

# ELI Screen Orientation

## Summary:

This document explains how to change the direction your ELI screen displays its image — for example, rotating it sideways or upside down — and make sure that setting stays in place even after the device is restarted. Depending on the type of computer and software it is running, the steps to do this will be different. This guide covers the most common setups so you can find the instructions that apply to your device. If your screen also has touch capability, additional steps are included to make sure tapping and swiping still works correctly after the screen is rotated.

**Four Versatile Orientation Options**

Choose from **Normal**, **Left** (90° CCW), **Inverted** (180°), or **Right** (90° CW) to match your mounting.

**Cross-Platform Configuration**

Use Windows "Display Settings"

or Linux X11 terminal commands to apply your orientation.

**Synchronize Touch Capability**

Apply a **Transformation Matrix** in Linux to ensure tapping and swiping align with the rotated image.

**PC-Side Settings Persistence**

Configuration is **saved to your PC**, not the ELI device, ensuring settings remain after restarts.

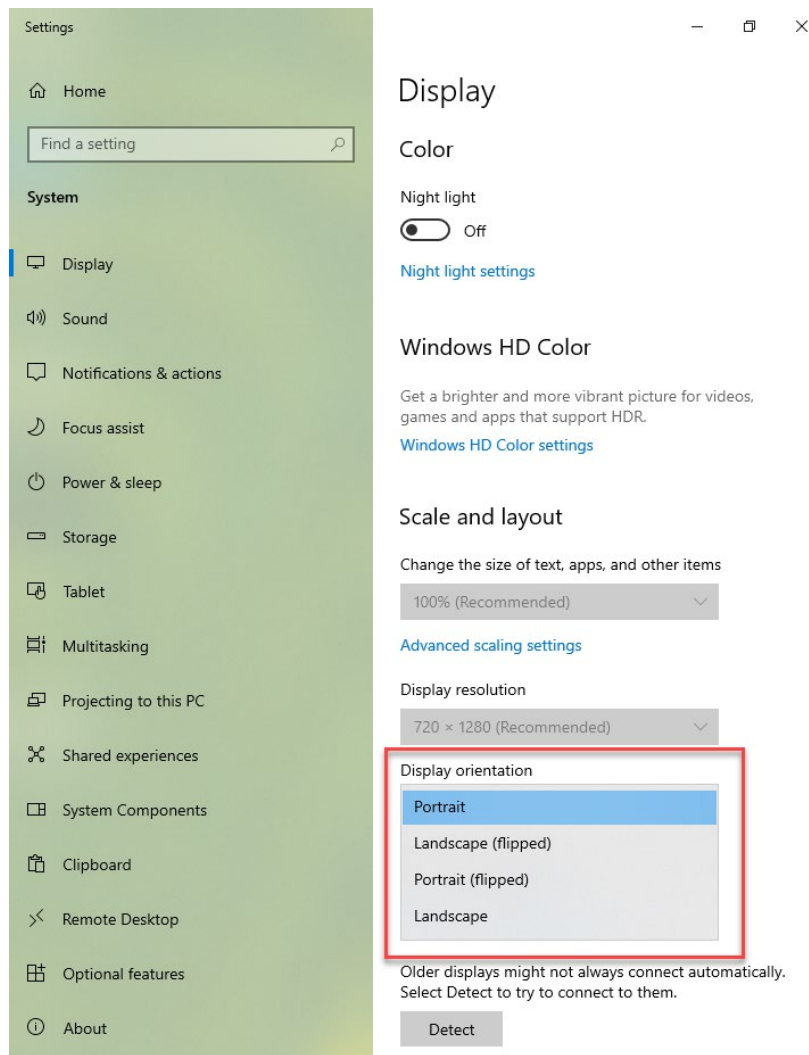
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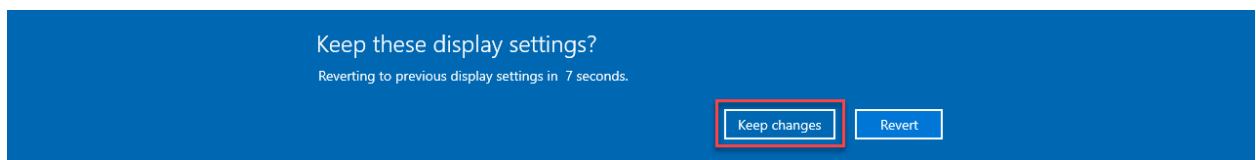
### 1. Windows

Right click the desktop and select “Display Settings”.

In the “Scale and Layout” section, modify the “Display orientation” property to select the desired orientation.



Select “Keep changes” once the desired orientation is selected.



After making this change, you should be able to restart the PC and show that the changes have been applied permanently.

**NOTE: This configuration is applied to the PC – it is NOT saved to the ELI.**

## 2. Linux (X11)

### a. Collecting information

Use the following command to determine the names for all connected displays:

```
xrandr --query
```

Expected output should be something like below.

Determine the name associated with the connected ELI and note the name for use later.

```
HDMI-1 connected
HDMI-2 connected
eDP-1 connected
DP-2 connected
```

Use the following command to determine the names for all connected input devices:

```
xinput list
```

All ELI touch devices should appear in the form as shown below.

Since the company name is standard between all ELIs, this can be used for name detection if only one ELI is used.

```
Future Designs Inc. ELIXX-XXX - Digitizer id=x
```

Use the following reference to choose how the orientation needs to be changed:

Orientation	"Monitor" Option	"InputClass" Option
Normal	normal	1 0 0 0 1 0 0 0 1
Left (CCW 90 degrees)	left	0 -1 1 1 0 0 0 0 1
Inverted (180 degrees)	inverted	-1 0 1 0 -1 1 0 0 1
Right (CW 90 degrees)	right	0 1 0 -1 0 1 0 0 1

## b. Configuring Startup

Use the following command to create or open the following file:

```
sudo nano /etc/X11/xorg.conf.d/99-fdi-eli-touchscreen.conf
```

Enter the following information into the file, customizing it based on the previous steps. Press Ctrl-X, then press Y followed by Enter to close and save the file.

```
Section "Monitor"
  Identifier
  "HDMI-1"
  Option "Rotate" "left"
EndSection
Section "InputClass"
  Identifier "Future Designs Inc. Orientation"
  MatchProduct "Future Designs Inc."
  Option "TransformationMatrix" "0 -1 1 1 0 0 0 0 1"
EndSection
```

After this file is created, you should be able to restart the PC and show that the changes have been applied permanently.

**NOTE: This configuration is applied to the PC – it is NOT saved to the ELI.**

## 3. BIOS / Startup

When powered on, most computers start from a BIOS or similar firmware which may or may not be configurable. The BIOS or other startup firmware may not recognize the orientation configured for the OS and display its logo or other text in the incorrect orientation. To overcome this, additional configuration of the BIOS or startup firmware is required. If configuration is NOT possible, we recommend blanking the screen during that boot time.

### Screen Blanking During Boot:

<https://fdiwebdocs.s3.us-east-2.amazonaws.com/2024/wp-content/uploads/Screen-Blanking-During-Boot.pdf>

Reach out to us at [sales@teamfdi.com](mailto:sales@teamfdi.com) if there are any questions!