

Born for the night



Adapts to DJI M300 & M350 RTK

 **SZWL-S3**

AUTHORIZED PRODUCT MATERIAL · AI FULL-COLOR NIGHT VISION

S3

AI Night Vision Drone Camera

In 2023, Deepthink launched the S3. As a state-of-the-art AI night vision UAV camera, S3 is tailor-made for ultra-low light scenarios, especially nearly 0.0001 lux.

Designed for the DJI M300 & M350 RTK, the S3 is a hybrid payload integrated with thermal, laser rangefinder and zoom. S3 is powered by proprietary technology AI-ISP algorithm, a second-to-none true-color solution for urban/forest firefighting, rescue service, oil and gas as well as aerial surveying.



AI-powered ISP algorithm,
full-color HD imaging in
low light down to 0.0001 lux



4MP zoom
camera, with 160X
integrated zoom



Built-in thermal imaging
camera, 640*512 resolution
high-definition picture



Laser rangefinder,
accurate range measurement
in 5-1500m



Intelligent HDR/3A,
high imaging quality, and
2K resolution HD picture



Real-time image transmission,
real-time view of the scene
screen, abnormalities at a glance



IP55,
fearless of rain
and snow



Operating range -25°C to
60°C (-13°F~140°F), no worries
in extreme scenarios



Low wind resistance design

high-density aluminum alloy shell heat dissipation. Overcome the extreme operating environment of the drone

Night vision zoom camera

30X optical zoom,
160X integrated zoom,
4MP

1/1.8" Super Starlight CMOS,
0.0001 Lux Full Color HD Imaging

Laser rangefinder

measurement range: 5-1500 meters

Wavelength 905nm
accuracy in $\pm 1\text{m}$
real-time display of positioning altitude

Thermal Imaging Camera

Uncooled Vanadium Oxide (VOx)

DFOV: 45.76°,
video resolution: 640*512

Temperature range: -20°C ~ 150°C (-4°F ~ 302°F)

Richly-defined color above 0.0001 lux

Generating images based on AI-powered ISP algorithm, this new technology enables users to see crisp, true-color images and take photos/videos in nearly complete darkness(0.0001 lux). Meanwhile, S3 has excellent field of view and ultra-long night visibility distance.



Reject Changeable Scenarios

Multi-sensor solution (Night vision zoom camera, laser range finder and thermal imaging camera), integrated design, for all the needs of multiple applications in different scenes. Regardless of day and night, rainy and foggy days, a consistent visual experience can also be realized.



Smart and Intelligent Thermal

In effective temperature measurement range, click on any point of the image, you can quickly obtain the surface temperature of the point, to ensure that the scene, the monitoring of important equipment without error. Meanwhile, S3 supports split-screen display of thermal imaging and zoom night vision camera, which can quickly locate the problem area and effectively screen the problem point, so as to play double insurance for monitoring and surveillance.



HDR Imaging in all conditions

In complex lighting scenes such as nighttime and city traffic, imaging is easily affected by light intensity, resulting in the loss of imaging details. The full-color zoom night vision camera has a built-in HDR function that boosts the high dynamic range to 120dB, restores true colors, and ensures that image details are not lost.

Before



After



Lift one's head above the fog

In rain, fog, snow, and other environments, light is affected by the occurrence of different degrees of attenuation, which in turn leads to blurred imaging. De-fog kinetic energy automatically analyzes each pixel in the picture, calculates the degree of attenuation of light through the obstacles, through the algorithm to compensate for the imaging, and ultimately realizes the de-fogging, presenting high-definition imaging.

