Control Room Display Solutions

Always on. Always performing.

The Wall | LED Signage | Video Wall | QLED 8K Signage | Crystal UHD Signage | Business Monitor | Color Expert
Deliver a clear and confident visual experience

For many years, control rooms have acted as critical information hubs for various organizations around the globe. A crucial element of any properly functioning control room is the latest display technology. To monitor multiple information streams efficiently, decision makers must be equipped with crisp and clear information, delivered with the finest level of detail for optimum outcomes. It is also critical that any display operates without any downtime, providing the reliability and operational efficiency that can make all the difference in a mission-critical environment.

Capture all detailed information in critical scenarios
When making important decisions in the moment, control room staff need all information to be delivered in perfect detail, giving them the confidence to make the best decision every time.

Empower the workforce to make better, faster decisions
Crisp picture quality not only helps to make better decisions, but by consolidating and providing information in one place across a range of displays, staff can continually improve and make better decisions each time.

Secure, simple and reliable
In a mission-critical environment, staff do not have the time to worry about security and reliability so require a display that is built for 24/7 use with power redundancy and security features for total peace of mind during everyday operations.
LED Signage
Samsung’s large-scale indoor LED display options including The Wall and IF series ensure optimal and uninterrupted picture quality in any mission-critical control room, enabling reliable and efficient operations with no downtime.

Video Wall
With extremely narrow bezels, Samsung’s video walls are a versatile solution to seamlessly enhance any control room, ensuring the delivery of important information around the clock in a variety of formats based on the needs of the team.

Calibration Solution
Samsung’s leading calibration tools, Color Expert LED and Color Expert Pro, ensure displays are showcasing color and visuals exactly as intended for control room staff.

QLED 8K Signage
An innovative breakthrough in display technology, Samsung’s QLED 8K signage delivers an unmatched, crystal clear picture with AI upscaling technology ensuring all content is showcased in 8K resolution for optimal user experience in any control room.

Crystal UHD Signage
Samsung’s premium UHD signage are displays that deliver exceptional picture quality, featuring high-brightness and non-glare panels for a clear picture regardless of ambient light within control room environments.

Business Monitor
Samsung’s monitors provide more workspace for control room teams without sacrificing picture quality, while also reducing distractions to ensure team members are fully engaged when real-time decisions require optimum focus.

What Samsung offers

Samsung’s comprehensive line-up of professional displays are built for the control room. From large-scale LED signage and video walls visible to the entire room, to QLED 8K Signage that shows incredible details and even ultra-wide, high resolution monitors, teams will have the technology to get the job done.
The Wall

Unmatched image detail and contrast that’s built to last
The Wall is the ultimate centerpiece of any control room, offering industry leading picture quality and long-lasting quality to meet the demands of any control room environment.

The Wall: IWJ, IWA* series

Pristine black & color expression
The Wall supports every control room builds its display walls as intended. The fusion of an exceptionally black base with specialized Black Seal technology delivers deep black levels for intense contrast and immaculate detail. Ultra Chroma technology produces vibrant and natural colors.

Pin-sharp clarity in every scene
Boasting the industry’s best picture quality engine, The Wall utilizes advanced HDR picture refinement technologies – LED HDR, HDR10+ support and Multi-link HDR – rendering optimum peak brightness and contrast in every single scene for precise, true-to-life imagery.

The Wall: IWJ-R series

Total display solution
The Wall is not just a screen but provides a total display solution for control rooms. Requiring nothing more than a mobile phone and a Wi-Fi connection, calibration can be done instantly. Front access to critical signage components ensures a tidy activation free of catwalk space.

Operational safeguards
The Wall features multiple operational safeguards intended to minimize screen failures including off board hot swap power supply and power/signal redundancy. These redundant systems help to ensure content interruptions are reduced as much as possible, keeping your message front and center.
LED Signage

Taking a panoramic view of the situation

Large-scale indoor LED display options from Samsung provide a perfect view of critical information and guaranteed performance to keep the control room operational at all times.

IFJ, IFA*, IFR, IEA series

Best-in-class LED picture quality

Samsung’s IF series ensures optimal and uninterrupted picture quality for precise information in control room environments. IF series provides best-in-class picture quality for LED, producing images with exact color expression, reduced noise and a full range of grays and blacks.

Vivid color expression Noise reduction Linear grayscale

Clearly refined visuals

Utilizing a propriety algorithm, LED HDR creates true-to-life images, turning any content into HDR-level quality without requiring any special metadata. The IF series supports HDR10+ which optimizes brightness and contrast ratio scene-by-scene to ensure each frame looks exactly as intended.

