USER MANUAL

BLO-Line series

BLO-Line monitors from 61.0 cm (24")

FORTEC
INTEGRATED

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Table of Contents

1. General Specifications

Scope of Document

This user manual is valid for BLO-Line monitors from 61.0 cm (24") up to 163.8 cm (64.5"). The BLO-Line monitors are offered in different screen sizes. All monitors are equipped with a special fire protection glass and a temperature fuse for voltage-free switching from a certain temperature. The series is designed for use in fire load and flue gas sensitive environments. The monitors correspond to fire protection class A1-s1, d0.

Important note: This user manual is complemented by other additional documents when indicated. All documents are also available for download from our website: www.fortec-integrated.de/en.

BLO-Line monitor versions:

BLO-Line PME: Monitor with integrated controller, 1 x RGB, 1 x HDMI, 1 x Display Port,
                       USB-B for Touch

BLO-Line P4K: Monitor with integrated controller, 1 x HMDI 1.4, 2 x HDMI 2.0,
                       1 x Display Port 2.0, Audio out, USB-B for Touch

BLO-Line IQ: Monitor with integrated PC Intel® Atom, E3845-19 CPU, 1.9 GHz, USB-B for Touch

BLO-Line VideoPoster: Monitor with integrated media player for video play lists

BLO-Line IoT: Monitor with integrated Raspberry Pi Compute module 3+

2. Scope of Delivery

When unpacking the monitor, please check if the following accessories are included in the shipment:

⚠ Note: Pictures can differ from actually supplied products.
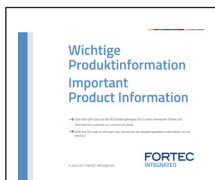
☐ Product information

☐ BLO-Power cable 0,5 m

☐ Certificate fire load   ☐ USB stick[1]   ☐ Screw cover[2]

1 - only with VideoPoster monitors

2 - only with 64.5" monitors

3.   General Safety Regulations

Safety information

Please read this safety information carefully for your personal safety and for the prevention of property damage.

In case of a malfunction, immediately disconnect the power plug and contact your dealer or the next Data Display Group service centre. A malfunction is also considered if the housing, a control element or cable is damaged or if liquids or other objects penetrate the monitor.

Please read the safety information carefully before installing the device. If you have any doubts about whether the device may be used in a particular environment, please contact our service partner.

Repairs

Repairs may only be carried out by authorized technical personnel. Unauthorized access or improper repairs might cause serious property damage or cause danger to the user. In addition to that, any legitimate warranty claim expires.

Electrical connection

Disconnect the monitor from socket before executing any work. Do not touch or connect data cables or power cables during thunderstorms.

System start-up

Before the system start-up let the monitor adjust to the room temperature. Do not expose the device to direct heat sources. In case of condensation, please wait a minimum of 12 hours before switching on the monitor. The monitor shall only be installed and used according to this documentation data sheets. Only qualified personnel may perform the initial installation and system setup.

Qualified personnel

Qualified personnel, in terms of the safety information of this documentation, are persons who are qualified to activate, ground and label devices, systems and circuits according to the safety standards.

Operation

For a proper and safe utilization of the product, adequate transportation, storage, installation, assembly, careful handling and maintenance are essential. The device is only certified for in-door operation. Extreme ambient conditions shall be avoided and the monitor shall be protected from dust, humidity and heat. Do not expose the monitor to direct sunlight.

Transport

Unpack the monitor at the place of installation. Use only original packaging for transportation. Please observe these rules for any later transport.

Condensation

Avoid condensation during transport at low temperatures or at extreme fluctuations of temperature.

Safety guidelines for the handling of LCD monitors

→ If the device is not used for a long period of time, unplug the power cable.

→ Do not unplug the power cable while the device is powerd on, except for emergencies.

→ To unplug the device without problems, sockets have to be easily accessible.

→ Ensure that the power cable does not get pinched or kinked.

→ Do not place heavy objects on the power cable.
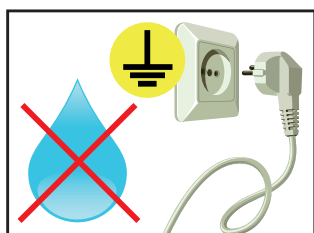
→ Do not use damaged or loose sockets to plug in the device.

→ Plug the device in earthed sockets only.

→ Operate the device with the power cables included in the delivery packet only.

→ Use undamaged power cables only.

→ When plugging in and out, do not touch the power cable with wet hands.

→ Ensure that the power cable is plugged in the socket safely and correctly.

→ Use for devices with external power supply only the supplied original power supply, or an equivalent Low Power Source (LPS).
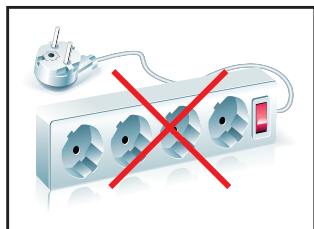
→ Do not use extension block to plug several devices into a single socket.

→ According to the size, devices may be difficult to handle and very heavy. Ensure that at least two people lift and carry the device.

→ Put down the device slowly and carefully to avoid damaging the LCD screen. Ensure that the device stands stable.

→ Keep packaging away from children. Danger of suffocation!

→ Only use our specified and professionally mounted wall mounting.

→ Do not put objects onto the device.

→ Do not place candles, heaters or humidifier near the device.

→ Keep the device away from fireplaces and flammable materials.
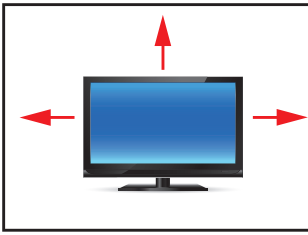
→ Ensure compliance with the operating temperature.
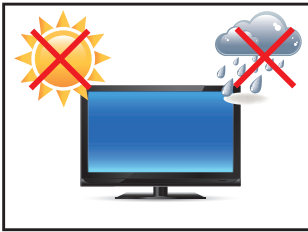
→ Do not install the device in places where it is exposed to environmental impacts such as rain or direct sunlight.

→ Do not install the device in places where it is exposed to high humidity, dust or smoke. In case of doubt, please contact your sales partner.

→ Please use a soft, moist cloth for cleaning.

→ For cleaning the screen, please use only commercially available screen cleaner. Do not spray the cleaner directly to the device but onto a cloth.

→ Please clean ventilation slots regularly to ensure a good air circulation.

→ Attention! High voltage! Never open the device by yourself.

→ In case of unusual noises, burnt smell or smoke unplug the power cable.

→ If the same picture is displayed over a longer period of time, an after-image may arise.

4.   First Installation
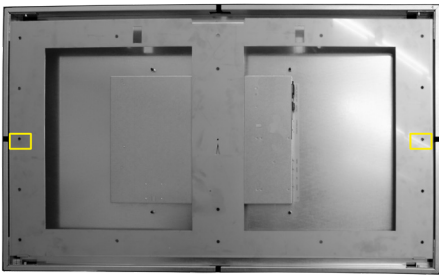
Position of connectors and controls

All connectors for power and cables are located at the bottom of the back side of the display.

Video signal cables and OSD keyboard (video series only)
Power cable and on/off switch

Transport lock

This fastening is used for transport safety and better movement in the warehouse, these screws and bolts must be removed when mounting on the wall.

→ The wall bracket is fixed with 2 screws, here the screw head is Torx 30 screw head
→ Spacer bolts with a spanner width of 10 mm are located under the wall bracket

Mounting

BLO-Line monitors are mounted on the wall mount supplied. See chapter: Montage Monitor

The supplied wall mount must be fixed with screws that appropriate for the wall and approved for the weight. The dedicated holes at the wall mount for this have a diameter of 5mm for 24 "-31.5" monitors, and a diameter of 8 mm for 46 "- 64.5" monitors. The monitor can be hung in landscape format or in portrait format. 3 people are recommended for the installation of larger monitors. It is important that there is a socket behind the wall mount to which the monitor should be connected. (see picture, data sheets BLO-Line)

Connect the monitors

With the devices of the BLO-Line size of 24 " and 31.5", the monitors are first hooked into the wall mount at the top and then a bracket is tipped down at the bottom of the wall mount, which locks the monitor in the wall mount. The connections can thus be reached. After the monitor is successful connected, the bracket is folded back and the monitor can be folded onto the wall / wall mount into an upward position. The monitor is fixed in this position by using the appropriate numbers of screws at the side of the monitor (scope of delivery). (see chapter assembly monitor).

The monitors of the BLO-Line size 46 ", 54.6", 64.5 "are first attached to the bottom of the wall mount and attached to the wall mount with a steel cable (located at the upper end of the devices). So the connections are accessible. After successfully connecting the monitor, it is folded onto the wall or wall mount into an upwards position. The monitor snaps into place on the wall mount in an upward position and can then be fixed by using the appropriate number of screws (scope of delivery). (see chapter assembly monitor)

Connecting to power

BLO-Line displays require a voltage of 110V - 230V AC. The standard scope of delivery includes a special fire load and flue gas optimized power cable for connecting the power supply.

⚠️   Note: Install all data cables to external devices before connecting the display to power.
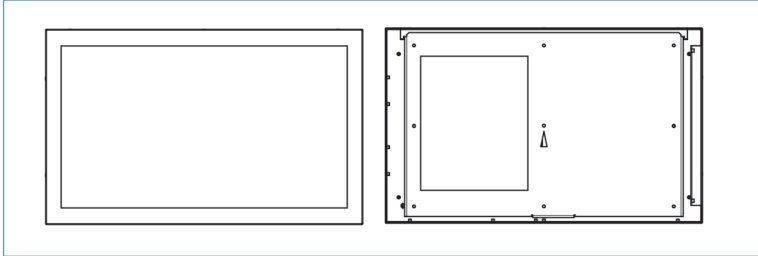
→ Switch the on/of switch in position off.

→ Connect the power cable to the display.

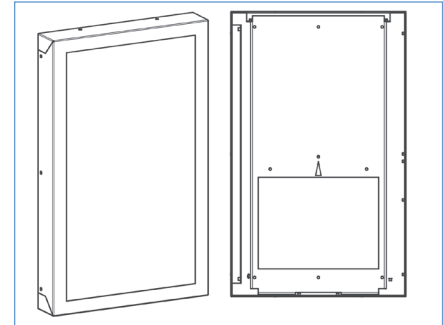→ Connect the power cable to a power socket.

→ Switch the display on .

On/Off Button	Power supply
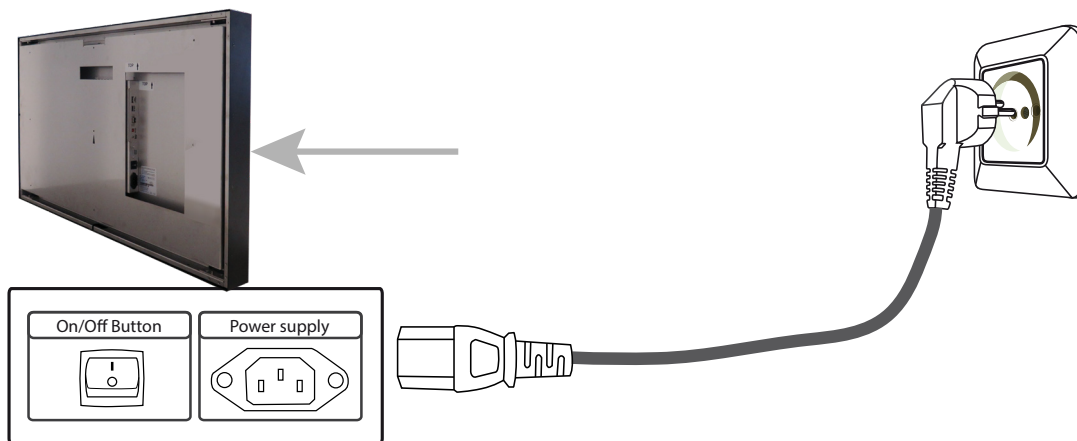
5.   Mounting monitors BLO 24"and 31.5"

**Front and back view of the monitor**
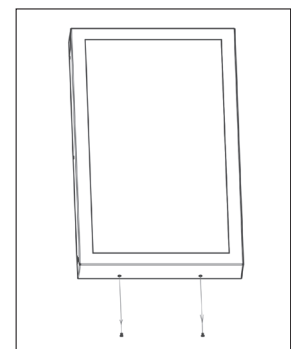
LANDSCAPE

PORTRAIT

1. Remove the locking srews

To mount the wall bracket, it must first be detached from the monitor. To do this, the locking screws must be removed. The following list is used to identify the correct screws.

