

# Panasonic

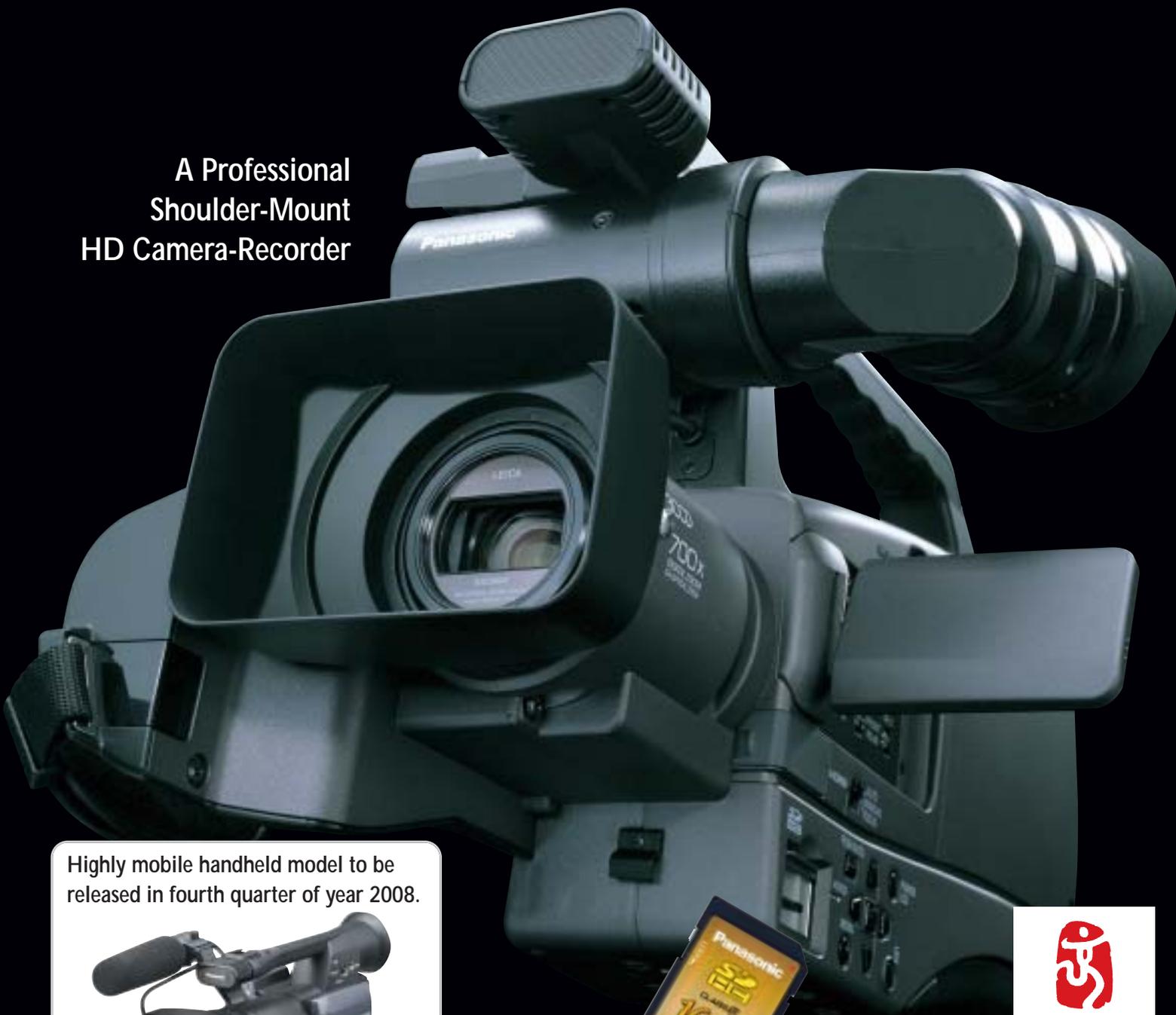
ideas for life

## AG-HMC70

Memory Card Camera-Recorder

# AVCHD

A Professional  
Shoulder-Mount  
HD Camera-Recorder



Highly mobile handheld model to be released in fourth quarter of year 2008.



