

DANMON ASIA EXHIBITIONS AND EVENT IN 2022

Hanoi, March 25th, 2022

Dear valued customer,

For the upcoming exhibitions and events in broadcasting, our schedule will be as follows. If you plan to join us there, please let us know your availability for a meeting and conversation about your requirements. We look forward to meet you.

- *The NAB 2022 (Las Vegas)*

Will take place from April 23-27, where Mr. Bjarne Pedersen - Managing Director and Mr. Son Pham - Chief Technical Officer will attend.

- *Broadcast Asia (Singapore)*

Will take place 1st to 3rd June, where Mr. Hoa Nguyen - Project Sales and Mr. Mr. Dung Manh Nguyen - Broadcasting Sales Engineer will attend.

- *Film and Television in Vietnam (Ho Chi Minh City)*

Will take place 09th to 11th June where Ms. Ngoc Nguyen, Sales Manager, and Mr. Sang Tran, Sales Engineer will attend

- *IBC (Amsterdam)*

Will take place 09th to 12th September where Mr. Bjarne Pedersen - Managing Director will attend

- *Danmon Group's 40 Years Anniversary (Denmark)*

In addition, Danmon Group, the parent company of Danmon Asia, will celebrate its 40 years anniversary in the first week of June. Mr. Duy Nguyen (Channel Sales Manager), Ms. Ha Pham (Logistics Manager), Ms. Dung Nguyen (Chief Accountant), Mr. Son Pham (Chief Technical Officer) and Mr. Bjarne Pedersen (Managing Director) will attend this big event.



DANMON ASIA WOULD LIKE TO INTRODUCE THE AJA IO X3 DEVICE IN THIS MARCH NEWSLETTER.

