31.1" | Graphics-Monitor

ColorEdge® PROMINENCE CG3146

CG3146

Your advantages

DCI 4K 4096 × 2160 | HDR | 5 YEAR WARRANTY

The ColorEdge PROMINENCE CG3146 reference monitor means professionals in the television and film industry can rest assured that the image they see is 100% accurate. It delivers precision and consistency in unparalleled HDR reference quality. This makes it the perfect solution for use in both 4K post-production and the studio, as well as 4K cinematography, and it is ideal for professional colourists. Its precise and colour-accurate reproduction across the entire luminance characteristic curve (EOTF) makes the CG3146 suitable for the entire 4K production workflow in both HDR in SDR. The reference monitor supports HLG (Hybrid Log Gamma) and PQ curves (Perceptual Quantization) for the editing of television content, films and other video content in HDR. Both the HLG and PQ EOTF as well as the brightness are precisely calibrated to reference class 1 level. The ColorEdge PROMINENCE is equipped with a built-in calibration sensor. It provides fully automated recalibration in reference quality and as well as project-specific calibrations.

- 31.1-inch HDR/SDR reference monitor (78.9 cm), 10-bit LCD and DCI 4K resolution
- HDR brightness and dynamics of up to 1000 nits and calibrated to reference class 1 level
- Deep black tones without ABL or local dimming with a contrast up to 1000000
- HLG and PQ EOTF are precisely calibrated to reference class 1 level
- Calibrated for: BT.2020, BT.709, DCI P3, PQ_BT.2100, PQ_DCI P3, HLG_BT.2100
- Gamut with 99% DCI P3 and colour precision with 3D look-up-table (LUT) with 24-bit
- Digital Uniformity Equalizer for perfect luminance distribution and colour purity
- Single-link 12G/6G/3G/HD SD and dual- and quad-link 3G/HD SDI, as well as HDMI and DisplayPort signal input
- Built-in sensor for fully automated recalibration in reference quality as well as project-specific calibrations

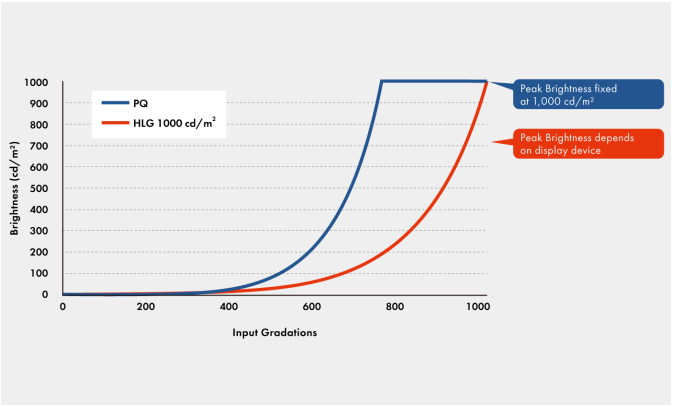
Features

HDR reference technology

The ColorEdge PROMINENCE CG3146 reference monitor means professionals in the television and film industry can rest assured that the image they see is 100% accurate. All monitors are calibrated at EIZO's own factory in Japan, which means that each and every monitor provides an accurate display of images and is ideally suited for post-production work. This factory calibration includes the commonly used SDR and HDR standards. BT.2020, BT.709, DCI P3, PQ_BT.2100, PQ_DCI P3 and HLG_BT.2100 are among the available reference modes for calibration. The ColorEdge PROMINENCE CG3146 from EIZO displays true HDR in reference quality without automatic brightness limitation or local dimming. This guarantees that each pixel has the correct colour and brightness.

Gamma curves

The ColorEdge PROMINENCE CG3146 supports both of the gamma curves for HDR video: the HLG curve (Hybrid Log Gamma) and the PQ curve (Perceptual Quantization). Both are precisely calibrated to reference class 1 level. The HLG curve is compatible with SRD displays, making it suitable for live TV broadcasts, for example. The PQ curve is closer to the colour and brightness perception of the human eye and is often used for films, streaming and other video content. Both gamma curves were defined as standards by the International Telecommunication Union (ITU) published as the ITU-R Recommendation BT.2100. The PQ curve is also known as the ST-2084 standard for the Society of Motion Picture and Television Engineers (SMPTE).



