HARVEST HTG-TEC-GUI-015 NQER Media Encoder User Manual

Contents

HARVEST

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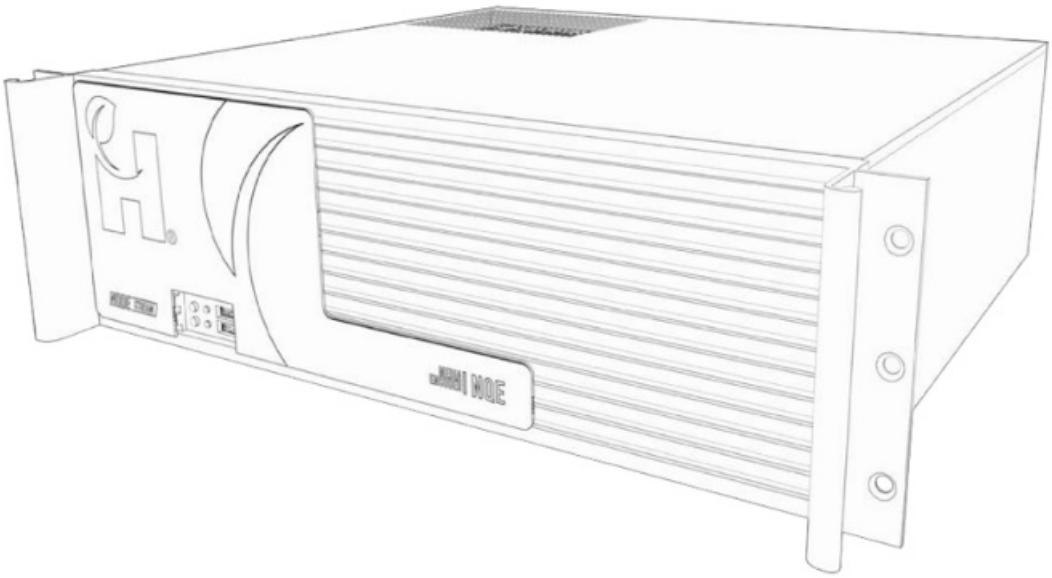


Please read these instructions carefully before using this product

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 are connected correctly. If you notice any damage, contact the support team immediately.

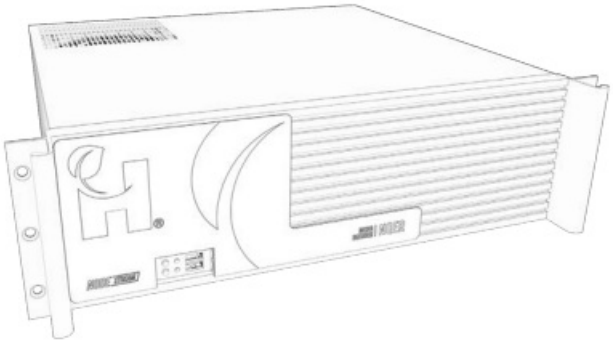
- To avoid short circuits, keep metal or static objects away from the device.
- Avoid dust, humidity, and temperature extremes. Do not place the product in any area where it may become wet.
- Operating environment temperature and humidity:
  - Temperature: Operating: 0 °C to 35 °C Storage: -20 °C to 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 at **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.

Overview

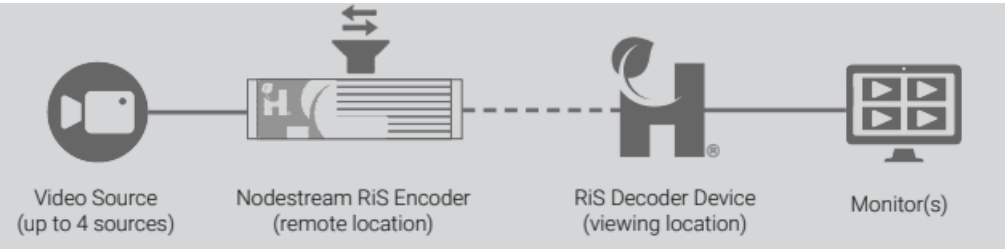
The Nodestream RiS Quad Encoder (NQER) provides encoding of up to four HD video sources and frame synchronous serial data, to a RiS Decoder at another location.



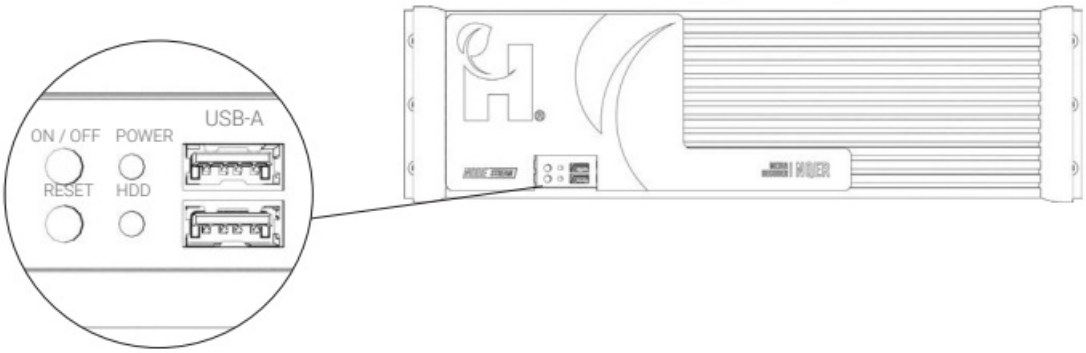
Feature Summary

- HD video and data over low-quality satellite networks
- Real-time monitoring of bandwidth utilization with bit rate and latency
- System capable of 4 x 60fps at 1080p
- Frame synchronous serial data