Hanoi, March 01st, 2022

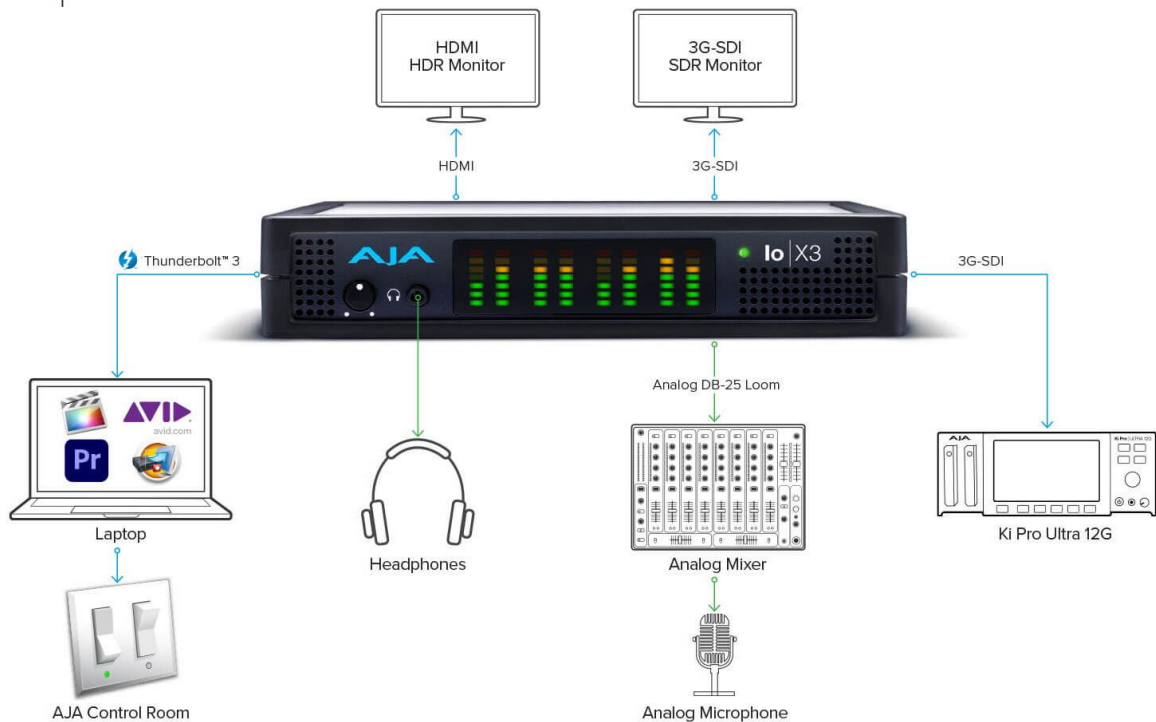


Overview

AJA io X3 is perfect for high quality HDR or SDR video work with up to 60p HD/2K signals or files with support for all major NLE applications as well as other video applications such as OBS Studio, vMix and Telestream Wirecast. Connecting with a single Thunderbolt 3 cable and providing a second Thunderbolt connector for flexibility, io X3's compact and quiet form factor is ideal for on set, in the studio, at an event or in the edit suite.

Use Case: NLE Workflow for io X3

io | X3



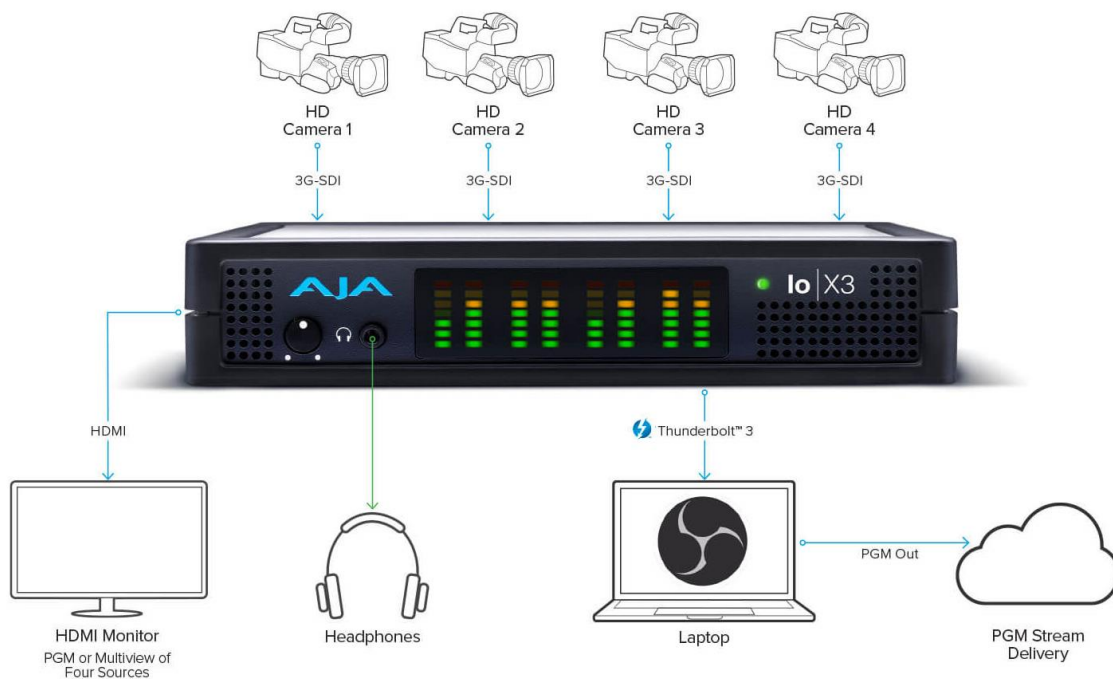
NLE Workflow

io X3 offers broad support for all major NLE applications, including Apple Final Cut Pro, Avid Media Composer and Adobe Premiere with a host of practical and easy to use features, shown in this NLE workflow diagram. The io X3 sits at the center of the NLE workflow, connected directly to the host laptop via super fast Thunderbolt 3. The NLE software is running on the host laptop, with the output of the time line being shown via both

the HDMI port and the 3G-SDI port simultaneously, with support for HDR and SDR monitoring. The analog audio jack on the front of the unit provides easy headphone monitoring, whilst at the same time a standard Tascam DB-25 loom connects an analog mixer and microphone to the workflow, with the front panel VU meters responding to the independent channel levels. An AJA Ki Pro Ultra 12G is connected for real time recording of the NLE output to Apple ProRes or Avid DNxHD for archive or hand-off. Whether editing promos, news footage, sports, long form content or any other demanding video environment content, lo X3 is your perfect partner.

