

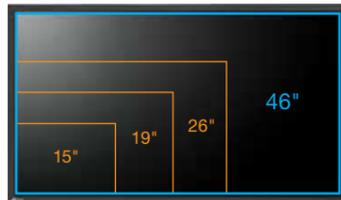


DuraVision DV4624  
117 cm (46") Monitor

## 46" Bridge System Monitor

### Large 46" Screen

A large screen provides ample space for viewing important nautical information from one or more bridge system applications in a single location. Images are displayed pixel-by-pixel in full high definition (1920 × 1080) to provide operators with vivid picture for precise observation.



### Steadfast Quality

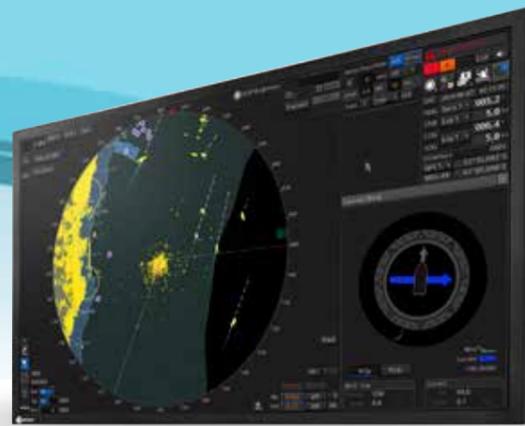
The monitor offers durability for use in harsh maritime environments, complying with the conditions for temperature, humidity, and vibration as defined in the IEC 60945 international standard for maritime navigation and radio communication equipment and systems. IP55 rating ensures it can withstand dust ingress and is protected against low-pressure water jets. The monitor uses stainless steel industrial-grade housing for maximum durability.

### Long-Lasting LED Backlight

The monitor is equipped with an LED backlight. Compared to conventional CCFL backlights, LED backlights last longer and consume less power. They are also mercury-free for minimal impact on the environment.

### Calibrated for ECDIS

Backlight brightness, gamma, and RGB color settings are calibrated at the factory so each monitor achieves accurate color reproduction for meeting the highly specialized requirements of ECDIS systems.



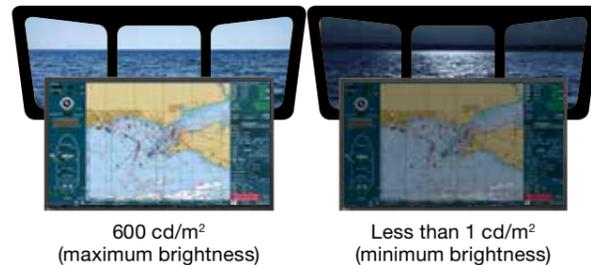
### Non-Intrusive Hardware Calibration

The monitor comes equipped with hardware calibration functionality using the optional EIZO EACAL-R01 luminance meter. Easily accessed through the OSD menu, calibration of the backlight brightness, gamma, and white point can be carried out in just minutes. No additional software is needed, ensuring calibration operation is non-intrusive to your system.



### Wide Dimming Range

The wide dimming range of less than 1 cd/m<sup>2</sup> up to 600 cd/m<sup>2</sup> allows controllers to adjust to the appropriate brightness level for viewing during the day or at night.



### Picture-in-Picture

Picture-in-Picture (PiP) functionality allows operators to display a small separate screen from a second signal source within the monitor to effectively view a variety of navigational information.



## Visionaries plan with EIZO innovations

### Customized monitor solution for Alpatron Marine BV

Alpatron CEO Luuk Vroombout is an entrepreneur with a pioneering vision. It was his idea to equip the Alpatron AlphaBridge with the largest possible monitor to provide navigation officers with the best working conditions. This resulted in the AlphaPremiumBridge concept with a 46-inch full HD monitor solution.

Alpatron Marine, headquartered in the Netherlands, designs, delivers and installs high-quality navigation and communication systems for maritime and inland shipping. The company opted for EIZO when it came to selecting a suitable monitor manufacturer for the new bridge concept.

Several factors played a role in the decision-making process. The two companies have a close business relationship in both the Netherlands and Japan that goes back several years. As a result, Alpatron Marine BV has been using over 4,000 EIZO 19-inch monitors since 2006 for radar applications. EIZO in Japan has already successfully developed a 26-inch ECDIS monitor in line with individual requirements for JRC, a Japanese partner firm of Alpatron.

What's more, EIZO took on the major challenge of working with Alpatron to realize Luuk Vroombout's vision and develop a new 46-inch monitor for shipping, specifically designed for the AlphaPremiumBridge concept. Alpatron also considered other well-known manufacturers, but these companies turned down the company's request at the outset.

