# 4K Displays

# Canvys visual technology solutions A Division of Richardson Electronics

# New and Updated Products

Ultra HD Monitors for Custom Display Design and OEM Solutions



### 4K — Bigger Pictures, More Details and Depth





#### Benefits of 4K Displays

#### **Highest Resolution**

With approximately 4,000 pixels horizontal (4K) by 2,000 pixels vertical (2K),  $4K/UItra\,HD$  technology equals 4 times Full HD and offers high values for contrast and enhanced color. 4K technology can be seen as a synonym for the new high resolution display technology sometimes referred to as  $UItra\,HD$  (3840  $\times$  2160) and/or 4K (4096  $\times$  2160).

#### **Medical Applications**

A revolutionary display technology for medical applications, 4K displays allow users to view the finest image details. This feature is especially useful in applications such as surgical and endoscopy where the smallest detail is critical and may not be visible with a Full HD resolution.

#### **Industrial Applications**

4K displays are ideal when using industrial endoscope tools for the internal inspection of machinery. The images shown on a 4K display enhances views to the degree of identifying micro-cracks. This advancement in technology will help to minimize the need to disassemble machinery for inspection, saving both time and money.

#### Multi-Modality

In addition to precise, high-quality images, 4K displays allows multiple windows to be displayed on one screen. Depending on the screen size and inputs, up to four windows from four different sources can be displayed on one screen – at one time. For example, a multi-modality display enables medical staff to view a camera input of an endoscope, as well as vital stats, and other patient information on one screen.

The 4K Picture-by-Picture function is especially useful in diagnostic interpretation. This function allows medical staff to view/compare two images side-by-side on a single screen in 2K by 2K resolution without losing image quality. In addition, only one calibration and gamma setting are needed when utilizing a single screen for multiple images. This multi-modality feature is also useful for industrial applications such as Control Centers in Transportation, Energy, Surveillance and Military markets.

#### **High Brightness**

Our 4K High Brightness monitors provide optimal color reproduction and a high contrast ratio – making these displays ideal for medical and industrial imaging applications. Even when exposed to strong ambient light, a consistent visibility is guaranteed.

#### **Display Modes of a 4K2K Display (Examples)**

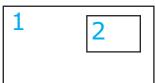
#### Quad Screen

- $\rightarrow$  4K2K = 4x Full HD.
- → Sources 1-4: each picture can be from a different source.

1	3
Full HD	Full HD
2	4
Full HD	Full HD

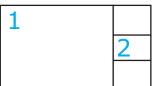
#### Picture in Picture (PIP)

→ Sources 1+2: each picture can be from a different source.



#### Picture on Picture (POP)

→ Sources 1+2: each picture can be from a different source.



