



EIZO CG246

24" ColorEdge LCD monitor

The EIZO CG246 with wide gamut and LED backlight operates on a very simple principle: It shows things as they are. The integrated measurement device with which the ColorEdge monitor adjusts itself ensures colours in original quality. The Digital Uniformity Equalizer (DUE) of the CG246 guarantees homogenous illumination on the entire display. It maps delicate image structures and colour nuances in a clean and sophisticated manner thanks to the 3D look-up table. This allows professionals from the pre-press, video and photography industries to use the monitor to see what would otherwise only be visible on the print or film – making it energy-saving.

- ◆ Wide gamut LCD with LED technology, contrast 1000:1, brightness 300 cd/m²
- ◆ Integrated measurement device and fully automatic self-calibration
- ◆ Colour precision with 16-bit look-up table and up to 10-bit colour reproduction
- ◆ Digital Uniformity Equalizer for perfect luminance distribution and colour purity
- ◆ Temperature-controlled adjustment of colour drift and brightness
- ◆ 3D-LUT for precise hardware calibration of brightness, white balance and gamma
- ◆ DisplayPort, DVI-I and HDMI inputs for digital and analogue port



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Features

Outstanding image quality The CG246 gleams with clear graphics and structures as well as sharp text contours. Its IPS-LCD module guarantees contrast and colour tones that are independent of the viewing angle. The backlight is achieved by using state-of-the-art, energy-saving LED technology.

Wide gamut The gamut of the CG246 includes significantly more colours than traditional LCD screens. For example, it covers colours in offset printing by over 99 per cent. For this reason, the screen visibly shows which saturation has been achieved with cyan and yellow tones.

High-resolution look-up table Thanks to its 16-bit look-up table, the CG246 can resolve image signals with an accuracy of 1/65 thousandths. Colour nuances and image structure are not lost, particularly in the case of dark hues. This reliable and precise reproduction reduces calibration steps, saving valuable production time. For particularly precise calibration, EIZO combines the colour allocation with a 3D look-up table (3D LUT) in the CG246. This feature guarantees the precise addition of the basic colours for each hue – a key technology for the ideal grey wedge and highly accurate colour reproduction.

Consistent hue curve and colour The brightness level of LCDs varies from module to module in relation to the image signal and the colour mix (addition) of red, green and blue. This can only be precisely recorded and controlled using special measurement devices. EIZO therefore configures each CG246 at the factory with its colours and hue curve at 343 grid points and in every primary colour. Therefore, a consistent colour temperature is attained on the entire grey value scale. Colour deviations usually amount to just 0.34 ΔE on average. The result is that the colour reproduction is balanced, precise and reliable for the CG246.

Integrated measuring device The CG246 achieves maximum colour accuracy thanks to its integrated measurement device. It automatically positions itself for calibration and hides away in the housing until the next measurement. EIZO optimally aligns each CG246 and the associated integrated measurement device. For example, the measuring location on the lower section of the image is correlated with the centre of the image so that the sensor measures as if it were in the centre. This integrated solution eliminates production spreads, as can occur with external measurement devices. Even ambient light influences are calculated during sensor initialisation and taken into account during calibration.

Digital Uniformity Equalizer (DUE) The DUE in the CG246 ensures colour purity and even brightness distribution across the entire display surface. A chip automatically adjusts for irregularities. While conventional LCDs are optimised at best for homogeneity of a white surface, every hue looks the same across the entire screen with EIZO. The DUE ensures precisely matching colours from the centre right to the outermost edge of the screen, where the integrated sensor travels to measure and carries out the adjustment for the entire surface and all tonal values. The DUE Priority function allows the user to freely choose whether to prioritise maximum homogeneity or maximum brightness.

Exact calibration The ColorNavigator software (included in the delivery of the CG246) has direct access to the monitor's look-up table during calibration. In the process, the user can freely determine colour temperature, brightness, black level and hue curve according to their requirements. The calibration is based on the default setting and is therefore unique in its precision and speed.

Self-calibration The CG246 carries out the calibration without any action on the part of the user. The computer does not even have to be turned on. Once programmed, the CG246 starts the calibration at night, during lunch or at any other defined time. Programming takes place conveniently via the ColorNavigator or the on-screen menu.

Colour drift correction Temperature deviations in LCDs can also lead to imprecise colour reproduction, for example, when warming up the monitor. Colour deviations of more than 2 ΔE often arise when the room temperature is unstable. The CG246 has an internal thermometer to eliminate these inaccuracies. It controls and reduces the colour drift fully automatically.

Brightness stabilisation Balanced brightness is crucial for brilliant colour reproduction. Conventional LCD monitors need one to two hours to level off their brightness. Indeed, they then react sensitively to temperature changes. The patented electronics of the CG246 therefore regulates the backlight. It automatically ensures constant brightness – regardless of the service life and temperature.

Overdrive The CG246 processes moving images by projection and overdrive in such a way that fast video sequences are displayed without any annoying delays.

Digital and analogue inputs DisplayPort, HDMI and DVI-I ports allow up to three computers to be connected at the same time. Users can switch either automatically or manually. HDMI signals from HD cameras can be displayed directly on the CG246 via HDMI and DisplayPort.

USB hub An integrated USB hub enables the connection of peripheral devices. For example, a keyboard and mouse can be connected to the monitor. The CG246 has two upstream ports. Therefore, devices connected to the monitor can be used alternatively with two computers.