Before



After



Before



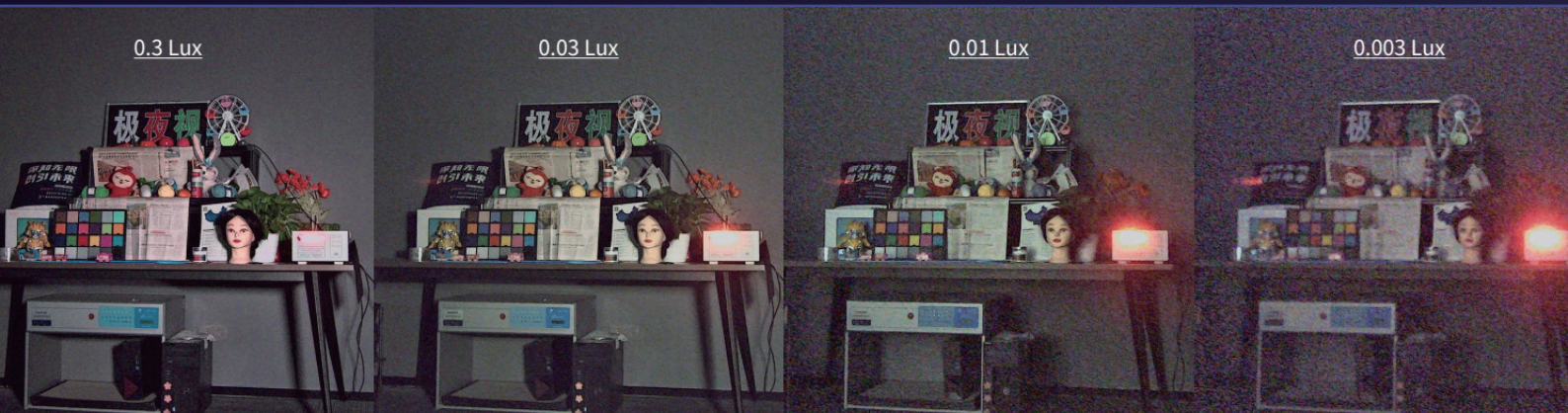
After



IR-Cut founction

Due to the influence of different wavelengths of light, the final image of the color is prone to deviation from the color seen by the naked eye, especially in the night environment. The light is extremely weak and difficult to image, and color deviation is more serious. Turning on the IR-CUT function can capture invisible light sources, thus ensuring that the target is prioritized in extremely dark scenes.

S3 Night Vision



Competitor



S3 Thermal



Competitor



AI Night Vision UAV Camera S Series

AI Night Vision Drone Camera S3

Spec

Sensor	1/1.8" Starlight CMOS
Minimum Illumination	Full color: 0.0001 Lux
Image Resolution	4MP, Full color 2688*1520P
Video Frame	5fps ~ 30fps
Video Compression	H.264
WB	Auto
Gain	Auto
No Fill-light	Support
OTA Upgrade	Support
Device Logs	Support
WDR	120 dB
SNR	>48db
Digital Noise	Support
AI HDR	Support
Exposure Mode	Auto

AI Night Vision UAV Camera S Series

AI Night Vision Drone Camera S3

Zoom

Focal	f=7.1~171mm, 30X optical zoom、160X max zoom Equivalent 34.8-820.8mm
Aperture	F 1.6 - F 5.1
Field of View	D:59.2° WIDE; 2.5° TELE H:34.6° WIDE; 1.4° TELE V:66.7° WIDE; 2.9° TELE
Day-night Mode	Electric IR-CUT

Laser Ranging

Effective Distance	5 - 1500 m
Wavelength	905 nm
Measurement Accuracy	± 1 m

AI Night Vision UAV Camera S Series

AI Night Vision Drone Camera S3

IR Camera

Sensor	VOx
Prime Lens	DFOV:45.76° Focal:19mm Aperture:F/1.0
Digital Zoom	8.0X
Video Format	640×512@30fps
Pixel Size	12 μm
Temperature Range	-20°C~+150°C(-4°F~+302°F) 0°C~+550°C(32°F~1022°F)

PTZ

Angular Jitter	± 0.008°
Control Rotation Range	P:-120°~+30°, Y:±320°
Interface	DGC 2.0
Power	13.6 V / 2 A

AI Night Vision UAV Camera S Series

AI Night Vision Drone Camera S3

Interface

SD card

Micro SD (Max 128G)

General Spec

Circuit Power

8 W

Protection Level

IP 55

**Working
Humidity**

-25°C~60°C(-13°F~140°F),
Humidity<95% (Condensation-free)

Size

L 179mm * W 126.5mm* H 190mm

Weight

1025g $\pm$ 5