Born for the night

Adapts to DJI M300 & M350 RTK

S3

AI Night Vision
Drone Camera

DEEPTHINK

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

Bulit-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 ±1m
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)
0°C~+550°C(32°F-1022°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.

0.0001 Lux

1/1.8" Super Starlight CMOS

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.

Before

After

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.

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.
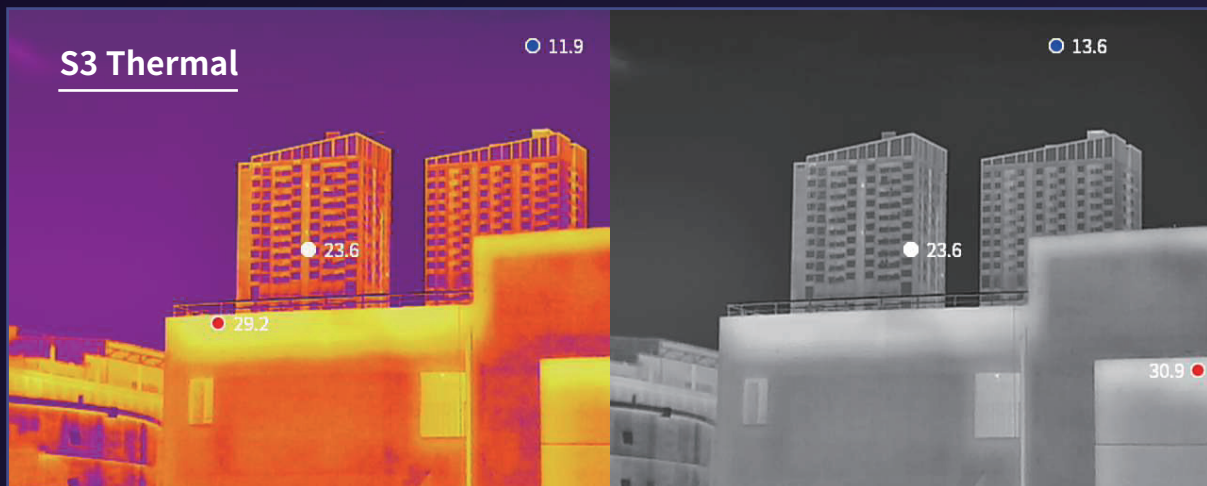
S3 Night Vision

0.3 Lux

0.03 Lux

0.01 Lux

0.003 Lux

Competitor

0.3 Lux

0.03 Lux

0.01 Lux

0.003 Lux

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 Upgrate	Support
Device Logs	Support
WDR	120 dB
SNR	>48db
Digital Noise	Support
AI HDR	Support
Exposure Mode	Auto

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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 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 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 ± 5

LET'S LIGHT UP
THE WORLD

The world's most advanced AI-ISP night vision hub.

Founded in 2017, Deepthink is the world's first start-up that uses AI ISP to deliver true-color night vision hardware. Product lines consist of AI night vision cameras, uav cameras and monoculars. Global markets include the US, Australia, Japan, Korea, as well as China.

As the world's leading night vision hub, Deepthink is the only company with the ability to achieve richly-defined color even in the darkest moment, which is around 0.0001lux. It's committed to unlock night adventure to users all over the world.

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