



# SAMSUNG UDE-S SERIES VIDEO WALL DISPLAY

Capture viewer interest with brilliant, near-perfect color on video walls specialized for broadcasting

## Highlights

- Leverage a specialized panel with low temperature operation (color temperature suited for 2,800K to 6,500K) tailored for broadcasting studio usage.
- Maintain uniform brightness and color accuracy across video wall displays with Samsung Color Expert Technology and factory calibration, and perform easy self-calibration for even more fine tuning, as needed.
- Project stunning images from any perspective through a wide viewing angle.
- Depend on 24x7 reliability for mission-critical broadcasting usage.
- Install and operate easily and cost-effectively with an attractively slim, space-saving design featuring an ultra-thin 3.5 mm bezel.

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# GET PRECISE AND CONSISTENT COLOR AND BRIGHTNESS FOR ANY BROADCASTING NEED

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## Attract audiences with uniquely compelling and engaging content

Today's networks and local broadcasting studios serve more technically savvy audiences, and strive to differentiate their programming in an ever-growing field of competition. Thus, contemporary broadcasters face increasing pressure to deliver high-quality, high-tech HDTV productions. These studios need integrated systems that offer the flexibility to innovate in real-time, while on the air, and allow them to transmit a variety of content that will ultimately attract new viewers.

The color performance needed for on-air perfection requires accurate color calibration, along with uniform brightness and color between screens. The color must display accurately within a color temperature range from 2800K to 6500K for low temperature usage that is compatible with the special lighting and cameras in a broadcasting studio. On-air displays also require a uniform viewing angle from any camera position without a change in brightness and an avoidance of color shifts. In addition, broadcasting studios need seamless, compelling large video wall panels of various sizes that consume minimal resources. The displays must be highly reliable and easy to use.

## Improve content and message clarity with striking similarity to the original color signal

Samsung UDE-S Series Video Wall Displays deliver on-air perfection with high similarity to the original color signal for improved content and message clarity. Compatible with color temperatures from 2800K to 6500K, the displays maintain color depth, contrast and high brightness at 3200K color temperature without glare, even in the high-ambient light of a broadcast set. Uniformity provides consistent color across the video wall without any variations in color, brightness or luminescence, even from various angles. Advanced panel scanning technology reduces the image distortion caused by the time delays and unsynchronized images of conventional LCD panel scanning mechanisms, which enables visually appealing on-air programming.



## Present excellent uniform brightness and color accuracy across video wall displays

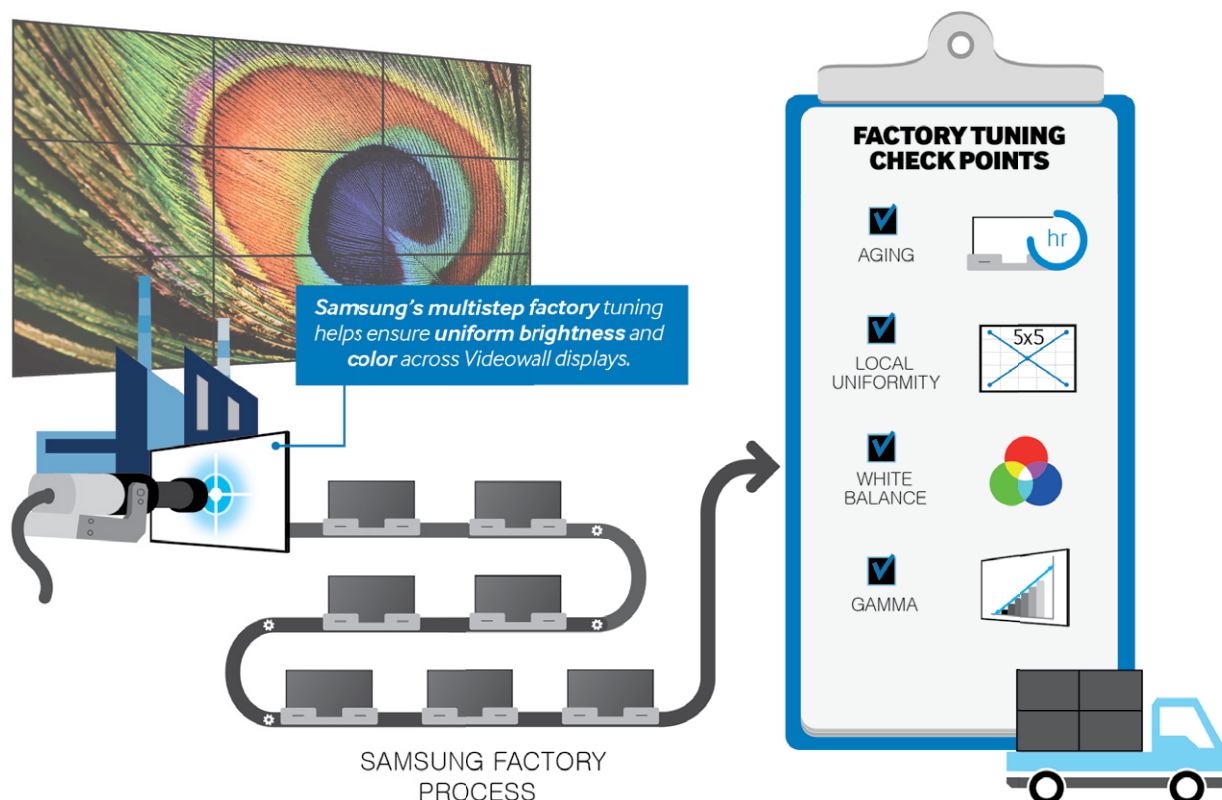
Factory calibration and Samsung Color Expert Technology provide uniform brightness and color accuracy across broadcasting video wall displays. The calibration and technology are specifically designed to maintain this uniformity and precision with low temperature usage.

