Panasonic
ideas for life

P2HD

AG-HPX600
Memory Card Camera Recorder "P2 cam"

HD COLOR VIEWFINDER

AVC ULTRA upgradable   *AVC INTRA*   DVCPRO HD   DVCPRO 50   DVCPRO DV

Compact, Lightweight, High-Sensitivity Camera Recorder with Excellent Expandability and a Future Proof Design

Expandability

Networking
Proxy Recording
Wireless LAN
Ethernet LAN

Cinema Production
Variable Frame Rate
24PsF Output

Performance

Small and Lightweight
High Sensitivity and
High S/N Ratio
AVC-Intra Recording

Future Proof

AVC-ULTRA Codec
microP2 Card

This new concept P2 cam combines high cost-performance, easy operation, expandable functions, and a future proof design to meet needs in a wide range of uses, from image production to broadcasting. A 2/3-type shoulder-type model, it accommodates a variety of interchangeable lenses. And its compact body provides superb mobility with the industry's lowest weight[*1] of approximately 2.8 kg (6.2 lb) for the main unit. Its newly developed MOS sensor attains high F12 sensitivity (at 59.94 Hz) and low noise with an S/N of 59 dB (standard). Multi HD/SD codecs, including AVC-Intra100/50, are equipped. In addition to these basic specifications, a wide range of functions are available as Loptions, such as networking functions and a Variable Frame Rate (VFR). This enables low-cost system support for numerous and diverse applications. AG-HPX600 also supports new P2HD technologies such as the AVC-ULTRA family of codecs[*2] and microP2 cards.[*3] These and other features will allow the P2 cam to transition smoothly to the next generation of video systems.

*1: As a 2/3-type shoulder-type HD camera recorder (as of August 2012). *2: Scheduled for future release as a paid option, not all AVC-ULTRA formats will be supported. *3: Scheduled for future release as a paid upgrade.

Performance

The high-sensitivity MOS sensor and AVC-Intra codec enable high-quality, Full-HD 10 bit 4:2:2* recording.

* Using the AVC-Intra100 codec.

The 2/3-type bayonet mount interchangeable lens system

2/3-type Interchangeable Lenses

The 2/3-type bayonet mount interchangeable lens system lets you choose from a variety of 2/3-type zoom lenses for broadcasting and other professional uses from third-party manufacturers. Select the lens type and performance level that meet your needs.

New, High-Sensitivity F12 MOS Sensor

A newly developed 2/3-type MOS sensor offers levels of F12 sensitivity (at 59.94 Hz)* and low noise with an S/N of 59 dB (standard) that surpass many 2/3-type 3CCD cameras. High-speed scanning minimizes skewing distortion.

* F13 sensitivity at 50 Hz

Image of shooting with F12 sensitivity
(AG-HPX600)

Image of shooting with F8 sensitivity
(equivalent to the naked eye)

High-Quality Image Processing and Versatile Image Settings

• **CAC (Chromatic Aberration Compensation):** When using a CAC compatible lens, the small amount of circumjacent chromatic aberration (circumjacent blur) that is not corrected by the lens is compensated by this process.
• **DRS (Dynamic Range Stretch):** Suppresses blocked shadows and blown highlights to achieve a visually wide dynamic range.
*The DRS function does not operate in 1080/25p, 1080/24p or 1080/30p mode.
• **Advanced Flash Band Compensation (FBC):** High-precision flash band detection and compensation.
• **Gamma:** Select from 7-mode (HD NORM/LOW/SD NORM/HIGH/B. PRESS/CINE-LIKE D/CINE-LIKE V) gamma curves.
• **Digital image settings:** H Detail, V Detail, Detail Coring, Skin Tone Detail, Chroma Level, Chroma Phase, Color Temperature, Master Pedestal, Knee (LOW/MID/HIGH), Matrix (NORM1/NORM2/FLUO/CINE-LIKE).

Professional Shooting Functions

• Scan Reverse function for use with a cinema lens adaptor.
• Digital Zoom function for 2x and 4x close-ups.
• Variable Shutter Speed from 1/12 sec to 1/2000 sec plus Synchro Scan function.
• Four-position (CLEAR, 1/4 ND, 1/16 ND, 1/64 ND) optical neutral density filter wheel.

