Topotek（Beijing）Technology CO.,Ltd

Zoom Camera Manufacturer for UAV

Concentration makes Profession

TAOBAO   WEBSITE

Company Profile

Topotek (Beijing) focuses on developing zoom cameras for UAV. The mature products are 10x, 18x, 20x, 30x, 36x optical zoom cameras, UAV pod and gimbal. Recently, Topotek has developed dual optical zoom camera which enables HD video recording under visible light and infrared light. It also supports picture-in-picture display function. The techniques of intelligent video processing are mainly base on our camera's zoom feature, including human face recognition, movement tracking, pattern recognition, car license plate recognition, and autoalarm, etc.

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Catalog

TOP-1031T/TOP-1032H/TOP-1035H
10X Zoom Camera for UAV

TOP-103X is a series of 10x optical zoom cameras with a 5M/3M CMOS sensor, which supports quick Auto-Focusing (AF). It has two video streams that one is local TF card handling HD videos at 1080P, 30FPS and the other is output of CVBS signals(D1 format) or HDMI videos(720P). Also,this product supports wireless transmitter of HD videos.

Function Description

Zoom

10x Zoom; Focus Range: 4.9~49 mm

Focus Speed

Quick AF: < 2 secs

OSD

Support IR control and OSD menu setting

Video Output

CVBS Signals in   D1 format and local TF card handling videos

at 1080P, 30FPS

Multi Protocol Control

Support VISCA, hitachi and PELCO-D protocol;Support PWM

signal control of UAV

Size & Weight

63mm×37mm×45mm; Weight：122g

Aerial Photograph
1080P Video

Data port	
6PIN connector	
1	UART_TX
2	UART_RX
3	DC12V
4	GND
5	USB_D-
6	USB_D+
5PIN connector	
1	DC12V
2	GND
3	TV OUT
4	GND
5	PWM CTRL

TOP-1031T doesn't Support HDMI Port

TOPOTEK 10X ZOOM CAMERA

Model	TOP-1031T	TOP-1032H	TOP-1035H(super clear)
Power Supply	DC 9V □ 12V (recommend: 9V or 12V)		
Consumption	2W		

CMOS	Sensor	1/4 inch	1/3 inch	1/3 inch
	Total Pixel	5M cmos sensor	3M cmos sensor	3M cmos sensor
	Valued Pixel	2592(H) x 1944(V)	2304(H) x 1536(V)	2592(H) x 1944(V)
	Wide Range	69dB	69dB	69dB

Optics	Zoom	10X, f=4.9 to 49mm
	Minimum Distance	1.5m
	Horizontal Range	53.2°(Near) to 5.65°(Far)
	Vertical Range	39.8°(Near) to 4.2°(Far)
	Scanning	Progressively scan

Function	Video Recording	1080P 30fps Local TF card record	
	HDMI Output	None	720P/480P 60fps HDMI1.4
	Analog Output	Standard CVBS 1Vp-p	
	SNR	48 dB	
	Min illumination	Color 0.05lux@F1.6	
	BLC	Support back light compensation	
	IRCUT	Color/mono mode	
	AE	Auto	
	AWB	Atuo /menu setting	
	Shutter	Auto	
	Control Mode	UART control /IR control /UAV PWM	
	Protocal	PELCO-D，Hitachi and VISCA protocal	
	Focus mode	Auto/manual/one time focus	
	Focus Speed	2s	
	Initialize	Auto	
	Preset Position	20set	
	Image Flip	Mirror/overturn	

Interface	TF card ，6 pin 1.27mm +5pin connector	
HD HDMI	NO	default is D type HDM
Device Size	37(W)×45(H)×63(D)mm	
Working Condition	0℃ to +55℃ / 20% to 80% RH	
Storage Condition	-20℃ to +60℃ / 20% to 95% RH	
Weight	122g	

TOP-1041T/ TOP-1042H
10X Zoom Camera for UAV

TOP-104X is a series of 10x optical zoom camera with a 2M CMOS sensor, which supports quick AF. It has two video streams that one is local TF card handling HD videos at 1080P, 30FPS and the other is output of CVBS signals(D1 format) or HDMI videos(720P). Also,this product supports wireless transmitter of HD videos, IRIS and IRCUT functions.

Function Description

Zoom

10x Zoom; Focus Range: 4.7~47mm

Focus Speed

Quick-reacting auto focus

OSD

Support IR control and OSD menu setting

Video Output

CVBS signals in D1 format and HDMI videos; local TF card handling videos at 1080P, 30FPS
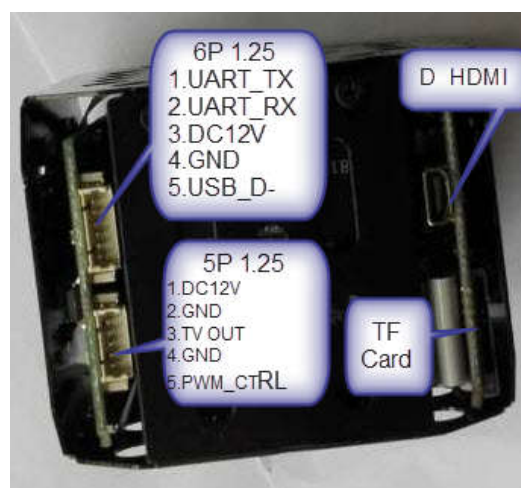
Multi Protocol Control

Support VISCA, hitachi and PELCO-D protocol; Support PWM signal control of UAV.

Size & Weight

68mm×44mm×54mm; Weight：159g

Data port	
6PIN connector	
1	UART_TX
2	UART_RX
3	DC12V
4	GND
5	USB_D-
6	USB_D+
5PIN connector	
1	DC12V
2	GND
3	TV OUT
4	GND
5	PWM CTRL

TOPOTEK 10X ZOOM CAMERA

Model	TOP-1041T	TOP-1042H
Power Supply	DC 9V □ 12V (recommend: 9V or 12V)	
Consumption	2W	

CMOS	Sensor	1/2.7 inch	1/2.7 inch
	Total pixel	2M cmos sensor	2M cmos sensor
	Valued pixel	1920(H) x 1080(V)	1920(H) x 1080(V)
	Wide range	69dB	69dB

Optics	Zoom	10X, f=4.7 to 47mm	
	Minimum Distance	1.5m	
	Horizontal Range	60.9°(Near) to 6.43°(Far)	
	Vertical Range	40.1°(Near) to 4.1°(Far)	
	Scanning	Progressively scan	

Function	Video Recording	1080P 30fps Local TF card record	
	HDMI Output	None	720P/480P 60fps HDMI1.4
	Analog Output	Standard CVBS 1Vp-p	
	SNR	48 dB	
	Minimum Illumination	Color 0.05lux@F1.6	
	BLC	Support back light compensation	
	IRCUT	Color/mono mode	
	AE	Auto	
	AWB	Atuo /menu setting	
	Shutter	Auto	
	Control Mode	UART control /IR control /UAV PWM	
	Protocal	PELCO-D，Hitachi and VISCA protocal	
	Focus Mode	Auto/manual/one time focus	
	Focus Speed	2s	
	Initialize	Auto	
	Preset Position	20set	
	Image Flip	Mirror /overturn	

Interface	TF card ，6 pin 1.27mm +5pin connector	
HD HDMI	NO	default is D type HDM
Device Size	44(W)×52(H)×67(D)mm	
Working Condition	0℃ to +55℃ / 20% to 80% RH	
Storage Condition	-20℃ to +60℃ / 20% to 95% RH	
Weight	167 克	

TOP-1831T/TOP-1832H
18X Zoom Camera for UAV

TOP-183X is a series of 18x optical zoom camera with a 5M/3M CMOS sensor, which supports quick AF. It has two video streams that one is local TF card handling HD videos at 1080P, 30FPS and the other is output for CVBS signals(D1 format) or HDMI video(720P). Also,this product supports wireless transmitter of HD videos.

