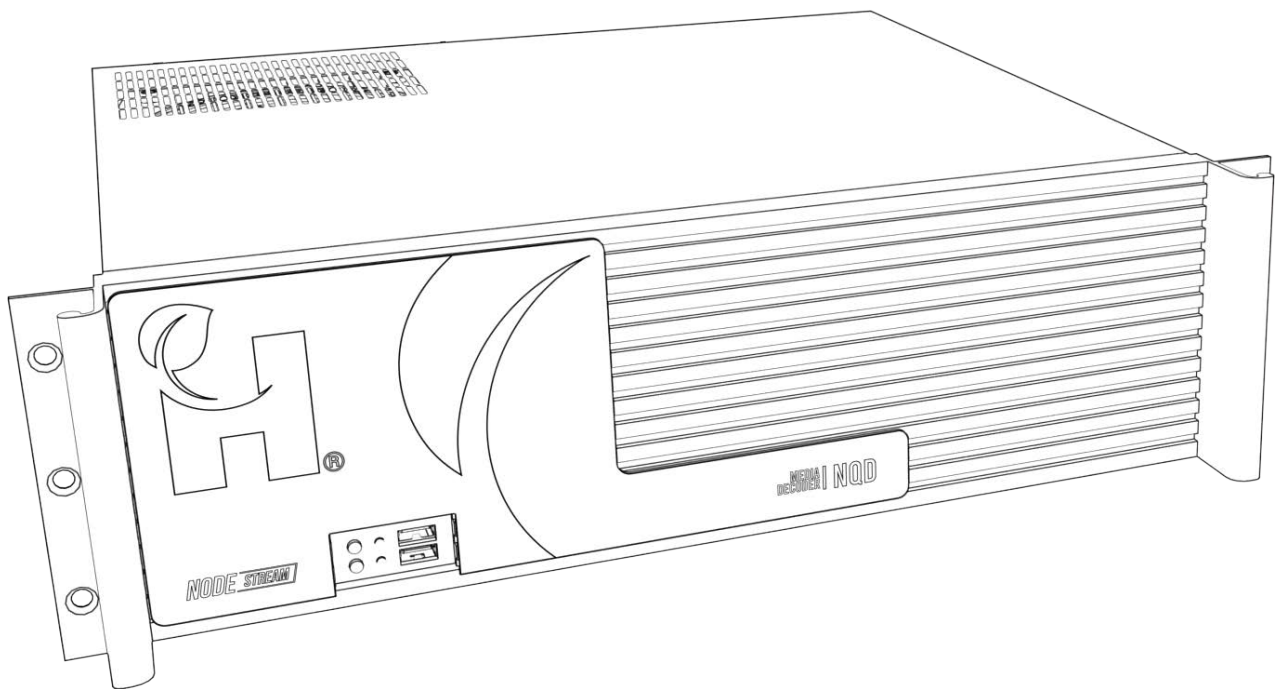


MEDIA DECODER | NQD

User Manual



NODE STREAM™

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.

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

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User Resources

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Warranty

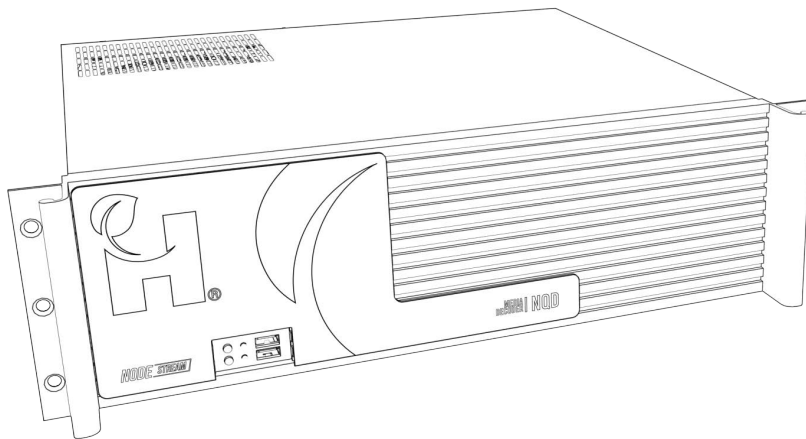
The warranty for this product can be found online at: <https://harvest.technology/terms-and-conditions/>

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Introduction

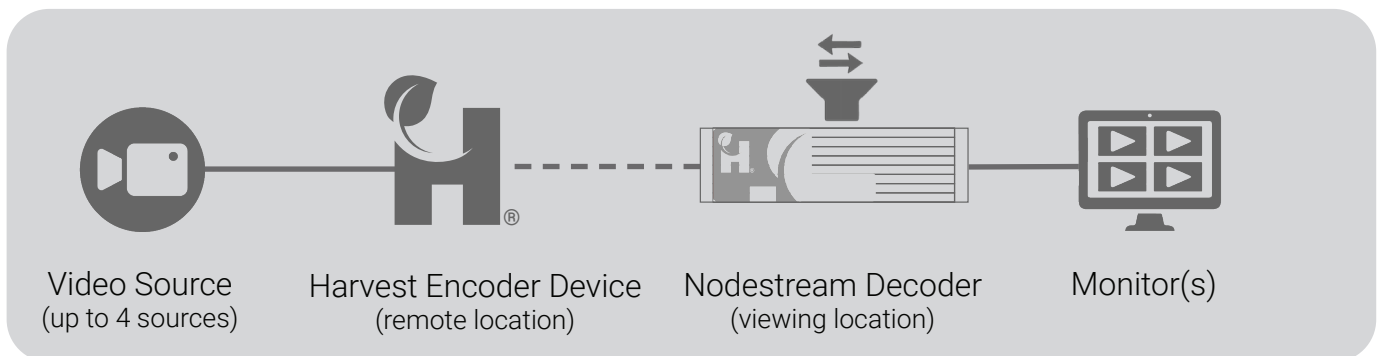
The Nodestream Quad Decoder (NQD) provides decoding up to four HD video sources from an encoder at another location, and a single audio channel for 2 way communication.