Use Case: OBS Workflow for lo X3

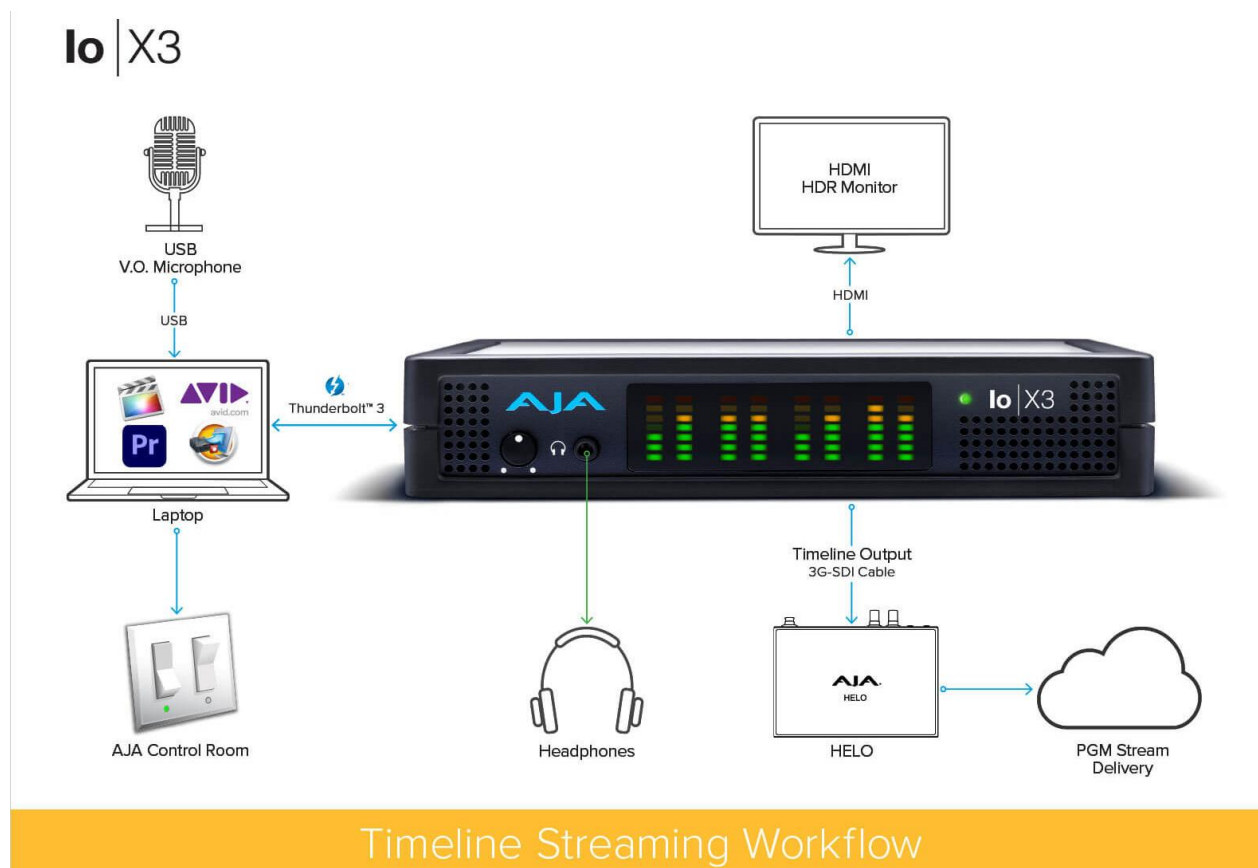
lo | X3



lo X3 and OBS Workflow

lo X3 is directly compatible with OBS Studio, offering a comprehensive toolkit for mixing live video and taking the program content out to streaming destinations. lo X3 again sits at the center of the workflow pictured opposite, providing the necessary video I/O for a 4 camera source program. Via lo X3's multi-channel support, the 4 HD cameras are connected directly to the 3G-SDI ports of the lo X3 which is connected via Thunderbolt 3 to the host PC or laptop. The host computer runs the OBS Studio software and allows you to view all incoming HD sources in a single multiview via the HDMI port to any display. Audio can be monitored via the built-in analog headphone port. The final PGM stream is output from our switched sources via the host computer.

