Samsung UDC and UEC Series video displays

Powerful and versatile LED displays for creating vibrant video walls

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A versatile and distinctive way to gain customer attention

Promote messages and images using the Samsung UDC, UDC-B and UEC video displays

Owners and managers of retail establishments, conference centers, shopping malls and hotels want to stand out from their competition. They are looking for new and diverse ways to publicize their goods and services while controlling costs and the creative process.

Samsung LED large format displays (LFDs) help clients create video walls that match their imaginations for a reasonable cost. The UDC, UDC-B and UEC Series displays are an optimal choice because users can configure them based on need and control display specifications. With various size options available, content developers can create eye-catching video walls in a myriad of configurations. The UDC and UEC LFDs are available in 46-inch and 55-inch models. The UDC-B, which is the basic model, is available in a 46-inch display.

Managers or staff can design near-contiguous video walls with full high definition (FHD) picture quality. The UEC Series offers narrow bezels and the UDC and UDC-B Series have ultra-narrow bezels to facilitate an overall message. The monitors are designed for ease of installation with narrow profiles for various configuration options. Samsung LED backlight technology helps reduce costs, consuming 40 percent less power on average compared with cold cathode fluorescent lamp (CCFL) LCDs during internal testing. The LED LFDs are free from harmful materials.

The UDC, UDC-B and UEC Series displays help clients:

- **Grab the attention of potential customers with narrow bezel widths and uniform color.** Narrow and ultra-narrow bezel widths help create near-seamless video walls. Additionally, augmented color calibration for color uniformity with enhanced factory color tuning helps match the color temperature across the display or multiple displays.

- **Control the display and content with the Samsung Smart Signage Platform.** Enhanced built-in functions eliminate the need to purchase a separate PC to run the displays.
- **Reduce expenses while advertising goods and services through a striking medium.** Companies save on energy costs with Samsung LED backlight technology and DisplayPort® (DP) 1.2 multistream support.
- **Customize installations of UDC, UDC-B and UEC Series displays to support business goals.** Users can create a video wall that meets company objectives with versatile installation options and accessories.

Figure 1. Eye-catching video walls enable businesses to publicize their goods or services.

Enhance the message with narrow and ultra-narrow bezels

The UDC, UDC-B and UEC Series displays feature narrow and ultra-narrow bezels for near-seamless video walls. The UDC and UDC-B models have an ultra-narrow bezel of 5.5 mm (0.22 in.). The UEC model has a narrow bezel of 11 mm (0.43 in.).
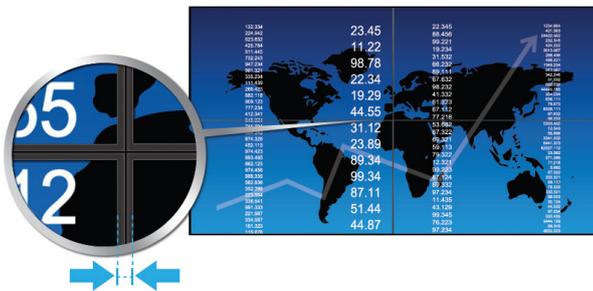

Figure 2. Narrow and ultra-narrow bezels help create a near-contiguous video wall.

Capture customer attention with clear, bright text and images

UDC, UDC-B and UEC Series LFDs are designed to help businesses with limited space create memorable video walls. Improved video wall color calibration helps create an enjoyable viewing experience.

Improved video wall color calibration for color uniformity

The displays' factory color tuning software has been enhanced for white balancing and color difference compensation. The result is a bright image with color temperature matching.

Before factory tuning   After factory tuning

Figure 3. The side-by-side comparison demonstrates how factory tuning increases color uniformity across the video wall.

Advanced Color Management (ACM) has also been improved for usability and performance. The calibration speed was increased and the user interface (UI) was enhanced for more detailed color management.

Figure 4. The enhanced color calibration UI provides more detailed color management.

With the factory color calibration and ACM software, Samsung customers can save on total cost of ownership (TCO). The displays decrease the need to invest in color management solutions and the effort of managing color uniformity across the video walls. The displays also help increase operational efficiency with a more uniform video wall.

Businesses can use ACM to adjust and configure color specifications, such as brightness and x and y coordinates.