Samsung's refined, multi-step factory calibration process manually tunes each display for uniform brightness and color to the highest-performing consistent factory standard to ensure uniformity of each display across the video wall.

Before uniformity, white balance and gamma correction, each monitor undergoes a three-step Aging process to prepare an environment that is similar to the actual usage environment.

Because display panels and backlight units have minute performance differences, each display inevitably experiences local uniformity deviations. Measuring the local brightness, and then adjusting local uniformity at more than 90% accuracy provides consistent luminance across the displays. It also makes Samsung color management technology superior to competitors' technology.

Accurate and high quality white color is created by fine tuning the RGB color balance. Gamma and grayscale calibration tunes the displays to show natural shading and gradation without color distortion, and subtle differences of white-to-black gradation. Before calibration, an uncorrected gamma curve results in unsaturated and distorted color. After calibration, the color is saturated and the grayscale is smooth.



## Easily fine-tune color to suit various studio environments

With easy self-calibration using an on-screen display (OSD) menu on the display's

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# PROVIDE EXCELLENT MULTI-ANGLE VIEWING WITH RELIABILITY, COST-EFFECTIVENESS AND STYLE

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Home screen, users can adjust color temperature and brightness perfectly for various studio environments. For perfect scene matching, users can fine-tune the display's appearance beyond the factory calibration with detail and uniformity management. Samsung Color Expert Software is provided for customers at no charge, and enables the user to simply and intuitively adjust local uniformity, white balance and Gamma calibration to further enhance the video wall displays' appearance.

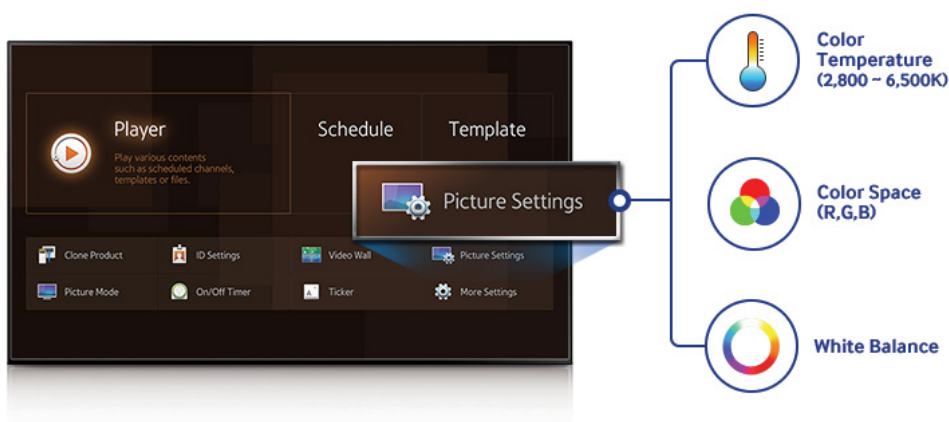
For Local Uniformity, Samsung Color Expert Software enables users to adjust the white uniformity of selected displays by choosing a 5 x 3, 5 x 5 or 7 x 7 matrix configuration.\*

With Adjustable White Balance, users can adjust the displays' white balance through three options.

