

Jon Fauer, ASC

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ARRI ALEXA 265 Camera Report

Walter Trauninger Introduction



Walter Trauninger in the ARRIAL Museum—with (right to left) the new ALEXA 265, ARRIFLEX 765 and ALEXA 65.

Walter Trauninger is Managing Director of Arnold & Richter Cine Technik. He joined ARRI in 1986 and was head of development of the ARRIFLEX 435, 235 (with its wonderfully sculptural dolphin fin shaped magazine), 416, ARRICAM, ALEXA, and AMIRA cameras.

Jon Fauer: Before introducing the new ARRI ALEXA 265, please remind us about your long involvement in the 65mm format.

Walter Trauninger: That was one of the reasons ARRI Austria was founded in April 1986. I was part of the team working on the original ARRIFLEX 765 film camera. I was assigned to the camera's movement and drive system design team.

The initial goal was to run up to 100 fps, which was no small undertaking considering that the acceleration of the 65mm film loop exceeded 1,000 G. We all started by working at drawing boards, which was very cumbersome. Fortunately, I got an early IBM PC XT computer for the calculations and we introduced CAD at ARRI Austria, which enabled us to speed up the calculations from many hours to a couple of minutes.

Two years later I took over as 765 Project Manager. We announced the camera in 1989 and before long it was available to productions. A particular highlight came in 1993 with *Little Buddha*, directed by Bernardo Bertolucci and filmed by Vittorio Storaro, ASC, AIC, who used the 765 for historical flashbacks.

That's a long time to develop a camera for a format used on only a handful of films. Why did ARRI want to build the 765 camera?

Originally, there was interest in higher frame rate acquisition, so we wanted a 65mm camera that could reliably shoot at 60 fps for an entire production. The image quality was remarkable because you didn't have motion blur. The impression was incredibly realistic, but you had to project it at 60 fps as well.

Jumping ahead, the 65mm format continued in the digital age with the ALEXA 65, launched in September 2014—and now, 10 years later, the ALEXA 265—December 2024. Clearly there's magic in the larger format. Why does ARRI spend so much time and effort, using so many resources on a format that's a relatively niche market?

ALEXA 265

We have always wanted to make cameras offering the highest image quality to the top end of the market. The 765 was mainly used for specific scenes or sequences in films that required exceptionally high image quality, and it is still used for that today.

The ALEXA 65 taught us that if you can offer an efficient digital workflow, filmmakers want to shoot entire movies in 65mm. Once that had been proven so successfully, it made sense to stick with the format and offer a smaller, modernized camera.

Why do you think there's so much interest in the 265?

The 65mm format is inspiring and aspirational, and the 265 is the next step forward for that format.

The resolution is very high, and yet the pixels are still large. We enhanced its low-light performance, denoising algorithms, dynamic range, and above all, made it smaller and lighter and more ergonomic. The sensitivity and dynamic range are not compromised; they are improved.

The ALEXA 265 offers cinematographers and directors a different perspective, a different point of view that comes with this format.

Some people wonder whether you will build new 65mm format lenses for the 265 cameras. Signature 65 lenses would be nice.

Let's see...

What were the challenges in manufacturing the 265?

It was challenging because it is not a mass-production camera—partly because of the high manufacturing costs, and also because the market is not that big. And if you make too many cameras, it's not so special anymore.

Why is it so expensive?

The revision to the sensor was a very intensive process that required a lot of resources. Also, the amortization of development costs per camera were high, given that we were only making 100 cameras.

In summary, what was the idea behind doing the 265 camera?

Our concept is to offer the best camera you can get in every capture format. The 265 reflects our commitment to the highest discipline of filmmaking by offering a versatile and fully featured camera for the 65mm format.



ALEXA 265



Right



Left



Front



Rear



Top



Bottom



Andrew Prior and ALEXA 265 camera body

David Zucker is Product Manager of the ALEXA 265 camera system. Andrew Prior is Head of Technology and Development for ARRI Rental worldwide. Both are based at ARRI's UK facility in Uxbridge, a suburb of London.

Jon Fauer: Please remind us about your backgrounds with the 65mm format at ARRI.

David Zucker: I was part of the team that developed the ALEXA 65. I was based at ARRI in Munich at the time, working alongside the R&D and sensor development teams. Originally, we were only going to produce 30 cameras because we thought it would be used mainly for VFX work and special sequences, but filmmakers immediately wanted to shoot whole movies in 65 mm, so we ended up making 70 camera bodies. I provide tech support to ALEXA 65 productions and I have maintained the camera fleet over the past decade.

Andrew Prior: I've been with ARRI for around 20 years and I was involved in the rollout of ALEXA 65 in 2015. Since then, I have been a contact person for many of the big productions that worked with the camera. I also managed ARRI Rental's lens development program, producing 65mm format optics such as the Prime DNA series.

When did you start thinking about an updated 65 mm camera?

David: The ALEXA Mini came out soon after the ALEXA 65. The Mini's success pointed to where camera sizes and shapes were going. It didn't take long before cinematographers were asking for

a smaller version of the ALEXA 65, especially after the ALEXA Mini LF appeared in 2019. But the technological breakthroughs of the ALEXA 35—especially cooling and power management—really made it possible for us to fit a 65mm sensor into a significantly smaller camera.

Andrew: We put together a technology proposal and business case about two-and-a-half years ago and that went through an internal approval process. It helped that a number of ALEXA 65 films were up for major awards around that time, so there was a lot of positive sentiment about the format. The final green light to go ahead with the project was less than two years ago.

Please describe your job as Product Manager.

David: It's about bridging the gap between the technical development team and the end users. I work very closely with the Project Manager, Michael Göpel, and the R&D team.

At the earliest stages of the project, my role was to keep a close eye on the utilization of the 65mm format—how people were using it (as well as other cameras) and to make sure we developed a product that would suit their requirements with the flexibility and features they needed.

I have always loved the technology that goes into building these cameras. Working alongside such incredible engineers blows my mind and feeds my passion. Throughout the development phase, I couldn't restrain myself from being very hands-on with testing and using the camera. That does not stop after the camera is released.



David Zucker working on ALEXA 265 prototype

Do you listen to specific feedback from cinematographers?

Andrew: Yes, the basic parameters of the project were guided by direct feedback from ALEXA 65 cinematographers, camera operators, assistants, directors, producers and crew. Over the last 10 years, we have serviced hundreds of ALEXA 65 projects across our three rental regions (US, UK and EU) and we have direct relationships with those filmmakers. In supporting them, we also ask about their experiences working with the camera—what they like and what they don't.

Certainly, we were aware that they all wanted a smaller 65mm camera, because many of them would carry an ALEXA Mini LF for shots requiring a more compact body. But we also learned that they didn't want us to mess around with the image too much. Few people were asking for more resolution than the 6.5K of ALEXA 65. They loved the image they already had, but were interested in improvements like higher dynamic range, greater sensitivity and easier workflow. And so, that's where we focused our efforts.

How did those comments land in camera development?

David: We developed a completely new revision of the existing 65mm sensor, expanding dynamic range from 14 to 15 stops, increasing sensitivity from 3200 to 6400 EI and reducing noise. At the same time, we put a lot of work into finessing the optical path of the new camera body. Reducing the amount of stray light has increased contrast and will allow for the true nature of the lens

to be revealed in the image without any optical contamination. We're very excited about the images this camera can produce.

Take us on a tour of ALEXA 265 recording, data wrangling and post production.

Andrew: The workflow is pretty much identical to that of the ALEXA 35. The ALEXA 265 records onto the same Codex Compact Drives as the ALEXA 35 and Mini LF. It only records ARRIRAW, and has three sensor modes: 65mm 6.5K Open Gate, 5.1K crop, and 4.5K crop (which is the familiar ALEXA Mini LF Open Gate sensor size and resolution). So, you can shoot with Large Format lenses on this camera as well.