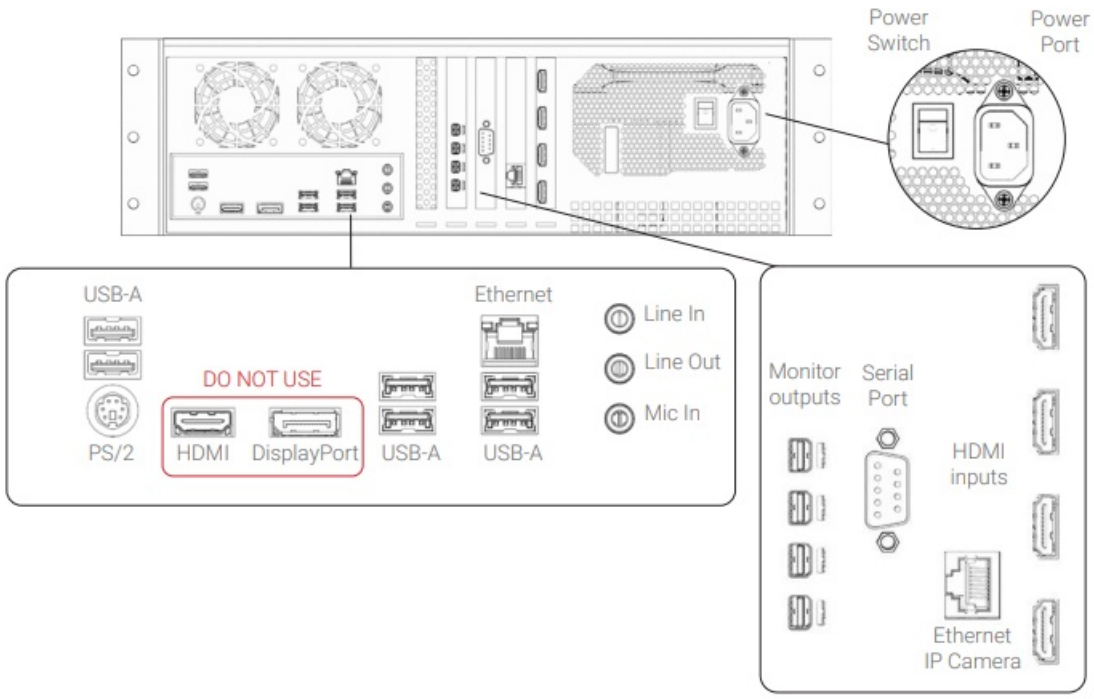
Video and frame synchronous data streaming solution



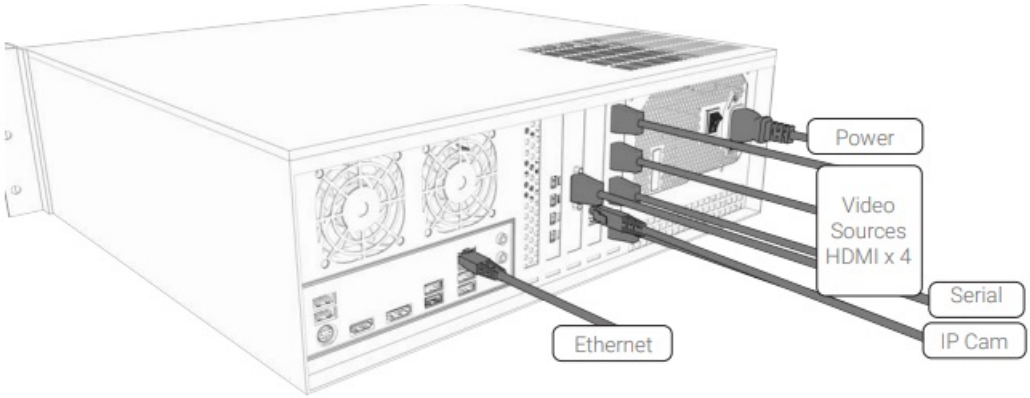
Front Panel



Rear Panel



Connections



- Monitor output required for local device configuration
- The NQER is supplied with a Quick Start Guide for installation. See the User Resources on the last page for access.

Serial Data
RS232 serial data can be input to the NQER via the D9 serial port.

