

**Panasonic**

C I N E M A



**VARICAM**

**LT**







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VARICAM





# The Cinematic VariCam Look in Your Hands

## Compact Size, Light Weight and Top Cinema Quality — The VariCam LT Debuts.

Say hello to the newest addition to Panasonic's cinema camera line.

The Cinema VariCam LT features outstanding image quality that allows you to achieve your "VISION". The advanced grading tools, in-camera dailies and proxy recording capabilities that are built into the VariCam LT are a "REVOLUTION" in streamlining workflow.

The VariCam LT has a compact and lightweight magnesium body and offers same picture quality specifications as the larger VariCam 35 cinema camera.

The super 35mm image sensor, which is the same imager as VariCam 35, features wide dynamic range, an expansive color gamut, and high sensitivity for 4K image acquisition. It has dual native ISO settings of 800 and 5000. The native 5000 ISO allows for clean shooting in very low light situations. Its size and design facilitate a wide array of shooting styles including comfortable ergonomic shoulder mounted operation or use on gimbals and drones.

One new feature that has been added to the VariCam LT is the EF lens<sup>\*1</sup> mount which offers a wide array of lens choices. The EF mount<sup>\*1</sup> can be removed by an end user and replaced with a PL mount (optional). This allows for even greater versatility in lens selection when shooting with the VariCam LT.

The VariCam LT workflow is very similar to that of the VariCam 35. Both cameras have a dual codec recording function that allows the user to record a primary or "main" codec as well as a smaller proxy file. In addition, each camera offers an in-camera color grading function and support for AVC-Intra 4K and Apple ProRes<sup>\*2</sup> codecs.

Join the "REVOLUTION" and achieve your perfect "VISION".

<sup>\*1</sup>: Panasonic does not guarantee the compatibility or performance of all EF lenses.

For more details, to be updated on the Panasonic website.

<sup>\*2</sup>: ProRes is licensed from Apple Inc. Apple ProRes codec is from Atomos under license. The use of DCF Technologies is under license from Multi-Format, Inc.



# The Cinematic VariCam Look, Stunning Image Quality

## Same Imager as VariCam 35

The VariCam LT is equipped with the super 35mm single-chip MOS sensor developed especially for the VariCam 35. It offers 4K (4096 x 2160) and UHD (3840 x 2160) resolution, and boasts high sensitivity, low noise, wide dynamic range and cinematic depth of field. This sensor received The Hollywood Post Alliance Engineering Excellence Award 2015.

## 14+ Stops of Wide Latitude

The camera has a dynamic range of 14+ stops. This wide dynamic range assures accurate image rendering over the entire image, from dark areas to highlights. Even in very dimly lit scenes, which are particularly important in movie production, the VariCam LT provides low-noise images without any compromise in picture quality. "V-Log" is capable of creating the 14+ stops of dynamic range offered by the VariCam LT image sensor, greatly enhancing look creation capability.

## Dual Native ISO of 800/5000

The VariCam LT has two native ISO settings: 800 and 5000. This means the VariCam LT achieves very high sensitivity while maintaining a low noise level at 5000 ISO. The noise level at 5000 ISO is nearly identical to that seen at 800 ISO. In order to achieve this function two dedicated analog circuits are implemented on every pixel of the imager of the VariCam LT for each native ISO before gain processing. This allows the camera to achieve much higher sensitivity without increased noise. Normally noise is introduced in the gain process of rating ISO in digital cameras. This functionality is revolutionary for low light scene shooting. Especially this ISO 5000 enables the camera to capture with very low available light maintaining a realistic mood.

## Expansive Color Gamut

The VariCam LT is equipped with "V-Gamut," giving it a wider color gamut than that of film. V-Gamut also encompasses the entire BT. 2020 color space.

