

Panasonic – the leader in **solid-state high definition** video production

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The 5-year P2 limited warranty is the 1-year regular warranty plus 4-year extended warranty. Register within 30 days of purchase at www.panasonic.com/broadcast

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when it counts

Panasonic
ideas for life

when it counts

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ideas for life

the beauty of *P2HD*



full production-quality **HD**

As the world leader in solid-state acquisition and file-based workflow, Panasonic P2 HD provides you with true, full production-quality video and brings dramatic improvements to the way you capture, process and distribute HD content. With P2 HD, you'll enjoy the unmatched reliability of solid-state technology with lower operating costs and the advantage of environmentally friendly tapeless operation.

P2 is everywhere and used in numerous production applications — more than 840 television networks and stations and more than 80,000 units are in use worldwide. The Beauty of P2 offers four fundamental advantages for broadcast and media production.



With P2 HD, you can capture extraordinary, independent-frame high definition images using either widely adopted DVCPRO HD or advanced 10-bit master-quality AVC-Intra compression, producing a robust and pristine quality video signal that holds up under compositing, editing and rendering to multiple distribution formats.

As the industry-leading format for broadcast and production, DVCPRO HD offers industry-preferred intra-frame compression, where each frame stands on its own, along with full 4:2:2 color sampling.

Panasonic's advanced independent frame codec, AVC-Intra, vaults P2 HD to a higher level. AVC-Intra is the industry's most advanced compression technology with twice the compression efficiency of DVCPRO HD. AVC-Intra provides master-quality 10-bit intra-frame encoding in two modes: AVC-Intra 100 for full 1920 x 1080 4:2:2 video quality and AVC-Intra 50 for DVCPRO HD-comparable quality at half the bit rate, thereby doubling the record time on a P2 card and other storage devices.

P2 HD is superior to long GOP MPEG-2 recording systems like XDCAM-HD or HDV, and provides advantages over tape-based formats, with random accessible metadata, no dropouts, no head clogs, no missing time-code, no digitizing and no need for recording head alignment.

ultra **reliability**

With a solid-state, no-moving-parts design, P2 HD "core" products dramatically reduce the downtime associated with mechanical designs like tape, optical disc or hard drive-based systems. They are better able to perform in harsh environments and are resistant to temperature extremes, shock and vibration. P2 HD cameras offer all-weather durability and stand up to the toughest conditions. And, P2 cards can be used reliably over and over, without deterioration in quality.

The P2 card withstands impacts up to 1,500 G, vibrations up to 15 G, and operates in temperatures from -4° F to 140° F. The card's rugged specifications ensure ultra-reliable recordings under extreme conditions and enhance newsgathering mobility. Because data is saved in files, there's no risk of accidentally overwriting valuable data.

unmatched **flexibility**

AVC-Intra P2 HD models (or models with optional AVC-Intra boards) offer compatibility with your present DVCPRO/50/HD production environment, while providing a path to 10-bit master-quality and greater bandwidth efficiency. With the capacity of the reusable P2 card increasing (a 64GB card will be available this fall), P2 HD offers greater recording capacity than tape and optical disc-based systems. Because P2 HD models are upgradeable, there's no need to replace a unit for one with a higher capacity drive. The P2 card connects instantly with laptops and works with major non-linear editing systems by plugging it in directly or by utilizing a multi-card drive or adapter. Using our P2 Gear or P2 Mobile, content can be converted to baseband to interface with existing HD-SDI infrastructures.

fast file-based **IT workflow**

With P2 HD, you'll enjoy a fast, more productive file-based workflow. P2 cards eliminate the need for a special deck and the time required to digitize content into your production environment. Content files can be stored on any affordable, off-the-shelf data storage device. Unlike with tape or disc, as technology evolves, you'll never need to worry if you will have the video deck from which to retrieve your valuable content. P2 HD provides seamless compatibility and immediate connectivity to your existing IT infrastructure, as well as full interoperability with leading NLE systems. This means you have the versatility and compatibility to shoot in familiar, production-quality DVCPRO HD, DVCPRO50 or DVCPRO 25 and then move to full-raster AVC-Intra when you are ready.

