

SONY

VENICE

50
PL/T2
CineAlta

ft
-∞
-30'
-15'
-10'
-5'0'5'10'15'20'25'30'35'40'45'50'55'60'65'70'75'80'85'90'95'100'

1
2
3
4
5
6
7
8
9
10
11
12

BACK

FOCUS MAG



LOCK
→





CineAlta

FPS 24
Fixed 24
2500
180.0
TCC 00:00:00:00 23.98fps 6K 32
BATT 29 min Rem A003 Shot C004
| AXS 64 mm X-OCN ST
| SxS 134 mm ProRes422HQ HD P
0.3 SDI 3+ Lock 3200+07
NO S+S Log WB

S7/8
32mm
-5
-6
-8
-10
-15
-30
-60
-∞
f11

Emotion in Every Frame

The history of Digital motion picture camera technology started in 1999 when Sony released the first 24p digital motion picture production system. In 2006, Sony released the world's first 4K digital cinema projection system which influenced and increased demand for high-quality digital content in 4K resolution. Following, Sony introduced the F65, F55 and F5 motion picture camera systems, all of which have been used on a significant amount of productions, and supported by many users from the cinema industry worldwide.

Now, Sony proudly introduces the next generation motion picture camera system, forward thinking to large format production, the VENICE.

VENICE features a newly developed full-frame image sensor. This camera has been created based on significant feedback from film industry professionals.

Regardless of any changes in technology or economy, our mission remains the same: to satisfy the ever-increasing demands of creative minds. Sony is committed to further elevating image quality and improving the visual experience so that filmmaker and audience can feel emotion in every frame.

With this in mind, the CineAlta logo symbolizes 'infinity', which can also be thought of as 'unlimited creative possibility' and 'endless pursuit of perfecting technology'.



Reliable Partner for Creativity

VENICE is a cinema camera created by and for the cinematographer. VENICE is equipped with a newly developed full-frame image sensor meeting the needs of the film industry in pushing the boundaries of large format image capture with exceptional picture quality.









Beautiful Image

Satisfied with the current condition?
With the wide latitude and gamut recorded by VENICE, freedom of expression is significantly expanded in grading and based on established workflow.

Simple and Intuitive

Usability and reliability of the camera is one of the major concerns for operators especially in tough or time-critical filming conditions. With a user-friendly design, clear and simple menu navigation, and with a highly durable and reliable construction, in using VENICE, you can simply concentrate on filming, not the camera.





SONY

CINEMA HARDWARE

AXSM

USLOW

RONFORD - BAKER

75

ARRI

Master Anamorphic

ZEISS

A
Demo Reel
Shot on
VENICE

THE DIG









Joseph Kosinski

Writer, Director

Q: Tell us about "THE DIG".

Joe: Every director has a folder full of abandoned ideas or commercials you pitched on or short films you pitched that for whatever reason didn't go. My folder happens to be pretty deep. We first talked about how to showcase and test out VENICE and give us a variety of conditions to torture the camera. "THE DIG" seemed like a good one that it was nighttime, daytime, urban, desert, interiors, exteriors, driving shot and helicopter simulating film shoot.

Q: In general, what is important for you in terms of camera qualities?

Joe: I want a blank slate. I want flexibility to take an image any number of directions giving me basically what I saw in the day, that kind of neutral look, the look I created in the moment and able to push it around without breaking down. What we're seeing with VENICE, even though it's a prototype, the dynamic range is something you notice right off the bat. It's fantastic. I was immediately struck by an improvement of the skin tones, the way it rolls into the highlights and the neutrality. I would say the image is beautiful.

Q: Following the shoot, how was the grading in standard dynamic range.

Joe: A dark black car with a black interior shooting out midday desert pushing the envelope of what a camera can capture and yeah, seeing detail outside the windows, great shadow detail, the way the camera rolls into the highlights, like shots pointing directly

into the sun. We have one of those in the spot. It was very clear from our first look at the footage that this was another kind of leap forward. Cinematographer Claudio Miranda, ASC talked about as well the smoothness of how it renders skin tones looked very natural and falls in really nicely. You don't want to search for it or hunt for it. It should be there and VENICE had it there.

Q: VENICE is a full-frame camera, but the large imager mode couldn't be tested for "THE DIG" because of the prototype cameras, but what do you expect to have by using aspect ratios 2.66: 1 and 2.39: 1 falls into the creative process?

Joe: For this particular project, that ultra-wide aspect ratio really suited the landscapes and the shots we

were framing up. We shot it on set. We kind of protected for it but I thought we would end up hard matting the 2:39: 1 version. But after seeing it, I fell in love with that extra wide ratio suited to the desert landscapes and nature of this story. I did research myself to understand why 2:39: 1 exists and it was due to the fact that the soundtracks were included on the negative itself using up part of the width of the film. We don't put audio on the visual media anymore so why stay compromised in that way in terms of digital media? That is why I felt "let's use the full chip", because we can digitally, and maybe bring back this 2.66: 1 format which is what anamorphic was originally capable of. So, I love having full-frame option in the future and being able to shoot in that format.





Claudio Miranda, ASC

Cinematographer

Q: Tell me about this project.

Claudio: I remember Joe always wanted to do a project on his own and I thought it would be good to present it to Sony and see actually if we can get this made for this new camera. Joe and I like testing the latest and greatest cameras that are coming out and we've done it in the past with the F65 and F35.

Q: You went to Japan and gave engineers very specific feedback?

Claudio: It was important that we addressed the anamorphic issue. We had to use other camera brands when we wanted to take advantage of the full 4 x 3 anamorphic and any other lenses. Now, the choices of lenses have opened up considerably. Also, with full-frame, 24 x 36mm, it opens up the use of 65mm lenses that were once limited to only film cameras. I just think that's incredible to get the depth of field, to be able to actually shoot with those lenses at night because of the high sensitivity of the new image sensor in VENICE. That's kind of a new opening for us as well that was not possible before.



Q: What else have you discussed with the VENICE engineers in Japan?

Claudio: I put a wish list of "can we get all the NDs inside the camera?" - Meaning I wanted all eight steps of ND, would this be even possible? If so it would be a first for any camera. When the engineers arrived with the prototype camera bodies I was really impressed, they did implement all eight, with steps of 0.3, 0.6, 0.9, 1.2, 1.5, 1.8, 2.1 and 2.4, implemented internally to VENICE. The filters are really accurate steps and there's no loss or shift even at the heaviest ND we

used during filming. It covers the whole gap. There's no need to carry ND filters anymore. This is a huge advantage for remote set ups, and for helicopter and drone work. We can even change the ND values remotely without having to be next to the camera.

Q: How did you like the quality of the pictures you're seeing?

Claudio: I was especially impressed with the color rendition. What I love about the color, it feels a little more cinema, it's a little bit softer feeling, also there's



a lot more dynamic range than before. The highlight roll-off is really smooth. I was talking to Alex Carr (DIT) and it was he's finding at the very early stage, that VENICE has tremendous range in the highlights. In "THE DIG", we are filming in the rock quarries, and the sun goes down behind the rocks and there's still bright sky in the background. So I'm trying to hold that latitude and the detail that's down on the ground and it's holding all the detail in the shadows. Pretty amazing stop range. Smooth latitude feels like it's not as electronic, a little bit homier, a kind of organic response. Additionally, I really love how the camera responds to skin tones, really beautiful.

Q: What is your impression for the operator side and the assistant side design?

Claudio: There are actually two menu panels on this camera. One for the camera assistant side which has the full set of menu data and also one for the operator side which is a little smaller sized menu showing all the critical information the Cinematographer need to know. Everything's really much clearer to find and you can set color temperatures, NDs, shutter angles, and other often needed functions.

Q: What else impressed you about the VENICE?

Claudio: The Viewfinder (DVF-EL200), a lot quicker response, less delay. And I like the size. In "THE DIG", there was a point trying to get VENICE into the Shotover K1 helicopter housing. If you go with a bigger body, then choices of lenses on the other side are

limited. So it is really nice the VENICE body is small enough which makes my lens choices on the other end much more, which is super important to enough which makes my lens choices on the other end much more, which is super important to be able to have that available to me.

Q: How would you recommend VENICE to Cinematographers?

Claudio: Well, I think it's just great to have a camera that has all the NDs built in. You can go with a really small package and can be pretty lightweight. Also, you can choose any kind of lens you'd like to use. I think the color gamut is great. It has great dynamic range, smooth highlight handling, and beautiful skin tone rendition. It has a softer kind of overall tone curve I think that feels easy to work with and produces a wonderful image.





Dan Ming

1st Assistant Camera (A Camera)

Q: How did you get involved with this film project "THE DIG"?

Dan: I'm Claudio's First AC and Claudio was asked to shoot this project, "THE DIG", to test these new cameras out. It's always fun being the first to use a new camera and also challenging to use something that no one's ever used before.



Q: How did VENICE perform and what are your impressions?

Dan: We took these bodies and set them up and just threw them in the heat and the dust and the dirt and just did what we would normally do with any camera for a shoot and with these subjected them to even more punishment. We actually went out of our way to let the cameras sit in the sun a bit to see how hot they could run, and they didn't overheat at all. So the tolerance of VENICE is definitely markedly improved in terms of the environments it could work in.

Q: What were some of the features that appealed to you more?

Dan: The boot time of the camera is very impressive, from OFF to first picture within five seconds is very impressive. No other camera can do that. Five seconds you have a picture to

work with. It sounds like a small feature but this alone will save a huge amount of time on set each day.

Q: Talk about the image performance you were seeing on set.