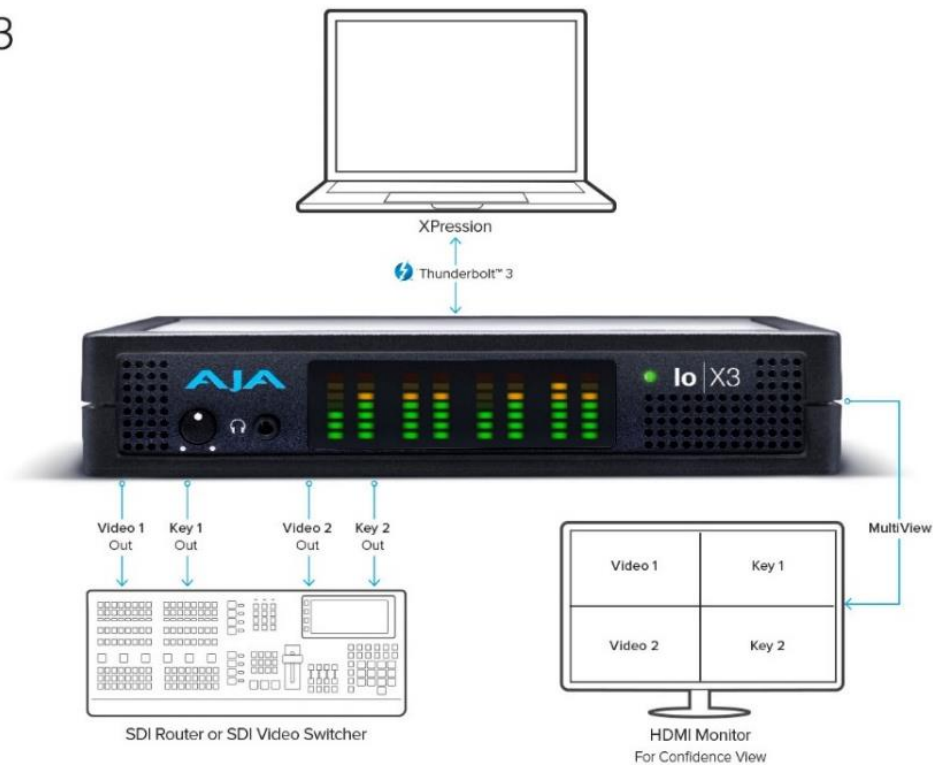
Use Case: Streaming Timeline Workflow for Io X3



A popular way to stream for NLE and 3D modelling applications is to utilize the timeline output and offer commentary in real time as edits or models are created. Following the same base set up as the NLE workflow and by utilizing AJA's HD streaming device, the HELO, we can combine two high quality AJA devices to create an extremely robust solution. It is easy to connect a 3G-SDI output from the Io X3 to the 3G-SDI input of the HELO and take the content directly from the timeline playhead to a live stream, with voiceover provided by a USB microphone. A very simple but powerful set up that can be utilized by streaming for both entertainment, remote collaboration and educational purposes, allowing viewers to better contextualize the content.