A big priority for the project was to offer non-specialized data wrangling because we wanted to make 65mm as easy to work with as any other format. You can use any Codex Compact Drive reader or docking station, and like all ARRIRAW cameras, the ALEXA 265 is compatible with HDE.

Is HDE the compressed Codex codec?

David: HDE stands for High Density Encoding. It's not compression in the sense of reducing quality, but it is a method of reducing ARRIRAW file sizes. Essentially, it's like a .zip file that is reduced in size when you send it via email. When it is opened at the other end, you don't lose anything. HDE is completely lossless encoding. The camera will always record non-HDE. But, when you offload the files, you can create an HDE copy on-the-fly with

Andrew Prior and David Zucker

the Codex Device Manager or the ARRIRAW HDE Transcoder, reducing file sizes by around 40%. It's a very useful tool, especially for the higher data rates of larger formats like 65mm, because it saves productions a lot of time and money without affecting image quality.

As part of the effort to enable easy workflows and post-production, ARRI is releasing an update version of its SDK alongside the ALEXA 265 that will allow third-party tools commonly used in our industry to integrate easily with ARRIRAW content shot on this camera. As with all ARRIRAW, it's uncompressed RAW, so no compromise there.

Please explain the in-camera filter system that was developed for the 265?

Andrew: The filter cartridge system is unique to the ALEXA 265. Instead of an internal ND filter mechanism, you slide a cartridge in from the side of the camera. It can be an ND or any type of effect filter and it sits between the sensor and the lens. We're making full sets of ARRI FSND filters. They will be supplied with the camera in single stop increments.

David: An encoded chip on the filter tray carries information about what filter is being used—information that is visible on the user interface and travels all the way through with the recorded footage and the live SDI output in metadata. What's exciting about this filter cartridge system is its flexibility and creative potential. It can carry any type of filtration, or even optical elements, and the encoded chip will always tell the camera what filter is being used, and what it's doing to the image.

Does the ALEXA 265 use the same color science as the ALEXA 35 camera?

David: Yes, the ALEXA 265 uses the same LogC4 workflow and the same REVEAL Color Science as ALEXA 35. We have also implemented super color matching, whereby each 265 camera matches every other 265, and aligns nicely with the ALEXA 35 and every future ARRI camera. To achieve this, the spectral response to light of every camera is profiled because there can be slight variations in color between each sensor. First with the ALEXA 35 and now with the 265, we profile those spectral responses and compensate for the tiny variations, with the result that every camera matches, making color grading easier.

Andrew: Another important point is that the ALEXA 265 also uses the same accessories that were developed by ARRI for the ALEXA 35. These include the Production Support Set, with the cage and all the mounting points, so the new camera can be rigged and operated in much more versatile ways than the ALEXA 65 could. Combined with the smaller size and weight, it means the ALEXA 265 completely dispenses with the physical limitations that used to go hand-in-hand with bigger and heavier 65mm cameras. Now, with ALEXA 265, you have amazing image quality and you also have unrestrained creative freedom.

In what other ways is the camera easier to work with on set?

Andrew: Monitoring options are much better than they were with the ALEXA 65, mainly because we've got UHD outputs now, with 1.5G, 3G, 6G and 12G options. You can monitor in HD or UHD; in SDR or HDR, or both. It's just a more modern setup having the same workflow as ALEXA 35. You can apply looks and moni-

tor any way you want, and it doesn't affect the ARRIRAW you're recording.

David: There are all the REVEAL Color Science benefits like a Log-to-Log lookup table, enhanced look management, and full compatibility with on-set grading options like Pomfort Livegrade. ARRI recently introduced custom color management under the REVEAL umbrella and the ARRI Look Library is available for this camera as well.

I think UHD and 4K monitoring is important because focus pullers seem to rely on it for formats with ever shallower depth of field.

Andrew: Absolutely. Monitors like the 17-inch SmallHD and even UHD prosumer panels have become quite popular focus tools. The camera also has a magnification feature where you can zoom in on the sensor. It's not just magnifying the HD image output; it's a native zoom in on the sensor so you can really use it to evaluate sharpness. We often see DPs or focus pullers assigning a user button to this feature, just to check focus.

What have been your favorite experiences over the past 10 years of ALEXA 65 and what do you think is special about the 65mm format?

Andrew: The best experiences of the last 10 years have been the relationships we've built with filmmakers through the 65 camera and lens program. The format is special because of its size—the magnification and the field of view—but also because of its history and the emotional relationship filmmakers have with it.

David: That's right—this camera is the closest you're going to get to a 5-perf 65mm film frame. It comes directly out of that cinematic history. Because of its form factor and versatility, the ALEXA 265 will allow cinematographers to achieve images that have never really been seen before in 65mm. The bottom line is that we just love the format, we know that creators love the format, and we want it to continue.





Dr. Joachim (Achim) Oehler has been with ARRI for 25 years. He worked on every ARRI digital camera ever made. He was head of the ARRISCAN project, project manager for the D-20 and D-21 digital cameras, and managed the ALEXA project through first customer deliveries. He was the project leader of the original ALEXA 65 camera. These days, he has the title of Director Imaging Frontend R&D Camera Systems ARRI Group. If that's a mouthful, he was originally a geophysicist and planetologist working on basic research for digital imaging on planetary missions—in short, a rocket scientist.

Achim supervised sensor development for the ALEXA 265.

When the ALEXA 65 came out in 2014, Achim told us, “After introducing the ALEXA camera, there was an idea to build a larger format camera based on that sensor. As large as possible. This was especially because Franz Kraus, our CTO and Managing Director at the time, wanted to have a 65mm format camera since forever. It was interesting because we already had a 65mm ARRISCAN in our ARRI Film & TV services department because we already loved larger formats. It was, and still is, a passion for most of us.”

Jon: What is different about the sensor in the new ALEXA 265?

Achim Oehler: It's a revised version of the familiar ALEXA 65. We invested a significant amount of resources to revise it, so it's not just a quick fix that avoids altering the underlying layers. It can almost be thought of as a new sensor—a complete revision where you change the layout, you improve the circuits, and you

redo the entire sensor with a new mask set. So, that's what it is: a real, true, revision B sensor that took a lot of work and investment, and we are very proud to have it.

Will this carry over to other cameras in the future?

It will in the sense that many design principles of our high dynamic range sensors are certainly respected and carried over to the new sensors in development. Because our basic principle is to have a dual-gain architecture, that's something not easy to do. All the experience of these big sensors with internal multi-gain architecture is naturally being used in the future designs we are already working on.

Can you explain the dual-gain architecture a bit more?

You have a pixel and the pixel is read out in two passes. We call one pass high gain and the other low gain. The pixel itself delivers a signal for each of them. So, it's not just that you take one signal from the pixel and amplify it in two different ways, it's that the pixel delivers two different signals that are amplified in two different ways. And then, the sensor delivers two frames that are blended into a single frame in the processing electronics of the camera.

Is there a delay? Do you get any motion blur?

No motion blur and absolutely no artifacts. Obviously on a microsecond scale there is a delay, but nothing that is relevant for motion picture shooting. It's effectively the same point in time where the high and low gain are sampled and then combined in the electronics.



Achim Oehler with ALEXA 265 prototype

Will images from the ALEXA 65 and ALEXA 265 match, or will they look different?

The color processing isn't the same because the ALEXA 265 uses REVEAL Color Science, which we developed for the ALEXA 35 and is based on LogC4, so colors may look a little bit different. Also, there are improvements to the usable dynamic range and sensitivity of the ALEXA 265. These are a combination of what the revised sensor is capable of and what the improved image science delivers. Both cameras provide a very high-quality 65mm image and if you needed to match them in a color grade, you could do so very easily.

What is it that sets ARRI sensors apart?