- Auto Calibration calibrates displays automatically according to user-set target values.
- Manual Calibration can then be performed to fine-tune the RGB gain and offset, digital gain, contrast and BLU brightness values.
- Duplicate Calibration can be used additionally to “copy and paste” the calibrated result to other displays.

Gamma Calibration can occur in steps of 32, 64 and 128. Higher steps require longer correction time but provide a more accurate result. Users can accurately measure the grayscale by supporting the standard of Digital Image Communication in Medicine (DICOM), which is designed for medical digital imaging and communications standards.

*\*A higher matrix requires longer correction time, but produces a more accurate result.*



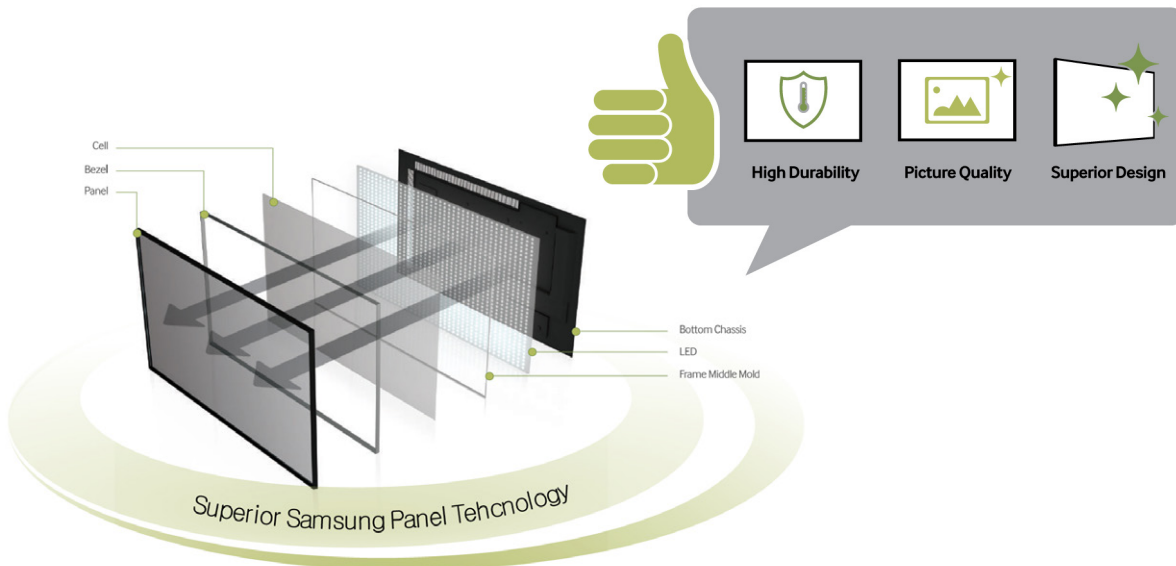
## Deliver a clear image under studio lights with non-glare panels

Non-glare panels present vivid, highly visible images even under ambient light, which is crucial in a well-lit broadcasting studio. By smoothly spreading any direct light, non-glare panels provide broadcasters the flexibility to light studios as required without having to worry about distracting glare and deliver a flawless viewer experience.



## Rely on 24/7 performance for mission-critical programming

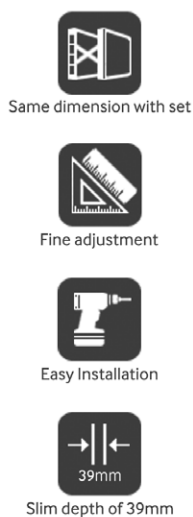
Dependable UDE-S Series video wall displays are designed for continuous 24/7 live television broadcast environments in which downtime is not an option. Whether in a 24-hour news channel studio or for various special live broadcast requirements UDE-S Series ensure the delivery of ceaseless programming with reliable operation.



