (6.61lbs)

Power

Input	4pin mini DIN - 12VDC
Consumption (operating)	10-30W typical

Environment

Temperature	Operating: 0°C to 35°C (32°F to 95°F)	Storage: -20°C to 65°C (-4°F to 149°F)
Humidity	Operating: 0% to 90% (non-condensing)	Storage: 0% to 95% (non-condensing)

Video

Input	HDMI	NS4 (x4)
	<ul style="list-style-type: none"> Resolutions up to 1920x1080 pixels Frame rates up to 60fps 4:2:2, YUV 	
	SDI	NS4 (x4) NS8 (x8)
Output	<ul style="list-style-type: none"> SD/HD/3G Resolutions up to 1920x1080 pixels Frame rates up to 60fps 4:2:2, YUV 	
	USB Type A 3.0 (only available on Rev2 devices)	
	<ul style="list-style-type: none"> 4:2:0 8-bit, 4:2:2 8-bit MJPEG 	
Output	HDMI	NS4 (x1) NS8 (x2) NS12 (x3)
	<ul style="list-style-type: none"> Max resolution 4096x2160 @ 30Hz 	

Network Streams

Supported Protocols	RTSP/RTP/HTTP/UDP (MPEG, H.264, H.265)
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Other Interfaces

Ethernet	10/100/1000 RJ45	NS4 (x2) NS8 (x3) NS12 (x4)
WiFi	802.11ac 2.4GHz/5GHz (optional USB adapter, only available on Rev2 devices)	
USB	Rev1 devices - USB A 2.0, Rev 2 devices - USB A 3.0	
UI	Reset / factory reset button Status LED	

Included Accessories

Hardware	2 x 90w ACDC PSU 2 x IEC13 power cable (region specific)	
Documentation	Quick start guide	



Troubleshooting

System

Issue	Cause	Resolution
Device not powering	PSU switch in off position and/or not connected	Confirm PSU connected and switch is in the on position
Unable to access Web Interface	LAN port not configured Network issue Device not powered	Connect to device locally and confirm network configuration correct Refer "Network" troubleshooting below Confirm device is powered on
Device operating in incorrect mode	Device "video mode" not set	Set desired video mode in Web Interface Refer " System Video Mode " on page 13
Device overheating	Blocked vents Environmental conditions	Ensure device ventilation is not blocked (refer quick start guide) Ensure specified operating conditions are met Refer " Technical Specifications " on page 22
Keyboard and/or mouse not responding	Faulty keyboard and mouse Not plugged in	Try another keyboard and mouse Ensure device(s) or dongle correctly connected
Forgot login and/or network details	N/A	Factory reset device, refer " Factory Reset " on page 14

Network

Issue	Cause	Resolution
LAN(x) (unplugged) message displayed	Network not connected to LAN port Incorrect/inactive port on network switch	Check an Ethernet cable is connected Confirm connected port is active and configured
"Server connection error" message displayed (No connection to server)	Network issue Port not configured Firewall settings	Ensure network is connected Confirm port configuration is correct Refer " Port Configuration " on page 8 Ensure firewall settings are implemented and correct. Refer " Firewall Settings " on page 11
Unable to open video stream input	Associated network not connected and/or configured Stream source not connected and/or powered Stream URI incorrect Stream not enabled and/or configured on source device	Confirm network connected and configured Refer " Port Configuration " on page 8 Confirm stream source connected and powered Confirm URI is correct Refer " Network Stream Inputs " on page 18 Login to source interface and confirm stream is enabled and correctly configured



Video

Issue	Cause	Resolution
No output to monitor(s)	Monitor(s) not connected or powered Incorrect output used	Ensure monitor(s) connected and powered Test monitor with an alternative input Ensure monitor connected correct output Refer " Connections " on page 2
"No Signal" or black screen displayed	Hardware input not connected or powered on Source is HDCP protected Input not selected in Harvest control application	Confirm source is connected and powered Test with another input device (monitor) HDCP sources are not supported due to copyright restrictions Select input source via your Harvest control application
"Unsupported Signal" displayed	Poor cable connection Damaged cable Cable incorrectly specified Excessive signal loss Input signal not supported	Check cable connections Replace cable Ensure cable meets required signal specifications Reduce cable length, remove unnecessary connectors Check input signal type is supported Refer " Technical Specifications " on page 22
Black screen displayed when USB source selected	USB device not supported	Confirm USB source meets specifications refer " Technical Specifications " on page 20 Test USB source with another device
Incorrect video source displayed	Incorrect input selected	Select the correct input source via your Harvest control application
Poor video quality	Poor input source quality Insufficient network bandwidth Input settings set low in Harvest control application Network stream source settings low Lower quality stream sub profile selected not main	Test video source with another input device (monitor) Increase network bandwidth or only stream 1 input Check input configuration settings in your Harvest control application Login to network stream source device and adjust output settings Ensure main profile stream is selected in stream URI

Audio

Issue	Cause	Resolution
No audio input and/or output	Audio device not connected Audio input/output not selected Device muted	Ensure audio device is connected and powered on Select correct input and/or output device in your Harvest control application Confirm device is not muted
Output volume too low	Level set too low	Increase output volume at the connected device or via your Harvest control application
Input volume too low	Level set too low Microphone obstructed or too far away	Increase mic level at the connected device or via your Harvest control application Ensure microphone is not obstructed Decrease distance to microphone
Poor audio quality	Poor cable connection Damaged device or cable Limited bandwidth	Check cable and connections Replace device and/or cable Increase available bandwidth and/or reduce bandwidth of video streams



User Resources

Contact and Support

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