

# C1 PRO X10

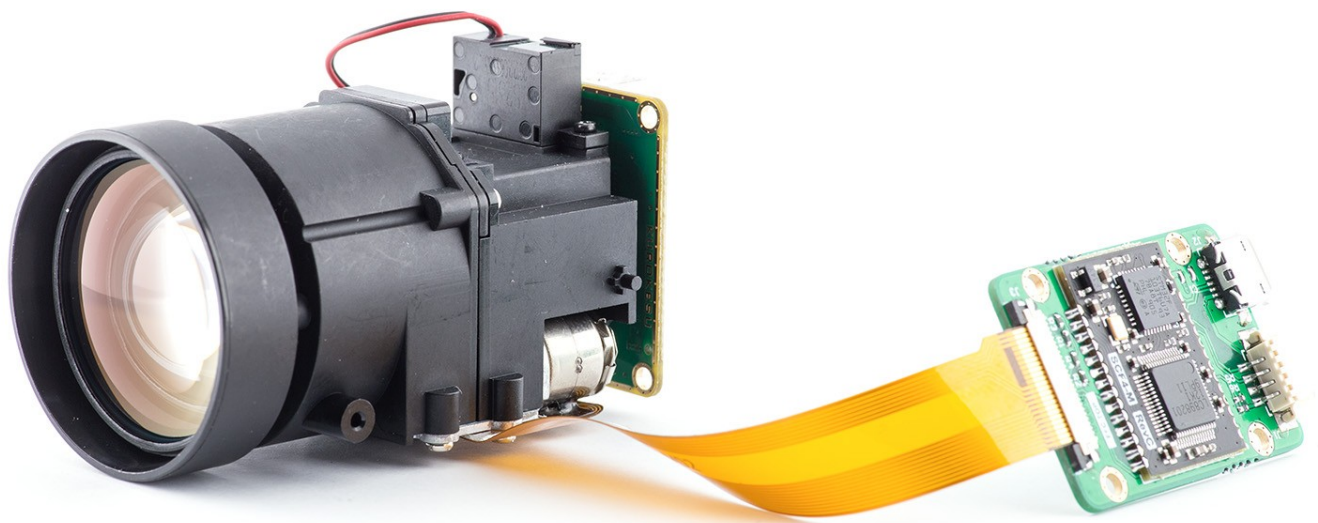
Lightweight and compact USB powered, self sufficient 5.1~47mm motorized zoom lens camera kit for day/night operation

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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                        |