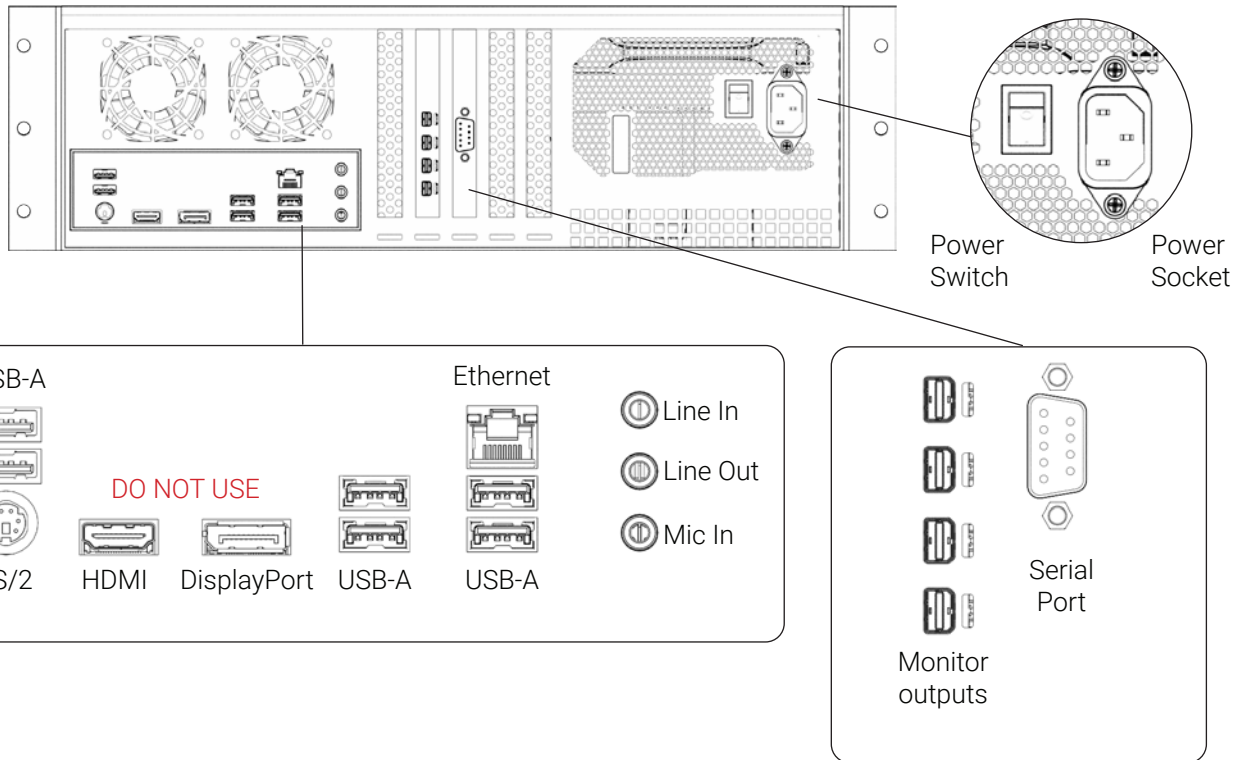
Feature Summary

- HD video and data over low-quality satellite networks
- Real-time monitoring of bandwidth utilisation with bitrate and latency
- System capable of 60fps at 1080p