Use Case: Video and Key Workflow for Io X3

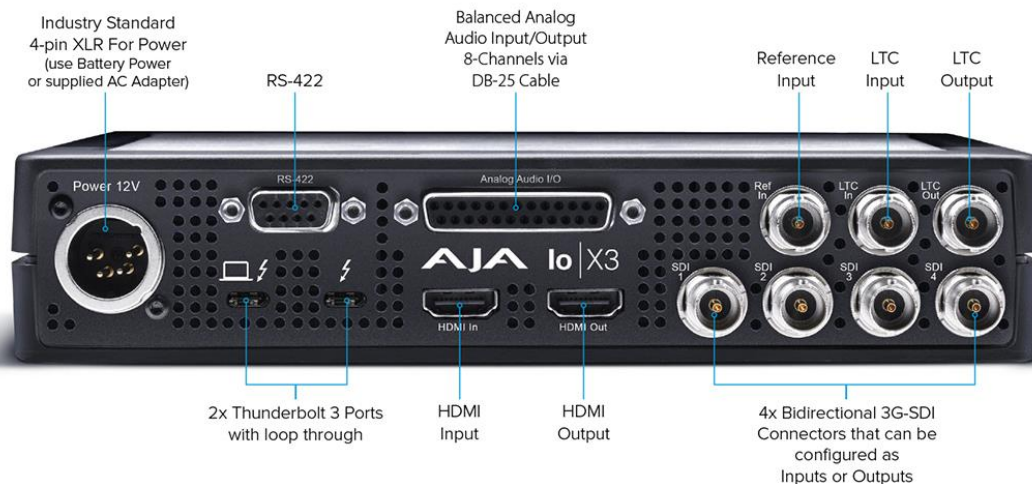
Io X3 fully supports video and key workflows up to HD 60p as shown in the adjacent diagram. The first instance shows Io X3 connected to a laptop or desktop computer running ROSS Xpression software. The Xpression software is receiving live statistics and weather data as metadata via the internet. It is also receiving two live IP video inputs. The IP video is assigned as video 1 and video 2 out with the incoming statistics and weather metadata assigned as key 1 and key 2 out. Io X3 provides an HDMI out for multiview of all four sources on one monitor. The Io X3 can then pass the groups of video and key 1 and video and key 2 via 3G-SDI onto a router or other SDI destination. The second diagram also shows the same set up but this time all inputs are IP video sources that are assigned in ROSS Xpression as video and key 1 and video and key 2, with the Io X3 again providing multiview monitoring via HDMI, whilst simultaneously passing the video and key pairs out via 3G-SDI to a router or other SDI destination.



ROSS XPression Example Workflow

Features

- 2K/HD/SD I/O up to 50/60p
- 4x bidirectional 3G-SDI BNC with 16-channel embedded audio
- HDMI I/O with 8-channel embedded audio
- Two Thunderbolt 3 ports with loop through
- Multi-channel workflow support for OBS/Wirecast/vMix and other applications
- YCbCr 4:2:2 10-bit up to 60p
- RGB 4:4:4 12-bit up to 30p
- VPID signaling for SDR/HDR Transfer Characteristics, Colorimetry and Luminance via SDI
- PQ, HLG, HDR10, HDR10+ and Dolby Vision Support
- HDR Metadata Capture and Auto Playback Detection
- Multiview output over HDMI, to view up to 4-channels on one screen
- Analog audio flexibility with a choice of 8-channel In or 8-channel Out or 4-channel In and 4-channel out via a standard Tascam connection
- Front panel audio display
- Includes support for the Apple M1 chip and the latest OS versions
- XLR 12V power for battery or AC use (AC adapter included)
- Headphone jack and level control for mobile and live environments
- RS-422 VTR control, Reference, LTC Input and LTC Output



Versatile and Practical Connectivity

The io X3 rear panel offers a wealth of easy to access connectivity for almost any need in SD/HD/2K video pipelines. Power is supplied via industry standard 4-pin XLR with either the included AC adapter or battery power. Dual Thunderbolt 3 ports provide host connectivity to a laptop or desktop PC or Mac, with the second port for loop through to other Thunderbolt devices. RS-422 is included for machine control of external devices so they can be synchronized for editing. Analog audio is offered via a DB-25 port, with all 8-channels configurable to be in or out. HDMI in and out ports allow for easy monitoring or video input sources to be accessed, including HDR and SDR video. Reference input connects the io X3 to any master clock source alongside LTC input and output for timecode. Finally, 4 bidirectional 3G-SDI ports can be configured as multi-channel inputs or outputs to suit the video application of choice, offering immense flexibility in the field, editing suite or on-set.