#### Picture by Picture (PBP)

→ Sources 1+2: 2 windows with each 2K by 2K

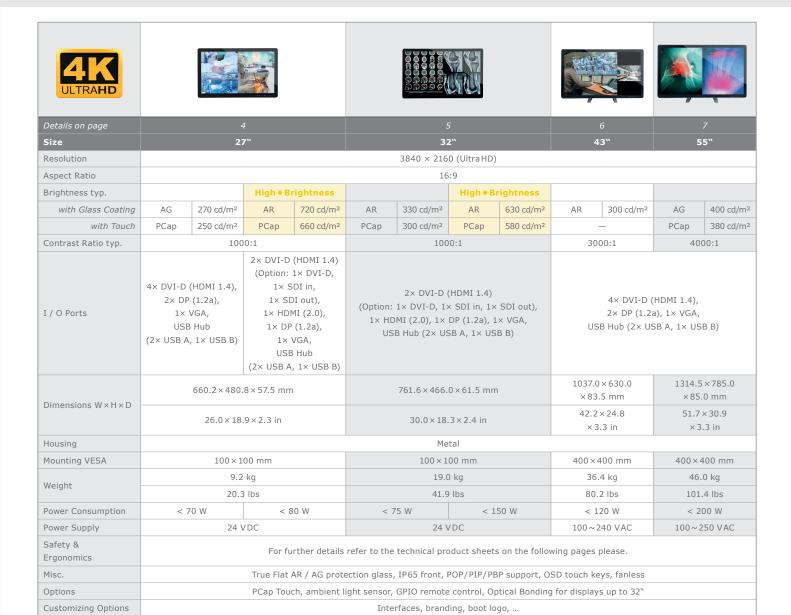
1	2

#### **Optical Bonding**

Optical Bonding is an option we offer to enhance the viewing quality of a display by reproducing a higher contrast and higher color depth. The bonding of the LCD module with the touch screen or protection glass reproduces a more vibrant image. The advantages are a clearer picture, reduced glare and greater resistance against breakage under mechanical pressure.



# 4K Displays Product Overview



#### Benefits Canvys 4K Displays

- Available custom sizes from 23.8" 84" (1)
- High Brightness panels for 27" and 32"
- Optical Bonding available up to the size of 32"

Important Note: Additional sizes may be available depending on MOQ. Please contact your Canvys DSM!

- Through up to four various picture input sources and the different display modes the screen can be split into multiple high resolution sections
- Modern and easy to clean True Flat design
- Optional Projected Capacitive Touch (PCap); operable by 10 fingers or latex gloves
- Customizing possible: branding, boot logo, protection glass, ...
- Long-term solutions available
- Medical certified and industrial versions available

#### Markets/Applications

#### **Medical**

- Surgical (operating room): monitoring with different inputs (camera, vital parameters, ...)
- Surgical (Minimal Invasive Surgery)
- Diagnostics , Endoscopy, Microsurgery, Pathology

#### **Non-Medical**

- Industrial Endoscopy for service, maintenance, ...
- Control Centers/Rooms, Transportation,
- Energy and Military Industry
- Monitoring, Surveillance, ...

### 4K Displays - 27"



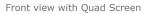


- 4K Display (Quad Full-HD / Ultra HD resolution with 3840 × 2160)
- True Flat design with protection glass and IP65 front
- POP/PIP/PBP multiple picture support
- Medical certified display (EN 60601-1 3.1 and EN/IEC 60601-1-2 4<sup>th</sup>)
- DICOM® compliant and color gamut
- Uniformity correction to meet ISO 12646 or DIN6868-57
- LED backlight with stabilization and low power consumption
- Optional with PCap Touch and Optical Bonding



Model		27" 4K Display		27" 4K Display High Brightness	
Size	Aspect Ratio	27" / 68.6 cm	16:9	27" / 68.6 cm	16:9
Active Area (H×V)	Pixel Pitch	596.2 × 335.3 mm	0.155 mm	596.2 × 335.3 mm	0.155 mm
Resolution		3840×2160   UltraHD		3840×2160   Ultra HD	
Display Colors		1.07 B		1.07 B	
Response Time		12 ms typ. (GtG)		16 ms typ. (GtG)	
Brightness (Glass)	Brightness (Touch)	270 cd/m <sup>2</sup> typ. (AG)	250 cd/m² typ. (PCap)	720 cd/m² typ. (AR)	660 cd/m² typ. (PCap)
Contrast Ratio	atio 1000:1 typ.		1 typ.	1000:1 typ.	
Viewing Angle (H×V)		178°/178°		178°/178°	
I/O Ports		4× DVI-D (HDMI 1.4), 2× DP (1.2a), 1× VGA, USB Hub (2× USB A, 1× USB B)		2× DVI-D (HDMI 1.4) (Option: 1× DVI-D, 1× SDI in, 1× SDI out), 1× HDMI (2.0), 1× DP (1.2a), 1× VGA, USB Hub (2× USB A, 1× USB B)	
Power Consumption	Power Supply	< 70 W	24 VDC	< 80 W	24 VDC
Dimensions (W×H×D)		660.2 × 480.8 × 57.5 mm	26.0 × 18.9 × 2.3 in	660.2 × 480.8 × 57.5 mm	26.0 × 18.9 × 2.3 in
Housing   Mounting VESA		Metal   100×100 mm		Metal   100×100 mm	
Weight		9.2 kg	20.3 lbs	9.2 kg	20.3 lbs
Safety & Ergonomics CE (EN60601-1, EN60		E (EN60601-1, EN60601-	1-1-2), FCC, UL/cUL, cTUVus		
Misc.		True Flat AR/AG protection glass, IP65 front, POP/PIP/PBP support, OSD touch keys, fanles		SD touch keys, fanless	
Options		PCap Touch, Optical Bonding, ambient light sensor, GPIO remote control, plastic housing available Q3/2018			