Recommended port settings

- Baud Rate: 9600bps
- Data Bits: 8
- Stop Bits: 1
- Parity: None
- Flow Control: None
- 1: Rx
- 2: Tx
- 5: GND
- When connecting serial data to an established video stream, the connection MUST be restarted

- Data string requires LF (line feed) termination

Serial data can be verified on the Decoder by toggling on screen information. See “Deliverer Manual” for further information.

Configuration
The NQER is configured via the Web UI. The Web UI allows the user to view device information and status, configure network settings and perform system related tasks. The device is shipped in a “factory default” state. Settings must be configured to enable use on the customers RiS network.

Access
The Web UI can be accessed via a web browser or locally on the device.

Web Browser

1. Connect the NQER device to your LAN via the Ethernet port and power the device
2. Navigate to the device from a web browser by entering the IP in the address bar

- The device is set to DHCP by default.
- The IP address can be identified by use of a suitable IP scanning tool. Serial number and/or MAC address should be displayed (PC must be on the same network)

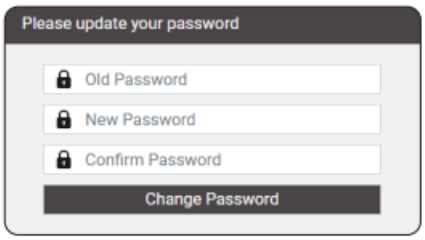
Access via the Device

1. Connect LAN, monitor, keyboard/mouse and power the device
2. Once the device has booted, double click the “RiS configuration” icon on the desktop or hold CTRL and press ~ if the application starts

Initial Login

1. Access the device Web UI configuration utility via a web browser or the device.

2. Login with the following
   User: admin , Password: admin



3. Enter a new password

Dashboard

Following the initial login, the user will be presented with the WebUI dashboard. The following information and configuration is provided

Device

- Uptime

Information

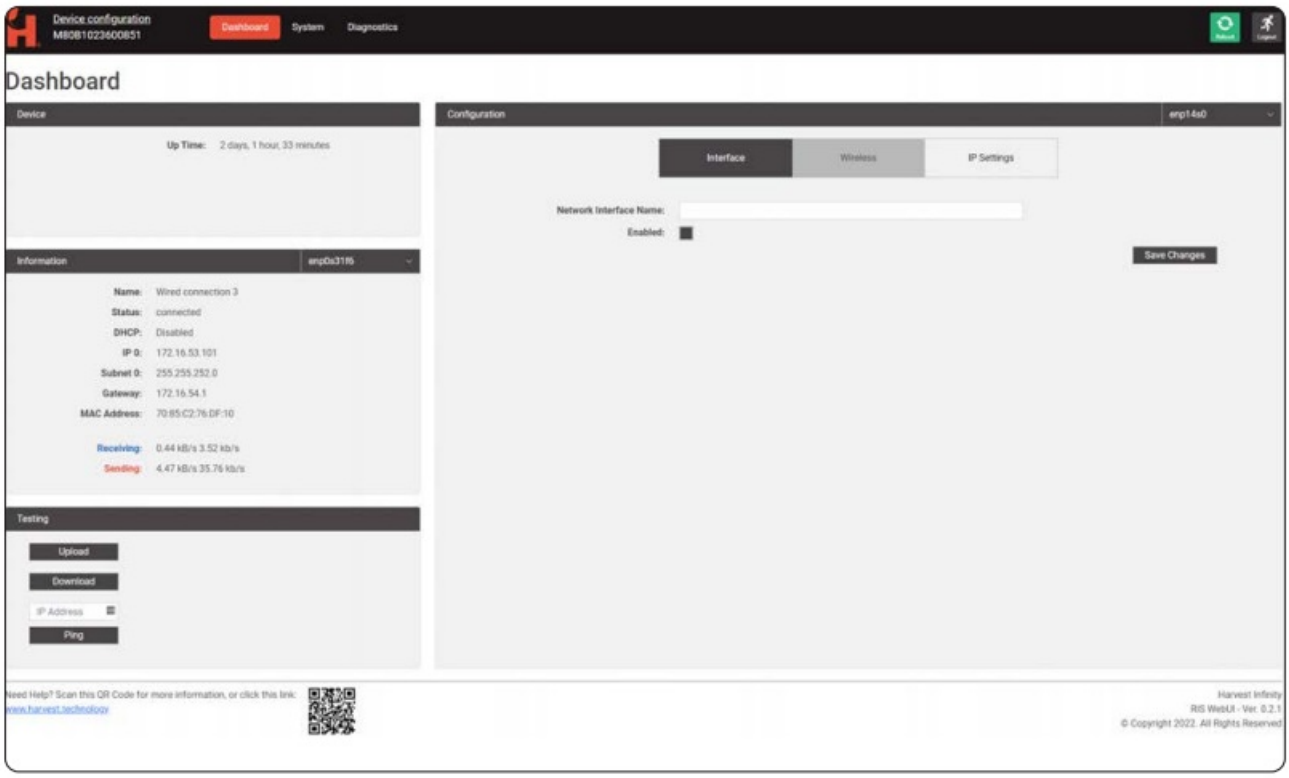
- Select interface from drop down
- Current network status & information

