Customer Service BULLETIN

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Customer Service Bulletin	**23811**
Title	**Package update LDX 100**
Date	**2021-04-20**
Product	**LDX 100**
Product Version	**All**

Overview

System parts involved:

- LDX 100 **V05**

Overall Message

Overall Note:

See New functionality and Bug fixes on the next page.

New:

- Added C2IP control failover in 25G Native IP mode. See more information on page 4.

- **JPEG XS compression single Speed:**
  - Note that a JPEG-XS sw perpetual option is needed. (**9-0110000114-9**)
  - Support for two outgoing streams/two incoming streams.
  - Includes SDP rtp-map attribute.
  - System configuration for JPEG XS:
    - Native IP only
    - Only in single speed broadcast video standards: 4K50/59, 1080p50/59, 1080i50/59 and the single speed filmic broadcast/cinema video standards
    - Support with 10G and 25G SFPs only.
  - Video outgoing streams:
    A: Native IP mode 1080i50/59
      - IP TX: Main: 1920x1080i@50/59 (ST2110-22) HDR
      - IP TX: Live: 1920x1080i@50/59 (ST2110-22) HDR or SDR

    B: Native IP mode 1080p50/59:
      - IP TX: Main: 1920x1080p@50/59 (ST2110-22) HDR
      - IP TX: Live: 1920x1080p@50/59 (ST2110-22) HDR or SDR or 1920x1080i@50/59 (ST2110-22) HDR or SDR

    C: Native IP mode 4K50/59:
      - IP TX: Main: 3840x2160p@50/59 (ST2110-22); HDR only
      - IP TX: Live: 1920x1080p@50/59 (ST2110-22) HDR or SDR or 1920x1080i@50/59 (ST2110-22) HDR or SDR

    D: Native IP mode 4K23.98/25/29.97:
      - IP TX: Main: 3840x2160p@23.98/25/29.97 (ST2110-22); HDR
      - IP TX: Live: 1920x1080p@23.98/25/29.97 (ST2110-22) HDR or SDR

- Added extra 2k live video channel (Live-aux).
  - This is including support for BNC selection and IP configurations on Camera Connect and XML. (Camera Connect version **1.66.0038** required)
- Added 1080p/1080i video modes (default video modes, no sw/fw option required).
- Implement new UI for 4K + HD Detail
  - 4K follow detail for 2K video paths.
- Added black clip level for HDR/SDR down mapper.

Bug fixes:

- No Tally and Green feedback to Camera Connect/XML (CGP, CGA)
- Improved Media DHCP server handling
- Fixed HDR White Cliplevel for SLOG3
- Improved HDR to SDR LUTs for SMPTE2084 and SLOG3.
- Dhcp is not working correctly when BiDir SFPs are used
- Color Space in Vpid of HD-SDR signals not correct
- Sawtooth gain not optimal for linear mode and SLOG3.
- In XCU mode the diagnostics (in VF Menu) for external video inputs was not correct.
- HDMI audio program source selection should be mono in XCU mode
- HDMI source selection "ext=c" does not restore after power up
- Reference source selection PTP is lost when toggling to XCU mode and back.
- After power up the Timing Main video setting does not restore.
- Diagnostics redundant video inputs "pkts" in buffer ="0"
- Writing diagnostic files to SD-card causes loss of control of camera
- Actual stream state (ena/dis) is not announced towards nmos
- nmos info on rtp-Enabled status is incorrect for a number of streams
- Incoming SDP file config for IP receivers not handled correctly.
- Sdp parser failed on empty lines
- PTP path delay is "0" after loss and restore of fiber connection.
- Improved IS-07 Tally request handling.

- Improved IS-05 handling and PTP diagnostics
- Switching IP receiver from ST2110-20 to ST2022-6 is incorrect
- NativeIP reference source selection is not restored, when system mode is switched from XCU mode to Native IP mode.

Known Issues:

- White line visible in top and bottom line of 1080i HDR image.
- Switching JPEG-XS mode on/off can cause non valid video output and loss of media network interface.
  - Work-around: reboot camera.
- Sometimes JPEG-XS UHD return video not available
  - UHD streams with higher bitrate (1:10 compression or higher) sometimes fail. Work around: Reboot camera.
- Skin view window on selected colour is shifted horizontally in SDR outputs.
- Camera output sometimes shows a purple image with jumping vertical bars
  - Work-around: reboot camera
- Switching IP receiver from ST2110-20 to ST2022-6 result in receiver failure
  - Work-around: reboot camera
- Switching to a PTP GM with lower priority causes hick-up in locking.
- Several issues when using “in-band” Amwa NMOS registry and control.
  - Workaround: recommended to use amwa nmos on the C2IP interface.
- Using DHCP for the Media network interface does not work after power up.
  - Workaround: toggle between “DHCP” and “manual” and back to “DHCP” again.