## Scene Files and V-LOOK

The "V-Log" gamma curve offers 14+ stops of dynamic range and facilitates advanced color grading adjustments in post production. The five position scene file function is new to the VariCam LT. The VariCam-LOOK (V-LOOK) mode is a newly developed setting for creating cinematic images without color grading. A newly designed gamma curve that allows detail to be maintained over a greater tonal range within the Rec 709 color space has also been included in the VariCam LT. The "V-709" gamma setting provides a tone suitable for viewing on standard monitors while the "BC-LOOK" creates a look that mimics traditional TV broadcast images.

## Monitoring Output Terminals

The VariCam LT provides down conversion to Full HD via two 3G HD SDI outputs and one VF output (BNC) while shooting in 4K. Your look with in-camera color grading and information overlay can be applied to each output.



Super 35 mm Imager and EF Lens Mount\*

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14+ Stop Wide Latitude



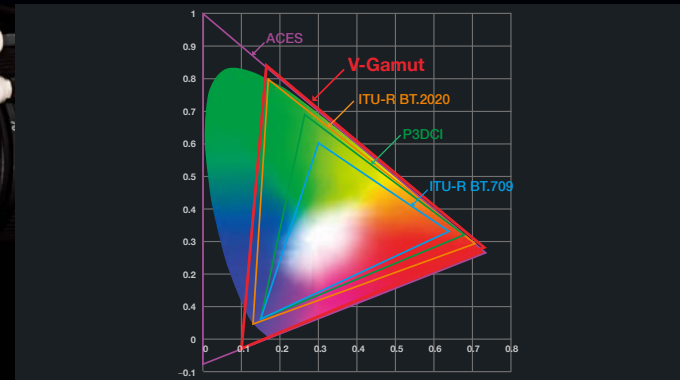
Beautiful Skin Tone



Dual Native ISO of 5000



Rear Side Connectors



Large Native Color Gamut (V-Gamut)





2K/240p Slow Motion



Detachable Control Panel with Monitor

## Advanced Shooting Functions

### Native 4K/60p Shooting

The maximum frame rate when recording in 4K (4096 x 2160) or UHD (3840x2160) resolution is 60p (60fps). This produces smooth, high-resolution images when recording fast-moving action scenes.

### 2K/HD 240p Slow Motion

When shooting in 2K (2048 x 1080) and HD (1920x1080) resolution, high-speed 240 fps recording can be used to produce an extreme slow-motion effect. This is achieved by cropping the image sensor recording area in order to achieve a faster scanning speed. Variable frame rates are available from 1 to 120 fps in AVC-Intra 2K422 and from 120 to 240 fps in AVC-Intra 2K-LT. The frame rate can be changed while recording.

### Infrared Shooting (IR)

The Cinema VariCam LT has an integrated, detachable IR cut filter. This feature allows 4K image capture in extremely dark unlit nightscapes. This is ideal for capturing nocturnal wildlife and other scenes with no illumination.

Also, the IR filter can be used in daylight as a creative tool for achieving a unique look.

### Detachable Control Panel with Monitor

The supplied control panel has a built-in 3.5 type LCD display panel. It can be used for menu operation or as a live/preview monitor. The keys and dials are laid out around the display for quick and accurate operation. Frequently used settings can be accessed directly. This detachable module allows operation up to 90cm in distance.

### Standard HD SDI Interface for EVF

The VariCam LT has a regular BNC connector for the View Finder. Users can select from various HD monitors or viewfinders in addition to the new Panasonic View Finder (AU-VCVF10G). The DC power and command control connectors for the Panasonic VF are also provided.

### Toughness, Durability and Reliability

- The lens mount is made of stainless steel, and designed to prevent flange back deviation due to temperature changes.
- The camera body is made of strong rigid magnesium.
- The top and bottom panels have been made flat for easy installation of various plates and accessories.
- Mounting holes are provided on both sides as well as on the handle for convenient mounting of accessories.
- New accessories include the new Shoulder Mount (AU-VSHL2G) and Grip Module (AU-VGRP1G).
- The new Shoulder Mount (AU-VSHL2G) installs directly on a base plate.



The New Shoulder Mount with a Base Plate.