Standard-Equipped, High-Quality AVC-Intra Codecs

 This advanced system maintains intra-frame compression based on the new MPEG-4 AVC/H.264 moving picture compression technology. It records in AVC-Intra100 mode (1920 x 1080,*[1] 10 bit, 4:2:2) for images with full-pixel HD and full sampling, and AVC-Intra50 mode (1440 x 1080,*[1] 10 bit, 4:2:0) for high-quality images at a low bit rate and for low-cost operation. The AG-HPX600 will also support the new codec, AVC-ULTRA*[2] in the future as a paid upgrade.

*1: These figures are for 1080i/p mode. The AG-HPX600 also supports 720p mode.
*2: Not all AVC-ULTRA formats will be supported.

HD/SD Multi-Format and Multi-Codec Recording

• AVC Intra100/50: 1080/60i, 24pN, 30pN, 720/60p, 24pN, 30pN*
• DVCPRO HD: 1080/60i, 24p, 24pA, 30p, 720/60p, 24p, 30p*
• DVCPRO 50/DVCPRO/DV: 480/60i, 30p, 24p, 24pA*
• 50 Hz mode: 1080/50i, 25p, 25pN, 720/50p, 25p, 25pN, 576/50i, 25p

* 24p = 23.98p, 30p = 29.97p, 60p = 59.94p and 60i = 59.94i

48 kHz/16 bit, 4-Channel Digital Audio

The AG-HPX600 can record full 48 kHz/16 bit digital audio on all four channels. You can freely select the audio source for each channel, choosing from mic-in, line-in and wireless receiver.

P2 Card — Excellent Speed, Reliability, and Environmental Performance

• **Broadcast-use P2 card:** Offers high reliability to withstand impacts, vibrations, and temperature changes.
• **Quick start:** Lets you stand by with the power off, then start shooting immediately with no need for cueing.
• **Safety:** Automatically records onto blank card sections and protects against accidental data overwriting.
• **Re-use:** High durability and reliability allows years of repeated use.
• **Instant playback:** Files can be played or transferred as soon as the thumbnail images are displayed.
• **Instant editing:** No need for digitizing. P2 cards can be directly mounted on a PC*[1] for instant editing with a nonlinear editor and high-speed data transfer*[2] to a network server.

*1: PCs must be installed with the P2 driver in order to mount P2 cards. For editing, PCs must be installed with P2-compatible editing software available from various companies. Read "Notes Regarding the Handling of P2 Files Using a PC" on the back page.
*2: The maximum transfer speed is 1.2Gbps. when using the P2 cards. Transfer speed is subject to change depending on the system configuration.

Versatile File-Based Recording Functions

• **Double Slot system:** Two P2 card slots allow continuous recording, card select (recording slot selection), and hot-swap recording (replacing a card during recording).
• **One-Clip rec mode:** Records up to 99 consecutive cuts as a single clip.
• **Loop rec:**[1] Repeatedly re-records while maintaining a recording of the most recent, predetermined period.
• **Pre-rec:**[1] Continuously stores footage prior to pressing Rec Start for recovery if desired.
• **Interval rec:**[1] Automatically records intermittently based on a set interval and recording time.
• **One-shot rec:**[1] A frame-shot recording function useful for producing animations.
• **Text Memo:**[2] Up to 100 memos can be posted onto a clip as bookmarks.
• **Shot Marker:**[2] Used to mark clips as OK, NG, etc.
• **Metadata:** Data with information such as operator's name, shooting location, and text memos can be added via an SD Memory Card.

*1: These functions cannot be used during optional Variable Frame Rate recording.
*2: Shot marker and text memo cannot be used in loop rec, interval rec, or one-shot rec.

Functions

Comfortable operating functions, such as SmartUI, and a host of system functions are included in this compact, lightweight (approximately 2.8 kg (6.2 lb)) body.

A large number of functions can be quickly set on the "SmartUI".

The Lightest 2/3-type Shoulder-type Model

The AG-HPX600 is the lightest* in its class at approximately 2.8 kg (6.2 lb) for the main unit. This compact body provides superb mobility. It is also designed with excellent forward visibility.

