C1 PRO X3

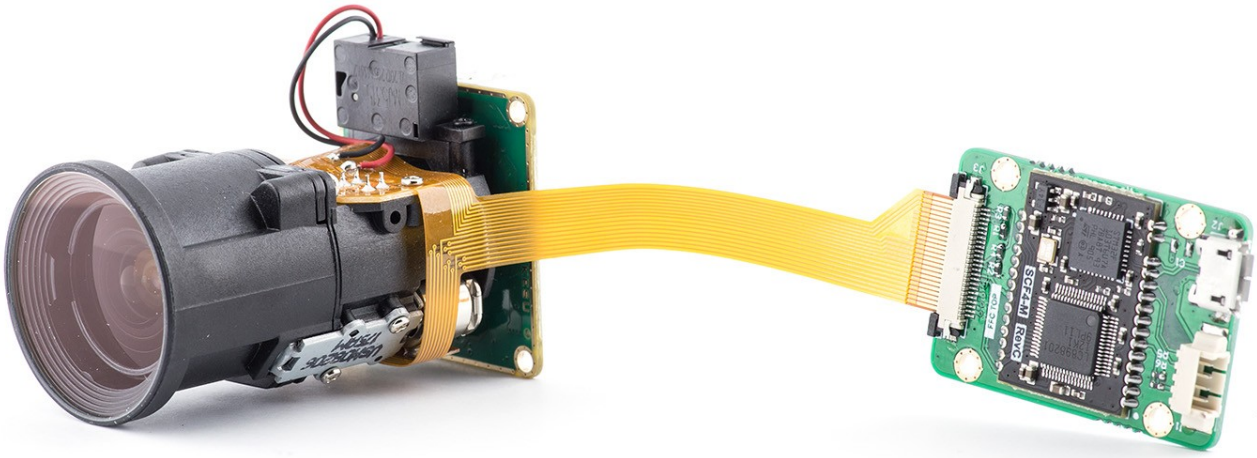
Lightweight and compact USB powered, self sufficient 3.4-10mm motorized zoom lens camera kit for day/night operation

- Overview
- Lens specifications
- Pinout
- Dimensions
- Control software

Overview

Lightweight and compact USB powered, self sufficient 3.4~10mm motorized zoom lens camera kit for day/night operation.

- Board level camera C1 PRO camera with USB MINI connector
- Controller SCF4-L050 (featuring SCF4-M module)



Lens specifications

Optics

Image sensor	1/2.7" Effective image area > 6.8mm
Focal distance	3.4±5% ~ 10±5%mm
Aperture	f/1.7~f/3.0
Focus range	• WIDE: 1.0m - infinity • TELE: 1.0m - infinity
Field of view (D=6.6mm)	• WIDE: 129.2° • TELE: 37.6°
Relative contrast	• WIDE: >-14% • TELE: >-1.7%
Distortion	• WIDE: -9.2% • TELE: 3.2%

Mechanics

Mechanical back focus	-0.35 (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	• Length: 59.6mm • Width: 33.7m • Height: 38.7mm • Front end diameter: 34.8mm

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

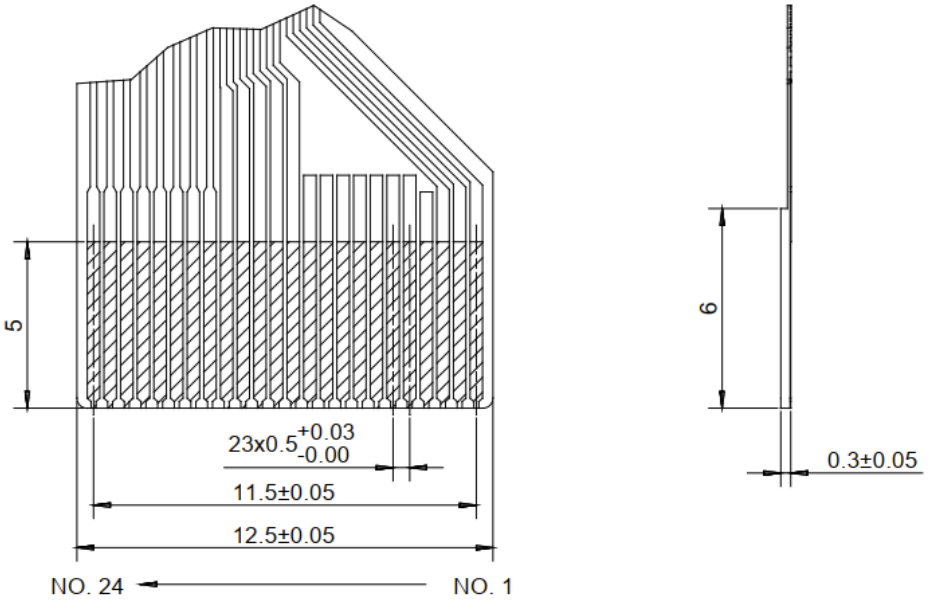
Coil resistance	25 ± 5Ω
Operation voltage	4.5V
Current consumption	144~200mA
Switching time	200-500ms
Filters	• Clear glass • 420 ~600nm Tavg >95%

