NEWT-IPX RELEASE NOTES

Welcome to the NEWT-IPX v5.0.32 Release Notes. Please read this document to find important information on areas of NEWT-IPX that may not be covered in the user documentation.

CONTENTS

1000DR-010-09

VERSION HISTORY

VERSION 5.0.32 – OCTOBER 2022

BUG FIXES

- Fixed an issue with HDMI 16-channel audio receivers in NMOS.
- Fixed an issue around our customizable OEM settings, which caused errors when changing the IP and global parameters.

VERSION 5.0.0 – AUGUST 2022

WHAT'S NEW

- **SUPPORT FOR ANCILLARY ST2110-40**

  A new operational mode, "IP to 2x3G-SDI Gateway with ANC", was added to support Ancillary ST2110-40. This allows the NEWT-IPX to transparently receive an ancillary stream, and pass through all received ancillary data types. The user can configure up to 2 ancillary receiver streams to be output on up to 2 SDIs. Support for ancillary stream statistics and diagnostics was also added.

- **ADDED CPU UTILIZATION DIAGNOSTICS**

  The user can monitor the CPU utilization of the NEWT-IPX over time via a new option in the Advanced > Diagnostics interface.

BUG FIXES

- Fixed a redundancy SDP parsing bug that was causing some interop issues.
- Fixed an issue where the Input Status tab in the DashBoard UI now reports an alarm for unsupported video formats.
- The SLP Auto Discover feature in DashBoard now works correctly.

KNOWN ISSUES

- When upgrading from a previous firmware version, the Device Name will be reset to the default.

  Workaround: Update the Device Name field in DashBoard to the previous name, then reboot the NEWT-IPX.

- After multiple power cycles, connections with ancillary data may no longer be aligned with video.

Workaround: Disconnect and reconnect the failing stream.

- When using Source-Specific Multicast, the NEWT-IPX does not support receiving multiple streams using the same multicast IP address on a single receiver device.

  Workaround: Receive streams with unique multicast addresses on a single receiver.

- NEWT-IPX does not support the use of Mixed Audio Channel mode for Ember+ connections.

  Workaround: Define a specific audio channel count mode (1, 2, 4, 8, or 16), through DashBoard, for Ember+ connections.

- When in "2-in/2-out SDI/IP Converter" or "IP to 2x3G-SDI Gateway with ANC" operational mode, the Ember+ receivers for SDI 3 and SDI 4 report as "Group 1" and "Group 2" respectively.
- Quad-split connections made through NMOS do not always recover all quadrants on reboot, sometimes one quadrant will not populate.

  Workaround: Make the quadrant connection again or reboot the receiver NEWT-IPX.

- When in "IP to 2x3G-SDI Gateway with ANC" operational mode, the ancillary streams can become unstable for high video/ancillary delays.

  Workaround: Before making any connections, set the Output Video/Ancillary Delay to the default or no higher than 16,000 microseconds (us).

VERSION 4.1.12 – DECEMBER 2021

BUG FIXES

- Addressed an NMOS IS-05 active receivers schema violation issue.

KNOWN ISSUES

- When using Source-Specific Multicast, the NEWT-IPX does not support receiving multiple streams using the same multicast IP address on a single receiver device.

  Workaround: Receive streams with unique multicast addresses on a single receiver.

- NEWT-IPX does not support the use of Mixed Audio Channel mode for Ember+ connections.

  Workaround: Define a specific audio channel count mode (1, 2, 4, 8, or 16), through DashBoard, for Ember+ connections.

- Quad-split connections made through NMOS do not always recover all quadrants on reboot, sometimes one quadrant will not populate.

  Workaround: Make the quadrant connection again or reboot the receiver NEWT-IPX.

VERSION 4.1 – AUGUST 2021

WHAT'S NEW

- **AUTOMATIC SENDER SESSION DESCRIPTION PROTOCOL (SDP) UPDATES**

  When in 2-in/2-out mode and the video format of an active sender stream changes on the SDI input of that stream, the sender stream SDP will automatically update and start sending the new video format. The automatic update will only occur in valid format scenarios.

  This allows for a quicker and more automated experience when switching video formats on the SDI input of the sender NEWT-IPX.

BUG FIXES

- Removed the IGMPv2 join on video Sender streams. This addressed a bandwidth allocation issue for layer 3 switch configurations using a non-blocking multicast (NBM) process without SSM.
- Addressed an NMOS IS-05 issue where a connection made without an SDP file could default to a video format incompatible with the global frame rate setting.

KNOWN ISSUES

- When using Source-Specific Multicast, the NEWT-IPX does not support receiving multiple streams using the same multicast IP address on a single receiver device.

  Workaround: Receive streams with unique multicast addresses on a single receiver.

- NEWT-IPX does not support the use of Mixed Audio Channel mode for Ember+ connections.

