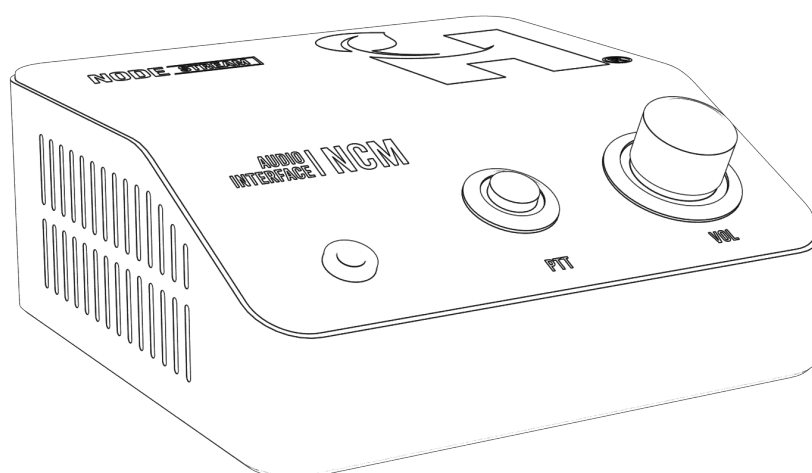


# NODECOM

---

## 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: 0°C to 65°C  
Humidity (non-condensing): Operating: 0% to 90% Storage: 0% to 90%
- 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](mailto: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](mailto:support@harvest-tech.com.au)



User Resources

Harvest Technology Pty Ltd  
7 Turner Avenue, Technology Park  
Bentley WA 6102, Australia  
[harvest.technology](http://harvest.technology)

# Disclaimer and Copyright

Whilst Harvest Technology will endeavor to keep the information in this user guide up to date, Harvest Technology makes no representations or warranties of any kind, express or implied about the completeness, accuracy, reliability, suitability or availability with respect to the user guide or the information, products, services or related graphics contained in the user guide, website or any other media for any purpose.

The information contained in this document is believed to be accurate at the time of release, however, Harvest Technology cannot assume responsibility for any consequences resulting from the use thereof.

Harvest Technology reserves the right to make changes to any of its products and associated documentation at any time without notice. Harvest Technology does not assume any responsibility or liability arising out of the application or use of any of its products or associated documentation.

Any decisions you make after reading the user guide or other material are your responsibility and Harvest Technology cannot be held liable for anything you choose to do.

Any reliance you place on such material is therefore strictly at your own risk.

Harvest Technology products, including all hardware, software and associated documentation is subject to international copyright laws. The purchase of, or use of this product convey a license under any patent rights, copyrights, trademark rights, or any other intellectual property rights from Harvest Technology.

## 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.

## 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 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.

# CONTENTS

|                               |           |
|-------------------------------|-----------|
| <b>Getting Started .....</b>  | <b>1</b>  |
| Introduction .....            | 1         |
| Key Features.....             | 1         |
| Typical System Setup.....     | 1         |
| Connections / UI .....        | 2         |
| <b>Configuration.....</b>     | <b>3</b>  |
| Overview .....                | 3         |
| Access .....                  | 3         |
| Initial Configuration.....    | 4         |
| Network .....                 | 4         |
| Information.....              | 5         |
| Testing.....                  | 5         |
| Port Configuration.....       | 6         |
| Ethernet.....                 | 6         |
| WiFi .....                    | 6         |
| Firewall Settings .....       | 7         |
| Discovery .....               | 7         |
| System .....                  | 8         |
| Applications.....             | 8         |
| Reset and Support .....       | 8         |
| Update Password.....          | 8         |
| Server Configuration.....     | 9         |
| Updates.....                  | 9         |
| <b>Operation.....</b>         | <b>10</b> |
| User Interface.....           | 10        |
| Nodestream Audio .....        | 11        |
| Control Applications .....    | 11        |
| <b>Appendix .....</b>         | <b>12</b> |
| Technical Specifications..... | 12        |
| Troubleshooting.....          | 13        |
| System.....                   | 13        |
| Network.....                  | 13        |
| Audio.....                    | 13        |



