→ **Product Website**

Image optimisation systems

The visual evaluation of image recordings or live recordings is critically important. Be it for crime prevention, monitoring and control of infrastructure, detection of product defects, scientific image analysis and numerous other scenarios. However, recordings can be unclear due to uncontrollable circumstances.
 EIZO proves image optimisation can also work outside the monitor with the DuraVision EVS1VX image optimisation system. The system improves the recognisability of video recordings in the areas of security, monitoring, infrastructure maintenance and image analysis in real time.
 DuraVision EVS1VX is installed via HDMI between the signal source (camera or recorder) and the monitor or analysis unit and optimises playback. This simplifies the visual differentiation of image details and facilitates image analysis in AI-supported systems.
 Areas that are difficult to see due to low light, atmospheric haze or other environmental conditions are differentiated in real time and the brightness of each pixel is adjusted to increase detectability. This is useful not only for night or fog visibility, but also for detecting surface irregularities, such as cracks in concrete, tracks, pipes or asphalt. DuraVision EVS1VX has advanced setting options and optional features.

- ✔ Simplifies visual differentiation and easier image analysis in AI-based systems
- ✔ Installed between signal source and screen or analysis unit, video content is optimised
- ✔ 2D noise reduction filters unnatural block artefacts
- ✔ Clearer contours through 3D noise reduction (optional), especially for night shots
- ✔ Better colour differentiation of almost colourless images (optional)
- ✔ Effective adaptation to the displayed scene through extensive leveling options
- ✔ Focusing on interesting sections of the image optionally through partial image enhancement
- ✔ Capture still images of optimised scenes and save directly to USB media (optional)

Image optimization system
For improved visibility

Numerous areas of application

EIZO's image enhancement systems improve visibility in a variety of situations where the accurate review of video content is required, whether it's visual inspection by people or machine evaluation including AI.

Areas such as security (visibilty of suspicious activities and objects), monitoring (detection of irregularities and defects), infrastructure maintenance (maintenance and early detection of dangers) and image analysis benefit from the optimised detectability of video recordings.

Better visibility in real time

The EVS1VX is equipped with EIZO's patented Visibility Optimizer technology which analyses and adjusts images pixel by pixel in real time.

Optimize difficult to recognise images

The DuraVision EVS1VX detects and corrects areas of the image which are difficult to see due to low light or haze. The solution handles both dark and light areas of the image by adjusting the brightness of each pixel while maintaining detail for a realistic sense of depth. Not only is this useful for surveillance at night or in fog, but also for detecting irregularities or cracks in surfaces such as concrete.

Image processing is based on the Retinex theory, where pixels are optimised individually.

With optimized brightness

Without optimized brightness

Reduce noise at high ISO values

The DuraVision EVS1VX combines both 2D and 3D noise reduction features which enhance contours and make it easier to distinguish objects, especially when monitoring at night.

The 3D noise reduction uses visual information from the previous image and evaluates the differences with the subsequent images. This is extremely effective when monitoring static video. 2D noise reduction analyses the content on a frame-by-frame basis and is optimal for videos which contain motion or scene changes.

The DuraVision EVS1VX automatically adjusts the noise reduction method according to the content being displayed.


