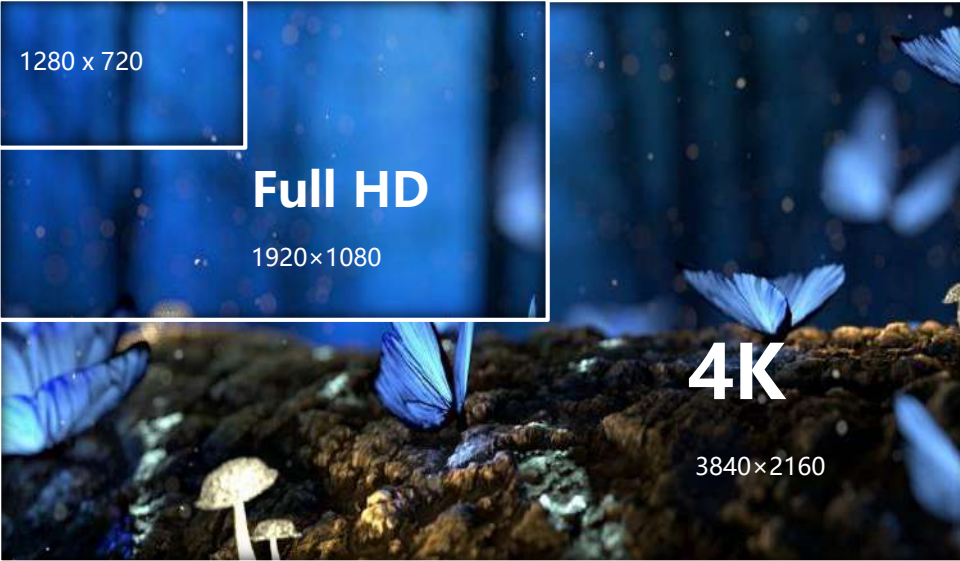


4K High Image Quality Display Solution





1280 x 720

Full HD

1920 x 1080

4K

3840 x 2160

4K is coming





MCTRL4K



NovaPro UHD Jr



NovaPro UHD

A8s / A10s Plus

+

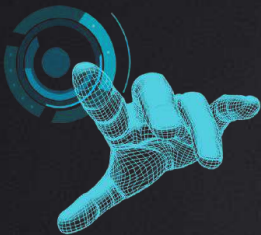


4K Performance



Imagine Booster

Powered by NovaStar



1

View More Details

2

Smoother Grayscale

3

More Precise Representation

4

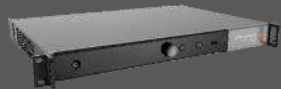
High Dynamic Immersive Experience

View More Details

4K Resolution



- Supports $4096 \times 2160 @ 60\text{Hz}$
- Supports preset resolution, like $3840 \times 2160 @ 60\text{Hz}$ and etc.
- Supports $8\text{K} \times 1\text{K} @ 60\text{Hz}$
- Supports 8/10/12bit
- Supports RGB444、YCbCr444/422/420



Smother Grayscale

22Bit+

Solves a common industry problem:
Low brightness causing poor grayscale processing



5%
Brightness

With 22-bit grayscale processing (actual photo)

22Bit+

Improves grayscale
by 64x in low brightness conditions



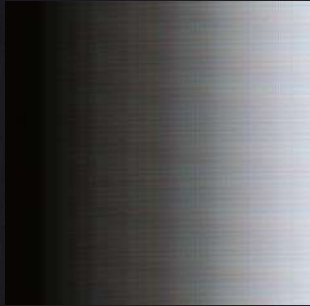
5%
Brightness

actual photo

More Precise Light and Dark Representation



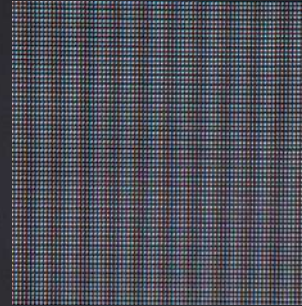
Solves common industry problems



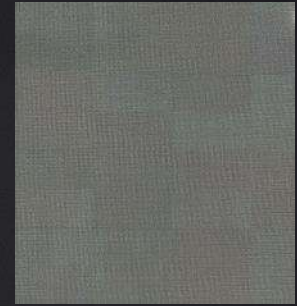
Low grayscale “bouncing”