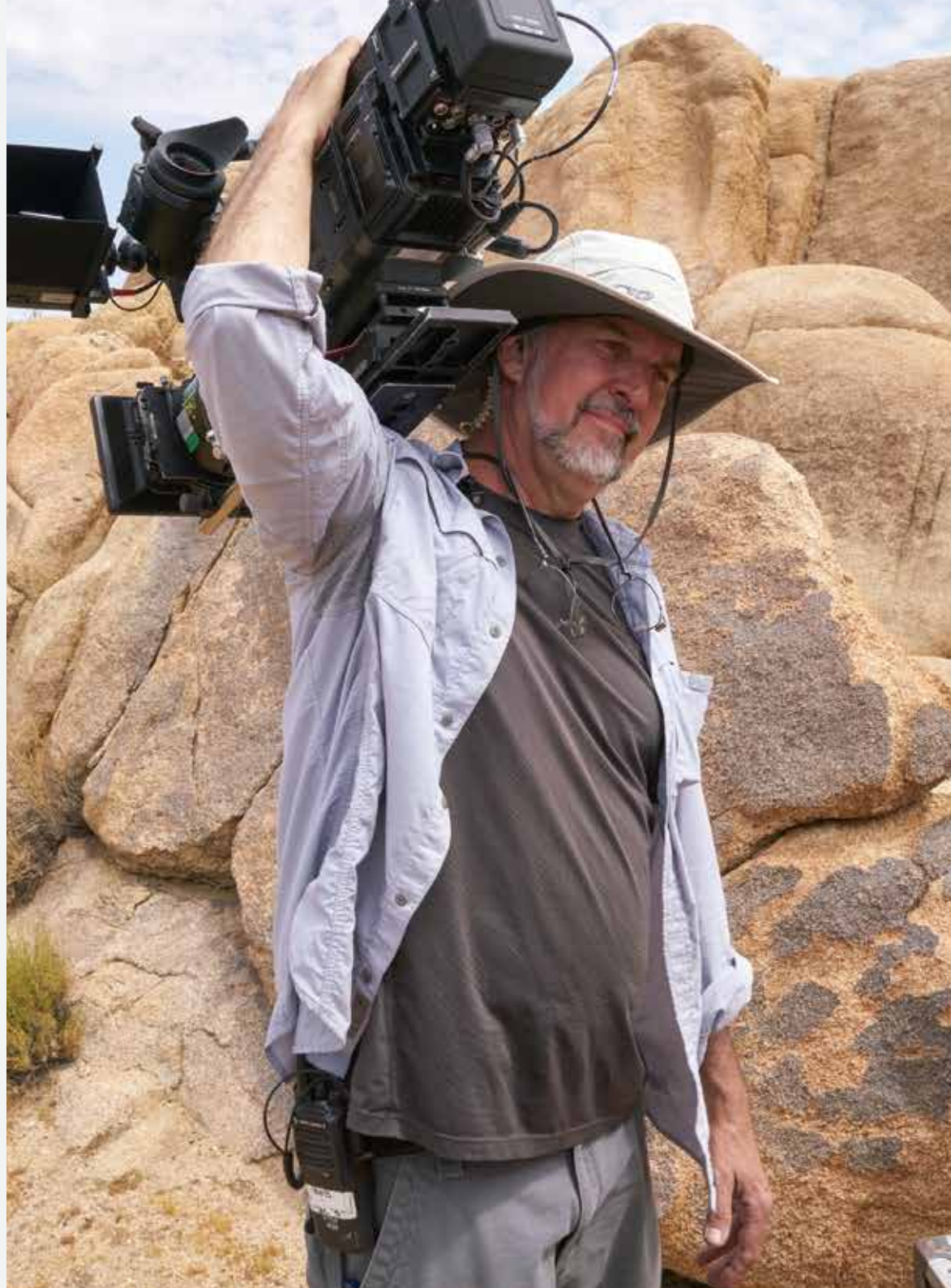
Dan: For "THE DIG" we elected to shoot Full Height 18mm anamorphic 4x3. So we used the top and the bottom of the frames and not a full Vista Vision width—as we know, the field of view of anamorphic lenses is twice the field of view as a spherical lens so it reduces your depth of field, but it gives you that look with the anamorphic flares that streak across. It's a more organic look than Spherical.

Bob Smathers

1st Assistant Camera (B Camera)

Q: What were your impressions of VENICE?

Bob: The camera is a good size. It has a nice dovetail on the top with the handle that slides into that and there were several variations with that. The internal NDs are nice. Those worked flawlessly from 0.3 to 2.4 quick and easy. The user interface is clean, simple and nice.



Alex Carr

Digital Imaging Technician

Q: What are your experiences with the workflow?

Alex: For the VENICE, the workflow is almost identical, as it uses Sony RAW. It uses the same media, the same AXS-R7 recorder as the previous Sony camera generation. But there is something new. There's now a Thunderbolt 2 card reader, (AXS-AR1) which is one of the fastest card readers of any camera right now. I back up all of my media to a solid state HDD array and I can copy one card at 1 GB per second, so it's very, very, very fast.

Q: What are your impressions of the imagery you were seeing coming from VENICE?

Alex: When working with VENICE, we have a huge color gamut. At the time of this writing we have only done preliminary tests, but so far the results are pretty amazing. VENICE uses the S-Log3 gamma setting and has a very wide dynamic range, and it allows us to push and pull the image in any direction the Director needs to achieve his vision of the story. So, even in some shots where we don't always have the best lighting or don't always have the best

the best circumstances, we can still push and pull and move around without getting too noisy or getting cornered into a particular look. So, it's one of the most flexible cameras I have worked with. This also helps us to match a cinema or a film look very easily. It's a very, very good match to cinematographers who are used to using film or who are looking for a film look.

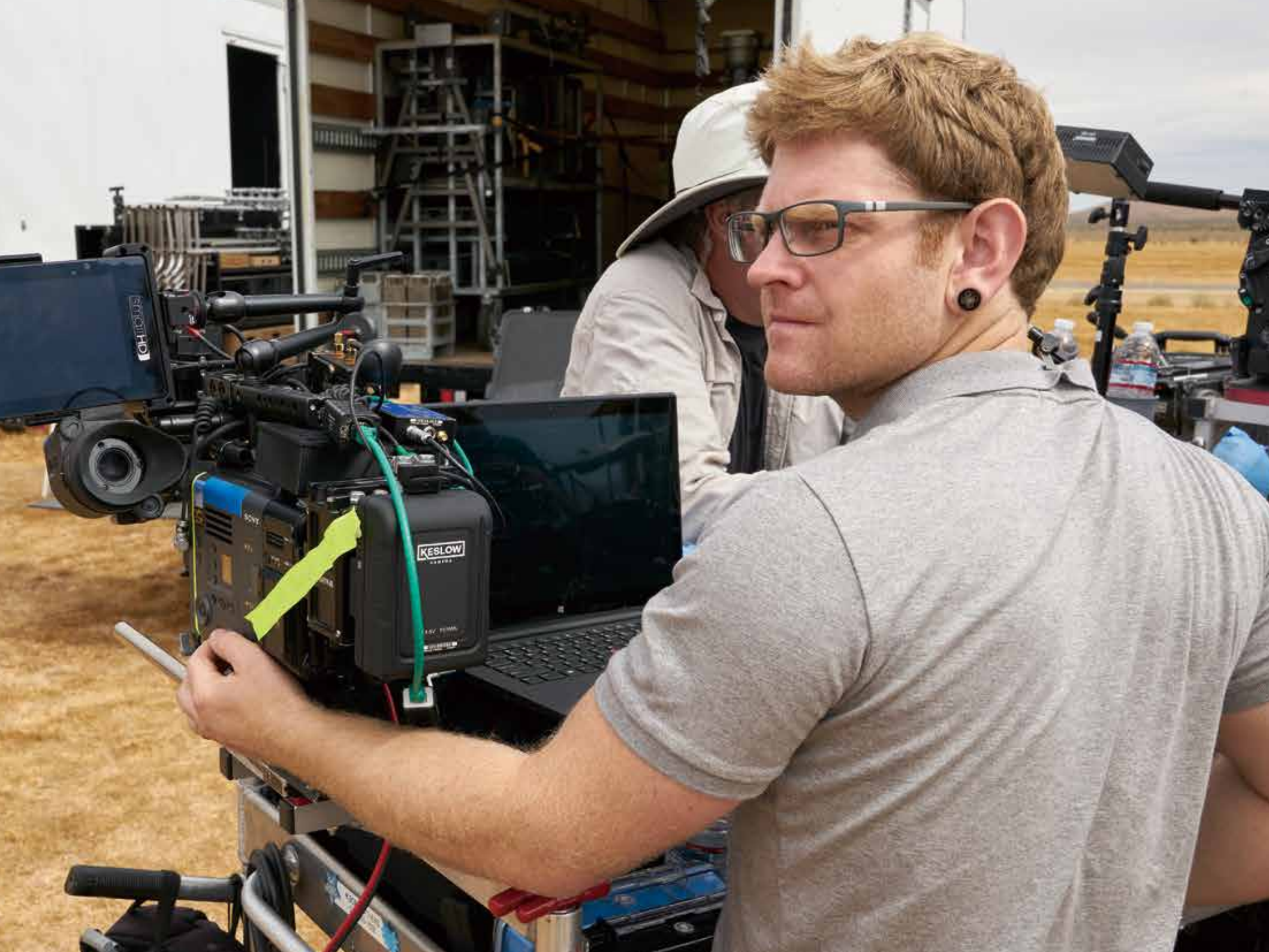
Q: How robust is the camera?