# Getting Started

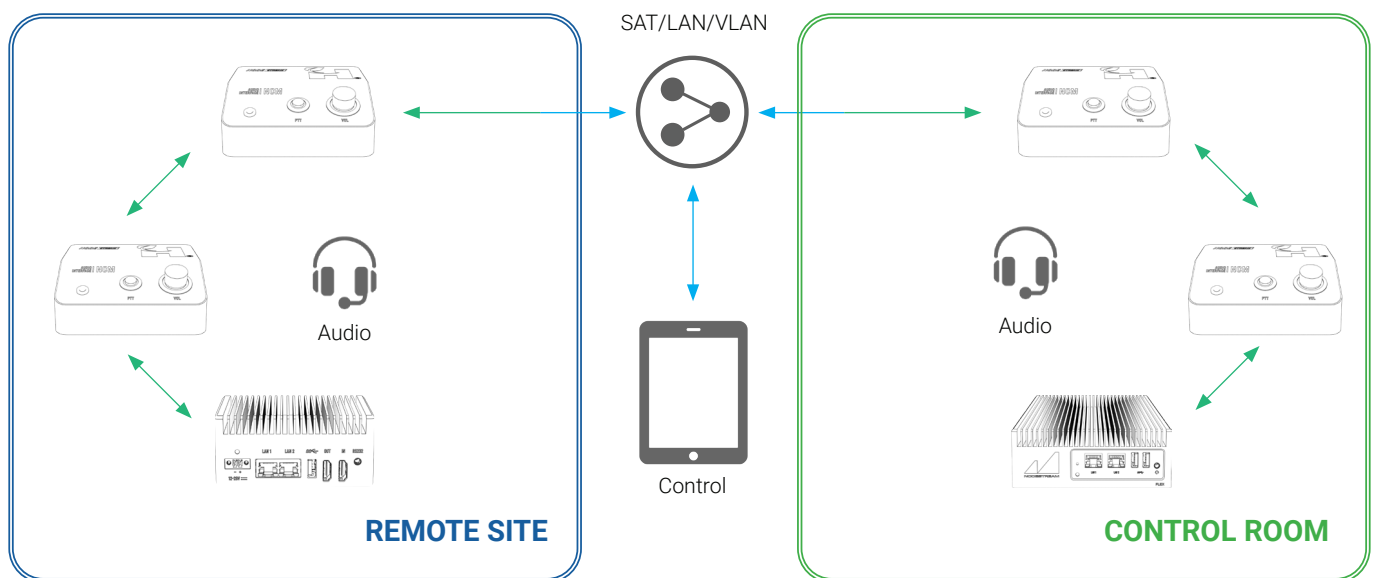
## Introduction

The Nodecom is designed to for use as a single channel desktop audio streaming device for communication with other Nodestream devices within your Nodestream group. Integrated UI allows for intuitive control and feedback of system status.

## Key Features

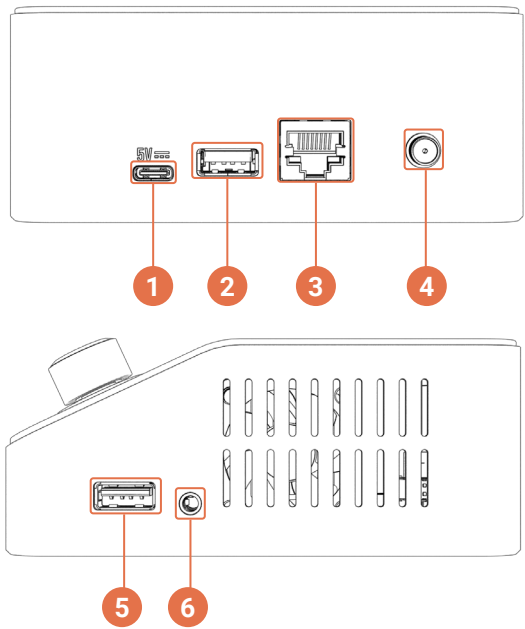
- Low bandwidth, low latency streaming of 1 audio channel
- Small desktop device
- Multiple input types - USB and analog audio
- Low power consumption

## Typical System Setup

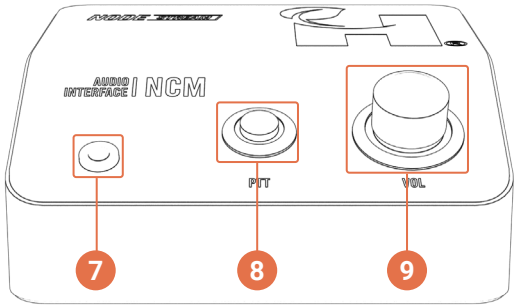




# Connections / UI



- 1 Power Input** - USB C  
5VDC (5.1VDC preferred)
- 2 USB A 2.0**  
Connection of peripherals
- 3 Ethernet**  
Gigabit RJ45
- 4 WiFi Antenna** - SMA  
For connection of supplied WiFi antenna.
- 5 USB A 2.0**  
Connection of peripherals
- 6 Analog Audio** - 3.5mm TRRS  
Connection of audio devices.