Testing

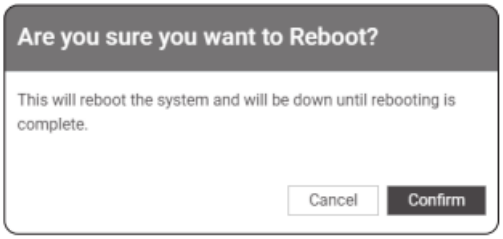
- Network connection upload & download speed tests
- Ping a device on the network (helpful for network diagnostics)

Configuration

- See next section



Reboot



- To reboot the device, select the reboot icon from the top right of any screen and select Confirm

Network Configuration

RiS devices communicate over a customers “closed” network, ensuring stable and secure transmission of sensitive data. Device network adapters require IPv4 configuration.

Firewall Settings
The following port numbers MUST be set to open on customer network devices where applicable Video & data streaming, device control & connection management

- UDP – 2100 to 2200

Device-to-device communication

- UDP – 2025 & 2026
- TCP – 2020

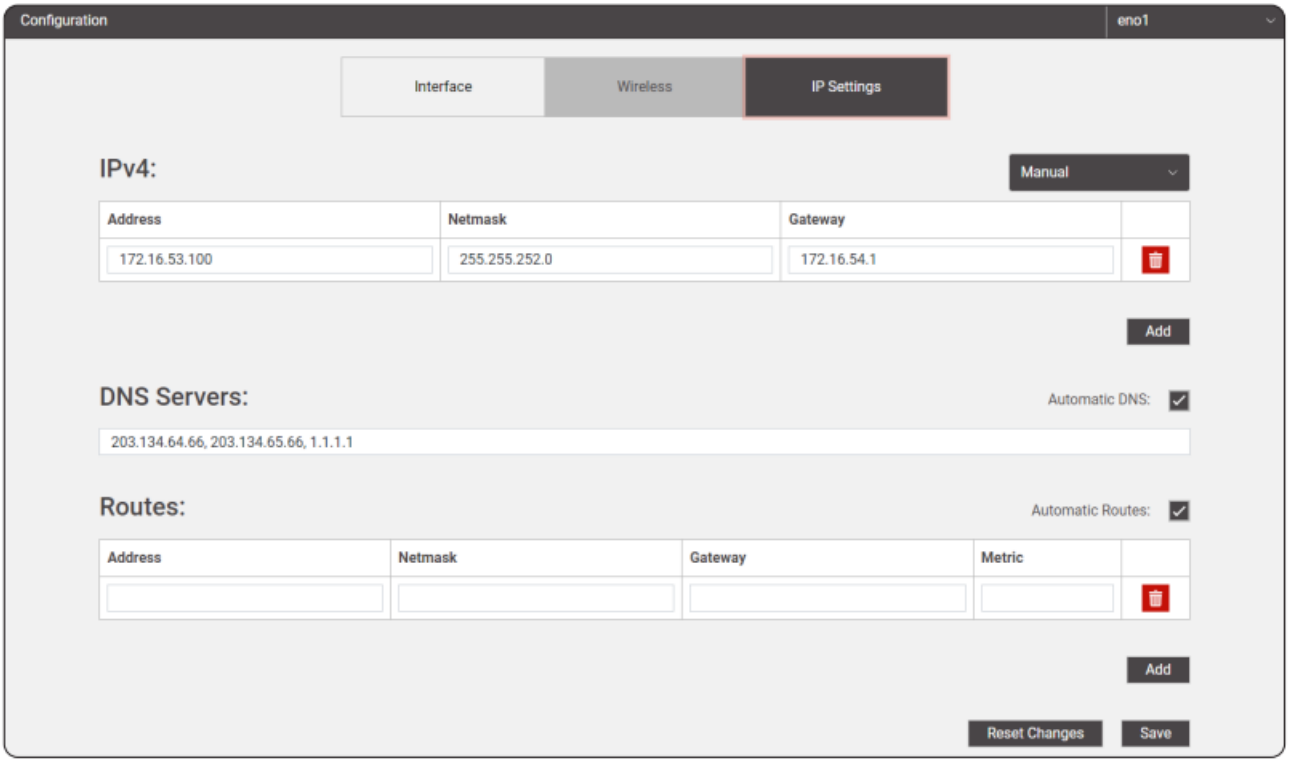
Ethernet connections will take preference over WiFi. Disable or unplug Ethernet cable if WiFi connection is preferred

Current network settings can be viewed from LHS of the dashboard

Ethernet

1. Select the Ethernet adapter from the drop down list in the top right of the window

2. Name the interface (optional) and select enabled then Save Changes
3. Select the IP Settings tab, then manual from the drop-down



