

D-80Pro 40x-4K Spherical Gimbal



● Characteristics

- Carries an 8.29M pixels 40x hybrid zoom camera, which provides a video resolution of 4K@30fps and an image resolution of 3840x2160.
- Laser lighting module ensures the camera getting a clear image even in complete darkness.
- Features auto target tracking, which can constantly track the target selected on screen.
- Low-profile spherical shape and 3-axis nonorthogonal mechanical stabilized structure, minimize the gyration radius and the wind resistance of the gimbal. The D-80Pro is able to spin continually around its yaw axis.
- With the GCU, the D-80Pro supports network, UART and S.BUS control. The GCU supports both private protocol and MAVLink protocol.
- Thanks to the Dual-IMU complementary algorithms with IMU temperature control and carrier AHRS fusion, the D-80Pro provides a stabilization accuracy at $\pm 0.01^\circ$.
- Can be mounted onto multiple carriers, whether downward or upward.
- With the GCU and the Dragonfly software, user can watch the image and control the gimbal without protocol ducking.
- Screen supports overlaying OSD information such as latitude, longitude and altitude. Image supports shooting point coordinate EXIF save.
- Supports ONVIF protocol.
- 14~53 VDC wide voltage input.

Specifications

General	
Product Name	D-80 _{Pro}
Dimensions	Gimbal: 85.8 x 86 x 129.3mm
	GCU: 45.4 x 40 x 13.5mm
Weight	Gimbal: 405g
	GCU: 18.6g
Operating Voltage	14 ~ 53 VDC
Power	Gimbal: 6.7W (AVG, light off) / 55 W (Stall, light on)
	GCU: 1.8W
Mounting	Downward / Upward
Gimbal	
Gimbal Type	3-axis Nonorthogonal Mechanical Stabilization
Angular Accuracy	±0.01°
Controllable Range	Pitch: -157° ~ +70°, Yaw: ±360° constantly
Max Controllable Speed	Pitch: ±200°/s, Yaw: ±200°/s
Zoom Camera	
Image Sensor	1/2.8" CMOS; Effective Pixels: 8.29M
Lens	Focal Length: 4.8~48mm
	Aperture: f1.7~f3.2
	HFOV: 60.2° ~ 6.6°
	VFOV: 36.1° ~ 3.7°
DFOV: 67.2° ~ 7.6°	
Resolution	3840 x 2160
Pixel Pitch	1.45μm
Electronic Shutter Speed	1~1/30000 s
Optical Zoom Rate	10x
Equivalent Digital Zoom Rate	4x
Min Illumination	Night Vision off: 0.01Lux / f1.5
	Night Vision on: 0.001Lux / f1.5
Object Detection Distance	EN62676-4:2015 Person ^[1] : 1449m; Light vehicle ^[2] : 1904m; Large vehicle ^[3] : 4057m
	Johnson Criteria Person: 16552m; Light vehicle: 50759m; Large vehicle: 108138m
Object Identification Distance	EN62676-4:2015 Person: 290m; Light vehicle: 381m; Large vehicle: 811m
	Johnson Criteria Person: 4138m; Light vehicle: 12690m; Large vehicle: 27035m
Object Verification Distance	EN62676-4:2015 Person: 145m; Light vehicle: 190m; Large vehicle: 406m
	Johnson Criteria Person: 2069m; Light vehicle: 6345m; Large vehicle: 13517m

[1] Reference dimension of person: 1.8x0.5m. Critical dimension under Johnson criteria is 0.75m

[2] Reference dimension of light vehicle: 4.2x1.8m. Critical dimension under Johnson criteria is 2.3m

[3] Reference dimension of large vehicle: 6.0x4.0m. Critical dimension under Johnson criteria is 4.9m

Laser Lighting Module	
Wavelength	850±10nm
Laser Power	0.8W
Beam Angle	8°
Beam Diameter	14m @ 100m
Effective Illumination Distance	≤200m
Laser Safety	Class 3B (IEC 60825-1:2014)
Image & Video	
Image Format	JPEG
Maximum Image Resolution	3840 x 2160
EXIF	Shooting point coordinate
Video Format	MP4
Maximum Video Resolution	4K@30fps
Stream Encode Format	H.264, H.264H, H.264B, H.265, MJPEG
Stream Network Protocol	ONVIF, RTSP
Storage	
Supported SD Cards	Supports a Speed Class 10 MicroSD card with a capacity of up to 256GB
Environment	
Operating Temperature	-20°C ~ 50°C
Storage Temperature	-40°C ~ 60°C
Operating Humidity	≤85%RH (Non-condensing)