









	ARRI ALEXA XT (2013)	RED DRAGON (2013)	SONY FS700R (2013)	CANON C100 MARK II (2014)	BMPC4K (2013)	CANON 5D MARK III (2012)	SONY A7S (2014)	PANASONIC LUMIX GH4 (2014)
								
PRICE	~\$1500 Daily Rental (body only)	\$24,000 at RED (BRAIN only)	\$3999.00 at B&H (body only)	\$3999.00 at B&H (body only)	\$2995.00 at B&H (body only)	\$2599.00 at B&H (body only)	\$2198.00 at B&H (body only)	\$1297.99 at B&H (body only)
BACKGROUND & USE	Arri is Hollywood's workhorse. The company's Alexa range is loved for its modular design, reliability, and robust feature set. 2015's SXT evolves the XT, adding such perks as internal ProRes 4K and 4K UHD. Not surprisingly, an Alexa costs a pretty penny even to rent.	In 2007, RED's first camera, the Red ONE, kicked off the 4K and RAW recording craze. Granted, it was costly, but not as costly as shooting on film in most situations. RED continues to expand its modular, proprietary designs for Hollywood and indie filmmakers alike, most recently with 2015's 8K full-frame WEAPON , featuring internal ProRes and other advances.	Originally released in 2012, Sony's modular FS700 received a firmware update that enabled 4K/2K RAW output and S-Log2 recording. Shipping as the FS700R, it boasts impressive dynamic range and slow motion functionality. Although 2014's FS7 evolves the FS700R with such features as internal 4K, the FS700R remains a formidable - and more affordable - camera.	2012's C300 kicked off Canon's Cinema EOS range. Trusted especially by event videographers and documentarians, it's a versatile camera with excellent ergonomics, recently updated to a Mark II with internal 4K. The C300's little brother, the C100 Mark II, inherits its sibling's thoughtful design and offers solid functionality at a lower price.	The Blackmagic Production Camera 4K (BMPC4K) can create Hollywood-grade images at an indie film price. This Cinema Camera - along with the rest of Blackmagic's range - is a disruptive force thanks to its astonishing affordability.	In 2008, Canon (accidentally) revolutionized indie filmmaking with the 5D Mark II. Interchangeable lenses and a full frame sensor meant cinematic depth of field and low light capabilities, ushering in the DSLR era. 2012's 5D Mark III refined its predecessor and remains a popular camera today. Of course, 2014's 7D Mark II is a competent lower-cost alternative.	The large pixel sensor and ISO sensitivity of Sony's a7S enhance video quality, especially in low light conditions. The camera's impressive dynamic range, S-Log2 Picture Profile, and other features round out this small but powerful DSLM camera. It's also capable of capturing UHD 4K with an external recorder.	Panasonic's DSLM innovation, the GH4, combines a small form factor with partial modularity. It packs an incredible punch for its price, featuring internal 4K and a plethora of recording options.
