

Broadcast Technologies

# Canon Caters to 8K Broadcasting, Video Production

*BEEFING UP ITS LINEUP OF HIGH-PERFORMANCE LENSES AND VIDEO PRODUCTION EQUIPMENT ARE 8K BROADCASTING-COMPLIANT SUPER HIGH-DEFINITION CAMERA LENSES FOR PROFESSIONAL VIDEO PRODUCTION AND TOP-OF-THE-LINE VIDEO EQUIPMENT THAT MEET VARIOUS NEEDS AND VIDEO EXPRESSIONS.*

For more than half a century, Canon Inc. has contributed to the broadcasting and video industry through high-performance lenses. Now, the company is developing next-generation 8K super high-definition broadcasting lenses to meet professional needs, in addition to 4K broadcasting lenses and cinema lenses. In the following, various new products of the company are introduced.

In 2019, the company released the UHD-DIGISUPER 51 field zoom lens for 8K broadcasting with the longest\*<sup>1</sup> focal length and highest\*<sup>1</sup> zoom ratio of 51 times. It also integrates 7×10.7 KAS S, the first\*<sup>2</sup> portable zoom lens for 8K broadcasting.

For the CINEMA EOS SYSTEM video production equipment, the company announced EOS C500 Mark II, which is equipped with 5.9 K full-size sensor and a newly developed video processing platform, while being compact and lightweight. The new lens makes it possible to shoot impressive video images that takes advantage of the beautiful bokeh effect despite its compact and lightweight body, expanding the range of video expressions.

This year, for the CINEMA EOS SYSTEM, EOS C300 Mark III in the super 35mm format equipped with the newly developed DGO (Dual Gain Output) sensor was released. It expands the range of options for users. As for lenses, Sumire Prime was introduced in 2019 to expand the lens lineup. This year, the range of expressing images will be expanded by introducing the CN10×25 IAS S,\*<sup>3</sup> which achieves a high zoom ratio of 10 times.



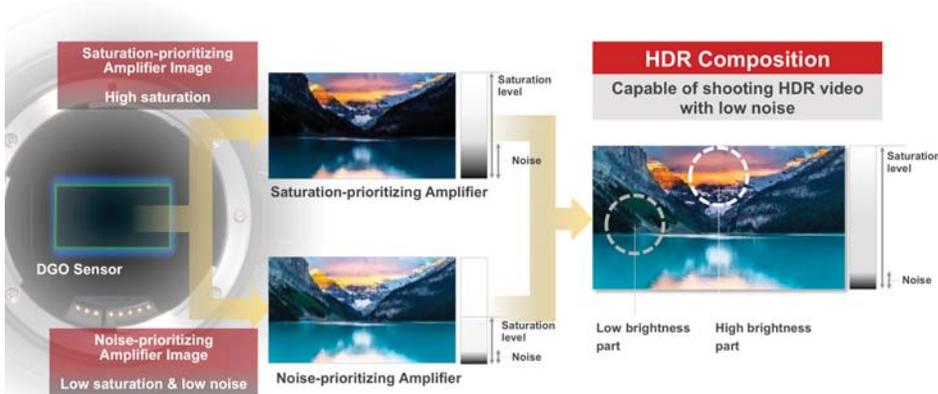
8K lens UHD-DIGISUPER 51

8K lens 7×10.7 KAS S

### Video Camera

As a new product of CINEMA EOS SYSTEM, the EOS C300 Mark III digital cinema camera was released in June 2020. This has realized a wide dynamic range by adopting the newly developed DGO sensor and also supports high frame rate recording of 4K/120P.

This camera is equipped with the newly developed 4K Super 35mm DGO CMOS sensor that generates high dynamic range (HDR) video with low noise by outputting different gains for a single pixel output. As a result, even in an environment with a great contrast between light and shade, high quality 4K/60P



DGO sensor



EOS C300 Mark III with EF cinema lens CN-E85mm T1.3 L F

images with rich gradation can be obtained without image shift. It is compatible with the proprietary dual pixel CMOS autofocus technology of the company.

In addition, by installing the DIGIC DV 7 high-speed video processing platform, it provides 4K/120P high frame rate recording that enables smooth video expressions even during RAW recording and slow playback. Furthermore, by enabling functions such as dual pixel autofocus, the functionality and flexibility can be expanded, and a variety of video expressions that can be used for professional video production is realized.