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A built-in media player for flexible content display options

Broaden display options with the built-in Samsung Smart Signage Platform

The Samsung Smart Signage Platform is available for UDC and UEC Series LFDs. The platform eliminates the need to purchase a separate PC to control content displayed over video walls of various sizes and configurations. The platform supports dynamic screen editing and split screens, showing different content at the same time.

Built within a microchip, the internal media player features the following components:

- A 1 GHz dual CPU with a cache size of 512 KB
- 1 GB double data rate 3 (DDR3) dual 32-bit memory
- A video processor with full codec, high performance Microsoft® Windows® Media Video (WMV), MP4 and H.264 capabilities
- A storage solid state disk (SSD) of 4 GB to 8 GB of memory (2 GB is occupied by the OS)
- Professional signage software with MagicInfo™ S Premium
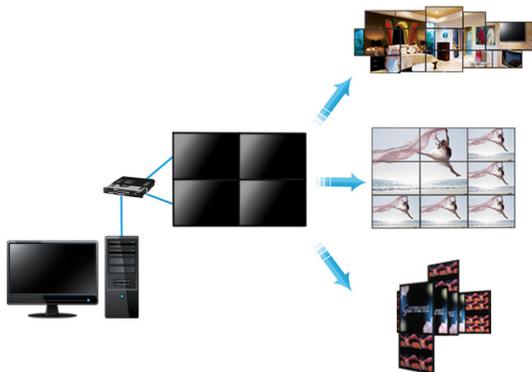
Figure 5. Samsung Smart Signage Platform helps make business messages stand out from the competition.

With the Samsung Smart Signage Platform, the UDC and UEC Series displays can be set up in a diagonal direction. This distinctive function helps users create more interesting video walls.

Connect multiple displays through an HDCP daisy chain

The UDC and UEC Series displays offer High-bandwidth Digital Content Protection (HDCP) daisy chain connections. By supporting HDCP daisy chain connectivity, content from live TV or a Blu-ray Disc™ can be displayed without an HDCP distributor. The HDCP daisy chain feature helps decrease the cost of deploying multiple displays.

With no complex distributors to connect, a digital daisy chain has a maximum loop out of 100 displays.

Additionally, the UDC and UEC Series displays offer ultra high definition (UHD) resolution through DP 1.2 multistreaming. A video wall of up to four units (2 x 2) can have UHD resolution multistreaming without additional equipment.

Figure 6. UDC and UEC Series displays offer UHD resolution of 3,860 x 2,160 for a 2 x 2 wall.

Save energy costs and sharpen pictures with backlight dimming technology

For UDC and UEC Series screens, Samsung technology offers a dimming solution that generates deeper black tones by controlling the LED BLU (backlight unit). The overall picture quality of the displays is heightened, providing a sharp and vibrant image. The backlight dimming technology reduces costs by consuming 40 percent less power than CCFL LCDs, based on an internal Samsung test. The technology is also free of harmful materials, such as mercury or halogen, contributing to a cleaner environment.

Figure 7. Samsung LED backlight technology uses less power for optimal energy efficiency.

Install displays in tight spaces with ingenious installation choices

Businesses can create individualized video walls with multiple installation options. Business users can design video walls within limited space and use a wall or floor stand to position displays in various configurations.

Construct a video wall where space is limited

The narrow depth of the UDC, UDC-B and UEC Series of displays is designed to enable placement in tight areas, such as behind counters and display cases. The UDC and UDC-B models offer slim profiles of 96 mm (3.78 in.) and the UEC model features a depth of only 29.9 mm (1.18 in.).

Figure 8. Displays can be installed in narrow areas.

Mount the displays to the wall or a floor stand

Versatile installation accessories, such as a floor stand, a mobile Internet device (MID) and wall brackets, are some of the versatile installation accessories that provide even more display options. Using this modular approach also enables company owners and managers to find the exact Samsung LFD to fit their needs cost-effectively.

Figure 9. Floor stands and expandable wall mounts provide various custom configurations to fit almost any need.