Landsca-pe	Mounting points locking screws	Number and size of screws on this side	Identify the locking screw
24"	On the bottom	3, Torx 10	Middle screw
31.5"	On the bottom	4, Torx 10	2nd and 3rd screw
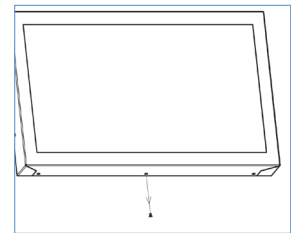
Portrait	Mounting points locking screws	Number and size of screws on this side	Identify the locking screw
24"	On the bottom	2, Torx 10	both
31.5"	On the bottom	2, Torx 10	both

2. Fold down the wall mount / slide the wall mount down / remove the wall mount
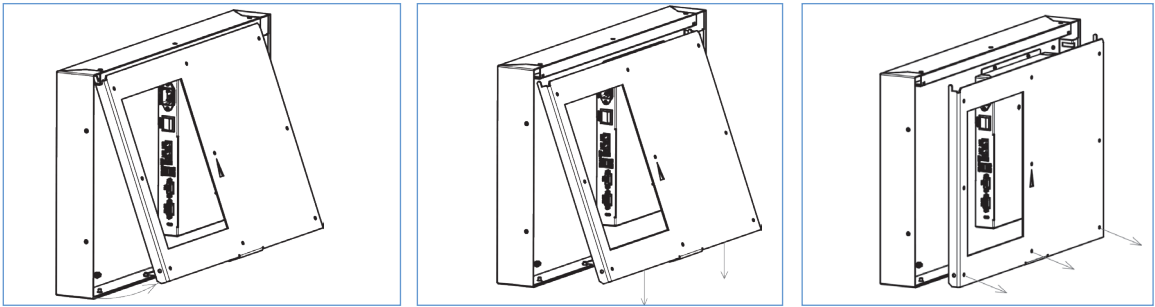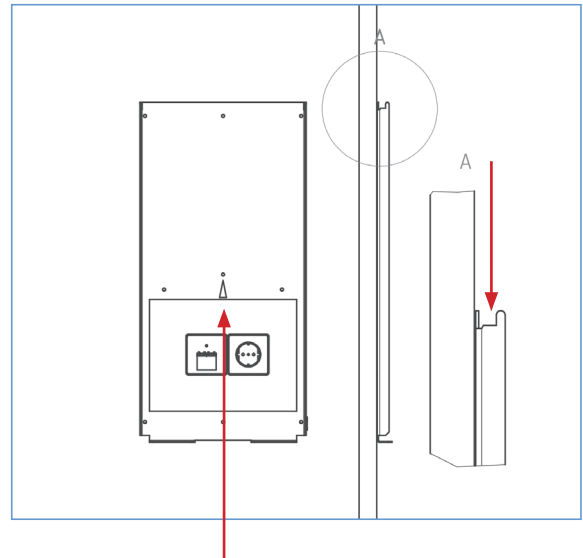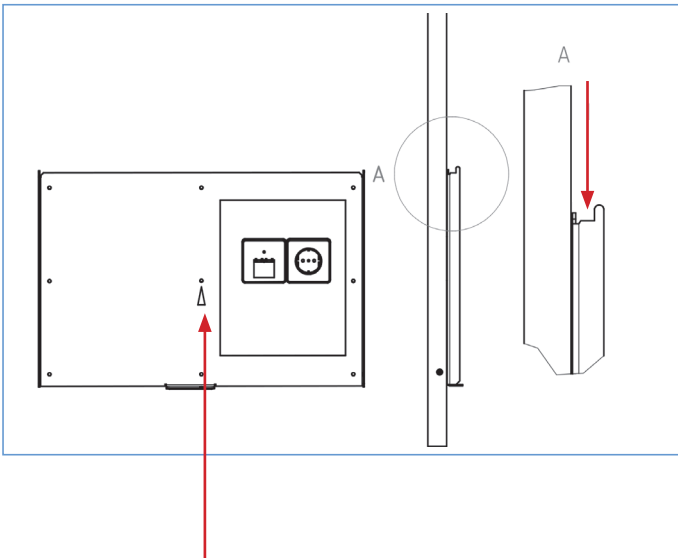
Landscape
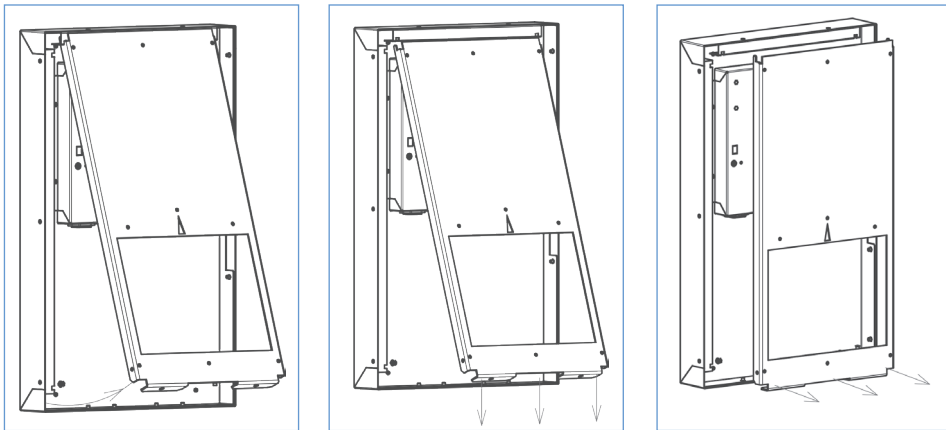
Portrait

3. Install wall mount

Landscape

The monitor must first be attached to the top of wall mount.

Portrait

The monitor must first be attached to the top of wall mount..

Monitor center after assembly

When mounting the wall bracket on the wall, please note: the arrow must be on for correct mounting the wall mount facing up.

4. Hang the monitor in the wall mount and fold out the support

Hang the monitor from above into the wall mount. Then fold out the support on the wall mount and hook it into the montior. Now all cables can be connected. After connecting the cables, fold the support back onto the wall and carefully fold the monitor onto the wall. Then it lies flat.

For an application in which the connections (power socket/ LAN socket) etc. is not behind the monitor, but separate from it:

Before the device is hung up in the wall mount - before step 4 - the corresponding cables must be threaded into the opening of the cable entry.

for seperate connections   Landscape   Portrait
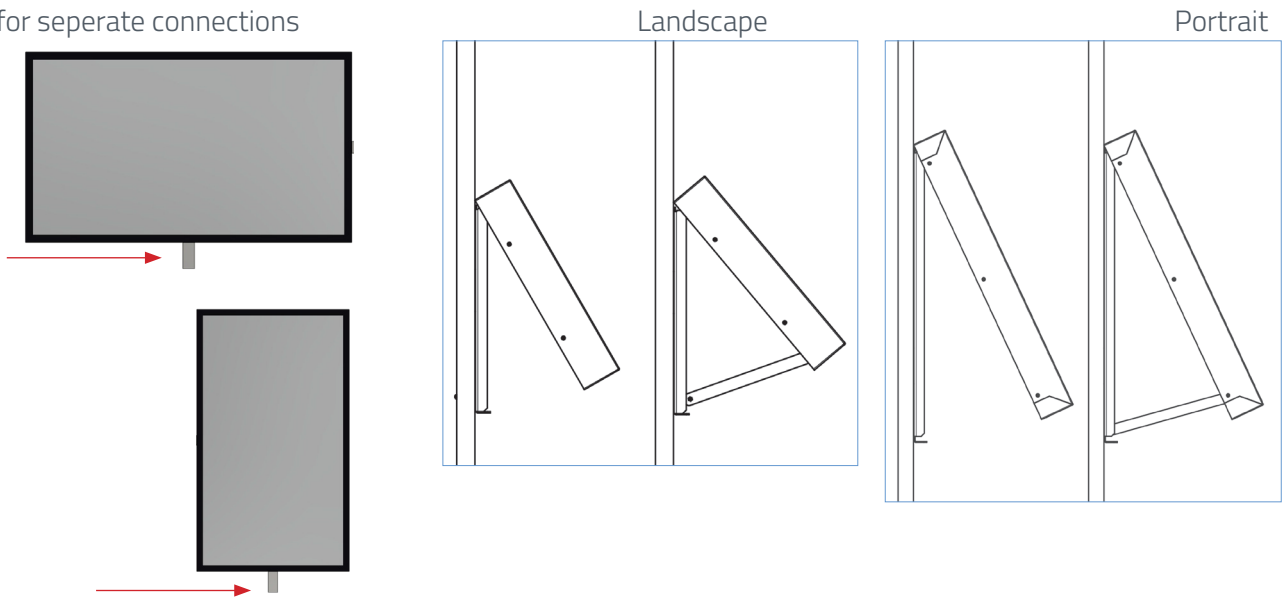
5. Reattach the locking screws

After the correct installation, the monitor hangs plane on the wall. Only when this is the case can the locking screws be screwed into the monitor.

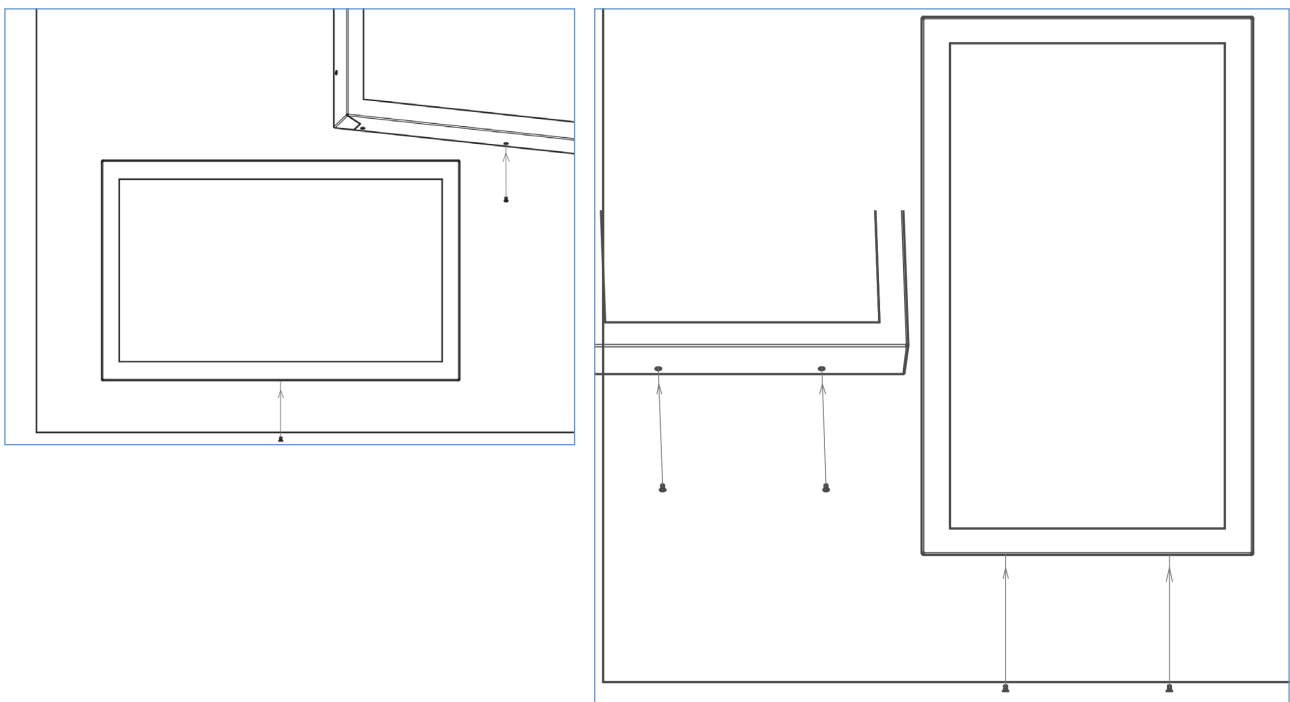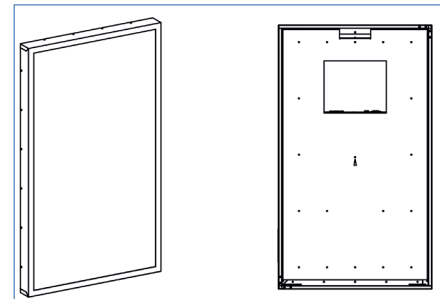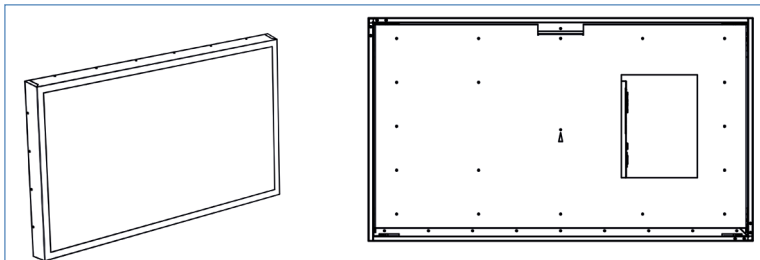# 6.   Mounting monitors up to BLO 64.5"

Front and back view of the monitor

LANDSCAPE   PORTRAIT

1. Remove the locking srews

To mount the wall bracket, it must first be detached from the monitor. Please remove the transport safety bolt for the 4K version! (capter commissioning) To do this, the correct screws must be removed - the locking screws. The following list is used to identify the correct screws.