Alex: While we were shooting in the desert, we had very high temperatures. The cameras were very hot, but they never really failed. When shooting in such dusty locations, it's good to have ND filters inside because then you're not switching filters and cleaning filters all the time and it can save a ton of time and headaches.

Q: Did you like the menu system?

Alex: The menu system of VENICE is very quick, very responsive, very clean to navigate, and it uses a lot of cinema terms instead of broadcast terms. This helps the creative minds within the film industry to understand the camera not from the perspective of engineering but the perspective of a cinematographer or a camera assistant. You can understand the camera just simply by pressing the menu and going through the first few steps, you see, oh, wow, this is very simple, it's very nice, and it's quick and easy.







Mike Sowa

Sr. Colorist, Technicolor

Q: Tell me about your history.

Mike: I've been in the business 32 years. When I first became a colorist, I started off doing dailies overnight from film on a Rank Cintel with its color correction system. There were just three knobs with joysticks that came off of them, and that was it. Then Da Vinci came out and went to the Da Vinci Classic and then moved to Da Vinci 2K back in the days of high definition. I have been on four different systems throughout my career.

Q: The Director Joe Kosinski and Cinematographer Claudio Miranda, ASC were the first in the world to shoot with VENICE and you are the first in the world to grade the footage. What is your opinion seeing the imagery as you grade it?

Mike: There are certain cameras that require a lot of individual color work to get it to look like traditional film. Nowadays, the digital cameras capture so many colors, almost too much. Some of them have colors that don't make any visual sense to me. I live in a world of dynamic range and it's always the detail bottom end and top end of the signal. Images that Claudio gives me fall into a place where he has intended it to be. I have to stay within that. I can tell you he is incredibly happy with the amount of dynamic range and the ease in that he gets these images because it's all about lighting the sets and he loves to shoot dark also. There is a lot of nice beautiful soft black but it's still black. Sense of all the detail that he's expecting to

see, I look at that and I think okay, this camera nailed it.

Mike: The detail between the bottom end and the high end is, with the combination of lenses that Claudio used, is so crisp and clean that you get that 3D feel. Claudio and Joe see things the same way mostly. I see things the same way they do now. Getting to that



image was incredibly easy. No compromises. The lowlight detail and the highlight detail are all there in the camera and there is a nice range between the two so the skin tones fell into a really pretty place. He wanted overhead light but there's a real soft quality in the low-light flesh tones that I didn't have to push or pull to work on it at all. Trying to pull color out in this condition is very difficult with other cameras, and I was really happy with what I was getting in this camera without having to fight for it, and most importantly with no windowing needed. What you see on screen is what the camera did, not what I did.

Q: As of this writing, we haven't done the HDR grade yet, but in your experience with many HDR grades you have done, what do you think of how the "THE DIG" will perform in High Dynamic Range? Do you see any issues?

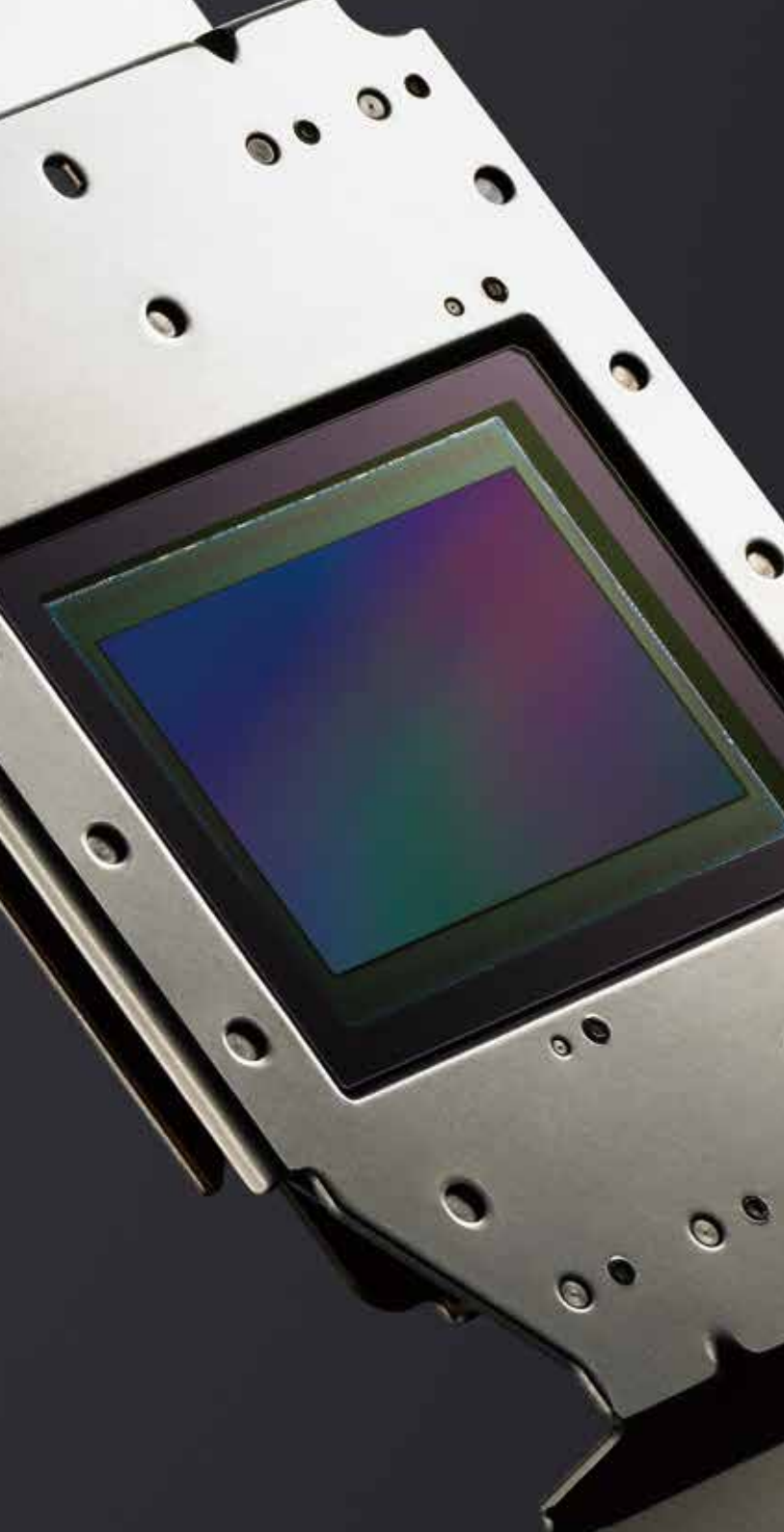
Mike: No new issues. Typically, the issues are with the display itself. With HDR grading, if we do have an image that's slightly noisy in SDR, when you go to

HDR, it's going to magnify a lot of the issues. Stuff that looks great is just going to look great. Often I have to go back in and massage a little bit. In most of those cases, it's a noise problem. The digital noise in digital cameras is a much finer size than film grain. It is pixel based, whereas film grain can be massive depending on the stock that was used and what and how it was exposed. If you try to bring that up, film grain can completely take over a face in film, whereas digital noise, the same level can be on the face. It's easier to treat digitally than with film grain if you have to do it.





Inside **VENICE**

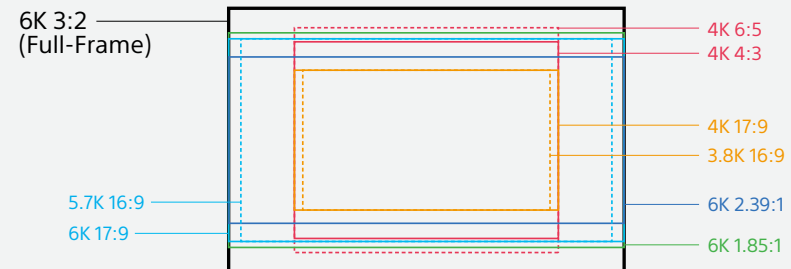


36x24mm Full-Frame Sensor for Cinema

VENICE is equipped with a 36x24mm full-frame image sensor, designed specifically for the demands and performance of high end cinematography, and can capture images up to a maximum resolution of 6048 x 4032. By switching imager modes, VENICE can natively support Super35 24.3 x 18.0mm, 4096 x 3024 resolution (equivalent to 4-perforation motion picture film) and Super35 24.3 x 12.8mm, 4096 x 2160 resolution (equivalent to 3-perforation motion picture film). In other words, VENICE's new full-frame sensor can capture in almost any format, including full 18mm-height Super35 Anamorphic and spherical and full-frame 24mm-height Anamorphic and spherical*. Almost any aspect ratio can be conjured up: 1.85:1, 2.39:1, 17:9, the list goes on in full-frame* or Super35.

With VENICE, Sony is giving users the option to customize their camera by only enabling the features needed, according to their individual production requirements. Licenses are available to expand the camera's capabilities including 4K anamorphic and full-frame*.