### EF Cinema Lens

CINE-SERVO lens CN10×25 IAS S was scheduled for release in early July 2020 as a new EF cinema lens product.

As an expansion of the lineup of the EF cinema lens CINE-SERVO lens Series, EF mount CN10×25 IAS S/E1 and PL mount CN10×25 IAS S/P1 were announced. With the addition of these two new lenses, the lineup of cinema lenses expands to a total of 30 models.

CN10×25 IAS S realizes high-power 10× zoom that covers optical performance corresponding to that of the 8K camera and focal length of 25 to 250mm. A 1.5× extender is built into the lens body and the full frame sensor can be completely covered. Using the high optical performance compatible with 8K cameras, it can shoot 4K images with quality higher than conventional 4K cameras. In addition to its lightweight design being able to be carried on the shoulder, it is equipped with a removable drive unit, as standard, achieving the same operability as broadcasting lenses. It can respond to a wide range of applications from production of broadcast contents to video productions.

### Display

For the two 4K displays for professional use (DP-V1710 and DP-V1711), upgrades of the firmware that realizes high brightness will become possible at the customer's request for a fee. In addition, for seven 4K displays for professional use (DP-V3120, DP-V2421, DP-V2420, DP-V2411, DP-V2410, DP-V1711, and DP-V1710), the firmware to improve various functions and performance will be provided free of charge.

By adding a paid upgrade to two professional 4K display products (DP-V1711 and DP-V1710), a "Boost (Contrast)" setting is added to the display and the maximum brightness of full-screen white is improved from 300cd/m<sup>2</sup> to 1,000cd/m<sup>2</sup>. In addition, the maximum brightness of full-screen white is improved from 300cd/m<sup>2</sup> to 600cd/m<sup>2</sup> even during the local dimming operation. This improves the gradation expression in the high-brightness area, which is useful when checking high-brightness images in bright shooting locations, studios, broadcast vans, among others.



**CINE-SERVO lens  
CN10×25 IAS S**

The company has a lineup of 31-inch, 24-inch, and 17-inch 4K/HDR displays from DP-V3120, which achieves a maximum brightness of 2,000cd/m<sup>2</sup>, to 17-inch 4K/HDR displays. These have achieved high brightness (maximum brightness of full-screen white) that meets the requirements of 1,000cd/m<sup>2</sup> specified in the standards and the operation guidelines for HDR video production. This will strongly support the workflow of 4K/HDR video productions from shooting to editing.

As mentioned above, the free firmware is added to seven products for professional 4K displays (DP-V3120, DP-V2421, DP-V2420, DP-V2411, DP-V2410, DP-V1711, and DP-V1710). Among them, three products (DP-V2411, DP-V1711, and DP-V1710) achieve a contrast ratio of 1,000,000:1 by improving the black luminance performance. The free firmware added common to all seven products enables input of 3D-LUT/1D-LUT (Look Up Table) of the file format ".cube" that is widely used for batch conversion of color gamut, gradation, and others, in the field of video production.

### Technology Development for 8K

The company is working on the development of a highly flexible 8K solution that responds to various 8K video expressions and different needs from their input to output.

In addition, it is working on the development of EOS R5 full-size mirrorless camera, and introducing 8K CAMERA HEAD and 8K CONVERSION BOX that realize both mobility and high image quality; 55-inch 8K REFERENCE DISPLAY that reproduces high-definition 8K images.

The company is developing by itself the whole line up of the lenses, from shooting images, to sensors, cameras, and display, which is the exit for displaying images.

### Notes:

<sup>\*1</sup> For field zoom lenses compatible with 8K broadcast cameras equipped with a 1.25-inch sensor. At the time of press release on Nov. 6, 2019. According to an in-company investigation.

<sup>\*2</sup> For portable zoom lenses compatible with 8K broadcast cameras equipped with a 1.25-inch sensor. At the time of press release on Nov. 6, 2019. According to an in-company investigation.

<sup>\*3</sup> Normally, the lens is compatible with the Super 35mm format, but when using the 1.5× built-in extender, it supports a full size sensor.



**DP-V Series 4K display**