LED HDR HDR10+ support Multi-link HDR

Seamless, smooth content playback

Frame rate synchronization guarantees smooth content playback without screen tearing when multiple S-boxes are connected—even when combining or splitting content across cabinets. Requiring nothing more than a mobile phone and a Wi-Fi connection, calibration can be done instantly.

Frame rate sync Mobile calibration Redundant system Front service

Easy and efficient installation*

To provide more flexibility in design, IFR series features two cabinet types. One, a larger and lighter version compared to conventional cabinets to simplify installation, and the other about a quarter of that size to create displays of varying dimensions.

* This feature is only available on IFR series.

*IFA is available from 2Q, 2020

IFR-F

Conventional

Conventional

Conventional

IFR

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Video wall

Immersive, uninterrupted viewing around the clock

A video wall is often at the heart of a control room, providing clear visibility for efficient monitoring and maintenance. Samsung’s video walls offer optimal brightness and long-lasting performance in any environment.

VHR-R / VHT-E / VMT-E / VMT-U series

Immersive viewing experience

Extreme narrow bezels enables content to be delivered as one seamless image, minimizing the visual distraction. A non-glare panel evenly distributes light throughout the screen, eliminating glare while maintaining content vibrancy and accuracy. Samsung’s powerful picture enhancement technology ensures all content is vibrant and clear.

Screen uniformity all the time

Samsung’s complete and comprehensive calibration tunes video wall displays to the optimal uniform brightness and color across multiple displays to fit any control room requirements. Every video wall display presents fine-tuned picture quality whether used as a single display or multiple screens.

Long-term performance

Samsung’s video wall displays allows control rooms to deliver clear information 24/7. The panel prevents screen darkening, ensuring long-term delivery of brilliant content. EMC* Class B compliant displays and ISTA-certified packaging keep both environment and delivery safe.

Advanced presentation, simplified operation

Utilizing daisy chain design through DisplayPort 1.2 or HDMI ports enable Samsung video wall displays to present UHD content on multiple screens without an external graphic card. Samsung’s UHD Signage Player Box streamlines functionality by combining the media player and content management software.

* EMC: Electromagnetic compatibility
** EMC Class B certification varies by video wall model
*** ISTA: International Safe Transit Association

* The Signage Player Box must be purchased separately.
** Samsung’s special wall mount accessories must be purchased separately.
Calibration solution

Powerful calibration tools to optimize picture quality

Samsung’s leading calibration tools – Color Expert LED and Color Expert Pro – offer full criteria on color calibration. Mobile calibration also offers a simplified tuning process and uniformity down to the pixel-level, meaning visuals are presented exactly as intended.

Samsung Color Expert technology

- Factory calibration
  - Multi-step factory fine tune for uniform brightness and colors

- ACP* chip set embedded
  - (*Advanced Color Management)

- Color Expert software
  - Color Expert LED
  - ACM* chipset embedded
  - Factory calibration
  - Mobile calibration
  - Pixel-level tuning

- Color Expert Pro
  - Color Expert software
  - 15x15 Calibration
  - Color Expert Pro Mobile

Color Expert LED

- Pixel
  - Calibration

Color Expert Pro

- Module
  - Calibration

Conventional

- Manual calibration
  - Human eye based adjustment

- Local uniformity
  - White balance
  - Gamma correction

- White balance
  - Gamma correction
  - White balance

- Gamma correction
  - White balance

Automatic calibration

Using just a mobile phone camera and Wi-Fi network, calibration can be done without the need for additional, expensive professional devices. Color Expert LED Mobile calibrates automatically based on a target area ensuring it does not miss any subtle differences in color and brightness.

Manual calibration

- Quick & easy
  - Full screen calibration

- Intuitive UI
  - Wireless

Convenient refinement

Color Expert Pro Mobile uses the smartphone camera to quickly and easily calibrate without a professional calibrator physically connected to the video wall. This highly cost-effective solution can calibrate up to 25 sets (5x5) of displays at once – dramatically faster than one-by-one calibration methods.

Conventional

- Mobile calibration
  - Quick & easy
  - Full screen calibration

- Intuitive UI
  - Wireless

Color Expert Pro Mobile

- Mobile calibration
  - Quick & easy
  - Full screen calibration

- Intuitive UI
  - Wireless

*Color Expert Pro Mobile supports white balance calibration only. Local uniformity and gamma and gray scale is not supported.

Calibration solution

Enhanced picture quality

Color Expert Pro delivers stunning before-and-after results. White balancing options enable accurate white color. Users can calibrate for consistent luminance and color uniformity across displays. Gamma and gray scale calibration brings out subtleties, detail and depth in white-to-black gradation.