Inaccurate color representation



Post-calibration mottling



Post-calibration color blocks

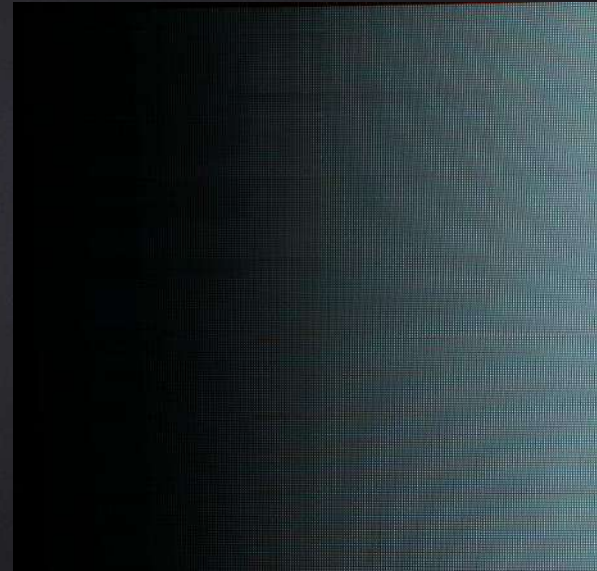
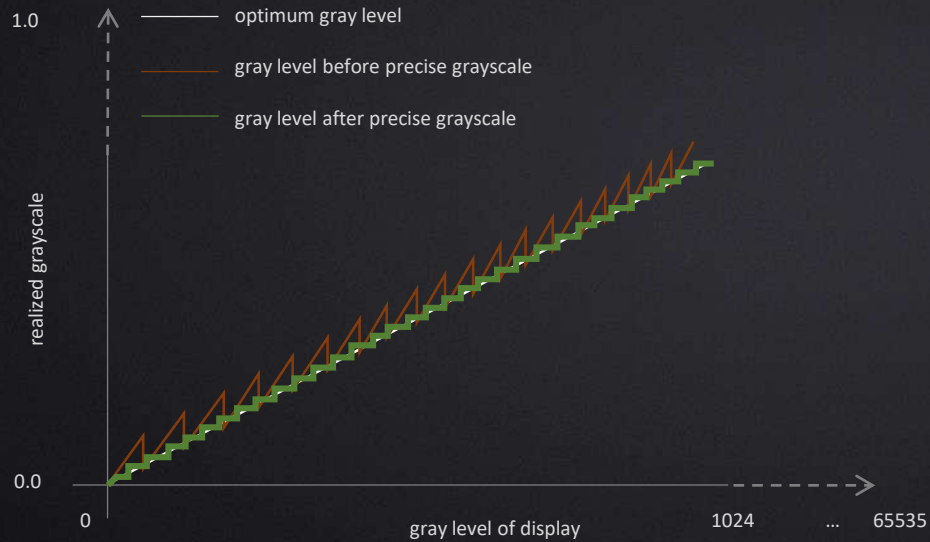
Precise grayscale works with 22bit+ to increase and improve grayscale for a better image

- Precise grayscale improves low grayscale through level-by-level grayscale detection and correction.
- 22bit+ improves grayscale by 64x in low brightness conditions.



精细灰度
Precise Grayscale

Correct stepping, mottling, and incorrect display of color in low brightness conditions