## Install and maintain easily while controlling costs

The displays' installation is simplified with special wall mounts that make setup easier, delivering a perfect fit without unnecessary measuring. Users have the freedom to create single landscape displays, multi-panel portrait walls or massive 10 x 10 video walls. A special wall mount kit for UDE-S Series video wall displays with no consumable replacement parts (such as lamps) reduces installation and maintenance expenses for a lower Total Cost of Ownership (TCO). Samsung special wall mounts feature an uncomplicated, slim design and, compared to conventional wall mounts, require fewer installation steps with a simple attach-and-connect setup. An exact match between the wall mount size and video wall display sizes eliminates the need for additional measurement and also enables a faster, more convenient installation process. Plus, because Samsung special wall mounts are significantly slimmer than conventional wall mounts, they provide a sleeker, more attractive display appearance to enhance any broadcasting set.

UDE-S Series video wall displays' embedded System-on-Chip (SoC) streamlines installation by eliminating the need for an additional media player.



## Experience near-seamless viewing with slim-depth displays and incomparable 3.5 mm bezels

UDE-S Series video wall displays feature a sleek design with a slim depth and 3.5 mm bezels that are the narrowest in the video wall industry for an elegant and near-seamless viewing experience. The chic design enables broadcasting studios to create sophisticated video walls with creative designs to enhance programming.

# SAMSUNG UDE-S SERIES VIDEO WALL DISPLAY



| Model        |                         | UDE-S                               |                                       |  |
|--------------|-------------------------|-------------------------------------|---------------------------------------|--|
| Panel        | Diagonal Size           | 55"                                 |                                       |  |
|              | Type                    | D-LED DID                           |                                       |  |
|              | Resolution              | 1920*1080                           |                                       |  |
|              | Pixel Pitch(mm)         | 0.63mm(H) * 0.63mm(V)               |                                       |  |
|              | Active Display Area(mm) | 1209.6 * 680.4mm                    |                                       |  |
|              | Brightness              | 700cd/m2                            |                                       |  |
|              | Contrast Ratio          | 4000:1                              |                                       |  |
|              | Viewing Angle(H/V)      | 178/178                             |                                       |  |
|              | Response Time(G-to-G)   | 8ms                                 |                                       |  |
|              | Display Colors          | 8 bit - 16.7M                       |                                       |  |
| Display      | Dynamic C/R             | 10,000:1                            |                                       |  |
|              | H-Scanning Frequency    | 30kHz ~ 81kHz                       |                                       |  |
|              | V-Scanning Frequency    | 48Hz ~ 75Hz                         |                                       |  |
|              | Maximum Pixel Frequency | 148.5MHz                            |                                       |  |
| Sound        | Speaker Type            | N/A                                 |                                       |  |
| Connectivity | INPUT                   | RGB                                 | Analog D-SUB, DVI-D, Display Port 1.2 |  |
|              |                         | VIDEO                               | HDMI1,HDMI2, Component(CVBS Common)   |  |
|              |                         | AUDIO                               | Stereo mini Jack                      |  |
|              |                         | USB                                 | USB 2.0 x 1                           |  |
|              | OUTPUT                  | RGB                                 | DP1.2(Loop-out)                       |  |
|              |                         | VIDEO                               | N/A                                   |  |
|              |                         | AUDIO                               | Stereo mini Jack                      |  |
|              |                         | Power Out                           | N/A                                   |  |
|              | EXTERNAL CONTROL        | RS232C(in/out), RJ45                |                                       |  |
|              | EXTERNAL SENSOR         | Detachable type(IR, Ambient)        |                                       |  |
| Power        | Type                    | Internal                            |                                       |  |
|              | Power Supply            | AC 100 - 240 V~ (+/- 10%), 50/60 Hz |                                       |  |
|              | Power Consumption       | Max[W/h]                            | 297                                   |  |
|              |                         | Typical[W/h]                        | 217                                   |  |
|              |                         | BTU(Max)                            | 1,013                                 |  |
|              |                         | Sleep Mode                          | less than 0.5W                        |  |
| Off Mode     | less than 0.5W          |                                     |                                       |  |