Universal Compatibility: Thunderbolt™ 3 via USB-C



io X3 Plus provides two Thunderbolt 3 ports for true Thunderbolt flexibility.

Thunderbolt 3 doubles the speed of the previous Thunderbolt 2 standard with up to 40 Gps of throughput and utilizes the universal USB-C connection standard for true simplicity over a single cable for today's leading Mac and PC workstations and laptops.

Thunderbolt™ 3 features:

- Thunderbolt™ and power on one cable
- USB-C connector and cables (small, reversible)
- 40 Gb/s: Thunderbolt™ 3 – double the speed of Thunderbolt™ 2

HDR

HDR or High Dynamic Range, provides the ability to display a wider and richer range of colors, much brighter whites, and much deeper, darker blacks than standard signals allow. This gives your imagery a more 'dynamic' look and allows for natural true to life colors to be communicated to your audience.

Io X3 provides this support for your 2K and HD HDR pipelines to HDMI and SDI compatible displays in software v16.2 with HLG and HDR10 support with HDR Infoframe metadata, in accordance with HDMI 2.0a/CTA-861.3 and HD.

AJA Control Room software and Io X3 adds support for HDR metadata capture from an incoming SDI or HDMI signal. The captured .mov video file will have embedded HDR metadata, allowing the file to be played back at its intended dynamic range.

AJA Control Room software and Io X3 Plus also provides HDR Auto Playback Detection. Embedded HDR metadata in a recorded .mov file is read and used to automatically set the HDR format on the monitor(s) connected to the HDMI and/or SDI outputs.



Support for file-based .mov HDR outputs with metadata from Adobe Premiere Pro / Adobe Media Encoder HDR files is also available. Screening those rendered outputs is a simple and high-quality experience with AJA Control Room. Every frame is presented in its full-quality, at the timing intended, and with the proper HDR format set correctly and automatically.

v16.2 Desktop Software also offers HDR input from HDMI for capturing HDR gaming content and more.

Integrated Digital Audio, Analog Audio Flexibility

Embedded 16-channel SDI and 8-channel HDMI audio are supported as well as analog audio inputs, outputs or both via a standard Tascam DB-25 connection.

Stereo monitoring is also possible with a front panel 3.5mm mini-TRS headphone jack.

The flexible analog audio I/O can be configured to record voice overs and more with the ability to choose how the DB-25 connection on Io X3 is configured:

- 8-channel, 24 and 16-bit D/A analog audio, 48 kHz sample rate, balanced, using industry standard 8x XLR or TRS on DB-25 breakout cable (cable not included)
- Balanced Analog Audio I/O:
- Input across Ch. 1-8, Ch. 1-4, or Ch. 5-8
- Output across Ch. 1-8, Ch. 1-4, or Ch. 5-8

High Density, Rack Mountable



Io X3's compact design offers easy rack mounting, allowing for two Io X3 devices to sit comfortably in just 1RU. This allows for high channel density for up to 8-channels of fully configurable video I/O for applications such as OBS Studio.

Multiview Output

Io X3 offers multi-channel I/O, and the HDMI output port can display all of these sources to one display. Io X3 is fully compatible with OBS Studio software with multiview output offered for clear monitoring of incoming or outgoing video via the convenient HDMI output. OBS Studio can be configured with Io X3 to make monitoring easy, all from a single I/O device.



Sync Up



Io X3 can be locked to an external reference for integration into larger productions, or feed LTC in and out to ensure footage captured with Io X3 has the proper timecode. The REF in port ensures reference sync with other synced devices in a facility.

Machine Control

An RS-422 port allows control of tape decks for frame accurate captures and layoffs.

Apple M1 Chip Support

Desktop Software v16.1 and above is optimized for the Apple M1 chip with native support for AJA macOS drivers, application plug-ins, AJA Control Room, AJA Control Panel, AJA System Test and AJA NMOS software.



Host Systems Compatibilities

Io X3 and Desktop Software v16.2 come with a wide range of tested configurations to help you make an informed choice based on requirements.

- Laptops for AJA Thunderbolt devices.
- Workstations and Minis for AJA Thunderbolt devices.