Zoom-Focus curve diagram

Pinout

Pinout

Lens signals routed by 24 pin 0.5mm pitch FFC cable. Contacts facing top. Recommended connector Wurth Electronics 687124183622



Nr	Function
1	ZOOM Anode, Collector
2	ZOOM Cathode
3	ZOOM Emitter
4	
5	
6	
7	
8	
9	
10	

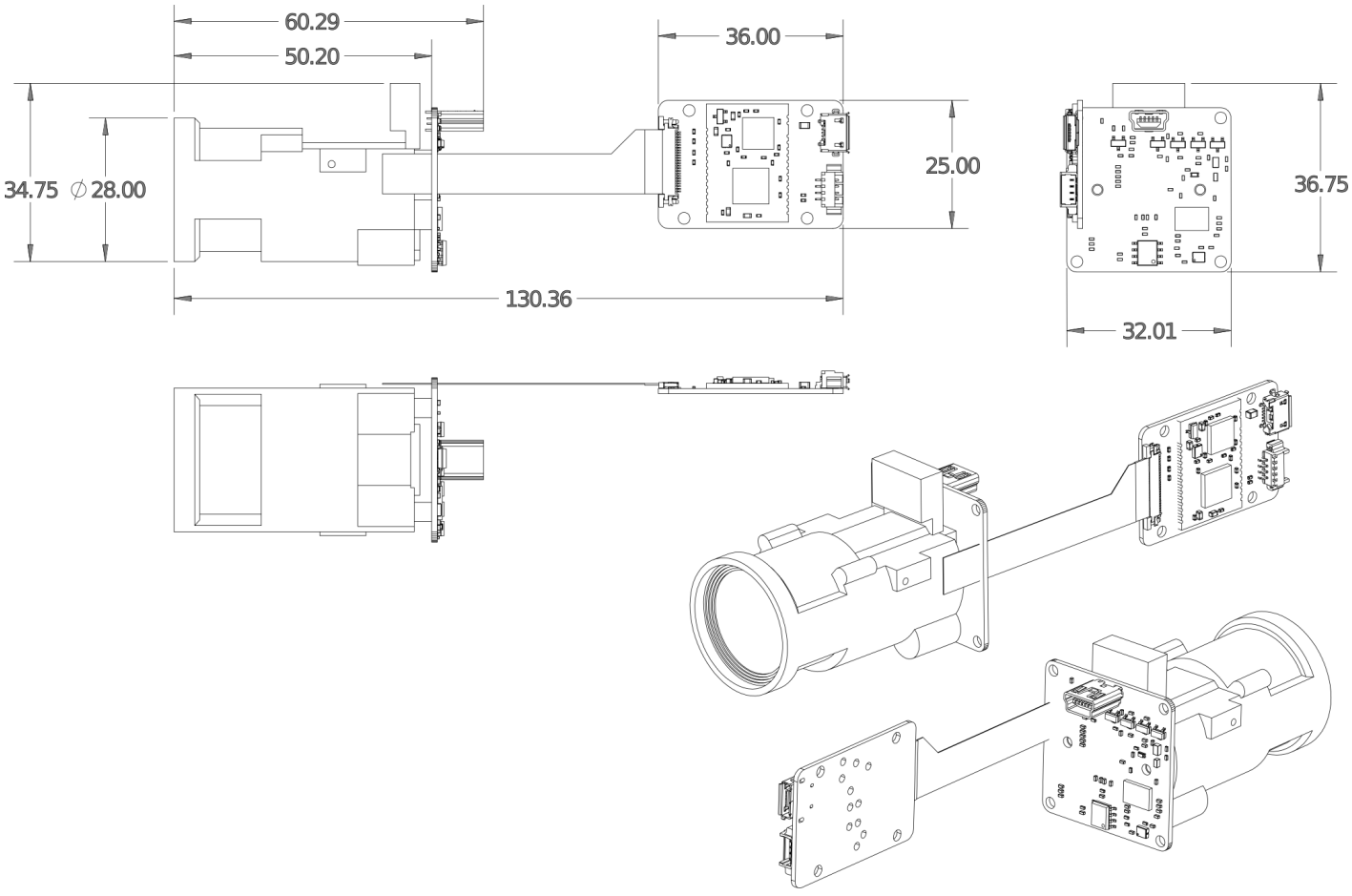
11	
12	FOCUS Cathode
13	FOCUS Emitter
14	FOCUS Anode, Collector
15	IR-cut -
16	IR-cut +
17	FOCUS A-
18	FOCUS A+
19	FOCUS B-
20	FOCUS B+
21	ZOOM A-
22	ZOOM A+
23	ZOOM B-
24	ZOOM B+

Dimensions

Lens dimensions

Length	50.2mm
Width	28mm
Height	34.75mm

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