PIX VIDEO

## VIDEO S DEVICES

# PIX 270i

Network-Connected Video Deck with Multi-Unit Frame Sync, MADI, and Dante



The PIX 270i file-based video deck delivers the performance, quality, and reliability required for fast-paced studio, live sports, event, and mobile multi-camera production. It seamlessly replaces tape- and disc-based video decks and provides a cost-effect and compact alternative to complex video servers.

Extensive network connectivity and multi-unit synchronization support grouping multiple PIX recorders over Ethernet for simultaneous frame-accurate multicam recording and playback. The PIX 270i can group with other PIX 270i recorders, as well as PIX 260i, with all of the recorders functioning as a single system. The grouped recorders can controlled two ways: directly through the PIX hardware interface or via a browser accessing the embedded the built-in web-based control panel.

The PIX 270i records and plays Apple ProRes or Avid DNxHD Quicktime video files through its 12-bit 4:4:4 3G-SDI at data rates from 330 Mb/s (Apple ProRes 4444) down to 36 Mb/s (ProRes and DNxHD proxy files). Files recorded on a PIX 270i can be directly imported by leading editing systems including Avid Media Composer, Apple Final Cut Pro, and Adobe Premiere Pro. And Quicktime files made in an editing system are ready for playback on the PIX 270i.

Up to four SSD drives can connect to the PIX 270i, two in the drive bays behind the front panel and two attached via eSATA. The PIX 270i can record to the four drives simultaneously for redundancy or sequentially for long form recording. PIX SSD drives and files are also accessible over Ethernet as network-attached SMB volumes. In addition to browser-based control, the PIX 270i can be controlled by external RS-422 (Sony 9-pin compatible). Machine transport and setup menu selections are fully controllable. Description continues on back.



### PRODUCT HIGHLIGHTS

#### **Built for Mission-Critical Production**

- Dedicated video hardware records to standard removable solid-state drives
- Simultaneous multi-drive recording on up to four SSD drives enables redundancy and backup
- Redundant 4-pin XLR power connections
- PowerSafe circuitry provides 10-second power reserve and safe file shutdown during external power loss

## **Time-Saving Efficiency**

- Tapeless file-based recording, playback, and file transfer
- · Access and transfer files over Ethernet
- Edit-ready Apple ProRes and Avid DNxHD files
- Recording on up to four drives provides immediate file copies and back up, as well as long-form recording

## **Expandable and Networkable**

- Group control of multiple PIX recorders facilitates multi-camera recording
- Frame synchronized recording and playback
- 64 channels of MADI audio and 64 channels of Dante audio I/O for large-scale audio systems

## **High-Quality HD Video**

- 12-bit 4:4:4 over 3G-SDI I/O
- Apple ProRes and Avid DNxHD codecs from 36 Mb/s proxies up to 330 Mb/s ProRes 4444

## PIX VIDEO PIX 270i

The PIX 270i integrates extensive audio capability with eight channels of analog audio, eight channels of AES digital audio, 16 channels of embedded SDI audio, 64 channels of MADI audio (both coaxial and optical), and 64 channels of Dante audio over Ethernet. The unit records audio-only monophonic and polyphonic WAV files.

The PIX 270i includes a precision 5-inch 800 x 480-pixel IPS display for menu access and video monitoring. The highly accurate display provides peaking, false color, and zoom features to facilitate framing, exposure, and focus evaluation.

A built-in Ambient Lockit time-code generator/reader ensures accurate sync in multi-camera and double-system sound applications. In addition to generating ultra-stable time code, the PIX 270i reads time code embedded in SDI and HDMI streams, and from external sources.

The high-quality hardware scaler and converter in the PIX 270i powers real-time up, down, or cross-conversion during ingest. It converts between all supported SD and HD resolutions and frame rates, and includes 3:2 pull-down removal.

PowerSafe circuitry provides a constant 10-second power reserve. In the event of power loss, the PIX 270i continues to operate for up to 10 seconds, then cleanly stops any file operation and safely shuts down. The PIX 270i draws 10-27 VDC through a four-pin XLR connector. A secondary connection allows connection to redundant power supplies.

## **ACCESSORIES**



PIX-CADDY 2.5" SSD caddy required to insert SSDs into the front-panel drive bays of PIX Video Recorders, Includes FireWire 800, USB 3.0, and eSATAp interfaces.

PIX-SSD 2.5" SSD approved for use with all PIX Recorders. 240 GB capacity. Preformatted exFAT.

PIX-DRIVE BAY Half-rack bay holds two PIX-CADDY drives, giving the PIX 270i access to four drives. Connects to the PIX 270i with two attached 21" eSATAp cables. Requires a PIX-RACK kit for mounting.

PIX-RACK Rack-mount kit for all PIX rackmount recorders. Accommodates (2) PIX 270i Recorders. Supports single and dualunit mounting. 2 RU height.



Thunderbolt adapter holds a PIX-CADDY, providing high-speed transfer to and from a Thunder-bolt enabled computer.

