

# RasaAndishan Moj Pardaz

## رسا اندیشان موج پرداز (دانش بنیان)



طراح و سازنده انواع آشکارسازهای خطی و دوربین های تصویربرداری

- Robust & Reliable Hardware & Software Architecture
- Multi Interface Connectivity (USB2.0,USB3.0,Ethernet)
- Cross Platform - Linux & windows Application Support
- Plugin Based API and Sophisticated FlowGraph Structure
- Various SDK (C#,C++,MATLAB,VB.Net,Python,LabVIEW) Included



## Overview

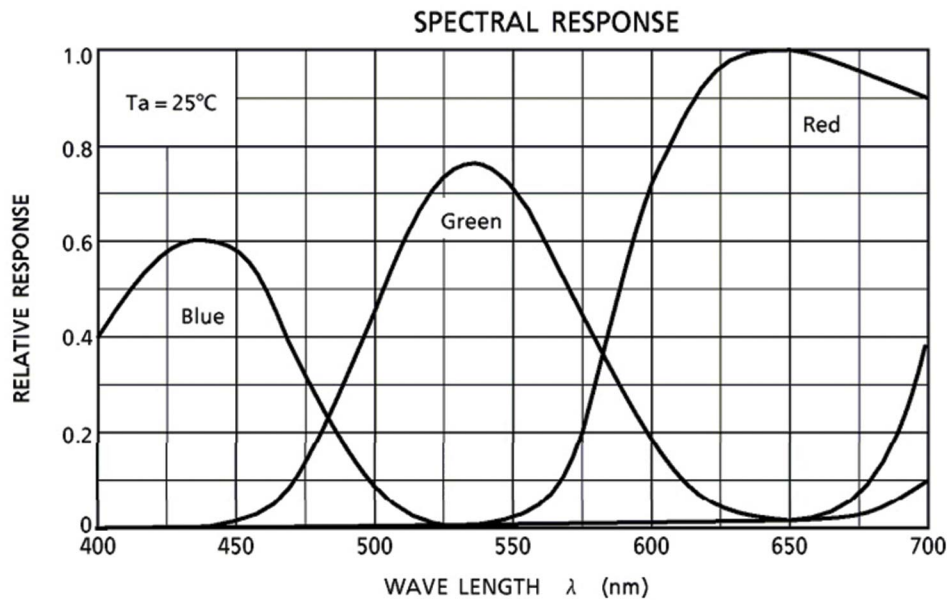
PhotoFinish is a USB3.0 Line Scan Camera that incorporates a CCD array use of LuxBoost technology to improve the Image Quality in different Light Conditions, Focusing and Shutter Control of all Canon lenses through the Camera are some of the Special Features of this Native System.

## GUI Features

Operates up to 10 Cameras Simultaneously without loss of any data  
Cross Platform Software with Auto-Detection of Compatible Cameras  
Smoothing, FPN Correction, PRNU Correction, Shading Correction, Background Subtract  
Best Responsiveness by Separate Threads of Data Acquisition, Processing and Monitoring,  
Zooming, Panning, Cursor Definition, Normal And Advanced Scanner

## Application

The Photofinish System is designed for Sports Competitions such as Car racing, Horse Riding, Cycling and Running.



## Specification

Sensor Spec	
Sensor Type	Color CCD Linear Image Sensor
Spectral Response	350-1100 nm
CCD Pixel Size	10.5 $\mu\text{m}$ x 10.5 $\mu\text{m}$
Pixel Height	10.5 $\mu\text{m}$
Pixel Width	10.5 $\mu\text{m}$
Effective Pixels	2700 x 3
Effective Length	2700 x 10.5 $\mu\text{m}$ = 28.35 mm
Max Pixel Frequency	16.66 MHz
Max Line Rate	2990 Hz @ Free Running Mode
Min Exposure Time	334 $\mu\text{s}$
Max Exposure Time	65 ms
Exposure Resolution	1 $\mu\text{s}$
Pixel Color Depth	24 bit - 16 Million Colors
Brightness Coefficient	-/+ 300 mV - 512 Analog Steps
Contrast Coefficient	64V/V - 64 Analog Steps
Advanced Spec	
Positioning Resolution	-
Positioning Accuracy	-
Pan Rotation Technology	Manual
Tilt Rotation Technology	Manual
LuxBoost Technology	Hardware and Software Sophisticated Algorithm
Finish Line Adjustment	Manual
Mirror Adjustment	Manual
Lens Support	All Electrical Canon Lens with Focusing and Shutter Control
General Spec	
Interface   Power	High Speed USB 3.0 (3.2 Gbit/s)   7.5V DC Adaptor
Weight   Package Size	1.7 Kgr   30 cm x 20 cm x 15 cm
Temperature Range	0 to + 60 ( $^{\circ}\text{C}$ )



## What is PhotoFinish?

A photo finish occurs in a sporting race when multiple competitors cross the finishing line at nearly the same time. As the naked eye may not be able to determine which of the competitors crossed the line first, a photo or video taken at the finish line may be used for a more accurate check. Photo finishes make it less likely that officials will declare a race a dead heat.

Finish line photos are still used in nearly every modern racing sport. Although some sports use electronic equipment to track the racers during a race, a photo is considered the most important evidence in selecting the winner. They are especially important during close races, but they are also used to assign official times to each competitor during any race.

The final image often shows a solid white background, which is a continuous scan of the painted finish line. Racers may appear distorted based on the movement of their limbs and heads as they cross the line. limbs are elongated where they remain static or move backwards in relation to the slit-shutter, or truncated if they move faster than the film moving past the slit.

Rasandishan Moj Pardaz is the first and only manufacturer of PhotoFinish System in Iran. The possibility of very easy adjustment of the finish line and the mirror in front of it, support for all Canon lenses with electronic focus and aperture adjustment and luxboost technology are some of the extensive features of this native system.

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حکیمیه، میدان فجر، خیابان خرم، خیابان سحر، کوچه پگاه ۶، پلاک ۱۱، واحد ۷

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