FAQ on Panasonic E Series P2 Cards

1.) What are the main differences between the E Series cards and current A Series P2 cards?

The four main differences are the transfer speed, price, card lifetime and the type of flash memory utilized.

2.) What is the maximum transfer rate for these P2 cards?

The maximum transfer rate for the new E Series card is 1.2 Gbps. The maximum transfer rate for the A Series cards is 800 Mbps. Please note that transfer speeds are based on several factors, including computer and disk / RAID configuration, copy method or application software and potential network traffic.

This super-fast 1.2Gbps transfer speed means you can edit, archive and complete your project faster than ever. Typical real-world results: Since P2 HD transfer speed is 8:1, you can transfer a full 16GB E Series card with at least 16 minutes of P2 HD video in under two minutes, and a full 32GB E Series card with at least 32 minutes of P2 HD video in less than four minutes.

When shooting with one 16GB E Series card in AVC-Intra 100 1080/24p, the P2 HD transfer speed is 10:1, which means 20 minutes of recorded HD video transfers in under two minutes. And when shooting with one 16GB E Series card in DVCPRO HD/AVC-Intra 100/ 720/24p, the P2 HD transfer speed is 20:1, which allows you to transfer 40 minutes of recorded video in under two minutes.

3.) What is the life span of the new E Series P2 cards?

When recorded once daily, at full capacity (100%), the new E Series cards are reusable for up to five years. When used at half capacity (50%), the cards will continue to record for up to 10 years or longer.

Current P2 cards, including the A Series and the previously discontinued R and H series, have a record life of 30,000+ uses when filled with data and overwritten once a day.

4.) How can you monitor your E Series P2 card's usable life?

The E Series P2 card's remaining usable life cycle can be viewed on a computer with Panasonic's **P2 Formatter software** - available for download at https://eww.pavc.panasonic.co.jp/pro-av/support/desk/e/p2ecard.htm.

For questions on P2 Formatter software, please visit https://eww.pavc.panasonic.co.jp/pro-av/support/cs/csregistp2m/ep2main/soft/upg_p2c_e.htm.

Additionally, a notification is given in the camcorder's LCD/viewfinder or the P2 recorder's LCD display as the card approaches the end of its life cycle.

5.) During the P2 E Series card's usable life, does it provide the same quality and reliability as the current "A" or "R" series?

Yes.

6.) How do P2 cards compare to solid-state memory cards offered by other manufacturers?

All P2 cards use high-quality solid-state memory, extremely durable, diecast aluminum construction and impact-proof connectors. This is in direct contrast to other solid-state memory card products, which often feature breakable, plastic casing with less reliable connectors. Additionally, P2 cards offer reliable performance during recording in all types of environments, as well as instant access and complete data compatibility in all P2 camcorders and workflow tools.

Panasonic's P2 solid-state memory cards ensure highly reliable, video, audio, and metadata recording in any environment, especially in challenging conditions of extreme temperature range, shock, and vibration. P2 cards allow professional users to benefit from a fast, easy, file-based workflow and exceptional reliability, and support for all current P2. Since P2 acquisition requires no media consumption like tape or optical disc, it results in tremendous savings in media costs.

7.) What is technically different in the E Series card's solid-state storage or design compared to other P2 cards?

Current P2 cards, including the A Series (model numbers ending with an A) as well as the previously discontinued R and H series of P2 cards, use Single Level Cell (SLC) NAND Flash Memory. The E Series of P2 cards use Multi Level Cell (MLC) NAND Flash Memory.

In SLC NAND flash memory, each cell holds one bit of data; in MLC NAND flash memory, each cell holds two bits of data. While MLC NAND flash memory holds more data and reduces the unit price per byte, it offers fewer overwrites than SLC NAND flash memory.

8.) What is the difference between Panasonic's low-cost E Series P2 cards and the low-cost, Multi Level Cell (MLC) Compact Flash Memory used by other camcorders or recorders?

While some competitive camcorders or recorders use low-cost, Multi Level Cell (MLC) Compact Flash memory, they do not all offer the reliability and high-speed transfer capability of our E Series P2 card. In addition, Panasonic provides the ability to monitor an E-Series P2 card's usable life cycle via P2 Formatter software. Also, the user is provided a notification as the card approaches the end of its usable life cycle. These features are not offered by other Compact Flash memory.

9.) Are the E Series cards compatible with non-linear editing and server solutions?

Yes. As always, please contact your non-linear editing or server provider with any specific questions.

10.) Are the E Series P2 cards compatible with all P2 camcorders and recorders?