Alpatron indeed had very high requirements for the desired monitor. In addition to top product and image quality, Alpatron required IEC 60945 certification, versatile connection options and a flexible power supply. Alpatron also wanted the ability to remotely configure and adjust the monitor's brightness via the bridge. The EIZO development team in Germany managed to successfully fulfill all of these requirements for the new monitor.

When asked what he valued most when working on the AlphaPremiumBridge concept with EIZO, Bas Eerden, Marketing and Product Development Manager for Alpatron Marine BV, said: "The direct communication and the quick reaction times, as well as EIZO's proactive approach to the development work." He added, "This is in addition to the short time frame of just one year in which we were able to work with EIZO to implement the concept to our utmost satisfaction."

AlphaPremiumBridge equipped with DuraVision DV4624 monitors.



DuraVision FDS1904  
48 cm (19") Monitor



DuraVision FDU2603W  
65 cm (25.5") Monitor

## 19" and 26" Panel Mount Monitors

### Steadfast Quality

These monitors offer durability for use in harsh maritime environments, complying with the conditions for temperature, humidity, and vibration as defined in the IEC 60945 international standard for maritime navigation and radio communication equipment and systems. IP65 rating ensures the monitors can withstand dust ingress and are protected against low-pressure water jets.

### Approval from Classification Societies

The monitors meet the requirements for major maritime classifications. They come standard with approvals for LR (UK), DNV (Norway), ABS (USA), and ClassNK (Japan). Additional certifications for GL (Germany), BV (France), KR (Korea), and CCS (China) are available on request.

### Long-Lasting LED Backlight

The monitors are equipped with an LED backlight. Compared to conventional CCFL backlights, LED backlights last longer and consume less power. The monitor is also mercury-free for minimal impact on the environment



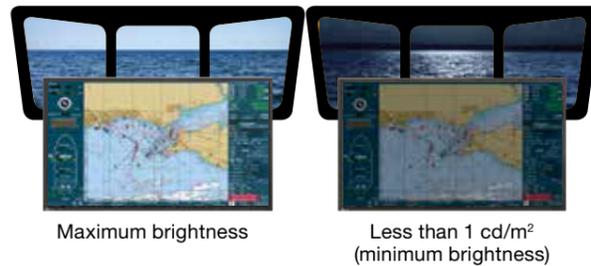
### Calibrated for ECDIS

Backlight brightness, gamma, and RGB color settings are calibrated at the factory so each monitor achieves accurate color reproduction for meeting the highly specialized requirements of ECDIS systems. The monitor meets IEC 61174, IEC 62288, and IEC 62388 international standards for ECDIS and RADAR applications.



### Wide Dimming Range

The wide dimming range of less than 1 cd/m<sup>2</sup> up to maximum brightness allows controllers to adjust to the appropriate brightness level for viewing during the day or at night.



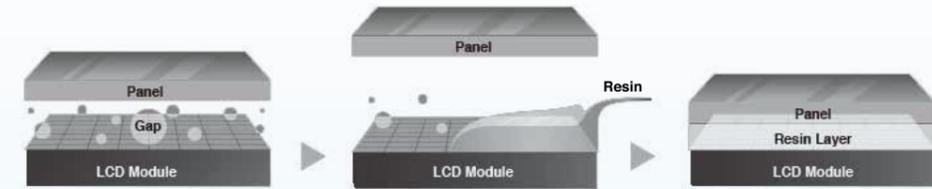
### Projected Capacitive Touch Panel

The FDU2603WT and FDS1904T are the touch variations. They have a projected capacitive touch panel that accepts touch input from a bare hand or special stylus and supports multi-touch operation. The panel is also highly resistant to dust and water droplets to minimize unintended input.



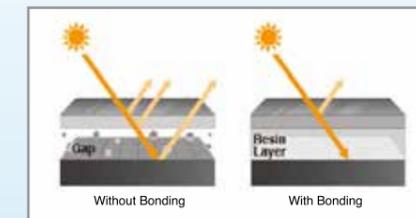
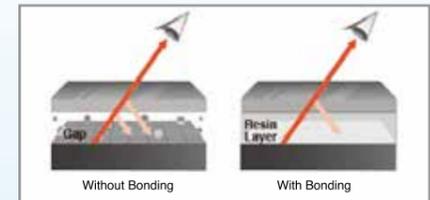
## In-House Optical Bonding Production

Optical bonding is produced in-house at EIZO's factory in Japan and is available as an option for 19" and 26" marine monitors. A layer of resin is used to fill the gap between the LCD module and panel to adhere them together, greatly improving visibility. In-house production allows EIZO to continue to meet the needs of maritime and other specialty markets while ensuring high quality in each product.