With noise reduction

Without noise reduction

Distinguishes details in monochrome images

The DuraVision EVS1VX improves visibility in images dominated by one colour and distinguishes small differences in brightness more easily. This is particularly useful when analysing endoscopic and pathological images or when detecting objects in underwater images.
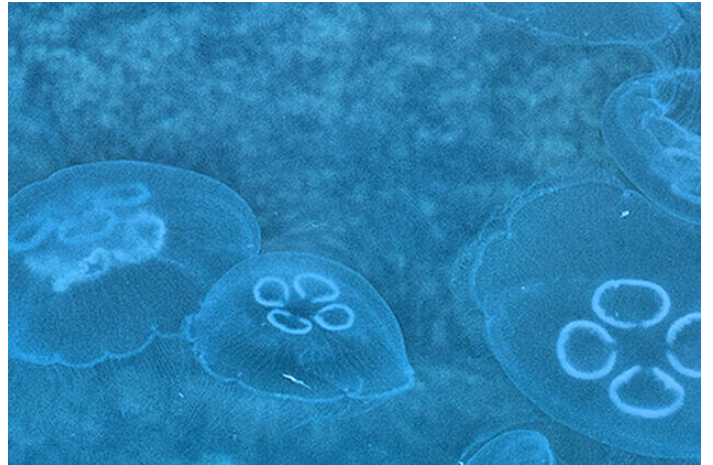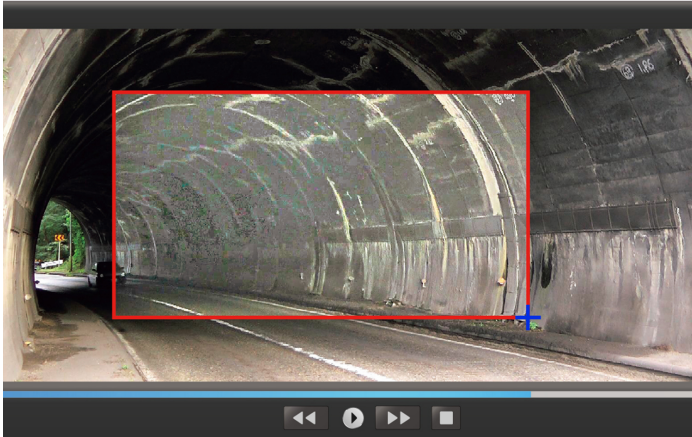

Detailed representation

Few details visible

Image enhancement of selected areas

The DuraVision EVS1VX allows specific areas of the image to be selected for image enhancement. This allows the viewer to concentrate on the areas of interest or to limit the image enhancement to relevant areas.

Easy to use
Features for greater comfort

Set display modes and image sharpness

With the EVS Image Optimization control, display modes can be fine-tuned and image sharpness maximised through enhanced contours, contrast and brightness.

The EVS Image Optimization control is free of charge, however, connection to a Windows PC via USB (cable not included) is required for use.

The right display mode for every situation

Four pre-installed display modes (Standard, Balanced, High, Low) are available to the user. In addition, up to five custom modes can be addedand fine-tuned for specific viewing environments. The DuraVision EVS1VX can register up to 10 display modes, which the operator can switch between using the front panel buttons. Unused display modes can be removed from the list for clarity and ease of use.


Example preset display modes: 1. standard, 2. balanced, 3. high

Save still images directly to USB

The DuraVision EVS1VX allows operators to capture still images from any enhanced scene and save them directly to a USB flash drive using a USB numeric keypad. These images inherit the currently set image enhancements so they can be used for a second review or investigative purposes. This feature is also useful for tracking damage to infrastructure, such as roads, or defects in product manufacturing.
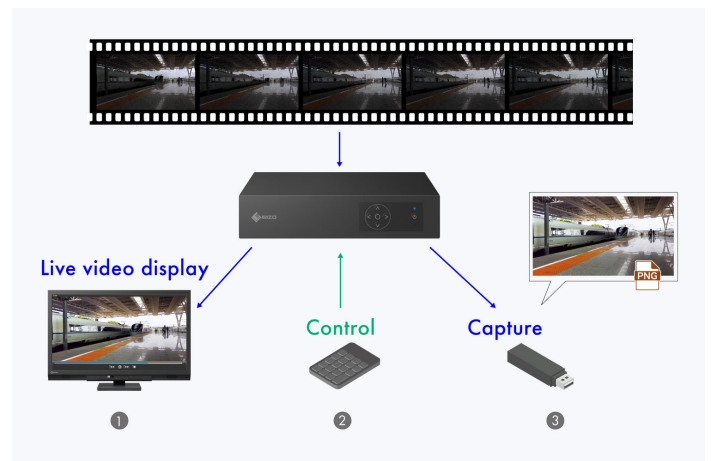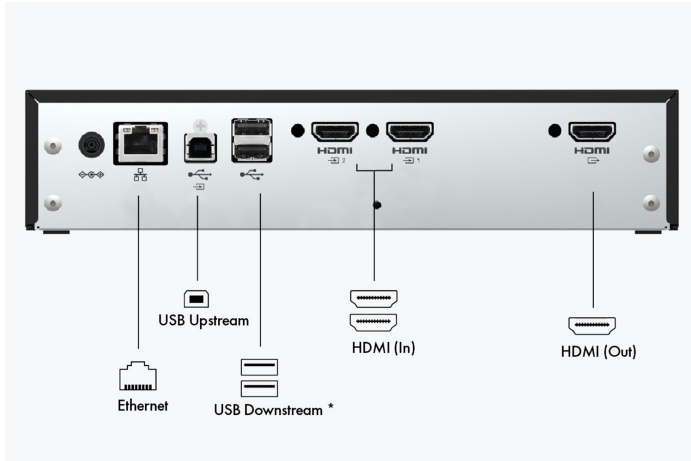