One big difference is the question of whether you put A/D converters on-chip or off-chip. To put A/D converters off-chip, as we do in the ALEXA 265 and also the original ALEXA 65, is something special. We believe it's very beneficial because the thermal load from the chip is minimized since the A/D converters consume most of the power. Due to our high dynamic range architecture, we need to temperature-stabilize the sensor. The Peltier cooling for those sensors is essential. If the A/Ds are not on-chip, then they don't need to be cooled as well. It takes away thermal load from the part that you have to temperature-stabilize.

Another advantage of off-chip A/D converters is that you're free to choose the technology nodes for A/Ds and sensors separately. That way you can optimize both because a seamless sensor technology

stack is not exactly what you need to create a good A/D. But ARRI is unusual in doing this because it is a unique art to build an imager with analog outputs and that rarely exists anymore.

How is the cooling different in the new ALEXA 265 camera compared to the ALEXA 65?

It's optimized: much more advanced and very lightweight. The complete cooling logistics have been redesigned. The heat pipes from the sensor and the radiator, combined with the main airflow through the camera, have all been improved.

Is the sensor work and image science done in-house at ARRI? How does your team interact with the color science team?

I lead a team of 16 people at ARRI in our Imaging Front End department. We do the sensor, the front end—everything up to the linearized image. And then, this linearized and artifact-free image is sent over to the image science team members who do their magic.

Your team is quite large.

Yes, we need it. Characterization of a sensor consumes a lot of manpower. For the actual sensor design, we do not do everything completely on our own. We set up the project and manage it so that ultimately we own the design. That's a crucial point—if the design is owned by a design house and they vanish from the market, which happens often, then it's a problem. You can create better sensors if you have complete control over the design, so that's what we do.



Michael Göpel is a Senior Project Manager at ARRI, responsible for the ALEXA 265. He is based at ARRI's headquarters in Munich, having joined the company in 2018 after a decade spent building optical systems for space flight applications.

Please tell us, what's the difference between a Project Manager and a Product Manager?

Michael Göpel: The Product Manager defines the look and the features of the camera. That's David Zucker.

As Project Manager, I lead the product development, managing the R&D team and carrying out the development tasks. So, it's my responsibility to make sure all of David's feature requests are met. I also manage the budgets, costs and timelines so the entire team can do their work.

Did you have any background with the ALEXA 65 or the 65 mm format?

When I first joined ARRI, I worked on the Signature Prime lens project. Then I moved over to camera and sensor development. Quite early on, I became responsible for the ALEXA 65 maintenance and upgrade program, keeping the camera up-to-date and introducing new features. Because the ALEXA 65 is a rental-only product, I was working with both the ARRI Rental team and the ARRI Camera Systems team. That is when I fell in love with the 65mm format.

What was the biggest challenge for you with the ALEXA 265?

It was how to get such a big sensor into such a comparatively small body without sacrificing image quality. Our starting point was the ALEXA 35 body. Next, we worked on finding ways to make the 65mm sensor and everything else fit. We built a demonstrator mock-up with a sensor board that had to be manoeuvred into the available space. Then, it was all about refining the front end of the camera. We had to do lots of analysis, design iterations, simulations and calculations on how to get this big sensor and cover glass in there— while making sure that we didn't have issues with stray light.

Workflow was the second big challenge. We wanted to get rid of the need for any external device, like the Vault, which meant doing all the image processing inside the camera. We had to ensure that the sensor would deliver a very good image that didn't need post-processing.

Furthermore, we developed a new processing board for the camera using different technology with lower power consumption. So, the ALEXA 265 is not power-hungry at all. In fact, its power consumption is less than the ALEXA 35.

Is it a totally new processor?

It's a new FPGA. Basically, we had to make adjustments to the image chain and all the internal processing, but this also helped to make the camera a bit smaller overall. That was very successful. The ALEXA 265 is only 4 mm longer and 11 mm wider than the ALEXA 35, which means that all the same accessories can



L-R: Andrew Prior, Achim Oehler, Michael Göpel, David Zucker

be used, with the exception of one side bracket. We wanted to achieve this because it makes things easy for end users. Viewfinders, support and mechanical accessories are all the same. That helps with the acceptance of a new product. We want to enable users to be more creative without the burden of too many new things. Keep it simple.

Why did you decide on the new filter cartridge system rather than the internal ND filter slider of the ALEXA Mini LF?

The ALEXA 65 had the Internal Filter Module (IFM) option. You had to insert the ND filters from the front, with the lens removed. We wanted to move on from that. A mechanical slider system with a couple of filter stages would have been an option, but the more we looked at it, the more flexibility we wanted. We knew from speaking to cinematographers that they wanted NDs in single stops all the way from ND.3 up to ND2.7, and a cartridge system could achieve that within the project timescale.

Once we hit on the filter cartridge concept, it grew and grew, with more people contributing ideas. When we shared the idea with filmmakers, they liked it. One of the first DPs who saw it immediately opened the filter cartridge door and started shining a flashlight inside to see what it did to the image. We hadn't even tried that ourselves. There are all kinds of possibilities for the future; it's a very expandable system.

David talked about how feedback from filmmakers was important to the development process.

It was. I was in Los Angeles and, together with some colleagues, had the opportunity to talk to several cinematographers—established names and upcoming talents. It was very interesting to get their feedback and hear what they were looking for.

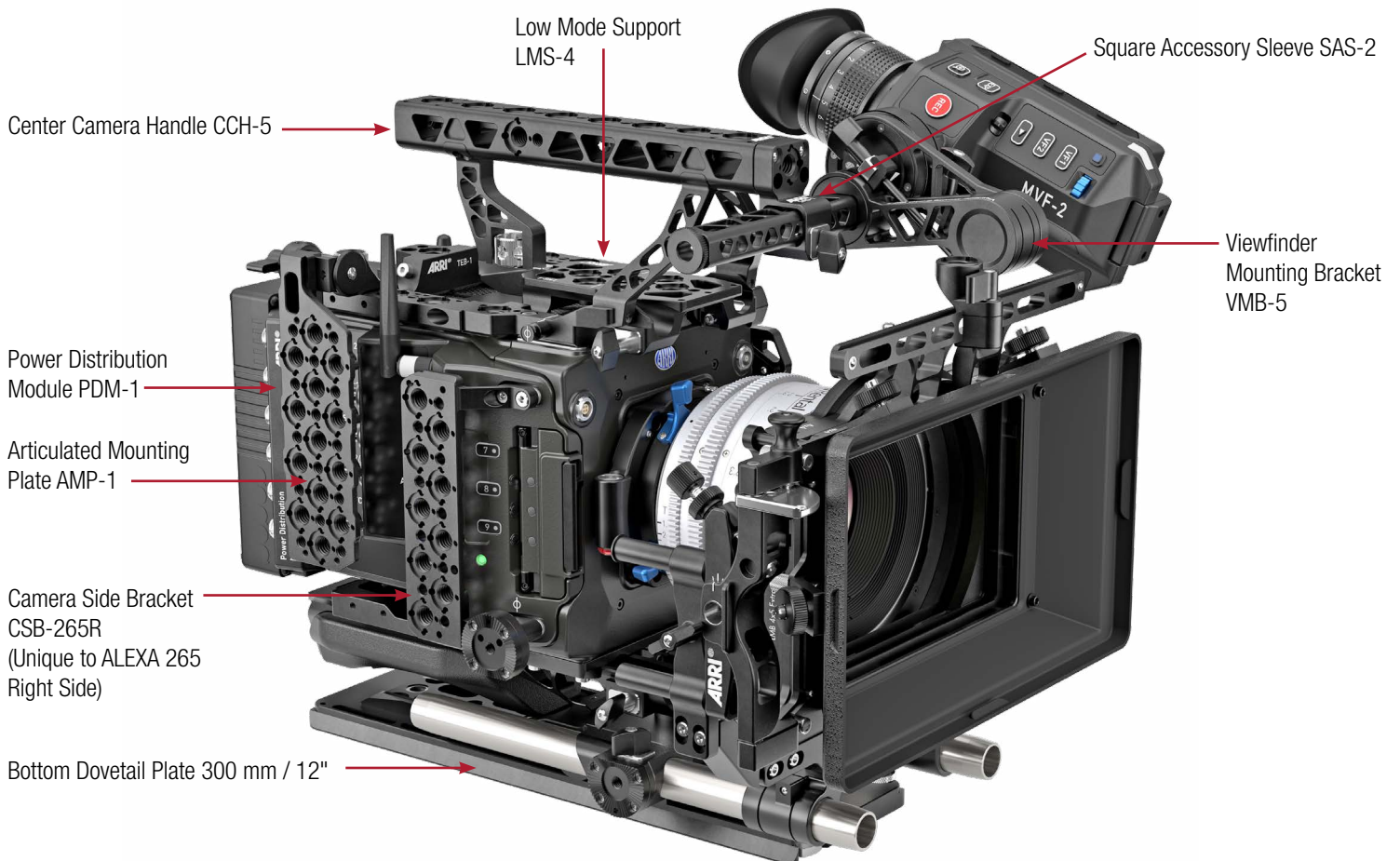
We were gratified that there was a lot of excitement with this new camera and with the 65mm format. I'm looking forward to seeing the ALEXA 265 out there and in the hands of filmmakers—and watching what they do with it. Hopefully, they will be doing things to tell their stories in ways we haven't even thought of.