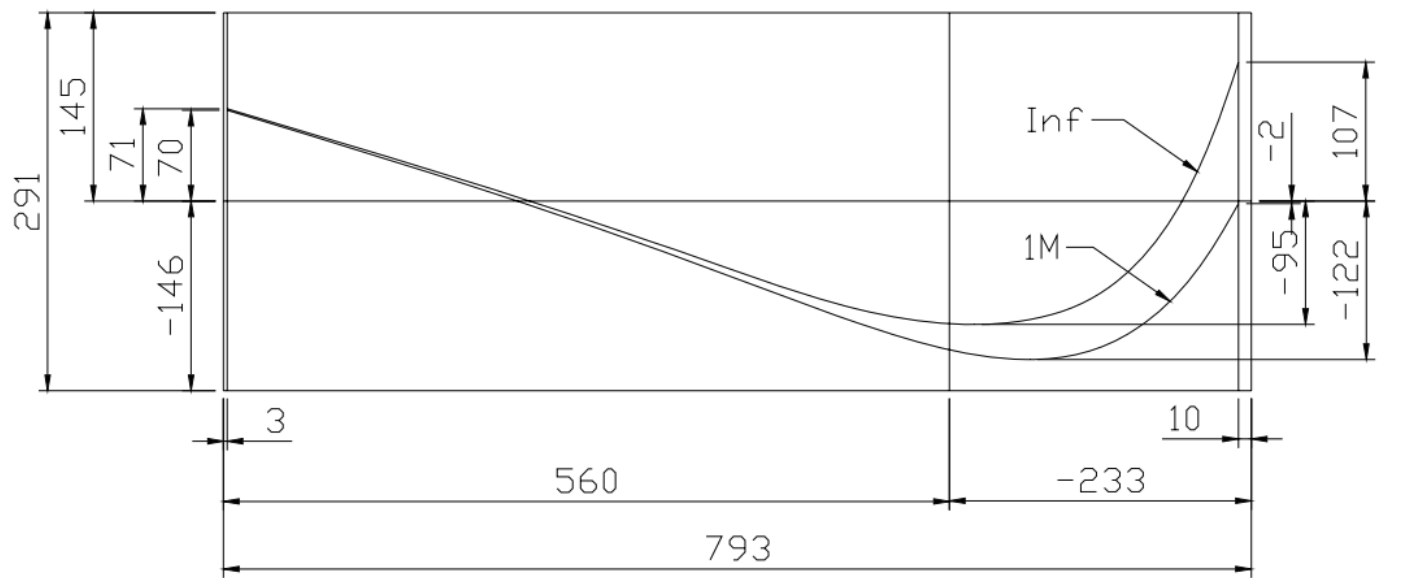
## Position alignment sensor PI

|              |                |
|--------------|----------------|
| Model number | RPI-222 / ROHM |
|--------------|----------------|

## 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

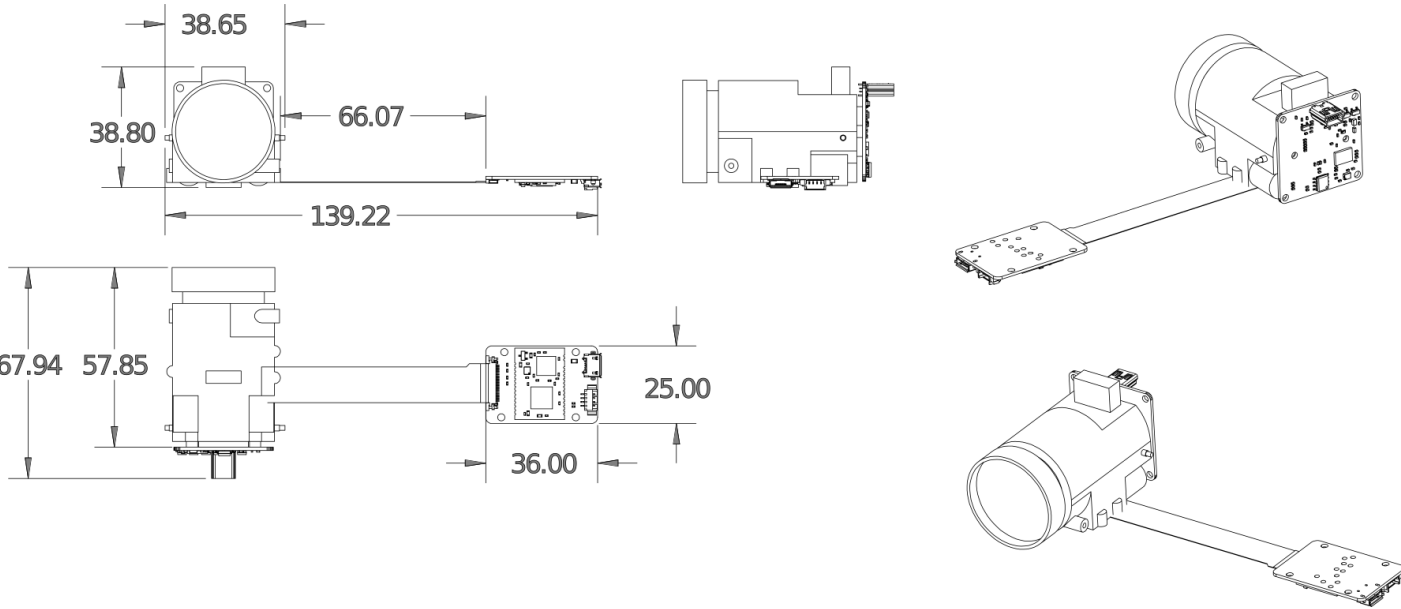


# Dimensions

## 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