CONSUMER 'HD' Cameras

The prosumer HDV videotape format is the most common recording format for a number of new low priced HD cameras, but the Panasonic HVX-200 uses the better quality DVCPro HD format on P2 solid state cards.

The frontrunners are the HVX-200; Canon XL-H1with 24f that is similar to 24p; the Sony HVR-V1U that now has a true 24p frame rate compared to the Sony V1U which did not; and the JVC GY-HD250U camcorder. All have a variety of strengths and disadvantages. Any of these formats are better than shooting in standard def but each has its big weaknesses especially compared to Sony CineAlta and Panasonic Broadcast cameras.

Panasonic HVX 200 960x540p three 1/3" CCDs..... 518K [.5 Mega Pixel] imager that use pixel shifting to get a claimed resolution of 1440x810 with uprezzing voodoo but in real life testing resolutioin is significantly less than that

P2 records DVCPro HD data in the 960x720p format and also upconverts to 1440x1080 format, 100 Mbps data rate which is much better than HDV, the same as Varicam and HDX 900, but no HD SDI or HDMI output is available.

Canon XL H1 1440 x 1080 three 1/3" CCDs... 1.5 Mega Pixel imager uses Canon Divic DVII technology; records 24f which is very similar to 24p_records to HDV at 25 Mbs data rate, but has HD SDI output can record to other tape formats including HDCAM and DVCPro HD portable recorders._

Panasonic HDX 900 is the lowest form camera to have interchangable lenses, 20x zoom lens available, and can use Canon XL mount still photo lenses.

Sony HVR-V1U A 24p prosumer camcorder from Sony._three 1/4" CMOS sensors 960x1080 pixels ...1 Mega pixel imager, layed out in a diamond shape; this camera has an excellent dynamic range_records to HDV at 25 Mbs data rate, but has HDMI output that can convert to HD SDI output can record to other tape formats including HDCAM and DVCPro HD portable recorders.

JVC GY-HD 250U_1280x720p three 1/3" CCDs..... 1.1 Mega Pixel imager, frame rates up to 60p_records to HDV at 25 Mbs data rate; tapes are not compatible with Sony vtrs

Professional HD cameras with full size 2/3" CCD imagers and higher data rate HD recording

Panasonic HDX-900, 27H Varicam, HVX-3000 1280x720p three 2/3" CCDs..... 1.1 Mega Pixel imager, frame rates up to 60p; records to DVCPro HD tape at 960x720p resolution 100 Mbs but at 24p really is 40 Mbs interchangeable lenses standard 2/3" B4 mount

SONY 750

Sony HDW-F900, F950_1920x1080p three 2/3" CCDs...2.1 Mega Pixel imager, frame rates up to 60i;_F900 records to HDCAM tape at 1440x1080 resolution 144 Mbs_F950 can record 4:4:4 dual link video to HDCAM SR format at 440 Mbs, but this camera discontinued, replaced by F23_interchangeable lenses standard 2/3" B4 mount

HIGH END HD CAMERAS NEEDING DATA RECORDING EQUIPMENT OR an SR Deck

DALSA ORIGIN

ARRI D20

PANAVISION Genesis

Sony F23 _1920x1080p three 2/3" CCDs...2.1 Mega Pixel imager, frame rates up to 60p;_can record 4:4:4 dual link video to HDCAM SR format at 440 Mbs, and 4:2:2 at 880 Mbs for 60p

Thomson VIPER

RED

SILICON IMAGING S1-2k

Bit: short form for binary digit. It is either a 0 or a 1 (binary code).

1 byte= 8 bits.

1 kilo byte = 1024 bits.

1 mega byte = 1024 kilo bytes.

So if 1 megabyte=1024*1024=1,048,576 bytes and 1 byte=8 bits, and 1 megabyte (1048576) is just 8,388,608 bits, then 1 megabit is

approximately .125 megabytes.