

Turku University of Applied Sciences

Functional specification

Auto Screen Orient



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SPECIFICATION DOCUMENT

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1. Introduction

Auto Screen Orient detects the rotation of monitor's screen by user and applies the screen orientation in operating system accordingly. Auto Screen Orient system consists of rotation detector and script that runs as a background process on desktop. Rotation detector is mounted on rear side of monitor and sends data to the desktop where the script running on background decides whether to change the screen orientation or retain the same orientation. Script can be run as background process in Windows 10 and Ubuntu OS. The product is designed keeping programmers in mind but can be used by anyone who owns a pivot-monitor.

2. Users and the environment

This solution is designed specifically for programmers to help them read and understand huge codebase by reducing frequent need to scroll up and down. It can also be used by students, researchers and wide range of other user groups who use desktop computers to read digitally.

The product is designed to be used on monitors that support screen rotation via pivot. The device should be mounted properly on monitor to avoid accidental dropping.

3. Use cases

3.1 Use Case

ID	1
Title	Changing display orientation automatically
Description	As a user, I want display orientation to be changed automatically when the pivot monitor is rotated by more than 45 degrees.
User	Programmers, Researchers, Students etc.
Preconditions	<ol style="list-style-type: none"> 1. Rotation detector needs to be mounted on the monitor 2. Rotation detector needs to be powered by either USB cable (recommended) or 9 V battery. 3. Script should be allowed to run as background process.
Scenario	<ol style="list-style-type: none"> 1. Turn the display on 2. Rotate the screen
Post conditions	Display orientation is changed if screen is rotated by more than 45 degrees.

3.2 Circuit Diagram