P2 HD — your path to the future.



the new **P2 HD** VariCams



VariCam 3700

world-class performance

Our VariCam HD Cinema camcorder is globally recognized as the industry's premier digital cinematography camera—a true, ever-ready workhorse capable of delivering the distinct “film look” that cinematographers desire. Building on VariCam's successful foundation, we're excited to debut the VariCam 3700 and VariCam 2700. These all-new VariCam implementations feature native HD 2/3” imagers with premium-quality optics. These fully solid-state camera-recorders offer exceptional, finely tuned performance, incorporating DSP with 14-bit A/D conversion, while providing the renowned VariCam look that closely matches the color and response of film stock.

Master-quality, full resolution, 10-bit 4:2:2 AVC-Intra 100 recording and the incomparable benefits of P2 HD solid-state acquisition assure a fast, ultra-reliable, file-based workflow in any shooting environment. Unlike tape-based systems, the P2 HD

VariCams record only necessary frames in native 24p and play back off-speed footage instantly without a frame rate conversion process. To empower creativity, we've provided the new VariCams with a dazzling array of extraordinary capabilities, including Chromatic Aberration Compensation (CAC) to maximize lens performance, Dynamic Range Stretching (DRS) for wide variations in lighting, variable frame rate capability for capturing in different frame rates (one-frame increments), an integer record rate option (24.00, 60.00, 30.00), unique shutter angle settings, and full control of matrix and color correction.

With the new P2 HD VariCams, Panasonic's passion for performance and engineering excellence provides you an advanced creative tool like no other in the world, while returning your investment over and over.



VariCam 2700



AJ-HPX3700 Master-Quality Native 1080p P2 HD VariCam

This ultra-premium 2/3” 2.2-megapixel 3-CCD camera offers a 4:4:4 RGB dual-link output to deliver pristine images ideal for RGB composition of visual effects and can record 4:2:2 HD in-camera simultaneously. Perfect for feature films, TV episodics and commercial production, the HPX3700 records in full-raster 1920 x 1080 resolution with 4:2:2 10-bit sampling in AVC-Intra 100, as well as in AVC-Intra 50 and DVCPRO HD. It's loaded with features such as variable frame rates (1fps to 30fps) and 23.98psf/24psf video output and genlock/time code, plus dual optical filter wheels.



AJ-HPX2700 Solid-State P2 HD VariCam

With three 2/3” high-density 1-megapixel CCDs and 14-bit A/D conversion, the HPX2700 captures cinema-quality 1080 and 720 images in full-raster 1280 x 720 resolution with 4:2:2 10-bit sampling in AVC-Intra 100 and supports recording in industry-standard DVCPRO HD and AVC-Intra 50. Designed for sports, documentaries, independent films and other uses where versatility is essential, the HPX2700 offers intuitive operation with advanced gamma settings, including Film-Rec gamma mode; variable frame rates (from 1fps to 60fps in 720p mode); two separate HD-SDI outputs; and dual optical filter wheels.



BT-LH1760 120Hz 17” HD Monitor with WFM/Vectorscope

With a 120Hz refresh-rate (double that of standard production-quality LCD monitors); multi-format capability; and a new, prime-quality LCD panel, this native widescreen display reproduces stunning HD images and handles fast-motion content like a high-end CRT. The display also includes a built-in Waveform monitor, Vectorscope, and closed captioning and time code display. For critical HD focusing and comparison, the LH1760 comes with valuable functions such as pixel-to-pixel matching, which allows the user to see an input signal pixel by pixel without any resizing, and split screen/freeze frame (live input vs. freeze frame).



Five-Year P2 HD Warranty

Enjoy the peace of mind and unsurpassed confidence that comes with the industry's best HD warranty. Panasonic's five-year limited warranty* program on full-sized P2 HD camcorders and field recorders is unprecedented.