Rear view









- 4K Display (Quad Full-HD / Ultra HD resolution with 3840 × 2160)
- True Flat design with protection glass and IP65 front
- POP/PIP/PBP multiple picture support
- Medical certified display (EN 60601-1 3.1 and EN/IEC 60601-1-2 4<sup>th</sup>)
- DICOM® compliant and color gamut
- Uniformity correction to meet ISO 12646 or DIN6868-57
- LED backlight with stabilization and low power consumption
- Optional with PCap Touch and Optical Bonding



Model		32" 4K Display		32" 4K Display High Brightness	
Size	Aspect Ratio	32" / 81.3 cm	16:9	32" / 81.3 cm	16:9
Active Area (H×V)	Pixel Pitch	708.5 × 398.5 mm	0.185 mm	708.5 × 398.5 mm	0.185 mm
Resolution		3840×2160   UltraHD		3840×2160   UltraHD	
Display Colors		1.07 B		1.07 B	
Response Time		12 ms (GtG)		12 ms (GtG)	
Brightness (Glass)	Brightness (Touch)	330 cd/m² typ. (AR)	300 cd/m <sup>2</sup> typ. (PCap)	630 cd/m <sup>2</sup> typ. (AR)	580 cd/m² typ. (PCap)
Contrast Ratio		1000:1 typ. 1000:1 typ.		1 typ.	
Viewing Angle (H×V)		178°/178° 178°/178°		/178°	
I/O Ports		2× DVI-D (HDMI 1.4) (Option: 1× DVI-D, 1× SDI in, 1× SDI out), 1× HDMI (2.0), 1× DP (1.2a), 1× VGA, USB Hub (2× USB A, 1× USB B)			
Power Consumption	Power Supply	< 75 W	24 VDC	< 150 W	24 VDC
Dimensions (W×H×D)		761.6 × 466.0 × 61.5 mm	30.0 × 18.3 × 2.4 in	761.6 × 466.0 × 61.5 mm	30.0 × 18.3 × 2.4 in
Housing   Mounting VESA		Metal   100×100 mm		Metal   100×100 mm	
Weight		19.0 kg	41.9 lbs	19.0 kg	41.9 lbs
Safety & Ergonomics CE (EN60601-1, EN60601-1-2), FCC, UL/cUL, cTUVus		IS			
Misc.		True Flat AR/AG protection glass, IP65 front, POP/PIP/PBP support, OSD touch keys, fanless			
Options		PCap Touch, Optical Bonding, ambient light sensor, GPIO remote control			



Front view showing Picture By Picture (PBP) Mode



Rear view

## 4K Displays - 43"





- 4K Display (Quad Full-HD / Ultra HD resolution with 3840 × 2160)
- True Flat design with protection glass and IP65 front
- POP/PIP/PBP multiple picture support
- Industrial display EN 60950, CE Class B certified
- LED backlight with stabilization and low power consumption
- PCap Touch upon request