* As a 2/3-type shoulder-type HD camera recorder (as of August 2012).

Low Power Consumption

Power consumption for the main unit is only 18 W. This is a reduction of about 50% from our previous model, the AJ-HPX2100 (36 W for the main unit only, with LCD off), which was released in 2007. The AG-HPX600 consumes only 22 W even with the optional AG-YDX600G Video Encoder Board and optional AG-YA600G HD/SD SDI Input Board mounted.

SmartUI — A New User Interface

This newly designed user interface consists of an LCD and a variety of switches. A large number of functions, including Scene File settings, Audio Level settings, Audio IN/OUT selection, Time Code settings, and MON/HDMI Output Video settings, are easy to recognize and can be set with only a few steps each.

Versatile Shooting Assist Functions

• **Focus Assist:** Press the Focus Assist button to expand the center section of the viewfinder screen for easier focusing.
• **Scene Files:** Select either of six preset files from the menu according to the shooting situation. The settings can also be stored onto an SD card.
• **Gain:** There is a three-position gain selector with a maximum gain value of +18 dB.
• **User Buttons:** Functions can be freely allocated to the three User buttons.
• **Shockless White Balance:** A smooth transition occurs when switching White Balance modes. This is effective, for example, when moving from outdoors to indoors.
• **WFM:** Simplified waveform and vectorscope display.
• **Zebra:** Select any two levels from among 50% to 109%, in 1% steps.
• **Mode check:** Displays a list of the camera settings.
• **Y–GET:** Measures brightness at center and displays numerical data.
• Auto White Balance with an auto tracking white function.
• User files can be saved to an SD card and shared with other cameras.
• Audio input level adjustment (front) can be switched on/off and allocated to desired channels.

New Color LCD Viewfinder

The newly designed, optional AG-CVF10G Color HD Viewfinder (cost-effective model) and AG-CVF15G Color HD Viewfinder (upper grade model) are 8.76 cm (3.45 inches) color LCD with approximately 920,000-dot resolution and a 16:9 aspect ratio. When opened, it serves as an LCD monitor. The optional 5.08 cm (2 inches) AJ-HVF21G Monochrome HD Viewfinder can also be used.

Waveform (The above photo is AG-CVF10G)

Camera Remote System Compatibility

• **10-pin Remote Terminal:** Camera remote operation is enabled with the optional AG-EC4G Extension Remote Control Unit or AJ-RC10G Remote Control Unit.*
• **Camera Studio System:** The optional camera extension system (AG-CA300G Camera Adaptor and AG-BS300 Base Station) support low-cost studio integration.

* Only functions that are supported by the AG-HPX600 can be controlled.

HD SDI IN/OUT, HDMI OUT

HDMI™
HIGH-DEFINITION MULTIMEDIA INTERFACE

• **SDI OUT (IN):** It outputs SDI with embedded audio. Backup recording operation can be interlinked with the Rec Start/Stop controls of an SDI input-equipped Panasonic recorder, such as the AG-HPD24. Adding the optional AG-YA600G HD/SD SDI Input Board makes it possible to switch SDI input with this terminal, for line recording.
• **HDMI OUT:** This terminal allows digital A/V output to a wide range of devices with both professional and consumer specifications.
• **MON OUT:** This terminal outputs separate from the SDI OUT terminal. It can also be set to output HD SDI, down-converted SD SDI, or VBS.
• **Aspect conversion:** The aspect ratio can be selected to Side Crop, Letter Box, or Squeeze mode when down-converting and outputting from SDI OUT/MON OUT terminals.

Other Interfaces

• **TC IN/OUT:** A built-in SMPTE time code generator/reader. IN/OUT selectable by menu settings.
• **GENLOCK IN:** For synchronized recording with a multi-camera system.
• **USB 2.0:** Equipped with both HOST (for connection to an HDD) and DEVICE (for connection to a PC/Mac) terminals.
• UniSlot® compatible wireless receiver slot (2 channels).
• **XLR audio input:** 2-channel mic/line inputs supporting 48V phantom power supply.
• Audio output terminals (pin jacks), 2 channels.
• Multiple battery support, including Anton Bauer.

* UniSlot® is a trademark of Ikegami Tsusinki Co., Ltd.