WEIGHT	17.6 lbs/8 kg w/ XR Module, viewfinder, and handle	5 lbs/2.3 kg (body only)	3.25 lbs/1.47 kg (body only)	2.2 lbs/1.0 kg (body only)	3.75 lbs/1.7 kg (body only)	1.89 lbs/860 g (body only)	1.08 lbs/489 g w/ battery and memory card	19.75 oz/560 g w/ battery and memory card
LENS MOUNT	54mm stainless steel LDS PL mount, Super 35 centered	Interchangeable lens mounts accommodate Leica-M, Canon, Nikon, PL lenses	E Mount	EF Mount	PL, EF, MFT models available	EF mount	FE Mount	MFT mount. Full-frame crop factor of ~2.3x in 4K
SENSOR TYPE	35 Format ALEV III CMOS sensor	19 MP "Red Dragon" CMOS sensor	11.6 MP Super 35mm Exmor CMOS sensor	8.3 MP Super 35mm CMOS sensor	Super 35mm size CMOS sensor	22.3 MP Full-Frame CMOS sensor	12.2 MP 35mm Exmor CMOS sensor	16.05 MP Digital Live MOS sensor
FORMATS & RESOLUTIONS	ARRIRAW <ul style="list-style-type: none"> 3414x2198 - Open Gate 2880x2160 - 4:3 Full 2880x1620 - 16:9 2578x2160 - 4:3 Cropped PRORES <ul style="list-style-type: none"> 3.2K (422, 422 HQ, 4444, 4444 XQ) - 3168x1778 - 16:9 2K (422, 422 HQ, 4444, 4444 XQ) - 2868x1612 down sampled to 2048x1152 in 16:9; 2868x2150 down sampled to 2048x1536 in 4:3 Full FHD (422, 422 HQ, 4444, 4444 XQ) - 2880x1620 down sampled to 1920x1080 - 16:9 DNxHD (optional license key) <ul style="list-style-type: none"> FHD (145, 220x, 444) - 2880x1620 down sampled to 1920x1080 - 16:9 	REDCODE (.R3D) RAW <ul style="list-style-type: none"> 6K - 2:1, 2.4:1 5K - FF, 2:1, 2.4:1, A2:1 4.5K - 2.4:1 4K - 16:9, HD, 2:1, A2:1 3K - 16:9, 2:1, A2:1 2K - 16:9, 2:1, A2:1 See details, p86 	AVCHD MTS <ul style="list-style-type: none"> FHD - 1920x1080 - 16:9 HD - 1280x720 - 16:9 1440x1080 - 16:9 MPEG-2 MPG <ul style="list-style-type: none"> VGA - 720x480, 720x576 	MPEG-4 AVC/H264 MP4 <ul style="list-style-type: none"> FHD - 1920x1080 HD - 1280x720 VGA - 640x360 AVCHD MTS <ul style="list-style-type: none"> FHD - 1920x1080 1440x1080 	CINEMADNG RAW <ul style="list-style-type: none"> 4K - 4000x2160 PRORES <ul style="list-style-type: none"> 4K UHD (422, 422 HQ, 422 LT, 422 Proxy) - 3840x2160 FHD (422, 422 HQ, 422 LT, 422 Proxy) - 1920x1080 	MPEG-4 AVC/H264 MOV <ul style="list-style-type: none"> FHD - 1920x1080 HD - 1280x720 VGA - 640x480 RAW, RAW OR .MLV (via Magic Lantern hack; note it voids warranty, is unstable, & complicates workflow) <ul style="list-style-type: none"> Max resolution 1:1 Liveview, no crop - 1920x1280 Max resolution 1280x720 50/60 fps - 1920x672, 1.61x Max resolution crop mode - 3584x1320 Max resolution 24p continuous rec - 1920x1080 Rec time @ 16:9, almost 1080p 24fps, no crop - 1920x1080 continuous 	XAVC S MP4 <ul style="list-style-type: none"> FHD - 1920x1080 HD - 1280x720 MPEG-4 AVC/H264 MP4 <ul style="list-style-type: none"> 1440x1080 VGA - 640x480 AVCHD MTS <ul style="list-style-type: none"> FHD - 1920x1080 	MPEG-4 AVC/H264 MOV <ul style="list-style-type: none"> 4K - 4096x2160 4K UHD - 3840x2160 4KA - 3328x2496 FHD - 1920x1080 MPEG-4 AVC/H264 MP4 <ul style="list-style-type: none"> 4K - 4096x2160 4K UHD - 3840x2160 FHD - 1920x1080 HD - 1280x720 VGA - 640x480 AVCHD MTS <ul style="list-style-type: none"> FHD - 1920x1080