4. Enter network settings as provided by your Network Administrator and select Save

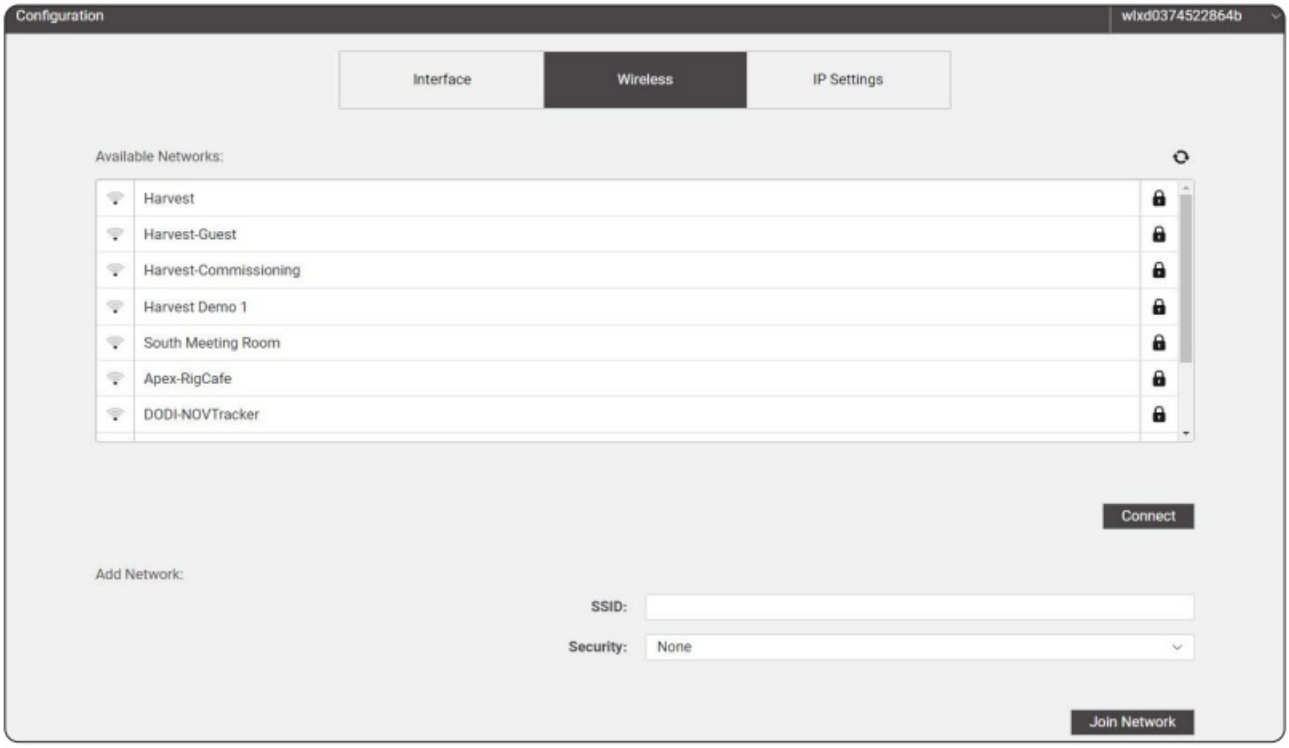
Ethernet connections MUST be reset for settings to take effect by

- Disconnecting and reconnecting the Ethernet cable
- Enabling then disabling the connection from the interface settings
- Power cycling the device

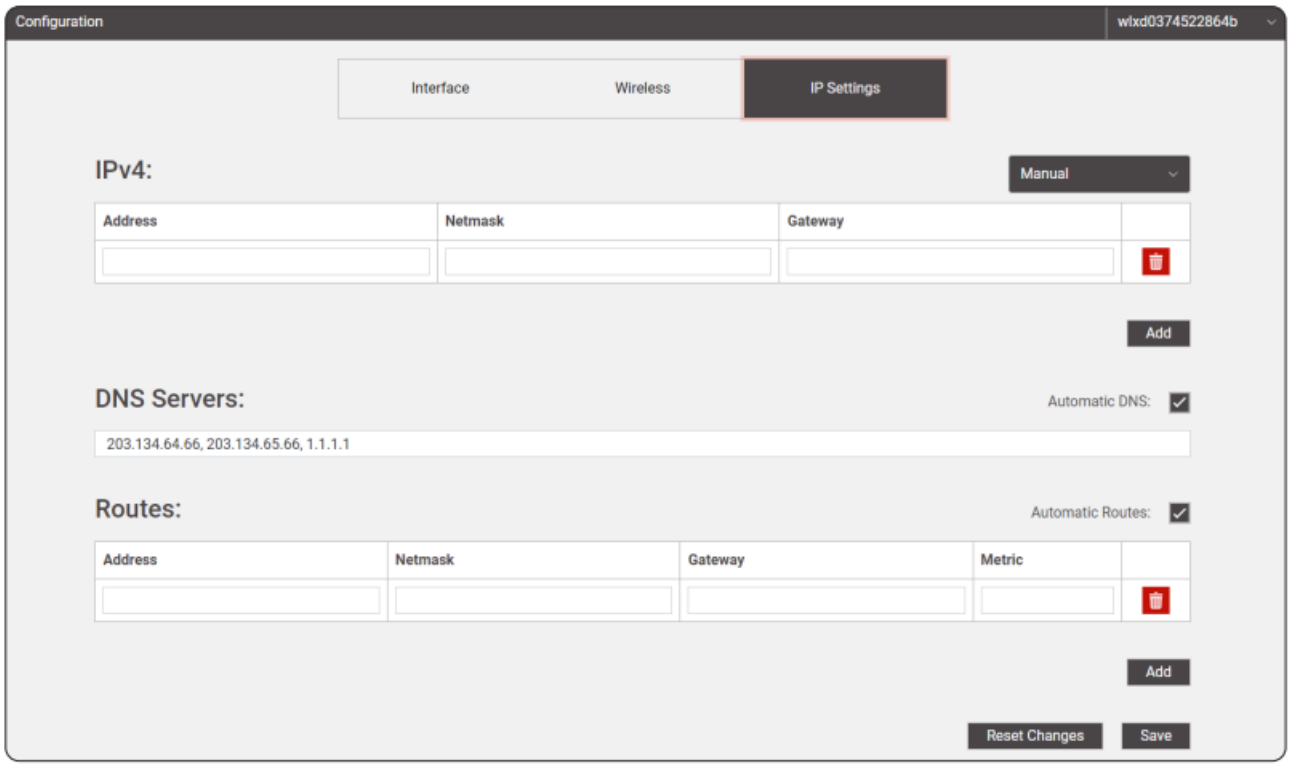
WiFi (with optional USB adapter)