Rear Terminal

Audio Output (Right Side)

USB Terminal Left Side)

Expandability

Proxy Recording, Network Functions, and a Variable Frame Rate.
This Expandable System Lets You Add Only the Functions You Need.

Revolutionary Workflow with High-Resolution Proxy Video and Network Options

High-Resolution Proxy Video Supported
(With the optional AG-YDX600G Video Encoder Board)
With this option, the AG-HPX600 records proxy files onto SD/SDHC memory cards or onto P2 cards.* It supports high-quality video (Quick Time/H.264) and audio formats at a low bit rate. High-quality proxy files can be used for breaking news and other scenarios that would benefit from proxy workflows. Moreover, it streamlines the production workflow by allowing the editor to review the content details during offline editing.

* Proxy data cannot be recorded when using the Loop Rec or Interval Rec function. Proxy data is low-resolution video and audio data with time code, metadata, and other management data in a file format. Use of DCF Technologies under license from Multi-Format, Inc.

Streaming with a Wireless or Wired LAN
(With the optional AJ-SFU601G Upgrade Software Key and AJ-WM30 Wireless Module)
These options enable use of a wireless or wired (Ethernet) LAN. Proxy files*[1] can be streamed or viewed via a standard web browser on a PC/Mac, tablet, or smartphone.*[2] While viewing the streamed files, metadata can be added to the P2 files. Using a PC/Mac also enables a cloud-based workflow by uploading and sharing video data via a network.

*[1]: The optional AG-YDX600G Video Encoder Board is required to use proxy video.
*[2]: For the latest information, see "Service and Support" on the Panasonic website (http://pro-av.panasonic.net/).

picture simulated

Tablet terminal such as iPad

Smartphone*[1] such as iPhone

Portable media player*[1] such as iPod Touch

PC such as Panasonic Toughbook MacBook Air etc.

Wireless LAN IEEE802.11b/g

AG-HPX600

AJ-WM30 Wireless Module

Ethernet

The VFR Option for Cinema Production Use

Variable Frame Rate Shooting and 24PsF Output
(With the optional AG-SFU602G Production Package Upgrade Software Key)
In 720p mode, the frame rate can be set in the range of 1 fps-60 fps, and in 1080p mode it can be set to 1 fps-30 fps. This allows the use of undercranking and overcranking to create fast-motion and slow-motion effects. Either 24p/30p Native mode or over 60p mode can be selected for recording. In addition, the 24PsF format can be output from SDI OUT for uncompressed data recording.

Shown above is a sample of operation style.

Future Proof

Compatible with the P2HD next–generation codec family AVC–ULTRA and the new solid state recording media microP2

AVC ULTRA

AVC–ULTRA Upgrade Service
(A paid upgrade scheduled for future)

AG-HPX600 can be upgraded to support the AVC-ULTRA family of codecs to meet the variety of image production demands. The USB HOST interface can also be upgraded to the USB 3.0 high-speed transfer version at the same time.

* Not all AVC-ULTRA formats will be supported. The upgrade will require the replacement of a circuit board inside the camera recorder. The service will include charges for the new circuit board, the software upgrade, and labor.
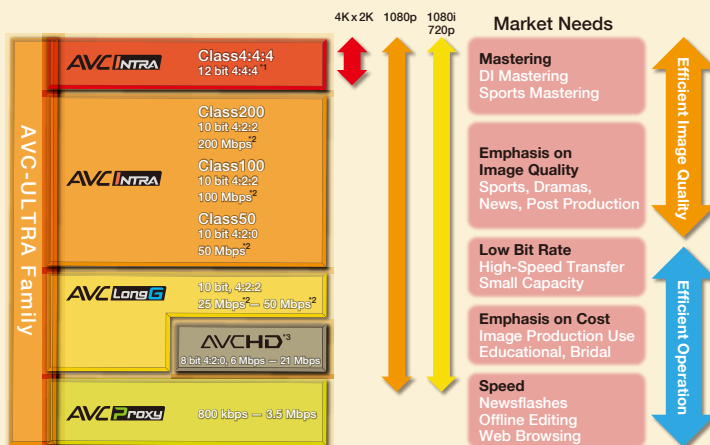
microP2 Card Compatibility Upgrade
(A paid upgrade scheduled to begin in spring 2013)

The P2 card has evolved into the microP2 card (32 GB/64 GB), a new solid state recording media for broadcast use. While achieving the same compact size as the SD Memory Card and a dramatic reduction in cost, the new microP2 card also offers high-speed data transfer and high reliability.