V-LOOK



IR Shooting in Daylight



EVF Connections with HD SDI and DC Power

# Revolutionary Workflow — Multi-Codec and Dailies in Camera

As of February 2016

## AVC ULTRA ProRes

### Multiple Codec 4K/UHD/2K/HD Recording

AVC-Intra 4K is a 4K-compatible version of the AVC-Intra, intra-frame compression codec that is suitable for cinema production. Using this codec, the VariCam LT can record 4K (4096 x 2160) or UHD (3840 x 2160) resolution. For 2K recording, the VariCam LT supports AVC-Intra 2K444/2K422/2K-LT. For HD recording, the VariCam LT supports AVC-Intra 444/422/100/LT and Apple ProRes 4444/HQ. Using the 256 GByte expressP2 card, the camera can record approximately 90 minutes of 23.98p 4K video with AVC-Intra 4K422.

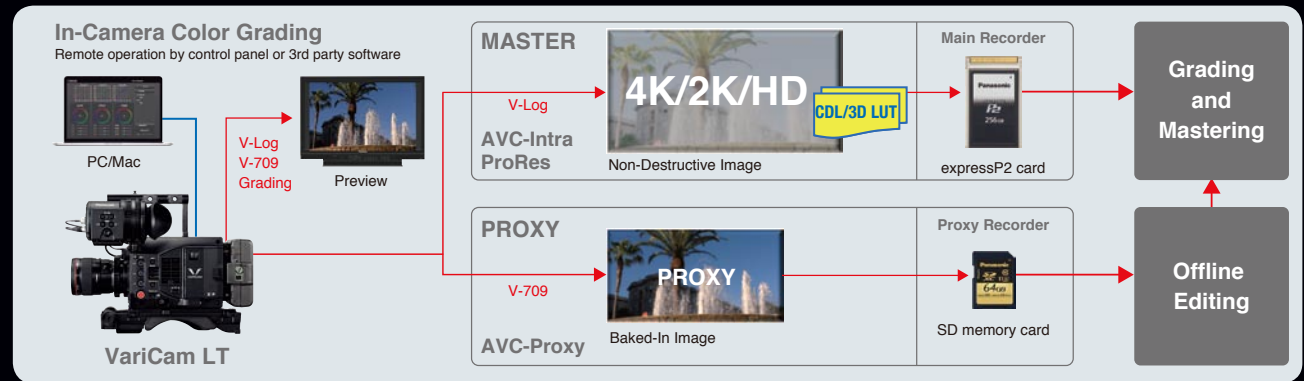
\* ProRes is licensed from Apple Inc. Apple ProRes codec from Atomos under license. Atomos is trademark and copyright of Atomos Global Pty. Ltd.

### In-camera Color Grading

The VariCam LT features an in-camera color grading function (3D LUT/CDL). This enables color tuning on set as well as in the field when using the camera control panel or 3rd party software. This means dailies which had been created after shooting can now be produced on set with the camera. Grading information such as 3D LUT files and CDL files can be recorded together with the image data, allowing you to provide the same vision that you created on set to the editorial staff.

### Main and Proxy Recording

In addition to the main codec recording the VariCam LT has the ability to record files to an SD memory card. This feature lets you record an ungraded 4K master with V-Log in the main expressP2 card recorder while simultaneously recording graded HD files on the SD memory card. The primary recording data is used to create deliverables while the proxy recordings are used for viewing or off-line editing. The file name and time code of each file will match exactly.



## Flexible System Configuration



**AJ-WM30G**  
Wireless Module



**AU-XP0256AG**  
Memory Card "expressP2 card" (256 GB model)



**AU-XP01**  
Memory Card Drive "expressP2 drive"

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# VariCam LT Specifications

As of February 2016

## Basic Specification

Power Consumption:	47 W (body only) 77 W (with all optional accessories connected and maximum power supplied from each output terminal)
Weight:	Approx. 2.7 kg/5.95 lb (body only)
Dimensions: (W x H x D)	184 mm x 230.5 mm x 247 mm (7-1/4 inches x 9-1/8 inches x 9-3/4 inches) (Body only, excluding protrusion)

