

# Samsung calibration solution for video wall

Specialized factory tuning and ACM software for uniform multi-video displays



## Highlights

- Achieve a uniform picture across video wall displays with Samsung factory tuning
- Manage brightness and color uniformity conveniently with Advanced Color Management (ACM) software and ACM Integrated Chip (IC) hardware
- Reduce total cost of ownership (TCO) with a thorough color management solution

## Create striking video wall displays

A video wall offers a notable way to communicate important information to customers, employees or guests. However, a video wall is composed of individual displays that may vary in luminescence, brightness, color and so on. This lack of uniformity can give viewers a negative impression, and may make them less receptive to the information companies want to convey.

The Samsung video wall solution helps to eliminate this problem by adjusting all panel specifications to a similar condition. Using the displays' software system, users can adjust brightness and other elements of the video picture to create consistency throughout the video wall. The solution incorporates a two-part approach:

1. **Factory tuning.** Samsung UD and UE Series displays are accurately tuned to the highest-performing uniform brightness and color.
2. **User calibration.** Samsung provides ACM software to more finely adjust color and other attributes.

## Display business content with consistent brightness and color quality

Samsung's refined manufacturing system manually tunes each display's x and y color coordinate and brightness to the highest-performing uniform factory standard. Other video wall device manufacturers do not typically perform this process.

The Samsung manufacturing procedure contributes to a more detailed color management solution. This step eliminates the color expression gap and helps ensure the uniformity of video wall displays from the factory. The process is designed to achieve uniformity even when displays are combined with other displays into a video wall. With factory tuning, users do not need to consider purchasing additional equipment or programs for calibration.

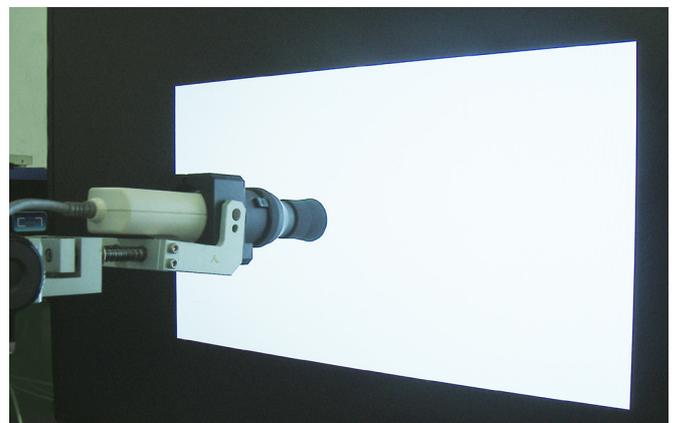


Figure 1. Samsung's multistep factory tuning helps ensure uniform brightness and color across video wall displays.

# The Samsung calibration solution provides optimal calibration through software and hardware.

## Manage color details and uniformity to fine-tune display appearance

The Samsung video wall solution starts with factory tuning, and provides ACM software program and a special ACM IC in the select displays for even better color expression.

### Customized ACM software program

ACM is a customized calibration program developed by Samsung based on market-leading video wall and color management technologies. Businesses can use ACM to adjust and configure color specifications, such as brightness and x and y coordinates. Designed for ease of use, ACM offers three options so that users can show the colors they want in their video displays:

- **Gamma Calibration.** Subtle differences from white to black gradation can be calibrated with this option in steps of 32, 64 and 128. Higher steps require longer correction time but more accurate result.
- **Local Uniformity.** Users can adjust white uniformity of selected displays by selecting 3x3, 5x5 or 7x7 matrix configuration. Higher matrix require longer correction time but more accurate result.
- **White Balance.** Users can adjust the display's white balance through three options. Auto Calibration will calibrate displays automatically according to user set target values. Manual Calibration can then be done 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" calibrated result to other displays.

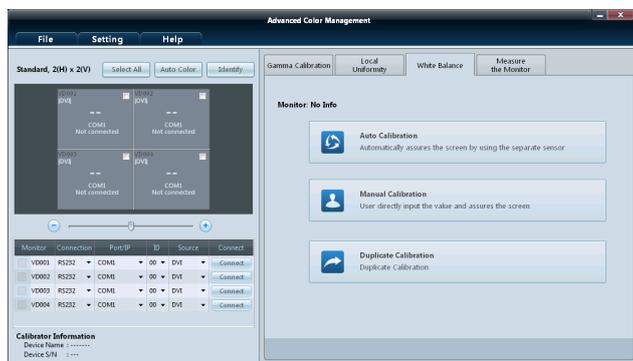


Figure 2. Using a straightforward interface, users can manage, adjust and configure color specifications for more accurate color matching.