### Clear Display

Without bonding, light generated from the LCD module bends when it passes through, resulting in a loss in its intensity. Optical bonding fills the gap, increasing the transmission of light for a clearer display.

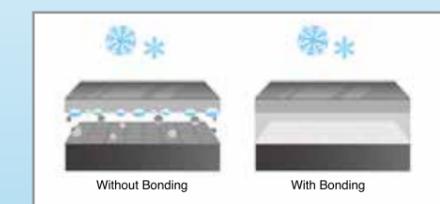
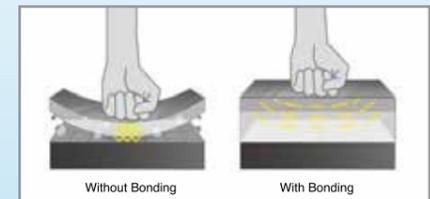


### Glare Reduction

Optical bonding also reduces glare on the screen, making it an ideal option when viewing a monitor outdoors or in environments with an intense direct light source.

### Increased Physical Durability

The additional resin layer with optical bonding provides increased physical durability to the screen, making it more resistant to physical pressure, scratches, dust, and fluids.

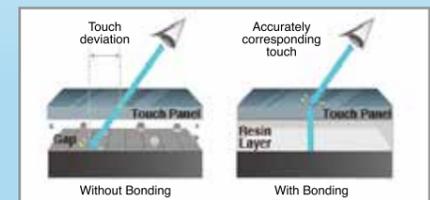


### No Condensation

In environments with wide temperature ranges, such as ships or offshore structures, screens are susceptible to becoming foggy from the moisture that penetrates the air gap. Optical bonding fills this gap to prevent condensation.

### Accurate Touch Experience

Panel thickness influences touch accuracy in touch panel monitors. A touch monitor with optical bonding maintains consistently accurate touch response, making it easy to use and reliable.



# EIZO — The Visual Technology Specialist

## Comprehensive Solutions

EIZO integrates hardware and software technologies with consulting, web hosting, and other services for customers in a wide range of fields.

## Integrated Approach

With over 45 years of technical expertise, EIZO is dedicated to developing innovative and high quality visual display solutions.



### R&D

To incorporate the latest technologies in our products, we follow a unique in-house research and development production model.



### Printed Circuit Boards

We apply our in-house production model to the production of our own printed circuit boards (PCBs) that are used in each EIZO monitor — essential to providing comprehensive quality control.



### Manufacturing

Our in-house manufacturing combines manual and automated operations to ensure high quality products are made as efficiently as possible.



### Quality Control

We use our own anechoic chambers to confirm that our products comply with international regulations covering electromagnetic interference (EMI) and susceptibility. We also conduct long-life testing where our monitors are kept powered on for thousands of hours and their image quality is checked regularly.



### Customization

We offer extensive customization for select monitors to meet the diverse requirements of various markets, including mission-critical fields such as maritime and air traffic control.



### Global Reach

EIZO products are highly regarded in many specialty fields throughout the world because of their accurate and stable image display. EIZO is based in Japan and is represented in over 70 countries by a network of group companies and exclusive distributors.



**DuraVision**  
Industrial Monitor Solutions

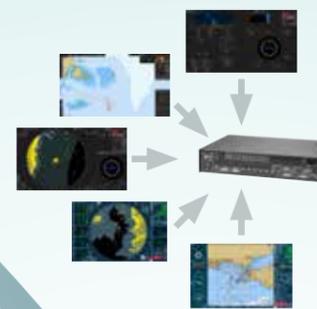


**FlexScan**  
Business Enterprise Monitor Solutions



**ColorEdge**  
Color Management Monitor Solutions

## Innovative Technology



### Video Management Solutions

EIZO's Large Monitor Managers gather various video inputs and display them on a large screen. Different layouts can be arranged according to user preference and work environment for a streamlined workflow.



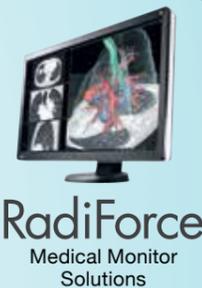
### Wide Range of Screen Sizes

EIZO offers an extensive range of screen sizes from 10 to 60 inches to meet requirements of any installation.

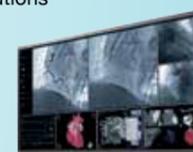


### 4K Resolution

EIZO's expertise in developing visual technology for professional applications extends to a diverse lineup of 4K monitors, providing high-resolution images and video for a growing number of uses.