1. Select the WiFi adapter from the drop down list in the top right of the window

2. Name the interface (optional) and select enabled then Save Changes
3. Select the Wireless tab, then manual from the drop down
4. Select from the available networks then Connect or manually enter details then Join Network



5. Select the IP Settings tab



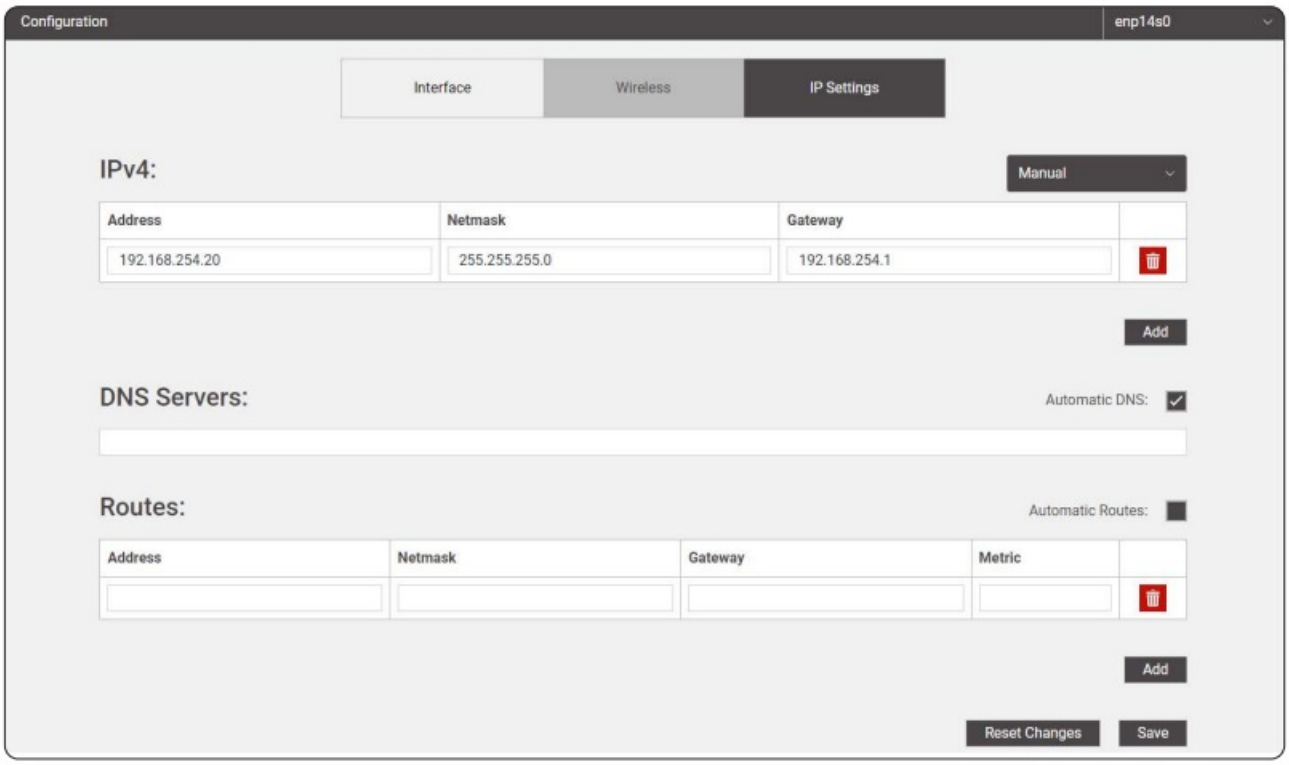
6. Enter network settings as provided by your Network Administrator and select Save

IP Camera

IP camera RTSP streams can be used as input devices on the NQER. The IP camera network should be connected to the CAM IP port on the rear of the device to avoid complications relating to conflicting IP networks or network security measures. IPv4 settings MUST match that of the camera network.

