AJA IPT/IPR-10G2 Series – Release Notes v2.5

Firmware for IPT-10G2-SDI, IPR-10G2-SDI, IPT-10G2-HDMI, IPR-10G2-HDMI
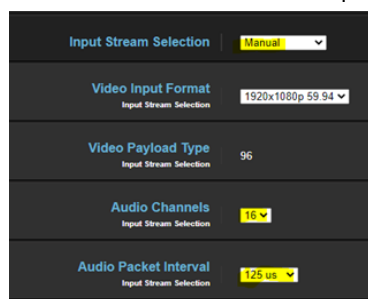
Introduction

IPT/IPR-10G2 v2.5 firmware includes two new features and several improvements. It is highly recommended that you update firmware to avoid any potential issues.

Be sure to consult the Installation and Operation Guide (user manual) for detailed information about features and configuration guidelines. The most current documentation can always be found on the IPT/IPR-10G2 Support page.

Features Additions in v2.5

- **2Kp (2048x1080) support .** Models: IPR-10G2-SDI, IPR-10G2-HDMI, IPT-10G2-SDI.
  Description: 2Kp (2048x1080) 23.98, 24, 25, 29.97, 30, 50, 59.94, 60 implemented. IPR 'Input Stream Selection' can choose any format. Supported in SDP and NMOS.
  NOTE: IPT-10G2-HDMI does **not support any 2K frame rates**
  **NOTE: IPR-10G2-HDMI does not support the added 128 pixels used in the blanking interval and will not show them. **
- **16 Channel audio support**. Models: IPT-10G2-SDI, IPR-10G-SDI, and IPR-10G2-HDMI.
  - IPT-10G2-SDI: When Audio Source is set to SDI, if the incoming SDI has 4 audio groups enabled, the transmitted ST2110-30 will have 16 channels. Audio Packet Interval remains a manual setting of either 125us or 1000us(1ms). SDP will update with appropriate audio channels and packet timing for ST 2110-30 automatic configuration capability.
  - IPR-10G2-SDI & IPR-10G2-HDMI: Input stream selection options:
    - SDP: Automatically adjusts the audio channel count and packet interval based upon SDP details.
    - Manual: Audio channels and packet interval must be manually set to match ST2110-30 source.

    - NMOS/Ember: NMOS or Ember will remotely adjust the audio channel count and packet interval.

** NOTE: IPR-10G2-HDMI can only embed audio 1-2 or 1-8 in the HDMI output **

** NOTE: IPR Analog audio channels selection does not support channels 9-16 **

** NOTE: IPR Audio Signal Generator does not support tone on channels 9-16 **

** NOTE: IPR-10G2-SDI 2K 29.97/30 formats support audio channels 1-16 on ST 2110-30 RX but will only embed the first 8 channels of audio into SDI. If there is no audio present on any channels 1-8, silence will be inserted on those channels. Audio on channels 9-16 are discarded and Groups 3&4 are disabled. All other 2K formats support up to 16 channel embedding into SDI.

Resolved Bugs

- Firmware update results in no video Tx bit rate present. Models: IPT-10G2-SDI, IPT-10G2-HDMI

- 8-channel audio truncates to 4-channels when frame sync is enabled. Models: IPT-10G2-SDI, IPT-10G2-HDMI

- PTP Domain missing in Metadata. Models: IPT-10G2-SDI, IPT-10G2-HDMI

- Intermittent crash resulting in loss of video or web app lock up. Models: IPT-10G2-SDI, IPR-10G2-SDI, IPT-10G2-HDMI, IPR-10G2-HDMI

- UltraHD 25 incorrectly read from SDP file, resulting in improper RX setting. HD was not impacted by this bug. Models: IPR-10G2-SDI, IPR-10G2-HDMI

- When transmitting 1080i, SDP file has an incorrect height of 2160 for both flows. Models: IPT-10G2-SDI, IPT-10G2-HDMI

- IPT Missing PTP domain number in SDP.

- IPR-10G2-SDI: 2kp29.97 and 2kp30 have bad data on the left side of the image in 2.5.

- IPT-10G2-HDMI has 2k test patterns - but is not 2K capable.

Known Bugs

- IPT-10G2-SDI: Audio fails on ST2110 output when Frame sync is enabled and fed SDI from Io 4K Plus / Io X3 in the following formats: 1080p23.98, 1080p24, 1080p25.

  - Workaround: When feeding SDI from Io 4K Plus or Io X3 and the following formats 1080p23.98, 1080p24, or 1080p25 are used, Disable Frame Sync (set to bypass).

- IPR: Audio channel groups 2 & 3 are swapped in async & gateway mode (IPR-HDMI only).

Important Hardware Upgrade Notes

Earlier models of IPR-10G2-HDMI are feature complete as of version 2.1 firmware. Attempting to update to v2.2 or newer firmware will result in the error message "this firmware is not for this device". If you encounter this message and wish to update your unit to v2.2 or newer firmware, please contact AJA Technical Support (see end of this document for contact details).

Initial Setup, Control and Updating Firmware

Please see the combined manual for all ST 2110 Transmitters and Receivers "10 GigE IP Mini-Converters" for further details.

There are two methods available for initial setup and updating firmware for IPR-10G2-HDMI:
- Web Browser on host computer connected to the same network as the IPR-10G2-HDMI.
- AJA eMini-Setup application running on host computer directly connected to IPR-10G2-HDMI via USB.