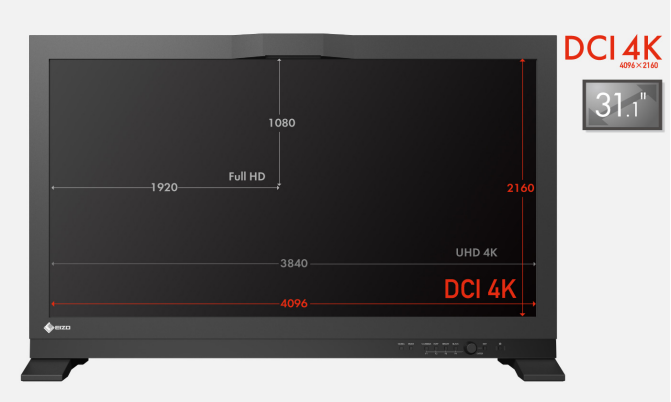
High brightness and impressive contrast

At 1000 cd/m^2, the ColorEdge PROMINENCE CG3146 achieves the high brightness necessary to display HDR content. It displays deep black tones with a typical contrast ratio of 1000000:1. All code values of HDR-HLG or HDR-PQ brightness levels are reliably reproduced on the monitor at reference class 1 level.

Features

DCI 4K resolution

The ColorEdge PROMINENCE CG3146 supports DCI 4K resolution (4096 × 2160), making it ideal for creating, editing and referencing with 2D and 3D CGI, VFX projects, compositing and colour grading.



Video compatibility

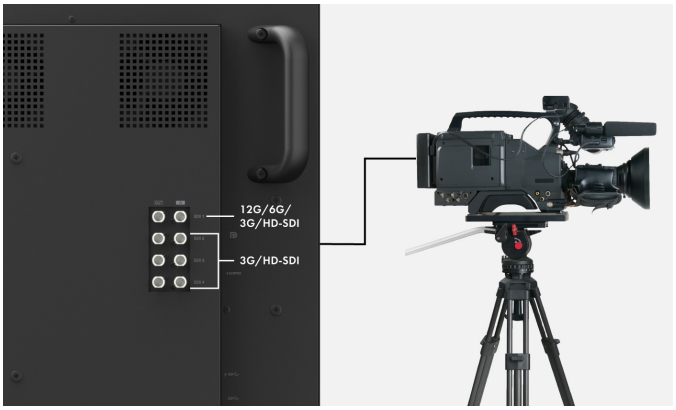
The monitor supports different video formats, such as HDMI signals with 10-bit 4:2:2 at 50/60 p. It supports DisplayPort signals with up to 10-bit 4:4:4 at 50/60 p.

Flexible connection options

The CG3146 offers flexibility in connection options for a wide variety of other video equipment and computers thanks to an HDMI and a DisplayPort input, which are easily accessible on the side of the monitor. There are also four downstream USB ports and one upstream USB port.

SDI ports

The ColorEdge PROMINENCE CG3146 is equipped with a single-link 12G/6G/3G/HD SD and dual- or quad-link 3G/HD SDI ports that enable you to use 4K video signals. The SDI ports support the 2SI process (2 Sample Interleave), which ensures that the image consistently remains stable during transmission. VPID data (Video Payload ID) for SDI ports are also supported.



Features

ColorNavigator colour management workflow software

EIZO ColorNavigator is the calibration and quality control software for colour management workflow monitors in the ColorEdge series. The proprietary software simplifies the recalibration process and produces reliable results for colour-accurate display.