|                  |                                |  |  |                 |
|------------------|--------------------------------|--|--|-----------------|
| Mechanical Spec  | Dimension (mm)                 | Set  | 1213.5 * 684.3 * 96.6  |                 |
|                  |                                | Package  | 1450 X 903 X 385   |                 |
|                  | Weight (kg)                    | Set  | 23.3kg   |                 |
|                  |                                | Package  | 36.9kg   |                 |
|                  | VESA Mount                     |  | 600 * 400 (mm)   |                 |
|                  | Protection Glass               |  | N/A  |                 |
|                  | Stand Type                     |  | N/A  |                 |
|                  | Media Player Option Type       |  | Embedded, SBB-C/DA/DI (Slide In)   |                 |
| Bezel Width (mm) |                                | 2.3mm(U/L), 1.2mm(R/B)   |  |                 |
| Feature          | Special                        | ACM Support(Advanced Color Management), Magic Clone(to USB), Auto Source Switching & Recovery, Haze 44%, Temperature Sensor, RS232C/RJ45 MDC, Plug and Play (DDC2B), PIP/PBP, Video Wall(15x15(OSD)), Video Wall Daisy Chain(10x10), Pivot Display, Image Rotation, Button Lock, DP 1.2 Digital Daisy Chain(Supporting MST 2x2 UHD Resolution), Smart Scheduling, Smart F/W update, Clock Battery(80hrs Clock Keeping) Built In MagicInfo(MagicInfo Player S3), Panel for Broadcasting (2,800K~6,500K) |  |                 |
|                  | Internal Player (Embedded H/W) | Processor  | Cortex-A9 1GHz Quad Core CPU   |                 |
|                  |                                | "On-Chip Cache Memory"   | L1 (I/D) : 32KB / 32KB<br>L2 (Unified) : 1MB   |                 |
|                  |                                | Clock Speed  | 1GHz CPU Quad  |                 |
|                  |                                | "Main Memory Interface"  | 1.5GB<br>Dual 48bit DDR3-933 (1866MHz)   |                 |
|                  |                                | Graphics   | 2D & 3D Graphics Engine<br>- Up to 1920x1080, 32bpp<br>- Supports OpenGL ES  |                 |
|                  |                                | Storage (FDM)  | 8GB<br>(2.65GB Occupied by O/S, 5.35GB Available)  |                 |
|                  |                                | Multimedia   | Video Decoder<br>- MPEG-1/2, H.264/AVC (Dual)<br>- VC-1, JPEG, PNG, VP8<br>Audio DSP (Decoder)<br>- AC3 (DD), MPEG, DTS and etc. |                 |
|                  |                                | IO Ports   | USB 2.0  |                 |
|                  |                                | Operating System   | Samsung Proprietary OS(VDLinux)  |                 |
| Certification    | Safety                         | UL (USA) : UL 60950-1<br>CSA (Canada) : CSA C22.2 No. 60950-1<br>TUV (Germany) : EN60950-1<br>NEMKO (Norway) : EN60950-1<br>KC (Korea) : K60950-1<br>CCC (China) : GB 4943-2001<br>PSB (Singapore) : IEC60950-1<br>GOST (Russia) : IEC60950-1, EN55022<br>SIQ (Slovenia) : IEC60950-1, EN55022<br>PCBC (Poland) : IEC60950-1, EN55022<br>NOM (Mexico) : NOM-019-SCFI-1993<br>IRAM (Argentina) : IEC60950-1<br>SASO (Saudi Arabia) : IEC60950-1   |  |                 |
|                  | EMC                            | FCC (USA) FCC Part 15, Subpart B class A<br>CE (Europe) EN55022, EN55024<br>VCCI (Japan) V-3 (CISPR22)<br>KCC (Korea) : KN22, KN24<br>BSMI (Taiwan) : CNS13438 (CISPR22)<br>C-Tick (Australia) : AS/NZS3548 (CISPR22)<br>CCC(China) : GB 9254-2008, GB 17625.1-2003  |  |                 |
|                  | Environment                    | ENERGY STAR 6.0 (USA)  |  |                 |
| Accessories      | Key                            | Quick Setup Guide, Warranty Card, DP cable, Power Cord, Remote Controller, Batteries,  |  |                 |
|                  | Stand                          |  | N/A  |                 |
|                  |                                | Mount  |  | WMN-55VD        |
|                  |                                | Specialty  |  | MID-UD55DS(TBD) |
| Media Player     | CPU                            |  |  |                 |
|                  | N/B                            |  |  |                 |
|                  | S/B                            |  |  |                 |
|                  | GPU                            |  |  |                 |
|                  | FDM/HDD/SSD                    |  |  |                 |
|                  | Memory                         |  | SBB (Optional, SIM Type)   |                 |
|                  | Connectivity                   | Ethernet   |  |                 |
|                  |                                | Others   | USB  |                 |
| Output           |                                |  |  |                 |
|                  |                                |  |  |                 |



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## NOTE

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