## Optical Block

Sensor:	S35 mm 1MOS (same as V35)
Lens Mount:	EF mount*1 (PL mount option)
Optical Filter:	ND filters: CLEAR/0.6/1.2/1.8 IR cut filter removable

## Media Slot and Connector

Media Slot:	expressP2 Card Slot x 1 SD Card Slot x1 for Proxy/Meta Data
Connector:	3G-SDI OUT x3 (SDI OUT 1/ SDI OUT2/VF SDI) Genlock IN TC IN/OUT LAN USB HOST (for Network Connect) USB DEVICE (miniB) XLR 5 pin x1, XLR 3 pin x2 DC OUT 4 pin Hirose x2 Lens/Grip Connector 12 pin 12 V DC-IN 4 pin Head Phone x1 3.5 mm Stereo Mini Jack

## Video Format (MAIN)

4096 x 2160:	59.94p, 29.97p, 24p, 23.98p, 50p, 25p
3840 x 2160:	59.94p, 29.97p, 23.98p, 50p, 25p
2048 x 1080:	59.94p, 29.97p, 24p, 23.98p, 50p, 25p
1920 x 1080:	59.94p, 29.97p, 23.98p, 50p, 25p 59.94i, 50i

## Rec Format

4K/UHD:	AVC-Intra 4K422: up to 30p AVC-Intra 4K-LT: 30p to 60p
2K:	AVC-Intra 2K444: up to 30p AVC-Intra 2K422: up to 60p, up to 120p (cropped) AVC-Intra 2K-LT: 120p to 240p (cropped)
HD:	AVC-Intra444: up to 30p AVC-Intra422: up to 60p, up to 120p (cropped) AVC-Intra100: 50i/59.94i AVC-IntraLT: 120p to 240p (cropped) ProRes 4444:*2 up to 30p ProRes 422HQ:*2 up to 60p
Proxy:	AVC-Proxy G6: up to 60p

## Audio Format

MAIN:	4ch 48 kHz/24 bit LPCM
Proxy G6:	2ch 48 kHz/16 bit AAC

## Camera Function

V-Log/preset Scene File x5	
1) V-Log Mode:	MAIN Color = V-Log, Proxy Color = V-Log/V-709/Grading
2) Preset Scene File Mode:	always MAIN Color = Proxy Color Image Preset with Scene files
Parameters:	Image control parameters (only in preset Scene File mode) - WHITE - BLACK - GAMMA - KNEE - WHITE CLIP - DETAIL (Not available in AVCI 4K-LT, 2K-LT) - SKIN DETAIL (Not available in AVCI 4K-LT, 2K-LT) - CHROMA - MATRIX - COLOR CORRECTION

ISO:	Native 800/5000 push up/down
WB:	2000 K to 15000 K, GMg -10 to +10
SHUTTER:	deg & /s, synchro scan
FPS:	4096/3840: up to 60p (Full Frame) 2048/1920: up to 60p (Full Frame) 2048/1920: up to 240p (Cropped)

## Other Function

Focus Assist:	Expand (x2, x3, x4, 9 positions) Focus in Color (RED/WHITE/GREEN) Focus Squares
El assist:	Zebra/WFM/FALSE COLOR/Y-GET
Anamorphic Lens Desqueeze	
Lens Meta Data:	EF, LDS, Cooke/i, B4 lens
Special REC function:	PreRec / Interval rec / One Shot Rec
Built-in GPS	
Shot Mark	
Text Memo	
IP Control with AK-HRP200G	
Proxy FTP	
In-Camera Color Grading: 3D LUT / CDL	
IR Shooting	
Power Hot Swap	

## Options

AU-VCVF10G	View Finder (for VariCam LT)
AU-VSHL1G	Shoulder Mount (for ENG Style)
AU-VSHL2G	Shoulder Mount (for Cinema Style)
AU-VGRP1G	Grip Module
AU-VMPL1G	PL Mount

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Factories of AVC Networks Company have received ISO14001:2004-the Environmental Management System certification. (Except for 3rd party's peripherals.)