Integrated measurement sensor for automated workflows

A reference monitor always needs to be precisely configured in terms of white balance, colour and EOTF. The ColorEdge PROMINENCE CG3146 is the world's first HDR reference monitor that is equipped with a built-in measurement sensor that automatically recalibrates the monitor to the reference class level.

Each individual built-in sensor is correlated at the factory with a precision lab measurement sensor and calibrated to 'its' monitor in order to provide the exact measurement result. In addition, the sensor can be correlated to other measurement sensors that are used in existing user workflows. Thanks to the built-in measurement sensor, there is no longer a need for third-party calibration equipment. This simplifies quality control and the user can concentrate on the creative process. The calibration settings are saved directly in the monitor so that it does not have to be recalibrated when it is connected to another computer.

Effortless quality control

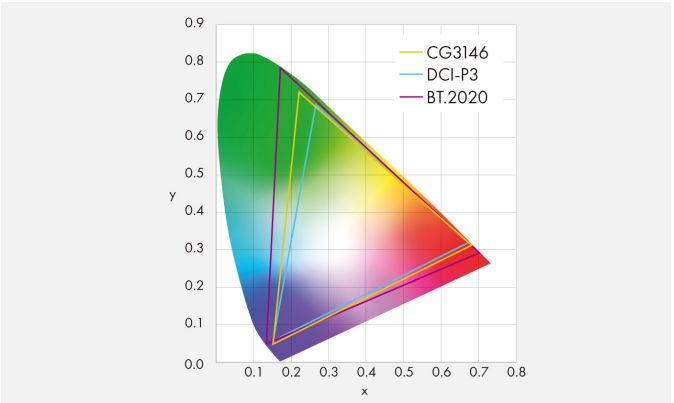
The built-in measurement sensor can be configured to automatically recalibrate the monitor at predefined times. For example, you can choose a time at night or the weekend to prevent interruptions while users are at work. This ensures consistently accurate colour representation on the monitor. The monitor warms up automatically, the measurement sensor is folded out and the recalibration is performed, even if the computer or other source is switched off.

If desired, the monitor's own calibration sensor can be calibrated using an external measurement sensor. The following devices are supported:

Colorimetry Research: CR-100, CR-250, CR300
Klein: K-10/K-10A
Konica Minolta: CS-1000, CS-1000A, CA-210, CA-310, CA410, CS-2000, CS-2000A, CS-200
Photo Research: PR-655, PR-680
JETI: Specbos 1211, Spectraval 1501

Wide gamut

The wide gamut reproduces 99% of the DCI P3 standard that is typically used in post-production, which displays colours true to the original source data.

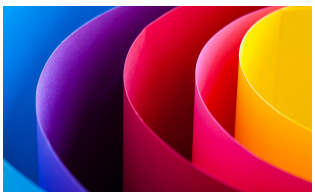


Features

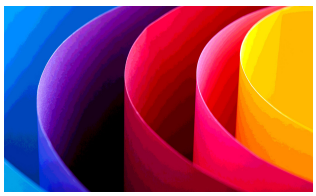
10-bit display

The ColorEdge PROMINENCE CG3146 offers 10-bit display* based on a 24-bit look-up-table (LUT), which can display more than one billion colours. This results in finer gradations and a lower colour distance (delta E) between adjacent hues.

* This requires a graphics board and software that support 10-bit display.



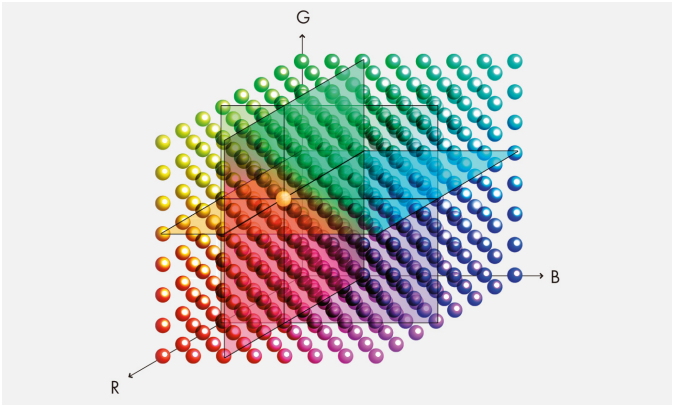
10 bit (LUT: 24 bit)