Landscape	Mounting points locking screws	Number and size of screws on this side	Identify the locking screw
42.5" 4K (under develop.)	On the bottom	2, Torx 20	the two outer screws in each case
46"	At the side	4, Torx 10	2nd from the top on both sides
54.6"	At the side	4, Torx 10	the top one on both sides
54.6" 4K	On the bottom	2, Torx 20	the two outer screws in each case
64.5"	At the side	5, Torx 10	the middle one on both sides
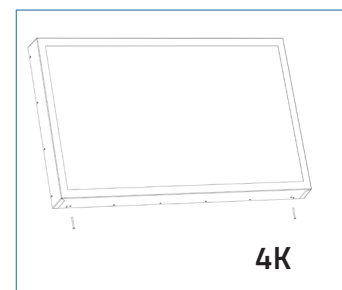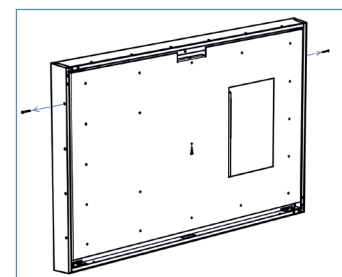
4K

Portrait	Mounting points locking screws	Number and size of screws on this side	Identify the locking screw
42.5" 4K (under develop.)	On the bottom	2, Torx 20	the two outer screws in each case
46"	At the side	5, Torx 10	the top one on both sides
54.6"	At the side	6, Torx 10	the top one on both sides
54.6" 4K	On the bottom	2, Torx 20	the two outer screws in each case
64.5"	At the side	7, Torx 10	the middle one on both sides
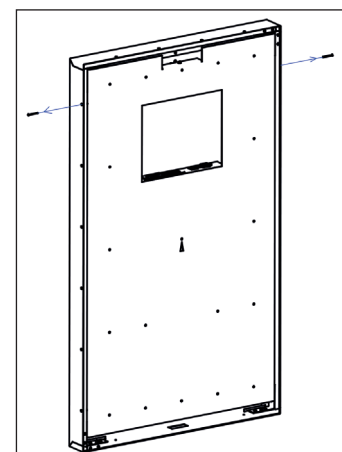
2. Fold down the wall mount / slide the wall mount down / remove the wall mount
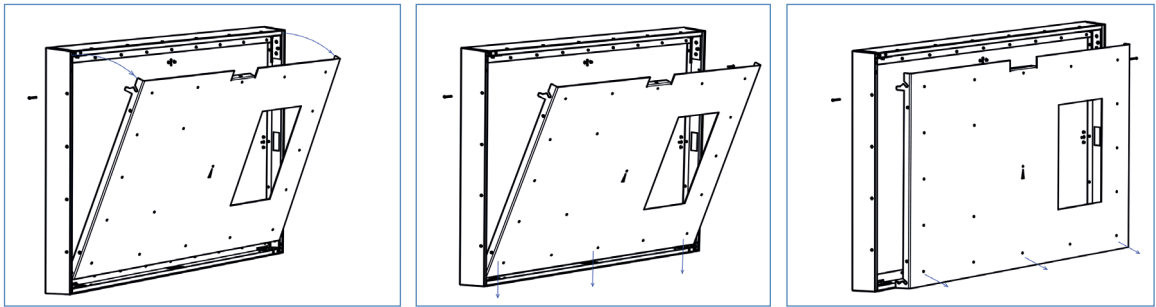
Landscape
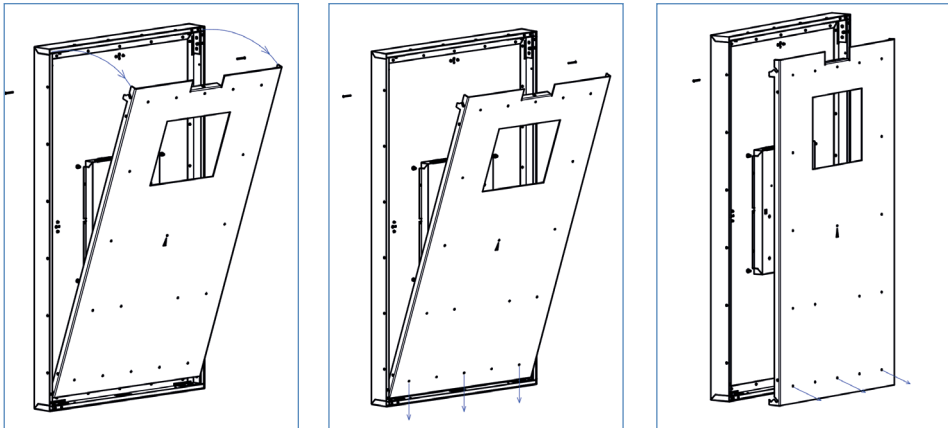
Portrait

3. Install the wall mount

Landscape

First time the monitor is attached, it is attached to the first hook.
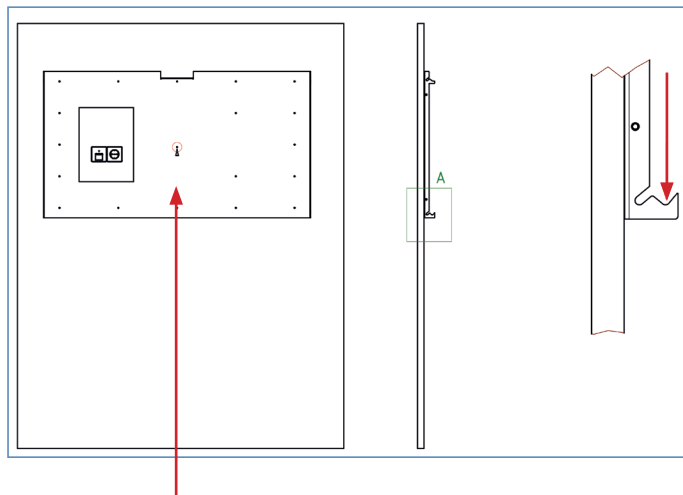
Portrait

First time the monitor is attached, it is attached to the first hook.
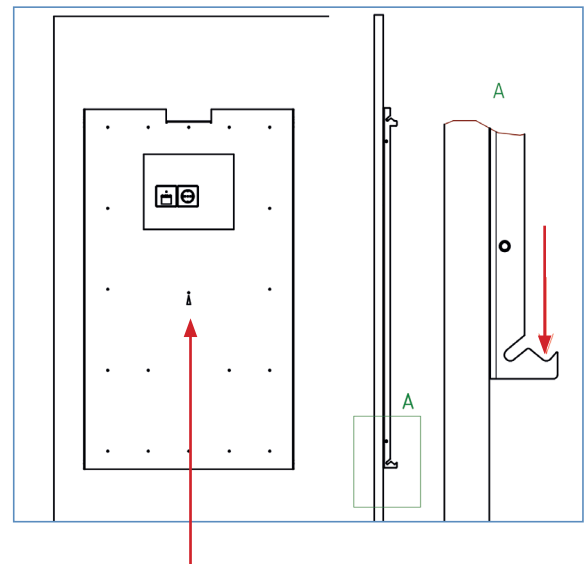
Monitor center after assembly

For easy installtion, the later middle of the monitor is marked by a spot on the wall mount. For correct installtion, the arrow at the wall mount must show upwards.

4. Hang the monitor into the wall mount and attach the rope

The carabiner of the steel cable must be properly hooked into the device provided on the wall mount. Only then will the monitor hang securely on the wall. The required cables can then be connected.
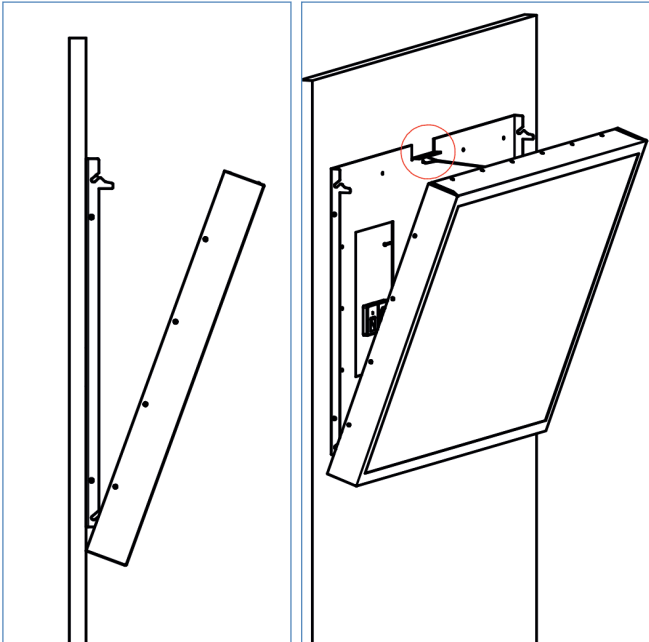
Landscape   Portrait
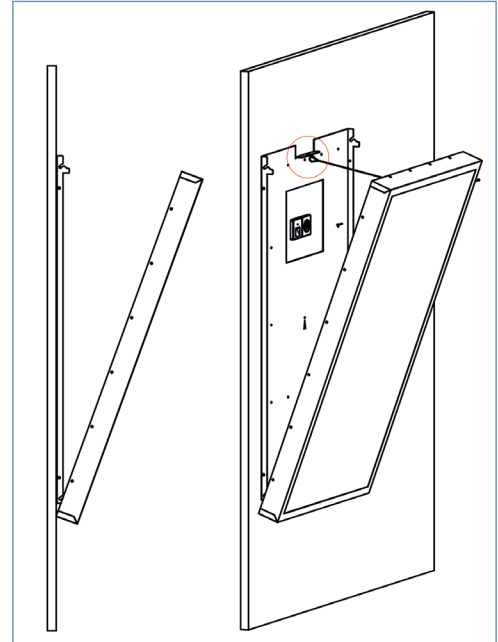
For an application in which the connections (power socket/ LAN-socket) etc. is not behind the monitor, but separate from it:

Before the device is hung up in the wall mount - before step 6 - the corresponding cables must be threaded into the opening of the cable entry.
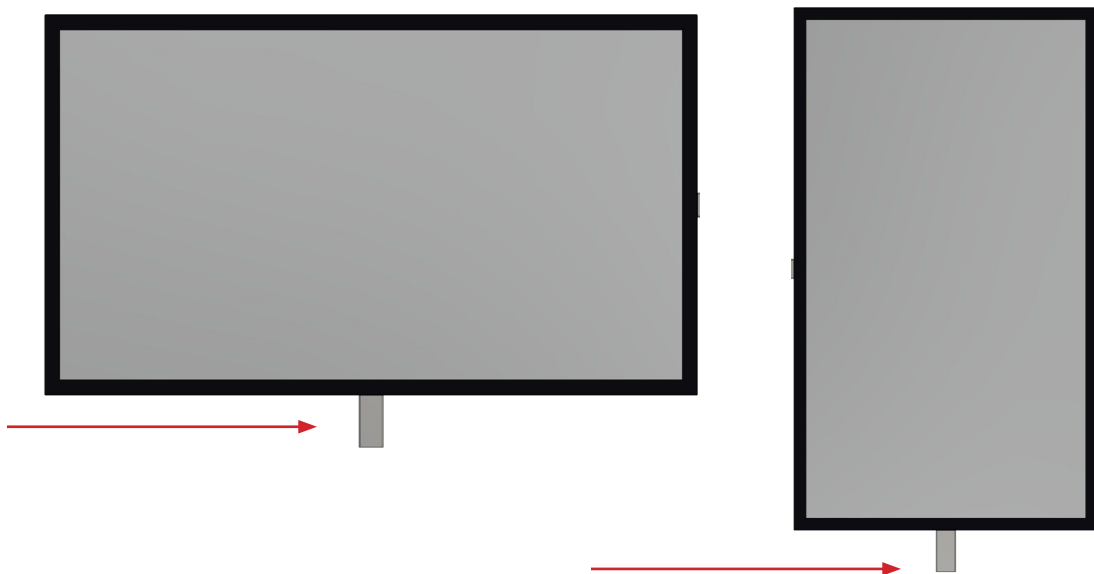
5. Positioning

In the next step, the monitorat first is finally hooked into the wall mount. To do this, the monitor is folded against the wall and pushed up a little while at the same time being pressed against the wall. The monitor slips into the hooks provided on the wall mount.
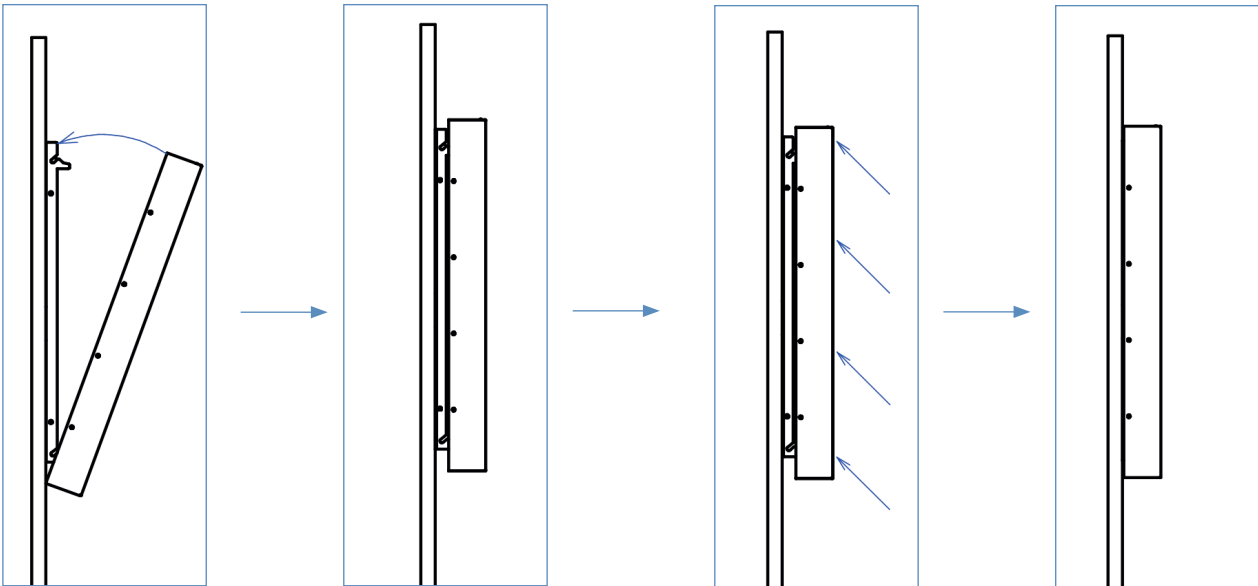
6. Reattach the locking screws