Function Description

Zoom

18x Zoom; Focus Range: 4.85~82mm

Focus Speed

Quick AF, < 2 secs

OSD

Support IR control and OSD menu setting

Video Output

CVBS signals in D1 format; local TF card handling videos at 1080P, 30FPS
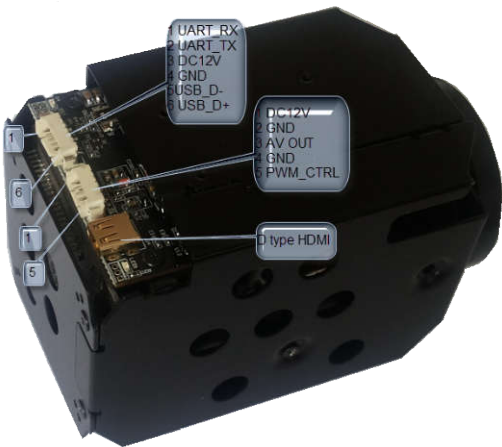
Multi Protocol Control

Support VISCA, hitachi and PELCO-D protocol; Support the PWM signal control of UAV.

Size & Weight

88mm×50mm×58mm; Weight：218g

Data port	
6PIN connector	
1	UART_TX
2	UART_RX
3	DC12V
4	GND
5	USB_D-
6	USB_D+
5PIN connector	
1	DC12V
2	GND
3	TV OUT
4	GND
5	PWM CTRL

TOPOTEK 18X ZOOM CAMERA

Model	TOP-1831T	TOP-1832H
Power Supply	DC 9V □ 12V (recommend: 9V or 12V)	
Consumption	2W	

CMOS	**Sensor**	1/4 inch	1/3inch
	Total Pixel	5M cmos sensor	3M cmos sensor
	Valued Pixel	2592(H) x 1944(V)	2304(H) x 1536(V)
	Wide Range	73dB	73dB

Optics	**Zoom**	18X, f=4.7 to 84.6mm
	Minimum Distance	1.5m
	Horizontal Range	54.8°(Near) to 3.4°(Far)
	Vertical Range	41°(Near) to 2.5°(Far)
	Scanning	Progressively scan

Function	**Video Recording**	720P/480P 60fps HDMI1.4	
	HDMI Output	NO	720P/480P 60fps HDMI1.4
	Analog Output	Standard CVBS 1Vp-p	
	SNR	48 dB	
	Minimum Illumination	Color 0.05lux@F1.6	
	BLC	Support back light compensation	
	IRCUT	Color/mono mode	
	AE	Auto	
	AWB	Atuo /menu setting	
	Shutter	Auto	
	Control Mode	UART control /IR control /UAV PWM	
	Protocal	PELCO-D，Hitachi and VISCA protocal	
	Focus Mode	Auto /manual /one time focus	
	Focus Speed	2s	
	Initialize	Auto	
	Preset Position	20set	
	Image Flip	Mirror /overturn	

Interface Port	TF card ，6pin 1.27mm +5pin connector, 30P coaxial cable	
HD HDMI	NO	default is D type HDMI
Device Size	50(W)×58(H)×88(D)mm	
Working Condition	0℃ to +55℃ / 20% to 80% RH	
Storage Condition	-20℃ to +60℃ / 20% to 95% RH	
Weight	218 克	

TOP-1082H
10X Zoom Camera for UAV

TOP-1082H is a 10x optical zoom camera with a 4M CMOS sensor, which supports quick AF.It has two video streams that one is local TF card handling HD videos at 1080P, 30FPS and the other is output for AV or HDMI videos(1080P).Also,this product supports wireless transmitter of HD videos.

Function Description

Zomm

10x Zoom; Focus Range: 4.9~49mm

Focus Speed

Quick AF, < 2 secs

OSD

Supported IR control and OSD menu setting

Video Output

HDMI1.4 at 1080P/720P, 60fps;   HDMI or AV output; Support

1080P TF card recording and 30P thin cable interface.
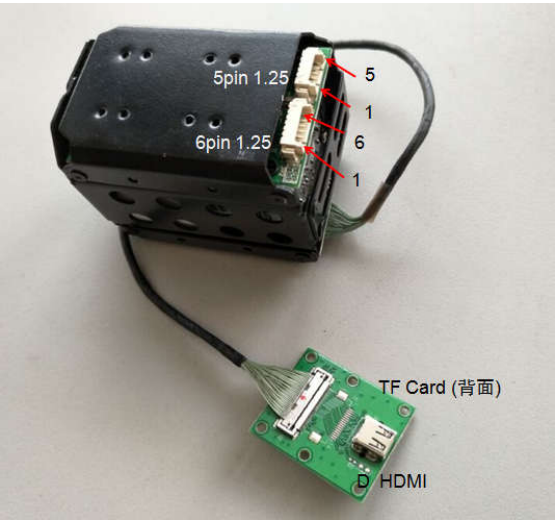
Multi Protocol Control

Support VISCA, hitachi   and PELCO-D protocol; Support PWM

signal control of UAV

Size & Weight

63mm×37mm×45mm: Weight：122g

aerial photograph, 1080P video

Data port	
6PIN connector	
1	UART_TX
2	UART_RX
3	DC12V
4	GND
5	USB_D−
6	USB_D+
5PIN connector	
1	DC12V
2	GND
3	TV OUT
4	GND
5	PWM CTRL

TOPOTEK 10X ZOOM CAMERA

Model	TOP-1082H	
Power Supply	DC 9V □ 12V (recommend: 9V or 12V)	
Consumption	2W	
CMOS	**Sensor**	1/3inch
	Total Pixel	4M cmos sensor
	Valued Pixel	2688(H) x 1520(V)
	Wide Range	65dB
Optics	**Zoom**	10X,f ＝4.9~49mm
	Minimum Distance	1.5m
	Horizontal Range	53.2°(Near) to 5.65°(far)
	Vertical Range	39.8°(Near) to 4.2°(far)
	Scanning	Progressively scan
Function	**Video Recording**	1080P 30fps Local TF card record
	HDMI output	1080P/720P/480P 60fps HDMI1.4
	Analog output	Standard CVBS 1Vp-p
	SNR	38dB
	Min illumination	Color 0.05lux@F1.6
	BLC	Support back light compensation
	IRCUT	Color/mono mode
	AE	Auto
	AWB	Atuo /menu setting
	Shutter	Auto
	Control Mode	UART control /IR control /UAV PWM
	Protocal	PELCO-D，Hitachi and VISCA protocal
	Focus Mode	Auto/manual/one time focus
	AF Time	< 2 secs
	Initialize	Auto
	Preset Position	20set
	Image Flip	Mirror /overturn
Interface	TF card ， 6pin 1.27mm +5pin connector, 30P coaxial cable	
HD HDMI	30P cable outside，default is D type HDMI and TF card port	
Device Size	63mm×37mm×45mm	
Working Condition	0℃ to +55℃ / 20% to 80% RH	
Storage Condition	-20℃ to +60℃ / 20% to 95% RH	
Weight	122g	

TOP-1882H
18X Zoom Camera for UAV

TOP-1882H is a 18x optical zoom camera with a 4M CMOS sensor, which supports quick AF.It has two video streams that one is local TF card handling HD videos at 1080P, 30FPS and the other is output for AV or HDMI videos(1080P).Also,this product supports wireless transmitter of HD vidoes.