8 bit (no LUT)

Precise colour reproduction using 3D LUT

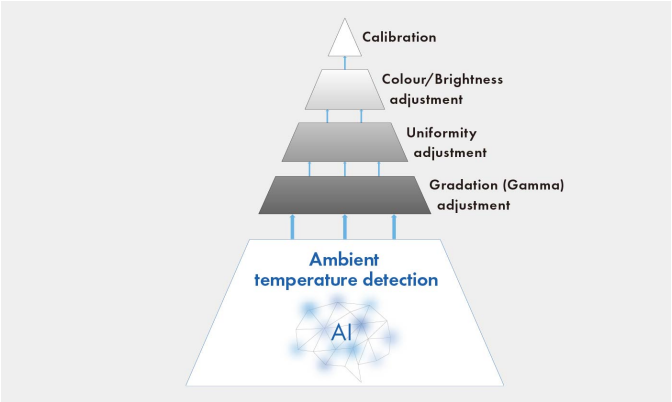
Hues are precisely addressed in a cubic RGB table thanks to the built-in 3D LUT. The 3D LUT also improves the monitor's additive colour mixing (mixing of RGB) – a key factor for ensuring correct display of neutral grey tones.



Stable display of industry-leading AI

The ColorEdge PROMINENCE CG3146 is equipped with a temperature sensor to make sure that gradations, colours, brightness and other characteristics are always displayed with total accuracy, even if the ambient temperature changes. It precisely measures the monitor's internal temperature while an AI algorithm* differentiates between different temperature change patters and calculates a precise adjustment in real time.

* Patent pending



Stable colour reproduction in just three minutes

It takes a traditional monitor a minimum of 30 minutes for the brightness, chromaticity and tone values to stabilise, whereas the ColorEdge PROMINENCE CG3146 only needs three* minutes. It means that users know they can reliably trust the colours of the monitor within a short time after switching in on.

* Based on internal testing at EIZO.

Homogeneity across the entire screen

LCD monitors often have inhomogeneous brightness and colour representation on the screen surface – which impairs colour accuracy. To counteract this, EIZO has equipped the ColorEdge PROMINENCE CG3146 with its patented DUE (Digital Uniformity Equalizer) technology. It corrects for these variations in every hue, anywhere on the screen, ensuring stable viewing.

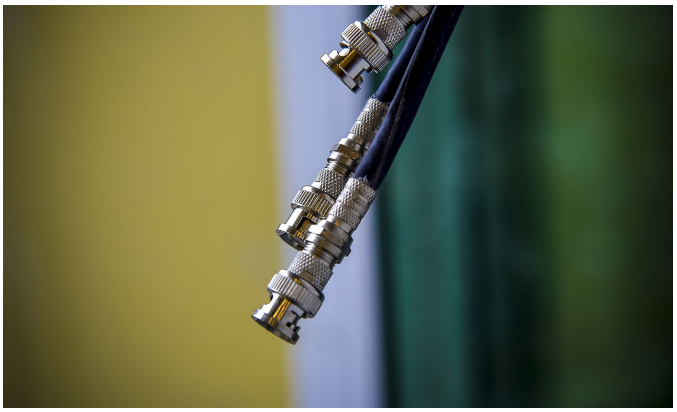
Default colour modes

The OSD menu of the ColorEdge PROMINENCE CG3146 offers quick access to the reference modes, which correspond to different playback standards. The available modes are BT.2020, BT.709, DCI P3, PQ_BT.2100, PQ_DCI P3, HLG_BT.2100, Calibration and Sync Signal.

Features

Automatic colour settings

The ColorEdge PROMINENCE CG3146 offers Sync Signal functionality, which adjusts monitor settings such as signal range and colour format to the video signal, offering consistent colour settings during the entire production process.