- 7 Status LED**  
RGB LED to indicate system status  
**BLUE** System starting  
**RED** Network issue
- 8 Push to Talk**  
PTT Button  
Press & hold to open mic  
Press 3 times to latch open mic  
RGB LED  
**BLUE** No connection  
**GREEN** Active connection, MIC closed  
**RED** Active connection, MIC open
- 9 Volume Control**  
Press to cycle control modes  
**BLUE** Speaker  
**RED** Microphone  
**GREEN** Monitor



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



Use only supplied or approved PSU and cable. Performance and operation may be affected when using alternatives.



# Configuration

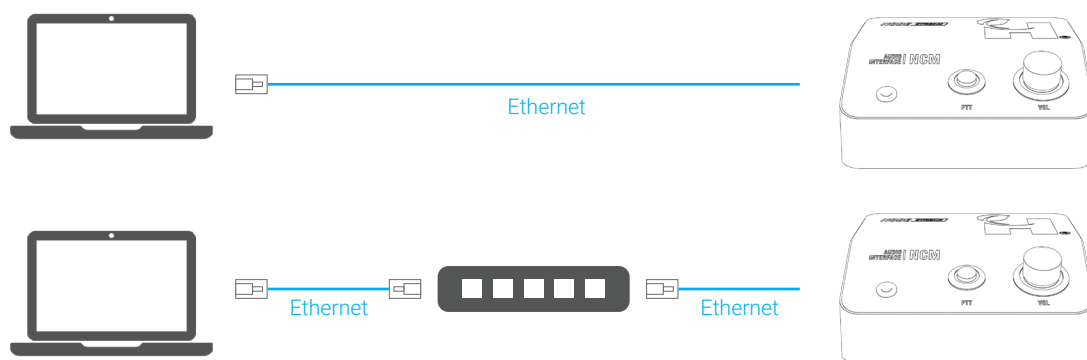
## Overview

The Web Interface provides details for, and management of;

- Software version information
- Network(s)
- User login credentials
- Remote support
- Server settings
- Updates

## Access

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



### DHCP Enabled Network

1. Connect your device to your LAN and power it up.
2. From the web browser of a computer connected to the same network, enter the device IP address or `http://serialnumber.local`, e.g `http://au2518ncmx2a014.local`
3. When prompted, enter your login details.



Serial number can be found on the product label, affixed to the underside of your device

### Non-DHCP Enabled Network

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

1. Connect 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 enabled network, only 1 device can be configured at a time, due to IP conflicts. Once a device has been configured, it may be left connected to your network.



## Initial Configuration

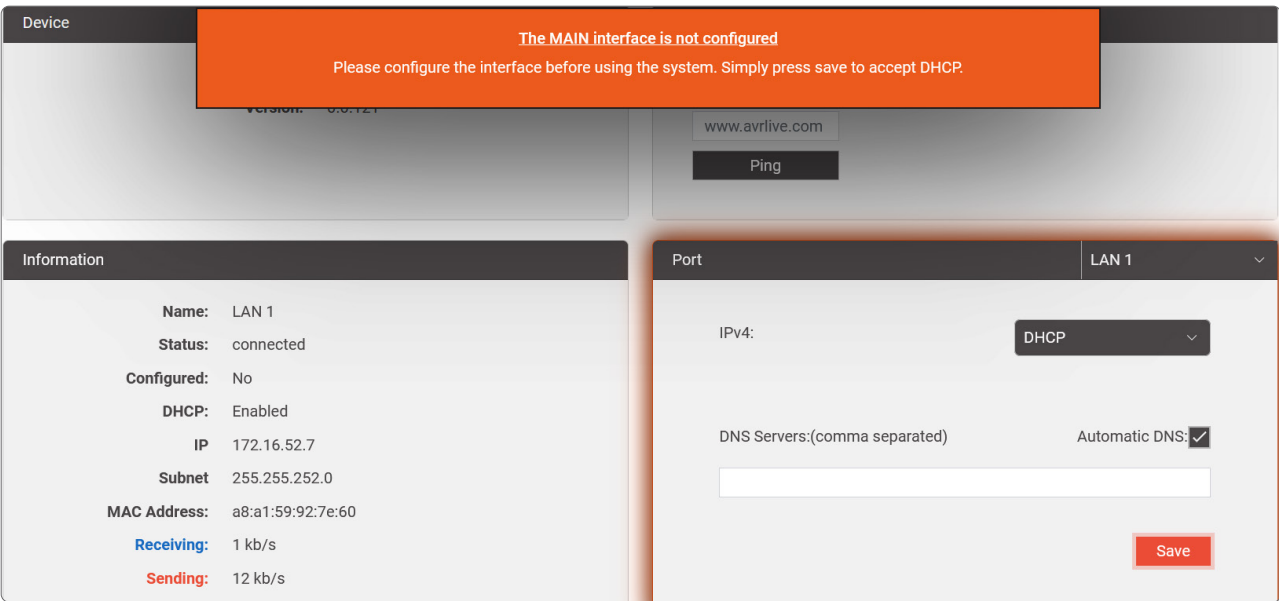
Nodestream devices require the following to be configured prior to operation;