## Specialized ACM IC hardware

A special hardware chip called ACM 12 IC is required pre-installed in the displays to support full capability of the ACM software. Not all displays come installed with the ACM IC. Displays without the ACM IC can still support white balance calibration as the basic functionality. However, among the displays that don't have ACM IC pre-installed, UD46A, UD55A and UD46C-B models are capable of supporting gamma calibration additionally with the latest firmware.

## Trim video wall costs with simplified calibration solutions

Because Samsung video displays are factory tuned, there is no need to purchase additional equipment or accessories to enhance video quality. However, companies that want to fine-tune video appearance can use the ACM software, which is provided at no charge. Other manufacturers charge customers an additional fee for this type of software. With the standard ACM software, Samsung customers save on TCO by eliminating their investment in calibration software. They also increase operational efficiency and business productivity with a more uniform video wall.



Samsung's video wall solution combines factory tuning and ACM software to optimize display consistency and quality.

## Compatible products

Display series	Full Calibration functionality	White Balance and Gamma Calibration	White Balance Calibration only
PE40C			
PE46C	●		
PE55C			
DE40C			
DE46C	●		
DE55C			
UE46C	●		
UE55C			
UD46C			
UD55C	●		
UD55C-B			
UD46A			
UD55A		with latest firmware	
UD46C-B			
All other models			●

## Accessories

Display series	Supplies and accessories
Samsung UE Series	<ul style="list-style-type: none"> <li>Included: Quick setup guide, warranty card, application CD, d-sub cable, power cord, re-mote controller, batteries</li> <li>Optional: Stand, mount, ceiling mount</li> </ul>
Samsung UD Series	<ul style="list-style-type: none"> <li>Included: Quick setup guide, warranty card, user manual (CD), d-sub cable, power cord, remote control, batteries</li> <li>Optional: MID floor stand set, middle bar, metal side bar, wall mount bracket</li> </ul>

## System Requirements

Solution	System requirements
Advanced Color Management (ACM)	<ul style="list-style-type: none"> <li>OS: Microsoft® Windows® XP, Windows 7 (32-bit, 64-bit), Windows Vista</li> <li>A calibrator is required to use the ACM solution. Customers must purchase the calibrator separately. X-Rite i1Display Pro is recommended.</li> </ul>

## Legal and additional information

---

### About Samsung Electronics Co., Ltd.

Samsung Electronics Co., Ltd. is a global leader in semiconductor, telecommunication, digital media and digital convergence technologies with 2011 consolidated sales of US\$143.1 billion. Employing approximately 222,000 people in 205 offices across 71 countries, the company operates two separate organizations to coordinate its nine independent business units: Digital Media & Communications, comprising Visual Display, Mobile Communications, Telecommunication Systems, Digital Appliances, IT Solutions, and Digital Imaging; and Device Solutions, consisting of Memory, System LSI and LCD. Recognized for its industry-leading performance across a range of economic, environmental and social criteria, Samsung Electronics was named the world's most sustainable technology company in the 2011 Dow Jones Sustainability Index. For more information, please visit [www.samsung.com](http://www.samsung.com).

### For more information

For more information about the Samsung video wall solution, visit [www.samsungLFD.com](http://www.samsungLFD.com).



Copyright © 2012 Samsung Electronics Co. Ltd. All rights reserved. Samsung is a registered trademark of Samsung Electronics Co. Ltd. Specifications and designs are subject to change without notice. Non-metric weights and measurements are approximate. All data were deemed correct at time of creation. Samsung is not liable for errors or omissions. All brand, product, service names and logos are trademarks and/or registered trademarks of their respective owners and are hereby recognized and acknowledged.

Microsoft and Windows are trademarks of Microsoft in the United States, other countries, or both.

Samsung Electronics Co., Ltd.  
416, Maetan 3-dong,  
Yeongtong-gu  
Suwon-si, Gyeonggi-do 443-772,  
Korea

[www.samsung.com](http://www.samsung.com)

---