* Firmware update required in future, details described in the chart



Software License	Imager Mode	Effective Number of Pixels (Image Pixels)	W x H (mm)	Project Frame Rate	Select FPS
License not Required*	3.8K 16:9	3840 x 2160	22.8 x 12.8	23, 24, 25, 29, 50, 59	1 to 60
	3.8K 16:9 Surround View	3840 x 2160 (4268 x 2400)	22.8 x 12.8 (25.4 x 14.3)	23, 24, 25, 29	1 to 48
	4K 17:9	4096 x 2160	24.3 x 12.8	23, 24, 25, 29, 47, 50, 59	1 to 60
	4K 17:9 Surround View	4096 x 2160 (4552 x 2400)	24.3 x 12.8 (27.0 x 14.3)	23, 24, 25, 29	1 to 48
Anamorphic License	4K 4:3	4096 x 3024	24.3 x 18.0	23, 24, 25, 29, 47	1 to 48
	4K 4:3 Surround View	4096 x 3024 (4552 x 3360)	24.3 x 18.0 (27.0 x 20.0)	23, 24, 25, 29	1 to 30
	4K 6:5	4096 x 3432	24.3 x 20.4	23, 24, 25, 29	1 to 30
Full Frame License*	5.7K 16:9	5670 x 3190	33.7 x 18.9	23, 24, 25, 29	1 to 30
	6K 2.39:1	6048 x 2534	35.9 x 15.0	23, 24, 25, 29	1 to 30
	6K 17:9	6054 x 3192	36.0 x 19.0	23, 24, 25, 29	1 to 30
	6K 1.85:1	6054 x 3272	36.0 x 19.4	23, 24, 25, 29	1 to 30
	6K 3:2	6048 x 4032	35.9 x 24.0	23, 24, 25	1 to 25

* The Anamorphic license is required to enable ratio settings, other than Off (1.0x), for the de-squeeze function.



Creative Freedom

Full-Frame Full width 36 mm 6K

In full-frame, you can use the full 6048 pixel width of the sensor for widescreen spherical 2.39:1 or Large Format Scope. Full-Frame can be used creatively in a number of ways – for example, to allow for extra shallow depth of field or super-wide shooting.

Super35 full height 2.0x squeeze Anamorphic

For anamorphic shooting and production, Super35 full height 2x squeeze anamorphic is supported.

Super35 17:9 and 16:9

These popular imager sizes are natively supported by VENICE. Current Super35mm PL mount lenses can be used.

Surround View (Look Around)

While the camera records only the active area, the viewfinder and on-set monitors can display a 5% margin around it.

Surround View supports three imager modes: 3.8K 16:9, 4K 17:9 and 4K 4:3.

Extension System Attachable

Extension System, CBK-3610XS enables cabled separation of the VENICE camera body and image sensor block by up to 5.5m (18feet) without degradation in image quality and functionality.

It allows not only the use of gimbals and handheld stabilizers but also full quality filming even in unconventional and confined spaces.

Phenomenal Latitude

VENICE has an exceptional 15+ stops of latitude, with low noise for extraordinary performance in delivering phenomenal images in conditions from searing sunlight to almost no light. VENICE's real-world performance also excels at High Dynamic Range imaging and allows unprecedented creative freedom in grading.

More Colors for More Expression

VENICE can exceed BT.2020 color space. This means the color range is wider than DCI-P3 and can beautifully reproduce the true color of the scene in front of your lens. This also provides the broad palette in the grading suite using the established workflow of Sony's third generation LOG gamma encoding (S-Log3) and Ultra-wide Color space (S-Gamut3).

Fast Shutter

Jello effect is something what we don't need when filming. VENICE has high speed readout sensor which minimizes the jello effect that are typical in the CMOS sensors.

Dual Base ISO

In addition to Base ISO500, Base ISO2500 is selectable.

High Base ISO2500 excels in low-light High Dynamic Range capture, with an exposure latitude from 6 stops over to 9 stops under 18% Middle Gray, for a total of 15+ stops.



PL Lens Mount

VENICE comes with the industry-standard PL lens mount. It is compatible with all Super35 and full-frame PL lenses, spherical and anamorphic. The lens mount includes contacts that support Cooke/i Technology. Lens information is recorded as metadata frame by frame.

Lever Lock Type E-mount

E-mount offers unsurpassed compatibility with Sony lenses. E-mount (lever lock type) gives users the ability to change lenses by rotating the locking collar rather than the lens itself, which means that in most cases lens support rigs don't need to be removed, saves time during a production.



Cinematographer Jeff Berlin

Depth of Field

As the sensor size gets larger, depth of field becomes shallower. VENICE's wide 36 mm full-frame sensor can capture images that have the equivalent of 1-2 stops shallower depth of field compared to Super35.



6K High Resolution

The stunning full 6K resolution of the camera can be recorded directly in X-OCN (16-bit eXtended tonal range Original Camera Negative) file format by the AXS-R7. Also, XAVC 4K can be captured onto SxS card while still sampling from the full 6K resolution of the sensor.



Anamorphic Look

VENICE's support for anamorphic lenses combined with its ability to shoot 4:3 and 6:5 aspect ratio at a horizontal resolution of 4K allows the capture of breathtakingly beautiful images with stunning lens flare, bokeh and emotional impact.



Provided by Bertone Visuals and Pursuit Aviation

High Sensitivity

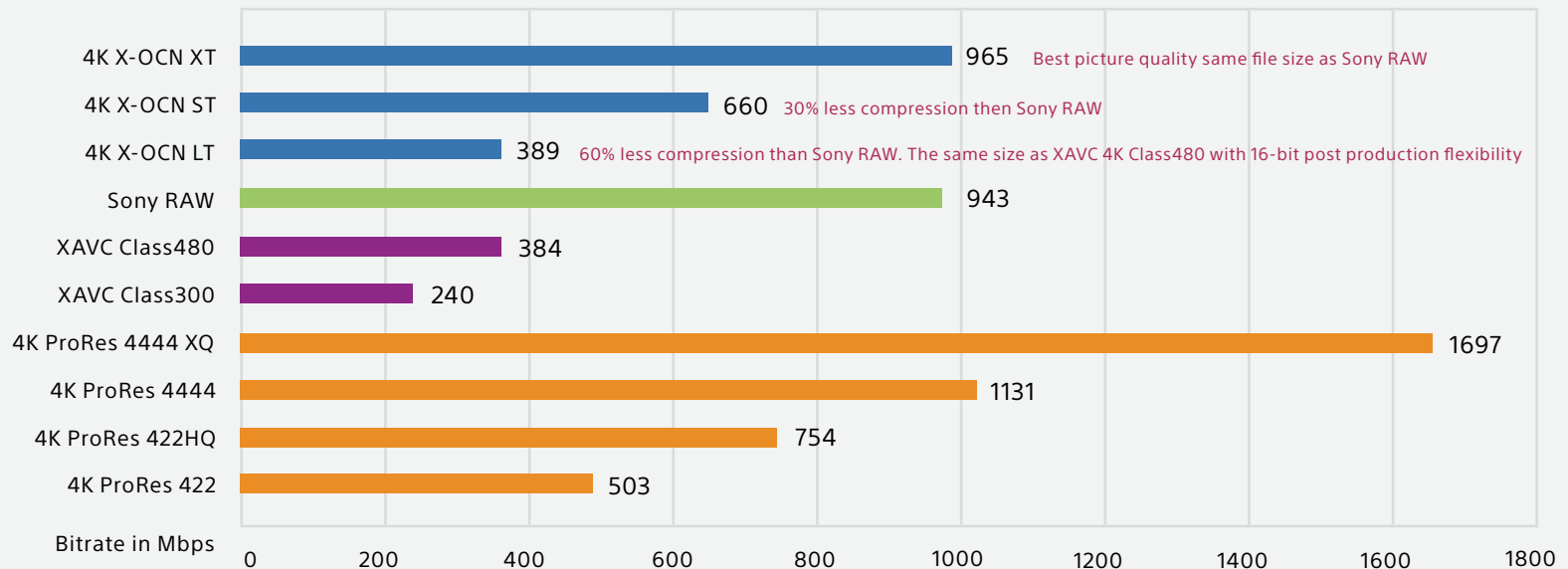
Base ISO2500 is ideal whenever you're using slow lenses or shooting dimly lit environments, such as exterior night, or indoors where lighting may be limited. Combining High Base ISO2500 with the internal eight-step Optical ND filter system offers tremendous flexibility with the ability to emulate different ISO's while maintaining maximum latitude of +6 and -9 stops.

Version 3.0 Firmware Introduces 16-bit X-OCN XT Profile

This new profile, called X-OCN XT, captures the highest quality imagery when using the AXS-R7 portable memory recorder. X-OCN XT is ideal for demanding visual effects work and productions requiring the utmost image quality from VENICE. The new X-OCN XT profile maintains economical file sizes comparable to Sony's RAW file size, making the workflow affordable and efficient. In comparing X-OCN with Sony's RAW

format, X-OCN has superior reproduction in low light areas and high light areas. In VENICE's 4K 17:9 imager mode, users will have the flexibility to record three X-OCN profiles (XT, ST, LT) and Sony RAW with V3.0 firmware. (Prior to V3.0 firmware, X-OCN LT, X-OCN ST and Sony RAW are available).

Bitrate comparison at 4096 x 2160 24p





Compact and Intuitive

VENICE has a surprisingly compact design which allows easier shooting in confined spaces or on drones. VENICE's control buttons reflect the requirements of camera operators, carefully positioned for intuitive operation. They even illuminate for easy use on dark sets. On-set monitoring operation is further enhanced by the addition of

an extra HD output alongside the standard 4K SDI. VENICE can be powered by both 12 V and 24 V power sources that can be connected at the rear. A wide range of accessories are supported, including standard Fischer connectors. For enhanced durability in tough conditions, the viewfinder uses a LEMO connector.