XL-WP4 Universal, 66 W in-line AC-to-DC power supply XLR 4-pin DC connector; with detachable IEC power cord, 100-240, 50/60 Hz. Included with the PIX 270i.

#### SPECIFICATIONS

SDI Input & Output

• 3G SDI 4:4:4, HD-SDI, SDI 4:2:2 conforming to SMPTE 12M-1, 12M-2, 125M, 259M, 272M, 291M, 292, 296M, 299, 352M, 424, 425

• Version 1.4a input, Version 1.3a output, HDCP enabled on input

#### Video Input Resolutions / Rates

 1080p23.976/24/25/29.97/30, 1080i50/59.94/60 1080PsF23.976/24/25/29.97/30, 720p 23.976/24/25/29.97/30/50/59.94/60, 576i50 (PAL), 480i59.94 (NTSC)

#### Video Codecs and Files

- Apple ProRes 4444 12-bit, 330 Mb/s
- Apple ProRes 36, 100, 145, 220 Mb/s, 8- and 10-bit
- Avid DNxHD 36, 100, 145, 220 Mb/s, 8- and 10-bit
- Quicktime wrapper (.MOV), exFAT File System
- WAV mono or WAV poly, contains Broadcast WAV metadata

#### Up/Down/Cross Conversion

• 480i, 576i, 720p, 1080i, 1080p to any 480i, 576i, 720p, 1080i, 1080p, anamorphic conversion

#### Frame-Rate Conversion

• 24, 25, 30, 50, 60 to 24, 25, 30, 50,60, 23.976, 29.97, 59.94 to 23.976, 29.97, 59.94, automatic 3:2 pull-down removal in 23.976 and 24 frame modes, other pull-down cadences include 2:2:2:4, 2:3:3:2, 3:2:3:2:2, and 2:2

#### Audio Recording

- 64 channels record/playback, simultaneous with video
- MADI Dante, Analog, HDMI / SDI, AES3. selectable per channel

**LCD Display**• 5-inch LCD; 800 x 480 resolution, IPS, flip-down for drive access

#### **Analog Audio**

- 8 balanced, line-level outputs on DB-25; ch1,2 also on XLR
- Frequency Response: 10 Hz-20 kHz, +/- 0.5 dB re 1 kHz;
- THD + Noise: 0.004% max (1 kHz. 22 Hz-22 kHz)
- Input and output topology: fully electronically balanced, line-level, RF, ESD, short, and overload protected; pin-2 hot, pin-3 cold
- Line output clipping level: +18dBu
- Output attenuation 0-20 dB, 1 dB increments
- Front-panel headphone port, 1/4" with gain control

#### **Digital Audio**

- · Sampling rate / bit depth: up to 96 kHz,
- Accepts 32k, 44.1k, 48k, 96k, 192k sample rates with SRC at input.
- · AES/EBU: 8 channels in and out via DB-25, 110 ohm, 2 V p-p
- HDMI: 8 channels embedded HDMI input, 8 channels embedded HDMI output
- SDI: 16 channels embedded SDI input and output, 48k sample rate
- Dante 64 channels, 48 kHz input and output
- MADI (AES10) optical or coaxial -64 channels, 48 kHz input and output (32 channels at 96 kHz)

- File Storage
  XL-CADDY mounted drives: two, front-mounted Sound Devices approved 2.5-inch drives
- eSATAp-connected drives: two, rear panel ports for Sound Devices approved drives, supplies 5V @ 2A
- Ethernet file transfer via SMB/CIFS volume

- Modes Supported: Freerun, Record run, External, 24 hr, external TC (SDI and HDMI), and others
- Frame Rates: 23.976, 24, 25, 29.97DF, 29.97ND, 30DF, 30ND
- Accuracy: +/- 0.2ppm, holds accurate time code for 2 hours after power is removed
- Inputs / Outputs: BNC(LTC input and output), SDI, or HDMI (Sony protocol)

#### Sync Output

- Analog bi-, tri-level sync / genlock
- Wordclock (square wave, up to 96 kHz sampling rate, 3.3 vp-p, 75 ohm)

#### Sync Input

- Analog bi-, tri-level sync / genlock
- Wordclock (square wave, up to 96 kHz sampling rate, 3.3 vp-p, 75 ohm)

#### Control

- RS-422 Machine control
- · Ethernet Web-based control, PIXNet, of settings and transport
- · GPIO on 3 pins, Phoenix connector

#### Kevboard

 Front-panel USB host. Keyboards without hubs acceptable.

- 4-pin XLR (pin1 = ground, pin4 = +), dual DC input connectors, 10-27 VDC, 30 watts
- PowerSafe circuitry with 10 second power reserve when external power removed

- Size (H x W x D): 3.3" x 8.6" x 10.3" (8.4 cm x 21.8 cm x 26.2 cm)
- Weight: 7.5 lbs (3.4 kg)
- Operating Temperature: -10C to +40C