P2 HD camcorders



AG-HPX500



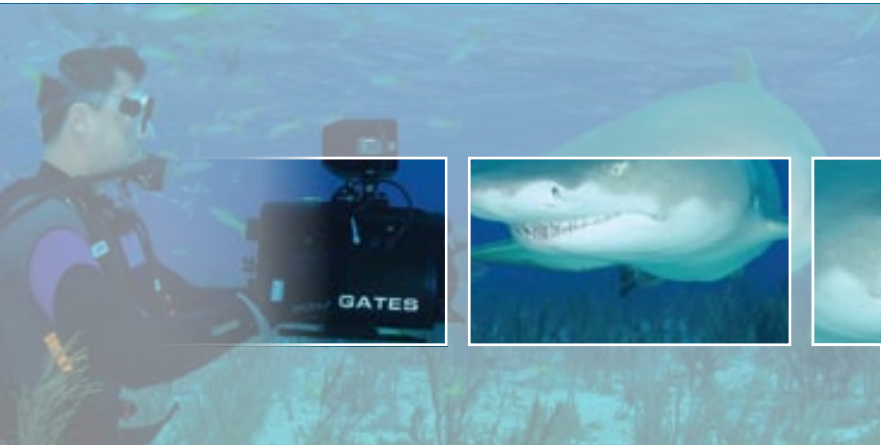
AJ-HPX3000 2/3" Native 1080p Shoulder-Mount Camcorder

This camera features three 2/3" high-density 2.2-million pixel CCDs to acquire master-quality, full-raster 1920 x 1080, 4:2:2 10-bit images using the built-in advanced AVC-Intra codec. It records in popular DVCPRO HD and DVCPRO 50 and offers five P2 slots.



AJ-HPX2000 Ultra-Versatile 2/3" Shoulder-Mount Camcorder

This flexible, full production-quality camera with three HD native resolution 2/3" imagers records pristine quality video in more than 30 HD/SD formats, including 1080i, 720p, 480p, 480i and 576i. AVC-Intra is optional, and five P2 slots allow extended recording.



unrivaed flexibility — that's P2 HD camcorders



AG-HVX200A 1/3" 3-CCD Handheld P2 HD/DV Camcorder

This remarkable camcorder features all the fabulous features and benefits of the HVX200, plus improved progressive 3-CCD imagers and a DSP that increases sensitivity, while lowering noise and smear. A new 13X zoom lens provides a wide 30mm viewing angle. In addition, this camera offers DV tape and P2 HD capability.



AG-HPX500 2/3" Affordable, Shoulder-Mount Camcorder

Offering a unique combination of high-end features never provided in a full 2/3" HD/SD camcorder in this price range, the HPX500 records in more than 32 HD and SD formats and offers variable frame rates and four independent audio channels.



AG-HPX170 Fully Solid-State, 1/3" 3-CCD Handheld Camcorder

This smaller, more powerful, go-anywhere DVCPRO HD camcorder offers a wide-angle Leica Dicomar lens, two P2 slots for continuous recording, HD-SDI and IEEE 1394 interfaces, NTSC/PAL switchable, a time/date stamp function, and more variable frame rates than prior P2 HD handhelds. It comes with our 5-year limited warranty.



P2 HD recorders and drives

our production tools ensure a fast, productive, file-based workflow



Our P2 HD master-quality field recorders, portable player/recorders and P2 drives offer fast and simple solid-state IT workflow, in the field or in the studio. These workflow tools are engineered to provide compatibility with your baseband or IT production/distribution infrastructure and offer a bridge from older tape- or disc-based camcorders.



HPM110's rear panel showcases its extensive AV/IT connectors.



AJ-HPM110 P2 Mobile — Versatile Field Recorder/Player

Featuring six P2 cards slots for unmatched recording times in intra-frame DVCPRO HD/50/25 and DV formats, this unit provides master-quality, full-raster 1920 x 1080 10-bit, 4:2:2 AVC-Intra (optional). Whether used with Panasonic P2 cameras or with other cameras or decks with HD-SDI output (including 23.98psf and 24psf), the HPM110 offers extensive I/Os and long record times.

Using the six P2 slots with 32GB P2 cards installed, this workhorse can record four hours of 1080p/24, eight hours of 720p/24 or three hours in other HD frame rates, all at 10-bit. It offers a wide range of recording capabilities, including multiple frame rates, up/down-conversion, 24p pull-down removal and real-time playback of 720p variable frame rates (over/under cranking).

P2 Drives — Faster, Easier File Transfers of P2 Content

The five-slot **AJ-PCD20** internal/external drive saves time by providing easy access to and high-speed transfer of P2 content to a desktop or laptop. It offers IEEE 1394b and USB 2.0 interfaces.