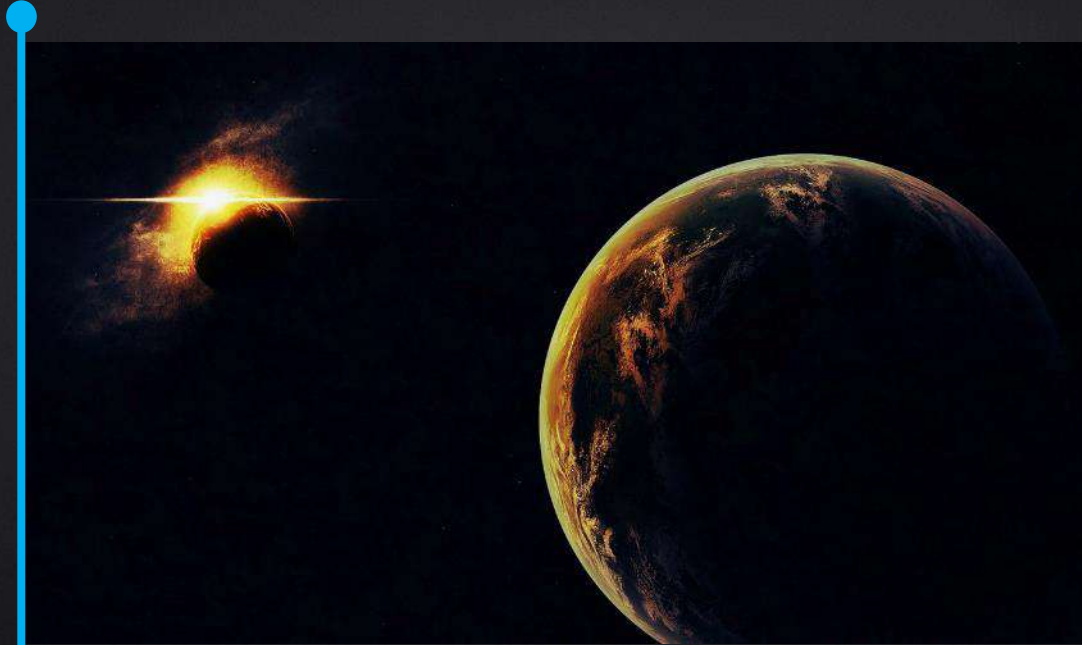


Before precise grayscale



精细灰度
Precise Grayscale

Corrects mottling
and color blocks for a stunning image



Before precise grayscale



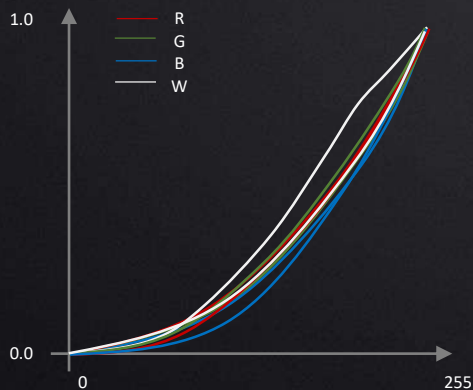
Solution

- Supports all standard ICs
- Automated process
- No darkroom needed



Color Management

RGB independent gamma adjustment solves common LED issues such as lack of grayscale uniformity and white balance drift, providing a more realistic and accurate image



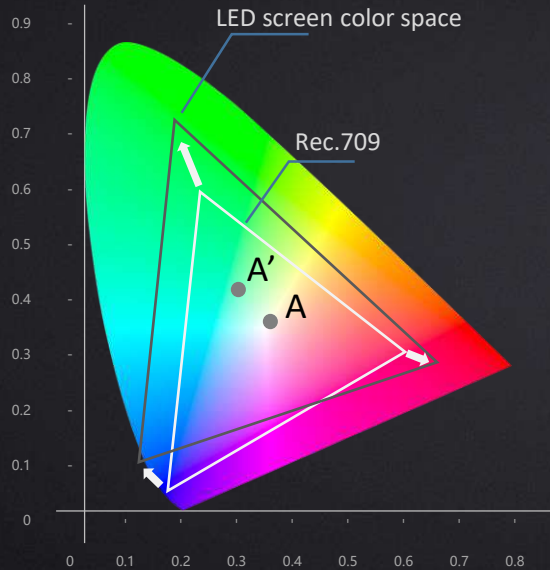
Independent RGB gamma adjustment



Color

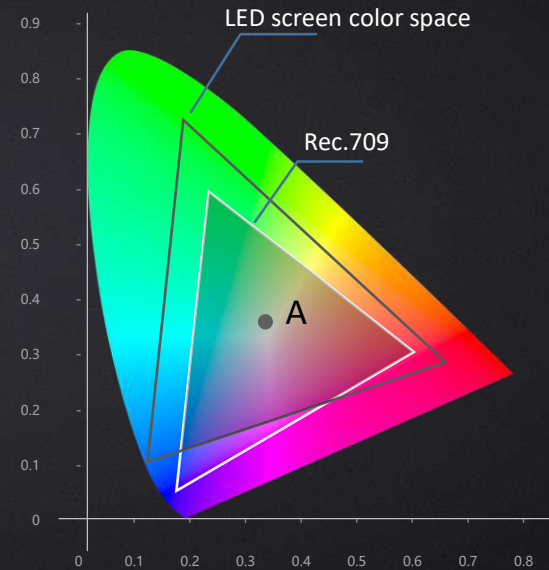
 Management

**Unifies color gamut between displays
 or corrects color gamut to standard**



$A(L,X,Y) \rightarrow A'(L',X',Y')$

Before color management



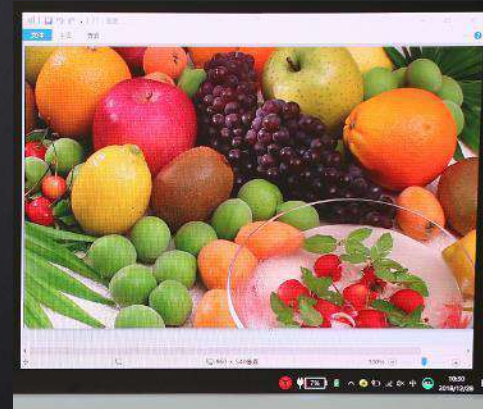
$A(L,X,Y) \rightarrow A(L,X,Y)$

After color management

Color
Management

Accurately represents image information to display intended image

- Color correction monitoring.
- Digital cinemas.
- Advertisement design and display.