* For the latest firmware, see "Service and Support" on the Panasonic website (http://pro-av.panasonic.net/).

Outline of the AVC-ULTRA Family of Codecs (Under Development)

	4K x 2K	1080p	1080i 720p	Market Needs	
AVC INTRA Class4:4:4 12 bit 4:4:4 *1				**Mastering** DI Mastering Sports Mastering	Efficient Image Quality
AVC INTRA Class200 10 bit 4:2:2 200 Mbps*2				**Emphasis on Image Quality** Sports, Dramas, News, Post Production	
Class100 10 bit 4:2:2 100 Mbps*2				**Low Bit Rate** High-Speed Transfer Small Capacity	Efficient Operation
Class50 10 bit 4:2:0 50 Mbps*2					
AVC Long G 10 bit, 4:2:2 25 Mbps*2 — 50 Mbps*2				**Emphasis on Cost** Image Production Use Educational, Bridal	
AVCHD *3 8 bit 4:2:0, 6 Mbps — 21 Mbps					
AVC Proxy 800 kbps — 3.5 Mbps				**Speed** Newsflashes Offline Editing Web Browsing	

AVC-ULTRA Family

*1: The bit rate is under consideration. *2: The bit rate is approximate at 1080/60i.
*3: AVCHD is not included in the AVC-ULTRA family.

OPTIONAL ACCESSORIES

AG-CVF10G NEW
Color HD View Finder
Open one way for LCD monitor viewing

AG-CVF15G NEW
(coming soon)
Color HD View Finder
Open two ways for LCD monitor viewing

AJ-HVF21G
50.8 mm (2 inches)
HD EVF
59.94 Hz/50 Hz switchable

AG-MC200G
XLR Microphone

SHAN-TM700
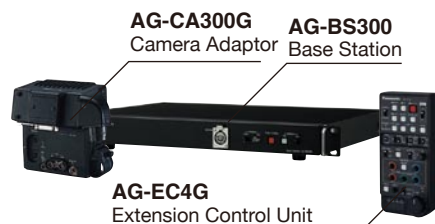Tripod Adaptor

AG-YDX600G NEW
Video Encoder Board

AG-YA600G NEW
HD/SD SDI Input Board

AJ-WM30
Wireless Module

CAMERA STUDIO SYSTEM

AG-CA300G
Camera Adaptor

AG-BS300
Base Station

AG-EC4G
Extension Control Unit

Transmits high-quality images and remote control signals for studio integration.

AJ-RC10G
Remote Control Unit
with 10 meters (32 feet) remote control cable

AJ-C10050G
Remote Control Cable
(50 meters / 164 feet)

* Not available in some areas.
* The remote control unit can control only functions supported by the AG-HPX600. It cannot control unsupported keys or dials.

P2 Viewer 3.6
Viewing Software (download free)

P2 CMS 1.4
Content Management Software (download free)

P2 Viewer Plus NEW
Viewing Software (coming soon)
The new P2 viewing software compatible with both Windows/Mac OS.

* For P2 Viewer or P2 CMS download and operating requirement information, visit WEB site http://pro-av.panasonic.net/ and click "P2 Support and Download"

AJ-P2E064FG NEW
AJ-P2E032FG NEW
AJ-P2E016FG NEW
Memory Card
(P2 card F series)

SD/SDHC Memory Card

AJ-SC900
Soft Carrying Case
*Not available in some area

SHAN-RC700
Rain Cover
*Not available in some area

Other Manufacturer's Products

Anton/Bauer Dionic Battery

Bound Cable for Camera Studio System
(between AG-BS300 and AG-CA300G)
[Canare]
V2PCS25-5CFWCE-SF-SC (25 meters /82 feet)
V2PCS50-5CFWCE-SF-SC (50 meters /164 feet)
V2PCS100-5CFWCE-SF-SC (100 meters /328 feet)