**AG-HMC150**

\*The SDHC card shown in the photo is an option. The AG-HMC70 comes with a 2GB SD card.



LEICA  
DICOMAR



Official Worldwide  
Olympic Partner

# AG-HMC70: As



The AG-HMC70 camcorder uses the AVCHD format and memory card media to offer high reliability, superb mobility, and advanced IT functions at low cost to meet diverse needs in video production.

Equipped with a 12x zoom

lens and progressive 3CCD, this camcorder uses the AVCHD format (H.264 compatible) to record up to 360 minutes\* of high-quality High Definition (HD) video onto a low-cost SD/SDHC card. Because the AG-HMC70's solid-state recording system uses no tape or moving parts, it starts operating immediately, provides silent operation and offers excellent reliability against vibration, impacts and temperature changes. The powerful features ensure easy, powerful HD recording.

With Shoulder stability, a full size Zoom Rocker control, and a Headphone output with Volume control, the AG-HMC70 has professional features that help you shoot like a Pro.

A recessed trigger and zoom control on the oversized handle enable accurate framing even at low angles or when using a tripod.

Two XLR locking audio input terminals (phantom mic supported) and four BNC's for component/composite video output equip the AG-HMC70 for video recording and production use.

\*When recording in HE mode using a 16GB SDHC card.



# Easy to Use As a Digital Camera



# EXTENDED, HIGH-QUALITY HD RECORDING ONTO A MEMORY CARD WITH

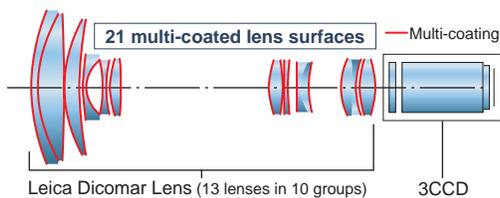


## Leica Dicomar Lens with Wide-Angle and 12x Zoom Range

The glass-molded, ultra high refractive index, aspherical lens enables wide-angle shots with a wide end of 38.5mm (35mm conversion) from a compact unit. So even with 12x optical zoom\*, you can shoot with superb HD image quality. Featuring 13 individual lens elements arranged in 10 groups, the Leica Dicomar lens is specifically designed for HD shooting. The lens elements are made of low dispersion glass to assure low chromatic aberration and high resolution. A total of 21 multi-coated lens surfaces minimize flare and ghosting.

\* Digital zoom goes up to 700x.

• Leica is a registered trademark of Leica Microsystems IR GmbH. Dicomar is a registered trademark of Leica Camera AG. Leica Dicomar products are manufactured using Leica-certified measuring instruments and quality assurance systems based on rigorous quality standards approved by Leica Camera AG.



## Optical Image Stabilizer Compensates for Hand-Shake

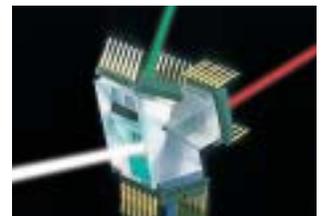
The AG-HMC70's advanced Optical Image Stabilizer (OIS) compensates for hand shaking that occurs as you shoot. Gyro sensors detect hand-shake and send signals to a linear motor, which adjusts the lens to compensate. Because this process takes place prior to the CCD image capture (rather than in the downstream electronic processing), it virtually eliminates any

effect of hand-shake on resolution and screen angle. The OIS can also be helpful when zooming or shooting in dim lighting. It's perfect for those Run & Gun applications.

\* Due to particularly large vibrations caused by hand-shake or other conditions, blurring may not be eliminated. \* Depending on shooting conditions, no large difference may appear.

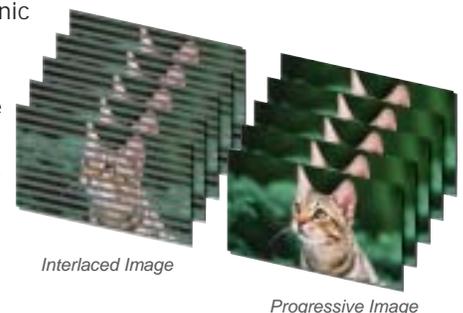
## 1/4-inch Progressive CCD Faithfully Reproduces Colors

To assure high sensitivity, Panasonic developed a 1/4-inch progressive CCD. Enlarging the area of each CCD pixel enables high-sensitivity shots in light as low 6 lux. This lets you shoot dark scenes with minimal noise.