Function Description

Zoom

18x Zoom; Focus Range: 4.85~82mm

Focus Speed

Quick AF, < 2 secs

Low Light

Support day/night modes; Can record high quality videos in dim light

Video Output

HDMI1.4 at 1080P/720P, 60fps; HDMI or AV output; Support 1080P TF card recording
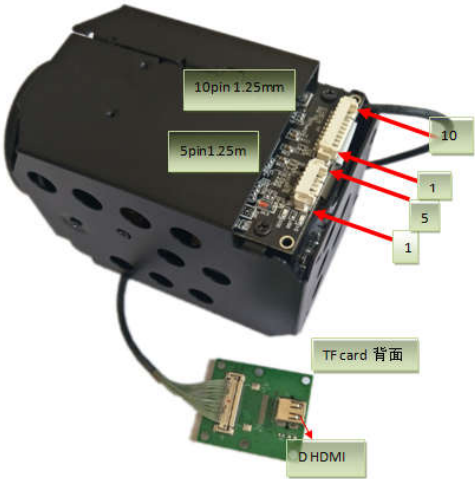
Multi Protocol Control

Support VISCA, hitachi and PELCO-D protocol; Support PWM signal control of UAV

Size & Weight

88mm×50mm×58mm; Weight：218g

Data port			
10PIN connector		5PIN connector	
1	UART_TX	1	DC12V
2	GND	2	GND
3	UART_RX	3	TV OUT
4	DC12V	4	GND
5	NC	5	PWM CTRL
6	NC		
7	GND		
8	USB_D+		
9	USB_D-		
10	GND		

TOPOTEK 18X ZOOM CAMERA	
Model	TOP-1882H
Power Supply	DC 9V □ 12V (recommend: 9V or 12V)
Consumption	2W
CMOS — **Sensor**	1/3inch
Total Pixel	4M cmos sensor
Valued Pixel	2688(H) x 1520(V)
Wide Range	65dB
Optics — **Zoom**	18X, f=4.7 to 84.6mm
Minimum Distance	1.5m
Horizontal Range	54.8°(Near) to 3.4°(Far)
Vertical Range	41°(Near) to 2.5°(Far)
Scanning	Progressively scan
Function — **Video Recording**	1080P 30fps Local TF card record
HDMI Output	1080P/720P/480P 60fps HDMI1.4
Analog Output	Standard CVBS 1Vp-p
SNR	38dB
Min illumination	Color 0.05lux@F1.6
BLC	Support back light compensation
IRCUT	Color/mono mode
AE	Auto
AWB	Atuo /menu setting
Shutter	Auto
Control	UART control /IR control /UAV PWM
Protocal	PELCO-D，Hitachi and VISCA protocal
Focus mode	Auto/manual/one time focus
AF Time	<2 secs
Initialize	Auto
Preset Position	20set
Image Flip	Mirror /overturn
Interface	TF card ，10pin 1.27mm +5pin connector, 30P coaxial cable
HD HDMI	30P cable outside，default is D type HDMI and TF card port
Device Size	50(W)×58(H)×88(D)mm
Working Condition	0℃ to +55℃ / 20% to 80% RH
Storage Condition	-20℃ to +60℃ / 20% to 95% RH
Weight	218g

TOP-2082H
20X Zoom Camera for UAV

TOP-2082H is a 20x optical zoom camera with a 4M CMOS sensor, which supports quick AF. It has two video streams that one is local TF card recording videos at 1080P, 30FPS and the other is HDMI video output used for its wireless transmitter.

Function Description

Zoom

20x Zoom; Focus Range: 4.7~94mm

Focus Speed

Quick AF, < 2 secs

Low Light

Support day/night modes; Can record high quality videos in dim light

Video Output

HDMI1.4 at 1080P/720P, 60fps;   HDMI or AV output; Support 1080P TF card recording

Multi Protocol Control

Support VISCA, hitachi and PELCO-D protocol; Support PWM signal control of UAV.

Size & Weight

88mm×50mm×58mm; Weight：225g

Data port			
10PIN connector		5PIN connector	
1	UART_TX	1	DC12V
2	GND	2	GND
3	UART_RX	3	TV OUT
4	DC12V	4	GND
5	NC	5	PWM CTRL
6	NC		
7	GND		
8	USB_D+		
9	USB_D−		
10	GND		

TOPOTEK 20X ZOOM CAMERA	
Model	TOP-2082H
Power Supply	DC 9V ☐ 12V (Recommend: 9V or 12V)
Consumption	2W

CMOS	**Sensor**	1/3inch
	Total Pixel	4M cmos sensor
	Valued Pixel	2688(H) x 1520(V)
	Wide Range	65dB

Optics	**Zoom**	20X, f=4.7 to 84.6mm
	Minimum Distance	1.5m
	Horizontal Range	55.5°(Near) to 3°(far)
	Vertical Range	41°(Near) to 2.5°(far)
	Scanning	Progressively scan

Function	**Video Recording**	1080P 30fps local TF card record
	HDMI Output	1080P/720P/480P 60fps HDMI1.4
	Analog Output	Standard CVBS 1Vp-p
	SNR	38dB
	Min illumination	Color 0.05lux@F1.6
	BLC	Support back light compensation
	IRCUT	Color/mono mode
	AE	Auto
	AWB	Atuo /menu setting
	Shutter	Auto
	Control Mode	UART control /IR control /UAV PWM
	Protocal	PELCO-D，Hitachi and VISCA protocal
	Focus Mode	Auto /manual /one time focus
	AF Time	< 2 secs
	Initialize	Auto
	Preset Position	20set
	Image Flip	Mirror /overturn

Interface	TF card ，10pin 1.27mm +5pin connector, 30P coaxial cable
HD HDMI	30P cable outside，default is D type HDMI and TF card port
Device Size	50(W)×58(H)×88(D)mm
Working Condition	0℃ to +55℃ / 20% to 80% RH
Storage Condition	-20℃ to +60℃ / 20% to 95% RH
Weight	225g

TOP-3082H
30X Zoom Camera for UAV

TOP-3082H is a 30x optical zoom camera with a 4M CMOS sensor, which supports quick AF. It has two video streams that one is local TF card recording HD videos at 1080P, 30FPS and the other is AV or HDMI video(1080P) output used for wireless transmitter.