1. Select the Ethernet adapter enpxS0 from the drop down list in the top right of the window

2. Name the interface (optional), select Enabled then Save Changes
3. Select the IP Settings tab, then manual from the drop-down



4. Enter network settings as provided by you Network Administrator and select Save

Disable “automatic routes” when using the CAM IP port. Undesirable operation will occur if checked.

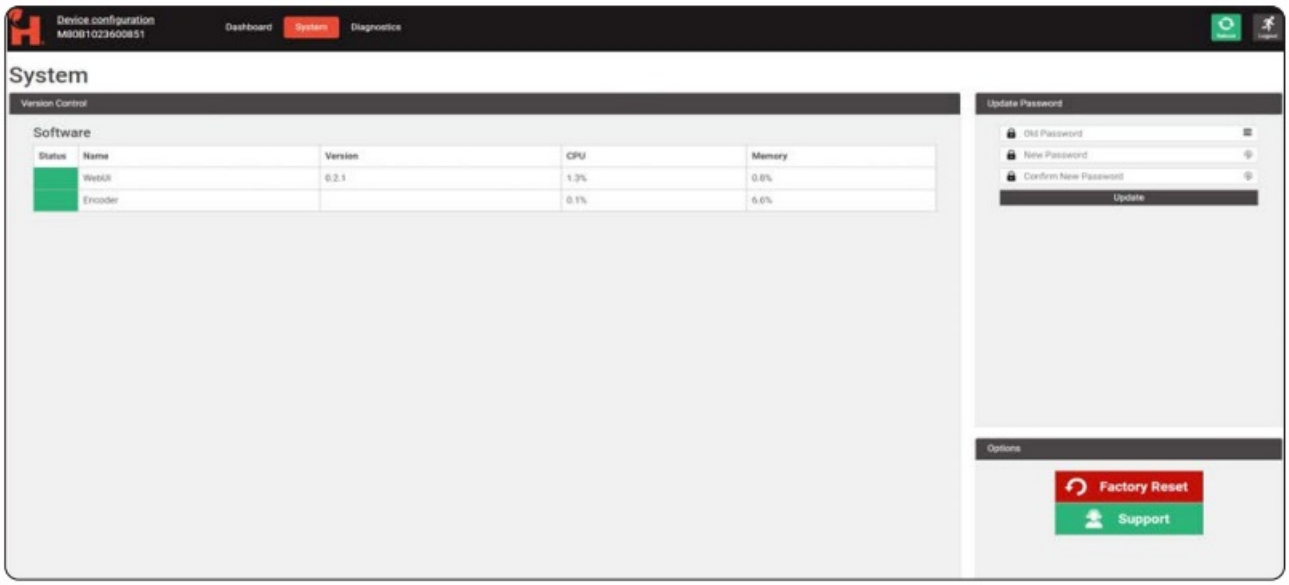
System Settings

Version Control

- Software versions currently installed and resource usage

Update Password

- Enter details and select Update

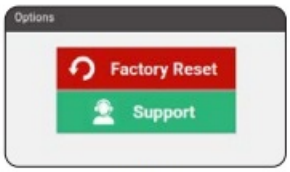


Factory Reset

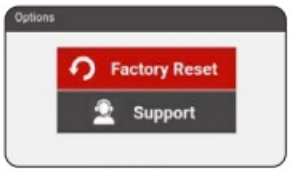
- Select to set the device to factory defaults (user and network settings)
- Select Confirm or Cancel when prompted