After the correct installation, the monitor hangs plane on the wall. Only when this is the case can the locking screws be screwed into the monitor. The functionality is identical to the display (portrait mode) in landscape mode.
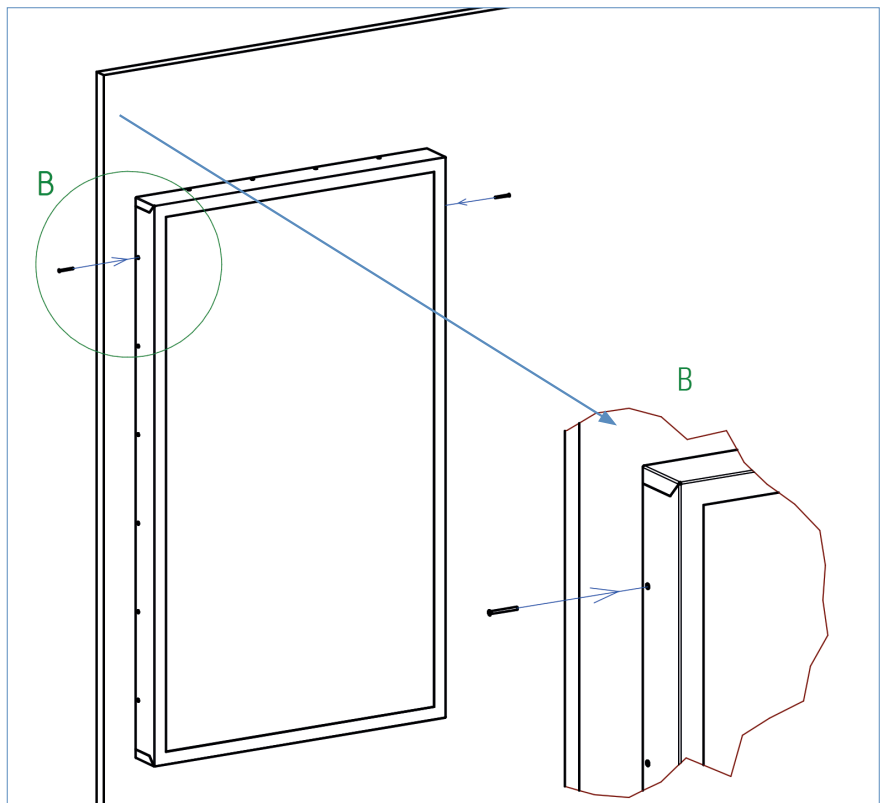
7.   BLO-Line Video PME

Connectors and OSD buttons of BLO-Line Video PME series
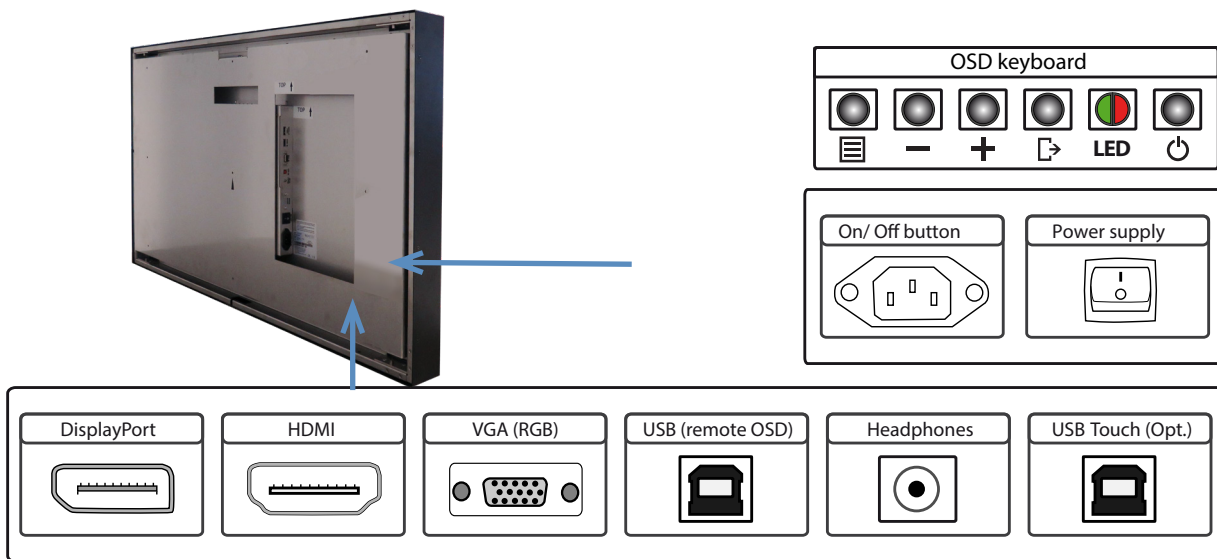
	OSD keyboard				
▤	─	╋	⤷	**LED**	⏻

On/ Off button	Power supply

DisplayPort	HDMI	VGA (RGB)	USB (remote OSD)	Headphones	USB Touch (Opt.)

⚠ Attention: All connections to external devices must be made behind the wall.

Connecting to a PC with VGA cable

VGA (RGB)		VGA (RGB)
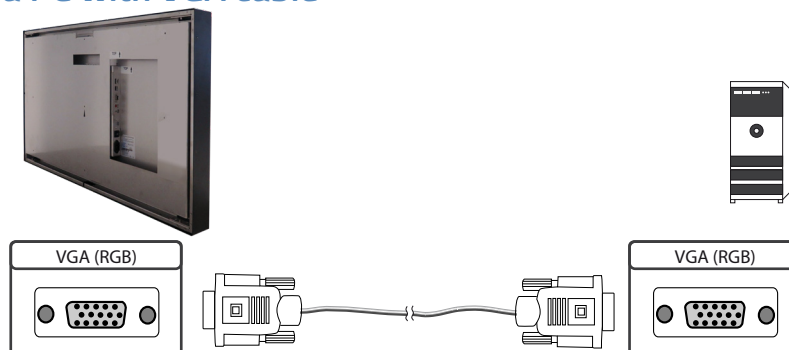
Connecting to a PC with HDMI-DVI cable

HDMI		DVI

17
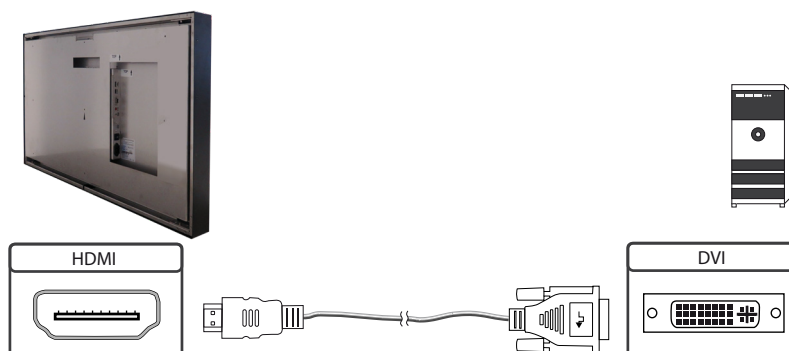
Connecting to a PC with HDMI cable
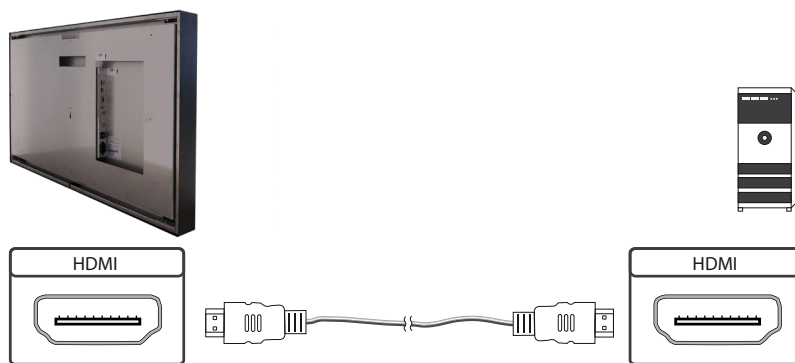
Connecting to a PC with DisplayPort cable
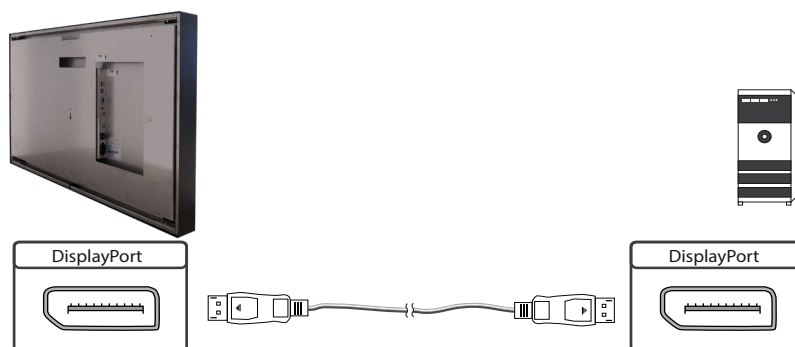
Connecting the Remote-OSD to a PC with USB cable
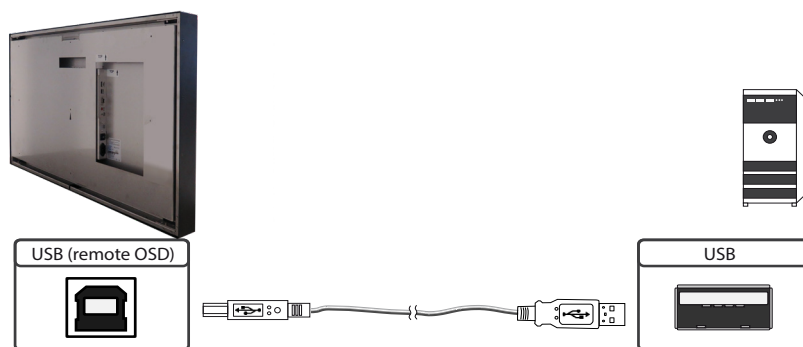
Connecting the touch to a PC with USB cable (for displays with touch sensor only)
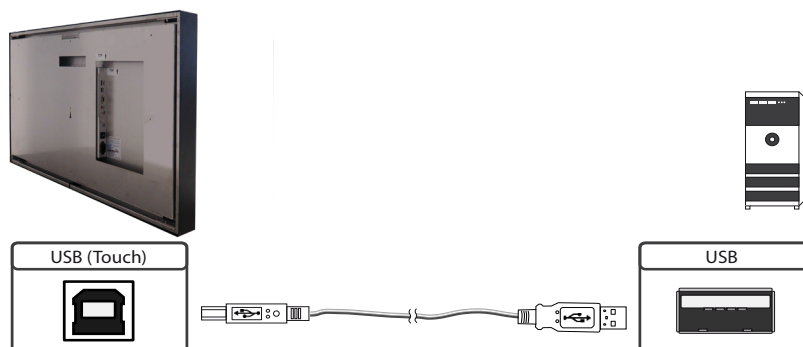
Remote OSD control

To control the OSD menu of the display remotely from a PC, use a USB cable and connect the display to your PC as described above. Please read the handbook for the remote control carefully. Please see the instructions for the remote control you find on our website. The document describes in detail all commands and the structure of the commands for the serial interface.

OSD keyboard

OSD functions of the monitor can be controlled via OSD key pad. The OSD allows selection of input source and fine tuning of various functional parameters like brightness, contrast etc.
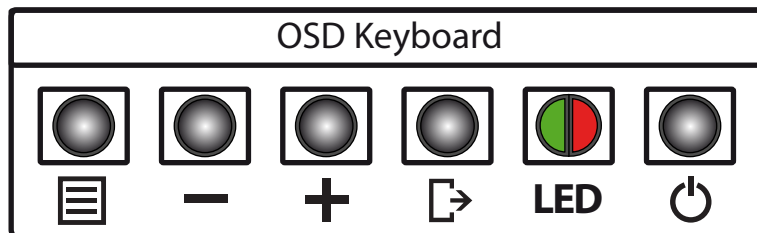
The OSD control can either be used:

→ to access various functions directly
→ to navigate within the OSD

The following two tables give an overview about the functions:

Direct functions:

Key	Function	Comment
Menu	Open the OSD menu	
—	Open volume control	
+	Open brightness control	
Exit	Select signal input	
Power	On/ Off	

Navigation in OSD menu:

Key	Function	Comment
Menu	Open sub menu	when in main
	Confirm entry	when in main
—	Cursor down	when in main or in sub menu
	Cursor/ slider to the left	when in main or in sub menu
+	Cursor up	when in main or in sub menu
	Cursor/ slider to the right	when in main or in sub menu
Exit	Leave OSD menu	when in main
	Leave sub menu	when in sub menu

The green/red LEDs (single package) on the external keypad show the current status of the board:

Color	Meaning	Remark
Green	Signal found	
Green blink	Search signal	
Red	Power safe mode	
LED off	Monitor off	

OSD menu
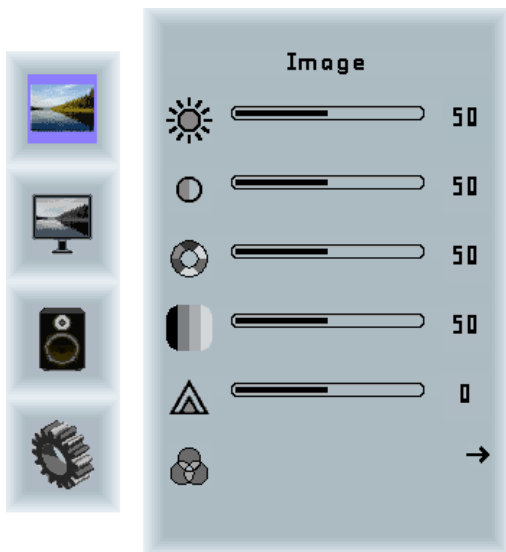
Image Menu

Brightness: Panel brightness adjustment.

Contrast: Panel contrast adjustment.

Hue: Panel hue adjustment.

Saturation: Panel saturation adjustment.

Sharpness: Panel sharpness adjustment.

Color: Opens the color sub menu.

Color Sub Menu

Auto: Performs auto color adjustment.

Color Temp: Allow selection of different color tempe-rature schemes, predefined and custom. Available if color space of input is RGB.

Full color: Selects full received color space.

SRGB: Selects SRGB color space.

XVYCC: Selects XVYCC color space.

Color Temp.