Video and two-way audio streaming solution

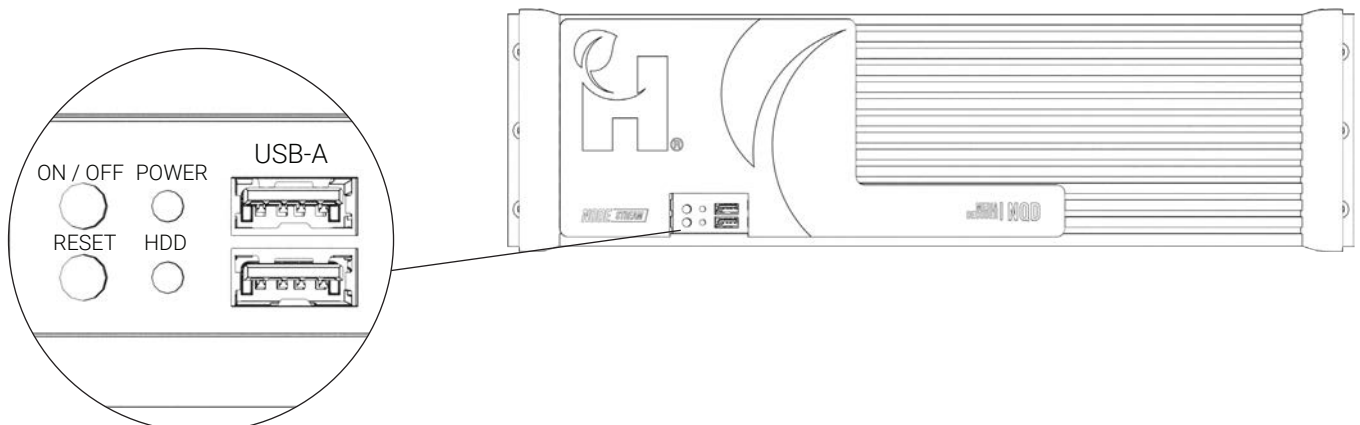


Rear Panel

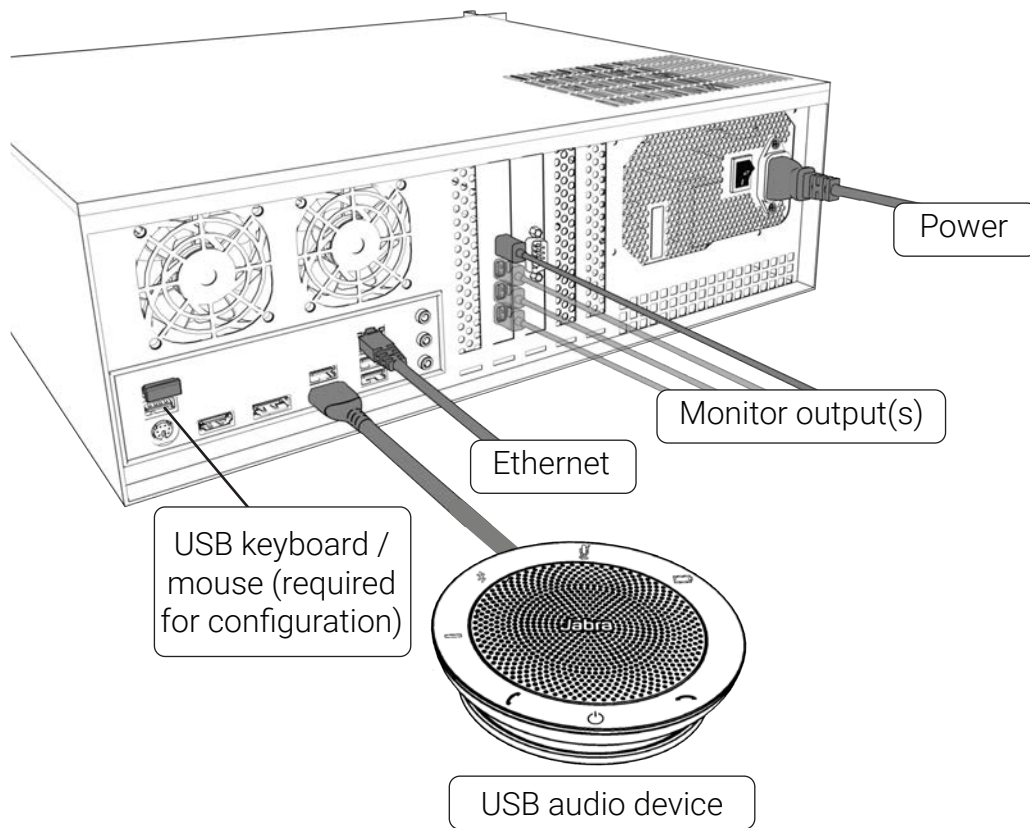


Use Mini DisplayPort for connection to monitors only. Do not use DisplayPort or HDMI ports

Front Panel



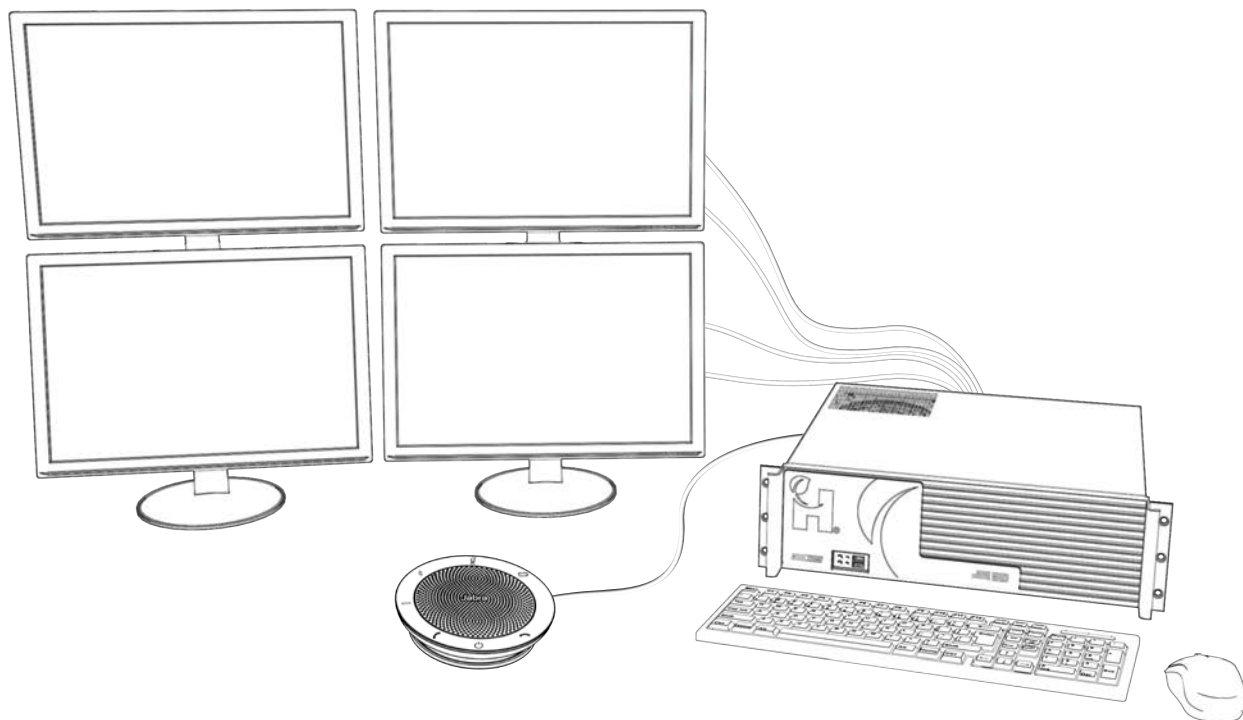
Connections



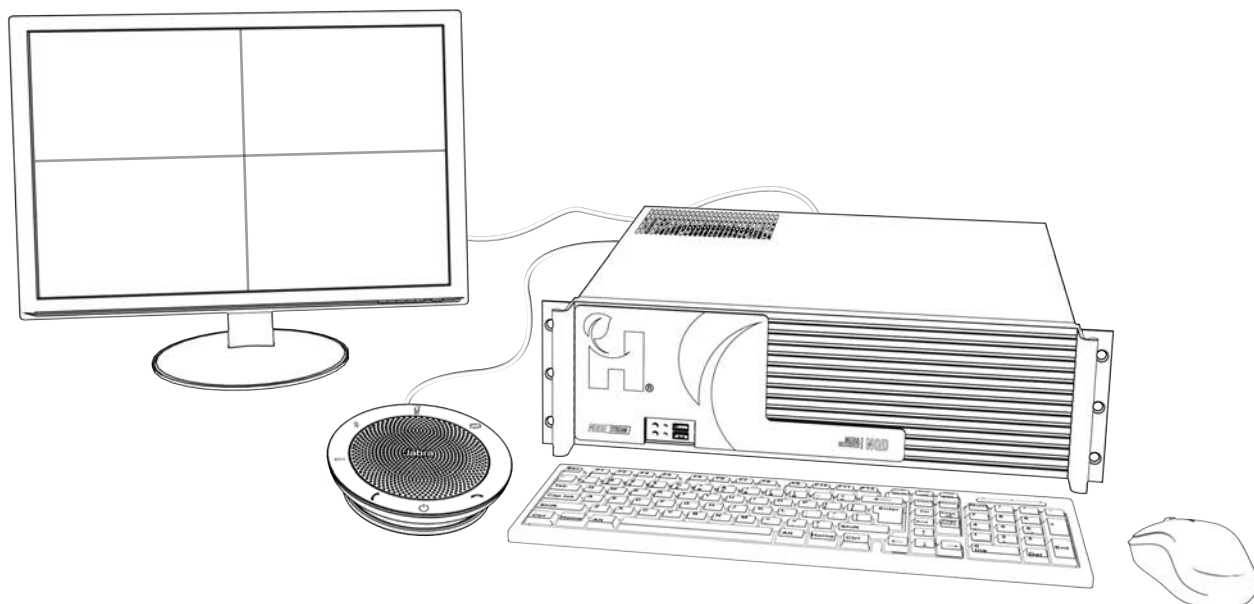
- See "Audio" on page 12 for more information on audio devices.
- The NQD is supplied with a Quick Start Guide for installation. See the User Resources on the last page for access.