## High-Precision Progressive Scan

In the AG-HMC70's camera section, the progressive CCD creates native progressive images with outstanding vertical resolution. Progressive interlace conversion is then used to provide image quality that is higher than you get with conventional electronic interpolation of interlaced signals. Progressive 3D noise reduction also dramatically reduces noise and after-images.



## Professional Tuning for Superb Color Reproduction

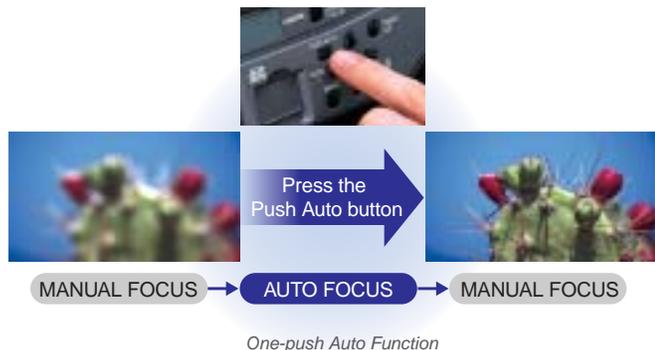
Color reproduction with features like color matrix, chroma gain and gamma curve creates the same look as that achieved by other Panasonic professional models. These features combine to produce the lifelike images that professionals demand.

## Auto/Manual Selector

Auto mode provides quick and easy shooting, while manual mode lets you adjust the white balance, brightness (IRIS and gain up to +18 dB) and shutter speed (1/60 to 1/8000 second). Manual focusing is also possible by setting the selector to the Focus position.

## Focus Assist

In manual focus mode, the MF Assist function enlarges the image at the center of the frame for easier focusing. The AG-HMC70 also has a one-push auto function. Simply press the Push Auto button to temporarily activate the AF system for quick focusing.



## Guidelines (Markers)

The LCD and viewfinder can display three types (horizontal, grid, 4:3) of guidelines. The horizontal and grid guidelines enable easy confirmation of camera tilt for stable framing. The 4:3 guidelines let you check images as they will display in Standard Definition (SD) format.



## Other Shooting Functions

- 2.1-megapixel still image recording lets you take stills while shooting video.
- Two-step selection of maximum 30x or 700x digital zoom.
- Black fade or white fade selectable for fade-in/out.
- Zebra pattern (white washout warning) on the LCD monitor and viewfinder.
- Five scene modes (Sports, Portrait, Low Light, Spot Light and Surf & Snow) speed up shooting under various situations.

## Small, Lightweight and Reliable SD/SDHC Card

The AG-HMC70 records onto an SD/SDHC card. Because there is no motor to drive the recording media, the AG-HMC70 starts recording immediately with no need for cueing. The SD/SDHC card also resists the effects of dust particles, temperature changes, and impacts, and is equally unaffected by condensation, dropout, and head clogging. This solid-state recording media contributes to the AG-HMC70's silent operation, compact size, and light weight.



## AVCHD Format for High-Quality, Efficient HD Recording

The AG-HMC70 uses the AVCHD format for 8-bit 4:2:0 digital component recording of high-resolution 1080i (1440 x 1080) HD video. It complies with the latest H.264 motion image compression standard, which forms the basis of the AVC-Intra codec used by P2 HD broadcast systems, and employs the High Profile standard to improve compression efficiency. Featuring twice the compression efficiency of HDV (MPEG-2), the AG-HMC70 achieves extended HD recording.

## Up to 360 Minutes\* of HD Recording

The high compression efficiency of the AVCHD format makes it possible to record up to 360 minutes\* of HD video onto a single SDHC card.

\* When recording in HE mode using a 16GB SDHC card.

Recording Mode	Recording Time	
	16GB SDHC Card	2GB SD Card
HF Mode (13Mbps)	Approx. 160 min.	Approx. 20 min.
HN Mode (9Mbps)	Approx. 240 min.	Approx. 30 min.
HE Mode (6Mbps)	Approx. 360 min.	Approx. 45 min.