- Network(s) refer below
- Server(s) refer "Server Configuration" on page 9



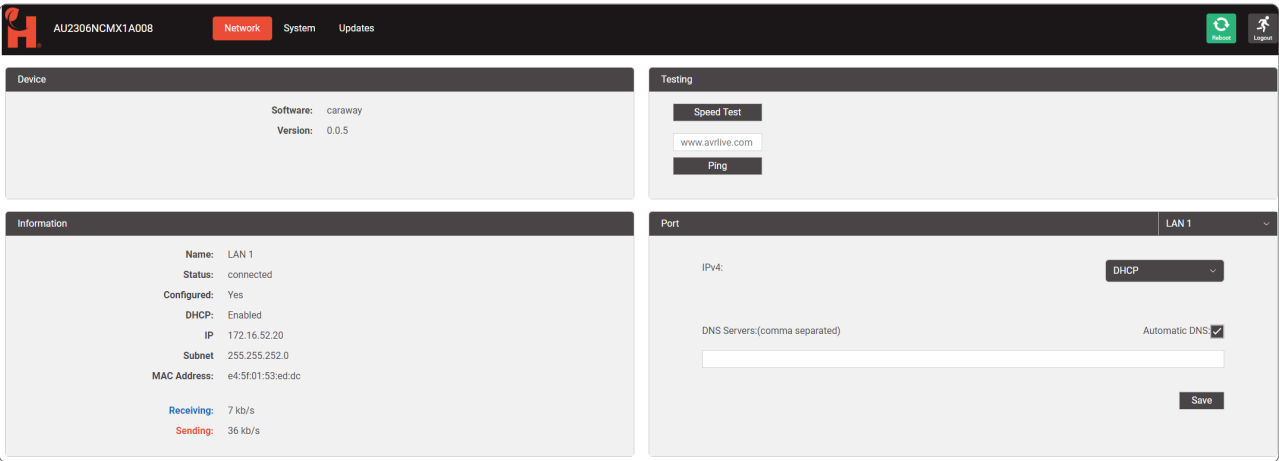
The primary network of your Nodestream device must be configured to ensure a stable connection and prevent the device from setting its IP address to its static default.

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 6 for configuration of static IP settings.

## Network







Port Configuration

Ethernet

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.

Manual

- 1. Select "Manual" from the "IPv4" drop down.
- 2. Enter network details as provided by your Network Administrator, then click save.
- 3. When prompted, confirm IP settings change.
- 4. To log back into the Web Interface, enter the new IP address or `http://serialnumber.local` in your web browser.

WiFi

- 1. Select "WiFi" from the "Port" drop down.
- 2. Select network from list of available networks from the "Visible Networks" drop down.
- 3. Select security type and enter password.
- 4. Click save for DHCP or select "Manual", enter port details as provided by your Network Administrator then click save.

Disconnect

- 1. Select WiFi from the "Port" drop down.
- 2. Click the "Disconnect" button.



- Only IPv4 networks are supported
- LAN 1 MUST be used for Nodestream traffic. LAN 2 is used for connecting to separate network stream inputs



Were a non-default MTU is set for a port, you MUST re-enter the value when changing port settings for the value to be retained.