Function Description

Zoom

30x Zoom; Focus Range: 4.5~135mm

Focus Speed

Quick AF, < 2 secs

Low Light

Support day/night modes; Can record high quality videos in dim light

Video Output

HDMI1.4 at 1080P/720P, 60fps; HDMI or AV output; Support 1080P TF card recording
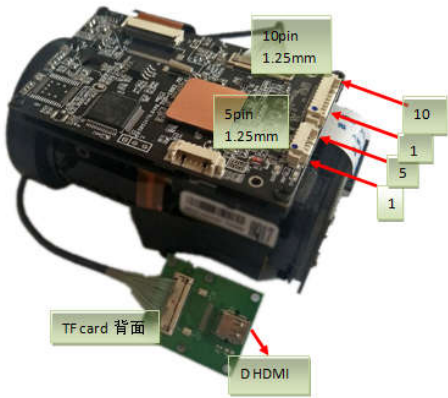
Multi Protocol Control

Support VISCA, hitachi and PELCO-D protocol; Support PWM signal control of UAV

Size & Weight

93mm×46mm×53mm; Weight：149g

Data port			
10PIN connector		5PIN connector	
1	UART_TX	1	DC12V
2	GND	2	GND
3	UART_RX	3	TV OUT
4	DC12V	4	GND
5	NC	5	PWM CTRL
6	NC		
7	GND		
8	USB_D+		
9	USB_D−		
10	GND		

TOPOTEK 30X ZOOM CAMERA

Model	TOP-3082H
Power Supply	DC 9V □ 12V (recommend: 9V or 12V)
Consumption	2.1W

CMOS	Sensor	1/3 inch
	Total Pixel	4M cmos sensor
	Valued Pixel	2688(H) x 1520(V)
	Wide Range	65dB

Optics	Zoom	30X, f=4.7 to 84.6mm
	Minimum Distance	1.5m
	Horizontal Range	59.8°(Near) to 2.77°(Far)
	Vertical Range	40.5°(Near) to 1.48°(Far)
	Scanning	Progressively scan

Function	Video Recording	1080P 30fps Local TF card record
	HDMI Output	1080P/720P/480P 60fps HDMI1.4
	Analog Output	Standard CVBS 1Vp-p
	SNR	38dB
	Minimum illumination	Color 0.05lux@F1.6
	BLC	Support back light compensation
	IRCUT	Color/mono mode
	AE	Auto
	AWB	Atuo /menu setting
	Shutter	Auto
	Control Mode	UART control /IR control /UAV PWM
	Protocal	PELCO-D，Hitachi and VISCA protocal
	Focus Mode	Auto /manual /one time focus
	Focus Speed	2s
	Initialize	Auto
	Preset Position	20set
	Image Flip	Mirror /overturn

Interface	TF card ，10pin 1.27mm +5pin connector, 30P coaxial cable
HD HDMI	30P cable outside，default is D type HDMI and TF card port
Device Size	93mm×46mm×53mm
Working Condition	0℃ to +55℃ / 20% to 80% RH
Storage Condition	-20℃ to +60℃ / 20% to 95% RH
Weight	149g

TOP-3682H
36X Zoom Camera for UAV

TOP-3682H is a 36x optical zoom camera with a 4M CMOS sensor, which supports quick AF.It has two video streams that one is local TF card recording HD video at 1080P, 30FPS and the other is 1080P HDMI video output used for its wireless transmitter.

Function Description

Zoom

30x Zoom; Focus Range: 4.6~165.6mm

Focus Speed

Quick AF, < 2 secs

Low Light

Support day/night modes; Can record high quality videos in dim light

Video Output

HDMI1.4 at 720P, 60fps; HDMI or AV output; Support 1080P TF card recording
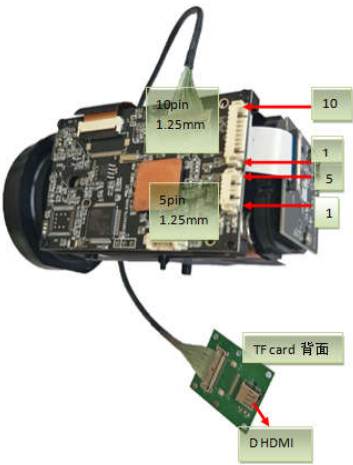
Multi Protocol Control

Support VISCA, hitachi and PELCO-D protocol; Support PWM signal control of UAV

Size & Weight

105mm×50mm×58mm; Weight：315g

Data port			
10PIN connector		**5PIN connector**	
1	UART_TX	1	DC12V
2	GND	2	GND
3	UART_RX	3	TV OUT
4	DC12V	4	GND
5	NC	5	PWM CTRL
6	NC		
7	GND		
8	USB_D+		
9	USB_D-		
10	GND		

Topotek 36x zoom camera for UAV	
Model	TOP-3682H
Power Supply	DC 9V □ 12V (recommend: 9V or 12V)
Consumption	2.1W
CMOS	
Sensor	1/3inch
Total Pixel	4M pixel
Valued Pixel	2688(H) x 1520(V)
Wide Range	65dB
Optics	
Zoom	36X, f=4.7 to 84.6mm
Minimum Distance	1.5m
Horizontal Range	64.3°(Near) to 2.04°(Far)
Vertical Range	45.4°(Near) to 1.38°(Far)
Scanning	Progressively scan
Function	
Video Recording	1080P 30fps local TF card record
HDMI Output	1080P/720P/480P 60fps HDMI1.4
Analog Output	Standard CVBS 1Vp-p
SNR	38 dB
Minimum Illumination	Color 0.05lux@F1.6
BLC	Support back light compensation
IRCUT	Color/mono mode
AE	Auto
AWB	Atuo /menu setting
Shutter	Auto
Control Mode	UART control /IR control /UAV PWM control
Protocal	PELCO-D，Hitachi and VISCA protocal
Focus Mode	Auto /manual /one time focus
AF Time	< 2 secs
Initialize	Auto
Preset Position	20set
Image Flip	Mirror /overturn
Interface	TF card ，10pin 1.27mm +5pin connector, 30P coaxial cable
HD HDMI	default is D type HDMI
Device Size	50(W)×58(H)×105(D)mm
Working Condition	0℃ to +55℃ / 20% to 80% RH
Storage Condition	-20℃ to +60℃ / 20% to 95% RH
Weight	205g

TOP-3632H
36X Zoom Camera for UAV

TOP-3632H is a 36x optical zoom camera with a 3M CMOS sensor, which supports quick AF. It has two video streams that one is local TF card recording HD video at 1080P, 30FPS and the other is 1080P HDMI video output used for its wireless transmitter.

Function Description

Zoom

30x Zoom, Focus Range: 4.6~165.6mm

Focus Speed

Quick AF, < 2 secs

OSD

Supported IR control and OSD menu setting

Video Output

HDMI1.4 at 720P,60fps; HDMI or AV output; Support 1080P TF
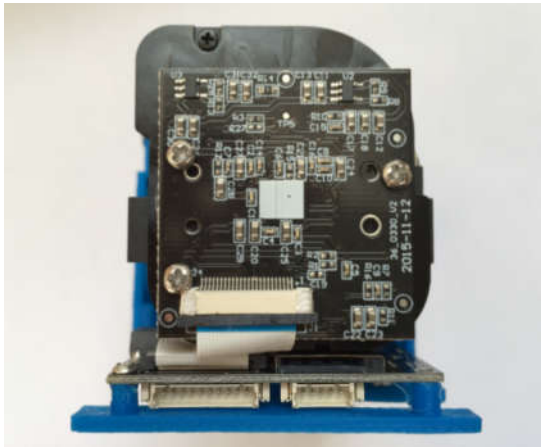
card recording

Multi Protocol Control

Support VISCA, hitachi and PELCO-D protocol; Support PWM

signal control of UAV

Size & Weight

105mm×50mm×58mm; Weight：315g

Data port			
10PIN connector		**5PIN connector**	
1	UART_TX	1	DC12V
2	GND	2	GND
3	UART_RX	3	TV OUT
4	DC12V	4	GND
5	NC	5	PWM CTRL
6	NC		
7	GND		
8	USB_D+		
9	USB_D-		
10	GND		