**RadiForce**  
Medical Monitor Solutions



**CuratOR**  
Operating Room Solutions



**Raptor**  
Air Traffic Control Visual Display Solutions



**FORIS**  
Home Entertainment Monitors



### IP Security Monitors

EIZO's IP solutions offer PC-less connection to multiple IP cameras for efficient video management in security and surveillance environments.



### Visibility-Enhancing Technology

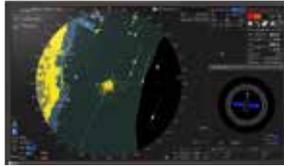
EIZO's unique Smart Insight technology automatically detects dark areas of the screen and adjusts the brightness of each pixel while reproducing them with a realistic sense of depth.



Smart Resolution blur-reduction technology ensures noise is not accentuated while correcting blurred areas. It sharpens the foreground more strongly to maintain a real-world sense of focus.

*45+*  
years  
— of —  
expertise

# Specifications



	DV4624	FDU2603W	FDU2603WT	FDS1904	FDS1904T	
<b>Model Variations</b>	Without Stand	Panel mount		Panel mount		
<b>Cabinet Color</b>	Black	Black		Black		
<b>Panel</b>	<b>Type</b>	VA	VA		VA	
	<b>Backlight</b>	LED	LED		LED	
	<b>Size</b>	46" / 117 cm (1168 mm diagonal)	25.5" / 65 cm (649 mm diagonal)		19" / 48 cm (481 mm diagonal)	
	<b>Native Resolution</b>	1920 × 1080	1920 × 1200		1280 × 1024 (5:4 aspect ratio)	
	<b>Viewable Image Size (H × V)</b>	1018.0 × 572.7 mm	550.0 × 343.8 mm		376.3 × 301.0 mm	
	<b>Pixel Pitch</b>	0.5303 × 0.5303 mm	0.2865 × 0.2865 mm		0.294 × 0.294 mm	
	<b>Grayscale Tones</b>	256 tones	256 tones		256 tones	
	<b>Display Colors</b>	16.77 million	16.77 million		16.77 million	
	<b>Viewing Angles (H / V, typical)</b>	178°, 178°	176°, 176°		178°, 178°	
	<b>Brightness (typical)</b>	600 cd/m <sup>2</sup>	490 cd/m <sup>2</sup>	470 cd/m <sup>2</sup>	590 cd/m <sup>2</sup>	540 cd/m <sup>2</sup>
	<b>Contrast Ratio (typical)</b>	4000:1	1500:1		2000:1	
	<b>Response Time (typical)</b>	6.5 ms (Gray to Gray)	20 ms (Black-White-Black)		20 ms (Black-white-black)	
	<b>Touch Panel</b>	<b>Type</b>	—	—	Projected Capacitive	Projected Capacitive
<b>Communication Protocol</b>		—	—	USB, RS-232C	USB, RS-232C	
<b>Touch Life</b>		—	—	50 million touches (minimum)	50 million touches (minimum)	
<b>Surface Hardness</b>		—	—	5H	5H	
<b>Compatible OS</b>		—	—	Windows 8.1 (32-bit/64-bit)/ Windows 8 (32-bit/64-bit)/ Windows 7 (32-bit/64-bit)/ Windows XP (32-bit)	Windows 8.1 (32-bit/64-bit)/ Windows 8 (32-bit/64-bit)/ Windows 7 (32-bit/64-bit)/ Windows XP (32-bit)	
<b>Video Signals</b>	<b>Input Terminals</b>	DVI-I 29 pin × 1, DVI-D 24 pin × 1, VGA HD-D-Sub15 pin × 1, CVBS(BNC) × 1	D-Sub mini 15 pin × 1, DVI-D 24 pin × 1, D-sub 9 pin(female) × 1 (for monitor control)		D-Sub mini 15 pin × 1, DVI-D 24 pin × 1, D-sub 9 pin(female) × 1 (for monitor control)	
	<b>Output Terminals (Loop Through)</b>	—	D-Sub mini 15 pin × 1		D-Sub mini 15 pin × 1	
	<b>Digital Scanning Frequency (H / V)</b>	15 – 100 kHz, 50 – 100 Hz (Max. Dotclk: 155 MHz)	31 – 76 kHz, 59 – 61 Hz (VGA Text: 69 – 71 Hz)		31 – 64 kHz, 59 – 61 Hz (VGA Text: 69 – 71 Hz)	
	<b>Analog Scanning Frequency (H / V)</b>	15 – 100 kHz, 50 – 100 Hz (Max. Dotclk: 155 MHz)	31 – 81 kHz, 56 – 76 Hz		31 – 80 kHz, 56 – 76 Hz	