## Fast Scene Searches with Thumbnail View

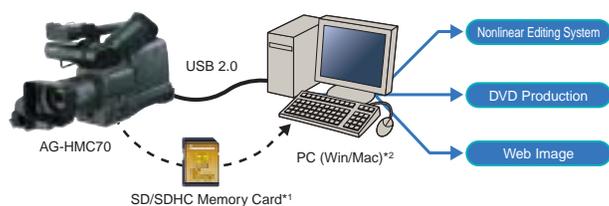
Image data is recorded as a file for each scene.

Thumbnail images and file information are automatically attached to each file to enable smooth, easy confirmation and deletion of files displayed on the LCD monitor.



## AVCHD Files Transfer Directly to IT Systems

Unlike tape, AVCHD files require no digitizing and can be directly accessed by a PC (Windows/Macintosh). This makes it easier to use motion images in new IT applications, like content production, Internet distribution and source material archiving.



\*1: An SDHC card reader is required if the SDHC card is not recognized by the PC.

\*2: AVCHD-compatible software is required. The Minimum System Requirements for using the software must also be satisfied.

# PROFESSIONAL DESIGN AND INTERFACES

## Shoulder-Mount Design

The AG-HMC70 is compact and lightweight, yet features a large shoulder pad, hand grip and viewfinder for the same kind of shoulder-mounted operation as a broadcast camera. The 3-point system keeps shooting stable even when zooming and panning.

## Professional-Level Audio with XLR Line/Mic In

The AG-HMC70 comes equipped with a built-in stereo microphone and with XLR-type audio input terminals (2 channels, mic/line switchable, +48V compatible) on the rear panel. You can switch audio channels 1 and 2 separately to either line or front mic input, which is especially useful when recording interviews or narration.

## Pro-Type Analog A/V Outputs

A host of outputs, including component HD/SD video output (BNC x 3), composite SD video output (BNC), and audio output (RCA x 2 channels), let you connect to an external monitor for viewing, video equipment for dubbing, and various other devices.

## Large Viewfinder

The AG-HMC70 viewfinder is as large as those offered on many broadcast cameras. A slide mechanism lets you shift the viewfinder to the left or right for maximum comfort. You can also use the viewfinder and LCD monitor at the same time.



## Recessed Trigger and Zoom Control on Upper Handle Grip

In addition to the lens grip, the upper part of the handle grip contains both the Rec Start/Stop button and a lens zoom control. This design assures easy shooting even at low angles or when using a tripod. The zoom speed can be set to any of three speed levels.



\*The battery shown in the photo is an option. The AG-HMC70 comes with a VW-VBG260PPK battery.

## HDMI Digital HD Output Terminal

The AG-HMC70 is equipped with a next-generation HDMI (High Definition Multimedia Interface) output terminal. It connects to HDMI-compatible systems to allow direct digital transferring of high-quality HD video and audio signals.

## PC Connection via USB 2.0

The standard USB terminal (typeB) allows the AG-HMC70 to connect to a PC in device mode. This lets a Windows PC installed with the provided HD Writer Version 2.5 software to upload, copy, and write HD video files, as well as transfer them to AVCHD-compatible editing software for HD production.

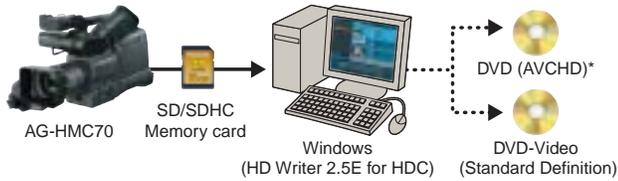
## Other Professional Specifications

- Tally lamps on the front and rear
- Large-capacity (5800 mAh) battery pack optional
- Color bar signal output

# SYSTEM APPLICATIONS

## Uploading to a PC and Writing to DVDs (Using Provided PC Software: HD Writer 2.5E for HDC)

The HD Writer 2.5E software for Windows PCs that comes standard with the AG-HMC70 lets you play video files; upload them to a PC; divide, delete and merge scenes; and write files to an SD/SDHC card or DVD. This software also has an AVCHD-to-MPEG-2 conversion function for producing standard-definition DVD-Video.