VF (LEMO 26pin)

DC 24V Output (Fischer 3pin)

Lens 12pin

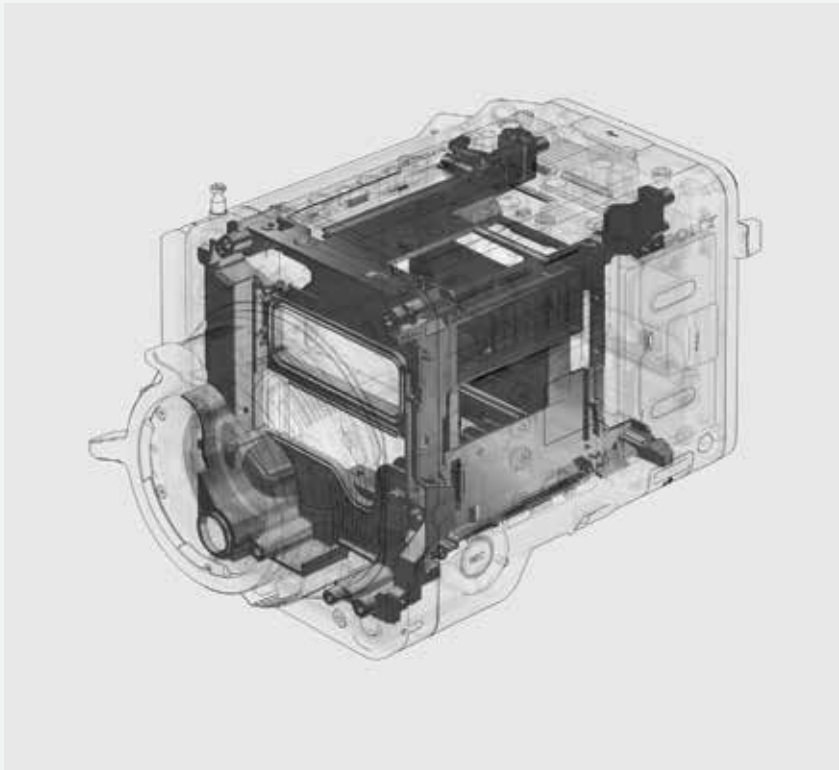


E-mount (lever lock type)

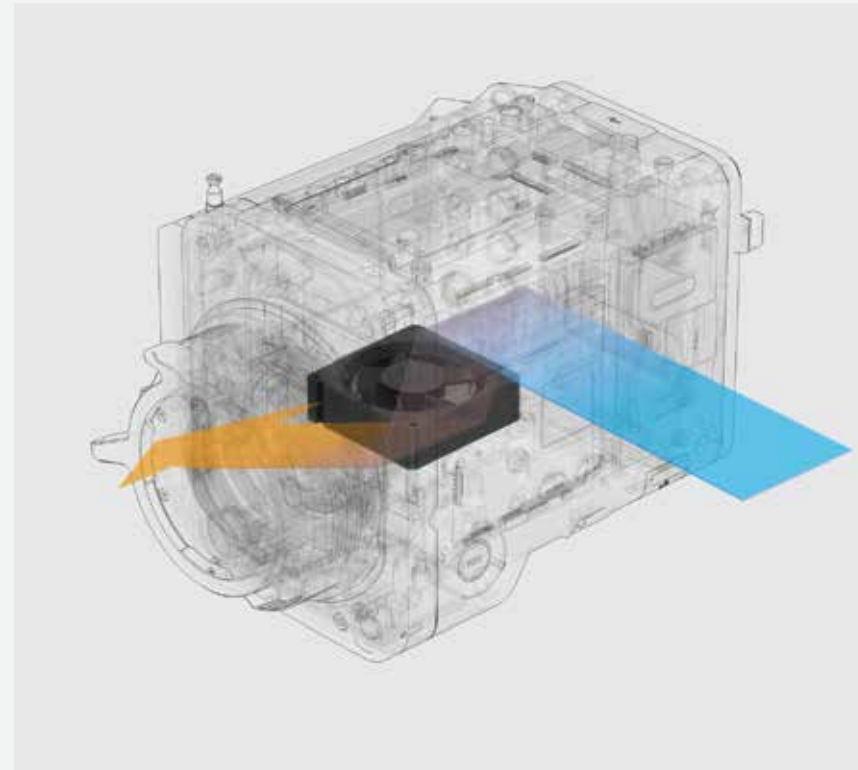


Phone Jack

Ethernet (RJ45)



Main Frame



Air Ventilation

Engineered to Survive

VENICE's chassis is engineered to be amazingly robust and has been rigorously tested in the harshest conditions as well as main frame structure enabled to design the body to be more durable.

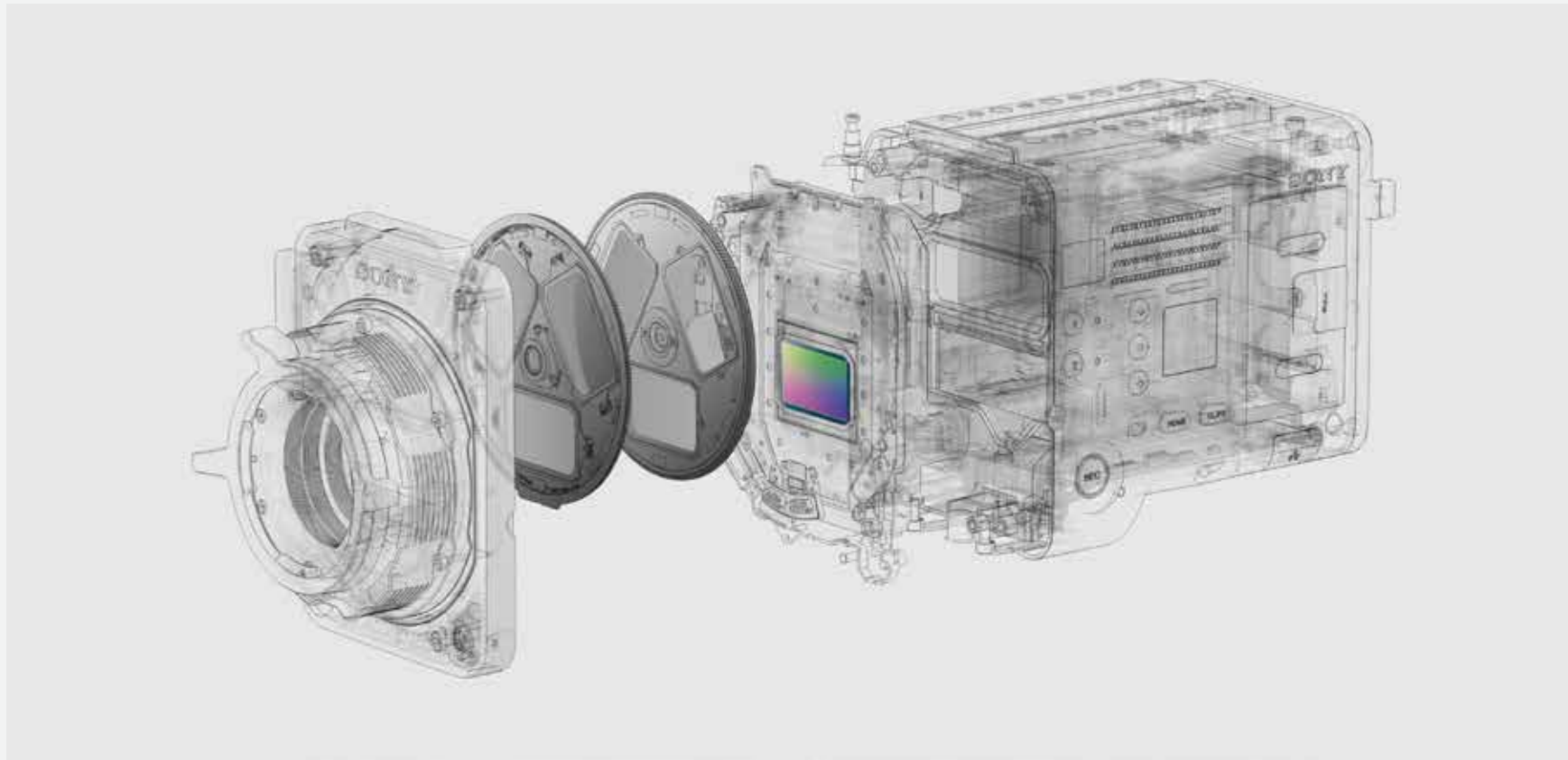
Its ventilation system is completely isolated from all electronic components to prevent ingress of dust, sand and splash. The silent-running fan can be cleaned or even swapped out on set quickly and easily.



Easily Configurable

VENICE has a fully modular design and even the sensor block is interchangeable. So, as sensor technology advances in the future, you have opportunities to upgrade without investing in a new camera.

In order to maintain ergonomic balance for operators, the top handle and viewfinder are easily adjustable. As the height of the camera from the bottom to the optical center of the lens mount is the same as the F55, base plates and other accessories used for the F55 can be used with Venice. The AXS-R7 recorder can be attached to VENICE with four screws rigidly.



World's first 8-step Mechanical ND Filters*

VENICE is the world's first camera of its class with a servo-controlled 8-step Mechanical ND filter mechanism built into the camera chassis. It offers a massive ND of 0.3 ($1/2 = 1$ stop) to 2.4 ($1/256 = 8$ stops) range that reduces time lost on set changing external

filters. The ND filters also greatly increase VENICE's flexibility when being controlled remotely on drones and cranes, or in an underwater housing.

* Based on Sony market search.