The new E Series P2 cards are designed to work with all P2 camcorders and recorders. A free, downloadable E Series firmware upgrade is required for optimum performance.

Although not required for initial operation, the E Series firmware upgrade ensures compatibility and optimum performance with all P2 equipment. Without the upgrade, P2 camcorder and recording equipment may experience error messages when recording over multiple P2 cards (Spanned Recording). These "REC Warning Error" messages may appear in the P2 camcorder's viewfinder or the P2 recorder's LCD screen during Spanned Recording when utilizing the following modes:

a. INTERVAL REC MODE (in DV or DVCPRO) (**Standard Definition)**
b. LOOP REC MODE (in DV or DVCPRO) (**Standard Definition)**
c. NORMAL REC MODE (in DV or DVCPRO) (**Standard Definition)**
d. VARIABLE FRAME RATE RECORDING/NORMAL in the 12p or 15p VFR settings in DVCPRO HD 720/24pN, 720/25pN or 720/30pN **(AG-HVX200/AG-HVX200A, AG-HPX170 and AG-HPX500 models only)**

The E Series firmware upgrade is not required for the following models: **VariCam 3700, VariCam 2700, AJ-HPX3000, AJ-SPX800, AJ-SPC700** camcorders, as well as the **AJ-SPD850, AJ-HPM100, AJ-HPS1500 and AG-HPG10** recorders.

For more information, including the estimated firmware upgrade release schedule, please visit https://eww.pavc.panasonic.co.jp/pro-av/support/desk/e/p2ecard.htm

11.) Are the E Series P2 cards compatible with available P2 Drives?

The AJ-PCD35, AJ-PCD20 and **AJ-PCD10** P2 Drive require a firmware upgrade to be compatible with the new E Series P2 Cards. This upgrade is currently available.

Please visit https://eww.pavc.panasonic.co.jp/pro-av/support/desk/e/p2ecard.htm for more information.

12.) Will the new E Series P2 cards require an upgrade to my computer driver?

Yes.

13.) Is the computer drive upgrade available on MAC and Windows computers?

Yes.

14.) When will the firmware and driver upgrades be available?

The first upgrades, including the P2 Driver (MAC/Windows), as well as the **AJ-PCD35/20/10** P2 Drive, **AG-HVX200/A** and **AJ-HPX170** firmware upgrades are already available. Other upgrades will be released soon. Following is a schedule of release for each upgrade.

Model / Driver	Upgrade Availability
P2 Driver (MAC/Windows)	May-09
AJ-PCD35/PCD20/PCD10	May-09
AG-HVX200/200A	Jun-09
AG-HPX170	Jun-09
AG-HPX300	Jul-09
AG-HPX500	Jul-09
AJ-HPX2000/2100	Aug-09
AJ-HPM110	Aug-09
AG-HPG20	Aug-09

These upgrades will be available for free download at:
https://eww.pavc.panasonic.co.jp/pro-av/support/desk/e/p2ecard.htm

15.) Is there a recording capacity difference between the E Series and current A Series P2 Cards?

E Series P2 cards have the same recording capacity as other series of P2 Cards.

16.) Why are the new E Series P2 cards based on a PCMCIA form factor?

These new cards have the PCMCIA form factor to ensure compatibility between all existing P2 cameras, recorders and workflow tools. Panasonic continues development on the P2 card platform. For example, the new E Series P2 card achieves a faster transfer speed (maximum 1.2 Gbps transfer speed) allowing for improved transfer/offload of P2 content. Only recently, the A Series P2 card achieved an 800 Mbps transfer speed, an increase in speed from previous generations of P2 cards.

Unlike other disc-based or solid-state recording systems, P2 cards are a high-speed bit bucket, offering high-quality video and optimum flexibility, including:

- Reliable performance and instant access
- Compatibility with all P2 camcorders, P2 recorders and workflow tools
- P2 cards can store all P2 frame rates and formats: HD, SD, DVCPRO HD/50/25 and AVC-Intra 100 / 50
- Over 110,000 P2 units in use around the world
- Compatibility with all major NLEs and servers

17.) How can I use P2 cards with new laptops that have Express card slots

Panasonic's **AJ-PCD20** P2 Drive provides IEEE.1394 and USB 2.0 connectivity. Most laptops or computers have one or both of these. Also, the new Panasonic **AJ-PCD35** P2 Drive provides super-fast connectivity via a PCI-e connector to desktop computers. In addition, 3rd party adapters are available to connect this unit to laptops.