LDX 100

After updating the package, the status of the LDX 100 camera head becomes:
Package LDX100_92-00034-000_**05**

PC Board Name	PC Board No (12NC)	Firmware No (12NC)	Version
Sitara Linux Platform OS	522-00066-01	12-00107-000	**01.02**
Sitara Main Application SW	522-00066-01	12-00108-000	**05.00**
Sitara Transmission SW	522-00066-01	12-00109-000	**01.17**
MPB Image 1 FW	522-00066-01	12-00110-000	**03.23**
MPB Image 2 FW	522-00066-01	12-00111-000	**03.23**
TXB Image 1 FW	522-00069-01	12-00121-000	**01.28**
TXB Image 2 FW	522-00069-01	12-00122-000	**01.28**
TXB Image 3 FW	522-00069-01	12-00123-000	**01.28**
TXB Image 4 FW	522-00069-01	12-00147-000	**01.28**
TXB uBlaze SW	522-00069-01	12-00015-000	**00.16**
Sensor Boards	522-00101-01	12-00080-000	**00.29**
Filter Driver SW	522-00091-01	12-00074-000	00.09
Handgrip SW	90-00062-000	12-00128-000	**00.07**

C2IP failover on primary/secondary Media network interface

With the LDX100 in Native IP mode the C2IP control interface can be embedded in the Media network interface (SFP1/2 as bidirectional 25G modules) using VLAN tags in the Ethernet packets for C2IP.
When using C2IP control of the camera over VLAN on the Media network interface it is required that C2IP control from a control panel on the management network is still available when one of the two SFP28 Media network interfaces fails.

Description

By using a hybrid port setting of the connected port of the Ethernet switch the media Ethernet packets (audio/video/ptp) can flow on the default VLAN of the switch and the C2IP packets can be filtered on their VLAN tags and used on other tagged ports of the switch on this VLAN.
Because the control panels (CGP500 and CCS One) do not support redundancy the camera shall hard switch between the primary and secondary network interface for the C2IP Ethernet packets in case one of the interfaces fails.
In the viewfinder menu user interface of the LDX100 camera the C2IP redundancy can be switched “on” and the VLAN tag number for the primary and secondary C2IP stream can be selected.

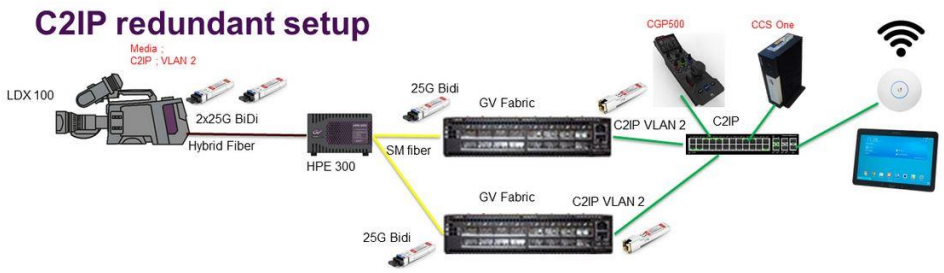
Behavior

When enabled a second VLanId can be entered for the secondary Vlan for the C2IP packets.
The control system now monitors the incoming packages on both SFP1 (primary) and SFP2 (secondary) Vlan.
The default is SFP1.

When no packages arrive on the primary Vlan and package do arrive on the seondary Vlan, the system switches to the secondary Vlan and vv.
When packages arrive on both Vlans, the system does not change from Vlan.
When no packages arrive on either Vlan, the system does not change from Vlan.
The control system will decide to switch to another SFP interface before a time-out of the control connection between camera and control panel will be active.
As such the camera user interface will not disappear from the control panel when the fail over occurs.

Overview

The block diagram below shows a typical redundant Media network setup with two Ethernet switches.
VLAN tagged ports are used to create a flow for the C2IP packets to a management switch, which is used for the camera control panels.



User Interface

The controls can be found in:
“Installation” > “Media Interface” > “Network setup” > “Vlan” > “C2IP Vlan”.
In this sub-menu the “Vlan” tagging can be switched “on”.
In this case the C2IP control is not on the RJ45 connector on the back of the camera but embedded as VLAN in the Media network interface.
When the “Vlan” option is “on” the “Vlan Tag” number is used for the Vlan tagging.
“Failover Cntrl” can be set to “On” if C2IP failover is required.
The “Vlan Tag 2ndary” can be set individually.
It is recommended to use the same Vlan tag number with respect to the primary Vlan tag number.
For diagnostics reason the sub menu page shows “Network selected” = “SFP1” or “SFP2”.

Contacts

Grass Valley Product Support

Web-based support is available for many Grass Valley products. Please visit our online Knowledgebase:

http://mygrassvalleyportal.force.com/gvknowledge

For or technical assistance, please contact us by e-mail or phone. For more information refer to:
http://www.grassvalley.com/support/contact

Overview

For an overview of released camera service bulletins, fault descriptions, related products and filter options, refer to:
ftp://ftp.grassvalley.com/cameras/