Power Cable for Camera Studio System
(between AG-BS300 and AG-CA300G)
[Canare]
DC50V10-CE01PS-SC (50 meters /164 feet)
DC100V10-CE01PS-SC (100 meters /328 feet)

Canare Electric CO., Ltd.
http://www.canare.co.jp/oversea/mainmenu.html

AG-HPX600 SPECIFICATIONS

General Specification

Supply Voltage:	DC 12 V (DC 11 V to 17 V)
Power Consumption:	18 W (main unit only) 22 W (with AG-YDX600G and AG-YA600G)
Operating Temperature:	0 °C to 40 °C (32 °F to 104 °F)
Operating Humidity:	10% to 85% (no condensation)
Keeping Temperature:	−20 °C to 60 °C (−4 °F to 140 °F)
Weight:	Approx. 2.8 kg (6.2 lb) excluding battery and accessories
Dimensions (W x H x D):	144 mm x 267 mm x 350 mm (5-21/32 inches x 10-1/2 inches x 13-25/32 inches) excluding prominent parts

Camera Section

Pick-up Device:	2/3-type MOS x 1
Lens Mount:	2/3-type bayonet type
ND Filter:	4 position (Clear, 1/4ND, 1/16ND, 1/64ND)
Gain Selection*1:	−3 dB, 0 dB, 3 dB, 6 dB, 9 dB, 12 dB, 18 dB (18 dB: USER SW allocation)
Color Temperature Settings:	ATW, ATW LOCK, Ach, Bch, Preset 3200 K/Preset 5600 K/VAR (2400K to 9900K)
Shutter Speed: (Preset)	SYSTEM MODE = 59.94 Hz ●60i/60p mode: 1/60 (OFF) sec., 1/100 sec., 1/120 sec., 1/250 sec., 1/500 sec., 1/1000 sec., 1/2000 sec. ●30p mode: 1/30 (OFF) sec., 1/50 sec., 1/60 sec., 1/120 sec., 1/250 sec., 1/500 sec., 1/1000 sec. ●24p mode: 1/24 (OFF) sec., 1/50 sec., 1/60 sec., 1/120 sec., 1/250 sec., 1/500 sec., 1/1000 sec. SYSTEM MODE = 50 Hz ●50i/50p mode: 1/50 (OFF) sec., 1/60 sec., 1/120 sec., 1/250 sec., 1/500 sec., 1/1000 sec., 1/2000 sec. ●25p mode: 1/25 (OFF) sec., 1/50 sec., 1/60 sec., 1/120 sec., 1/250 sec., 1/500 sec., 1/1000 sec.
Shutter Speed: (Slow)	SYSTEM MODE = 59.94 Hz ●60i/60p mode: 1/15 sec., 1/30 sec. ●30p mode: 1/15 sec. ●24p mode: 1/12 sec. SYSTEM MODE = 50 Hz ●50i/50p mode: 1/12.5 sec., 1/25 sec. ●25p mode: 1/12.5 sec.
Shutter Speed: (Syncro Scan)	SYSTEM MODE = 59.94 Hz (SYNC SCAN TYPE = sec) ●60i/60p mode: 1/60.0 sec. to 1/249.8 sec. ●30p mode: 1/30.0 sec. to 1/249.8 sec. ●24p mode: 1/24.0 sec. to 1/249.8sec. SYSTEM MODE = 50 Hz (SYNC SCAN TYPE = sec) ●50i/50p mode: 1/50.0 sec. to 1/250.0 sec. ●25p mode: 1/25.0 sec. to 1/250.0 sec.
Shutter Open Angle:	SCENE FILE VFR = OFF 3 deg to 360 deg, 0.5 deg step select SCENE FILE VFR = ON*2 (FRAME RATE 12p or more) 3 deg to 360 deg, 0.5 deg step select SCENE FILE VFR = ON*2 (Less than FRAME RATE 12p) 3 deg to 22.5 deg, 0.5 deg step select 45 deg, 90 deg, 180 deg, 360 deg
Frame Rates*2: (59.94 Hz mode)	●1080: 1/2/4/6/9/12/15/18/20/21/22/24/25/26/27/28/30 (frames per second) 17 steps ●720: 1/2/4/6/9/12/15/18/20/21/22/24/25/26/27/28/ 30/32/34/36/40/44/48/54/60 (frames per second) 25 steps
Frame Rates*2: (50 Hz mode)	●1080: 1/2/4/6/9/12/15/18/20/21/22/23/24/25 (frames per second) 14 steps ●720: 1/2/4/6/9/12/15/18/20/21/22/23/24/25/26/27/ 28/30/32/34/37/42/45/48/50 (frames per second) 25 steps
Sensitivity*3:	F12 (2000 lx, 3200 K, 89.9% reflect, 1080/59.94i) F13 (2000 lx, 3200 K, 89.9% reflect, 1080/50i)
Video S/N*3:	59 dB (standard)
Digital Zoom:	x 2, x 4