ALEXA 265 Studio Mode



Compact Bridge Plate CBP-5



Center Camera Handle CCH-5

Low Mode Support LMS-4

Square Accessory Sleeve SAS-2

Viewfinder Mounting Bracket VMB-5

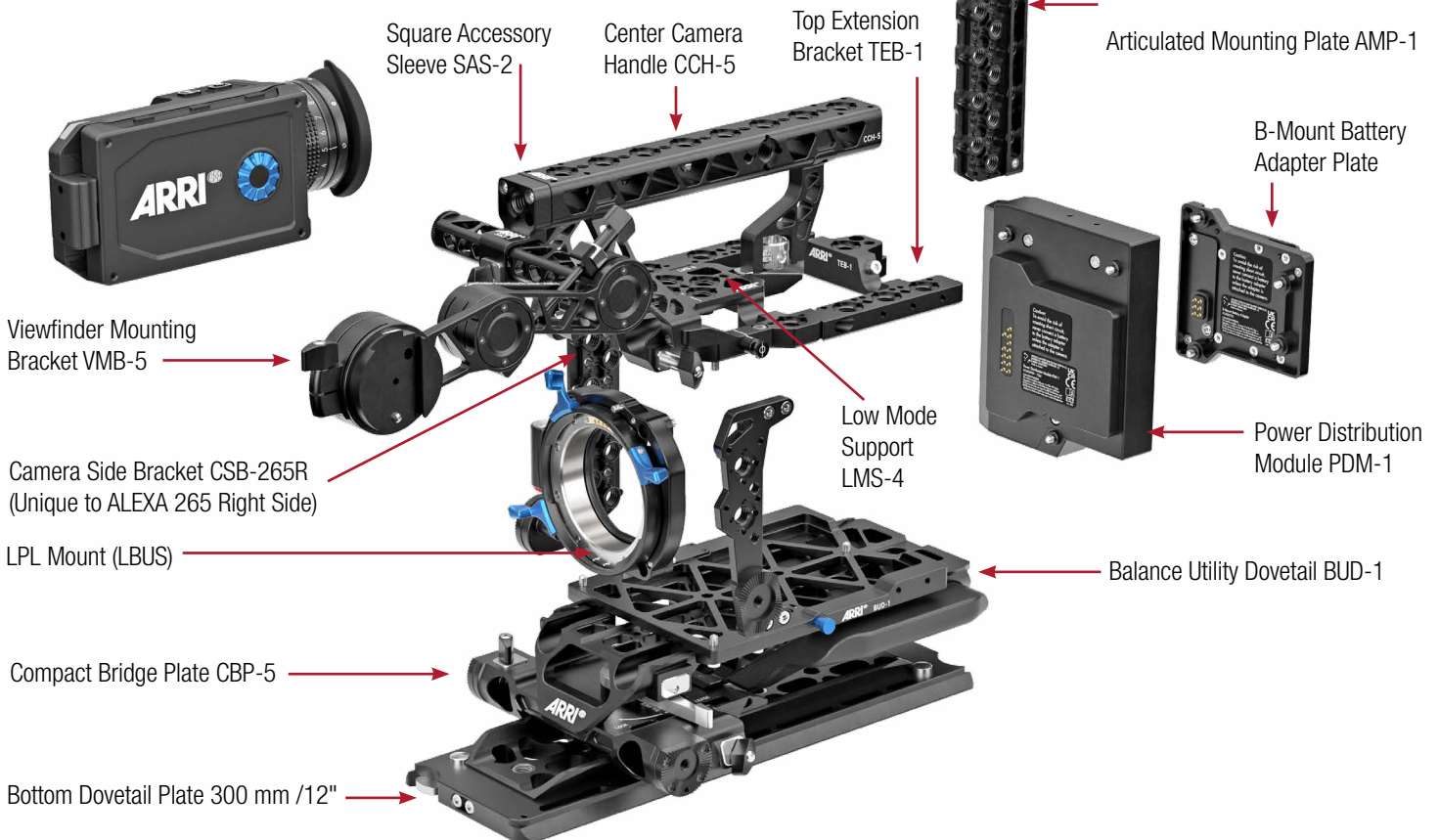
Power Distribution Module PDM-1

Articulated Mounting Plate AMP-1

Camera Side Bracket CSB-265R
(Unique to ALEXA 265 Right Side)

Bottom Dovetail Plate 300 mm / 12"

265 AKS - Accessories



265 Filter Cartridge

You may ask, “Why doesn’t the 265 have an ND filter wheel or slider system?”

Look inside and peer at the enormous 65mm sensor. Oh, internal filters would add a lot more real estate.

The 265 Filter Cartridge System is clever. Open its door on the camera left side. Insert the Filter Cartridge.

It’s a lot easier and faster than attaching a filter to the rear of a lens. Clearly, you are asking for more than NDs. You are thinking of effect filters, and little LED Varicons. And what about a small, electronically variable ND?