Typical system setup

System setup with up to four monitors



System setup with one monitor

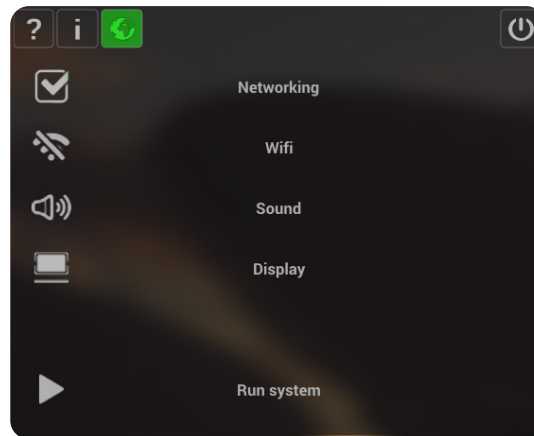













In this setup, the NQD is connected to one monitor with 4 decoded streams displayed.

Configuration

Graphical User Interface (GUI)

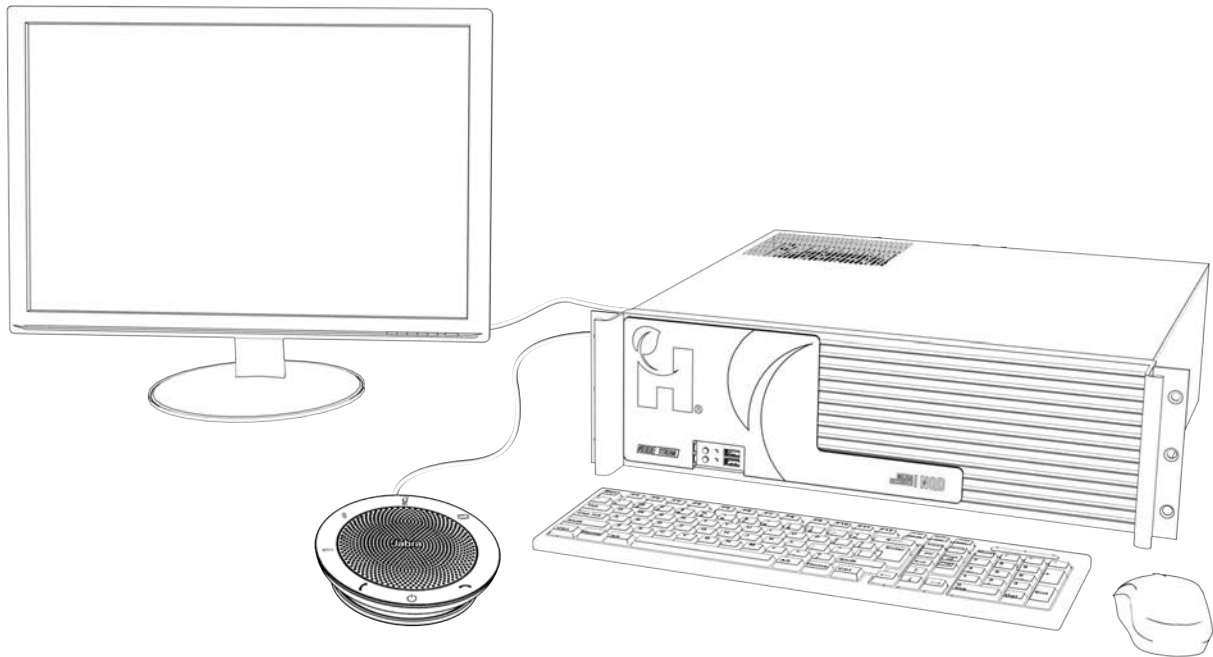
The GUI allows the user to configure the device, enable/disable remote assistance and view device information



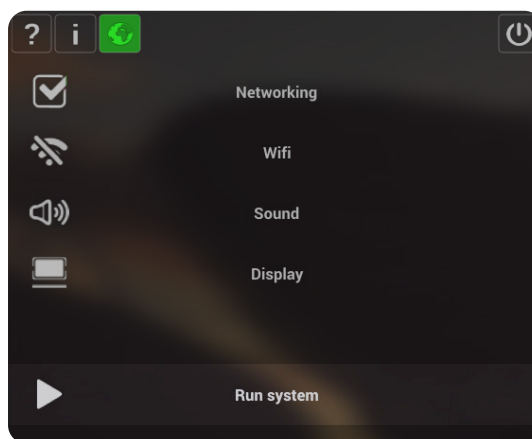
	Help menu
	Device information
	Enable or disable remote assistance
	Reboot or power down
	Network connection established
	Network configuration or connection required
	WiFi connected
	WiFi not connected
	Device sound settings
	Display output settings
	Run Nodestream software

Initial Configuration

A graphical user interface (GUI) will be displayed on initial startup allowing the user to configure device settings. A monitor and keyboard/mouse **MUST** be connected to the rear of the unit prior to powering.



If no configuration is required select **Run system** to start the Nodestream software



Once **Run system** is selected, the software will start automatically when the device is power cycled. To access the GUI, connect a monitor and keyboard/mouse then power cycle the device and select **stop system** when prompted.

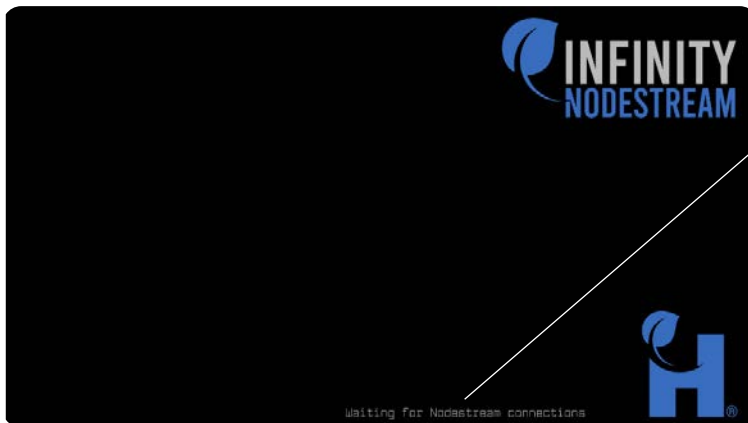
Video

Typical activity and description of events (if a monitor is connected)



Countdown following initial configuration or system boot.

Stop System can be selected to cancel and return to GUI.



Status message

Status Message	Action
Connecting to Nodestream server 0% (Percentage increments if network is configured correctly)	Applications started
Waiting for Nodestream connections	Device is connected to the server & ready for connection
Connection error. Check network settings	No connection to server
(No message displayed)	Indicates video and/or two-way audio is connected and streaming.