IMAGE PROCESSING	ARRIRAW <ul style="list-style-type: none"> Uncompressed; 12 bit PRORES & DNxHD <ul style="list-style-type: none"> Log C and Rec 709 color spaces available for ProRes and DNxHD. For Rec 709, a customized look can be applied during record and playback w/ Arri Look Files 	REDCODE (.R3D) RAW <ul style="list-style-type: none"> Compressed using proprietary wavelet compression w/ choices of 18:1-3:1; 12 and 16 bit 	AVCHD MTS <ul style="list-style-type: none"> FHD - 17 and 24 Mbps options; @50p and 60p, 28 Mbps; 8 bit 4:2:0 HD - 17 and 24 Mbps options; 8 bit 4:2:0 1440x1080 - 5 and 9 Mbps options; 8 bit 4:2:0 MPEG-2 MPG <ul style="list-style-type: none"> VGA - 9 Mbps; 8 bit 4:2:0 CineGamma curves including S-Log2	MPEG-4 AVC/H264 MP4 <ul style="list-style-type: none"> FHD - 17 and 24 Mbps options; @50p and 59.95p, 35 Mbps; 8 bit 4:2:0 HD - 4 Mbps; 8 bit 4:2:0 VGA - 3 Mbps; 8 bit 4:2:0 AVCHD MTS <ul style="list-style-type: none"> FHD - 17 and 24 Mbps options; @50p and 59.94p, 28 Mbps; 8 bit 4:2:0 1440x1080 - 7 Mbps; 8 bit 4:2:0 	CINEMADNG RAW <ul style="list-style-type: none"> Lossless compressed; 12 bit, w/ film dynamic range PRORES <ul style="list-style-type: none"> 10 bit 4:2:2; w/ film or video (Rec 709) dynamic range 	MPEG-4 AVC/H264 MOV <ul style="list-style-type: none"> ALL-1 @ 91 Mbps or IPB @ 31 Mbps; 8 bit 4:2:0 RAW <ul style="list-style-type: none"> Uncompressed; 14 bit 	XAVC S MP4 DATA <ul style="list-style-type: none"> FHD - 50Mbps; 8 bit 4:2:0 HD - 50Mbps; 8 bit 4:2:0 Optional S-Log2 Picture Profile MPEG-4 AVC/H264 MP4 <ul style="list-style-type: none"> 1440x1080 - 12 Mbps; 8 bit 4:2:0 VGA - 3 Mbps; 8 bit 4:2:0 AVCHD MTS <ul style="list-style-type: none"> FHD - @ 24p, 17 and 24 Mbps options; @ 60p, 28 Mbps; @ 60i, 17 and 24 Mbps options; 8 bit 4:2:0 	MPEG-4 AVC/H264 MOV & MP4 <ul style="list-style-type: none"> FHD - 50Mbps; 8 bit 4:2:0 FHD - ALL-1 @ 200 Mbps or IPB @ 50 and 100 Mbps options; @ 50 or 59.94 fps, additional 20 and 28 Mbps options; 8 bit 4:2:0 MPEG-4 AVC/H264 MP4 ONLY <ul style="list-style-type: none"> HD - IPB @ 10 Mbps; 8 bit 4:2:0 VGA MPEG-4 AVC/H264 MP4 data is IPB @ 4 Mbps; 8 bit 4:2:0 AVCHD MTS <ul style="list-style-type: none"> FHD - @ 23.98, 24 Mbps; @ 50p and 59.94p, 28 Mbps; @ 50i and 59.94i, 17 and 24 Mbps options; 8 bit 4:2:0