  Workaround: Define a specific audio channel count mode (1, 2, 4, 8, or 16), through DashBoard, for Ember+ connections.

- Quad-split connections made through NMOS do not always recover all quadrants on reboot, sometimes one quadrant will not populate.

  Workaround: Make the quadrant connection again or reboot the receiver NEWT-IPX.

VERSION 4.0.0 – APRIL 2021

WHAT'S NEW

- **NMOS IS-04 AND IS-05 SUPPORT**

  NMOS IS-04 is the Discovery and Registration Specification that allows for control and monitoring applications to find resources on a network.

  NMOS IS-05 is the Device Connection Management Specification that provides a transport-independent way of connecting media nodes.

- **NMOS ONE-TO-MANY**

  One-to-Many (video and audio) mode that enables the connection of one network stream to multiple outputs via NMOS.

- **ENHANCED AUDIO CHANNEL SUPPORT**

  Support for SMPTE ST2100-30 while providing 1ms and 125us audio packet times, 48kHz samples (with 1, 2, 4, 8, or 16 channels per video stream via NMOS, Ember+, and DashBoard). Full audio shuffling is also available for senders and receivers via DashBoard. Also provides support for mapping a single audio/video stream to multiple physical interfaces.

- **SOURCE-SPECIFIC MULTICAST (SSM)**

  Source-Specific Multicast allows the receiver to explicitly indicate which source device to receive traffic from. The receiver will still express interest in traffic for a specific destination multicast address but will also express interest in receiving traffic from only one specific source sending to that multicast address. SSM adds security to your device's network as it reduces the chances of a rogue device bombarding a receiver with unwanted traffic.

- **DASHBOARD METRICS AND DIAGNOSTICS**

  Quickly troubleshoot network and stream issues via the Diagnostics tab in DashBoard.

- **SYSTEM TIME SYNC TO PTP TIME**

  The system logs will display the PTP time as the system time. This is especially useful in systems where the PTP Grandmaster is GPS-referenced.

- **CUSTOMIZABLE LINK OFFSET**

  Added the ability to configure the link offset when making connections through Ember+, NMOS, and DashBoard. This enables users to set the Audio Offset and Video Delay per SDI interface (or set Audio Delay only for HDMI). These offsets will be used for connections made through DashBoard, Ember+, NMOS, and JSON API.

- **FLEXIBLE AUDIO ST2022-7 SEAMLESS PROTECTION SWITCHING**

Support for unique IP and UDP ports for primary/secondary audio and video streams

BUG FIXES

- Addressed an interoperability issue that occurred when the NEWT-IPX was video/audio sourced by an XPression device.
- Fixed an issue where the "a=framecount:48" field (see standard RFC4566) was not present in our SDP files which caused issues with some controllers. This optional field has been added to avoid interoperability issues.

KNOWN ISSUES

- An error status message “Advertisement Used is No Longer Available" displays when the NEWT-IPX detects a stream connection defined outside of DashBoard, (e.g. Ember+, NMOS). This does not affect stream quality and can be ignored for non-DashBoard stream connections.
- When using Source-Specific Multicast, the NEWT-IPX does not support receiving multiple streams using the same multicast IP address on a single receiver device.

  Workaround: Receive streams with unique multicast addresses on a single receiver.
- NEWT-IPX does not support the use of Mixed Audio Channel mode for Ember+ connections.

  Workaround: Define a specific audio channel count mode (1, 2, 4, 8, or 16), through DashBoard, for Ember+ connections.
- Quad-split connections made through NMOS do not always recover all quadrants on reboot, sometimes one quadrant will not populate.

  Workaround: Make the quadrant connection again or reboot the receiver NEWT-IPX.

VERSION 3.0.2 – JUNE 2020

WHAT’S NEW

- Added option to include different company logo when in OEM mode

BUG FIXES

- Removed the System Logs tab when in OEM mode
- Removed reference to NEWT from Device Name in Walkabout when in OEM mode

VERSION 3.0.1 – APRIL 2020

WHAT'S NEW

- Added OEM capabilities for the Bi-directional operating mode

VERSION 3.0.0 – OCTOBER 2019

WHAT'S NEW

- SQD receiver for UHD network streams
- Quad split mode for viewing four independent videos at once on single HDMI 2.0 output
- Wider supported multicast range for media streams (225.0.0.0 to 239.255.255.255).
- Glitchless handling of PTP Grandmaster switchovers
- DashBoard control for HDMI pattern generator

BUG FIXES

- Fixed an issue where the Payload Type Settings in DashBoard were not saved after reboot
- Fixed an issue where video streams were not re-aligned to proper link offset following a reboot
- The "No Packets Received" alarm is no longer always on for 2SI streams
- Clarified the Payload ID control fields in DashBoard to relate only to Senders

