

## Firmware Version 1.1.1 for Video Display DP-V2411

### Details of changes made to the firmware

This firmware (Version 1.1.1) includes the following added functions and performance improvements.

1. 4K video signals can now be reduced to 2K size for 4-picture or 2-picture display. In addition, a function has been added that reduces 8K video to 4K size and displays it to enable more efficient video checking.
2. A function has been added that automatically switches the picture quality settings in accordance with the video resolution (4K/2K) and the metadata (Colorimetry bit of the video payload ID, cinema camera type (CINEMA EOS SYSTEM/ARRI/Panasonic), and HDMI). This enables more practical and efficient operation in environments that use both HDR and SDR.
3. A function has been added that displays the brightness values\*<sup>1</sup> or RGB values of the input video of the specified pixel position. This enables to check the subject brightness in greater detail.
4. A function has been added that displays the peak and average brightness values\*<sup>1</sup> or the peak and average gradation values as well as the transition in these values for the entire input video picture (frame). This enables to visually check changes in brightness during video production.
5. A comparison display function has been added that enables HDR/SDR comparison display and CDL/User LUT ON/OFF comparison. This enables left-right picture quality comparison display with the press of a single button.
6. A function has been added that colors areas which are the specified range or more. This enables to visually check the brightness level during HDR shooting.
7. A function has been added to "False Color" that enables to arbitrarily adjust the boundary positions of the brightness coloring range.
8. A function has been added to "2020 Outside of Gamut View" that colors areas outside the native color gamut of the panel.
9. PLUGE and Color Bar test pattern images for HDR signals have been added to "Test Pattern".
10. A function has been added for remotely controlling the display using a Web browser\*<sup>2</sup>. This enables to use a PC, tablet or other device to check and manipulate the displayed video and settings.
11. "2020 PQ to 2020 SDR", "2020 PQ to 709 SDR" and "2020 HLG to 709 HLG" have been added to "CDL/User LUT". This enables display of PQ signals converted to SDR characteristics and display with the PQ/HLG signal color gamut converted to BT.709.
12. The ARRI cinema camera LUTs "ARRI (Rec2100-PQ-1K-100)" and "ARRI (Rec2100-HLG-1K-200)" and the Panasonic cinema camera LUT "VARICAM (V-Log to V-709)" have been added to "User LUT".
13. "Preset Log 1", "Preset Log 2", "ARRI (Rec2100-PQ-1K-100)" and "ARRI (Rec2100-HLG-1K-200)" scale display have been added to "Wave Form Monitor".
14. A function has been added to "Wave Form Monitor" that colors areas outside the ranges set by "Color Range" and "HDR Range". This enables to easily check the areas outside these ranges.
15. A waveform monitor can now be displayed in both the left and right pictures during MultiView (Dual) display.
16. A brightness adjustment function has been added to "Wave Form Monitor".
17. The system gamma can now be adjusted between 1.000 and 1.500 when "Gamma/EOTF" is set to

“Hybrid Log-Gamma.

18. The auto setting operation in “Color Range” has been changed to “Full” when “Gamma /EOTF” is set to “Preset Log 1” or “Preset Log 2”.
19. “D65-Custom” has been added to “Color Temperature” to enable fine adjustment of the D65 color temperature.
20. Anamorphic display can now be zoomed as is.
21. “Gray” to the line display color setting and “Half” to the brightness setting have been added in the “Aspect Marker/Safety Zone Marker 1/Safety Zone Marker 2/Area Marker/Center Marker/Grid Marker” settings. This enables dark display during HDR display.
22. A display size setting has been added to “Center Marker /Audio Level Meter”.
23. Horizontal display position adjustment, brightness adjustment, and VITC/LTC display ON/OFF settings have been added to “Time Code”.
24. A save format setting has been added so that JPEG format capture is now possible in addition to the previous bitmap format.
25. Other UI and operation performance enhancements have also been made.

\*1: Only when “Gamma /EOTF” is set to “SMPTE ST 2084 (PQ)/Hybrid Log-Gamma”. (Not supported when “Gamma /EOTF” is set to “Hybrid Log-Gamma RGB”.)

\*2: A Wi-Fi adapter is required when using Wi-Fi.

Please check the firmware version on your display. If it is running Version 1.0 or earlier version, then it should be updated to Version 1.1.1. There is no action necessary if the display's firmware is Version 1.1.1.

#### Preparations for updating the firmware

It is recommended that current settings are exported before attempting to update the firmware. Once the firmware is updated, settings can be imported back to the display.

The downloaded folder contains the new firmware. (Filename: “update\_dpv2411.rom”, file size: 22,337,306 bytes) It also contains the firmware update procedure document (multilingual PDF file in following languages: Japanese, English, French, German and Chinese (simplified characters)). Before proceeding to update the firmware, please read the firmware update procedure document.

The following items are required to perform the firmware update:

1. Display unit
2. Personal computer
3. USB memory (FAT16 or FAT32)
4. Firmware (The downloaded file)

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■linux kernel, busybox, SquashFS, JFFS2, FUSE  
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■glibc, libfuse, avahi-autoipd

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■Newlib(libc)

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■Newlib(libm)

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■openssl

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