The **AJ-PCD35** drive also offers five P2 card slots but includes a PCI Express interface for use with computers using the Express card interface.



AJ-HPG10 P2 Gear — Portable Viewer/Player/Recorder

The one-pound, battery-operated unit provides viewing, backup recording and file management of P2 recorded content. With two P2 card slots and a 3.5" LCD monitor, it offers on-the-spot playing and viewing in multiple formats (1080i, 720p, 576i and 480i). The heavy-duty, shock-resistant P2 Gear is equipped with speakers,

easy-to-use controls and professional input/outputs (IEEE 1394, USB 2.0 and HD-SDI). Its essential in-the-field functions include viewing clips recorded on a P2 card or the FOCUS FS-160 portable hard drive, copying files to an external hard drive, outputting a playback signal to a large monitor and backup recording with P2 HD/P2 or tape-based DVCPRO cameras.

P2 HD news & info:

To learn the latest news, technical information and more on P2 HD, check out our new website at **www.panasonic.com/p2hd**.



Eagles Equip Emmy-Award Winning TV Network with AJ-HPX3000 Camcorders

The Philadelphia Eagles may have hung up their cleats after the Pro Bowl in February, but Rob Alberino, vice president of broadcasting for the Eagles Television Network (ETN), and his staff of award-winning producers/videographers continue to work year-round to create original programming. In its 12th season, ETN has been nominated for 106 Mid-Atlantic Emmy Awards, winning 32, since 1997. The network has also won 53 prestigious National Telly Awards.

ETN has been shooting all its features, interviews and show elements in high definition with three AJ-HPX3000 native 1080p, one-piece camcorders to create a half-dozen 30-minute weekly television shows that will air during the next football season.

Alberino has been delighted with the HPX3000s' performance: "Our owners, Jeffrey and Christina Lurie, are not only progressive in every area of the organization,

"We like the fact that cameras are switchable between AVC-Intra and DVCPRO HD, and the five-year warranty is a terrific benefit."

Rob Alberino,
Vice President of Broadcasting for the
Eagles Television Network

but they're also in the movie business: he's a producer and she is an independent filmmaker. After we did our research, it was easy to persuade everyone at the organization that the HPX3000 represented the highest standards among HD cameras. The HPX3000s produce an outrageously beautiful image — and P2 HD is a flexible, strong platform. An early HPX3000 shoot was the Pro Bowl in Honolulu. It was essentially a case of taking the camera out of the box, slapping on a battery and exposing it to heat, sun and sand, really pushing it to its limits. It performed flawlessly."



Original Productions shoots 6-Part Discovery Channel series on the Iditarod with HVX200s



Award-winning television production company Original Productions (Burbank, CA) recently documented the grueling 1,150-mile Iditarod Trail Sled Dog Race with 21 AG-HVX200 P2 HD handheld camcorders. A six-part series profiling the exploits of eight mushers (including the race winner Lance Mackey) will air on the Discovery Channel in the fourth quarter of this year.

Original Productions is one of television's leading suppliers of popular culture programming and is well known for the Discovery Channel series "Monster Garage", "Monster House", "Biker Build-Off" and the Primetime Emmy-nominated "Deadliest Catch". Also on air from Original are "Ice Road Truckers" and "Ax Men" for History.

"P2 HD was proven on the Iditarod trail last year, and we were convinced that only solid-state gear would be durable and hardy enough to perform in this harshest of environments," said Iditarod series producer Tim Pastore. Last year, the Iditarod organization recorded the entire race for the first time in HD on P2 HD, and did the same this year.

"Besides the ability and durability to function in the inhospitable environment of the Alaskan bush, the practicality of a handheld camcorder for producers and cameramen was a major selling point for the HVX200," Pastore continued. "Considering our run-and-gun, guerilla-style documentary, as well

as factoring in the mode of transportation out on the trail (small planes and snowmobiles), staying light and mobile was a priority."

Original's crew in Alaska included 13 camera operators and producers armed with HVX200s. The production established a man-on-man style of following the eight mushers, with the cameramen traveling by snowmobiles and the producers flying in Cessna 180s from race checkpoint to checkpoint. The production shot in 720pN mode, which fully utilized the recording capacity of scores of 32GB P2 cards.