Topotek 36x zoom camera for UAV	
Model	TOP-3632H
Power Supply	DC 9V □ 12V (recommend: 9V or 12V)
Consumption	2.1W
CMOS **Sensor**	1/3inch cmos sensor
Total Pixel	3M pixel
Valued pixel	2304(H) x 1536(V)
Wide Range	73dB
Optics **Zoom**	36X, f=4.7 to 84.6mm
Minimum Distance	1.5m
Horizontal Range	64.3°(Near) to 2.04°(Far)
Vertical Range	45.4°(Near) to 1.38°(Far)
Scanning	Progressively scan
Function **Video Recording**	1080P 30fps Local TF card record
HDMI Output	1080P/720P/480P 60fps HDMI1.4
Analog Output	Standard CVBS 1Vp-p
SNR	48 dB
Minimum Illumination	Color 0.05lux@F1.6
BLC	Support back light compensation
IRCUT	Color/mono mode
AE	Auto
AWB	Atuo /menu setting
Shutter	Auto
Control Mode	UART control /IR control /UAV PWM
Protocal	PELCO-D，Hitachi and VISCA protocal
Focus Mode	Auto /manual /one time focus
AF Time	< 2 secs
Initialize	Auto
Preset Position	20set
Mirror /Overturn	Mirror /overturn
Interface	TF card ，10pin 1.27mm +5pin connector, 30P coaxial cable
HD HDMI	30P cable outside，default is D type HDMI and TF card port
Device Size	50(W)×58(H)×105(D)mm
Working Condition	0℃ to +55℃ / 20% to 80% RH
Storage Condition	-20℃ to +60℃ / 20% to 95% RH
Weight	205g

TOP-RescueⅡ
10x Optical Zoom Camera + Gimbal

TOP-RescueII adopts 3-axis gimbal for 10x optical zoom camera, which supports quick AF. The camera has two video streams that one is local TF card recording HD video at 1080P, 30FPS and the other is output for CVBS signals(D1 format) or HDMI videos(720P). Also this product supports wireless transmitter of HD videos.

Function Description

Zoom

Focus Range: 4.9~49mm

Angle of 3-axis

Pitch：+45°   -90°

Roll： +45°   -45°

Yaw：   +180°   -180°

Function

Lock control by one-click; photographying, filming, working temprature range from -20℃ to +50℃

Video Output

CVBS signals in D1 format;Support HDMI images transmission

Control Mode

Camera: Zoom, Focus, Recording, Snapshot are based on PWM signal control

Pod: Pitch and Yaw controlled by PWM Signals.

Weight

weight：410g

Data Port	
Left 6PIN connector	
1	PWM
2	PWM
3	5V
4	GND
5	AV
6	AV_GDN
Right 6PIN connector	
1	Zoom
2	pitch
3	mode（follow，lock）
4	direction
5	5Voutput
6	GND

TOP-RescueII 10x Optical Zoom Camera + Gimbal

Model		Top-RescueII Gimbal
Power Supply		DC 9V □ 12V (recommend: 9V or 12V)
Consumption		Static 3.96W; Dynamic 5.4W
Optics	**Zoom**	10X, f=4.9 to 49mm
	Minimum Distance	1.5m
	Horizontal Range	53.2°(Near) to 5.65°(Far)
	Vertical Range	39.8°(Near) to 4.2°(Far)
Function	**Video Output**	1080P video storage, 720P HDMI output
	Control Mode	UAV PWM
	IrDA	IrDA control the menu,zoom
	Receiver	Conventional receiverIBUS/SBUS
	Jitter Angle	Pitch and Roll：±0.02 degree Yaw：±0.03 degree
	One-click Restore	Once-click restore to the initial position
	Gimbal Speed Adjustable	Use low speed control at big zoom status for high precision display. Use fast speed control at small zoom status
	Control Mode	OSD menu setup,Support control by PWM signal and serial port command. Also support digital transmitter command.
Static Tracking Accuracy		±0.01°~±0.03°
Motion Tracking Accuracy		±0.05°~±0.5°
Pitch		+45° -90°
Roll		+45° -45°
Yaw Range		-180° +180°
Output Interface		D type HDMI，6PConnection terminal
Device Size		37(W)×45(H)×63(D)mm
Working Condition		0℃ to +55℃ / 20% to 80% RH
Storage Condition		-20℃ to +60℃ / 20% to 95% RH
Function		Camera Protection, video conference
Weight		410g

TOP-FLY
10x Optical Zoom Camera + Gimbal

TOP-FLY is an excellent 3-axis auto-stabilizing gimbal developed for UAV enthusiasts. Camera adopts a 10x optical zoom lens and a 1/3 CMOS sensor. The effective pixels are 4,000,000. Besides, TOP-FLY applies Innertial Measurement Unit (IMU) to control gimbal and integrates servo drive module, which can be widely used in entertainment, aerial photograph and other drone activities, etc.

Function Description

Zoom

Focus Range: 4.9~49mm

Angle of Direction

Pitch：-100 degree ~ +45 degree

Yaw：   -240 degree ~ +240 degree

Posture Control Accuracy

±0.02 degree

Output Interface

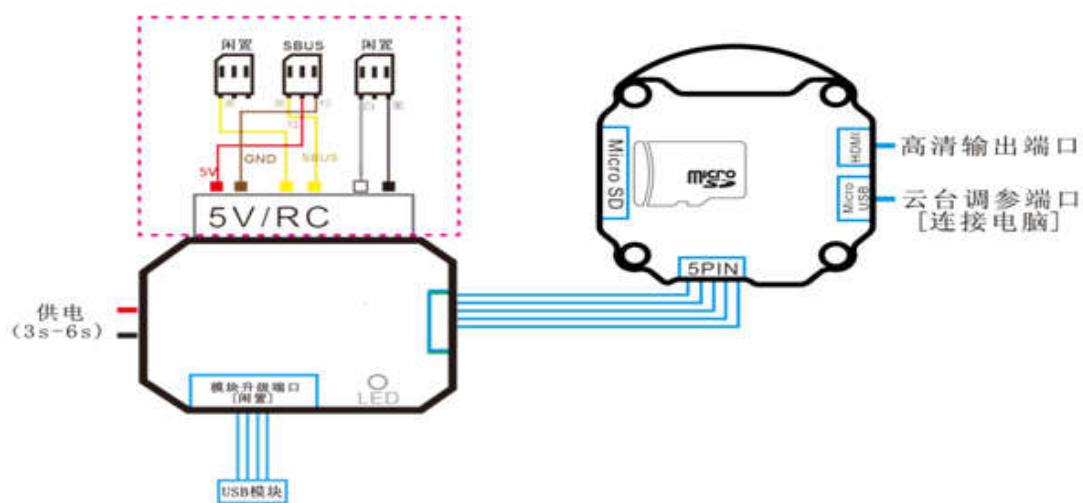1080P, 60fps; HDMI output;1080P TF card recording

Control Mode

Pod controlled by SBUS or PWM signals

Size & Weight

77 mm *100 mm *147mm; weight：365g

Data port

TOP-FLY 10x Optical Zoom Camera + Gimbal

Model	TOP-FLY pod
Power Supply	4S～6S
Consumption	Static 3.96W; moving 5.4W

Working Status	Control Angle	-30°～30°（roll），-120°～30°（pitch）; -175°～175°（YAW direction）
	Receiver	Conventional receiverIBUS/SBUS
	control Accuracy	0.03°
	Jitter Angle	Pitch and Roll：±0.02 degree Yaw：±0.03 degree
	One-click Restore	Support quick return to initial position
	Gimbal Speed Adjustable	Use low speed control at big zoom status for high precision display. Use fast speed control at small zoom status
	Control Mode	OSD menu setup,Support control by PWM signal and serial port command. Also support digital transmitter command.