VERSION 2.20.0 – APRIL 2019

WHAT'S NEW

- Added Walkabout support for auto-discovery of multiple Newt modules by DashBoard regardless of IP address settings
- One-to-Many (video and audio) mode that enables the connection of one network stream to multiple outputs
- Cross-connect representation of connected audio streams available in DashBoard
- Single-stream UHD traffic support (up to 2160p50)
- DashBoard support for different sized audio streams (1, 2, 8, 16, or mixed channel modes) on Sender and Receivers
- Payload ID of video and audio Senders is now configurable through DashBoard
- Full audio shuffling on Sender and Receivers through DashBoard
- In-band Ember+ control (assumes NET ports are on different subnets)

- In-band DashBoard control (assumes NET ports are on different subnets)
- Ember+ support for 1, 2, 8, and 16-channel network streams (mixed mode is not supported)
- Ember+ stream restoration after reboot
- Added a PI controller to reduce fan speed
- Added a feature that reports the fan speed
- Added support for HDMI hot-plug for UHD traffic
- Simplified the basic workflow by adding Advertisements to the Connections tab in DashBoard

BUG FIXES

- PTP profile settings are now captured before a reboot
- Timing Announce interval no longer is reset to default values during a loss of signal on the SFP ports
- Video format configuration is now saved
- Magellan controller can connect to NEWT
- Removed the black dots on the NEWT output video when receiving a SMPTE ST2110-20 stream using a continuation bit
- Licenses are now applied correctly after a reboot
- Newt now registers with Sony® NMOS RDS

VERSION 2.3.0 – JUNE 2018

WHAT'S NEW

- Full release of the Bi-directional (2 SDI In/2 SDI Out) operational mode
- Added the Pattgen tab in DashBoard for enabling SDI pattern generators
- Added support in DashBoard for downloading software log files and generating packet captures

BUG FIXES

- The 4 streams from a 2SI stream will now always come up aligned for all link offset values
- NMOS now functional for HDMI and Bi-directional operational modes

VERSION 2.2.0 – MAY 2018

The 2.2 release is the first generally available version of NEWT, the compact IP, SDI, and HDMI Signal Converter by Ross Video. This section communicates the baseline features of this release as well as the incremental changes since the previous 2.1 BETA release.

BASELINE FEATURE LIST

- **INTERFACES**
  - Provides 4 x 3G SDI TX and 1 x HDMI 2.0 TX
  - Provides 2 x 10GE
  - LEDs to monitor power and general communication status
  - A 1GE Management Interface
- **SUPPORTED SMPTE STANDARDS**

  Supports the following SMPTE standards: SMPTE ST2110-20 Video Transport, SMPTE ST2110-30 Audio Transport, and SMPTE ST2022-7 Seamless Protection Switching.
- **OPERATIONAL FEATURES**
  - Ross Keys Licensing (per Operational Mode)
  - 1ms and 125us audio packet times
  - 48kHz samples
  - 8 channels per stream
  - Dual 10GE Bandwidth Aggregation Mode
  - BESS v.1.1 connection management
  - NMOS IS-04 and IS-05 basic support
- **SUPPORTED VIDEO FORMATS**

  SDI Video formats: 720p50/59.94/60, 1080i50/59.94/60, 1080p50/59.95/60
  HDMI Video format (2SI): same as SDI formats plus UHD formats 2160p25/29.94/30/50/59.94/60
- **DASHBOARD FEATURES**
  - DashBoard control for device configuration and connection management
  - An Initial Setup Wizard in DashBoard assists user with configuring their NEWT-IPX device.
  - DashBoard support for configuring 125us and 1ms audio packet time (previously, only 1ms packet time was available)
  - DashBoard SLP discovery for automatically finding NEWTs in the network

BUG FIXES

- Eliminated the possibility of damaging a NEWT-IPX during upgrade or Operational Mode setup
- Users can now switch directly between streams when using VSM (BESS 1.1) instead of having to disconnect then reconnect
- When using VSM, a NEWT-IPX does not require SDPs without any space/newlines
- Audio data path will no longer lock up in Redundancy mode when cables are pulled
- Fixed system crash that resulted in DashBoard connectivity not always established after a reboot or power cycle

GETTING HELP

- Our 24-hour hotline service provides access to technical expertise around the clock. After-sales service and technical support is provided directly by Ross Video personnel.
- During business hours (Eastern Standard Time), technical support personnel are available by telephone.
- After hours and on weekends, emergency technical support is available. A telephone-answering device will provide the names and phone numbers of technical support and field service personnel who are on call. These people are available to react to any problem and to do whatever is necessary to ensure customer satisfaction. For serious issue which need urgent attention and tracking, please ensure you are given a ticket number and refer to this in future communications.
- **Technical Support: (+1) 613-652-4886**
- **After Hours Emergency: (+1) 613-349-0006**