Near-seamless video wall designed for creative installation

Rotate images more conveniently with Auto Image Rotation

The UDC and UEC Series displays offer Auto Image Rotation, providing image orientation rotation from portrait to landscape for greater display flexibility. For convenience when rotating the image, two resolution options are available: original resolution or auto full-sizing resolution. Image quality is preserved when the images are rotated, with no loss of resolution.
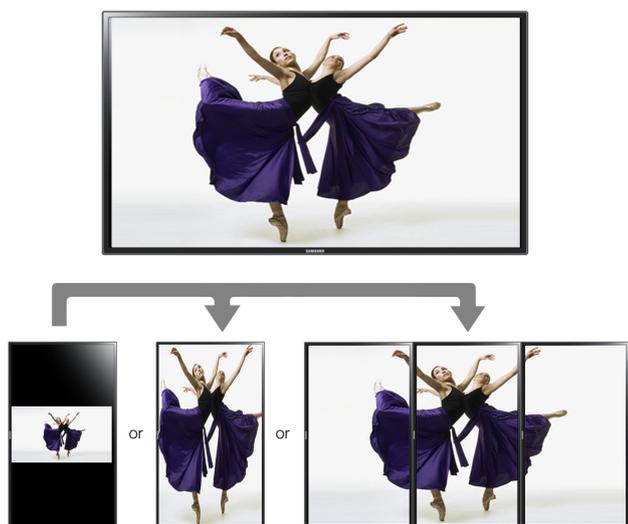
Figure 10. Portrait to landscape image rotation enhances usability with no loss of resolution.

Auto Image Rotation enhances the message with two resolution options: original resolution and automatic full-size resolution.

Control displays remotely with mixed connections

The UDC and UEC Series displays offer powerful connectivity, even when working with registered standard jacks (RJ45) and recommended standard cables (RS-232C) connections. Both network connections can be used simultaneously. Using a digital visual interface (DVI) loop out, a single display image can be shared with nearby displays. This feature eliminates the need to purchase separate video signal distributors for each display, further reducing equipment costs.

Figure 11. UDC and UEC Series displays enable RJ45 and RS-232C connectivity simultaneously.

Create and display attention-getting messages

Samsung UDC, UDC-B and UEC Series LED LFDs help companies stir client interest with vibrant images and clear, crisp text. The displays help control costs while advertising through a distinctive medium with:

- Virtually uninterrupted video walls with narrow and ultra-narrow bezels
- Uniform brightness and color temperatures across the display, with color tuning and calibration software
- The Samsung Smart Signage Platform for UDC and UEC Series screens, which eliminates the need to purchase a separate PC to run content displayed over a video wall
- DP 1.2 multistream support for UHD on UDC and UEC Series displays
- Samsung LED backlight technology for UDC and UEC Series displays, which offers a dimming solution that shows deeper black tones and lowers energy costs by controlling the LED BLU
- Auto Image Rotation, which allows businesses to change the picture of UDC and UEC Series monitors without changing the physical setup

Features and benefits

Features	Benefits
Color calibration for color uniformity	Enhance the video color ratio with matched brightness and color temperatures.
FHD resolution of 1,920 x 1,080	Display high-resolution images with clarity.
Narrow and ultra-narrow bezels	Create near-continuous video walls with fewer distractions.
Samsung Smart Signage Platform	Support dynamic screen editing and split screens, showing different content at the same time and creating various-sized video walls.
DP 1.2 multistream support	Support UHD (4 K x 2 K) without additional distributors.
Samsung backlight technology	Save energy costs and upgrade picture quality for a clear and vibrant image.
Slim profiles	Create video walls in areas with limited space.
Auto Image Rotation	Eliminate the need to create new content or reprogram existing content when pivoting content from landscape to portrait mode and vice-versa.

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Samsung UDC, UDC-B and UEC Series