- White balance
  - Gamma correction
  - White balance

- White balance
  - Gamma correction
  - White balance

- Gamma correction
  - White balance

*Color Expert Pro Mobile supports white balance calibration only. Local uniformity and gamma and gray scale is not supported.
QLED 8K Signage

Capturing all the subtle differences

Samsung’s QLED 8K Signage delivers extremely accurate imagery ensuring control room staff are seeing all the details they need to on one, uniform screen, in the highest resolution.

Incredible 8K resolution

Samsung QLED 8K Signage offers super high resolution with more than 33 million pixels, 4 times higher than 4K UHD content and 16 times higher than FHD. With AI-powered upscaling, control room staff are able to recognize precise detail even in low resolution.

Brilliant picture quality

Samsung’s QLED technology ensures the delivery of 100% color volume, based on over a billion colors. Together with a peak brightness of 4,000 nits and 8K resolution, scenes appear more dynamic and impactful, bringing every detail to life in total clarity.

QPR-8K / QPA-8K* series

Crystal UHD Signage

Clear delivery of critical information

Samsung’s Crystal UHD Signage delivers crystal clear picture, keeping control room staffs from missing any detailed information in critical scenarios.

Real 4K resolution

Samsung’s UHD Signage showcases intricate details thanks to 4K UHD resolution. Samsung’s cutting-edge intelligent UHD upscaling technology performs edge restoration and noise reduction to deliver UHD-level picture quality for control room’s use, even with lower resolution content.

High visibility at all times

Samsung’s UHD Signage delivers clear information 24/7, ensuring critical information is always visible. Using 10-bit processing, the displays are able to showcase a wider spectrum of colors — up to a billion different shades — capturing subtle differences for flawless color expression.
Multi-productive displays

PBP transforms a single monitor to a dual-view monitor by displaying content from two sources side by side on one screen. With PIP, staffs can see and organize multiple apps and programs exactly how they want to.

Ultimate connectivity

Samsung’s ultra-wide monitors let staffs multitask more efficiently, saving their desk space. USB Type-C ports transmit both power and data. The built-in KVM switch lets them control two computers connected to the monitor using just one keyboard and mouse.

High resolution

The ultra-wide screen supports a number of open windows without scroll or zoom, while eliminating the clutter and inconveniences of the traditional dual monitor setups. Multi-tasking features – PIP, PBP and Easy Setting Box – allows staffs to work on more documents and applications simultaneously.

Detailed clarity

Samsung’s UHD monitors display crisp, clear images and text with much greater sharpness. So the staffs can enjoy higher readability with reduced eye strain in control room environments that require long work hours.

Multi-productive displays

PBP transforms a single monitor to a dual-view monitor by displaying content from two sources side by side on one screen. With PIP, staffs can see and organize multiple apps and programs exactly how they want to.
### Specifications

#### LED Signage

<table>
<thead>
<tr>
<th>Type</th>
<th>Project</th>
<th>Panel pitch</th>
<th>Diode type</th>
<th>Brightness (Peak/Max)</th>
<th>Contrast ratio**</th>
<th>Certification</th>
<th>Cabinet size (Unit), per cabinet</th>
<th>Weight (per cabinet)</th>
<th>Service***</th>
<th>IP rating</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>The Wall</strong></td>
<td>IWJ/IFJ-R*</td>
<td>1.25 mm (R/B)</td>
<td>Flip-chip RGB LED</td>
<td>65”, 75”, 85”</td>
<td>7680 x 4320</td>
<td>500 nit</td>
<td>IWJ: 684 x 414 x 72 x 5 mm, IFJ-R: 2136 x 1239 x 95 x 10 mm</td>
<td>15.2 kg (IWJ-R)</td>
<td>Front</td>
<td>IP50</td>
</tr>
<tr>
<td><strong>WA</strong>**</td>
<td>P2.5, 3.9</td>
<td>Flip-chip RGB LED</td>
<td>65”, 75”</td>
<td>7680 x 4320</td>
<td>500 nit</td>
<td>IWJ: 684 x 414 x 72 x 5 mm, IFJ-R: 2136 x 1239 x 95 x 10 mm</td>
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</table>

**Peak value according to IDMS (Information Display Measurement Standard)**

- **Contrast Ratio**: Measured under 10lux light. Contrast in darkroom exceeds 100000:1
- **Peak value according to IDMS (Information Display Measurement Standard)**