For network or video issues, see "Troubleshooting" section on page 22

Audio

The NQD provides an audio channel for streaming two-way audio to other devices in the users Nodestream group. The following audio devices are supported:

- USB speakerphone or headset via any USB port (Jabra Speakerphone supplied)
- 3.5mm stereo/mono + mic headset or microphone & speaker via the rear panel connections
- Mini DP/HDMI audio channel output via monitor outputs

Network Configuration

NQD Ethernet and WiFi networks are configured as DHCP by default

- Network configuration can be modified from the GUI
- A monitor and keyboard/mouse is required



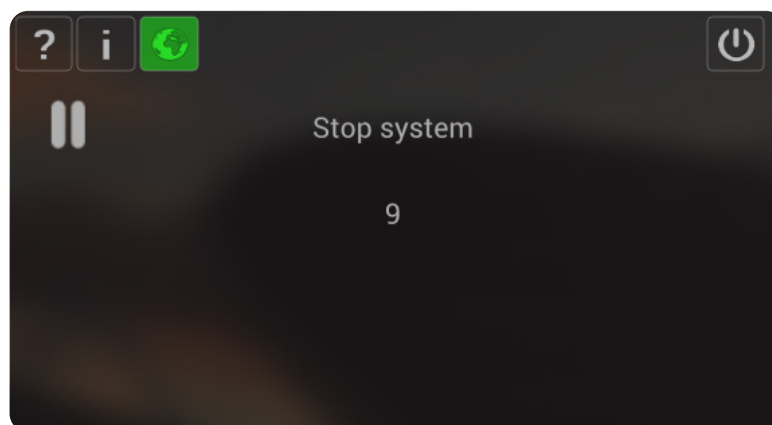
Only one WAN network (internet enabled) can be connected at any time, multiple may cause undesirable behaviour.



Ethernet connections **MUST** be reset for settings to take effect by

- Disconnecting and reconnecting the Ethernet cable
- Cycling the connection off then on in network settings
- Power cycling the device

If the GUI does not display, reboot the system and select **Stop System** when prompted



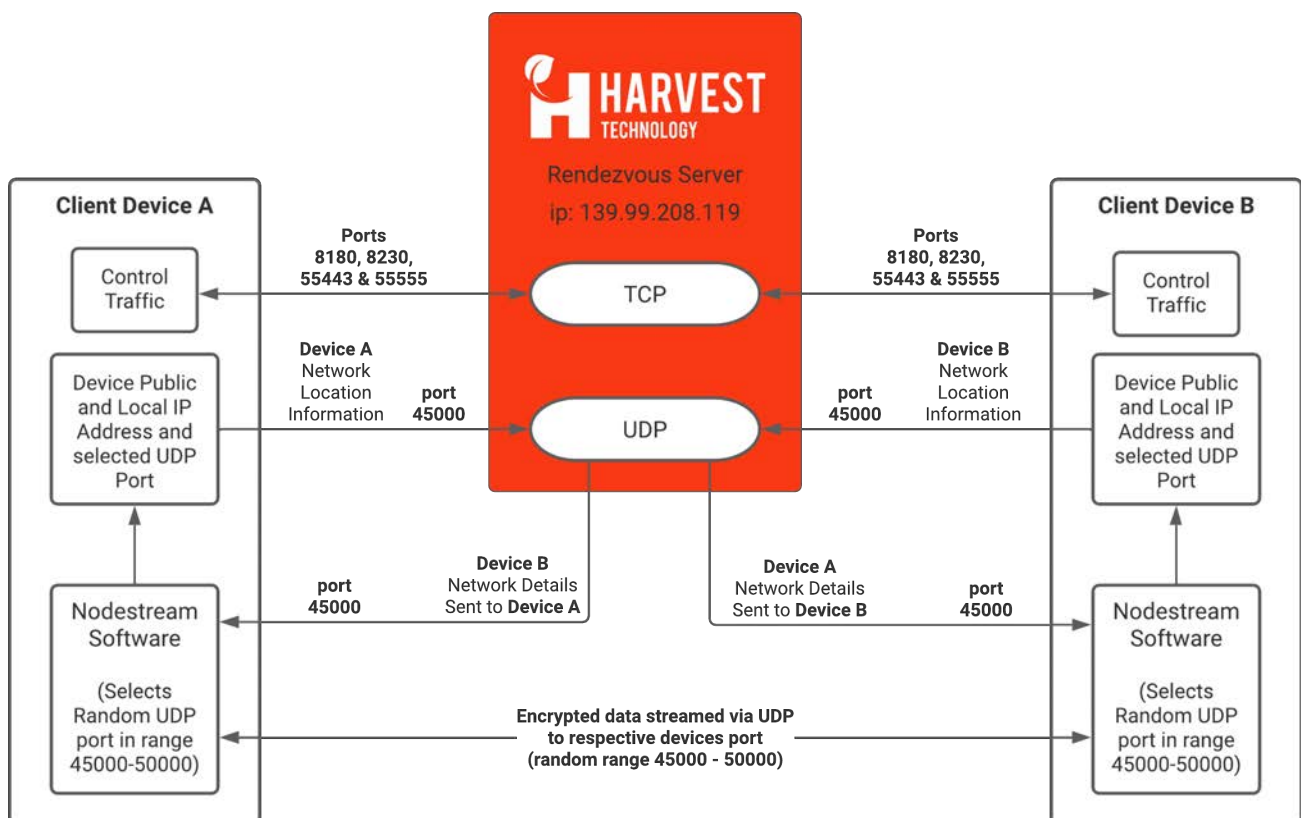
Firewall Settings

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

Harvest 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 must have access to the public network (internet)
- Inbound/Outbound to Harvest Infinity Server on IP: 139.99.208.119
 - TCP port 55443, 55555, 8180, 8230
 - UDP port 45000
- Devices must be able to send UDP packets between each other in the range of:
 - UDP port: 45000 - 50000