Filter Cartridge Access Door is weather-sealed to keep dust and spray out



Filter Cartridge inside: here’s an ND1.2



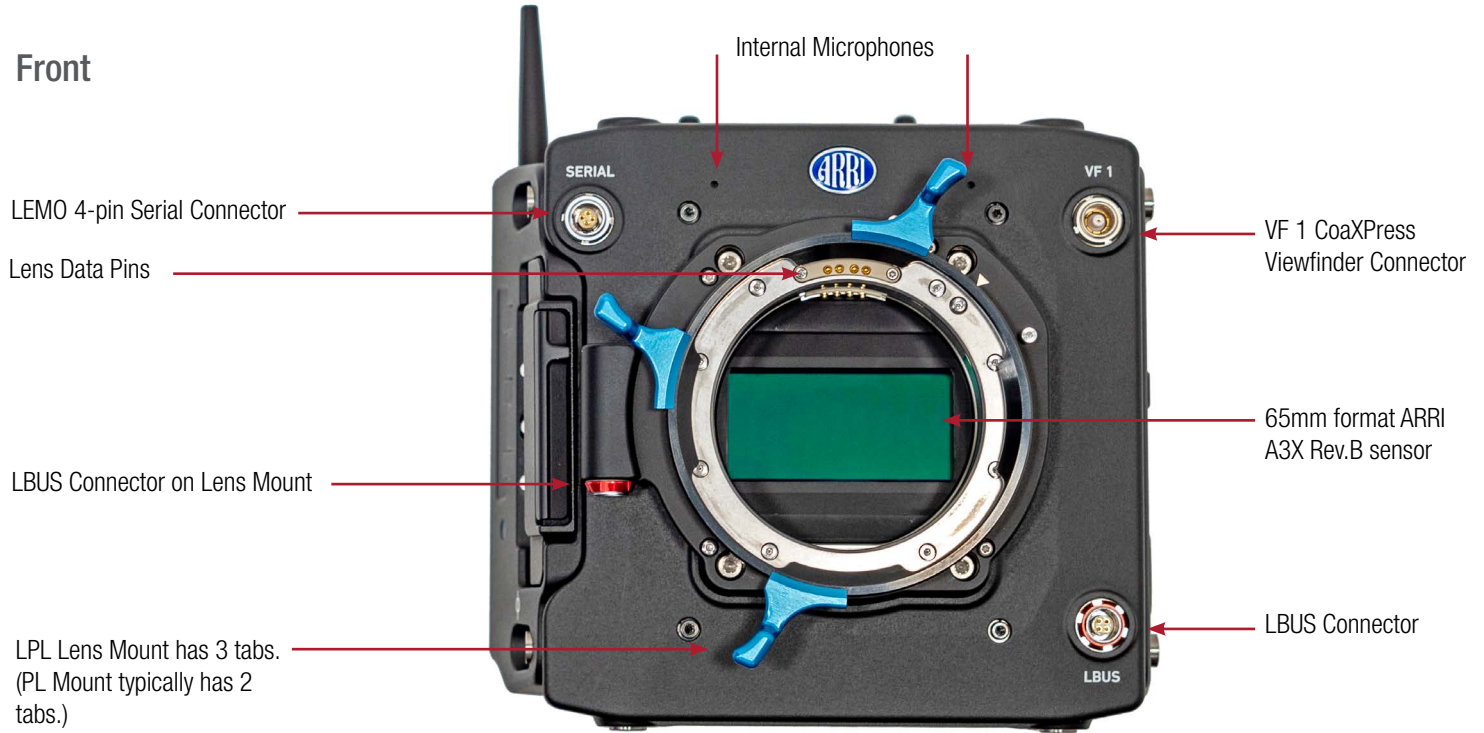
The ALEXA 265 camera can record metadata from the Filter Cartridge and the information can be displayed live on monitors.



Filter Cartridge removed

ALEXA 265 Camera Views

Front



Camera Left



ALEXA 265 Camera Views

Camera Right

Connectors:

VF 2 Viewfinder

SDI 1 OUT

SYNC IN

SDI 2 OUT / RET IN

TC (Timecode)

Battery LED

WiFi Antennas

Antenna for wireless lens control, lens data communication and camera remote control using ARRI Hand Units.

Side Attachment Point

Fischer 3-pin 24V R/S

LEMO 2-pin 12V

AUDIO

LEMO 10-pin for Ethernet, remote control, 24V and service

Side Attachment Point

Status LED

LEMO 8-pin for External Power IN

External Power IN LED

Rear

B-mount Onboard Battery Plate

Media Door

Codex Compact Drive



ALEXA 265 Specs

Sensor	6560 x 3100 photosites. 54.12 x 25.58 mm. 59.86 mm Ø. 65mm format ARRI A3X Rev.B CMOS sensor with Bayer pattern color filter array. 8.25 µm photosite pitch. Optical low pass, UV, IR filter.				
Sensor Frame Rates	0.75 - 60 fps				
Project Frame Rates	23.976, 24, 25, 29.97, 30, 48, 50, 59.94, 60 fps				
Camera Weight	3.3 kg / 7.3 lb (camera body with three antennas and LPL Mount (LBUS))				
Camera Size	147 x 163.3 x 191.4 mm / 5.79 x 6.43 x 7.54 in (HxWxL camera body with LPL lens mount)				
Sensor Modes	Active Image Area (Dimensions)	Image Circle Diameter (Ø)	Active Image Area (Photosites)	Recording Resolution (Pixels)	Top Speed Maximim fps (ARRIRAW)
6.5K Open Gate 2.12:1	54.12 x 25.58 mm	59.86 mm	6560 x 3100	6560 x 3100	1TB: 29 fps 2TB: 60 fps
5.1K 1.65:1	42.24 x 25.58 mm	49.38 mm	5120 x 3100	5120 x 3100	1TB: 37 fps 2TB: 60 fps
4.5K LF 1.44:1	36.7 x 25.54 mm	44.71 mm	4448 x 3096	4448 x 3096	1TB: 43 fps 2TB: 60 fps
Exposure Index	Adjustable from EI 160 - 6400 in 1/3 stops				
Dynamic Range	15 stops				
Shutter	Electronic shutter, 5.0° - 358° or 1s - 1/8000s				
Recording Codec	MXF/ARRIRAW (ARRIRAW is recorded as MXF files, as with ALEXA 35.)				
Recording Media	Codex Compact Drive 1TB (CA08-1024), Codex Compact Drive 2TB (CB16-2048)				
Recording Modes	Standard as well as pre-recording.				
Viewfinder Type	MVF-2 (Multi Viewfinder) OLED 1920 x 1080 EVF, and 4" LCD 800 x 480 flip-out monitor. Same as ALEXA 35. Viewfinder diopter is adjustable from -5 to +5.				
Color Output	Rec 709, Rec 2020, Rec 2100 PQ, Rec 2100 HLG, LogC4				
Look Control	Custom color look (using ARRI Look File ALF4 or ARRI Look Library) Custom Color Management				
White Balance	Manual and auto white balance, adjustable from 2,000K to 11,000K. Color correction adjustable from -16 to +16 CC (1 CC corresponds to 1/8 Rosco Plus and Minus Green).				
Filters	Drop-in Filter Cartridge System with filter identification				
Anamorphic Squeeze Factors	1.00, 1.25, 1.30, 1.33, 1.50, 1.65, 1.80, 1.85, 2.00, 1.30 Vertical, 1.33 Vertical, 1.50 Vertical				
Exposure and Focus Tools	False Color, Zoom, Aperture and Color Peaking				

ALEXA 265 Specs

Lens Mounts and Adapters	ARRI LPL Mount (with LBUS connector) ARRI LPL-to-PL Adapter ARRI PL Mount (with LBUS connector) ARRI PL Mount (with Hirose connector) ARRI EF Mount (with LBUS connector) Leitz M Mount for ARRI
Flange Focal Depth	LPL Mount: 44 mm PL mount: 52 mm
Power Consumption	20.5 V - 33.6 V DC. ~75 W (camera body with MVF-2 viewfinder).
Power Inputs	1x PWR — LEMO 8-pin for external power 1x BAT — interface at rear for onboard battery plate
Power Output Connectors	1x RS — Fischer 3-pin for 24 V accessories, remote start/stop and shutter pulse 1x 12 V — LEMO 2-pin for 12 V accessories 1x LBUS — LEMO 4-pin has 24 V power out. 1x AUDIO — LEMO 6-pin can provide 12 V accessory power out 1x ETH — LEMO 10-pin has 24 V accessory power out PDM-1 Power Distribution Module accessory attaches to the rear of the camera: provides 4x 24 V, 2x 12 V, 1x D-Tap and B-mount battery plate.
Image Outputs	2x VF — CoaXPress for MVF-2 viewfinder and CCM-1 Monitor 2x 12G SDI — BNC: 422 1.5G HD; 422 3G HD; 444 3G HD; 422 6G UHD; 422 12G UHD; 444 12G UHD
Connections	1x LBUS — LEMO 4-pin for lens motors, daisy chainable 1x SERIAL — LEMO 4-pin for distance measuring accessories 1x TC — LEMO 5-pin for timecode In/Out 1x ETH — LEMO 10-pin for Ethernet, remote control, 24V and service 1x SYNC IN — BNC for Genlock 1x RET IN — BNC, switchable on SDI 2 1x USB-C for user setups, look files, etc. 1x Rear Interface — 18-pin Pogo 1x Top Interface — 5-pin Pogo
Audio Recording	4 channel linear PCM (24 bit, 48 kHz)
Audio Inputs	1x AUDIO — LEMO 6-pin for balanced stereo line in. (camera left side) (Line input max. level +24 dBu correlating to 0 dBFS) 2x built-in microphones for scratch audio Audio Extension Module AEM-1 accessory provides additional 3x TA3 connectors: (MIC/Line, +48 V, AES)
Audio Outputs	SDI (embedded). 3.5 mm stereo headphone jack on MVF-2.
Sound Level	< 20 dB(A) at 30fps, recording 6.5K Open Gate, ARRIRAW, ≤ +30° C ambient temperature
Remote Control	Camera Companion App ARRI Electronic Control System (ECS) Web-based remote control from phones, tablets and laptops via WiFi & Ethernet Camera Access Protocol (CAP) via WiFi & Ethernet GPIO interface for integration with custom control interfaces
Wireless Interfaces	Built-in WiFi module (IEEE 802.11b/g) Built-in White Radio for ARRI ECS lens and camera remote control