Support

- Select to enable/disable remote access to a support specialist



Enabled



Disabled

Diagnostics

- Network
- Network connection information
- Select interface from the drop-down

Software

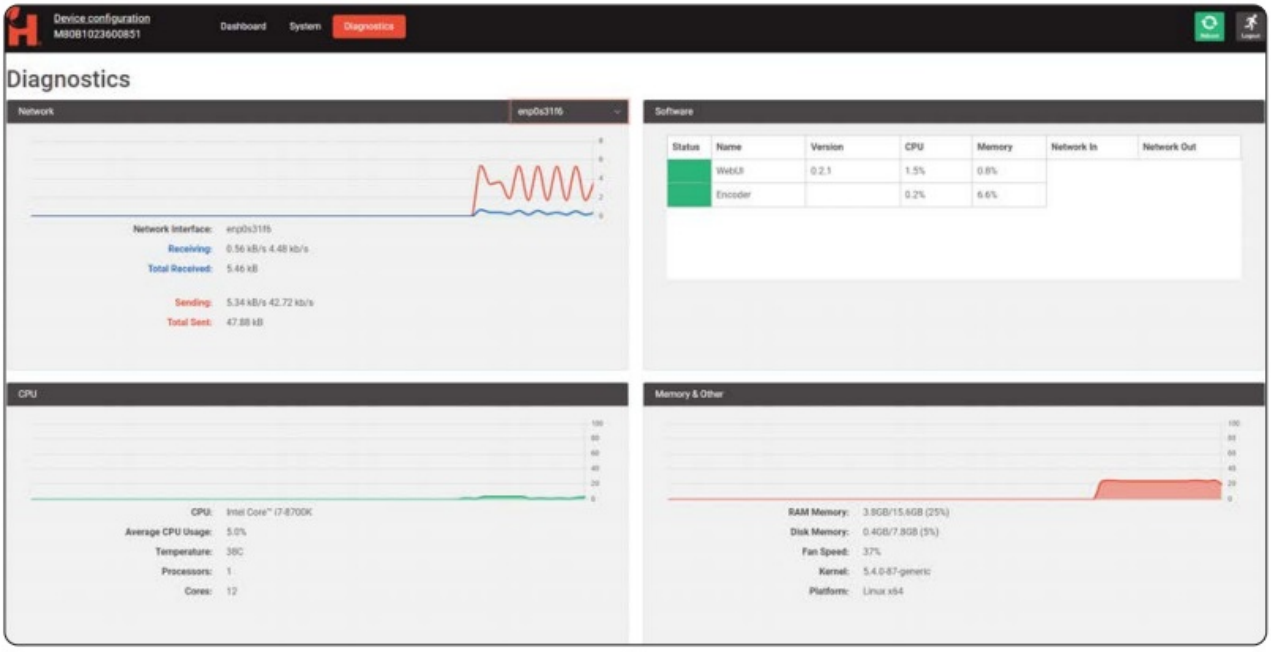
- Software versions currently installed and resource usage

CPU

- Current CPU usage and temperature

Memory & Other

- Information on other system resources



Deliverer

RiS device connection management and configuration is performed using the Deliverer application.

Deliverer User Manual
Refer to the Deliverer User Manual for additional information.

Appendix

Technical Specifications

Troubleshooting

Hardware

Physical dimensions	440 (W) x 132 (H) x 380 (D) mm	
Weight	8.2 kg	
Power	Power supply:	100-240VAC 47/63Hz
	Power consumption (operating):	150W
	Power consumption (idle):	100W

Environmental

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

Video

Input	4 x HDMI 1.4a Input resolution up to 2048x2160 @ 144fps 8/10/12-bit colour depths RGB 4:4:4, YCbCr 4:4:2 colour sampling
Output	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	6 x USB type-A ports 3.5mm audio 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	1 x Mini DisplayPort to HDMI adapter 1 x IEC13 power cable (region specific)
Documentation	Quick start guide

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
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
No serial data transmission	Incorrect RX/TX cable config Inorrect input string settings	Confirm pinout correct, use NULL modem Confirm serial data string settings correct. (See “ Serial Data” on page 7)

Network

Issue	Cause	Resolution
Device offline in Deliverer App	Network issue Firewall settings	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 Ensure firewall settings are implemented, (see “ Firewall Settings” on page 10)
Unable to see WiFi networks	No WiFi adapter connected WiFi not enabled Incompatible WiFi adapter No networks in range	Connect Wifi adapter to USB port Enable WiFi from GUI Confirm compatibility with Harvest Support Reduce distance to WiFi router/AP
No connection to IP camera(s)	Incorrect port used Incorrect network settings	Ensure camera network is connected to “IP CAM” port Confirm correct network settings with your Network Administrator Check camera is connectable via another device Ping camera from the WebUI dashboard

Video

Issue	Cause	Resolution
“No Signal” displayed on Decoder	Source(s) not connected or powered on Damaged cable Inadequate cable used	Confirm video source(s) connected and powered. Test source with another display Ensure cable is specified correctly (length, speed, impedance, etc.)
“Unsupported signal” or “Out of sync” displayed on Decoder	Poor cable connection Damaged cable Input signal not supported	Check cable connections Replace cable Check input signal type is supported
No output to monitor	Monitor not connected or powered Incorrect output used	Ensure monitor connected and powered Test monitor with an alternative input Ensure monitor connected to Mini DisplayPort
Poor video quality	Poor input source quality Poor quality / damaged cable Quality settings in Deliverer set low	Test video source with another display Test with another cable Check quality settings in deliverer

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

Harvest Technology Pty Ltd

7 Turner Ave, Technology Park
Bentley WA 6102, Australia
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Contact and Support User Resources
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Bentley WA 6102, Australia
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Disclaimer and Copyright

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.

Documents / Resources

	HARVEST HTG-TEC-GUI-015 NQER Media Encoder [pdf] User Manual HTG-TEC-GUI-015 NQER Media Encoder, HTG-TEC-GUI-015, NQER Media Encoder, Media Encoder, Encoder, NQER

References

- Turner Rooms for Rent
- Harvest | Terms and Conditions