4200k	✕
5000k	✕
6500k	✕
7500k	✕
9300k	✕
user	→

Color Temp.

r	[=====]	50
g	[=====]	50
b	[=====]	50

Display

👍		▶
〰	[======]	50
♨	[======]	50
✛		→
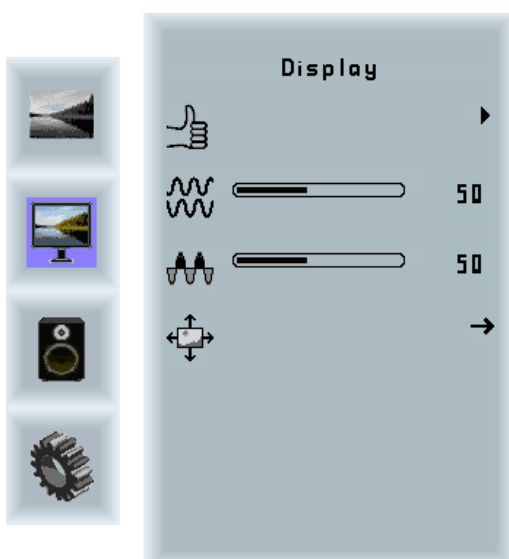
Display Menu

Auto-adjust: Performs auto-adjustment on the VGA input image.

Phase: This function is a slider to adjust the sampling phase of the analogue interface. For optimum image quality, input pixels should be sampled at the ideal sampling points.

Clock: This function is a slider to adjust the sample clock of the analogue interface. This is helpful for improving the image quality for non-standard display modes.

Position: Used to alter placement of the image.

Move Position

use arrows to
move image
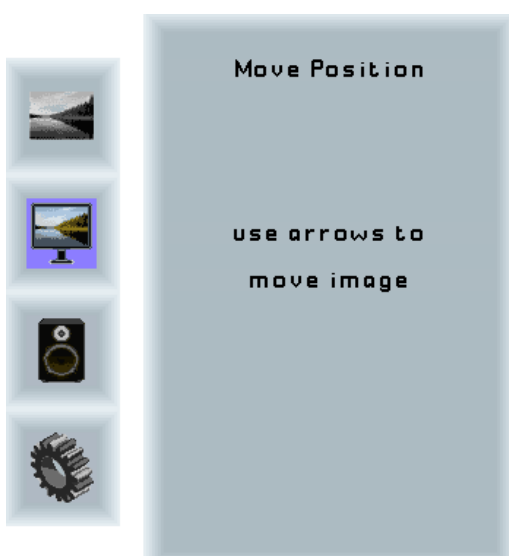
Move Position Sub Menu

Arrows: Use arrow keys to move the position of the image on the screen.
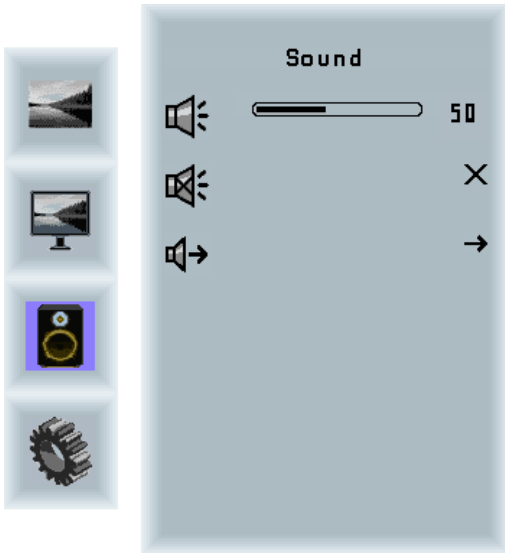
Sound Menu

Volume:	Slider bar to adjust volume.
Mute:	Mutes audio.
Output:	Chooses between speakers and head-phone. Only one can be active at a time (Speakers are not available for POS-Line monitors).

Output Sub Menu

Speakers:	Toggles speakers on/ off.
Headphone:	Toggles headphone on/ off.

System Menu

Input source:	Sub menu to select input source.
OSD settings:	Sub menu for OSD settings.
Factory reset:	Sub menu for Factory Reset.
EDID settings:	Sub menu for EDID settings.
FW Revision:	Firmware revision.
OSD Revision:	OSD revision.

Input Sub Menu

Input		
Display Port	✓	
VGA	✗	
DVI/HDMI	✗	
Auto Scan	✓	
Signal info:		
no sync		

Display Port: Select display port as input signal.

VGA: Select VGA as input signal.

DVI/HDMI: Select DVI/ HDMI as input signal.

Auto Scan: Enable/ disable input auto-scan.

OSD Settings Sub Menu

Osd Settings

MENU →
MENU →
MENU →
MENU   50

Timer: Sub menu for timer settings.

Rotation: Sub menu for rotation settings.

Position: Sub menu for image position.

Transparency: Slider to set transparency.

Timer Sub Menu

Timer	
3 sec.	✗
6 sec.	✗
12 sec.	✓

Timer: Selects how many seconds the OSD will
                         remain active after the last use.

Rotation

0° ✓
90° ✗
180° ✗
270° ✗
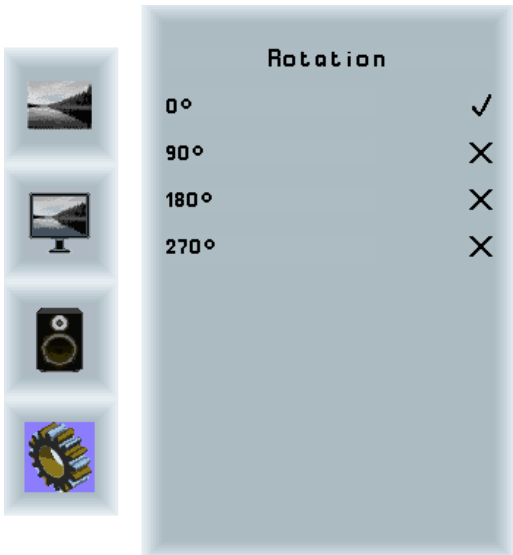
Rotation Sub Menu

Rotation: Rotates the OSD menu.

Reset

Press right to factory
reset ▶

Reset Sub Menu

Reset: Performs factory reset.

EDID Write Protect

Off ✓
On ✗

EDID Write Protect Sub Menu

Write protect: EDID write protect on/ off.

8.   BLO-Line P4K Controller

The BLO-Line 4K monitor has the following connections and controls:

OSD Keyboard					
▤	—	+	↳	LED	⏻

Power supply	On/ Off button

1 x HDMI 1.4 IN	2 x HDMI 2.0 IN	DisplayPort 2.0	MIC / Spk / Line-out	USB B Touch (opt.)
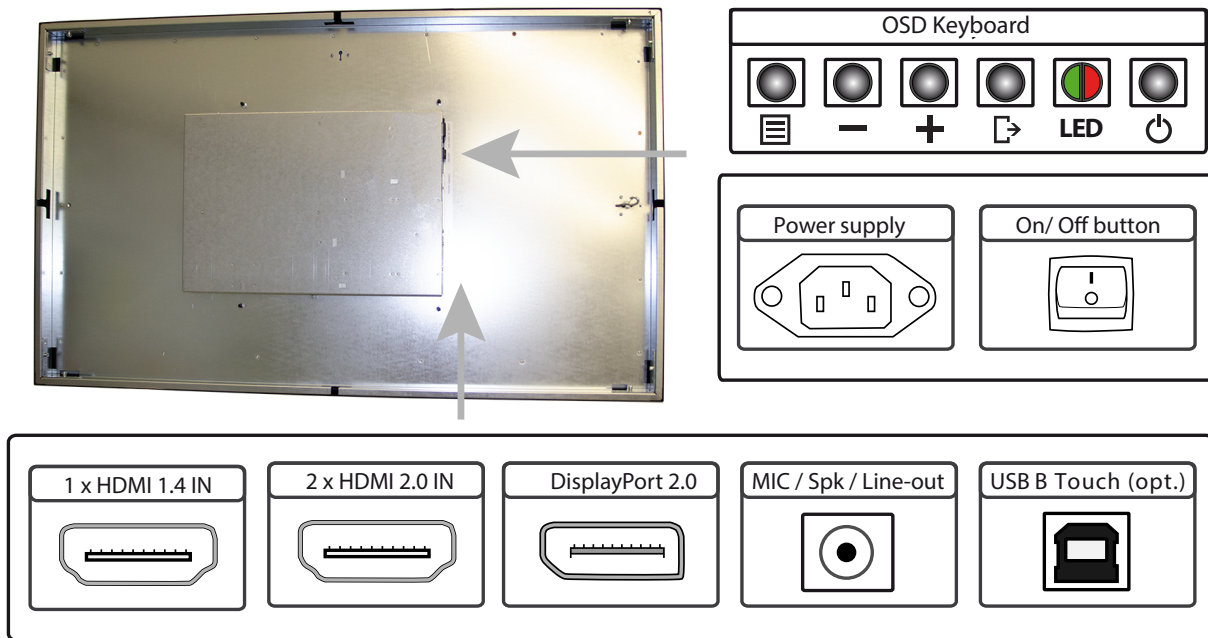
Connecting to a PC or external device with HDMI cable

HDMI IN   HDMI

Connecting to a PC with DisplayPort cable
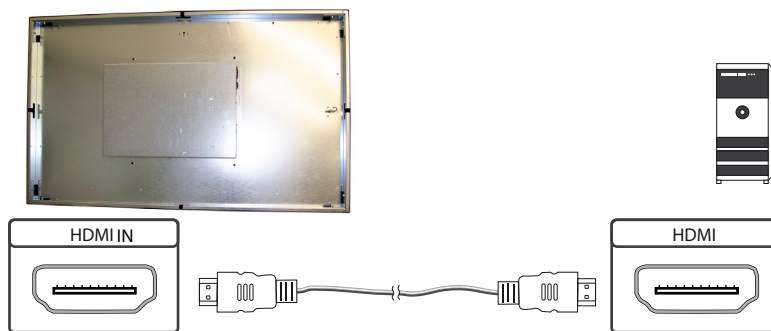
DisplayPort   DisplayPort
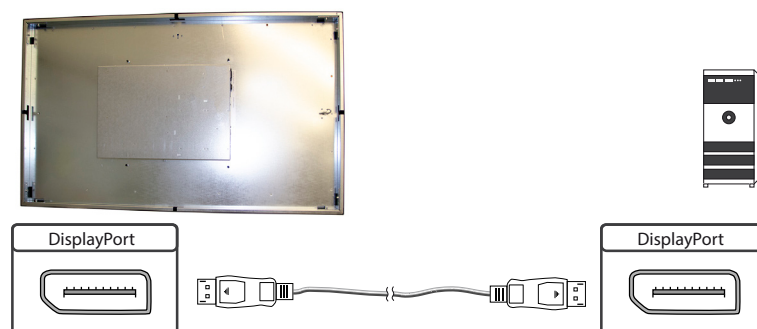
Connecting to a loudspeaker or headphones
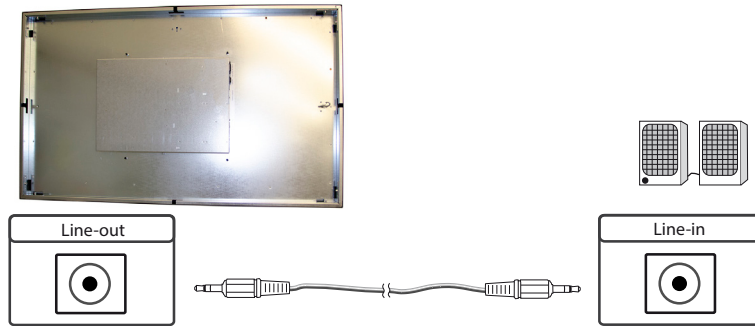
The OSD Keyboard

You can control the OSD functions of the monitor using the OSD keypad. You can use the OSD menu to select the signal input source and set many other functions such as screen brightness and contrast.
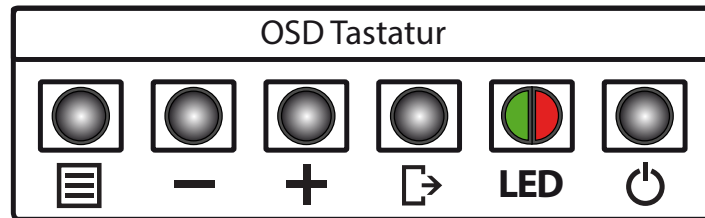
As an alternative to the OSD keypad, the OSD menu can also be controlled using the remote control supplied as standard.
You can use the buttons in two operating modes:

→ Direct selection of functions without opening the OSD menu

→ To navigate within the OSD menu

The following tables give you an overview of the functions:

Direct selection of functions:

Key	Function	Note
Menu	Calling up the OSD menu	
—	Calling up the volume control	
+	Calling up the brightness control	*
Exit	Select sign al input	
Power	On/ Off	

*ATTENTION:

The BLO-Line 4K P4K series is set to energy efficiency class F as standard. To leave this and obtain a higher brightness, the prompt in the menu: „Press MENU to overstep the nominal brightness" must be confirmed with the OSD menu button. The brightness can now be changed accordingly using the „+" and „-" buttons. If the brightness is reduced again, the prompt must be confirmed again to increase the brightness again.

Navigation in the OSD menu:

Key	Function	Note
Menu	Calling up sub menu	if in the main menu
	Confirm input	if in the main menu
—	Cursor down	if in the main menu or sub menu
	Cursor/ Slider to the left	if in the main menu or sub menu
+	Cursor up	if in the main menu or sub menu
	Cursor/ Slider to the right	if in the main menu or sub menu
Exit	Leave the OSD menu	if in the main menu
	Leave the sub menu	if in the sub menu

The red/green LED on the OSD keypad indicates the status of the monitor:

color	description	note
Green	Signal found	
Flashing green	Search signal	
Red	Power safe mode	
LED off	Device off	

The OSD menu

Display Mode

Selection of different display modes
→ 1P/ 1 picture
→ 2P LR/ 2 pictures, left & right
→ 2P TB/ 2 pictures, up & down
→ 2P PIP/ 2 pictures, picturein picture
→ 4P/ 4 pictures

Display Function

Selection of the various screen functions Submenus depend on the settings in the **„Display Mode"** menu.