Some specifications may be preliminary. Subject to change. Also, production cameras may look slightly different from prototypes shown in this report.

ALEXA 265 — 3 Sensor Modes

ALEXA 265 6.5K Open Gate

6560 x 3100 photosites
 54.12 x 25.58 mm
 2.12:1 aspect ratio
 59.86 mm Ø
 0.75 - 60 fps

ALEXA 265 5.1K

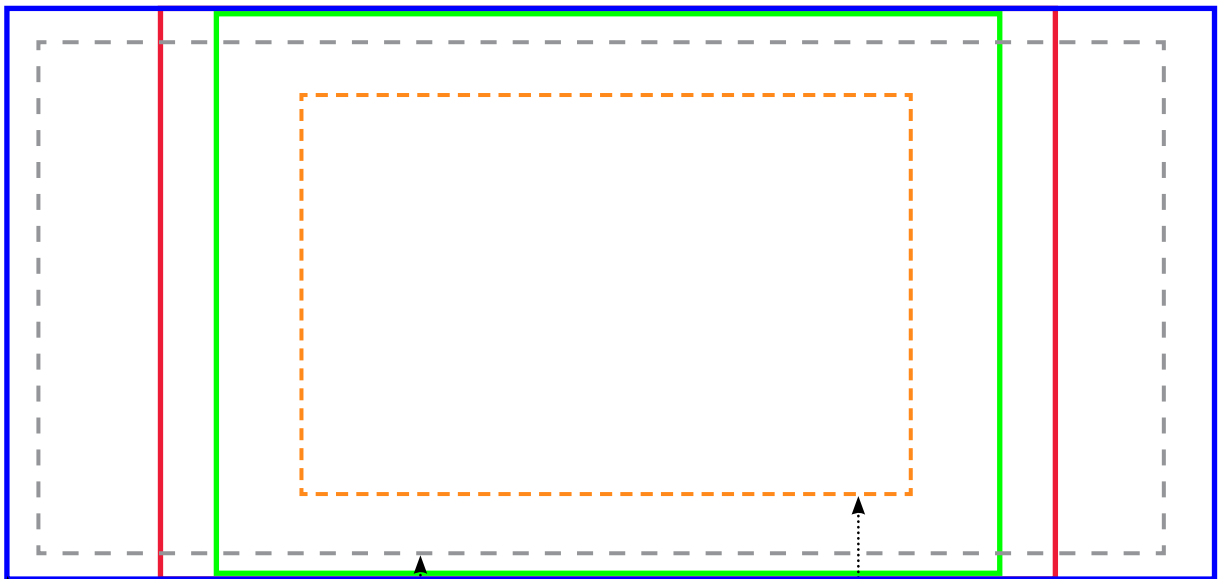
5120 x 3100 photosites
 42.24 x 25.58 mm
 1.65:1 aspect ratio
 49.38 mm Ø
 0.75 - 60 fps

ALEXA 265 4.5K

4448 x 3096 photosites
 36.70 x 25.54 mm
 1.44:1 aspect ratio
 44.71 mm Ø
 0.75 - 60 fps
(Same sensor area and resolution as ALEXA Mini LF; however Mini LF top speed is 40 fps in Open Gate.)



ALEXA 265 compared to ALEXA Mini & ARRIFLEX 765



ALEXA 265 6.5K Open Gate
 54.12 x 25.58 mm (6560 x 3100)
 2.12:1 aspect ratio
 59.86 mm Ø

ARRIFLEX 765 film camera
 52.5 x 23.0 mm
 2.28:1 aspect ratio
 57 mm Ø

ALEXA Mini (Super35)
 28.25 x 18.17 mm (3424 x 2202)
 1.55:1 aspect ratio
 33.59 mm Ø

ALEXA 265 Framelines

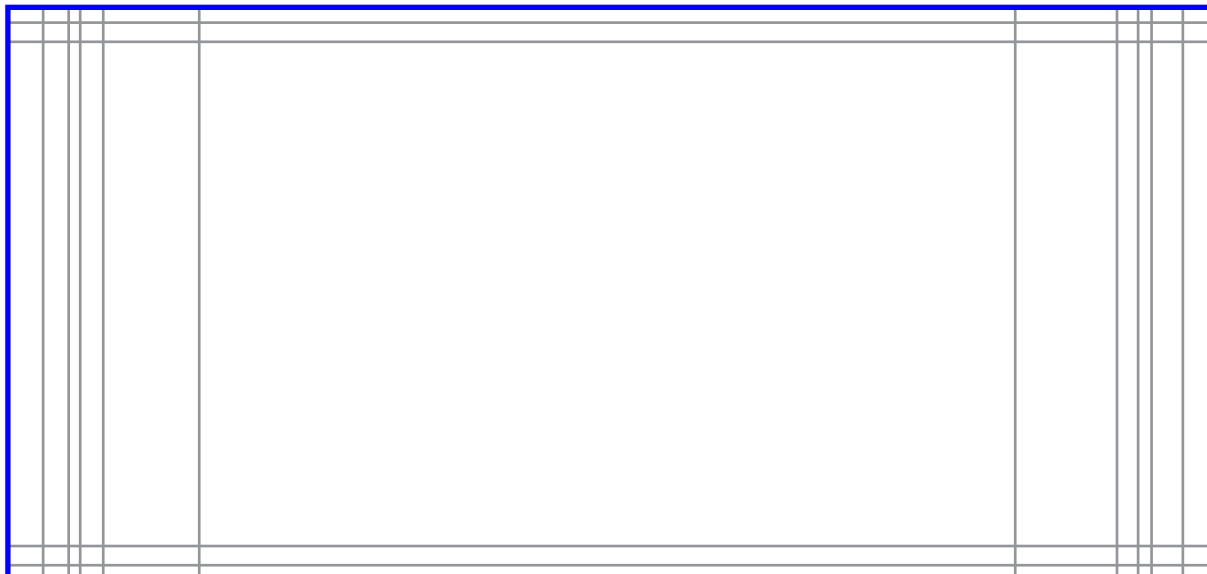
All 3 Sensor Modes of ALEXA 265 have similar standard framelines in camera.