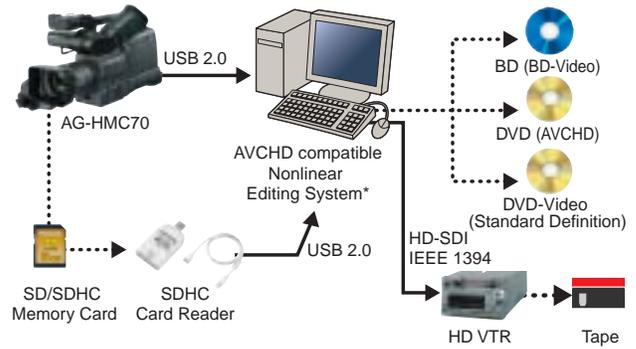


**[PC Minimum System Requirement]**

- CPU: Intel® Pentium III 1.0 GHz or better (for use of motion image playback and MPEG-2 output function, Intel® Core™ Duo 2.16 GHz or Pentium® D 3.2 GHz, or better is recommended)
- OS: Microsoft® Windows Vista® (Home Basic/Home Premium/Ultimate/ Business), Windows® XP (Home Edition/Professional SP2), Windows® 2000 Professional SP4 (Japanese version) (\* Macintosh not supported)
- RAM: 1024 MB or more for Windows Vista, 512 MB or more for Windows XP/2000 (1024 MB or more recommended)

\*Do not insert a disc [DVD (AVCHD)] produced with the provided HD Writer 2.5E software into a device that does not support the AVCHD standard. If it is inserted into such a device, the disc may not eject. Also, do not play the disc with a device that does not support the AVCHD standard.

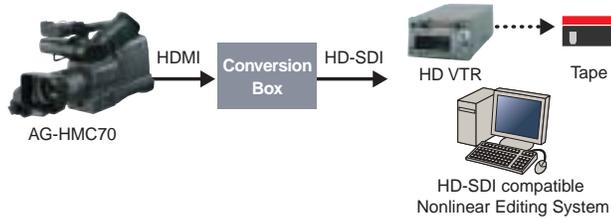
## AVCHD Nonlinear Editing



The AG-HMC70 can be connected to an AVCHD nonlinear editing system by means of the USB interface or an SDHC card reader. This reduces production time by allowing high-speed data transfers without the need for digitizing.

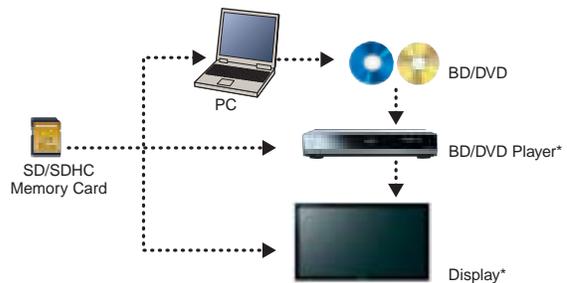
\* Panasonic has confirmed AG-HMC70 compatibility with the following AVCHD nonlinear editing software (as of February 2008). Apple: Final Cut Pro Version 6.0.1, Grass Valley EDIUS Software Version 4.5. For information on the compatibility of other nonlinear editing software, please contact the manufacturer. For further information, we recommend that you refer to software that supports the Panasonic Consumer model HDC-SD1. Free transcoder software (from AVCHD to P2-DVCPRO HD) is available. For details, please visit the Panasonic website at <<https://www.pavc.panasonic.co.jp/pro-av/>>.

## Compatibility with Existing HD Editing Environments



By using an HDMI/HD-SDI conversion box to convert data to an uncompressed HD stream, the AG-HMC70 can be linked to existing linear/non-linear HD production environments using the DVCPRO HD format.

## Playback on compatible components



\*need to be compatible with AVCHD. Not available in some areas.

# OPTIONS



\*The battery pack is necessary for the use of video DC light. The battery pack that can be used is VW-VBG260PPK.

