AJA IP25-R v1.0 – Release Notes

IP25-R release with firmware v1.0

Introduction

The AJA IP25-R is a next-generation IP Converter that seamlessly bridges SMPTE ST 2110 IP video networks with traditional SDI and HDMI infrastructures. Engineered for professional broadcast, production, and live event workflows, the IP25-R offers dual 10/25 GigE network ports, 4x 12G-SDI BNC outputs, and 2x HDMI 2.0 outputs, delivering pristine video up to 4K DCI (4096x2160p60) with ultra-low latency. IP25-R v1.0 firmware supports this new product.

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 IP25-R Support page.

Features

- SMPTE ST 2110 (-10, -20, -21, -30, -40) standards compliant Video, Audio, ANC Receiver
- ST 2110-20 Video: Supports up to 4 RX with ST 2022-7 redundancy, bandwidth dependent
- 10-bit 4:2:2 up to 4K DCI (4096x2160 p60) resolution
- ST 2110-30 Audio: Supports up to 4 RX with ST 2022-7 redundancy
    - Up to 16-channels per stream
    - 1ms and 125us timing
- ST 2110-40 Ancillary data (ANC): Supports up to 4 RX with ST 2022-7 redundancy
- 4x 12G-SDI BNC outputs
- 2x HDMI 2.0 outputs
- 2x SFP28 cages support 10 GigE and 25 GigE SFPs for ST 2022-7 redundancy
- NMOS (IS-04 and IS-05) compatible
- In-Band (via SFPs): PTPv2/ST 2059-2, control via NMOS (IS-04 and IS-05), AJA REST API, and Ember+
- Out-of-Band (via 1 GigE RJ-45): control via NMOS (IS-04 and IS-05), AJA REST API, and Ember+
- ST 2059-2 (IEEE 1588 Precision Time Protocol) (PTPv2) accessed via media net SFPs
- WebUI signal monitoring of selected output video channel
- WebUI for easy control and configuration
- Output standard test patterns
- HDR support, including HDR metadata override
- BT.709 and BT.2020 colorimetry support with override
- LLDP (Link Layer Discovery Protocol)
- DNS SD (DNS Service Discovery)
- Five year warranty and technical support

Initial Setup, Control and Updating Firmware

There are two methods available for initial setup and updating firmware for IP25-R:

- Web Browser on computer connected to the same network as the IP25-R.
- AJA eMini-Setup application running on computer directly connected to IP25-R via USB.

Following a firmware update, it is recommended to refresh the browser cache.

- Windows select: Ctrl+F5
- macOS select: Cmd+Shift+R

Web Browser – Configuration, Control and Updates

Note: Safari is the preferred web browser for control on macOS. Chrome and Firefox are the preferred web browsers on Windows. Other web browsers may work, but AJA cannot guarantee consistent operation for all web browsers.

IP25-R requires a network connection for initial configuration, control and firmware updates. The IP25-R is shipped from the factory with DHCP (Dynamic Host Configuration Protocol) enabled and supports automatic network discovery via SSDP (Simple Service Discovery Protocol) and mDNS (Multicast Domain Name System). If no DHCP server is available, e-Mini-Setup must be utilized to program the Network Interfaces.

1. Connect IP25-R Control Port to the intended network with Ethernet cable.
2. The intended network's DHCP Server will assign an IP address and the IP25-R Mini-Converter will join that network.
3. Locate and connect to the AJA IP25-R 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 "IP25-R" 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 "IP25-R" 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/IP25-R#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 Restart button in the prompt window.

AJA eMini-Setup – Configuration, Control and Updates

Please see the eMini-Setup Manual for more detail.

1. Download 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. If static IP is required for the control or media LANs, 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.

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
Fax: +1-530-274-9442
Web: https://www.aja.com/support/contact
Shipping: 180 Litton Dr. Grass Valley, CA 95945 USA