Assistant Display



Operator Display

Intuitive and Familiar On-Set Operation

VENICE has control displays on both sides of the camera, with the main control display on the camera outside for fast access to the camera settings by the camera assistant while shooting. The camera operator's OLED mini display allows intuitive control of

commonly accessed features such as ND filter, shutter, FPS, White Balance and Exposure Index. The control interface is an all-new design based on extensive researches with camera operators.

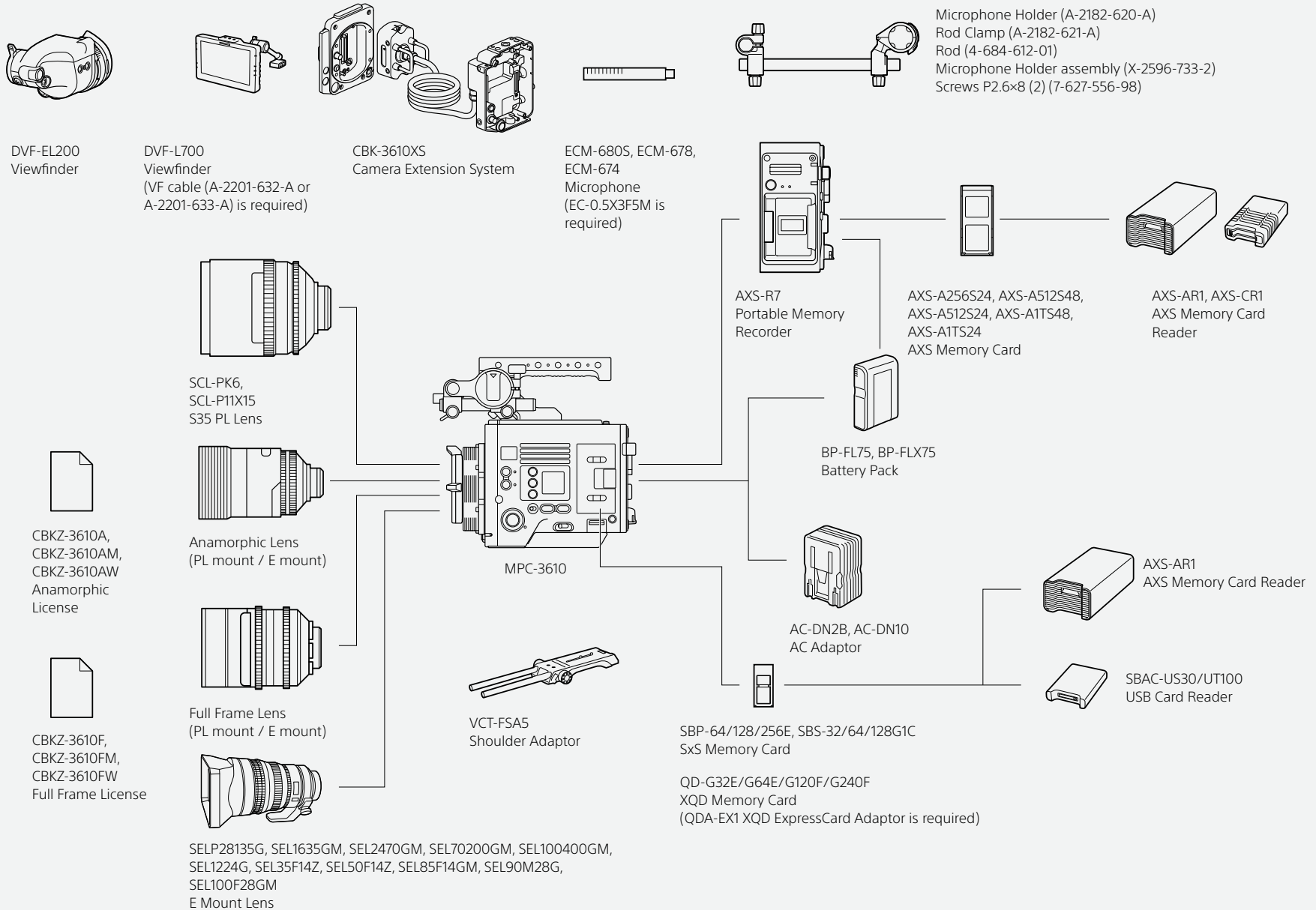


Next Generation Viewfinder

The DVF-EL200 was specifically created as the perfect partner for VENICE due to its exceptional performance and additional control features. It has a 1920 x 1080 resolution OLED panel with exceptional high contrast, enabling precise, high resolution focusing and framing. Its all-new ergonomic design allows for tool-free attachment/

detachment and reconfiguring within seconds. A rotary encoder provides instant access to brightness, peaking and contrast. The industry-standard LEMO connector offers exceptional durability.

System Configuration



High Performance, Proven Recording Formats

VENICE offers complete production flexibility. Internally, VENICE can support XAVC, Apple ProRes or MPEG HD recording onto SxS memory card. Additionally, by using the AXS-R7 recorder, it can record 16-bit RAW or X-OCN (16-bit eXtended tonal range Original Camera Negative) onto AXS memory card.



SxS PRO+ Card

SXS



AXSM Card A-Series

AXSM



SxS Card Reader/Writer
SBAC-US30

SXS



SxS Card Reader/Writer
SBAC-UT100

SXS

XAVC

XAVC is the highest-performing implementation of H.264/AVC intra-frame coding. It supports 4K with superb efficiency and beautiful 10-bit pictures. Naturally, VENICE supports XAVC Class480, which is the highest bitrate and quality available.

Apple ProRes

Apple ProRes including ProRes 422 proxy formats are popular in postproduction, and are supported by VENICE. This means there's no need for transcoding; you can simply handle these formats directly from the camera.

RAW

This ultimate 16-bit linear RAW format preserves all the information captured in 4K, with 16 times more tonal values than 12-bit RAW.



USB3.0 AXSM Card Reader
AXS-CR1

AXSM



Thunderbolt™ 2* AXSM Card Reader
AXS-AR1

AXSM SXS

X-OCN – 16-bit eXtended tonal range Original Camera Negative

Full 4K and 6K resolution, with extraordinary color reproduction, nicely suits Sony’s third generation color development, S-Gamut 3. In particular, 16-bit scene linear tonal gradation retains the camera’s full dynamic range, with far greater capacity for visual expression than 10-bit or 12-bit digital formats.

16-bit X-OCN offers significant file size reduction, which make working with full resolution content from VENICE’s 6K sensor far more practical in terms of file transfer times and storage requirements.

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Recording Time AXS-A512S24/48 (512GB)

IMAGER MODE	PROJECT FPS	RAW	X-OCN XT	X-OCN ST	X-OCN LT
4K 17:9 /3.8K 16:9	23.98/.24	60 min	57 min	84 min	142 min
	25	56	55	81	136
	29.97	46	45	67	114
	50	27	27	40	68
4K 4:3	60	24	22	33	56
	23.98/.24	-	41	60	102
	25	-	39	58	99
4K 6:5	29.97	-	33	48	81
	23.98/.24	-	36	53	90
	25	-	35	51	86
6K 2.39:1	29.97	-	28	42	72
	23.98/.24	-	33	48	82
	25	-	32	46	79
6K 17:9/5.7K 16:9	29.97	-	27	38	66
	23.98/.24	-	26	38	65
	25	-	25	36	63
6K 1.85:1	29.97	-	20	30	53
	23.98/.24	-	26	37	64
	25	-	25	36	62
6K 3:2	29.97	-	20	30	51
	23.98/.24	-	20	30	52
	25	-	19	29	50

Recording Time SBP-128E (SxS PRO+ 128GB)

FORMAT	23/24p	25p	29p	50p	59p	50i	59i
XAVC 4k Class300	66 min	63 min	53 min	32 min	27 min	-	-
XAVC 4k Class480	42	40	34	-	-	-	-
XAVC QFHD Class300	66	63	53	32	27	-	-
XAVC QFHD Class480	42	40	34	-	-	-	-
HD ProRes 422HQ	82	79	66	40	33	79 min	66 min
HD ProRes 422	122	117	98	59	50	117	98
HD ProRes Proxy	361	347	294	185	155	347	294
MPEG HD	275	273	272	-	-	273	272

Recording formats Version 3.0 firmware (Mbps) 23.98/24p

FORMAT	PROFILE	3.8K 16:9	4K 17:9	4K 4:3	4K 6:5	5.7K 16:9	6K 2.39:1	6K 17:9	6K 1.85:1	6K 3:2
RAW Using AXS-R7 recorder		943	943	-	-	-	-	-	-	-
X-OCN Using AXS-R7 recorder	X-OCN XT	965	965	1,343	1,525	2,091	1,665	2,091	2,143	2,631
	X-OCN ST	660	660	919	1,044	1,431	1,140	1,431	1,467	1,800
	X-OCN LT	389	389	541	615	843	671	843	864	1,061
XAVC 4K SxS cards	Class480	-	384	384	384	-	384	384	384	384
	Class300	-	240	240	240	-	240	240	240	240
XAVC QFHD SxS cards	Class480	384	-	-	-	384	-	-	-	-
	Class300	240	-	-	-	240	-	-	-	-
MPEG HD SxS cards		50	50	50	50	50	50	50	50	50
HD ProRes SxS cards	ProRes 422 HQ	176	176	176	176	176	176	176	176	176
	ProRes 422	117	117	117	117	117	117	117	117	117
	ProRes 422 Proxy	36	36	36	36	36	36	36	36	36

Recording format Version 3.0 firmware (Mbps) 25p

FORMAT	PROFILE	3.8K 16:9	4K 17:9	4K 4:3	4K 6:5	5.7K 16:9	6K 2.39:1	6K 17:9	6K 1.85:1	6K 3:2
RAW Using AXS-R7 recorder		983	983	-	-	-	-	-	-	-
X-OCN Using AXS-R7 recorder	X-OCN XT	1,006	1,006	1,398	1,589	2,178	1,735	2,178	2,232	2,740
	X-OCN ST	688	688	957	1,087	1,491	1,187	1,491	1,528	1,875
	X-OCN LT	406	406	564	641	878	699	878	900	1,105
XAVC 4K SxS cards	Class480	-	400	400	400	-	400	400	400	400
	Class300	-	250	250	250	-	250	250	250	250
XAVC QFHD SxS cards	Class480	400	-	-	-	400	-	-	-	-
	Class300	250	-	-	-	250	-	-	-	-
MPEG HD SxS cards		50	50	50	50	50	50	50	50	50
HD ProRes SxS cards	ProRes 422 HQ	184	184	184	184	184	184	184	184	184
	ProRes 422	122	122	122	122	122	122	122	122	122
	ProRes 422 Proxy	38	38	38	38	38	38	38	38	38

Recording formats in bold require the higher speed cards AXS-A512S48 (512GB) or AXS-A1TS48 (1TB).