FRAMERATES	Progressive only. All speeds adjustable with 1/1000 fps precision. Some limitations based on recording media and settings <ul style="list-style-type: none"> Open Gate - 0.75-75 fps 4.3 Mode - 0.75-90 fps 16:9 Mode - 0.75-120 fps 	Progressive only. Some limitations based on recording media and settings <ul style="list-style-type: none"> 6K - 1-100 fps 5K - 1-120 fps 4.5K - 1-120 fps 4K - 1-150 fps 3K - 1-200 fps 2K - 1-300 fps 	PROGRESSIVE <ul style="list-style-type: none"> FHD - 24, 25, 30, 50, 60 HD - 50, 60 Slow and fast motion recording (AVCHD MTS only). 120 and 240fps bursts @ FHD. At reduced resolutions, 480 and 960fps bursts available. Also 60, 30, 15, 8, 4, 2 and 1 fps in 60 Hz mode; 50, 25, 12, 6, 3, 2 and 1 fps in 50 Hz mode INTERLACED <ul style="list-style-type: none"> AVCHD's FHD also @ 50i, 60i 1440x1080 - 50i, 60i VGA - 720x480/60i, 720x576/50i 	PROGRESSIVE <ul style="list-style-type: none"> FHD - 23.98, 25 (MP4 only), 29.97 (MP4 only), 50, 59.94 HD - 23.98, 25, 29.97 1440x1080 - 23.98 VGA - 23.98, 25, 29.97 Slow and fast motion recording (MP4 only) - 25% faster, 40% slower INTERLACED <ul style="list-style-type: none"> AVCHD's FHD also @ 25PF, 29.97PF, 50i, 59.94i 1440x1080 - 25PF, 29.97PF, 50i, 59.94i 	Progressive only <ul style="list-style-type: none"> 4K - 23.98, 24, 25, 29.97, 30 4K UHD - 23.98, 24, 25, 29.97, 30 FHD - 23.98, 24, 25, 29.97, 30 	Progressive only <ul style="list-style-type: none"> FHD - 24 (23.976), 25, 30 (29.97) HD - 50, 60 (59.94) VGA - 25, 30 (29.97) 	PROGRESSIVE <ul style="list-style-type: none"> FHD - 24, 30 (XAVC S only), 60 HD - 120 1440x1080 - 30 VGA - 30 INTERLACED <ul style="list-style-type: none"> AVCHD's FHD also @ 60i 	PROGRESSIVE <ul style="list-style-type: none"> 4K - 24 4K UHD - 23.98, 24, 25, 29.97 FHD - 23.98, 24, 25, 29.97, 50, 59.94 HD - 25, 29.97 VGA - 25, 29.97 VFR up to 96 fps @ MPEG-4 AVC/H264 MP4 IPB @ 100 Mbps INTERLACED <ul style="list-style-type: none"> AVCHD MTS' FHD also @ 50i, 59.94i
RECORDING MEDIA	<ul style="list-style-type: none"> XR Module w/ XR Capture Drives - 512GB SxS PRO and SxS PRO+ (via SxS Adapter) CFast 2.0 (via CFast 2.0 Adapter) 	Digital Media REDMAG SSDs - 48, 64, 128, 256, 512GB	<ul style="list-style-type: none"> 1x for SD, SDHC, SDXC Class 4 or faster; or Memory Stick PRO Duo (Mark 2), HG-Duo Optional HXR-FMU128 adds 128GB flash memory 	2x SD, SDHC, SDXC	2.5" SSDs	<ul style="list-style-type: none"> 1x CF 1x SD, SDHC, SDXC (w/out UHS-1 support) 	<ul style="list-style-type: none"> 1x SD, SDHC, SDXC Class 4 or faster; 64GB Class 10+ SDXC card required for XAVC S 1x Memory Stick PRO Duo (Mark 2), HG-Duo, XC-HG Duo 	1x SD, SDHC, SDXC
SHUTTER	Rolling shutter, 5.0-358° up to 60 fps; 5.0-356° above 60 fps. Adjustable with 1/10° precision	Rolling shutter, 1.0-360°	Rolling shutter, w/ following shutter speed options: <ul style="list-style-type: none"> Auto - 1/60 to 1/2000; @ 30p, 1/30 to 1/2000; @24p, 1/48 to 1/2400 Manual - 1/3 to 1/10000 @ 24p/30p/60p/60i Understand the relationship between shutter speed and shutter angle here	Rolling shutter, w/ following shutter angle options: <ul style="list-style-type: none"> 23.98p/24PF - 360, 345.6, 288, 240, 180, 172.8, 144, 120, 90, 86.4, 72, 60, 45, 30, 22.5, 15, 11.25° 30PF, 59.94i - 