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 X devices communicate with the server and each other via TCP/UDP ports, therefore the following permanent network rules for all inbound & outbound traffic must be in place:

Ports

TCP 8180, 8230, 45000, 55443 & 55555

UDP 13810, 40000 & 45000 - 45200

Server access to IP address



- All port ranges are inclusive
- Contact Harvest support for further information. [support@harvest-tech.com.au](mailto:support@harvest-tech.com.au)

Discovery



AU2503NSNX1A004

Network

Discovery

System

Updates





Detecting devices... 

Enable discovery

Disable discovery

| Serial          | Device IP      | Nodestream X Server ID                                             | Nodestream X Server Key | Nodestream X Server IP |
|-----------------|----------------|--------------------------------------------------------------------|-------------------------|------------------------|
| AU2446NSFX1A002 | ➔ 172.16.52.6  | ⚙ 48013ca7ae0622440548b35590f8ec6949a103b3b0119587865ea9e98711a3ad | YKEYS4HBZUyO9esOY       | ➔ 170.64.196.15        |
| AU2446NSRX2A045 | ➔ 172.16.52.17 | ⚙ 48013ca7ae0622440548b35590f8ec6949a103b3b0119587865ea9e98711a3ad | YKEYS4HBZUyO9esOY       | ➔ 170.64.196.15        |

Access Nodestream Devices

Nodestream devices connected to the same network as your device will display. Click the ➔ icon next to the Device IP to open its Web Interface in a new window.

Copy Nodestream X Server Details

To copy the Nodestream X server details from another device;

1. Click the ⬆ icon of the device server details you'd like to copy.
2. Confirm the action.
3. Nodestream X software will restart and connect to the new server.

Confirm Action

This will copy the enterprise server configuration from the remote device to this device. Are you sure?

Confirm

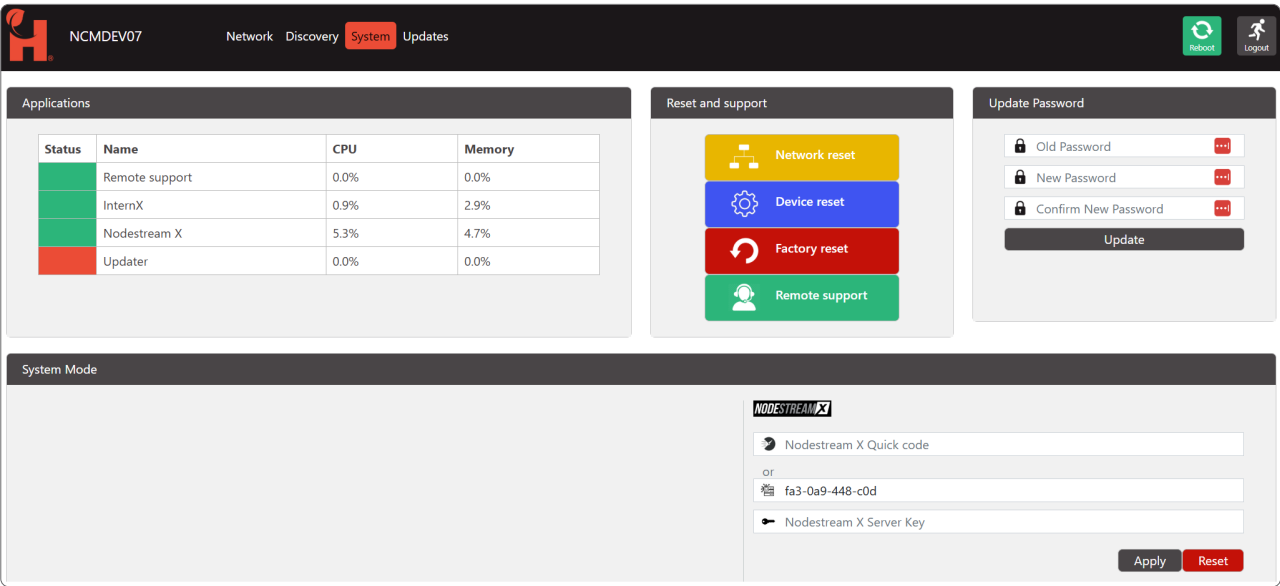
Cancel

Access Nodestream X Server

To access the Nodestream X server web interface, click the ➔ icon next to the Nodestream X Server IP.