A mobile ingestion unit was equipped with AG-HPG10 P2 Gears, AJ-PCD20 P2 drives, AJ-HPM110 P2 Mobile and eight laptops; this portable unit was used to offload material first in Anchorage, then along the Iditarod trail. The production returned to California with more than 800 hours of footage. The series (as yet untitled) of six one-hour episodes will be deliverable to Discovery on a hard drive.

"In this demanding milieu, the HVX200s were great performers for us, delivering an image quality commensurate with the spirit of the series, capturing the big heart of the Alaskan wilderness."



P2 – the Choice of Broadcasters

The bona fide ability of P2 and P2 HD to improve a television station's broadcast operations with higher quality video, exceptional reliability and low maintenance and a fast file-based workflow is convincing more and more stations to adopt Panasonic solid-state video products. In fact, 840 television networks and stations worldwide are utilizing P2/P2 HD.

The ever-growing list of U.S. television station groups converting TV stations to P2 includes ABC, Barrington, Cordillera, Cox, Cowles, Dispatch, Entravision, Fisher Broadcasting, Fox, Freedom, Gray, Griffin Communications, Journal, Liberty, McGraw-Hill, Media General, Meredith, Morgan Murphy, Nexstar, Quincy, Raycom, Sinclair, Univision, Waterman, Weigel and Young Broadcasting.

next generation affordable HD

AVCHD professional

Panasonic has created AVCHD Professional, a line of highly affordable, next generation HD camcorders that offer incredible advantages over tape-based, MPEG-2 HDV systems. AVCHD Professional opens up a new world of creative possibilities for event videographers, schools, churches, website producers, law enforcement and much more.

AVCHD Professional records amazing HD 1080i quality on the same reusable, widely available SD cards as your digital still camera. At 1080i, AVCHD Professional offers four quality levels to extend your recording time or address your storage or transmission bandwidth requirements. And, as with your digital camera, the SD card can be inserted directly into your computer for editing, so there's no need to buy a special deck or waste time fast forwarding/rewinding or digitizing video into your computer. And, because there is no mechanical tape, HDD or optical drive, our AVCHD Professional camcorders offer ultra-reliable, solid-state recording and are not subject to the wear, temperature sensitivity, shock and vibration of older systems. Because the recordings are data files, they can be rapidly transferred to and stored on affordable consumer storage products available now or in the future. And, as memory card capacity increases and costs decrease, you can expand your recording time without replacing the camcorder.

AVCHD is an industry-standard format supported by more than 30 manufacturers and most editing software. And a key benefit of AVCHD is that, unlike HDV, you can play it directly from the SD card in a growing number of highly affordable HD video players, including Blu-ray HD disc players, Sony PlayStation 3, plasma displays, as well as PCs with AVCHD-compatible viewer software. If you don't have one of these players, you can render it into almost any format using editing software packages.



HD as easy as your digital camera



Panasonic
ideas for life



The HMC70's professional audio connectors include two locking XLR inputs, +48V Phantom Power, auto/manual level, mic attenuation and front/rear assignment.



AG-HMC70 Shoulder-Mount 3-CCD Camcorder

Recording 1080i onto standard SD/SDHC cards to ensure a fast, tapeless production workflow, this camcorder offers professional audio and video connectors, including XLR inputs and BNC outputs. The lightweight, shoulder-mount unit captures still images, even while recording motion video, and offers image stabilization and a 12X Leica Dicomar wide-angle zoom lens.

AG-HMC150 Handheld 1/3" 3-CCD Camcorder

This advanced, versatile 16:9 model records in the AVCHD format on widely available SD/SDHC cards in 1080 at 60i/ 50i/ 30p/ 25p/ 24p and 720 at 60p/ 50p/ 30p/ 25p/ 24p. The HMC150 offers four record modes, including 21Mbps, 17Mbps, 13Mbps and 6Mbps, as well as XLR audio input, HDMI and USB2.0 outputs and a 28mm wide-angle lens.

AG-HSC1U Handheld 3-CCD Camcorder

Weighing 1.1 lbs., this 3-CCD camcorder records beautiful, highly accurate 1080i HD video and still images onto a SD or SDHC memory card. In addition, it comes standard with a portable 40GB media storage unit for off-loading content.

To learn more about AVCHD Professional, visit www.panasonic.com/avchdpro.