Sub menu (active in mode 1P)
→ Disp Rotate
   0°
   90°/ turn by 90°
   180°/ turn by 180°
   270°/ turn by 270°
→ Latency — not available
→ Freeze — not available
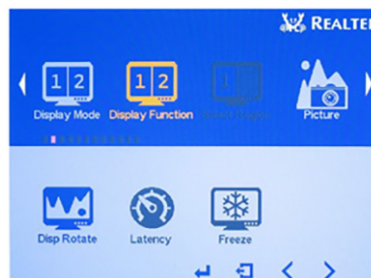
Sub menu (active in mode 2P LR)

→ Disp L/ R Ratio

→ Input Swap of the 2 inputs
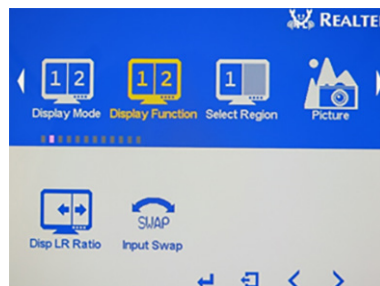
Sub menu (active in mode 2P PIP)

→ PIP Position
    Left up
    Left down
    Right up
    Right down
    Centre
    User/ Position manuelly adjustable

→ Transparency

→ PIP Size

→ Input Swap of the 2 inputs
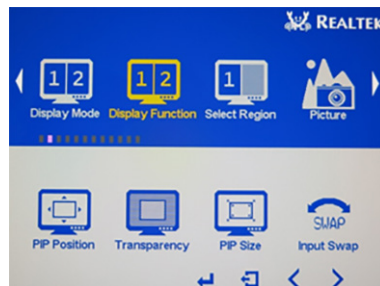
Select Region

Submenus depend on settings in the 'Display Mode' menu. Determines which regions the other picture settings can be applied to.

Sub menu (active in mode 2P LR)

→ Left Side activated

→ Right Side activated

→ Full: both activated
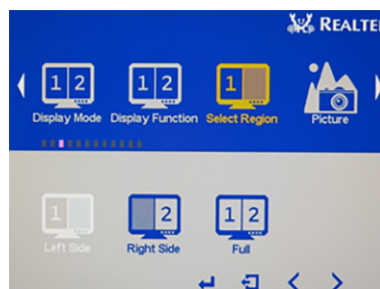
Sub menu (active in mode 2P TB)

→ TopSide activated

→ Bottom Side activated

→ Full: both activated
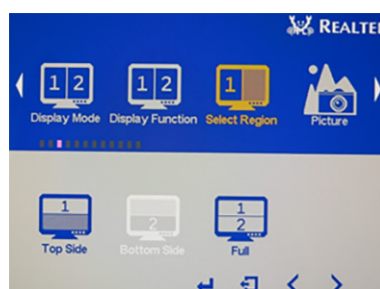
Sub menu (active in mode 2P PIP)

→ Main activated

→ Sub activated

→ Full: both activated
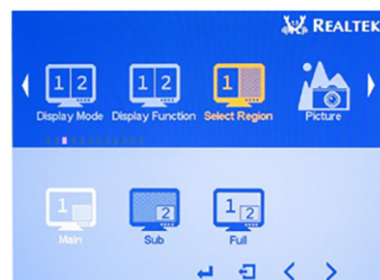
Sub menu (active in mode 4P)
→ 1P In activated
→ 1P Out: pictures 2,3,4 activated
→ 2P In: picture 2 activated
→ 2P Out: pictures 1,3,4 activated
→ 3P In: pciture 3 activated
→ 3P Out: pictures 1,2,4 activated
→ 4P In: picture 4 activated
→ 4P Out: pictures 1,2,3 activated
→ 4P Full: all pictures activated
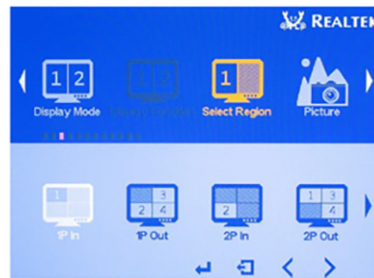
Picture

Setting options for image

Picture sub menus
→ Backlight: setting backlights
→ Brightness: setting brightness
→ Contrast: setting contrasts
→ Sharpness: setting sharpness
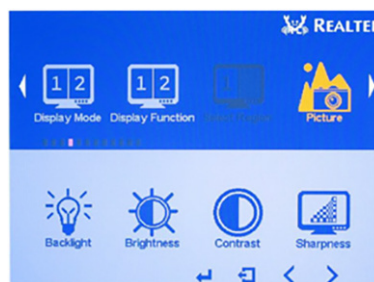
Analogue/ Not availabe

Colour

Settings relating to the colours of the image can be made here.

Colour sub menus
→ Panel Uniformity: On/ Off
→ Gamma: Off | 1,8 | 2,0 | 2,2 | 2,4
→ Temperature: 9300/ 9500K | 7500/ 7500K
    6500/ 6500K | 5800/ 5800K | sRGB
    User(RGB values can be set individually here)
→ Colour Effekt: Standard | Game | Movie | Photo | Vivid
    User: R,Y,G,B,M hue and Saturation can be set here
→ Demo: Creates various frames for demonstration
→ Color Format: not available
→ PCM: not available
→ Hue: Individually setting of colour tone
→ Saturation: setting of colour saturation
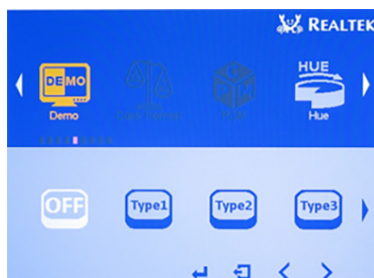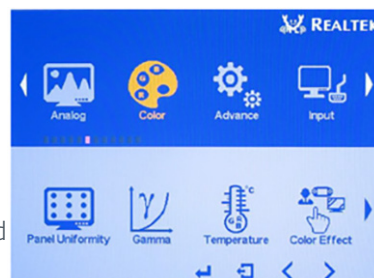
Advance

Further settings can be made to the image here.

Advance sub menus
→ Aspect Ratio: Full | 16:9 | 4:3 | 5:4 | User | 1:1
→ Over Scan: OFF | ON
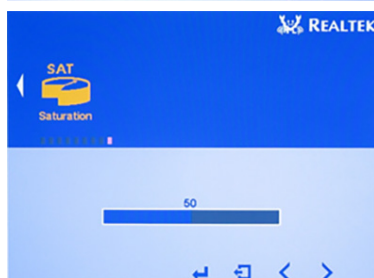
→ Over Drive: ON | OFF | OD Gain
→ DDCCI: activates display control via the
   DDCCI-Protokoll - ON | OFF
→ Ultra Vivid: further colout brightness ans saturation
   adjustment - OFF | L | M | H
→ DP Option: D0 off | D1 | DP 1.1 | DP 1.2 | DP 1.3
   D6 off
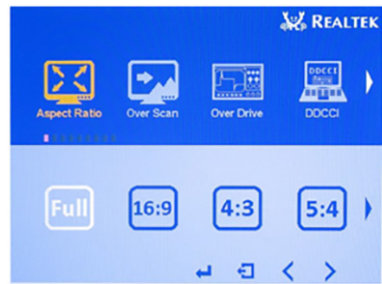
Input

Selection of the input signal to be displayed, submenus depend on the settings in the 'Display Mode' menu.

Sub menu (active in mode 1P)

→ D1: DP
→ D2: HDMI
→ D3: HMDI
→ D4: HDMI
→ Auto Select

Sub menu (active in mode 2P LR)

→ Left Side
   D1,D2,D3,D4, assigns the respective input signal to
   the left image content(1)
→ Right Side
   D1,D2,D3,D4 assigns the respective input signal to
   the right image content(2)
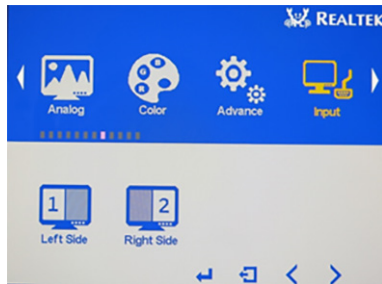
Sub menu (aktiv bei Bildschirmmodus 2P TB)

→ Top Side
   D1,D2,D3,D4, assigns the respective input signal to
   the upper image content (1)
→ Bottom Side
   D1,D2,D3,D4 assigns the respective input signal to
   the lower image content (2)
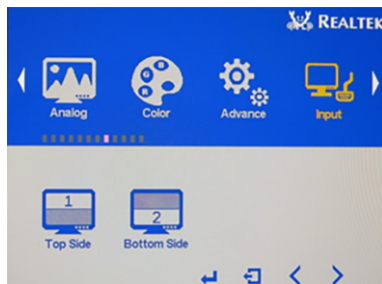
Sub menu (active in mode 2P PIP)

→ Main
   D1,D2,D3,D4, assigns the respective input signal to
   the main image(1)
→ Sub
   D1,D2,D3,D4 assigns the respective input signal to
   the small image(2)
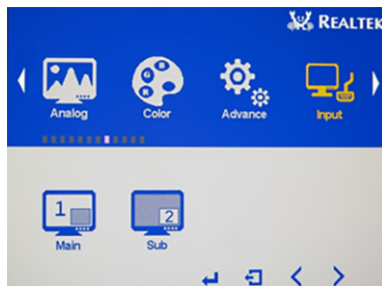
Sub menu (active in mode 4P)

→ 1P In
D1,D2,D3,D4, assigns the respective input signal to the upper left corner

→ 2P In
D1,D2,D3,D4 assigns the respective input signal to the lower left corner

→ 3P In
D1,D2,D3,D4 assigns the respective input signal to the upper right corner

→ 4P In
D1,D2,D3,D4 assigns the respective input signal to the lower right corner
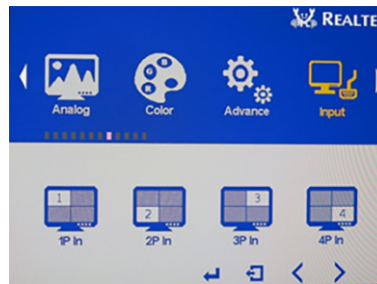
Audio

Setting options for audio playback

Sub menus Audio

→ Volume: 0 – 100
→ Mute: On/ Off
→ Stand Along: On/ Off
→ Audio Source: Analog | Digital
If several input signals are displayed (2P 4P modes), the corresponding audio signals can be selected here. (adjacent image for 2 input signals)
→ Sound Mode
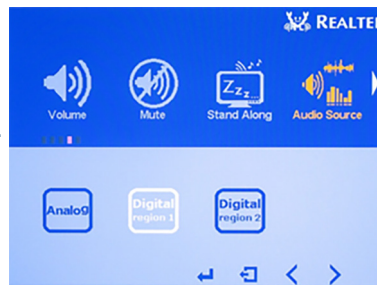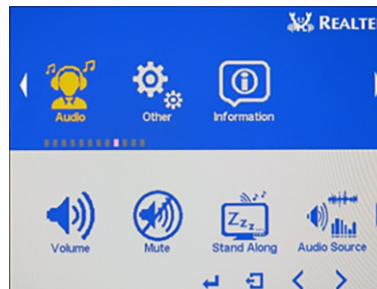
Others

Sub menus Others

→ Reset
→ Menu Time: 0 – 100 sek
→ OSD H Position: 0 – 100
→ OSD H Position: 0 - 100
→ Language
→ Transparency OSD: 0 - 100
→ Rotate OSD: 0° | 90° | 270° | 180°
→ Border Width
→ Border Coler: R | G | B | W

Information

Displays additional information
Firmware version, resolutions of the displayed inputs etc.

9.   BLO-Line IQ

⚠️ Note: The delivery includes a driver DVD with all Atom main board drivers!

⚠️ Note: This POS-Line display is equipped with a battery. Please read the following note carefully:

→ Unplug the power cable before exchanging the battery.

→ There is a risk of explosion if the battery is not installed correctly.

→ Replace the battery always with a battery of the same type.

→ Recycle empty batteries with the free battery collection system. Please read the chapter "Disposal" in this document.

Passive cooling

Displays of the IQ BLO series (integrated PC) are designed for passive cooling.

Passively cooled monitors have a heat pipe that routes by which the heat of the processor to a heat sink on the back of the monitor. Passively cooled devices have no moving parts.

PC specification

Please inform yourself current data sheet BLO-Line about the details of the PC specification of the IQ BLO.