Memory Card Recorder Section

Recording Media:	P2 card
System Formats:	1080/59.94i, 1080/23.98PsF*2, 720/59.94p, 480/59.94i, 1080/50i, 720/50p, 576/50i
Recording Video Signal:	1080/59.94i, 1080/29.97p, 1080/29.97pN, 1080/23.98p, 1080/23.98p, 1080/23.98pN, 1080/50i, 1080/25p, 1080/25pN, 720/59.94p, 720/29.97p, 720/29.97pN, 720/23.98p, 720/23.98pN, 720/50p, 720/25p, 720/25pN, 480/59.94i, 480/29.97p, 480/23.98p, 480/23.98pA, 576/50i, 576/25p
Recording Formats:	AVC-Intra100/AVC-Intra50/DVCPRO HD/ DVCPRO 50/DVCPRO/DV formats switchable

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Recording/Playback Time*4: with a 64 GB P2 card	AVC-Intra100/DVCPRO HD: AVC-Intra50/DVCPRO 50: DVCPRO/DV:	approx. 64 min. approx. 128 min. approx. 256 min.
Recording/Playback Time*4: with a 32 GB P2 card	AVC-Intra100/DVCPRO HD: AVC-Intra50/DVCPRO 50: DVCPRO/DV:	approx. 32 min. approx. 64 min. approx. 128 min.
Recording/Playback Time*4: with a 16 GB P2 card	AVC-Intra100/DVCPRO HD: AVC-Intra50/DVCPRO 50: DVCPRO/DV:	approx. 16 min. approx. 32 min. approx. 64 min.

Digital Video Specification

Recorded Video Signals:	AVC-Intra100/DVCPRO HD: Y: 74.1758 MHz, PB/PR: 37.0879 MHz (59.94 Hz) Y: 74.2500 MHz, PB/PR: 37.1250 MHz (50 Hz) DVCPRO 50: Y: 13.5 MHz, P PB/PR: 6.75 MHz DVCPRO: Y: 13.5 MHz, PB/PR: 3.375 MHz
Quantizing:	AVC-Intra100/AVC-Intra50: 10 bit DVCPRO HD/DVCPRO 50/DVCPRO/DV: 8 bit
Video Compression:	AVC-Intra100/AVC-Intra50: MPEG-4 AVC/H.264 Intra Profile DVCPRO HD: DV-Based Compression (SMPTE 370M) DVCPRO 50/DVCPRO: DV-Based Compression (SMPTE 314M) DV: DV Compression (IEC 61834-2)

Digital Audio Specification

Recording Audio Signal:	AVC-Intra100/AVC-Intra50: 48 kHz, 16 bit, 4CH DVCPRO HD/DVCPRO 50: 48 kHz, 16 bit, 4CH DVCPRO/DV: 48 kHz, 16 bit, 2CH/4CH switchable
Headroom:	20 dB/18 dB switching via menu

Video Input/Output

SDI OUT/IN (OP)*5:	BNC×1 HD SDI: 0.8 V [p-p], 75 Ω SD SDI: 0.8 V [p-p], 75 Ω
MON OUT:	BNC×1, HD SDI/SD SDI/VBS (Analog Composite) can be switched on SmatUI HD SDI: 0.8 V [p-p], 75 Ω / SD SDI: 0.8 V [p-p], 75 Ω / VBS: 1.0 V [p-p], 75 Ω
HDMI OUT:	HDMI x 1 (HDMI TypeA terminal), VIERA Link not supported

