

# C1 PRO X10

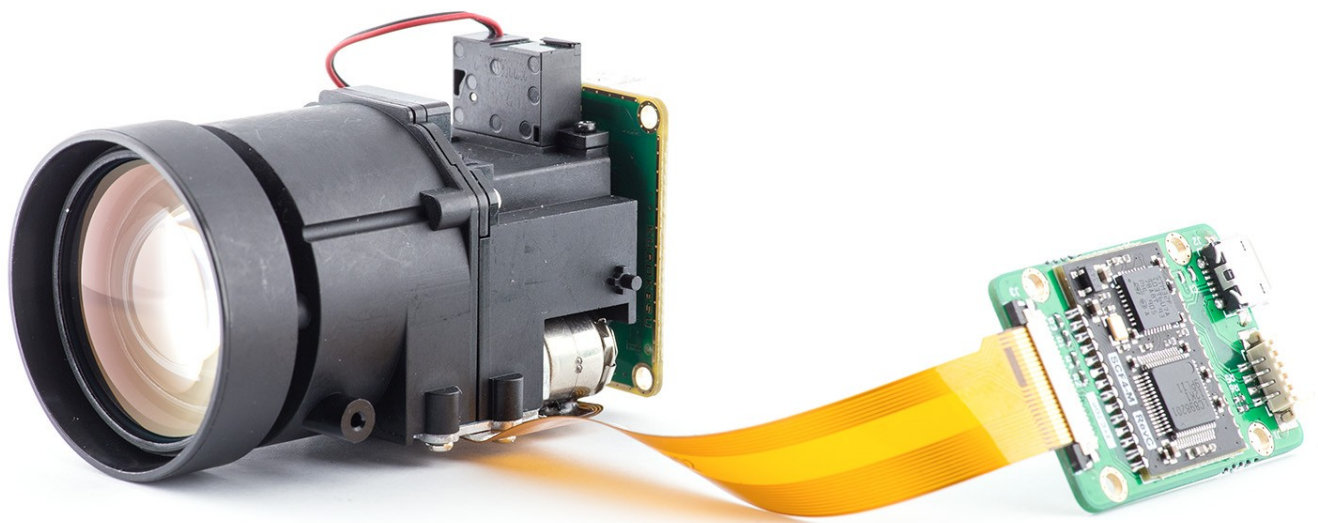
Lightweight and compact USB powered, self sufficient 5.1~47mm motorized zoom lens camera kit for day/night operation

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# Overview

Lightweight and compact USB powered, self sufficient 5.1~47mm motorized zoom lens camera kit for day/night operation.

- Board level camera used in C1 PRO camera.
- Controller SCF4-L050 (featuring SCF4-M module)



# Lens specifications

## Optics

Image sensor	Effective image area > 6.4mm
Focal distance	4.7±5% ~ 47±5%mm
Aperture	f/1.6~f/2.5
Focus range	<ul style="list-style-type: none"><li>• WIDE: 1.0m - infinity</li><li>• TELE: 1.0m - infinity</li></ul>
Field of view (D=6.6mm)	<ul style="list-style-type: none"><li>• WIDE: 71°</li><li>• TELE: 7.1°</li></ul>
Distortion	<ul style="list-style-type: none"><li>• WIDE: -5.2%</li><li>• TELE: 1.8%</li></ul>

## Mechanics

Mechanical back focus	-0.33 (in glass t=0.4 BK7)
Lens zoom structure	The stepper motor is directly connected to the screw
Lens focusing structure	The stepper motor is directly connected to the screw
Lens size	<ul style="list-style-type: none"><li>• Length: 59.6mm</li><li>• Width: 33.7m</li><li>• Height: 38.7mm</li><li>• Front end diameter: 34.8mm</li></ul>

## Motor specifications

Screw pitch	0.4mm
Spiral rotation direction	Right
Rated voltage	4.5-5.0 VDC
Coil resistance	55Ω ± 10%
Phase count	2
Step angle	18° / step
Max start frequency	800 PPS/min @ at 5.0 VDC

Max operating frequency	1200 PPS/min @ 5.0 VDC
Pull torque	2.8 gf-cm min (at 480 PPS @ 5.0 VDC)
Push torque	3.8 gf-cm min (at 480 PPS @ 5.0 VDC)
Operating temperature range	-10°C ~ +70°C