PC box connectors

Connectors of BLO-Line IQ series
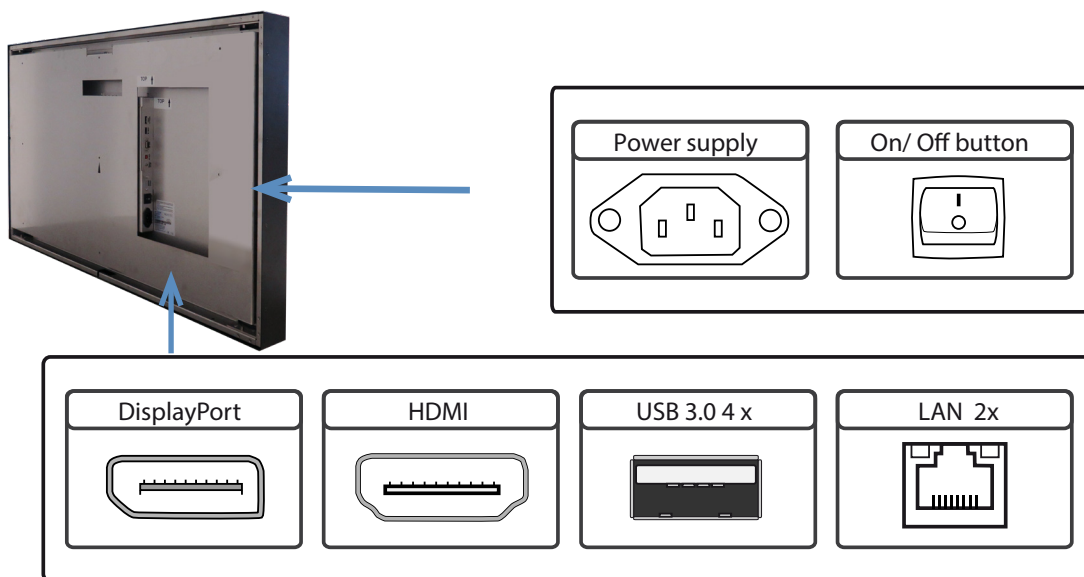
⚠️ **Attention: All connections to external devices must be made behind the wall.**

Connecting to a network using a patch cable

LAN   LAN
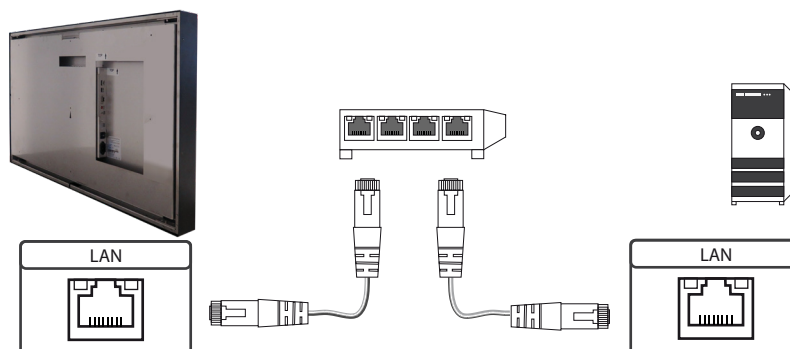
BIOS settings

A Phoenix UEFI Flash BIOS is installed on the PC main board. To change BIOS settings press the 'F2' or 'DEL' key on your keyboard during the boot process of the PC.

Operating systems

An operating system is pre-installed if your BLO-Line display has been ordered with this option. In this case all main board drivers or touch drivers are installed.

Activating the operating system:
→ Windows Embedded/ WIN IOT: This OS is already activated. The license key sticker is located on the back side of the display.
→ Windows 10: This OS is not activated. The license key sticker is added to the product documentation. After switching on the display for the first time Windows will prompt for the key.

10. BLO-Line VideoPoster

⚠ Note: Further information on media player, play list structure, handling, utilization and supporting software modules are available at https://www.fortec-integrated.de/en/service/downloads/video-poster-downloads/

⚠ Note: This display is equipped with a battery. Please read the following information carefully:

→ Unplug the power cable before exchanging the battery.

→ There is a risk of explosion if the battery is not installed correctly.

→ Replace the battery always with a battery of the same type.

→ Recycle empty batteries with the free battery collection system. Please read the chapter "Disposal" in this document.

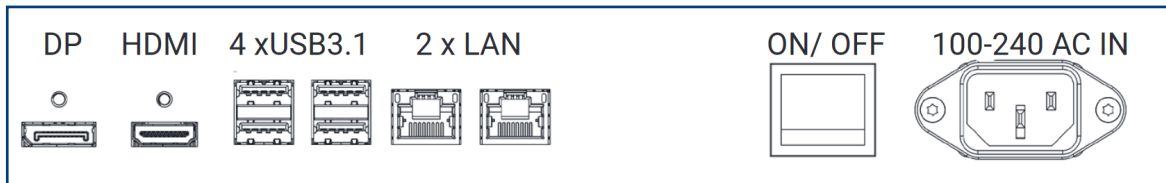### Connectors of BLO-Line VideoPoster series
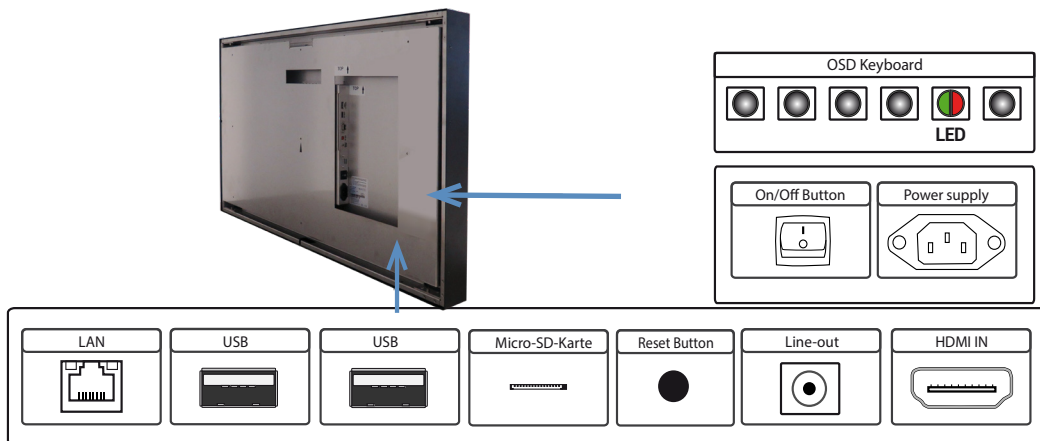
⚠ **Attention: All connections to external devices must be made behind the wall.**

Connecting to a network using a patch cable
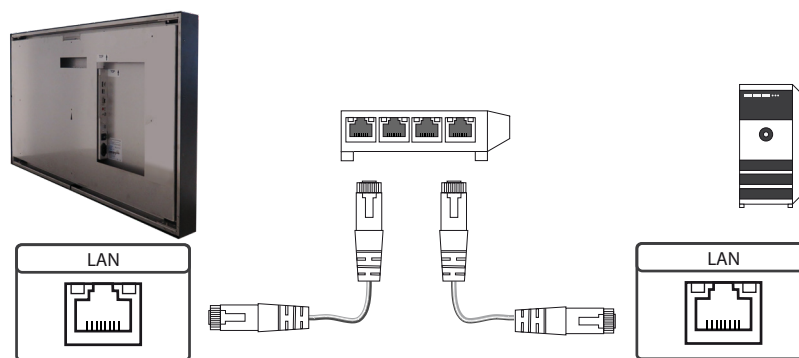
Factory configuration at the time of delivery

POS-Line VideoPoster is a network (Ethernet) device. Please note that inaccurate network configuration can have unintended influence on network operations and cause a breakdown of the entire network. To setup the device properly, you must be familiar with the basic operating parameters of your network.

Factory configuration of BLO-Line VideoPoster at time of delivery:

DHCP: on

IP-Address: assigned by DHCP server (fallback to static IP address 192.168.0.1, if no DHCP server is

                      available in the network)

Netmask: assigned by DHCP server (fallback to 255.255.255.0, if no DHCP server is available in the

                      network)

Hostname: Videoposter-IV-xx-xx-xx (last 6 bytes of the devices MAC address)

Login Name: Artista

Password: Artista

Content auto update: off

MicroSD Card

The Mediaplayer stores its playlists on the internal 2GB memory. A microSD card, however, can be extended, if the internal memory is not enough. If a microSD card is plugged in, it must not be removed during operation!

Supported media formats

Video:

  → MPEG-4 AVC / H.264

  → Quicktime

  → Flash Video

  → MPEG Transport Stream

Still images:

  → PNG

  → JPG

  → BMP

## Functional description

POS-Line VideoPoster is a networked stand alone media player to playback play lists. Operating systems or other client-based software components are not required. Play lists are based on a XML structure and can include videos and images. The media player controlls the play list. A play list is looped endlessly until a new play list is loaded or the player is switched off. A play list may contain several sub play lists which can be triggered by an internal timer or other external events like push buttons or proximity switches (optional external I/O board).

POS-Line VideoPoster does not need any local operation. As soon as a play list is loaded, the media player will automatically start with playback. Power can be switched off at any time, a shut down procedure is not required. After power on, the media player will automatically playback the current play list.

Connecting an external source with priority

An external source like video player or sat receiver can be connected to the POS-Line VideoPoster via HDMI. If priority of the HDMI connector has been activated, the playback of the play list will stop as soon as a HDMI signal is detected. In this case, the HDMI signal is shown on the screen. If the external player is switched off, the media player will automatically start or continuing playing back the internally stored play list.

Software

The following software and accompanying documentation were made available to you by e-mail:

ACC: Windows software to create play lists for POS-Line VideoPoster devices. Use ACC to transfer play lists to VideoPoster, and to store play lists on USB sticks for manual transfer.

ADF: Windows software to support installation and configuration of VideoPoster devices. Connect your VideoPoster as shipped (factory configuration) to the network. ADF will detect all VideoPosters and allow an easy configuration of the network parameters.

Downloading play lists

There are basically four methods to download play lists:

Via USB: If a USB stick with a playlist is inserted into the Mediaplayer, it is loaded and started automatically. In this operating mode, a network connection is not necessary..

Via ACC: This is a free software for Windows to create play lists and to upload play lists to one or more media player in the network.

Via FTP Server: The media player connects to a FTP server in configurable time intervals and searches for new playlists. The differences between the existing and the new playlist are loaded automatically and playback of the new content starts.

Via HTTP-Protocol: Use HTTP protocol to transfer and control VideoPoster from any existing Content Management System.

Configuration

Use any Internet browser like Firefox, Internet Explorer, Chrome, etc. for the configuration of the VideoPoster. Enter the URL (i.e. IP address or network device name) to open the device's web interface. Please enter the password if required (factory settings: Login name: Artista; Password: Artista).

Layout of the web interface:

Information

System Information: Here you can find all the information about the system like software

revision. In case of a support request please add a printout of this page to your

mail for a fast processing.

View Logs: VideoPoster creates log files to allow an easy monitoring of operations. The following log files are available:

Player   – shows the log file of the video player and error messages.

Updater	– shows the log file of content updates and error messages.
Setup Manager	– shows the list of executed setup files.
Event Manager	– shows error messages of the event manager.

Configuration

Network Configuration:	This page includes all entries for the network configuration. Click on „Submit Configuration" to store the settings and change the configuration. Clicking on „Reset Configuration" deletes all entries in the web page but does not change the configuration.
Date and Time:	Enter date, time and time zone. Enter a network time server for automatic synchronization (NTP).
Content Auto Update:	To configure automatic content updates with FTP server, enter the FTP server access information and update time interval here.
Audio Settings:	Volume settings for speakers.
Display Settings:	Panel brightness settings.
HTTP Access:	Enter password. It is recommended to change the password after installation.
Advanced:	Firmware updates, microSD card (optinal) formating,reset of hardware configuration to factory defaults and priority setting for HDMI input.

Restart

Restart:	Media player restart.

On-screen display of IP-address and host name

IP-address and host name are shown on the screen for 5 seconds during the boot process.

11.   BLO-Line IoT

The BLO-Line IoT monitor is equipped with the Raspberry® Pi compute module 3 (CM3). The specification can be found under the following link: https://www.raspberrypi.org/products/compute-module-3/

⚠️ Note:
The full driver package for the IoT monitor can be found on the enclosed DVD.
The device is equipped with a battery. Please note the following:

→ Disconnect the devise from the power supply before replacing the battery.

→ If the battery is not replaced properly there is a risk of explosion.

→ Always replace the battery with another one of the same type.

→ Supply empty batteries to the local waste battery return system. Please also observe the notes in chapter „Disposal".

Passive cooling

Monitors of the BLO-Line IoT series are equipped with a passive cooling system. Passively cooled monitors divert the heat of the processor to the monitor's housing. Passively cooled devices have no moving parts.

Spezification

Please refer to the current data sheet for the details of the IoT monitor specification.

Connectors of BLO-Line IoT series
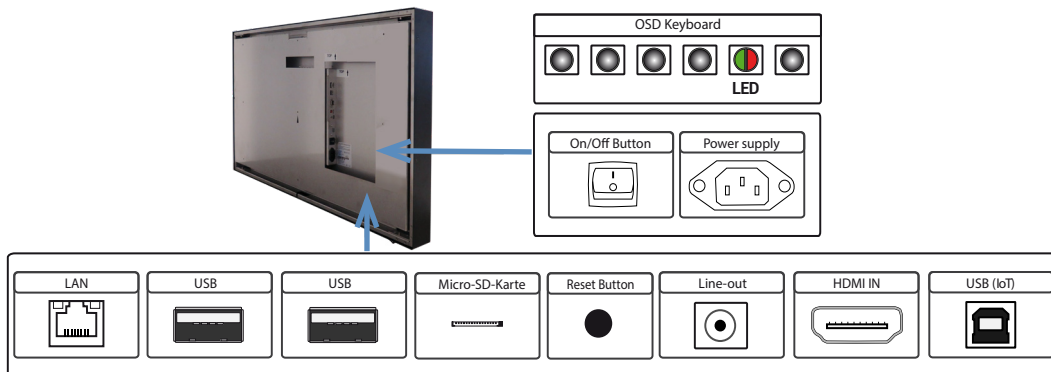
⚠️ **Attention: All connections to external devices must be made behind the wall.**

Connecting to a network using a patch cable
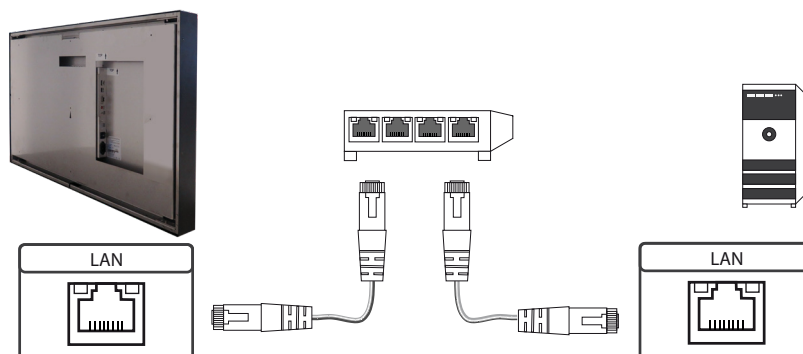
Switch on/ off

After the supply voltage has been applied, the IoT monitor starts automatically. To switch off, you must select „Shut down" in the operating system.