HDMI The monitor offers conventional resolutions and image refresh rates for video production. HDMI signals (YUV and RGB) are supported with the refresh rates of 60, 50, 30, 25 and 24 Hz. The monitor also features I/P conversion. The CG246 can be conveniently used in video editing and animation systems, too.

Reliable and energy-efficient LED backlight, power-off timer and PowerManager are among the energy-saving features. Protect the environment and save energy when the user is not currently using the computer. The power-off timer and PowerManager are particularly useful as they reduce the aging of the LCD backlight and luminance distribution. Brightness and homogeneity can be maintained for longer.

10-bit colour depth The CG246 has a Mini DisplayPort in addition to DVI interfaces. The port has a 10-bit colour resolution in combination with the frame rate control (FRC). This means the screen can display even the finest of colour gradations with a billion colours. However, you need to have the corresponding software and graphics board with 10-bit support.

Test marks



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Slovakia ♦ www.eizomonitor.sk
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Specifications

Diagonal	61 cm (24 inches) 16:10 aspect ratio
Visible image size	518 mm (width) x 324 mm (height)
Visible diagonal	611 mm
Ideal and recommended resolution	1920 pixels x 1200 lines
Dot pitch	0.27 mm x 0.27 mm
Displayed colours	1 billion (10-bit) DisplayPort 16.7 million (8-bit) DVI and analogue
Colour control	16-bit look-up table 48-bit (3 x 16-bit) approx. 278 billion colour tones
Max. colour range	AdobeRGB: 97% ISO-coated V2: 99% sRGB: 100%, Rec709: 100%, EBU: 100%, SMPTE-C: 100%, DCI: 91%
Max. brightness	300 cd/m ²
Max. dark room contrast	1000:1
Max. viewing angle	Horizontal: 178°; vertical: 178°
LCD technology	IPS
Typical mid-tone reaction time	8 ms
Typical reaction time, rise/fall	6/6 ms, black-white change
Features	Hardware calibration of brightness, white balance and gamma adjustment wide gamut, integrated measurement device for self-calibration, 16-bit look-up table (48-bit R+G+B), Digital Uniformity Equalizer, temperature-controlled colour drift adjustment, overdrive, 3D LUT film emulation (10-bit log), safe area marker (HDMI), I/P conversion (HDMI), pseudo-interlaced (HDMI), signal range extension (HDMI), noise reduction (HDMI), RGB and CMYK gamut emulation, Color Universal Design mode (simulating colour blindness), HDCP decoder, USB V2.0, powered hub
Configuration options	Brightness, contrast, gamma 1 to 2.6 in steps of 0.1, colour saturation (gain) for RGBCMY, colour temperature 4,000–10,000 K, gamut clipping, DUE priority, power-off timer, OSD language (DE, UK, FR, SE, ES, IT)
Resolutions	Max. 1920 x 1200 full image 1:1, HDMI 60 Hz: VGA, 480i, 480p, 1080i, 720p, 1080p HDMI 50 Hz: 576i, 576p, 1080i, 720p, 1080p HDMI 30 Hz/25 Hz/24 Hz: 1080p
Horizontal frequency	Analogue: 26–78 kHz/ 15–68 kHz (HDMI) (Digital: 26–78 kHz)

Vertical frequency	47.5–86 Hz (Digital: 23.75–63 Hz)
Video bandwidth	Analogue: 164.5 MHz (Digital: 164.5 MHz/149 MHz (HDMI))
Graphic signals	DisplayPort, DVI (TMDS), RGB analogue, HDMI (YUV and RGB)
Signal inputs	DisplayPort, DVI-I, HDMI
Plug & Play	VESA DDC CI
Power management	VESA DPMS, DVI-DMPM
Power consumption	Max.* 98 watts Typical power consumption of 41 watts, max. 0.5 watts in OFF mode 0 watts when the power switch is OFF
Dimensions (WxHxD)	58 cm x (42–55) x 25 cm
Weight	9.9 kg
Test marks	CE, TÜV GS, TÜV certified ergonomics, ISO 9241-307 pixel fault class I**
Flexibility	172° right/left, 30° to the back, 90° rotatable, 13 cm height adjustment
USB hub	2 upstream/2 downstream, rev. 2.0
Accessories included	Included: Manual in German, English and French, ColorNavigator, power, USB and signal cable for Mini DisplayPort and DVI-D, light protection shields
Service***	Five-year on-site replacement service
Errors excepted 08/12	

FlexStand



This enables turning and tilting as well as operation in portrait and landscape format. The continuous height adjustment starts very low on the base and has a range of 13 centimetres. This guarantees optimal ergonomics, regardless of whether the user is sitting or standing in front of the screen. The FlexStand base is always fully stable, despite its maximum range of movement.

* at maximum brightness, as well as two signal inputs and USB hub in operation
** Free from pixel errors (full RGB pixel group) for 12 months from the date of purchase according to ISO 9241-307, pixel fault class 1.

*** The duration of the warranty for the LCD module is five years from the date of purchase or a monitor usage time of 30,000 hours, whichever occurs first. The warranty also extends to normal wear and tear of the backlight if this is operated at a recommended brightness level of 120 cd/m² and a white balance of between 5,000 K and 6,500 K. EIZO guarantees this brightness for three years from the date of purchase or a monitor usage time of 10,000 hours, whichever occurs first.



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