ALEXA 265 6.5K Open Gate

6560 x 3100 px
54.12 x 25.58 mm
2.12:1 aspect ratio
59.86 mm Ø
0.75 - 60 fps

Std. Framelines

2.39:1 1.85:1
2.20:1 1.78:1
2.00:1 1.43:1
1.90:1



ALEXA 265 5.1K

5120 x 3100 px
42.24 x 25.58 mm
1.65:1 aspect ratio
49.38 mm Ø
0.75 - 60 fps

Std. Framelines

2.39:1 1.85:1
2.20:1 1.78:1
2.00:1 1.43:1
1.90:1

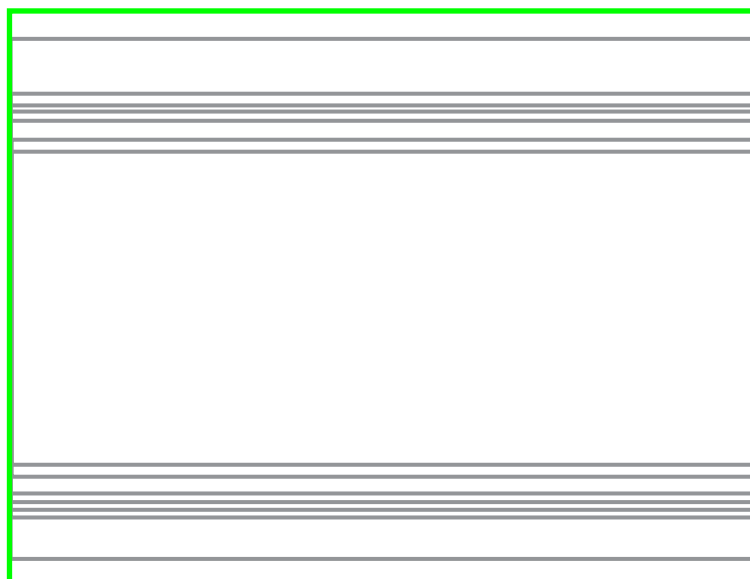


ALEXA 265 4.5K

4448 x 3096 px
36.70 x 25.54 mm
1.44:1 aspect ratio
44.71 mm Ø
0.75 - 60 fps

Std. Framelines

2.39:1 1.85:1
2.20:1 1.78:1
2.00:1 1.43:1
1.90:1



Want More?

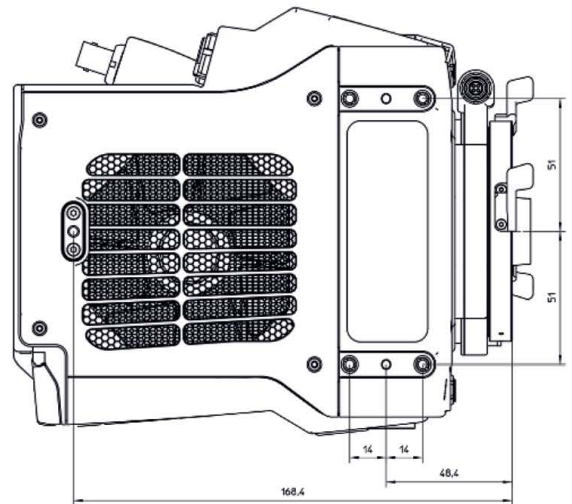
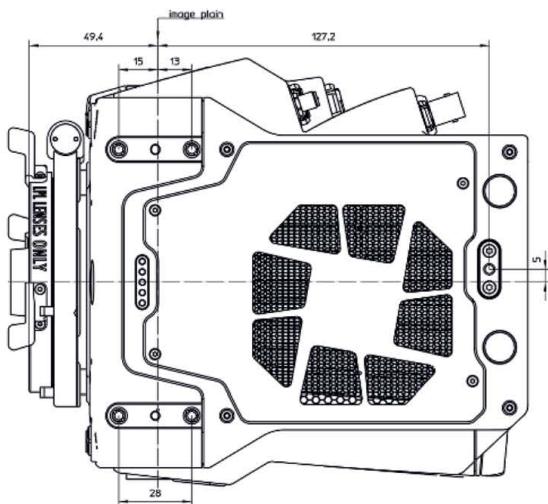
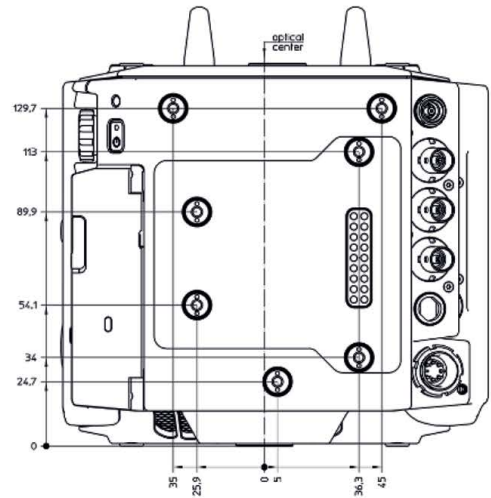
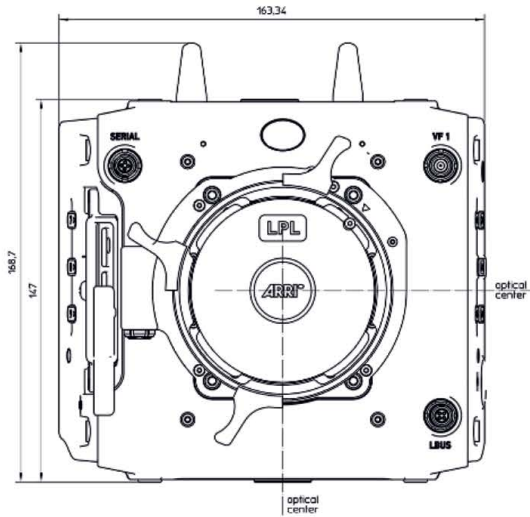
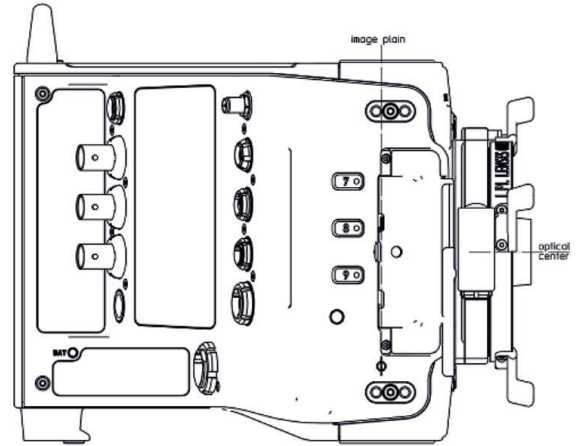
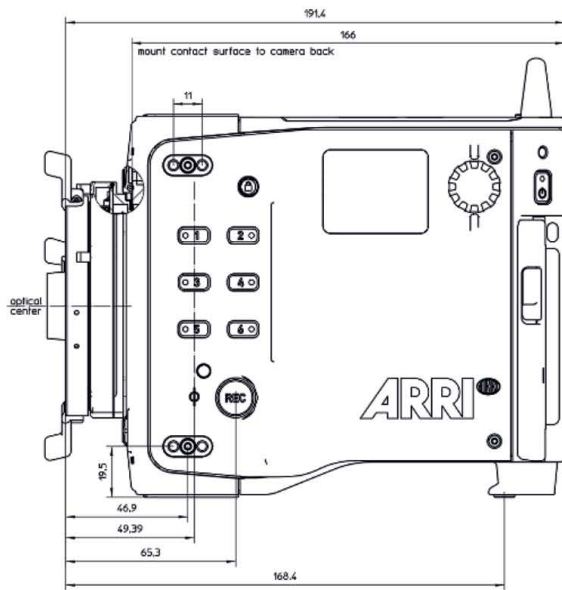
Create your own with ARRI's online Frame Line & Lens Illumination Tool (FLLIT):
tools.arri.com/flt