360, 240, 216, 180, 120, 90, 60, 45, 30, 22.5, 15, 11.25° 25PF, 50i - 360, 300, 240, 180, 150, 120, 90, 60, 45, 30, 22.50, 15, 11.25° Shutter speed options: <ul style="list-style-type: none"> 59.94i - 1/60-1/2000 in 1/4 or 1/3 stops; SLS: 1/4, 1/8, 1/15, 1/30; CS: 59.94 Hz - 250.51 Hz 30PF - 1/30-1/2000 in 1/4 or 1/3 stops; SLS: 1/4, 1/8, 1/15; CS: 29.97 Hz-250.51 Hz 23.98p/24PF - 1/24-1/2000 in 1/4 or 1/3 stops; SLS: 1/3, 1/6, 1/12; CS: 23.98 Hz-250.51 Hz 50i - 1/50-1/2000 in 1/4 or 1/3 stops; SLS: 1/3, 1/6, 1/12 1/25; CS: 50.00 Hz-250.51 Hz 25 PF - 1/25-1/2000 in 1/4 or 1/3 stops; SLS: 1/3, 1/6, 1/12; CS: 25.00 Hz-250.51 Hz 	Global shutter, 11.25-360°	Rolling shutter, 1/30-1/4000 shutter speeds. Understand the relationship between shutter speed and shutter angle here	Rolling shutter, 1/30-1/8000 shutter speeds. Understand the relationship between shutter speed and shutter angle here	Rolling shutter, 1/24-1/16000 shutter speeds. Understand the relationship between shutter speed and shutter angle here
ISO	160-3200 in steps of 1/3 stops; base is 800	250-12800 in steps of 1/3 stops; base is 800	320-64000 in steps of 1/3 stops; base is 500, or 2000 w/ S-Log 2	300-102400 in steps of 1/3 stops; base is 850 w/ Canon Log	200, 400, 800, 1600; base is 800	100-12800, can be expanded to 25600; base is 100	100-102400, can be expanded to 50-409600; base is 200, or 3200 w/ S-Log2	100-6400 in steps of 1/3 stops; base is 100
DYNAMIC RANGE	14+ stops	16.5+ stops	12+ stops	12 stops	12 stops	11+ stops	14+ stops	10+ stops
WHITE BALANCE	Automatic calculation or manual white balance for 2000-11000K, in 100 K steps. Presets for 3200 (tungsten), 4300 (fluorescent), 5600 (daylight), 7000 (daylight cool)	Automatic calculation or manual white balance for 1700-10000K; default is 5600. Presets for 2800 (incandescent), 3200 (tungsten), 4500 (fluorescent), 5500 (flash), 5600 (daylight), 7500 (cloudy), 9000 (shade)	Automatic calculation or manual white balance for 2300-15000K, in 100K steps. Presets for 3200 (indoor), 5800± 7 positions (outdoor)	Automatic calculation or manual white balance for 2000-15000K. Adjustable presets for 3000 (tungsten), 5500 (daylight); default is 5500	Presets for 3200 (tungsten); 4500 (fluorescent); 5000, 5600, 6500, 7500 for variety of daylight conditions	Automatic calculation or manual white balance for 2500-10000K. Presets for 3200 (tungsten), 4000 (white fluorescent), 5200 (daylight), 6000 (cloudy, twilight, sunset), 7000 (shade)	Automatic calculation or manual white balance for 2500-9900K. Presets for daylight, shade, cloudy, incandescent, fluorescent (warm white/cool white/day white/daylight), flash, underwater	Automatic calculation for 3200-8000K. Manual white balance for 2500-10000K, in 100K steps. Presets for blue sky, cloudy sky (rain), shade, sunlight, white fluorescent light, incandescent light bulb, sunrise and sunset, candlelight