Recording formats Version 3.0 firmware (Mbps) 29.97p

FORMAT	PROFILE	3.8K 16:9	4K 17:9	4K 4:3	4K 6:5	5.7K 16:9	6K 2.39:1	6K 17:9	6K 1.85:1	6K 3:2
RAW Using AXS-R7 recorder		1,178	1,178	-	-	-	-	-	-	-
X-OCN Using AXS-R7 recorder	X-OCN XT	1,207	1,207	1,678	1,907	2,613	2,082	2,613	2,678	-
	X-OCN ST	825	825	1,148	1,305	1,789	1,425	1,789	1,833	-
	X-OCN LT	486	486	676	769	1,054	839	1,080	1,197	-
XAVC 4K SxS cards	Class480	-	480	480	480	-	480	480	480	-
	Class300	-	300	300	300	-	300	300	300	-
XAVC QFHD SxS cards	Class480	480	-	-	-	480	-	-	-	-
	Class300	300	-	-	-	300	-	-	-	-
MPEG HD SxS cards		50	50	50	50	50	50	50	50	-
HD ProRes SxS cards	ProRes 422 HQ	220	220	220	220	220	220	220	220	-
	ProRes 422	147	147	147	147	147	147	147	147	-
	ProRes 422 Proxy	45	45	45	45	45	45	45	45	-

Recording format Version 3.0 firmware (Mbps) 50p

FORMAT	PROFILE	3.8K 16:9	4K 17:9
RAW Using AXS-R7 recorder		1,966	1,966
X-OCN Using AXS-R7 recorder	X-OCN XT	2,011	2,011
	X-OCN ST	1,376	1,376
	X-OCN LT	811	811
XAVC 4K SxS cards	Class480	-	-
	Class300	-	500
XAVC QFHD SxS card	Class480	-	-
	Class300	500	-
MPEG HD SxS cards	interlace	50	50
HD ProRes SxS cards	ProRes 422 HQ	367	367
	ProRes 422	245	245
	ProRes 422 Proxy	76	76

Recording format Version 3.0 firmware (Mbps) 59p

FORMAT	PROFILE	3.8K 16:9	4K 17:9
RAW Using AXS-R7 recorder		2,357	2,357
X-OCN Using AXS-R7 recorder	X-OCN XT	2,413	2,413
	X-OCN ST	1,650	1,650
	X-OCN LT	972	972
XAVC 4K SxS cards	Class480	-	-
	Class300	-	600
XAVC QFHD SxS card	Class480	-	-
	Class300	600	-
MPEG HD SxS cards	interlace	50	50
HD ProRes SxS cards	ProRes 422 HQ	440	440
	ProRes 422	293	293
	ProRes 422 Proxy	91	91

Recording formats in bold require the higher speed cards AXS-A512S48 (512GB) or AXS-A1TS48 (1TB).

Anamorphic de-squeeze options Version 3.0 firmware

IMAGER MODE	W X H (MM)	SUPPORTED PROJECT FPS	SELECT FPS	OFF (x1.0)	x1.25	x1.3	x1.5	x1.8	x2.0
3.8K 16:9	22.8 x 12.8	23, 24, 25, 29, 50, 59	1-60	✓	-	-	-	-	-
3.8K 16:9 Surround view	22.8 x 12.8 (25.4 x 14.3)	23, 24, 25, 29	1-48	✓	-	-	-	-	-
4K 17:9	24.3 x 12.8	23, 24, 25, 29, 50, 59	1-60	✓	✓	✓	-	-	✓
4K 17:9 Surround view	24.3 x 12.8 (27.0 x 14.3)	23, 24, 25, 29	1-48	✓	✓	✓	-	-	✓
4K 4:3	24.3 x 18.3	23, 24, 25, 29	1-48	✓	-	✓	-	-	✓
4K 4:3 Surround view	24.3 x 18.3 (27.0 x 20.0)	23, 24, 25, 29	1-30	✓	-	✓	-	-	✓
4K 6:5	24.3 x 20.4	23, 24, 25, 29	1-30	✓	-	-	-	-	✓
5.7K 16:9	33.7 x 18.9	23, 24, 25, 29	1-30	✓	-	-	-	-	-
6K 17:9	36.0 x 19.0	23, 24, 25, 29	1-30	✓	✓	✓	-	-	✓
6K 1.85:1	36.0 x 19.4	23, 24, 25, 29	1-30	✓	-	-	-	-	-
6K 2.39:1	35.9 x 15.0	23, 24, 25, 29	1-30	✓	-	-	-	-	-
6K 3:2	35.9 x 24.0	23, 24, 25	1-25	✓	✓	✓	✓	✓	✓

All video outputs (Incl. VF) and SxS recording has to be de-squeezed if you choose x1.25 to x2.0.
Recorded materials in AXS Memory is not effected.

Simultaneous Recording for faster workflow

A key benefit of VENICE is simultaneous recording. For example, a production could use RAW/X-OCN data recorded by AXS-R7 for online editing and also use XAVC, Apple ProRes or MPEG HD for offline editing without waiting for any file conversion. As VENICE can also record XAVC 4K and RAW / X-OCN simultaneously, another option would be to use XAVC 4K for quick turnaround mainstream production while using

simultaneously recording RAW / X-OCN as a future-proof archive suitable for the highest quality HDR applications. Even without using AXS-R7, VENICE itself can record XAVC 4K and Apple ProRes 422 Proxy or MPEG HD simultaneously. VENICE is designed to support both the highest quality imagery and high speed workflows.



SxS	AXS
MPEG HD*	RAW
HD ProRes	
XAVC 4K	
XAVC QFHD	
MPEG HD*	X-OCN
HD ProRes	
XAVC 4K	
XAVC QFHD	

*Fixed FPS only

SxS	Sub
XAVC 4K	MPEG HD*
	HD ProRes Proxy
XAVC QFHD	MPEG HD*
	HD ProRes Proxy

*Fixed FPS only

Powerful Tools for Color Management & On-Set Workflow

Catalyst Browse and the RAW Viewer are free software downloads for color grading and transcoding capabilities that work in close alignment with third-party color grading applications and also with non-linear editing systems.



Catalyst

Catalyst Browse is a media assistant that lets you browse files, see and edit media metadata, accurately view video, and apply color correction and looks. You can also copy material to a local hard drive or connected NAS, or upload to Sony's Media Cloud Services Ci, as well as transcode to a variety of formats.



RAW Viewer

RAW Viewer is an application for checking the quality of materials captured by VENICE* and also offers deep color controls. It has comprehensive color grading functions, the capability to output HD-SDI signals and support control panels from third-party vendors. RAW Viewer also offers exceptional developing performance when processing Sony RAW, and X-OCN files into image sequences for further editorial and grading work.

* Excluding MPEG50

VENICE Extension System

Providing outstanding mobility and greater freedom to create exceptional imagery with Version3.0



VENICE users can expect the same image quality and integrity when using the robust Extension System, which enables VENICE to become highly mobile and discreet for many mounting setups and filming scenarios including use with gimbals, handheld

stabilizers, underwater and helicopter housings, and 3D/VR rigs, as well as in tight and unconventional spaces, such as in vehicles, on cranes or Russian arms.



The VENICE Extension System (CBK-3610XS), which consists of a front panel cover, image sensor block case with a 2.7m (9-foot) cable and a 2.7m (9-foot) extension cable, is compatible with existing VENICE cameras with Version 3.0 firmware installed.



The addition of the Extension System adds an HD-SDI output, a 12V or 24V output for powering accessories such as lens servo motors and monitoring. CBK-3610XS also comes with multiple mounting points on all surfaces to enable various rigs and accessories attachment.