Model		43" 4K	43" 4K Display			
Size	Aspect Ratio	43" / 109.2 cm	16:9			
Active Area (H×V)	Pixel Pitch	941.2 × 529.4 mm	0.245 mm			
Resolution	'	3840 × 216	3840 × 2160 / Ultra HD			
Display Colors		16.	16.7 M			
Response Time		8 ms	8 ms (GtG)			
Brightness (Glass)	Brightness (Touch)	300 cd/m² typ. (AR)	_			
Contrast Ratio		3000:	3000:1 typ.			
Viewing Angle (H×V)		178°,	178°/178°			
I/O Ports		4× DVI-D (	4× DVI-D (HDMI 1.4),			
		·	2× DP (1.2a), 1× VGA,			
		USB Hub (2× US	USB Hub (2× USB A, 1× USB B)			
Power Consumption	Power Supply	< 120 W	100 - 240 VAC			
Dimensions (W×H×D)		1037.0 × 630.0 × 83.5 mm	42.2 × 24.8 × 3.3 in			
Housing   Mounting VESA		Metal   400	Metal   400 × 400 mm			
Weight		36.4 kg	80.2 lbs			
Safety & Ergonomics		EN 60950, CE Class	EN 60950, CE Class B / RoHS / WEEE /			
		RE/	REACH			
Misc.		True Flat design with AR pro	True Flat design with AR protection glass and IP65 front,			
		POP/PIP/PBP support, OSD tou	POP/PIP/PBP support, OSD touch keys, fanless, high brightness			
Options		PCap Touch, amb	PCap Touch, ambient light sensor,			
		GPIO remote control, 2× HI	GPIO remote control, 2× HDMI input instead of 4× DVI			
		Customizing options: inter	Customizing options: interfaces, branding, boot logo			



Front view showing Picture On Picture (POP) Mode



Rear view







### 4K Displays - 55"

- 4K Display (Quad Full-HD / Ultra HD resolution with 3840 × 2160)
- True Flat design with protection glass and IP 65 front
- POP/PIP/PBP multiple picture support
- Medical certified display (UL/EN 60601-1 3.1 and EN/IEC 60601-1-2 4<sup>th</sup>)
- DICOM® compliant and color gamut
- Uniformity correction to meet ISO 12646 or DIN6868-57
- LED backlight with stabilization and low power consumption
- Optional with PCap Touch



Model		55" 4K Display			
Size	Aspect Ratio	55" / 139.7 cm	16:9		
Active Area (H×V)	Pixel Pitch	1209.6 × 680.4 mm	0.315 mm		
Resolution		3840×2160 / Ultra HD			
Display Colors		1.07 B			
Response Time	Response Time		8 ms (GtG)		
Brightness (Glass)	Brightness (Touch)	400 cd/m² typ. (AG)	380 cd/m² typ. (PCap)		
Contrast Ratio	Contrast Ratio		4000:1 typ.		
Viewing Angle (H×V)	Viewing Angle (H×V)		178°/178°		
I/O Ports		4× DVI-D (HDMI 1.4), 2× DP (1.2a), 1× VGA, USB Hub (2× USB A, 1× USB B)			
Power Consumption	Power Supply	< 200 W	100 - 240 VAC		
Dimensions (W×H×D)		1037.0 × 630.0 × 83.5 mm	42.2 × 24.8 × 3.3 in		
Housing   Mounting VESA		Metal   400×400 mm			
Weight		46.0 kg	101.4 lbs		
Safety & Ergonomics		cTUVus (ANSI/AAMI ES60601-1:2005+A1, CAN/CSA C22.2 NO. 60601-1:14), FCCB, CE(IEC/EN60601-1:ed3.1,IEC/EN60601-1-2)			
Misc.		True Flat design with AR protection glass and IP65 front, POP/PIP/PBP support, OSD touch keys, fanless, high brightness			
Options		PCap Touch, ambient light sensor, GPIO remote control, 2× HDMI input instead of 4× DVI Customizing options: interfaces, branding, boot logo			



Front view showing Picture By Picture (PBP) Mode



Rear view









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