Specifications

			UD46C	UD55C	UD46C-B
Panel	Diagonal size		46 in.	55 in.	46 in.
	Type		D-LED DID		
	Resolution		1,920 x 1,080		
	Pixel pitch (H x V)		0.53 mm x 0.53 mm (0.021 in. x 0.021 in.)	.0.63 mm x 0.63 mm (0.025 in. x 0.025 in.)	0.53 mm x 0.53 mm (0.021 in. x 0.021 in.)
	Active display area (H x V)		1,018.08 mm x 572.67 mm (40.08 in. x 22.55 in.)	1,209.6 mm x 680.4 mm (47.62 in. x 26.79 in.)	1,018.08 mm x 572.67 mm (40.08 in. x 22.55 in.)
	Brightness (typ)		450 cd/m^2	700 cd/m^2	450 cd/m^2
	Contrast ratio		3,500:1		
	Viewing angle (H x W)		178:178		
	Response time (G-to-G)		8 ms	8 ms	6.5 ms
	Display colors		8 bit – 16.7 M		
	Color gamut		68%		
Connectivity	Input	RGB	Analog D-sub, DVI-D [High-Definition Multimedia Interface® (HDMI®)], DisplayPort 1.2	Analog D-sub, DVI-D, DisplayPort 1.2	Analog D-sub, DVI-D
		Video	HDMI1, HDMI2, Component [Composite Video Banking Sync (CVBS)] Common	HDMI1, HDMI2, Component (CVBS Common)	HDMI1, HDMI2, Component, CVBS
		Audio	Stereo mini jack		
	Output	RGB	DP 1.2 (loop-out)	DP 1.2 (loop-out)	DVI-D (loop-out)
		Audio	Stereo mini jack		
	External control		RS-232C (in and out), RJ45		
	External sensor		Detachable type (IR, Ambient)		
Power	Type		Internal		
	Power supply		AC 100 - 240 V - (+/- 10%), 50/60 Hz		
	Power consuption	Max (W/h)	TBD	TBD	TBD
		Typical (W/h)	TBD	TBD	TBD
		BTU (max)	TBD	TBD	TBD
		Sleep mode	< 0.5 W		
		Off mode	< 0.5 W		
Mechanical specifications	Dimension	Set	1,023.8 mm x 578.4 mm x 96 mm (40.31 in. x 22.77 in. x 3.78 in.)	1,215.3 mm x 686.1 mm x 96 mm (47.85 in. x 27 in x 3.78 in.)	1,023.7 mm x 578.3 mm x 95.5 mm (40.3 in. x 22.77 in. x 3.76 in.)
		Package	1,160 mm x 707 mm x 295 mm (45.67 in. x 27.84 in. x 11.61 in.)	1,355 mm x 820 mm x 310 mm (53.35 in. x 32.29 in. x 12.21 in.)	TBD
	Weight	Set	18 kg (39.68 lb)	24 kg (52.91 lb)	TBD
		Package	25 kg (55.12 lb)	35 kg (77.16 lb)	TBD
	VESA mount		600 mm x 400 mm (23.62 in. x 15.75 in.)		
	Media player option type		Embedded, SBB-A (slide-in)		
	Bezel width		5.5 mm (0.22 in.)	11 mm (0.433 in.)	5.5 mm (0.22 in.)

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Specifications, continued

			UD46C	UD55C	UD46C-B
Features		Key	Super narrow bezel	Narrow bezel	Super narrow bezel
	Internal player (embedded hardware)	Processor	Cortex A-9 1 GHz dual core CPU	Cortex A-9 1 GHz dual core CPU	-
		On-chip cache memory	L1 (I/D): 32 KB/32 KB L2 (Unified): 512 KB	L1 (I/D): 32 KB/32 KB L2 (Unified): 512 KB	-
		Clock speed	1 GHZ CPU dual	1 GHZ CPU dual	-
		Main memory interface	Dual 32-bit DDR3-667 (1,333 MHz)	Dual 32-bit DDR3-667 (1,333 MHz)	-
		Graphics	2D and 3-D graphics engine - Up to 1,920 x 1,080, 32 bpp - Supports OpenGL® ES	2-D and 3-D graphics engine - Up to 1,920 x 1,080, 32 bpp - Supports OpenGL ES	-
		Storage (FDM)	8 GB (TBD) (2 GB occupied by OS; 6 GB available)	8 GB (TBD) (2 GB occupied by OS; 6 GB available)	-
		Multimedia	Video decoder - MPEG-1/2, H.264/AVC (dual) - VC-1, JPEG, PNG audio DSP (decoder) - AC3 (DD), MPEG, DTS and so on	Video decoder - MPEG-1/2, H.264/AVC (dual) - VC-1, JPEG, PNG audio DSP (decoder) - AC3 (DD), MPEG, DTS and so on	-
		Host bus	TBD	TBD	-
		IO ports	USB 2.0	USB 2.0	-
		Operating system	Linux®	Linux	-
Accessories		Included	Quick Setup Guide, warranty card, application CD, D-sub cable, power cord, remote controller and batteries	Quick Setup Guide, warranty card, application CD, D-sub cable, power cord, remote controller and batteries	Quick Setup Guide, warranty card, application CD, D-sub cable, power cord, remote controller and batteries
		Mount	WMN-4655MD		
		Speciality	MID-UD46FS	MID-UD55FS	MID-UD46FS
Media player		CPU	SBB-A (SIM type)		
		N/B			
		S/B			
		GPU			
		FDM, HDD, SDD			
		Memory			
		Ethernet			
	Connectivity	USB			
		Output			
		Others			