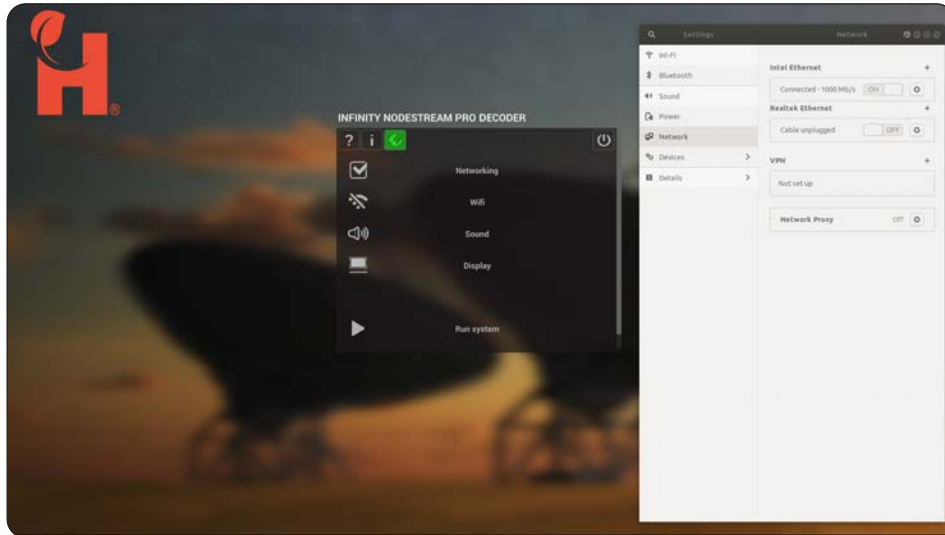
Network Requirements



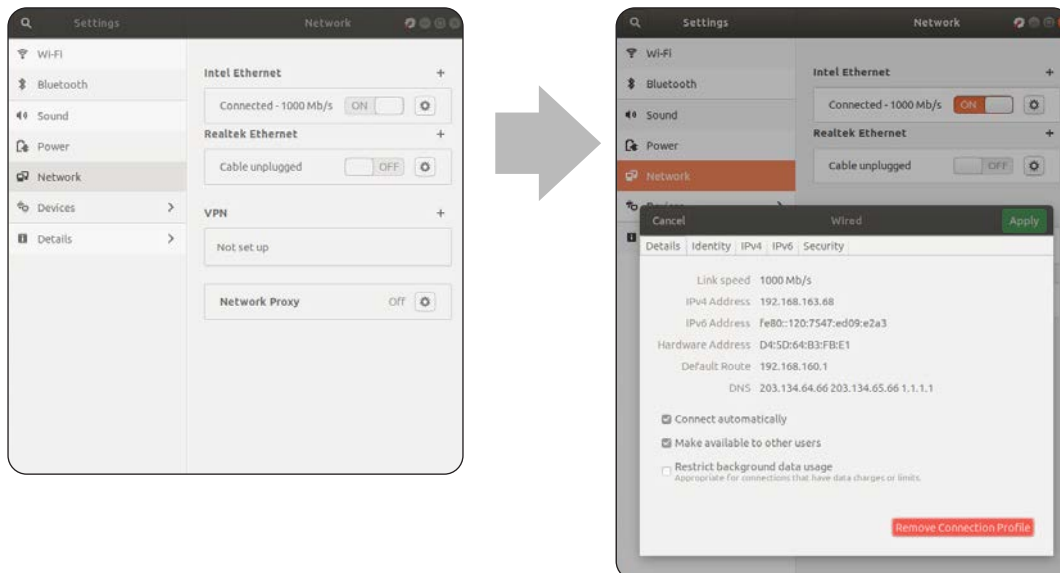
All port ranges are inclusive.

Ethernet

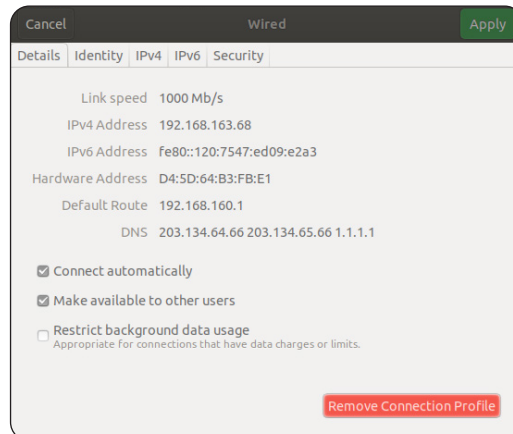
- 1 Select **Networking** from the GUI



- 2 Select **Wired Connection** or **Intel Ethernet**



3 Select IPv4



Cancel Wired Apply

Details Identity IPv4 IPv6 Security

Link speed 1000 Mb/s

IPv4 Address 192.168.163.68

IPv6 Address fe80::120:7547:ed09:e2a3

Hardware Address D4:5D:64:B3:FB:E1

Default Route 192.168.160.1

DNS 203.134.64.66 203.134.65.66 1.1.1.1

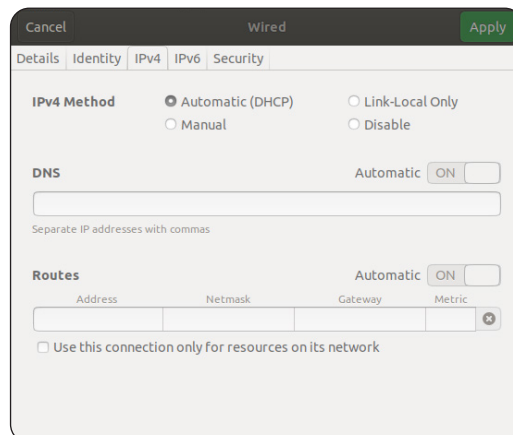
☒ Connect automatically

☒ Make available to other users

☐ Restrict background data usage
Appropriate for connections that have data charges or limits.