Color Management

Solution



High Dynamic Immersive Experience



The HDR10 standard provides a more vivid and lifelike image, NovaStar's

HDR10-Optima improves on the industry-standard HDR10 by utilizing a PQ more optimal for LED displays.

High dynamic

- Dynamic range is the difference between the brightest and darkest parts of the image.

10bit color depth

- Higher color depth means more shades of color. With more color shades the amount of “stepping” between neighboring colors in an image, allowing a much smoother overall picture.

wide color gamut BT.2020

- Going from BT.709 to BT.2020 allows for a greater amount of colors with more richness, allowing for more accurate representation of the colors we see with the human eye.



In conditions with backlight, HDR's high contrast ratio works like the human eye, showing details in both light and dark areas of the image.



HDR disabled



HDR enabled

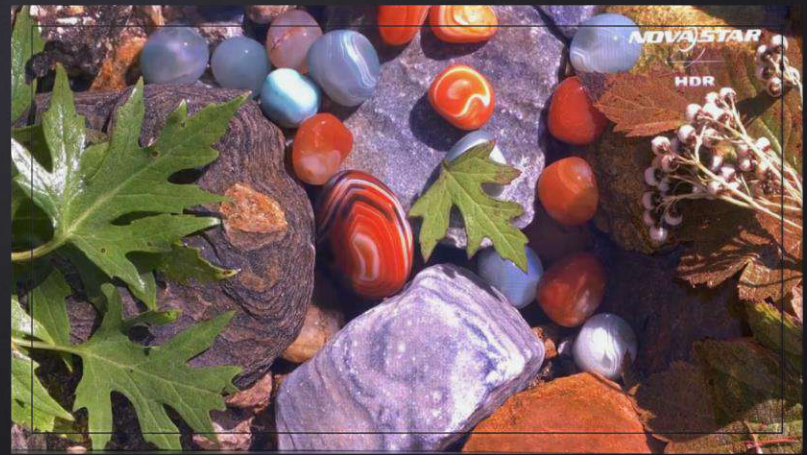
HDR

HDR10 -Optima

The wider color gamut provided by HDR provides color richness and brings the image closer to what we see in the real world.