Samsung UDC, UDC-B and UEC Series

Specifications

			UE46C	UE55C
Panel	Diagonal size		46 in.	55 in.
	Type		240 Hz e-LED BLU	
	Resolution		1,920 x 1,080 (16:9)	
	Pixel pitch (H x V)		0.15375 mm x 0.46125 mm (0.0061 in. x 0.018 in.)	0.21 mm x 0.63 mm) (0.0083 in. x 0.25 in.)
	Active display area (H x V)		1,018.08 mm x 572.67 mm (40.08 in. x 22.55 in.)	1,209.6 mm x 680.4 mm (47.62 in. x 26.79 in.)
	Brightness (typ)		450 nit	
	Contrast ratio		5,000:1	
	Viewing angle (H x W)		178:178	
	Response time (G-to-G)		4 ms	
	Display colors		10 bit dithering – 1.07 billion	
	Color gamut		73%	
Connectivity	Input	RGB	Analog D-sub, DVI-D , DisplayPort 1.2	
		Video	HDMI1, HDMI2, Component (CVBS Common)	
		Audio	Stereo mini jack	
	Output	RGB	DP 1.2 (loop-out)	
		Video	-	
		Audio	Stereo mini jack	
	External control		RS-232C (in and out) through stereo jack, RJ45	
Power	Type		Internal	
	Power supply		AC 100 - 240 V - (+/- 10%), 50/60 Hz	
	Power consuption	Max (W/h)	TBD	

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Specifications, continued

			UE46C	UE55C
Mechanical specifications	Dimension	Set	1,030.4 mm x 584.8 mm x 29.9 mm (40.57 in. x 23.02 in. x 1.18 in.)	1,212.8 mm x 692.6 mm x 29.9 mm (47.75 in. x 27.27 in x 1.18 in.)
	Weight	Set	TBD	
	VESA mount		400 mm x 400 mm (15.74 in. x 15.75 in.)	
	Stand type		Foot stand (optional)	
	Media player option type		Embedded, SBB-A (attached)	
	Bezel width		5.5 mm (0.22 in.)	
Features	Key		LED slim video wall	
	Special		ACM support, magic clone drive to USB, auto source switching and recovery, lamp error detection, Super Clear Coating, temperature sensor, RS-232CC andRJ45 MDC, plug and play (DDC2B), PIP and PBP, up to 10 x 10 video wall, Pivot Display, Image Rotation, Button Lock, DP 1.2 digital daisy chain (supporting 2 x 2 UHD resolution, HDCP support), Smart Scheduling, Smart F/W update, clock b battery (80 hours clock keeping), built-in MagicInfo™ (Lite, Premium-S and Videowall-S)	

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Legal and additional information

About Samsung Electronics Co., Ltd.

Samsung Electronics Co., Ltd. is a global leader in semi-conductor, telecommunication, digital media and digital convergence technologies with 2011 consolidated sales of US$143.1 billion. Employing approximately 227,000 people in 197 offices across 75 countries, the company operates three separate organizations to coordinate its 10 independent business units: Consumer Electronics (CE), comprising Visual Display, Home Appliances, Printing Solution, and Health and Medical Equipment; Information Technology and Mobile Communications (IM), including Mobile Communications, Network, and Digital Imaging; and Device Solutions (DS), consisting of Memory, System LSI, and LED. 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.

For more information

For more information about the Samsung UDC, UDC-B and UEC Series video displays, visit www.samsunglfd.com.

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