# System

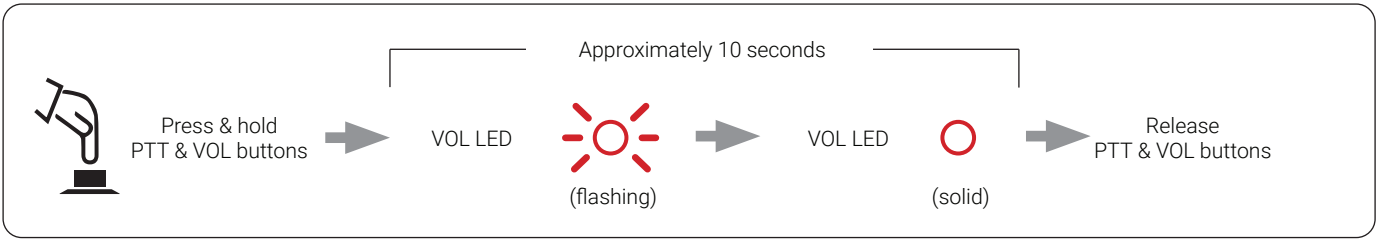


## Applications

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

## Reset and Support

- Network Reset**                Resets all network settings to default.
- Device Reset**               Resets all application and server settings to default
- Factory Reset**               Resets ALL device settings to default (alternatively, use the reset button, see below)



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



Remote support is enabled by default

## Update Password

Allows you to change the Web Interface login password. If the password is unknown, perform a factory reset. Refer “Reset and Support” above.



## Server Configuration

All Nodestream devices require configuration to a server for connection and settings management.

Enter the "quick code" or Server ID and Key provided by your Nodestream Administrator, then click "Apply".

Once a device has been registered to a server, your Nodestream Administrator will need to add the device to a group within the server before it can be used.

## Updates

### Automatic Updates

Automatic updates are disabled by default. Enabling this feature allows the device to download and install software when a newer version is available. During this process the device may restart. If this is not desired, set 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. Select "Update (permanent install)" and accept the conditions when prompted.
3. The updated manager will proceed to download and install the update.
4. 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

## User Interface

### Status LED

Displays device power and network status.

Power on

Network issue

### PTT (Push To Talk)

Displays software and connection status and provides control of microphone input. (also used for factory reset)

Software not running

Software running

Audio connection active, mic muted

Audio connection active, mic open

| Press and Hold |                 |                       |
|----------------|-----------------|-----------------------|
|                | Start talking   | LED Red <div></div>   |
|                | Release to mute | LED Green <div></div> |

| Open Mic |                           |                       |
|----------|---------------------------|-----------------------|
|          | Press 3 times to open mic | LED Red <div></div>   |
|          | Press for 1 sec to mute   | LED Green <div></div> |

### VOL (Volume)

Provides control of volume and displays current level. (also used for factory reset)

Press to toggle through audio devices

Speaker

Microphone

Monitor

LED Ring

Volume

Increase - CW

Decrease - CCW

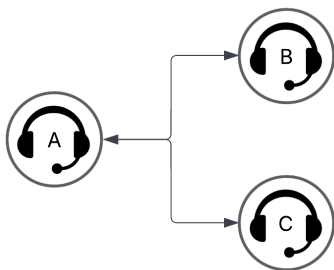
Mute - CCW until LED chases



# Nodestream Audio

Connection of up to 10 Nodestream audio enabled devices our your Nodecom allows for simple 2-way audio or complex communication networks within and/or between locations. Connection and settings management is performed via your Harvest Control application.

|             |                                                                                                                                                                                                                                                                                                           |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Quality     | Set to desired quality of audio, higher quality will demand higher bitrates                                                                                                                                                                                                                               |
| Speaker     | Select your audio output device.                                                                                                                                                                                                                                                                          |
| Microphone  | Select your audio input device                                                                                                                                                                                                                                                                            |
| Monitors    | Us if you'd like to output the audio to a secondary device                                                                                                                                                                                                                                                |
| Passthrough | When enabled, passthrough allows audio from other devices to "passthrough" your device.<br>Use to control which devices can communicate with each other.<br>Device A in the diagram below;<br>Passthrough disabled = B&C can only communicate with A<br>Passthrough enabled = All devices can communicate |



- Where there is no input to your microphone, or the device is muted, no data is transferred
- If your audio device is not shown, click "sync audio devices"