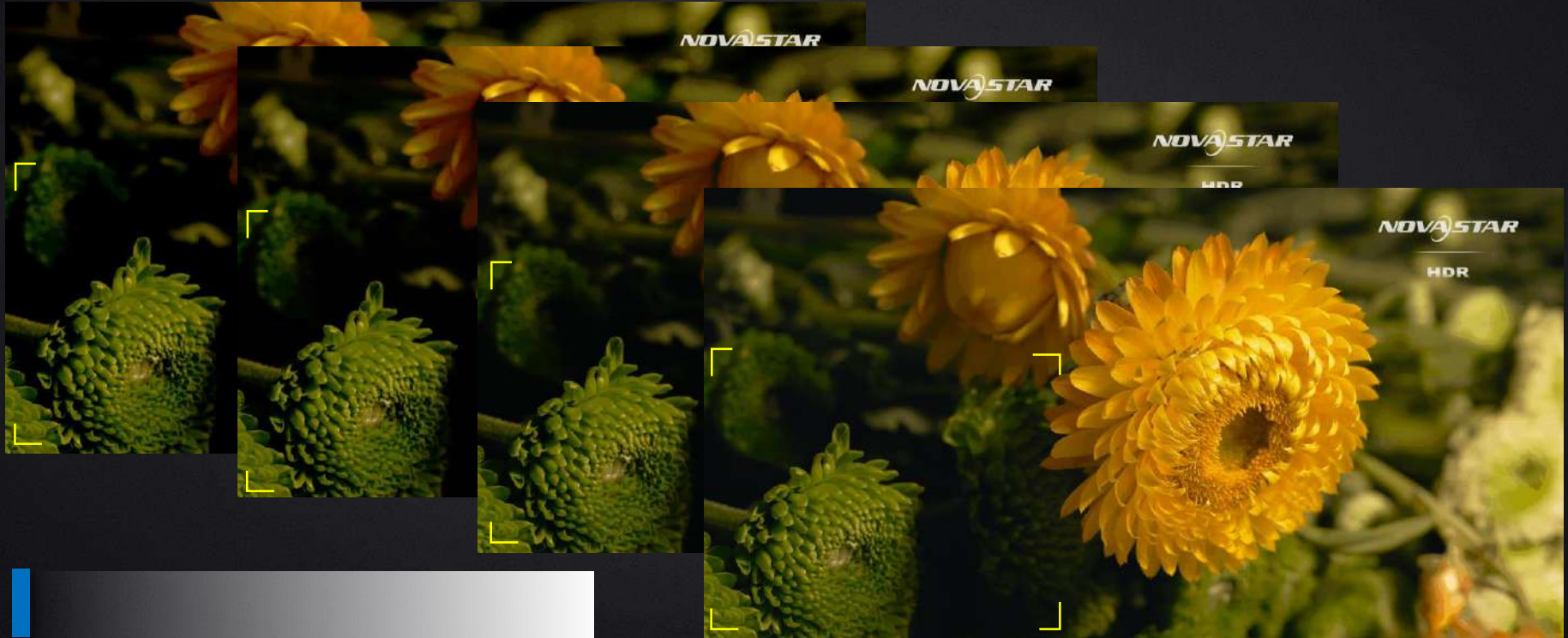
HDR disabled



HDR enabled

HDR**HDR10**
-Optima

Improves on the grayscale of HDR10,
allowing for more detail in shadowed areas.



0

Low grayscale mode

50



HDR10 Solution

-Optima



4K LED screen

A8s/A10s plus



MCTRL4K



A8s/A10s plus



MCTRL4K



HDMI

HDMI

HDR10 player



HDMI splitter
4K UHD 1X4

NovaStar HDR All-round Solution



HDR Master 4K

+



MCTRL4K

+

A8s / A10s Plus



NovaPro UHD Jr



NovaPro UHD



HDR Master 4K

- Supports HDR
- Supports HLG
- Free conversion between SDR and HDR10/HLG
- BKG and LOGO file importing via a USB drive 10G fiber output
- Output auto scaling to fit screen
- Output color space, sampling rate and bit depth settings
- Layer image flipping, input crop and layer mask
- Self-test and status monitoring
- BKG and LOGO file importing via a USB drive

HDR HLG

Eminently suitable for broadcasting and live entertainment

HLG is an HDR standard designed to minimize the post-processing of video source. This makes HLG very compatible for broadcasting and other live applications.

Real-time HDR transmission

- HDR video can be directly transmitted to display without any need for post-processing of the video source.

Backwards compatible

- HLG is backwards compatible, allowing you to use it for both HDR and SDR displays

wide color gamut BT.2020

- BT. 2020 provides a greater amount of colors with more richness, allowing for more accurate representation of the colors we see with the human eye.

HDR HLG Solution



A8s/A10s plus



MCTRL4K



HDMI

HDMI

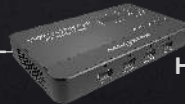


A8s/A10s plus

MCTRL4K



Camera Support HLG and
HDMI2.0 Converter



HDMI Splitter 4K UHD 1X4

MCTRL4K



- Supports HDR10-Optima
- Supports HLG
- 3D function
- Low latency $\leq 1\text{ms}$
- 10G fiber output
- Supports SNMP
- Supports RGB independent GAMMA adjustment
- Decimal framerate auto detection 23.976、59.94Hz

NovaPro UHD Jr



- Variety of inputs and outputs
- More output connectors, larger loading capacity
- HDR function
- Low latency
- 10G fiber output
- Customized BKG settings
- Personalized image scaling
- EDID management supported
- Decimal framerate auto detection 23.976、59.94Hz

NovaPro UHD



- Variety of inputs and outputs
- More output connectors, larger loading capacity
- Up to 8K output width or height of a single device
- HDR function
- Low latency
- 16 × Neutrik Ethernet outputs, 4 × 10G fiber optical outputs with copy and hot backup modes
- Built-in smart platform Master VI software
- Personalized image scaling
- EDID management supported
- Decimal framerate auto detection 23.976、59.94Hz

**A8s****A10s Plus**

512×256

512×512

Supports HDR10-Optima, HLG

Supports Color Management

Supports 22bit+

Supports precise grayscale

3D function

Supports color and chroma calibration

RGB independent Gamma Adjustment

* More details refers to the Spec

Thanks for your time!

NOVA STAR