PQ and HLG brightness warning

The ColorEdge PROMINENCE CG3146 features a brightness warning in case image areas cannot be properly displayed with the current brightness settings. These areas are highlighted in the user's choice of yellow or magenta and can be displayed for typical HDR brightness levels of 300, 500, 1000 or 4000 cd/m².

Brightness warning

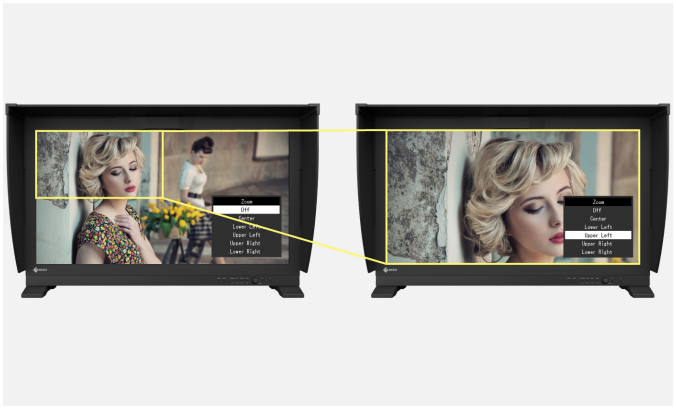
Without brightness warning

BT.709 gamut warning

When enabled, a BT.709 gamut warning ensures that areas of a BT.2020 image that cannot be reproduced in the BT.709 gamut are displayed in greyscale. A BT.709 clipping mode also allows BT.2020 images to be displayed within the BT.709 gamut, thus simulating how they would look on HDTV devices.

4K zoom

4K zoom functionality enables you to zoom in on specific areas of the monitor in order to conveniently check image detail and focus accuracy. The functionality can be quickly and easily accessed using the buttons on the monitor's bezel in the front.



Blue-only functionality

The CG3146 offers a blue-only functionality that can be used to check noise in the signal. A monochrome image that uses only the blue components of the input signal will be displayed.

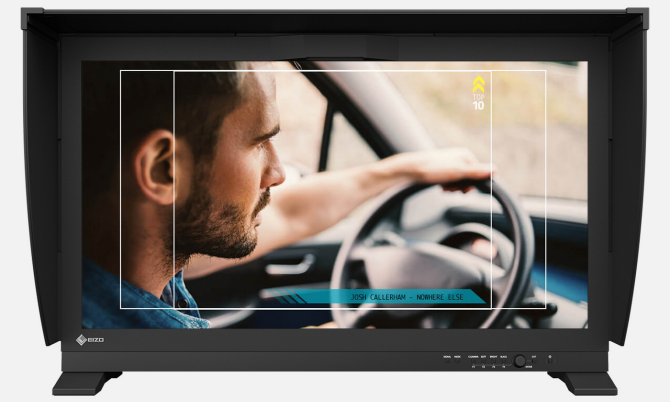
SMPTE test image

Blue Only

Features

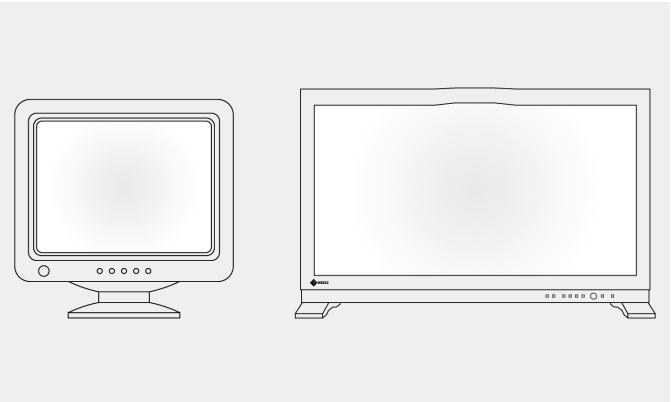
Aspect Marker

The CG3146 displays up to three types of markers at the same time. The position and size of each marker can be defined by aspect ratio, pixel (centre) and pixel (free). Width, height, priority and colour of each marker can be freely selected.