# SPECIFICATIONS

## [GENERAL]

Supply Voltage:	DC 7.3 V (when AC adapter is used) DC 7.2 V (when battery is used)
Power Consumption:	8.5 W (when recording)
Operating Temperature:	0°C to +40°C (32°F to +104°F)
Operating Humidity:	10% to 80% (no condensation)
Weight:	Approx. 2.7 kg (5.95 lb)
Dimensions (WxHxD):	233 mm x 233 mm x 434 mm (9-3/16" x 9-3/16" x 17-1/8")

## [CAMERA]

Signal method:	1080/60i
Recording Format:	AVCHD standard
Pick-up Device:	Interline transfer type CCD x 3
Picture Elements:	Total: 560,000 x 3 pixels Effective: 520,000 x 3 pixels (Motion Picture/Still Picture)
Lens:	12x Variable Speed Zoom F1.8 to F2.8 (f=4.0 to 48.0 mm) (35 mm equivalent: 38.5 mm to 462 mm)
Filter Diameter:	43 mm
Zoom:	Optical: 12x, Digital: 30x, Super Digital: 700x
White Balance:	Auto/white set/Indoor/Outdoor (with IR Sensor)
Standard Illumination:	1400 lx
Minimum luminance:	Approx. 6 lx (Low Light Mode, 1/60)

## [Moving Picture]

Recording Media:	SD Memory card: 256MB, 512MB, 1GB, 2GB (FAT12, FAT16) SDHC Memory card: 4GB, 8GB, 16GB (FAT32)
Compression method:	MPEG-4 AVC/H.264
Recording Mode:	HF: Approx. 13 Mbps (CBR), HN: Approx. 9 Mbps (VBR), HE: Approx. 6 Mbps (VBR)
Audio Recording Format:	Dolby Digital (Dolby AC3)/2ch recording

## [Still Picture]

Recording Media:	SD Memory card: 8MB, 16MB, 32MB, 64MB, 128MB, 256MB, 512MB, 1GB, 2GB (FAT12, FAT16) SDHC Memory card: 4GB, 8GB, 16GB (FAT32)
Compression method:	JPEG (DCF/Exif2.2 standard), DPOF
Recording Image Size:	1920 x 1080

## [Input/Output]

Video Out:	BNC 1.0 Vp-p 75Ω
Component Video Out:	BNC Y: 1.0 Vp-p 75Ω, Pb: 0.7Vp-p 75Ω, Pr: 0.7Vp-p 75Ω
HDMI Video Out:	HDMI [1125i (1080i) /525p (480p)]
Audio Out:	Pin Jack x 2 (CH1, CH2), 316 mV, Impedance 600Ω
MIC IN:	Stereo Mini jack (3.5 mm diameter), -70 dBV
XLR IN:	XLR (3 pin) x 2 (CH1, CH2), High impedance, LINE/MIC/+48V selectable, LINE: 0dBu, MIC/+48V: -50dBu/-60dBu
USB:	Card Reader/Write Function (No Copyright Protection support) PictBridge Compatible 2.0 high Speed USB, TYPE B USB terminal

## [Monitor/Microphone/Speaker]

LCD Monitor:	3-inch LCD color monitor, 251,000 pixels
Viewfinder:	0.44-inch LCD color wide viewfinder, 183,000 pixels
Internal Microphone:	Stereo microphone
Internal Speaker:	20mm round shape
Headphone Output:	Stereo Mini jack (3.5 mm diameter)

## [Standard Accessories]

Remote controller, Button-type battery, Battery pack, AC adaptor, AC cable, DC cable, CD-ROM x 2 (Operating instructions, HD Writer 2.5E for HDC), Shoulder strap, SD memory card (2GB), Eye cup, Lens hood cap, Ferrite core, Operating instructions

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

## P2 Asset Support System (PASS)

This model can be registered to P2 Asset Support System (PASS),  
an exclusive support program for P2HD owners.

### Benefits of registration to P2 Asset Support System (PASS)

- You can receive useful information on P2 and AVCHD.
- PASS helps you to manage your equipment with P2HD products together.  
You will see more benefits as a PASS member once you log in.

Please access the registration website. No registration fee. No annual fee.  
**Register Now!**

5 year warranty program is **NOT** applied to this model.

Please read and agree with terms and conditions upon registration

 [http://panasonic.biz/sav/pass\\_e](http://panasonic.biz/sav/pass_e)

Please refer to the latest Non-linear Compatibility Information, AVCHD  
Support and Download and Service Information, etc. at panasonic web site.



<https://www.pavc.panasonic.co.jp/pro-av/index.html>

# Panasonic®

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



SP-AGHMC70P1

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