

動画ディスプレイ DP-V1710 ファームウェア Version 1.2.1

ファームウェアの変更内容

このファームウェア（Version 1.2.1）は、以下の機能追加と性能向上を盛り込んでいます。

1. 4K 映像信号を 2K サイズに縮小して 4 画面/2 画面表示が可能になりました。また 8K 映像を 4K サイズに縮小して表示する機能を追加し、より効率的に映像確認が可能になりました。
2. 映像の解像度（4K/2K）やメタデータ（ビデオペイロード ID の Colorimetry Bit やシネマカメラ（CINEMA EOS SYSTEM/ARRI/Panasonic）や HDMI）に応じて、画質設定を自動で切り換える機能を追加し、HDR と SDR が混在する環境下でより実運的で効率的な運用が可能になりました。
3. 最大輝度を 600cd/m^2 ^{※1} に輝度向上させて表示^{※2} することが可能になりました。
4. 指定したピクセル位置の入力映像の輝度値^{※3}/RGB 値を表示する機能を追加し、被写体の輝度をより細かく確認することが可能になりました。
5. 入力映像の画面全体（フレーム）の最大/平均輝度値^{※3} または最大/平均階調値の表示と推移を表示する機能を追加し、映像制作時に輝度変化を視覚的に確認することが可能になりました。
6. HDR/SDR 比較表示や CDL/User LUT の ON/OFF の比較ができる比較表示機能を追加し、ワンボタンで左右画質比較表示が可能になりました。
7. 指定したレンジ以上の領域を着色する機能を追加し、HDR 撮影における輝度レベルを視覚的に確認することが可能になりました。
8. 「フォスカラー」に、輝度の着色レンジの境界位置を任意に調整する機能を追加しました。
9. 「2020 色域外表示」に、パネル Native 外の色を着色表示する機能を追加しました。
10. 「テストパターン」に HDR 信号用 PLUGE と Color Bar のテストパターン画像を追加しました。
11. Web ブラウザー^{※4}を使ってディスプレイをリモート制御する機能を追加し、パソコンやタブレットなどのデバイスを用いて表示映像/設定の確認や操作が可能になりました。
12. 「CDL/User LUT」に、「2020 PQ to 2020 SDR」「2020 PQ to 709 SDR」「2020 HLG to 709 HLG」を追加し、PQ 信号を SDR 特性に変換や PQ/HLG 信号の色域を B.T.709 に変換して表示することが可能になりました。
13. 「User LUT」に、ARRI 社製シネマカメラ用 LUT「ARRI (Rec2100-PQ-1K-100)」 「ARRI (Rec2100-HLG-1K-200)」、Panasonic 社製シネマカメラ用 LUT「VARICAM (V-Log to V-709)」を追加しました。
14. 「波形モニター」に、「Preset Log 1」「Preset Log 2」「ARRI (Rec2100-PQ-1K-100)」 「ARRI (Rec2100-HLG-1K-200)」のスケール表示を追加しました。
15. 「波形モニター」に、「カラーレンジ」や「HDR レンジ」の設定に応じてレンジ外を着色表示する機能を追加し、レンジ外を容易に確認することが可能になりました。
16. MultiView (Dual) 表示時に、左右両方に波形モニターを表示することが可能になりました。
17. 「波形モニター」に、明るさ調整機能を追加しました^{※2}。
18. 「ガンマ/EOTF」が「Hybrid Log-Gamma」の時、システムガンマ 1.000～1.500 の調整が可能になりました。
19. 「ガンマ/EOTF」が「Preset Log 1」「Preset Log 2」設定時、「カラーレンジ」のオート設定動作を「フル」に変更しました。
20. 「色温度」に、「D65-Custom」を追加し、D65 の色温度を微調整することが可能になりました。
21. 「カラーレンジ」が「リミテッド」設定時の動作を改善、オーバーホワイト/アンダーブラック領域の表示が可能になりました。

- 22. アナモフィック表示時、アナモ表示のままズームが可能になりました。
- 23. 「アスペクトマーカー/セーフゾーンマーカー 1/セーフゾーンマーカー 2/エリアマーカー/センターマーカー/グリッドマーカー」設定に、ラインの表示色に「グレー」と明るさ設定に「ハーフ」を追加し、HDR 表示時に暗い表示が可能になりました。
- 24. 「センターマーカー/オーディオレベルメーター」に、表示サイズ設定を追加しました。
- 25. 「タイムコード」に、表示位置の水平位置調整や明るさ調整や VITC/LTC 表示のオン/オフ設定を追加しました。
- 26. 保存形式設定を追加し、従来の Bitmap に加えて JPEG でのキャプチャーが可能になりました。
- 27. 「バックライトフラッシュ低減」設定を追加し、輝度差がある映像表示時に発生するフラッシュのように見える現象を低減することが可能になりました。
- 28. その他、UI、動作性能の改善を行いました。

※1：輝度値は、工場出荷時の標準値で保証値ではありません。

※2：有償アップグレードライセンスの購入が必要。

※3：「ガンマ/EOTF」の設定が、「SMPTE ST 2084 (PQ)/Hybrid Log-Gamma」時のみ。（「Hybrid Log-Gamma RGB」は対象外）。

※4：Wi-Fi を使用する場合は、Wi-Fi アダプタが必要です。

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ファームウェア変更のための準備

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- 1.ディスプレイ本体
- 2.パソコン
- 3.USB メモリー（FAT16 または FAT32）
- 4.ファームウェア（ダウンロードしたファイル）

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- SquashFS
- avahi-autoipd
- Newlib(libc)
- openssl
- busybox
- FUSE
- libxml
- Newlib(libm)
- libnl
- glibc
- libfuse
- zlib
- wireless_tools
- RealTek_WiFi_linux driver
- JFFS2
- libupnp
- libpng
- wpa_supplicant

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■linux kernel, busybox, SquashFS, JFFS2, FUSE

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```

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■glibc, libfuse, avahi-autoipd

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■Newlib(libc)

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