D065 (CRT) support

The CG3146 is capable of using an offset value for white balance/colour temperature that corresponds to the display on a CRT monitor.



Adjustable front dial

The CG3146 has a dial on its front bezel that can be used to customise the monitor settings to your needs, such as by assigning it to the brightness settings, making navigation quick and easy.

Flicker-free viewing

The ColorEdge PROMINENCE CG3146 regulates the brightness for flicker-free viewing to retain colour stability, for example, despite LED backlighting. This is beneficial as it alleviates strain on the user's eyes. You can work at your screen for longer periods.

Monitor hood

A monitor hood is included in the delivery. It prevents ambient light from producing reflections on the monitor. The monitor hood is magnetic and can be attached/detached quickly and conveniently.

Features

Built-in handles

You can conveniently carry or move the monitor thanks to two handles on the back of the device.

Five-year warranty

All components of the monitor, including the LCD panel, are covered by a five-year manufacturer's warranty* (repair work performed at the Service Centre). This is made possible by a highly developed manufacturing process, which derives its success from one straightforward principle: innovative and sophisticated monitor technology manufactured from high-quality materials and strict quality control in the EIZO factory.

* Maximum of 30 000 hours of monitor usage time (10 000 hours of monitor usage time for the LCD panel).

Guaranteed brightness and colour reproduction

EIZO provides a brightness and colour guarantee for a maximum of 10 000 hours of monitor usage time on the ColorEdge PROMINENCE CG3146 from the date of purchase. A minimum brightness of 800 cd/m^2 is guaranteed at a colour temperature of 6500 K.

Specification

General

Item no.	CG3146
Case colors	Black
Areas of application	Photography, design & media
Product line	ColorEdge
EAN	4995047056195

Display

Screen size [in inches]	31.1
Screen size [in cm]	78.9
Format	17:9
Viewable image size (width x height)	698 x 368.1
Ideal and recommended resolution	4096 x 2160 (4K)
Pixel pitch [mm]	0.170 x 0.170
Resolution supported	4096 x 2160 (DCI 4K), 3840 x 2160 (4K UHD), 2560 x 1440, 1920 x 1200, 1920 x 1080 (Full HD), 1600 x 1200, 1680 x 1050, 1280 x 1024, 1024 x 768, 800 x 600, 720 x 400, 640 x 480, 1080p (@ 60 Hz), 1080i (@ 60 Hz), 576p (@ 60 Hz), 480i (@ 60 Hz), 720p (@ 60 Hz), 1080p (@ 50 Hz), 1080i (@ 50 Hz), 720p (@ 50 Hz), 576p (@ 50 Hz), 1080p (@ 30/25/24 Hz), 2560 x 1440 (@ 30 Hz)
Panel technology	Dual Layer IPS (Wide Gamut, 10 Bit)
Max. viewing angle horizontal	178 °
Max. viewing angle vertical	178 °
Number of colours or greyscale	1.07 billion colours (SDI, 24-bit), 1.07 billion colours (DisplayPort, 24-bit), 1.07 billion colours (HDMI, 24-bit), 1024 greyscale (SDI, from 65000 grey tones), 1024 greyscale (DisplayPort, from 65000 grey tones), 1024 greyscale (HDMI, from 65000 grey tones)
Colour palette/look-up table	More than 278 trillion colour tones / 24 Bit 3D-LUT
Max. colour space (typical)	sRGB (100%), Rec709 (100 %), AdobeRGB (>97%), DCI P3 (99%)
HDR Gamma	HLG, PQ curve
Max. brightness (typical) [in cd/m²]	1000
Max. dark room contrast (typical)	1000000:1
Backlight	LED