ALEXA 265 with 65mm Format ARRI Prime DNA Lens



Renders courtesy of ARRI

ALEXA 265 Dimensions

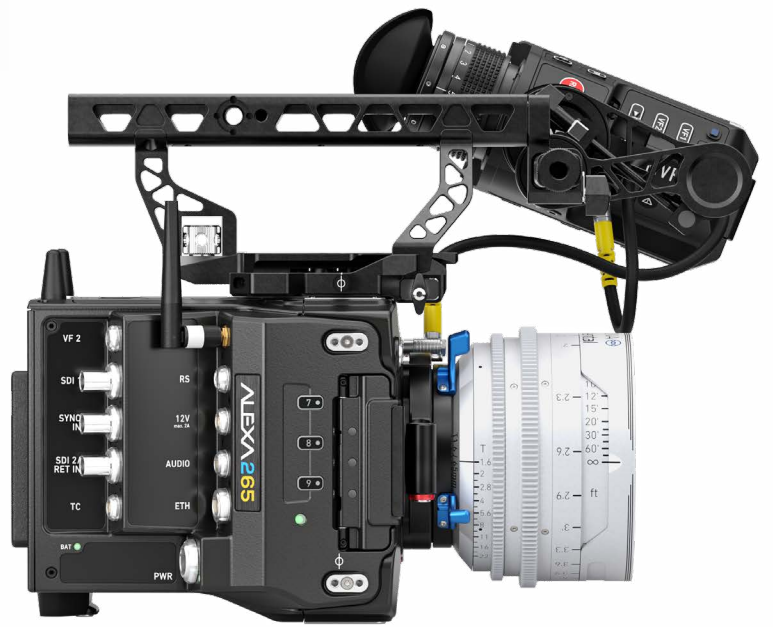


Drawing courtesy of ARRI. Camera shown with LPL mount. Measurement in mm. Not to scale.

ALEXA 265 size compared with ALEXA 65 on next page



ALEXA 265



ALEXA 65 compared with ALEXA 265 on previous page



ALEXA 65



GT40 in UK



Krystian Winszewski on *GT40* with 265

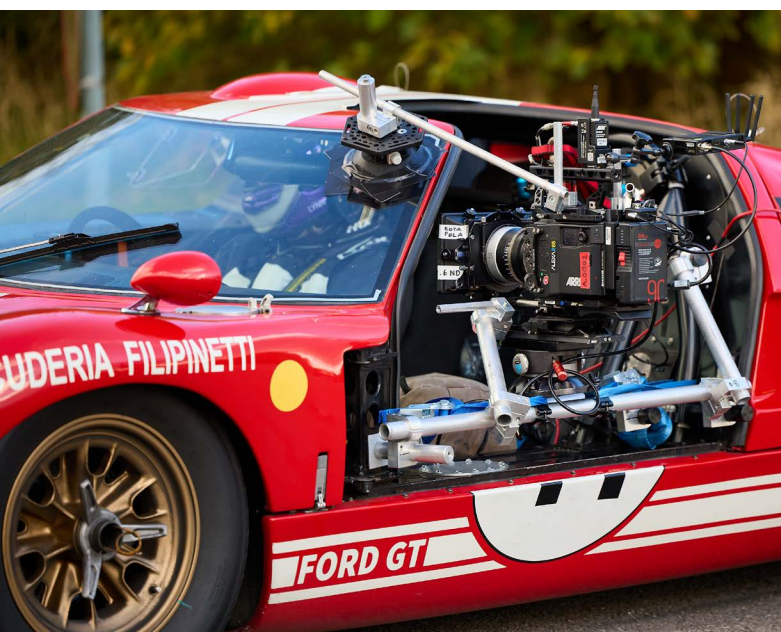


“Having had the opportunity to test the ARRI ALEXA 265 camera during a recent promo shoot with classic Ford GT40 racing cars, I can confidently say that it is an incredible step forward.

“Despite its strikingly large 65mm sensor, they managed to shrink the body of the camera significantly—it’s about three times smaller than the previous version. This reduction in size without sacrificing the image performance is a game-changer.

“In practical terms, the smaller size opens up new possibilities for us filmmakers. For example, we mounted the camera inside a GT40 car racing on a track. The compact size let us get the camera into tight, confined spaces—something that would have been impossible with larger cameras. This versatility is essential for capturing action shots in dynamic environments like a car chase or high-speed race.

“The 65mm sensor produces images that are nothing short of spectacular. The level of detail, texture, and richness in the footage is amazing.”



BTS photos: Ian Wallman



Alejandro Mejía, AMC on *Pulse*



265 balances on a Steadicam, on a small head like the OConnor 1040, or on a sandbag.



BTS photos: Karolina Wojtasik

“I always thought that 65mm was a beautiful format, but when I saw the ALEXA 265 I suddenly realized it was a possibility for the kinds of projects that I shoot, often working fast with available light.

“When I was asked to shoot something with the ALEXA 265, I started thinking about movement, just because the camera is so small and lightweight. What immediately came to mind was a story about the pulse of New York.

“I contacted a choreographer friend and we invited some dancers to go around the city, exploring how the camera responded to different movements and lighting situations.

“I was curious about the latitude of the camera, so we tried different lighting conditions to see how it would respond.

“We had a magic hour scene on a bridge. We tried some silhouette shots and worked in low light. The results were amazing. At the same time, scenes with hard sunlight on the different skin tones of our dancers were very nice as well.

“The shallow depth of field of the 65mm format really struck me. It was interesting to use different lenses on this project. My main set was the Prime 65 S series of lenses because of their extra stop of aperture. And then, for very wide angles, I used the Prime 65 series. For portraits I chose the 65 mm T1.6 Prime DNA and was very happy with the results.”

Escape at Sequoia Lake



Charlie Sarroff on *Escape*



"We shot *Escape* in September at Sequoia Lake in California. I had used the ALEXA 65 on both of the *Smile* films and was excited to see what upgrades and changes the new ALEXA 265 camera had.

"We wanted to demonstrate the camera's new versatility, so skateboarding in a high contrast, saturated environment was a fun fit. The camera is much lighter and more versatile than its predecessor, making handheld work less taxing.

"Since the ALEXA 265 is not much larger than the ALEXA 35, we could easily mount it on gimbals, remote heads that only take smaller payloads, and on the ARRI TRINITY 2 stabilizer. The camera has some impressive upgrades: more dynamic range and the same color science as the ALEXA 35.

"We shot with ARRI DNA and HEROES portrait lenses. We recorded in 6.5K (6560x3100) Open Gate ARRIRAW.

"We found it quite efficient working with the new filter cartridge system. Filter changes were quick and I expect we will use the port for experimental and creative effects as well."



2nd AC Cynthia Trejo with 265 package



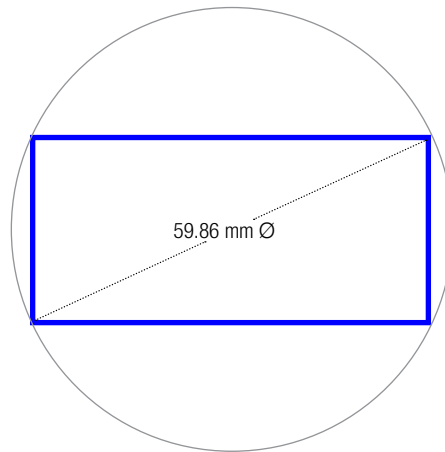
Filter cartridge system, above. Balanced on a skateboard, below.



BTS photos: Giovanni Solis



www.arri.com/alexa265



FILM AND DIGITAL TIMES

ALEXA 265 Camera Report
by Jon Fauer, ASC
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Credits

Thanks to everyone at ARRI who worked so hard on the 265 camera and this report:
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Photos by Hannes Jung, Hannes Rohrer, Sean Dooley, Jon Fauer.
Renders by Hannes Polta.

Filmmakers: Krystian Wyszewski, Alejandro Mejia AMC, Charlie Sarroff.
BTS photos by Ian Wallman, Karolina Wojtasik, Giovanni Solis.