Remove Connection Profile

4 Enter details as provided by your Network Administrator



Cancel Wired Apply

Details Identity IPv4 IPv6 Security

IPv4 Method

☒ Automatic (DHCP) ☐ Link-Local Only

☐ Manual ☐ Disable

DNS Automatic ☒

Separate IP addresses with commas

Routes Automatic ☒

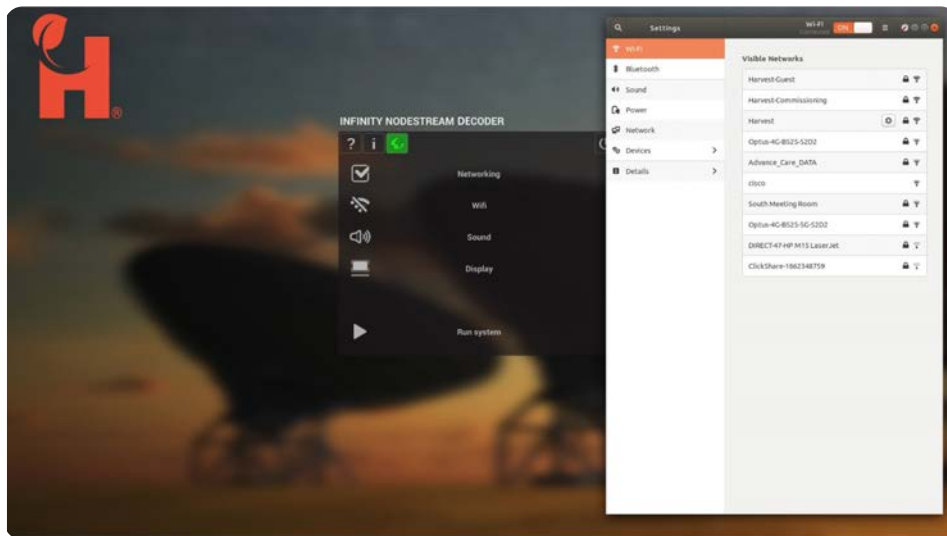
Address	Netmask	Gateway	Metric

☐ Use this connection only for resources on its network

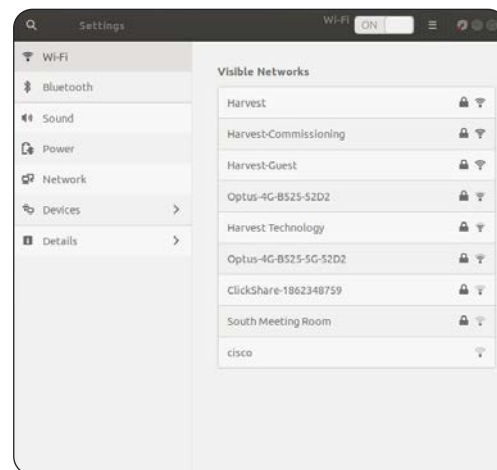
WiFi

When supplied with optional USB WiFi adapter:

- 1 Select WiFi from the GUI



- 2 Select WiFi network and enter password

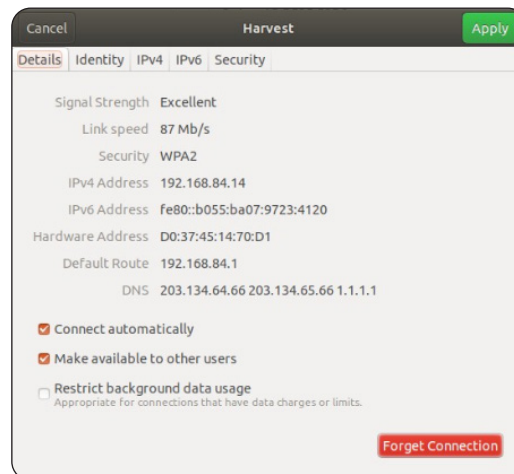


Ensure wifi is set to on

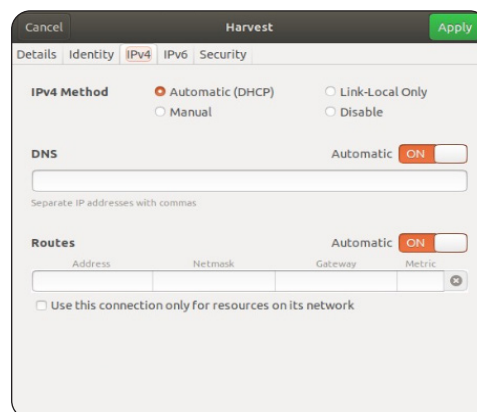
- 3 Confirm WiFi is connected and select the settings icon



- 4 Select IPv4




- 5 Enter details as provided by your Network Administrator

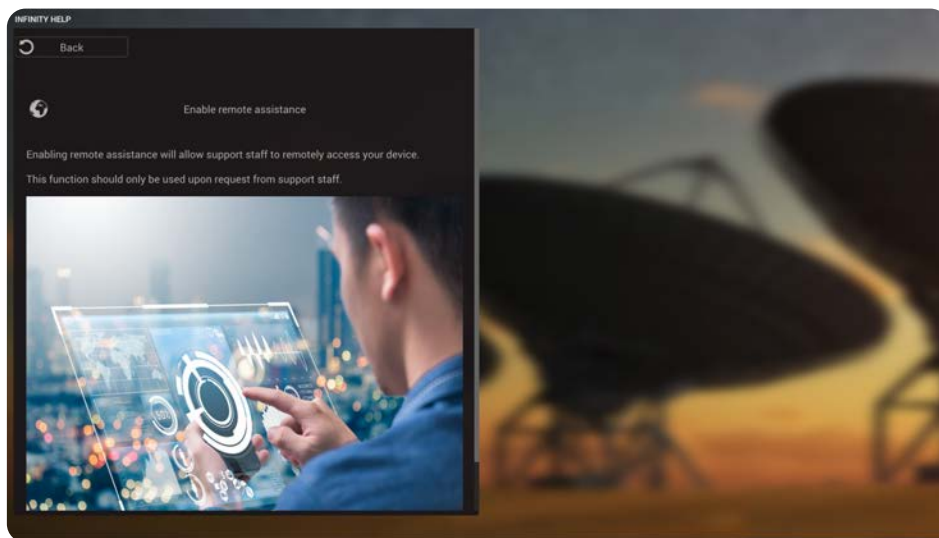


Remote Assistance

Remote assistance allows Harvest support staff to remotely access the system for diagnostics and configuration

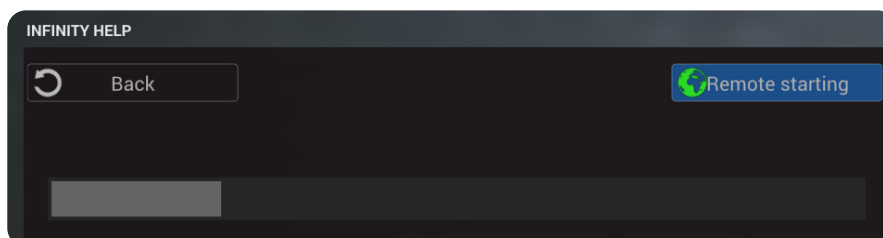
Enable Remote Assistance

- 1 Select  to display the remote assistance screen

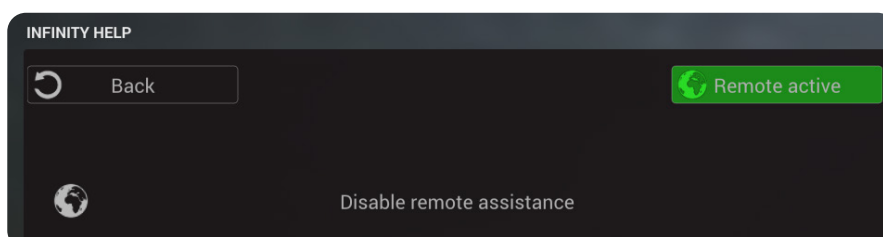


- 2 Select **Enable remote assistance**

- 3 Remote assistance starts...