	<b>Sync Formats</b>	Separate, Composite, Sync on Green	Separate, Composite, Sync on Green		Separate, Composite, Sync on Green	
	<b>Video Input Format</b>	PAL, NTSC, SECAM	—		—	
<b>USB</b>	<b>Function</b>	1 port for communication	—	1 port for touch panel control	—	
	<b>Standard</b>	USB 2.0	—	USB 2.0	—	
<b>Power</b>	<b>Power Requirements</b>	AC 90 – 240 V, 47 / 63 Hz DC 18 – 36 V	AC 85 – 264 V, 50 / 60 Hz DC +24V +30%/-10%		AC 85 – 264 V, 50 / 60 Hz DC +24V +30%/-10%	
	<b>Maximum Power Consumption</b>	AC 110 W, DC 100 W (Brightness max.)	108 W		64 W	
	<b>Typical Power Consumption</b>	AC 35 W, DC 30 W (Brightness 80 cd/m <sup>2</sup> )	—		—	
	<b>Power Save Mode</b>	Less than 16W (AC input)	Less than 10 W (AC input)		Less than 9 W (AC input)	
		Less than 10W (DC input)	Less than 7 W (DC input)		Less than 6W (DC input)	
	<b>Standby Mode</b>	AC 4 W, DC 2 W	Less than 10 W (AC input)		Less than 7 W (AC input)	
			Less than 7 W (DC input)		Less than 5W (DC input)	
<b>Power Management</b>	Power Save (VESA DPMS)	Power Save (VESA DPM and DVI DMPM), ECO Timer		Power Save (VESA DPM and DVI DMPM), ECO Timer		
<b>Features and Functions</b>	<b>Preset Modes</b>	Color Mode (Custom, Day, Dusk, Night)	Color Mode (Custom, Day, Dusk, Night)		Color Mode (Custom, Day, Dusk, Night)	
	<b>OSD Languages</b>	English, German, Spanish, French	English, German, French, Spanish, Italian, Swedish, Simplified Chinese, Traditional Chinese, Japanese		English, German, French, Spanish, Italian, Swedish, Simplified Chinese, Traditional Chinese, Japanese	
	<b>Communication Protocol</b>	Modbus, SNMP, EIZO proprietary	VESA DDC2B		VESA DDC2B	
	<b>Communication Interface</b>	RS232, RS485, USB, Ethernet, ext. Keyboard	DDC/CI,RS232		DDC/CI,RS232	
<b>Physical Specifications</b>	<b>Dimensions (W × H × D)</b>	1067 × 622.5 × 89.6 mm	624 × 456 × 86 mm		429 × 406 × 75 mm	
	<b>Net Weight</b>	31 kg / 68.3 lbs	14.5 kg / 32.0 lbs	15.1 kg / 33.3 lbs	5.9 kg / 13.0 lbs 6.4 kg / 14.1 lbs	
<b>Environmental Requirements</b>	<b>Operating Temperature</b>	-15 – 55 °C	-15 – 55 °C		-15 – 55 °C	
	<b>Operating Humidity (R.H., non condensing)</b>	max. 95 %	10 – 90 %		10 – 90 %	
	<b>Storage Temperature</b>	-20 – 70 °C	-20 – 60 °C		-20 – 60 °C	
	<b>Degree of Protection</b>	IP55 (front) IP20 (rear)	IP65 (front) IP22 (rear)		IP65 (front) IP22 (rear)	
<b>Certifications &amp; Standards*</b>	IEC60945, RoHS, REACH	Ship Classification: NK(Japan), LR(UK), ABS(US), DNV(Norway) General: CB, CE, RoHS, WEEE, China RoHS, IEC60945 (EMC/ environmental testing), IEC62288/IEC61174 (items for monitor), KC (K60950-1, K00022, K00024)		Ship Classification: NK(Japan), LR(UK), ABS(US), DNV(Norway) General: CB, CE, RoHS, WEEE, China RoHS, IEC60945 (EMC/ environmental testing), IEC62288/IEC61174/IEC62388 (items for monitor), KC (K60950-1, K00022, K00024)		
<b>Supplied Accessories</b>	Setup manual, connectors for RS485, DC-Power and keyboard interface	Setup manual, CD-ROM, AR cloth		Setup manual, CD-ROM, AR cloth		
<b>Warranty</b>	2 years	3 years		3 years		

\*Please see product pages on [www.eizoglobal.com](http://www.eizoglobal.com) for the latest information.

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[www.eizoglobal.com](http://www.eizoglobal.com)

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