AUDIO	<ul style="list-style-type: none"> Uncompressed PCM audio to ARRIRAW, ProRes, DNxHD, and embedded in all HD-SDI outputs. Only available w/ same project/sensor speed @ 23.976, 24, 25, 29.97, and 30 fps 24 bit/48kHz A/D conversion 1x XLR 5 pin AUDIO IN for 2 channel, line level, balanced audio 1x 1/8" (3.5mm) stereo headphone output 	<ul style="list-style-type: none"> Uncompressed 2 ch 48kHz 24 bit, embedded in R3D file and HD-SDI/ HDMI outputs Optional 4 channel, and AES/EBU digital audio 2x 1/8" (3.5mm) mini-jacks for 2 independent channels, mic level, balanced or unbalanced analog audio inputs. Supports +48V @ 10mA Phantom power 1x 1/8" (3.5mm) stereo headphone output 	<ul style="list-style-type: none"> AVCHD (LPCM 2 ch 48 kHz 16 bit or Dolby Digital 2 ch 48 kHz 16 bit), MPEG-2 (Dolby Digital 2 ch 48 kHz 16 bit) 2x 3-pin XLR for independent 2 channel audio, switchable between mic and line levels. Supports mic level +48V Phantom power 1x 1/8" (3.5mm) stereo headphone output 	<ul style="list-style-type: none"> AVCHD (@24-28 Mbps, LPCM 2 ch 48 kHz 16 bit; all other modes Dolby Digital 2 ch), MP4 (AAC-LC 2ch 48 kHz 16 bit; @ 35-17 Mbps, 256 kbps; @ 3-4 Mbps, 128 kbps) 2x 3-pin XLR for independent 2 channel, balanced audio, switchable between mic and line levels. Supports mic level +48V Phantom power. In handle unit 1x 1/8" (3.5mm) stereo mini-jack for external microphone 1x 1/8" (3.5mm) stereo mini-jack for external microphone 1x internal stereo microphone in handle unit 1x 1/8" (3.5mm) stereo headphone output 	<ul style="list-style-type: none"> LPCM 2 ch 48 kHz 24 bit to CinemaDNG RAW, ProRes, and embedded in 3G or 6G-SDI audio output 2x 1/4" jacks for balanced analog audio, switchable between mic and line levels 1x 1/8" (3.5mm) stereo headphone output 	<ul style="list-style-type: none"> LPCM 48kHz 1536 Kbps 16 bit audio from internal monaural microphone In RAW .MLV, a 48kHz 16 bit audio stream w/ timecode is held 1x 1/8" (3.5mm) stereo mini-jack for external microphone 1x 1/8" (3.5mm) stereo headphone output 	<ul style="list-style-type: none"> XAVC S (LPCM 2ch 48 kHz 16 bit), AVCHD (Dolby Digital 2 ch), MP4 (AAC-LC 2 ch) AAC/LPCM audio from internal stereo microphone 1x 1/8" (3.5mm) stereo mini-jack for external microphone 1x 1/8" (3.5mm) stereo headphone output Optional XLR Adapter Kit 	<ul style="list-style-type: none"> MOV (LPCM), MP4 (LPCM/AAC 2 ch), AVCHD (Dolby Digital 2 ch) Internal stereo microphone 1x 1/8" (3.5mm) stereo mini-jack for external microphone 1x 1/8" (3.5mm) stereo headphone output Optional Lumix DMW-YAGH Interface Unit adds 2x monaural XLR 3-pin inputs, switchable between mic and line levels, independent volume control of left and right channels. Supports +48V Phantom power for each channel. W/ audio level display monitor. See details
