Panasonic+Codex VariCam Pure

At IBC 2016, Panasonic introduces the VariCam Pure. It is a “co-production” between Panasonic and Codex.

VariCam Pure is a new S35 4K/2K camera system with high-quality imaging, 14+ stops of dynamic range, dual ISO 800/5000, and built-in, uncompressed RAW to 120 fps.

The new VariCam Pure camera records pure, uncompressed RAW up to 120 fps onto familiar, industry-standard Codex Capture Drive 2.0 media already widely used by many camera systems, post facilities and studios.

VariCam Pure is rugged, compact, lightweight (5 kg total) and ergonomic. The Codex RAW Recorder is integrated with the camera. Menus and controls of both the camera and the Codex are managed by the camera’s flexible control panel and video display. It attaches to either side of the camera or can be run remotely.

Same Camera Head as VariCam 35. The Recording Body is replaced by the Codex V-RAW 2.0 Recorder. The combined size and weight is significantly reduced.

Onboard battery: not considered in this size comparison
Describe RAW for someone who doesn’t know much about it.

RAW recording captures the maximum possible image quality from the sensor. It allows for flexibility in post production and color grading to achieve the best possible color reproduction.
VariCam Pure

VariCam Pure — Overview

- Exposure Latitude 14+ stops
- Maximum Frame Rate 120 fps
- Recording Format 4K Uncompressed RAW
- Weight 5 kg / 11.02 lb
- Dimensions 165.0 x 144.0 x 261.2 mm 6.5 x 5.7 x 10.3 in
VariCam Pure Specs

Power: 24 VDC, 91 W

Operating Temperature: 0 °C to 40 °C (32 °F to 104 °F)

Operating Humidity: 10% to 85% (relative humidity)

Weight / Dimensions (W x H x D): 5 kg / 144 x 165 x 262 mm

Pickup Device: Super 35 mm, MOS sensor

Number of Pixels: Total pixels: Approx. 10.3 million pixels
Effective pixels: Approx. 8.9 million pixels

Lens Mount: PL mount

Optical Filter: ND filter: 1: CLEAR, 2: 0.6 ND, 3: 1.2 ND, 4: 1.8 ND

ISO setting: Native ISO: 800, 5000. 800 Base: 200 to 4000, 5000 Base: 1250 to 12800

Shutter Angles: 1.0 deg to 358 degrees (in 0.1 degree increments)

Shutter Speed: 1/24 sec. to 1/250 sec. (for 24p)

Recording Media: CODEX Capture Drive

Recording Resolution: 4096 x 2160 (4K), 3840 x 2160 (UHD)

Recording Frame Rate (Max): 120 fps or 100 fps

System Frequency: 59.94p, 50p, 29.97p, 25p, 24p, 23.98p

Recording Format: VRAW   4K 12bit / 4K 10bit / UHD 12bit / UHD 10bit

Recording Video Signal: 4096×2160/59.94p, 50p, 29.97p, 25p, 24p, 23.98p
3840×2160/59.94p, 50p, 29.97p, 25p, 23.98p

Recording Time with 2TB Capture Drive:
- 4K 12bit / 23.98fps: 100 min.
- 4K 10bit / 23.98fps: 112 min.
- 4K 10bit / 120fps: 22 min.
- UHD 12bit / 23.98fps: 106 min.
- UHD 10bit / 23.98fps: 119 min.
- UHD 10bit / 120fps: 23 min.

Video Data Process: Uncompressed RAW 12-bit / 10-bit

Recording Audio Signal: 48kHz / 24bit, 2Ch
- SDI OUT 1-4: HD (1.5G) / 3G-SDI: 0.8 V [p-p], 75 ohm
- MON OUT 1/2: HD (1.5G) / 3G-SDI: 0.8 V [p-p], 75 ohm
- VF OUT: HD (1.5G) / 3G-SDI: 0.8 V [p-p], 75 ohm
- Audio: 48kHz / 24bit, 2Ch In/Out 1/2 XLR × 1 5-pin
- Headphones / Speaker: Stereo mini jack / 20 mm diameter built-in speaker
- GENLOCK IN: HD (1.5 G) / 3G-SDI: 0.8 V[p-p], 75 ohm
- TC IN/OUT: BNC x 1, Input / Output switching
- DC IN: 24V (10.5V to 34V) 2-Pin Fisher
- DC OUT/RS x2: 24V DC 3-pin Fischer Power/Remote Start-Stop Accessory Connector
- DC OUT x2: 12V DC 2-pin Accessory Connector
- LENS: 12-pin Hirose
- LAN: 100BASE-TX/10BASE-T LEMO (uses standard RJ45 Ethernet to Lemo adapter)
- USB: USB 2.0 Type A connector, 4-pin
- CONTROL PANEL: 20-pin, control panel contact terminals
- SD Card Slot: for Version Updates, 3D LUT/CDL File Upload and Save, Set Up File Upload and Save
- Control Panel LCD: 3.5-type QHD color monitor, approx. 1.56 million dots
- Additional Features: HDR Ready, In-Camera Grading, Metadata Recording

Offload Formats: from Codex Production Suite:
- ProRes 422 HQ: To 120 fps: 1920x1080 10-bit, 2048x1080 10-bit, 4096x2160 10-bit, 3840x2160 10-bit
- ProRes 4444: To 120 fps: 1920x1080 12-bit, 2048x1080 12-bit, 4096x2160, 3840x2160 12-bit
- ProRes 4444 XQ: To 120 fps: 1920x1080 12-bit, 2048x1080 12-bit, 4096x2160 12-bit, 3840x2160 12-bit
- DNxHR 444: 2048x1080 10-bit, 3840x2160 10-bit, 4096x2160 10-bit
- DNxHR HQX: 2048x1080 10-bit, 3840x2160 10-bit, 4096x2160 10-bit
- DNxHR HQ: 2048x1080 10-bit, 3840x2160 10-bit, 4096x2160 10-bit