VENICE SPECIFICATION

MPC-3610

General	
Power Requirements	DC12V (11–17.0V)
	DC24V (22–32.0V)
Operating Temperature	0–40°C
Storage Temperature	–20°C–60°C
Mass	Approx. 3.9kg (8lb 9.6oz) (excluding handle, VF attachment, bottom cover)
Dimensions: H x W x L	158 x 147 x 235 (6 1/4 x 5 7/8 x 9 3/8) (excluding protrusions)
Power Consumption	Approx. 60W

Camera	
Imaging Device	35 mm full size, single-chip CMOS image sensor
Imaging Device Pixel Count	24.8M (total)
Imaging Device Size	36.2 x 24.1mm 43.5mm Diagonal
Built-In ND Filters	Clear, 0.3(1/2), 0.6(1/4), 0.9(1/8), 1.2(1/16), 1.5(1/32), 1.8(1/64) 2.1(1/28), 2.4(1/256)
ISO Sensitivity	ISO 500, ISO 2500 (Dual Base ISO)
Lens Mount	PL Mount
	E-mount (lever lock type, without supplied PL lens mount adaptor)
Latitude	15+ Stop
Select FPS	3.8K 16:9, 4K 17:9: 1-60FPS,
	4K 4:3: 1-48FPS
	4K 6:5, 5.7K 16:9, 6K 17:9, 6K 1.85:1, 6K 2.39:1: 1-30FPS
	6K 3:2: 1-25FPS
White Balance	2000–15000Kelvin and Green/ Magenta adjust, AWB
Gamma Curve	S-Log3

Recording	
Recording Format (Video)	XAVC 4K Class480: 23.98p, 24p, 25p, 29.97p
	XAVC 4K Class300: 23.98p, 24p, 25p, 29.97p, 50p, 59.94p
	XAVC QFHD Class480: 23.98p, 25p, 29.97p
	XAVC QFHD Class300: 23.98p, 25p, 29.97p, 50p, 59.94p
	MPEG HD422 (1920 x 1080): 23.98p, 25p, 29.97p, 50i, 59.94i

Recording Format (Video)	HD ProRes 422HQ: 23.98p, 24p, 25p, 29.97p, 50p, 59.94p, 50i, 59.94i
	HD ProRes 422: 23.98p, 24p, 25p, 29.97p, 50p, 59.94p, 50i, 59.94i
	HD ProRes 422 Proxy: 23.98p, 24p, 25p, 29.97p, 50p, 59.94p, 50i, 59.94i
Recording Format (RAW/X-OCN) Required AXS-R7	RAW SQ:
	4K 17:9(4096 x 2160): 23.98p, 24p, 25p, 29.97p, 50p, 59.94p
	3.8K 16:9(3840 x 2160): 23.98p, 24p, 25p, 29.97p, 50p, 59.94p
	X-OCN XT/ST/LT:
	6K 3:2(6048 x 4032): 23.98p, 24p, 25p
	6K 2.39:1 (6048 x 2534)*: 23.98p, 24p, 25p, 29.97p
	6K 1.85:1 (6054 x 3272): 23.98p, 24p, 25p, 29.97p
	6K 17:9(6054 x 3192): 23.98p, 24p, 25p, 29.97p
	5.7K 16:9(5674 x 3192)*: 23.98p, 24p, 25p, 29.97p
	4K 6:5(4096 x 3432): 23.98p, 24p, 25p, 29.97p
	4K 4:3(4096 x 3024): 23.98p, 24p, 25p*, 29.97p*
Recording Format (Audio)	4K 17:9(4096 x 2160): 23.98p, 24p, 25p, 29.97p, 50p, 59.94p
	3.8K 16:9(3840 x 2160): 23.98p, 24p, 25p, 29.97p, 50p, 59.94p
Recording Format (Audio)	LPCM 4ch, 24-bit 48-kHz

Inputs/Outputs	
DC Input	XLR-type 4pin (male)
Battery DC Input	Square-shaped 5pin connector
DC Output	12V: Hirose 4pin x 1
	24V: Fischer 3pin x 2
SDI Output	BNC x 4, (12G*, 3G, 1.5G-SDI)
HD MONI Output	BNC x 1 (1.5G-SDI)
HDMI Output	Type A x 1
VF	LEMO 26pin
Audio Input	XLR-type 5pin (female) x 1 (LINE/ AES/EBU / MIC / MIC+ 48V selectable)
Timecode Input	BNC x 1
Genlock Input	BNC x 1
AUX	LEMO 5pin (female) x 1 (Timecode Output)
Remote*	8pin x 1
Lens*	12pin x 1

Lens Mount Hot Shoe	4pin x 2, conforming to Cooke/ i Intelligent Electronic Lens System
Network	RJ-45 type x 1, 10BASE-T, 100BASE-TX
USB*	USB host, type-A x 1
Headphone Output	Stereo mini jack x 1
Speaker Output	Monaural
Media Type	ExpressCard/ 34 slot x 2
	SD card slot x 1

*Firmware update required

CBK-3610XS

CBK-3610XS	
Power Consumption	Approx. 2.4 W (with 2.7 m extension) Approx. 3.9 W (with 5.5 m extension)
Operating Temperature	0 °C to 40 °C (32 °F to 104 °F)
Storage Temperature	-20 °C to +60 °C (-4 °F to +140 °F)
External Dimensions	Refer to the back of this document.
Mass	
CBK-3610XS	Approx. 2.9 kg (6 lb 6.3 oz) (excluding supplied accessories)
Imager Block to be installed to CBK-3610XS	with PL Mount: Approx. 1.9 kg (4 lb 3.0 oz) with E Mount: Approx. 1.4 kg (3 lb 1.4 oz)
Input/Output Connectors	24 V IN connector (Fischer 3-pin) (1) 24 V OUT connector (Fischer 3-pin) (1)
	MONITOR IN connector (BNC type) (1) MONITOR OUT connector (BNC type) (1)

AXS-R7

AXS-R7 (operating with MPC-3610)	
Dimensions	106 x 135 x 67mm (4 ¼ x 5 3/8 x 2 5/8 inch) (Width/ height/ depth)
Mass	Approx. 840g (1 lb. 13.6 oz.)
Interface Connector	144 pin
Battery DC Input	Square-shaped 5pin connector

DVF-EL200

DVF-EL200	
Dimensions	184 x 98 x 92mm (7 ¼ x 3 7/8 x 3 5/6 inch) (Width/ height/ depth)
Mass	Approx. 640g (1 lb 6.6 oz)
Brightness	200cd/m² (typical)
Resolution	1920 x 1080
Color Temperature	D65
VF Connector	LEMO 26pin (female)

AXS-AR1

AXS-AR1	
Dimensions	100 x 71 x 193.5mm (3 15/16 x 2 51/64 x 7 5/8inch) (Width/ height/ depth)
Mass	Approx. 1.0kg (2 lb 3.3 oz)
Operating System	Mac OS X10.10 or higher
Supplied Accessories	Thunderbolt Cable (1)
	AC Adaptor (1)

VENICE: Features Roadmap

	V1.0 FIRMWARE	V2.0 FIRMWARE (July 2018)	V3.0 FIRMWARE (February 2019)	V4.0 FIRMWARE (June 2019)
Imager Modes	4K 17:9 4K 16:9 4K 4:3 Anamorphic 6K 3:2 Full-Frame recording (without in-camera playback) When VENICE is set to 6K Full-Frame, SxS recording is not available	4K 6:5 Anamorphic 6K 1.85:1 6K 17:9 6K 3:2 (In-camera playback) When VENICE is set to 6K Full-Frame, SxS recording modes are supported	5.7K 16:9 6K 2.39:1	4K 2.39:1 for HFR
Lens Mount Support	PL lens mount (with ARRI® LDS and Cooke® /i™ technology)	E-Mount (lever lock type)	-	-
Recording Formats	16-bit RAW with AXS-R7 16-bit X-OCN with AXS-R7 XAVC® 4K/QFHD* MPEG50 (When camera is set to 4K mode)	Apple ProRes	X-OCN XT 47.952 project frame rate (4K 4:3 and 4K 17:9)	HFR shooting in Select FPS 4K 2.39:1 Max. 120FPS 4K 17:9 Max. 110FPS 4K 4:3 Max. 72FPS 6K 3:2 Max. 60FPS
Simultaneous Recording Combinations	RAW/X-OCN & MPEG50* XAVC 4K/QFHD & MPEG50* *When camera is set to 4K mode	RAW or X-OCN & ProRes	XAVC 4K/QFHD & Apple ProRes (Proxy only) RAW/X-OCN & XAVC 4K/QFHD	-
Shooting Functions	Variable White Balance (100K increments) Tint color correction control Relay rec. (SxS)	Select FPS (Off Speed) Dual Base ISO mode (High Base ISO 2500 added)	Cache Rec. (AXS, SxS) AXS Relay rec	RM/RCP control (Incl. paint) Cooke/i3 and Zeiss Extended metadata in X-OCN/RAW and XAVC
Monitor Out Functions	OSD on Black MLUT on Playback Independent MLUT On/Off (one preset) Double speed VF Two OSDs and two Markers selection 4K-SDI output in RAW/X-OCN recording	Independent MLUT select (several presets) MLUT in Off-speed shooting User 3D LUTs (install user-generated 16 or 33cube files) Preset LUTs for S-Gamut3.cine/S-Log3 and S-Gamut3/S-Log3 with EI applied	De-squeeze function (x1.25, x1.3, x1.5, x1.8) .cld file import 6G/12G-SDI 4K SDI output during RAW&HD Video simul rec	Pure P HD-SDI output in 25p/29p
Shooting Assist Functions	Digital Magnification in viewfinder Highlight Clip Indicator	Look Around (Surround View) High Resolution Magnification Auto White Balance High-Low Key False Color (use B button on DVF-EL200 viewfinder)	VENICE VF function control in EL200 SxS XDROOT Folder and Volume name changing to CamID+Reel# Configurable False Color on VF and HD Monitor False Color (SDI Monitor) 2:1 Frame Line preset	LINE+MASK Frame Line
Hardware	Visit pro.sony/VENICE	Inside Clips Button	12-pin lens remote	S700 Protocol
Network Functions	-	Wired LAN control (basic functionality)	Wireless LAN control (CBK-WA02) Wired LAN control (full menu)	-

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