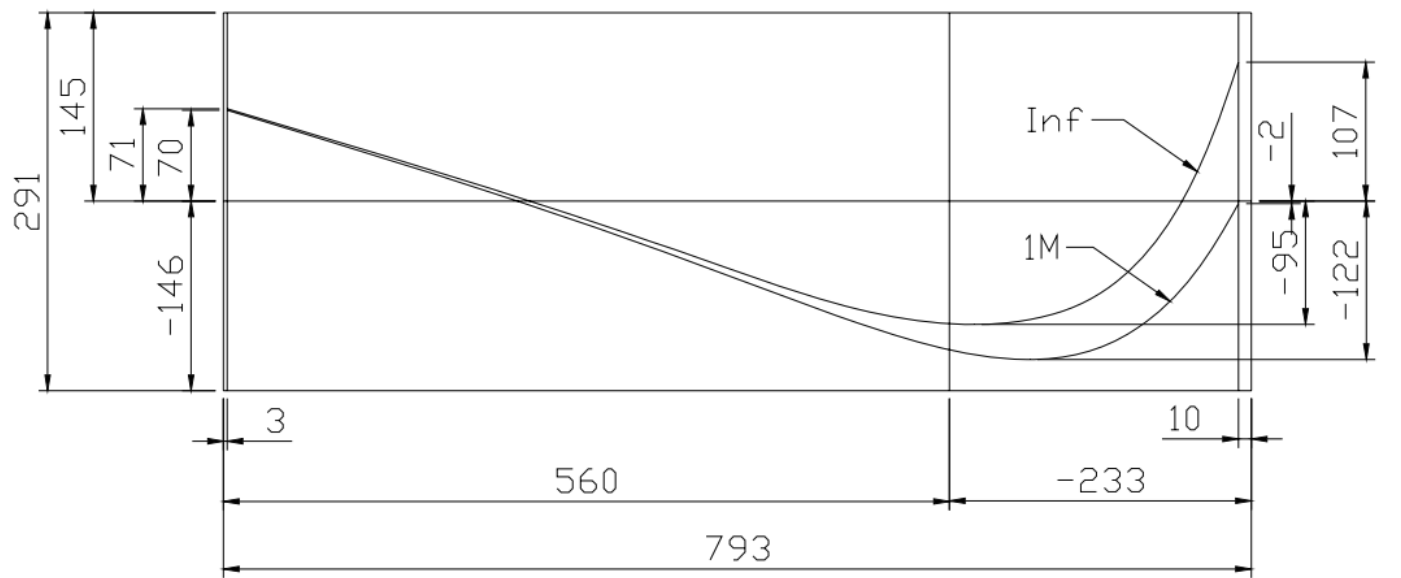
## Position alignment sensor PI

Model number	RPI-222 / ROHM
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## IR switch

Coil resistance	25 ± 5Ω
Operation voltage	4.5V
Current consumption	144~200mA
Switching time	200-500ms
Filters	<ul style="list-style-type: none"> <li>• Clear glass</li> <li>• 420 ~600nm Tavg &gt;95%</li> </ul>

## Zoom-Focus curve diagram

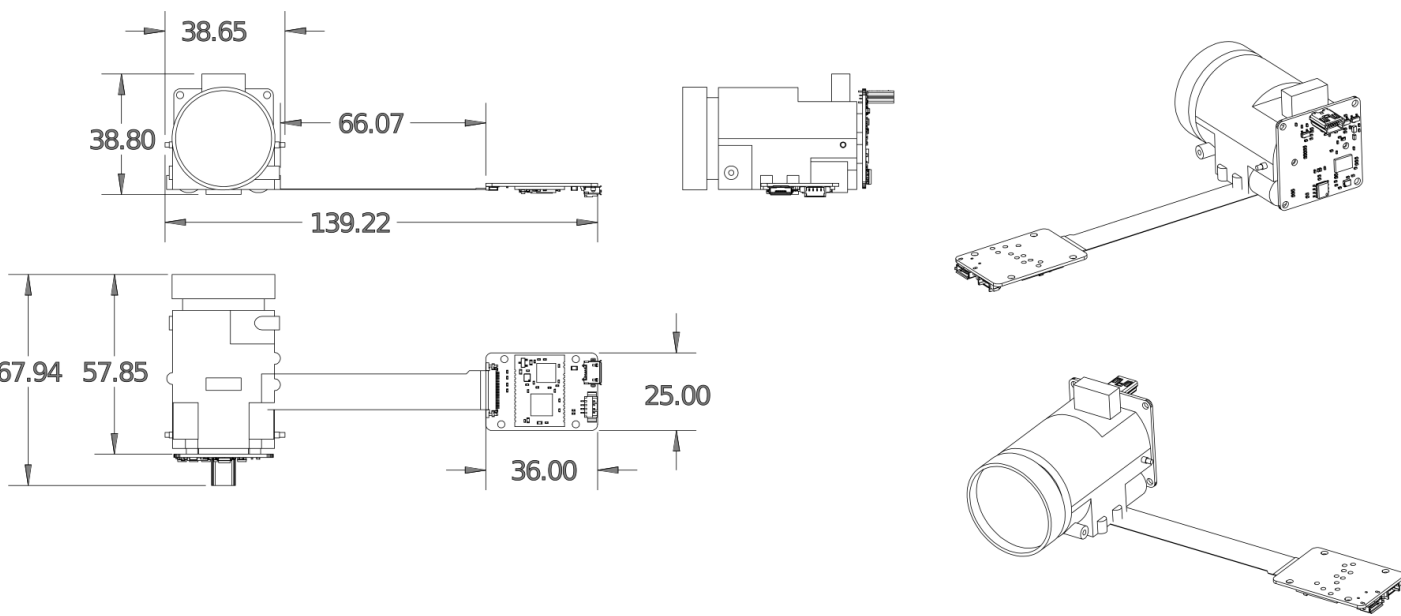


# Dimensions

## Lens dimensions

Length	57.9mm
Width	38.7mm
Height	38.8mm

## Camera drawing



## 3D models

3D models can be downloaded from [GitHub](#)

# Control software

SCF4-SDK comes with open-sourced command line and GUI sample programs for rapid controller evaluation. A simple control software example is provided for testing and demonstration. Software is given "as is" to help with getting started and testing.

**More details and control explanation in SCF4 documentation.** Source code is maintained on [GitHub](#)