Audio Input/Output

AUDIO IN:	XLR (3 pin) x 2 LINE/MIC switchable, high impedance, LINE: 0 dBu, MIC:−50 dBu/−60 dBu (switching via menu) MIC +48 V ON/OFF (switchable)
MIC IN:	XLR (3 pin) x 1 +MIC/+48 V switchable, −40 dBu/−50 dBu/−60 dBu (switching via menu)
WIRELESS IN:	25 pin, D-SUB, −40 dBu 2CH supported
AUDIO OUT:	Pin jack × 2 (CH1/CH2), Output: 316 mV, 600 Ω
PHONES OUT:	ø3.5 mm stereo mini jack × 1
Speaker:	20 mm diameter × 1

Other Input/Output

GENLOCK IN:	BNC × 1, 1.0 V [p-p], 75 Ω
TC IN/OUT:	IN: BNC × 1, 0.5 V [p-p] to 8V [p-p], 10 kΩ OUT: BNC × 1, 2.0 V ±0.5 V [p-p], low impedance (IN/OUT switching via menu)
DC IN:	XLR × 1, 4 pin, DC 12 V (DC 11.0 V to 17.0 V)
DC OUT:	4 pin, DC 12 V (DC 11.0 V to 17.0 V), Max. 1.5 A
REMOTE:	10 pin
LENS:	12 pin
VF:	20 pin
LAN*6:	100BASE-TX/10BASE-T
USB 2.0 (HOST):	Type-A, 4 pin USB ver 2.0 Standard
USB 2.0 (DEVICE):	Type-B, 4 pin USB ver 2.0 Standard
USB 2.0 (HOST)*6:	Type-A, 4 pin USB ver 2.0 Standard for Wireless Module AJ-WM30

Included Accessories

Shoulder strap, Mount cap*7, CD-ROM

*1: When SHOOTING MODE is NORMAL on SYSTEM SETUP MENU, −3 dB setting is treated as 0dB and 18dB setting can not be active. *2: AG-SFU602 Upgrade Software Key is required. *3: When SHOOTING MODE is LOW LIGHT on SYSTEM SETUP MENU *4: Time shown above is when you record a series of 1 shot onto P2 card. Depending on numbers of shots you record, time will get shorter than the number shown above. *5: Mounting the optional AG-YA600G HD/SD SDI Input Board makes this system SDI Input. (SDI OUT/IN switching via menu) *6: When Upgrade Software Key AG-SFU601 is installed, the network function of cable LAN and wireless LAN becomes effective. *7: It is attached to the main body.

Weight and dimensions shown are approximate. Specifications are subject to change without notice.

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Please refer to the latest Non-linear Compatibilty Information,
P2 Support, Download and Service Information, etc. at the following Panasonic web site.

http://pro-av.panasonic.net/

Notes Regarding the Handling of P2 Files Using a PC

Mounting and Transferring Files
The PC must be installed with the included P2 driver in order to recognize, copy and transfer P2 files. This driver is also necessary when using the PC card slot and when handling P2 files stored on a hard-disk device, such as the P2 store. The included P2 driver is compatible with Windows Vista, Windows XP, Windows 2000 and Mac OSX. For other operating requirements, refer to the P2 installation manual. The P2 driver and the P2 installation manual can be downloaded free from the following Panasonic website. Visit https://eww.pavc.panasonic.co.jp/pro-av/ and click "P2 Support and Download."

Preview and Nonlinear Editing
To preview (play) P2 files on a PC, it is necessary to install the P2 Viewer software (downloadable for free, for Windows only) or P2 CMS content management software (downloadable for free, for both Windows and Mac), both from Panasonic, or P2-compatible editing software available from other companies (for details, visit https://eww.pavc.panasonic.co.jp/pro-av/sales_o/p2/partners.html). Note that each software places specific requirements on the operating environment, and the operating environment must meet additional requirements to play and edit HD content on Windows PCs and Macs. For P2 Viewer or P2 CMS download and operating requirement information, visit https://eww.pavc.panasonic.co.jp/pro-av/. For operating requirements and details of other P2 editing software, visit the website of the relevant software manufacturer.

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