1. monitor, 2. USB numeric keypad, 3. USB stick to which optimized images can be exported and saved

4

Flexible connectivity

The DuraVision EVS1VX has two HDMI inputs, one HDMI output and is equipped with an Ethernet port for firmware updates via a browser.

* Peripheral connections only on EVS1VX

Durability
And reliability

Two-year warranty

EIZO grants a two-year warranty. This is possible thanks to the highly developed production process based on a simple principle of success: sophisticated and innovative technology, made from high-end materials.

24/7 use

The EVS1VX is built for 24-hour use and is characterised by maximum reliability.

Sustainability
Environmentally and socially conscious production

Socially responsible production

The EVS1VX is produced in a socially responsible way. It is free of child labour and forced labour. Suppliers along the supply chain have been carefully selected and they have also committed themselves to produce in a socially responsible way. This applies in particular to conflict minerals. We present a detailed report about our social responsibility annually and voluntarily.

Environmentally and climate friendly

Each EVS1VX is manufactured in our own factory, which implements an environmental and energy management system in accordance with ISO 14001 und ISO 50001. This includes measures to reduce waste, wastewater and emissions, resource and energy consumption, as well as to encourage environmentally conscious behavior among employees. We publicly report on these measures on an annual basis.

Sustainable and durable

The EVS1VX is designed to have a long service life and normally outlasts the warranty period by some distance. Replacement parts are available many years after production has ceased. The entire lifecycle takes into account the impact on the environment as the longevity of the product and the fact it can be repaired saves resources and protects the environment. When designing the EVS1VX, we took a minimalistic approach to our resources by using high-quality components and materials, as well as a careful production process.

Technical Data

GENERAL

Areas of application	Video surveillance, Industry
Product line	DuraVision
Areas of application	Image optimisation systems, Video surveillance

FEATURES & OPERATION

Optional features (licence required)	capture and save still images, compression artefact reduction, advanced colour differentiation, 3D noise reduction
24/7 operation	✔
Image enhancement process	Preset, Picture section selection, Visibility Optimizer X
Video formats	1080/50p, 720/50p, 720/59,94p, 720/60p, 1080/59,94p, 1080/60p

CONNECTIONS

Signal inputs	2x HDMI (HDCP 1.4)
Signal outputs	1x HDMI
USB specification	USB 2
USB upstream ports	1 x type B
Peripheral connections	2 x Typ A
Network connection	RJ-45
Control port	USB-Protocol, Ethernet

ELECTRICAL DATA

Maximum Power Consumption [in watts]	45
Power supply	AC 100-240V, 50/60Hz

DIMENSIONS & WEIGHT

Dimensions (width x height x depth) [in mm]	240,5 x 53,2 x 143,8
Weight [in kg]	1.4
Dimension drawing (PDF)	Dimension drawing (PDF)

CERTIFICATION & STANDARDS

Operating temperature	0 - 40 °C / 20-80 % (R.H., non condensing)
Certification	CE, UKCA, CB, RCM, cTÜVus, FCC-A, CAN ICES-3 (A), VCCI-A, RoHS, WEEE

SOFTWARE & ACCESSORIES

Other box contents	AC adapter, Signal cable HDMI - HDMI, Manual via download

WARRANTY

Warranty periode	2 years