#### Video wall

<table>
<thead>
<tr>
<th>Project</th>
<th>Screen size</th>
<th>Resolution</th>
<th>Brightness</th>
<th>Contrast ratio **</th>
<th>Operation</th>
<th>D-to-B</th>
<th>Bezel width</th>
<th>Connectivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>VHS-2</td>
<td>50”</td>
<td>1920 x 1080</td>
<td>700 nit</td>
<td>13/01</td>
<td>26/7</td>
<td>0.8mm</td>
<td>0.8mm (even)</td>
<td>Ep: DP/EDP/IEDP/IEDP+; Samsung LED Out: EDP2/EDP2+; Samsung Jack; E�n: EDP2/EDP2+; Android, RGB (Typ./Peak)</td>
</tr>
<tr>
<td>VHT-2</td>
<td>50”</td>
<td>1920 x 1080</td>
<td>700 nit</td>
<td>13/01</td>
<td>26/7</td>
<td>1.3mm</td>
<td>0.8mm (even)</td>
<td>Ep: DP/EDP/IEDP/IEDP+; Samsung LED Out: EDP2/EDP2+; Samsung Jack; E�n: EDP2/EDP2+; Android, RGB (Typ./Peak)</td>
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<td>50”</td>
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<td>26/7</td>
<td>1.3mm</td>
<td>0.8mm (even)</td>
<td>Ep: DP/EDP/IEDP/IEDP+; Samsung LED Out: EDP2/EDP2+; Samsung Jack; E�n: EDP2/EDP2+; Android, RGB (Typ./Peak)</td>
</tr>
<tr>
<td>VHT-4</td>
<td>60”</td>
<td>2560 x 1440</td>
<td>700 nit</td>
<td>13/01</td>
<td>26/7</td>
<td>5.0mm</td>
<td>0.8mm (even)</td>
<td>Ep: DP/EDP/IEDP/IEDP+; Samsung LED Out: EDP2/EDP2+; Samsung Jack; E�n: EDP2/EDP2+; Android, RGB (Typ./Peak)</td>
</tr>
</tbody>
</table>

#### QLED 8K Signage

<table>
<thead>
<tr>
<th>Project</th>
<th>Screen size</th>
<th>Resolution</th>
<th>Brightness</th>
<th>Contrast ratio **</th>
<th>Operation</th>
<th>S/W</th>
<th>Connectivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>QMR-8K</td>
<td>82”</td>
<td>7680 x 4320</td>
<td>1000 nit</td>
<td>13/01</td>
<td>16/7</td>
<td>SSDP</td>
<td>QM800-8K/1200-8K</td>
</tr>
<tr>
<td>QMR-8K*</td>
<td>47”, 70&quot;, 82”</td>
<td>7680 x 4320</td>
<td>1000 nit</td>
<td>13/01</td>
<td>16/7</td>
<td>SSDP</td>
<td>QM800-8K/1200-8K</td>
</tr>
</tbody>
</table>

**Contrast Ratio**: Measured under 10lux light. Contrast in darkroom exceeds 100000:1

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#### Crystal UHD Signage

<table>
<thead>
<tr>
<th>Project</th>
<th>Screen size</th>
<th>Resolution</th>
<th>Brightness</th>
<th>Contrast ratio **</th>
<th>Operation</th>
<th>S/W</th>
<th>Connectivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>GMR</td>
<td>49” X 85”</td>
<td>3840 x 2160</td>
<td>300 nit</td>
<td>16/7</td>
<td>12/7</td>
<td>SSPP</td>
<td>Non-glare</td>
</tr>
<tr>
<td>GMR</td>
<td>55” X 100”</td>
<td>3840 x 2160</td>
<td>300 nit</td>
<td>16/7</td>
<td>12/7</td>
<td>SSPP</td>
<td>Non-glare</td>
</tr>
<tr>
<td>GMR</td>
<td>65” X 110”</td>
<td>3840 x 2160</td>
<td>300 nit</td>
<td>16/7</td>
<td>12/7</td>
<td>SSPP</td>
<td>Non-glare</td>
</tr>
</tbody>
</table>

**Contrast Ratio**: Measured under 10lux light. Contrast in darkroom exceeds 100000:1

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#### Business monitor

<table>
<thead>
<tr>
<th>Type</th>
<th>Project</th>
<th>Screen size</th>
<th>Resolution</th>
<th>Brightness</th>
<th>Contrast ratio **</th>
<th>Operation</th>
<th>S/W</th>
<th>Connectivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>CBE9</td>
<td>18”</td>
<td>1366 x 768</td>
<td>1000 nit</td>
<td>16/7</td>
<td>12/7</td>
<td>0.8ms</td>
<td>SSDP</td>
<td>MagicINFO Lite</td>
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</tbody>
</table>

**Contrast Ratio**: Measured under 10lux light. Contrast in darkroom exceeds 100000:1

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#### Color Expert solution

<table>
<thead>
<tr>
<th>Project</th>
<th>Technology type</th>
<th>System requirement</th>
<th>Display compatibility</th>
<th>Calibration feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color Expert LED</td>
<td>PC software calibration with AIC</td>
<td>Windows 7 / Windows 8 / Windows 10</td>
<td>White balance, Color mapping, Color temperature</td>
<td></td>
</tr>
</tbody>
</table>