Function	Sensor	1/3 4M CMOS SENSOR
	Zoom	10x HD optical zoom, f=4.9 to 49mm
	Video Output	1080P video storage, 1080P HDMI output
	Auto Setting	Support awb,ae
	Video Recording	HDMI 1080P 60FPS output,1080P 30FPS Local TF card record.

Device Size	156×156×150（±5）mm
Working Condition	-10℃ to +45℃ / 20% to 80% RH
Storage Condition	-20℃ to +60℃ / 20% to 95% RH
Materials	Aluminum alloy, plastic
Function	Camera Protection
Weight	365（±50）g

TOP-10X3D
10X Zoom Camera + Gimbal

TOP-10X3D uses a customized gimbal designed for Topotek 10x zoom camera. Before leaving the factory, all parameters of gimbal are adjusted. This enables customers to use UAV immediately after camera is installed. TOP-10X3D is capable of stabilizing flight attitude when UAV rolls, yaws and pitches in three different directions. Most practically, the integration design of damping plate and gimbal significantly reduces mechanical vibration.

Function Description

Camera

Pitch: ±135° Roll:±45°

Yaw:　　±135°non-polar rotation

Jitter Angle
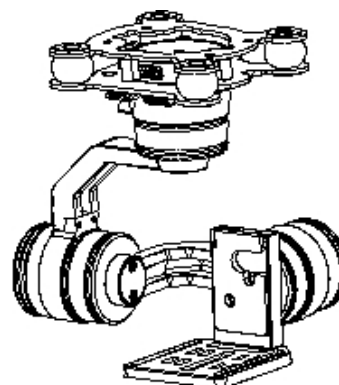
Pitch and Roll：±0.02°

Yaw：　　　　±0.03°

Trial Camera

TOP-1031T；TOP-1032H；TOP-1035H；TOP-1082H

Output Interface

Output either CVBS signals or HDMI video

Size & Weight

L90xW110xH115mm; Weight：280g

Data Port	
（3）5PIN connector	
1	GND
2	5V
3	RC-Y
4	RC-P
5	C-PWM
（7）6PIN connector	
1	GND
2	C-TV
3	GND
4	
5	C-RX
6	

[1] 云台挂载板　　　　[6] 减震球
[2] 数据线插孔　　　　[7] 连接线插孔
[3] 连接线插孔　　　　[8] 连接线插孔
[4] 航向角方向电机　　[9] 俯仰轴方向电机
[5] 横滚轴方向电机　　[10] 相机安装座

10X3D 10X Zoom Camera + Gimbal

Model		10X3D gimbal
Power Supply		3S（11.1V）
Consumption		Static 3.96W; moving 5.4W
Camera	**Pitch**	±135°
	Roll	±45°
	Yaw Range	±135 degree non-polar rotation
	Jitter Angle	Pitch and Roll：±0.02 degree Yaw：±0.03 degree
	One-click Restore	One-click restore to the initial position
	Gimbal Speed Adjustable	Use low speed control at big zoom status for high precision display. Use fast speed control at small zoom status
	Control Mode	OSD menu setup,Support control by PWM signal and serial port command. Also support digital transmitter command.
	Sensor	1/3 3M CMOS SENSOR
	Zoom	10x HD optical zoom, f=4.9 to 49mm
	AF Time	Real time fast auto focus; timelapse < 1 sec
	Video Output	Output resolution:1920X1080P 30FPS
	Control Mode	support PWM and UART control.
	Video Recording	HDMI 1080P 60FPS output,1080P 30FPS Local TF card record.
Device Size		L 90xW110xH115mm
Working Condition		-0℃ to +45℃ / 20% to 80% RH
Storage Condition		-20℃ to +60℃ / 20% to 95% RH
Function		Camera Protection
Weight		420g

TOP-318F
Gimbal for 18X Zoom Camera

TOP-318F is a high-precision 3-axis stabilizating gimbal developed for 18x zoom camera, which adopts high-precision FOC encolder. The features are high stability, small size, light weight, and low power consumption, etc. Inside the TOP-318F, there is a 18X optical zoom camera, named TOP-1882H. It uses a 4M cmos sensor, allows either HDMI or AV video output,and records HD video at 1080P in local TF card.

Function Description

Zoom

Focus Range: 4.7~84.6mm

Jitter Angle

Pitch and Roll：±0.02°

Yaw range：   ±0.03°

Work Range

Pitch range: -90°to +90°

Roll range: -85°to +85°

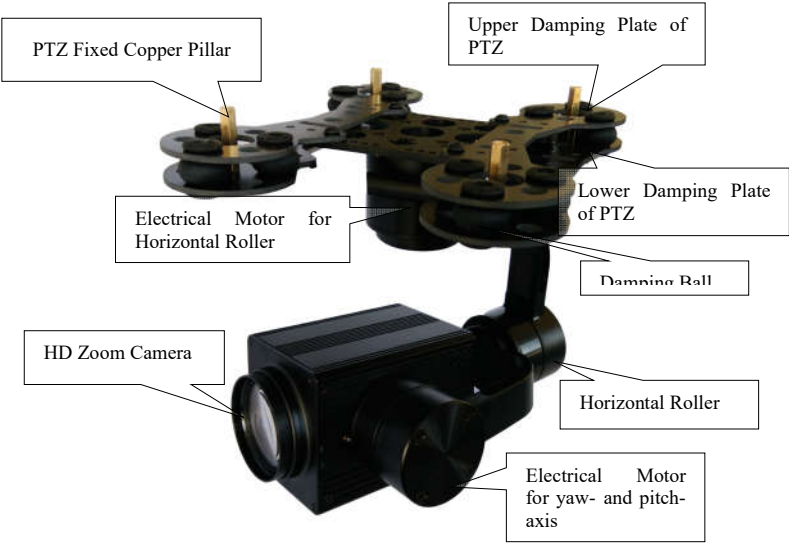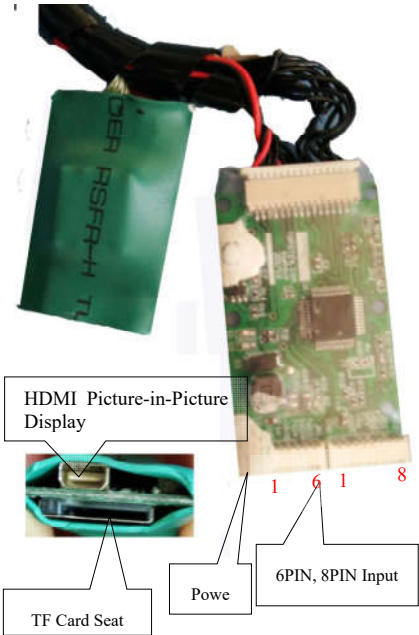Yaw range: -150°to +150°

Output Interface

Output either CVBS or HDMI video; Record HD video at 1080P, 30fps in local TF card with H.264 compressing mode.