Web Browser – Configuration, Control and Updates

Please see the combined manual for all ST 2110 Transmitters and Receivers "10 GigE IP Mini-Converters" for further details.
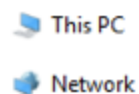
Note: Safari is the preferred web browser for control on the Mac, and additionally Chrome and Firefox on Windows. Other web browsers may work, but AJA cannot guarantee consistent operation for all web browsers or web browser versions.

IPR-10G2-HDMI requires a network connection for initial configuration, control and firmware updates. 10 GigE IP Mini-Converters are shipped from the factory with DHCP enabled, and support automatic network discovery via SSDP and MDNS.

1. Connect IPR-10G2-HDMI Control Port to the intended network with Ethernet cable.
2. The intended network's DHCP Server will assign an IP address and the IP Mini-Converter will join that network.
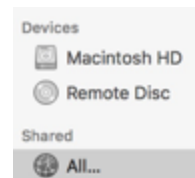3. Locate and connect to the AJA IP Mini-Converter.

   Windows PC host:
   a. Open Windows Explorer.
   b. Navigate to Network.
   c. Click on Network to enumerate network devices.
   d. Search for either "IPR-10G2" or the device's Serial Number.

      e.   Double click on the intended IP Mini-Converter.

      f.   The host machine web browser will launch and display the web GUI for the device.

Mac host:

    a.   Go to System Preferences > Sharing and turn on File Sharing.

    b.   Open Finder Window.

    c.   Navigate to Shared > All...

    d.   Click on All... to enumerate network devices.

    e.   Search for either "IPR-10G2" or the device's Serial Number.

    f.   Double click on the intended IP Mini-Converter.

    g.   The host machine web browser will launch and display the web GUI for the device.

    h.   If the above does not work, then you will need to download and install an MDNS browser to assist with discovering network devices on a Mac host.

4. Leaving the IP Mini-Converter browser tab open, open a new browser tab and check the AJA website for new firmware:

                                https://www.aja.com/products/mini-converters/IPR-10G2-HDMI#support

5. If new software is found, download it and uncompress the file archive (.zip) to a network location accessible to the IP Mini-Converter.

6. Return to the IP Mini-Converter browser tab and proceed to the Firmware Page.

7. Adjacent to "Upload New Firmware" use the "Choose File" button to locate previously unzipped firmware package (.ajas extension).

8. Follow the prompts to load the new firmware into your unit.

9. After the update, the AJA device must be rebooted by clicking on the Reboot button in the prompt window.

AJA eMini-Setup – Configuration, Control and Updates

Please see the eMini-Setup Manual for more detail.

 Note: eMini Setup 2.0 is the first version to support IPR-10G2-HDMI and IPR-10G2-SDI. Earlier versions will not work with these specific IP mini-Converter models. AJA Recommends using the latest version of eMini Setup available via AJA.com.
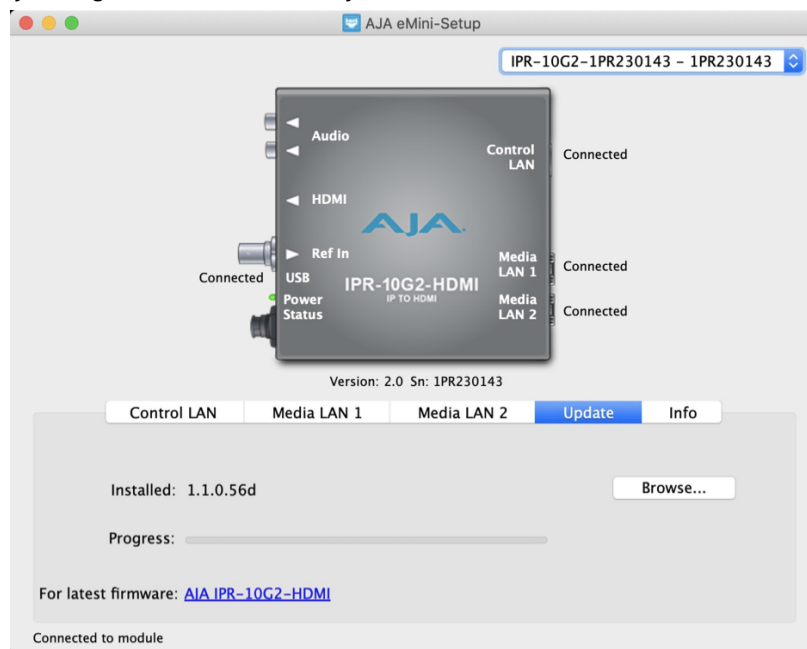
1. Acquire eMini-Setup from the AJA website for either macOS or Windows:
   https://www.aja.com/family/software#eminisetup

2. Install eMini-Setup:

    a.   Unzip the Installer

    b.   Run the .dmg file on macOS or the .msi file on Windows

3. Connect Power to your AJA Ethernet equipped Converter.

4. Connect the USB Config cable to the Computer running eMini-Setup.

5. Open eMini-Setup and Configure the device's network settings.
   Note: DHCP will be enabled by default, and if the device is connected to a DHCP server the IP address field will populate

6. Type in (or Copy/Paste) the IP address into a Browser Window.
            This will get you into the web based GUI for your AJA device.
7. Use the Web GUI to fully configure, control and use your AJA Device.

8. After the update, the AJA device must be rebooted by clicking on the Reboot button in the prompt window.

Technical Support

AJA Technical Support is free and available to help you answer questions or resolve issues with any of your AJA products.

To contact AJA Technical Support:

Email: support@aja.com
Phone: +1-530-271-3190
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