Operating systems

The IoT Monitor comes with the operating system Raspbian, which is equipped with all necessary drivers. This operating system is the official version of the community, reduced to the internal memory of the compute module. It is only used for the first commissioning of the monitors.

The IoT Monitor can be equipped and programmed by the customer with its own operating system/ image. For this, the USB port on the back of the monitor in the connection cover can be used, which is located under the OSD menu.
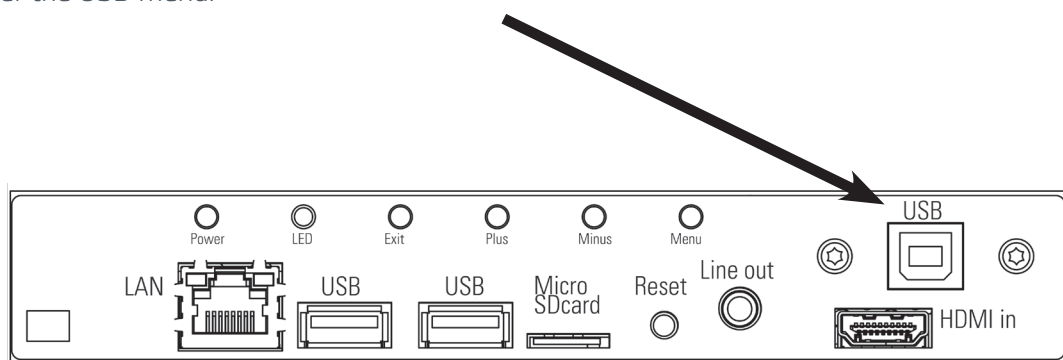
A guide for the integration of an image can be found on our homepage:

https://www.fortec-integrated.de/en/service/downloads/artista-iot-downloads/

In the community of Raspberry® Pi (https://www.raspberrypi.org/forums/) you can find many problem-solving and help to integrate and create your own system.

12. WebPoster

Connections and controls

WebPoster are BLO-Line IoT devices with a special firmware, so the ports and operating in the „IoT" must be observed. Connecting a mouse and keyboard is not supported with this firmware.

Functional description

The Industrial HTML Full HD Player is a complete solution for viewing Web pages. The website can be configured via a web interface. At the start of the device is automatically display.

Configuration of the media player on delivery (factory configuration)

This device is a LAN (Ethernet) enabled device. Please note that an incorrect network configuration the device may affect the safe operation of the entire network and in the worst case of a network failure leads. To set up the device for a specific network, you need the key operating parameters of the network be known. The POS Line WebPoster is shipped from the factory with the following configuration:
→ DHCP: on

→ IP-Address: 192.168.0.1*

→ Netmask: 255.255.255.0

→ Hostname: WebPoster-xx-xx-xx (the last 6 bytes of the MAC address of the device)

→ Login Name: Artista

→ Password: Artista

*If no DHCP server is found, this IP address is assigned automatically.

Supported site formats
→ HTML5

→ JavaScript

Software

On the enclosed disk contains the following software and related documentation.
ADF: A program that simplifies the installation and configuration of HTML players. Connect any HTML player in the factory configuration to the network and start ADF. It displays all the HTML players in a list. Select the devices one by one and remove the network configuration.

Configuration of the media player

The configuration of the HTML player can work with any standard web browser (Firefox, Internet Explorer, Chrome, etc.) are performed. Connect the HTML player to a network and enter to establish the connection URL (eg. as IP address or network name) in the browser. Now open the WEB interface. If you are prompted for the password, enter the password (factory setting: Login name: Artista; password: Artista).

Layout of the web interface:

Configuration

Network Configuration: The configuration of the network is the first step in setting up.
Submit Configuration: With Submit Configuration the entries will be accepted.
Discard Changes: With Discard Changes be deleted entries in the fields.
                         However, this has no influence on the current configuration.
Browser Settings: The configuration of the Web page to display is the second step of the device.
                         Here the web page can be entered and a „Reload Interval (seconds)" can be defined.
Submit Configuration: With Submit Configuration the entries will be accepted.
Discard Changes: With Discard Changes be deleted entries in the fields.
Change Password: Here, the default password can be changed.

Information

System Information: This page contains all details about the system, such as, for example, the software
                         version. If you contact our Support please add this page to your E-Mail to ensure a
                         fast response.

Restart

Restart: Restart of the media player.

Display of IP address and hostname

When booting the HTML player's current IP address and the host name of the HTML player is displayed on the screen for about 5 seconds.

13. Touch Sensors

BLO-Line monitors in 24", 31.5", 46", 54.6" and 54.6" 4K are also available with touch. Depending on the panel size, different touch systems and touch technologies are used. If the monitor has been ordered as touch screen, the touch sensor and touch controller are installed at factory.

BLO-Line Video PME:
No drivers are required for HID Touches with Windows 10/11, as the drivers are already pre-installed in Windows. A standard USB cable must be used for the connection, which you can also purchase from us (KA-30-051).

Note: All drivers for the touch sensors can be found on the websites of the manufacturers.

14. Maintenance

Systems with active cooling require cleaning of ventilation slots every 6 months. Systems with passive cooling must be cleaned every 12 months.

15. Warranty / Service

Warranty

FORTEC GROUP grants a manufacturer's warranty of two years from the date of delivery.

The rendering of warranty claims shall neither extend nor restart the warranty period.

During the warranty period, FORTEC GROUP shall repair product faults based on material or production defects. The warranty service is executed at FORTEC GROUP's discretion through repair, replacement of defective parts or by exchanging a product for a product of equal quality without charging the customer for material or labor.

Warranty claims are only accepted, if FORTEC GROUP receives notification of a defective product within the warranty period and the product is presented to the FORTEC GROUP Service Centre together with all information as specified in the RMA process.

Warranty Exclusions and Limitations

This warranty does not apply to any defect for which FORTEC GROUP is not responsible and which includes, but is not limited to the following:

- → Unauthorized opening or disassembling of the product
- → Faulty maintenance by non-observation of maintenance instructions
- → Inappropriate storage or cleaning of the product
- → Unauthorized modification of the product
- → Incorrect use or misuse
- → Non-observation of operating and installation instructions
- → Permanent display of fixed images (causing image retention or image sticking)
- → Operating the product in conditions which exceed the limitations of the specification
- → Use of inappropriate boxes, packaging or modes of shipment
- → Force majeure like fire, acts of war, acts of violence, chemical or biological impacts, lightning strikes, over voltage or similar events
- → Fault resulting from the use of software which was not originally supplied with the product or which is incorrectly installed
- → Normal wear and tear and wearing parts (i.e. LCD panel)

Mechanical damages like scratches, pressure or break points are excluded from this warranty.

This warranty does not include accessory parts which are not integral part of the product (as boxes, batteries).

Pixel errors only constitute a fault under the terms of this warranty if they deviate from the product specification (i.e. ISO 9241-307 pixel failure class II).

Display Quality - Prevention of after image burn in effects

After image burn-in means that an image or part of an image (i.e. logo) remains visible on the screen even if the image on the screen is changed. This should not occur if the LCD panel is operated in normal conditions with changing content. To prevent burn-in effects please follow the following guidelines.

→ Do not display fixed patterns for an extended time period of more then 12 hours.

→ Power-off the monitor for 4 hours after using it for 20 hours, and for 2 hours after using it for 12 hours.

→ Use the power scheme and power management of the PC.

→ Use plain-colored screen savers.

→ Avoid patterns with a strong difference in brightness and contrast.

→ Avoid gray colors.

→ Change images and logos regularly. Show animated pictures for 60 seconds after 4 hours of operation.

→ The best way to protect your display is to switch the monitor off when not in use or to use screen savers.

Non-observance of these guidelines may have effects on warranty.

Warranty Processing

Group RMA process. In order to avoid unnecessary charges, it is important to adhere to the RMA regulations.

Products must be appropriately and professionally packed for a safe return to the FORTEC GROUP Service Centre. Products with panel sizes equal or larger then 81 cm (32") must be shipped on pallets in upright position.

FORTEC GROUP does not assume liability for any customer data stored on products which are returned to FORTEC GROUP.

Limitations of Liability and Benefits

With this warranty declaration, FORTEC GROUP exclusively warrantys that the product is free of material and manufacturing faults.

FORTEC GROUP does not issue any other warranty or similar statements other than this declaration.

This warranty does not impair or affect a buyer's statutory claim against the seller due to material damage. Such claims can be asserted instead of the warranty agreed to here at the buyer's discretion.

Mandatory legal rights and mandatory claims under the German product liability remain unaffected.

Applicable Law and Place of Jurisdiction

The laws of the Federal Republic of Germany apply.

Place of jurisdiction is Munich.

16. Technical information

Model name		BLO-Line® 24	BLO-Line® 31.5	BLO-Line® 46
Display	Size [mm] / [Inch]	609.7/ 24.0	800.1/ 31.5	1168.4/ 46.0
	Active area [mm]	531.36 x 298.89	698.40 x 392.85	1018.08 x 572.67
Resolutions (screen specifications))	Optimum resolution [Pixel]	1.920 x 1.080	1.920 x 1.080	1.920 x 1.080
	Maximum resolution [Pixel]	1.920 x 1.080	1.920 x 1.080	1.920 x 1.080
Transfer conditions	Operation	Temperature: 0 °C up to 40 °C (32 °F up to 104 °F) * When installing the housing, keep the internal temperature at 40 °C or lower. (all models) Humidity: 10% to 90%, non-condensing		
	Storage	Temperature: -20 °C up to 60 °C (-4 °F up to 140 °F) Humidity: 10% to 90%, non-condensing (all models) * Applies before unpacking the product..		

Model name		BLO-Line® 54.6	BLO-Line® 54.6 4K	BLO-Line® 64.5
Display	Size [mm] / [Inch]	1366.8/ 54.6	1366.8/ 54.6	1639.06/ 64.5
	Active area[mm]	1209.60 x 680.40	1209.60 x 680.40	1428.48 x 803.52
Resolutions (screen specifications)	Optimum resolution [Pixel]	1.920 x 1.080	3.840 x 2.160	1.920 x 1.080
	Maximum resolution [Pixel]	1.920 x 1.080	3.840 x 2.160	1.920 x 1.080
Transfer conditions	Operation	Temperaturr: 0 °C up to 40 °C (32 °F up to 104 °F) * When installing the housing, keep the internal temperature at 40 °C or lower. (all models) Humidity: 10% to 90%, non-condensing		
	Storage	Temperature: -20 °C up to 60 °C (-4 °F up to 140 °F) Humidity: 10% to 90%, non-condensing (all models) * Applies before unpacking the product..		

→ Plug & Play: This monitor can be installed on any Plug & Play-capable system. The monitor settings are optimised by exchanging data between the monitor and the computer system. The monitor is installed automatically. You can also adjust the installation settings manually if you wish.

→ Due to the manufacturing process of this device, approx. 1 pixel per million (1 ppm) is displayed brighter or darker on the LCD display. This does not affect the performance of the device.

→ Due to the nature of the screen, you can only set one optimum resolution for each screen format on this device. If you use a different resolution instead of the resolution, the picture quality may deteriorate. To avoid this, we recommend that you select the optimum resolution specified for your device.

→ Detailed technical data of the device can be found on the FORTEC Integrated website.

→ You can access the energy label information for this product via the European Product Registration for Energy Labelling (EPREL) at https://eprel.ec.europa.eu/qr/******, where ****** is the EPREL registration number of the product. You can find the registration number on the rating label of your product.

Service addresses

Germany	Great Britain	USA
FORTECIntegrated GmbH Werk Kindel Am Künkelhof 4 99820 Hörselberg-Hainich +49 36920 7162-0 rma@fortec-integrated.de	FORTEC Technology UK Ltd. Osprey House, 1 Sprey Court Hichingbrooke Business Park Huntingdon, Cambridgeshire, PE29 6FN +44 1480 41160 info@fortec.uk	FORTEC United States Corp. 87 Raynor Avenue, Unit 1 Ronkonkoma NY 11779 +1 631 5804360 info@fortec.us

Please go to the following web address for further information about our RMA regulations and RMA forms: https://www.fortec-integrated.de/en/service/return-rma/

17. Disposal

Disposal of old devices

If the acquired FORTEC Integrated product is to be disposed of, must be implemented into national law the Directive 2012/19 / EU.
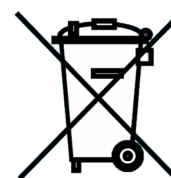
Disposal of batteries

Applicable in all countries of the EU and in countries with separate battery collection systems.

The Batteries in this product should not be disposed with other household waste. The chemical symbol Pb, CD or Hg indicate that the battery contains lead, cadmium or mercury above the reference level in EC directive 2012/19/EG.

Batteries which are not disposed correctly can cause harm environment and health.

Our environment is close to our hearts. Please help us to protect our environment and recycle empty batteries with the free battery collection system.
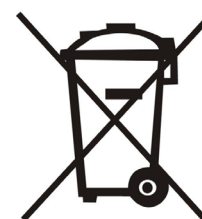
18. Declaration of Conformity

Declaration

Hereby the FORTEC Integrated GmbH declared that the unit EU is in compliance with the essential requirements and other relevant provisions of Directives 2014/30/EU, 2014/35/EU, 2019/2013/EU and 2011/65/EU.

The CE Declaration of Conformity is available in English on request from your sales contact person.