Control Mode

Zoom, focus, record and pod control (pitch&yaw) based on PWM signals

Size & Weight

144mm×85mm×134mm; Weight：586g

HDMI Picture-in-Picture Display

Powe

6PIN, 8PIN Input

TF Card Seat

PTZ Fixed Copper Pillar

Upper Damping Plate of PTZ

Electrical Motor for Horizontal Roller

Lower Damping Plate of PTZ

Damping Ball

HD Zoom Camera

Horizontal Roller

Electrical Motor for yaw- and pitch-axis

Model	Seq.	PIN Definition
6PIN	1	GND
	2	5V
	3	S/I BUS
	4	TXD4
	5	RXD3
	6	TXD3
8PIN	1	GND
	2	5V
	3	MODE
	4	YAW
	5	PIC
	6	ZOOM
	7	FOCU
	8	REC

18X Gimbal

Model	18X gimbal
Power Supply	3S（11.1V）
Consumption	Static 3.96W; moving 5.4W

Work Staus	Pitch	Pitch: -90~+90 degree;
	Yaw Range	-150~+150 degree non-polar rotation
	Roll Range	Roll: -85~+85 degree

Gimbal	Jitter Angle	Pitch and Roll：±0.02 degree Yaw：±0.03 degree
	One-click Restore	One-click restore to the initial position
	Gimbal Speed Adjustable	Use low speed control at big zoom status for high precision display. Use fast speed control at small zoom status
	Control Mode	Support control by PWM signal and serial port command. Also support digital transmitter command.

Camera	Sensor	1/3 4M CMOS SENSOR
	Zoom	18 x HD optical zoom, f=4.7 to 84.6mm
	AF Time	Real time fast auto focus，timelapse < 1 sec
	Video Output	1080P HDMI output and 1080P video storage
	Control Mode	Support OSD menu setting,PWM and UART control.
	Video Recording	HDMI 1080P 60FPS output,1080P 30FPS local TF card record.
	Tracking (Optional)	1）Position offset update in 50Hz
		2 Offset output delay＜15ms
		3）Min distinguish 5%
		4）Min SNR is 4
		5）Min target size 16*16 pixel
		6）Max target size 160*160 pixel
		7）Tracking speed 32 pixel/every frame
		8）Main square root value of target position noise＜0.5 pixel

Device Size	L144*W85*H134mm
Working Condition	-10℃ to +45℃ / 20% to 80% RH
Storage Condition	-20℃ to +60℃ / 20% to 95% RH
Function	Camera Production
Weight	586g

TOP-330F
30X Optical Zoom Camera + Gimbal

TOP-330F adopts a high-precision 3-axis auto-stabilizing gimbal with a 30x zoom camera. It uses FOC encoder and the features are high stability, small size, light weight, and low power consumption, etc. Inside the TOP-330F, there is a 30X optical zoom, named TOP-3082H.It uses a 4M CMOS sensor, outputs either HDMI or AV videos. Also, it can record HD videos at 1080P in local TF card.

Function Description

Zoom

Focus range: 4.5~135mm

Jitter Angle

Pitch and Roll：±0.02°

Yaw Range： ±0.03°

Work Range

Pitch Range: -90°to +90°

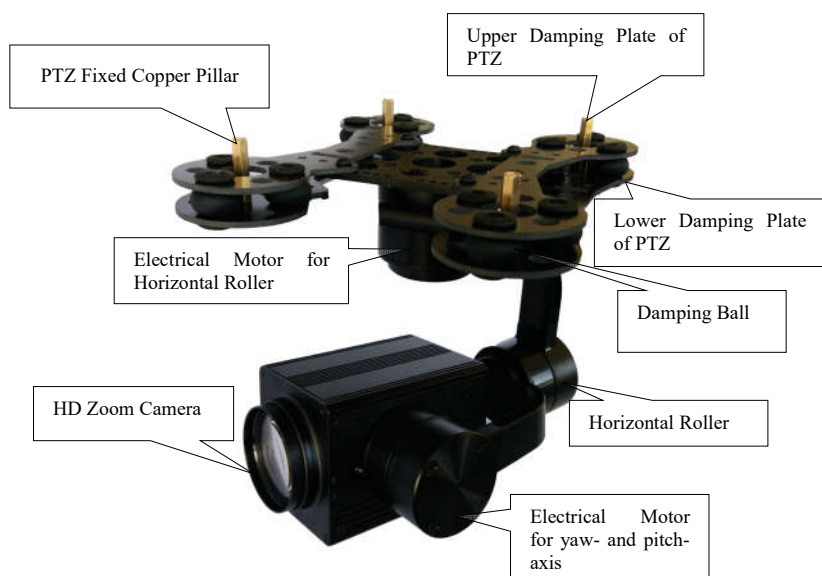Roll Range: -85°to +85°
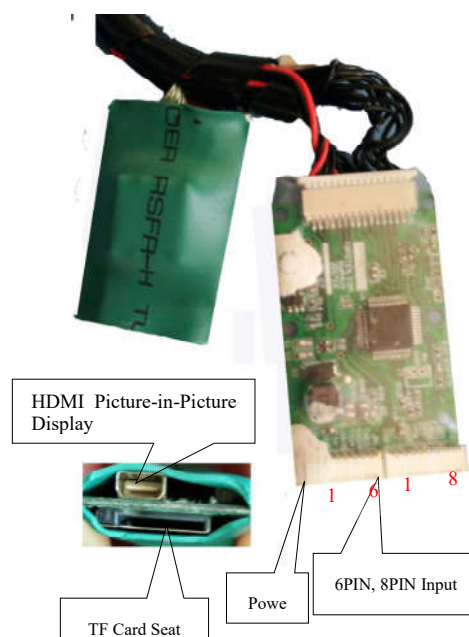
Yaw Range: -150°to +150°

Output Interface

Output either CVBS or HDMI video; Record HD video at 1080P, 30fps in local TF card with H.264 compressing mode

Control Mode

Zoom, focus, record and pod control (pitch&yaw) based on PWM signals

Size & Weight

144mm×85mm×134mm; Weight：591g

HDMI Picture-in-Picture Display

TF Card Seat

Powe

6PIN, 8PIN Input

Upper Damping Plate of PTZ

PTZ Fixed Copper Pillar

Lower Damping Plate of PTZ

Electrical Motor for Horizontal Roller

Damping Ball

HD Zoom Camera

Horizontal Roller

Electrical Motor for yaw- and pitch-axis

Model	Seq.	PIN Definition
6PIN	1	GND
	2	5V
	3	S/I BUS
	4	TXD4
	5	RXD3
	6	TXD3
8PIN	1	GND
	2	5V
	3	MODE
	4	YAW
	5	PIC
	6	ZOOM
	7	FOCU
	8	REC

30X Zoom Camera + Gimbal	
Model	TOP-330F
Power Supply	3S（11.1V）
Consumption	Static 3.96W; Dynamic 5.4W