## 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

|                             |                                                                                           |                                      |
|-----------------------------|-------------------------------------------------------------------------------------------|--------------------------------------|
| <b>Physical</b>             |                                                                                           |                                      |
| Physical dimensions (HxWxD) | 50 x 120 x 120 mm (1.96" x 4.72" x 4.72")                                                 |                                      |
| Weight                      | 475g (1.6lbs)                                                                             |                                      |
| <b>Power</b>                |                                                                                           |                                      |
| Input                       | USB Type C - 5.1VDC                                                                       |                                      |
| Consumption (operating)     | 5W typical                                                                                |                                      |
| <b>Environment</b>          |                                                                                           |                                      |
| Temperature                 | Operating: 0°C to 35°C (32°F to 95°F)                                                     | Storage: 0°C to 65°C (32°F to 149°F) |
| Humidity                    | Operating: 0% to 90% (non-condensing)                                                     | Storage: 0% to 90% (non-condensing)  |
| <b>Interfaces</b>           |                                                                                           |                                      |
| Ethernet                    | 10/100/1000 Ethernet port                                                                 |                                      |
| WiFi                        | 802.11ac 2.4GHz/5GHz                                                                      |                                      |
| USB                         | 2 x USB Type A 2.0                                                                        |                                      |
| <b>Included Accessories</b> |                                                                                           |                                      |
| Hardware                    | Jabra Speak 510 USB Speakerphone<br>20W PSU<br>USB Type A to C cable @ 1m<br>WiFi Antenna |                                      |
| Documentation               | Quick start guide                                                                         |                                      |
| <b>Certification</b>        |                                                                                           |                                      |
|                             | RCM, CE, UKCA, FCC                                                                        |                                      |



## Troubleshooting

### System

| Issue                               | Cause                                                            | Resolution                                                                                                                                                                           |
|-------------------------------------|------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Device not powering                 | Power source not connected or powered                            | Confirm PSU is connected to your device and the supply is turned on                                                                                                                  |
| Unable to access Web Interface      | LAN port settings unknown<br>Network issue<br>Device not powered | Perform a factory reset and re-configure device<br>Refer " <a href="#">Reset and Support</a> " on page 8<br>Refer "Network" troubleshooting below<br>Confirm device is powered on    |
| Device overheating                  | Blocked vents<br>Environmental conditions                        | Ensure device ventilation is not blocked (refer quick start guide)<br>Ensure specified operating conditions are met<br>Refer " <a href="#">Technical Specifications</a> " on page 12 |
| Forgot login and/or network details | N/A                                                              | Factory reset device, refer " <a href="#">Reset and Support</a> " on page 8                                                                                                          |

### Network

| Issue                                       | Cause                                                     | Resolution                                                                                                                                                                                                                                                                                                   |
|---------------------------------------------|-----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Red Status LED<br>(No connection to server) | Network issue<br>Port not configured<br>Firewall settings | Check an Ethernet cable is plugged in or,<br>Check WiFi is connected to correct network<br>Confirm port configuration is correct<br>Refer " <a href="#">Port Configuration</a> " on page 6<br>Ensure firewall settings are implemented and correct.<br>Refer " <a href="#">Firewall Settings</a> " on page 7 |
| Unable to see WiFi networks                 | WiFi antenna not installed<br>No networks in range        | Install supplied Wifi antenna<br>Reduce distance to WiFi router/AP                                                                                                                                                                                                                                           |

### Audio

| Issue                        | Cause                                                                         | Resolution                                                                                                                                                      |
|------------------------------|-------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| No audio input and/or output | Audio device not connected<br>Audio input/output not selected<br>Device muted | Ensure audio device is connected and powered on<br>Select correct input and/or output device in your Harvest control application<br>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<br>Microphone obstructed or too far away                    | Increase mic level at the connected device or via your Harvest control application<br>Ensure microphone is not obstructed<br>Decrease distance to microphone    |
| Poor audio quality           | Poor cable connection<br>Damaged device or cable<br>Limited bandwidth         | Check cable and connections<br>Replace device and/or cable<br>Increase available bandwidth and/or reduce quality setting via Harvest Control Application        |



User Resources

Contact and Support

[support@harvest-tech.com.au](mailto:support@harvest-tech.com.au)



Harvest Technology Pty Ltd  
7 Turner Ave, Technology Park  
Bentley WA 6102, Australia  
[harvest.technology](http://harvest.technology)

All rights reserved. This document is the property of Harvest Technology Pty Ltd. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, photocopy, recording or otherwise without the written consent of the CEO of Harvest Technology Pty Ltd.