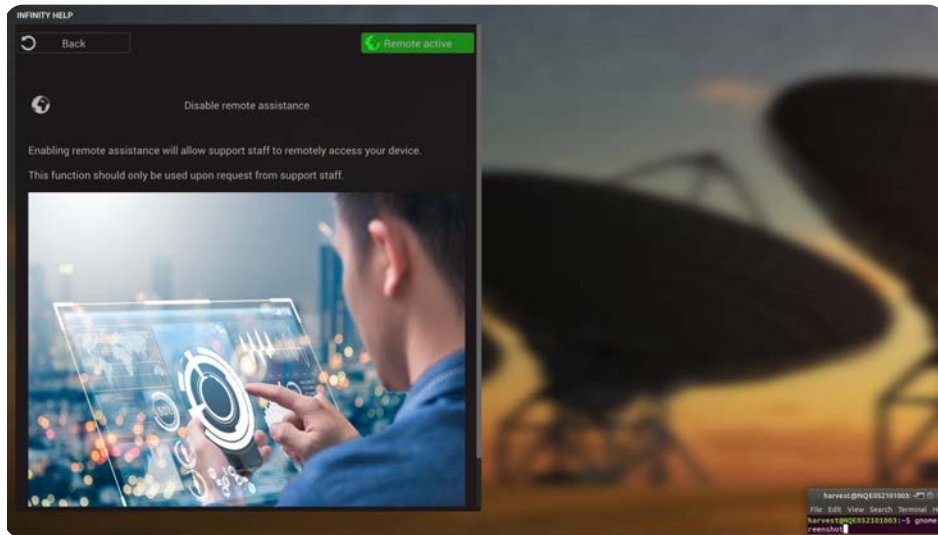
- 4 Remote assistance is enabled as indicated by the green **Remote active** icon.

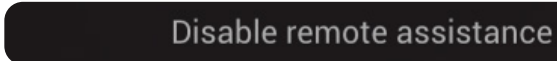


Disable Remote Assistance

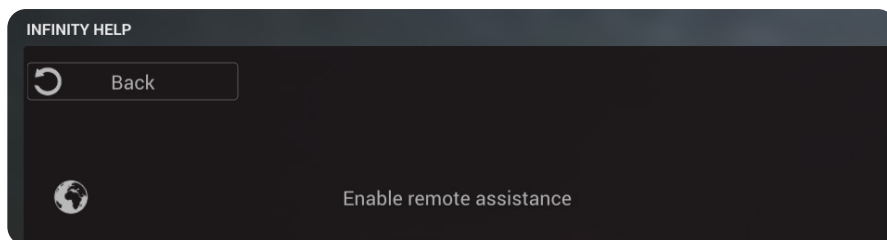
Remote assistance can be disabled after support staff have completed tasks.

- 1 Select  to display the remote assistance screen



- 2 Select 

- 3 Remote assistance disables



Nodester

Nodestream device connections and configuration is performed using the Nodester application



Nodester User Manual

Refer to the Nodester User Manual for additional information.



Appendix

Technical Specifications

Hardware

Physical dimensions	• 440 (W) x 132 (H) x 380 (D) mm
Weight	• 8.2 kg
Power	<ul style="list-style-type: none"> • Power supply: 100-240VAC 47/63Hz • Power consumption (operating): 150W • Power consumption (idle): 100W

Environmental

Temperature	<ul style="list-style-type: none"> • Operating: 0 °C to 35 °C • Storage: -20 °C to 65 °C
Humidity	<ul style="list-style-type: none"> • Operating: 0% to 90% (non-condensing) • Storage: 0% to 95% (non-condensing)

Video

Output	<ul style="list-style-type: none"> • 4 x Mini DisplayPort 1.4 • Max resolution 4096x2160 @ 60Hz
--------	---

Other

Ethernet	• 1 x 1Gbps Ethernet
WiFi	• 802.11ac 2.4GHz/5GHz WiFi (when supplied with optional adapter)
Serial	• 1 x 9-pin D male, RS-232
Front Ports	• 2 x USB type-A ports
Rear Ports	<ul style="list-style-type: none"> • 6 x USB type-A ports • 3.5mm audio <ul style="list-style-type: none"> • Line in • Line out • Mic in • 1 x HDMI (not used) • 1 x DisplayPort (not used) • 1 x PS/2 mouse/keyboard port (legacy)

Accessories (included)

Hardware	<ul style="list-style-type: none"> • 1 x Jabra USB speakerphone • 1 x Logitech K400 keyboard/mouse • 4 x Mini DisplayPort to HDMI adapter • 1 x IEC13 power cable (region specific)
Documentation	<ul style="list-style-type: none"> • Quick start guide

Troubleshooting

System

Issue	Cause	Resolution
Device not powering	PSU switch in off position AC not connected	Confirm AC connected and switch is in the on position
Software not starting	Run system has not been selected in GUI	Select Run system from the GUI (see "Initial Configuration" on page 9)
Device overheating	Blocked vents Environmental conditions	Ensure device ventilation is not blocked (refer quick start guide) Ensure device is located in an environment where specified operating conditions are not exceeded
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

Network

Issue	Cause	Resolution
"Connection error. Check network settings" message displayed (No connection to server)	Network issue	Check the Ethernet cable is plugged in Check WiFi adapter is plugged in and connected to correct WiFi network Confirm correct network settings with your Network Administrator
	Firewall settings	Ensure firewall settings are implemented, (see "Firewall Settings" on page 13)
Unable to see WiFi networks	No WiFi adapter connected	Connect Wifi adapter to USB port
	WiFi not enabled	Enable WiFi from GUI
	Incompatible WiFi adapter	Confirm compatibility with Harvest Support
	No networks in range	Reduce distance to WiFi router/AP

Video

Issue	Cause	Resolution
No output to monitor(s)	Monitor(s) not connected or powered	Ensure monitor(s) connected and powered Test monitor with an alternative input
	Incorrect output used	Ensure monitor connected to Mini DisplayPort output
Wallpaper displayed on monitor(s)	Monitor(s) not connected or powered prior to software	Connect and power monitor(s), reboot system
Incorrect video source displayed	Input configured as another in Nodester application	Select the correct input source via the Nodester application
Poor video quality	Poor input source quality	Test video source with an alternative display
	Input settings set low in Nodester	Check input configuration in Nodester (see Nodester manual for input configuration)

Audio

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



User Resources

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



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