OUTPUT	RECORDING OUTPUT <ul style="list-style-type: none"> 2x 3G-SDI REC OUT for uncompressed 1080p 4:4:4 or 4:2:2 @ 23.976, 24, 25, 29.97, 30, 50, 59.94, 60 fps Recording other speeds requires a recorder w/ Variflag support Legal or extended range signal mapping Embedded audio, timecode, metadata, and recording flag See details MONITOR OUTPUT <ul style="list-style-type: none"> 1x HD-SDI MON OUT for uncompressed 1080p (16:9) 4:2:2, legal range, @ 23.976, 24, 25, 29.97, 30 fps Embedded audio, timecode, metadata, and recording flag 	RECORDING OUTPUT <ul style="list-style-type: none"> 1x HD-SDI for clean 1080p 8 bit 4:4:4 or 10 bit 4:2:2, 720p 10 bit 4:2:2; w/ film or video dynamic range Embedded audio, timecode, and metadata MONITOR OUTPUT <ul style="list-style-type: none"> HD-SDI for 1080p, 720p w/ film or video dynamic range: 8 bit 4:4:4 or 10 bit 4:2:2 HDMI for 1080p, 720p, 480p: 8 bit 4:4:4 or 10 bit 4:2:2 Embedded audio, timecode, and metadata 	RECORDING OUTPUT <ul style="list-style-type: none"> 1x HDMI for uncompressed 4:2:0, w/ embedded audio, timecode, metadata Optional HXR-IFR5 Interface Unit adds connection to optional AXS-R5 RAW Recorder for FS700 RAW recording, 2K @ 24/30/60/120/240fps and 4K @ 24/30/60 or 120fps in 4 second bursts; 12 bit Optional third party recorder, Odyssey 7Q, via 3G-SDI for FS700 RAW recording (CinemaDNG), 2K @ 23.98/25/29.97/50/59.94/100/120/200/240fps, 4K @ 23.98/25/29.97/50/59.94, and 1080p ProRes HQ @ 23.98, 25, 29.97fps, 8 or 10 bit 4:2:2 MONITOR OUTPUT <ul style="list-style-type: none"> 3G-SDI HDMI 1x AV OUT 	RECORDING OUTPUT <ul style="list-style-type: none"> 1x HDMI for uncompressed 8 bit 4:2:2 Embedded audio (2 ch 48 kHz 16 bit), timecode, metadata Canon Log LUT support MONITOR OUTPUT <ul style="list-style-type: none"> HDMI 1x AV OUT 	RECORDING OUTPUT <ul style="list-style-type: none"> 1x 6G-SDI for clean 1080p 10 bit 4:2:2 w/ film or video dynamic range Embedded audio and metadata MONITOR OUTPUT <ul style="list-style-type: none"> 6G-SDI for 10 bit 4:2:2 w/ film or video dynamic range 1x Thunderbolt port for waveform monitoring in uncompressed 10 bit 1080p Embedded audio and metadata 	RECORDING OUTPUT <ul style="list-style-type: none"> 1x Mini-HDMI for clean, uncompressed 1080p 8 bit 4:2:2 (no audio) Embedded timecode MONITOR OUTPUT <ul style="list-style-type: none"> Mini-HDMI 1x AV OUT/Digital 	RECORDING OUTPUT <ul style="list-style-type: none"> 1x Micro-HDMI for uncompressed UHD 4K and FHD 8 bit 4:2:2 Embedded audio, timecode, metadata, recording flag MONITOR OUTPUT <ul style="list-style-type: none"> Micro-HDMI 	RECORDING OUTPUT <ul style="list-style-type: none"> 1x Micro-HDMI for clean, uncompressed 4K and 1080p @ 8 or 10 bit 4:2:2 (no VFR) In 4:3A, 10 bit @ 2880x2160 only Optional Lumix DMW-YAGH Interface Unit adds 2x 3G-SDI and 2x HD-SDI w/ embedded 2 channel audio and timecode; quad-link SDI output for 4:2:2/10 bit 4K; HDMI output. See details MONITOR OUTPUT <ul style="list-style-type: none"> Micro-HDMI 1x AV OUT/Digital