Work staus	**Pitch**	Pitch: -90~+90 degree;
	Yaw Range	-150~+150 degree non-polar rotation
	Roll Range	Roll: -85~+85 degree
Gimbal	**UAV Receiver**	Normal receiver or SBUS
	Jitter Angle	Pitch and Roll：±0.02 degree　　Yaw：±0.03 degree
	Once-Click Restore	One-click restore to the initial position
	Gimbal Speed Adjustable	Use low speed control at big zoom status for high precision display. Use fast speed control at small zoom status
	Control Mode	Support PWM control, serial port control, and digital transmission
Camera	**Sensor**	1/3　4M　CMOS sensor
	Zoom	30x HD optical zoom, f=4.5 to 135mm
	3A	Support AWB, AE, AF
	Control Mode	Support OSD menu setting, PWM and UART control.
	Video Recording	HDMI 1080P 60FPS output,1080P 30FPS Local TF card record.
	Tracking (Pptional)	1）Position offset update in 50Hz
		2 Offset output delay＜15ms
		3）Min distinguish 5%
		4）Min SNR is 4
		5）Min target size 16*16 pixel
		6）Max target size 160*160 pixel
		7）Tracking speed 32 pixel/every frame
		8）Main square root value of target position noise＜0.5 pixel
Device Size		L144*W85*H134mm
Working Condition		-10℃ to +55℃ / 20% to 80% RH
Storage Condition		-20℃ to +60℃ / 20% to 95% RH
Function		UAV　aerial
Weight		591g

SMT10ST6
10X Dual Optical Zoom Camera + Gimbal

SMT10ST6 has a powerful system that combines 10x optical zoom camera, 640 thermal imaging system, and a high-precision 3-axis stabilizing gimbal. It adopts high-precision FOC encoder and the features of SMT10ST6 are high stability, small size, light weight, and low power consumption. The camera designed for working under visible light has a low-light-level sensor with effective pixes 4,000,000. And its thermal imaging system utilizes a 640 resolution non-guard sheet imaging detector imported from America. Besides, this newly developed SMT10ST6 supports picture-in-picture displaying function in HDMI videos and allows storing their data in local TF card. More powerfully, the video recording under visible light and infrared light can work simultaneously with multiple picture-in-picutre displaying modes.By changing these different modes,the zoom function will not be interrupted.

Function Description

Zoom

Visiable Light: 5.1~51mm;
Thermal Imager: 8x,8.1x,..,etc.

Jitter Angle

Pitch and Roll：   ±0.02°
Horizontal Direction: ±0.03°

Work Range

Pitch range: -90°to +90°
Roll range: -85°to +85°
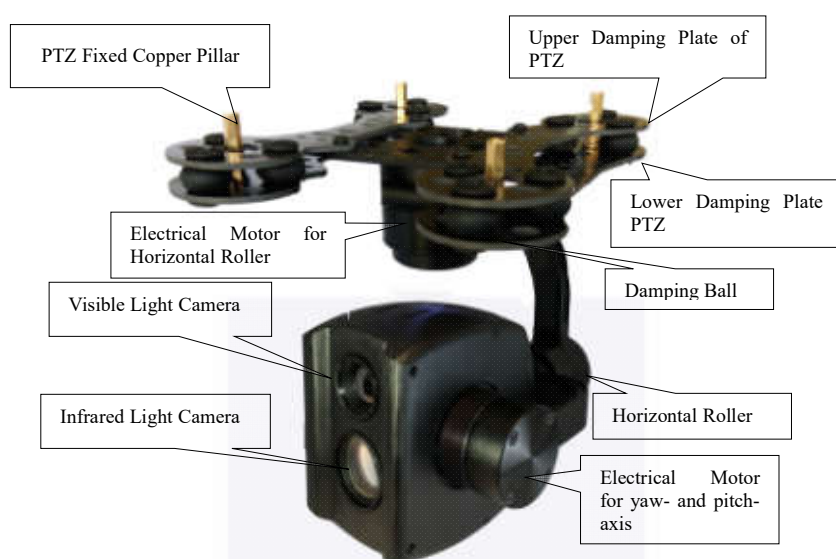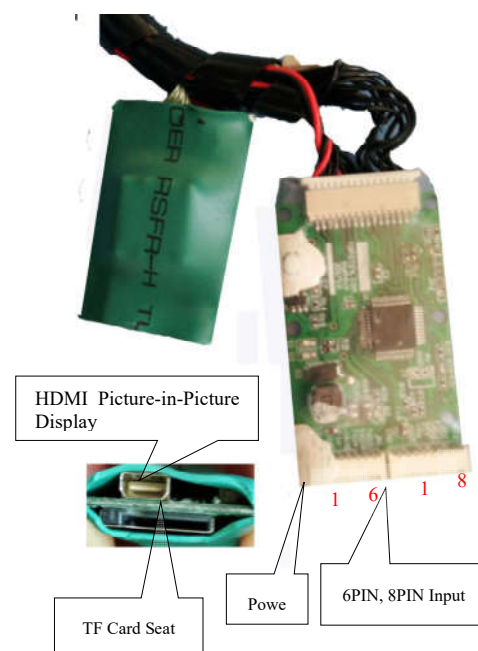Yaw range: -150°to +150°

Output Interface

HDMI video at 1080P; Picture-in-picture display; Record HD video at 1080P, 30fps in local TF card with H.264 compressing mode; Diameter of thermal imaging lens   19mm; Support 640X480 resolution

Control Mode

Support VISCA, hitachi and PELCO-D protocol; Support PWM signal control of UAV

Size & Weight

88mm×62mm×100mm; Weight：662g

HDMI Picture-in-Picture Display

TF Card Seat

Powe

6PIN, 8PIN Input

PTZ Fixed Copper Pillar

Upper Damping Plate of PTZ

Electrical Motor for Horizontal Roller

Lower Damping Plate PTZ

Visible Light Camera

Damping Ball

Infrared Light Camera

Horizontal Roller

Electrical Motor for yaw- and pitch-axis

Model	Seq.	PIN Definition
6PIN	1	GND
	2	5V
	3	S/I BUS
	4	TXD4
	5	RXD3
	6	TXD3
8PIN	1	GND
	2	5V
	3	MODE
	4	YAW
	5	PIC
	6	ZOOM
	7	FOCU
	8	REC

10X Dual Optical Zoom Camera + Gimbal

Model	SMT10ST6
Power Supply	3S（11.1V）
Consumption	Static condition 3.96W; Dynamic condition 5.4W

Work Staus		
	Pitch	Pitch: -90~+90 degree;
	Yaw Range	-150~+150 degree non-polar rotation
	Roll Range	Roll: -85~+85 degree
	Jitter Angle	Pitch and Roll：±0.02 degree Yaw：±0.03 degree
	One-Click Restore	One-click restore to the initial position
	Gimbal Speed Adjustable	Use low speed control at big zoom status for high precision display. Use fast speed control at small zoom status
	Control Mode	Support control by PWM signal and serial port command. Also support digital transmitter command.

Visible Light Camera		
	Sensor	1/3 4M CMOS sensor
	Zoom	10x HD optical zoom lens, f=5.1 to 51mm
	AF Time	Support quick auto focus, timelapse < 1 sec
	Video Output	Output HDMI HD video at 1080P and record video data in local TF card
	Control Mode	Support PWM control, serial port control and OSD menu setting
	Support Mode	1080P 30fps, 720P 60fps

Infrared Light Camera		
	Resolution	640*480
	Pix Spacing	17μm
	Type	Uncooled Micro Bolometer IR FPA Fabrication
	Wavelength	8～14μm
	(NETD) Thermal Sensitivity	≤65mk@30℃
	Brightness Contras	Adjustable
	Field Angle	19mm Lens; Angle：32.0x24.2
	Measurement(Optional)	Center point, highest temperature, lowest temperature, temperature display, over-temperature alert

Device Size	L88 x W62 x H100 mm
Work Condition	-10℃ to +45℃ / 20% to 80% RH
Storage Condition	-20℃ to +60℃ / 20% to 95% RH
Function	Aerial photograph
Weight	662g（plus damping plate 730g）