Ports

Signal inputs	BNC (12G/6G/3G/HD-SDI), 3x BNC (3G/HD-SDI), DisplayPort (HDCP 1.3), HDMI (Deep Colour, HDCP 2.2/1.4)
Signal outputs/Daisy chain compatibility	BNC (3G/HD-SDI, through-out (active)) x 3, BNC (12G/6G/3G/HD-SDI, through-out (active))
USB specification	USB 3.1 Gen 1
USB upstream ports	1 x type B
USB downstream ports	3 x type A (1 x 10.5 W battery charging function)
Video signal	DisplayPort, HDMI (YUV, RGB)

Electric data

Frequency	DisplayPort: 25 - 137 kHz, 23 - 61 Hz; HDMI: 15 - 136 kHz, 23 - 61 Hz
Power consumption (typical) [in watt]	282
Maximum Power Consumption [in watt]	463
Power Save Mode [in watt]	1.2
Power consumption off [in watt]	0
Power supply	AC 100-240V, 50/60Hz

Dimensions & weights

Dimensions [mm]	757 x 488 x 208
Weight [in kilograms]	26.5

Certification & standards

Certification	CE, CB, TÜV/GS, TÜV/Ergonomics (including ISO 9241-307), cTÜVus, TÜV/S, EAC, PSE, FCC-A, CAN ICES-3 (B), RCM, VCCI-A, RoHS, WEEE

Features & control

Hardware calibration of brightness, white point and Gamma/EOTF	✓
Integrated sensor for self-calibration	✓
Preset colour/greyscale modes	Sync Signal, BT.2020, BT.709, DCI, PQ BT.2100, PQ BT.709, PQ DCI, HLG BT.2100, Calibration
Temperature colour drift correction	✓
Digital Uniformity Equalizer	✓
3D LUT film emulation (10 bit log)	✓
Adjustable front dial	✓
Safe Area Marker (HDMI)	✓
I/P conversion (HDMI)	✓
Signal range amplifier (HDMI)	✓
Noise suppression (HDMI)	✓
RGB and CMYK colour space emulation	✓
HDCP Decoder	✓
Gamut warning	✓
Luminance warning	✓
Blue Only	✓
D65 (CRT) Offset	✓
Time Code (VITC, LTC)	✓
Gamut Clipping	✓
Input signal identification	✓
Picture-by-Picture	✓
OSD language	de, en, fr, es, it, se, ja, zh
Adjustment options	Signal colour system, Signal range, HDMI settings (noise reduction, film recognition), Signal information, Colour settings (brightness, white balance, gamma, HLG system gamma, gamut, colour intensity, colour saturation, clipping, XYZ format, gain, black level, 6-axis colour control, reset), Image format (full screen, aspect ratio, dot by dot), Zoom, REC709 gamut warning, Brightness warning, Markers (safe area marker, safe area size, format marker, format adjustment, bezel colour), Automatic signal input recognition, Skip signal input, Skip colour mode, Assignment of keys, Monitor reset, USB charger, Indicator, Custom Key
Button Guide	✓
Integrated power unit	✓

Software & accessories

Accompanying software and other accessories are available for download	ColorNavigator
Additional supply	Power cord, Signal cable DisplayPort - DisplayPort, Signal cable HDMI - HDMI, Quick guide, Calibration certificate, Light protection cover
Accessories	PM200-K (DisplayPort cable to transfer digital video and audio signals.), ST-USBC-DP-CABLE (Startech signal cable for USB-C™ to DisplayPort connections), EIZO ScreenCleaner (for the best possible clean without scratching the monitor)

Warranty

Warranty and service	5 years (repair in the service centre) *) **)

Terms

*) The length of the warranty for the LCD module is 5 years from the date of purchase or 10000 operating hours, depending on which happens sooner. EIZO guarantees a brightness of 800 cd/sq m and a white point of 6500 K for a term of 3 years from the date of purchase or for 10000 operating hours, depending on which happens sooner.**) Zero pixel error guarantee for completely lit sub-pixels (partial pixels ISO 9241-307). Valid: six months from the purchase date.