# datavideo

**12bit**

**HD HDR**

## NightHawk Camera

### NH-100

# Stunning low- light performance

Datavideo NH-100 Nighthawk is a revolutionary camera made for high-end EFP, live events and stage performances. A Micro Four Thirds lens mount ensures the user of a large amount of compatible lenses currently available. The NH-100 features a 4/3″ CMOS sensor that is capable of capturing real time HDR images. This camera can achieve stunning results in low-light environments. Datavideo NH-100 Nighthawk is truly one of the best performing cameras in its class.

| Model Name | NH-100 |
| --- | --- |
| Product Name | Nighthawk Camera |
| Video format | 1080P 24/25/50 or 24/29.97/59.94<br>1080i 50 or 59.94 |
| Image Sensor | Micro 4/3" CMOS |
| Effective Pixels (approx.) | 20.89 Mega pixel |
| S/N Ratio | 60 dB |
| Min. Illumination | 0.1Lux |
| Electronic Shutter | 1/25 (1/30), 1/50 (1/60), 1/75 (1/90), 1/100 (1/120), 1/125, 1/150, 1/200 (1/240), 1/500, 1/1000, 1/2000, 1/4000, 1/8000 sec |
| Zoom Ratio | Lens Dependent |
| Gamma Control | Dynamic Adjustment |
| Iris Control | Manual |
| Digital Noise Reductions | 3D Noise Reduction |
| On-Screen Display (OSD) | Simplified Chinese/English (control app) |
| White Balance | AWB / MWB / Lock |
| AGC / Gain Control | Auto(AGC) / Manual / Lock |
| Focus Mode | App control(push-auto/manual), Lens control |
| Focal Length | Lens Dependent |
| Field of View (Horizontal, Wide) | Lens Dependent |
| Image Compensation | Auto |
| Video Output | SDIx2, HDMIx1 |
| Audio Input | Support Dual XLR Mic in with phantom power<br>Embedded with video output |
| Tally LED | Dual color (Red, Green) |
| Remote Control Interface | Wifi<br>USB(OTG) |
| F/W Update | Control app(Wifi) |
| Camera Control Unit | Android / iOS phone |
| Color | Dark Blue |

Tally Light: A simple and bright tally light can guide the host to know the recording position right away in most of the EFP applications.

2x XLR Connectors: Compatible with one stereo microphone or two mono microphones . (48V phantom power available)

7~15V DC Input allows user to use power from an outlet or battery. Datavideo provides various accessories for mounting different batteries.

Serial and Ethernet control ports: Datavideo has developed its own external camera controller that is suited for the Nighthawk camera.

SDI and HDMI Dual Outputs: The NH-100 can output the video signal simultaneously through two SDI and one HDMI OUT interface.

# Features and functions

NH-100 uses state of the art technology to capture stunning image quality. Whether you're using the Nighthawk camera in day or night environment, the video images stay crisp and clear at the most natural colour.
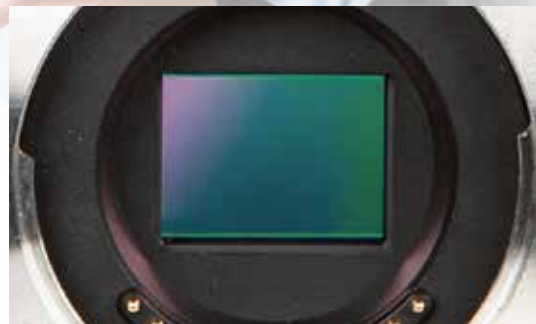




## MFT Lens Mount

The MFT mount is ready for lenses made by industry leading manufacturers such as Sony, Leica, Panasonic and Sigma. With optional converters you can also mount Canon EF and other lenses.

## Full HD 60fps Capture

NH-100 uses a Micro 4/3" sensor to capture images in 1080P resolution. The sensor allows the processor to create a noise-free recording even in dark environments.





## High Dynamic Range

The NH-100 uses HDR technology to capture a wide dynamic range of darkness and light seen in challenging environments, such as night-time concerts and theater stage performances.

## 12 bit processing

The NH-100 Nighthawk captures more color information than many other cameras, allowing it to deliver better-looking video for post-processing.

# Applications

## Worship

Houses of worship are often dimly lit by candles and other small light sources. This can be challenging for cameras since there is almost no contrast betwaeen light and dark areas. NH-100 is capable of handling that little contrast and delivers stunning low noise images.

## Live stage events

Concerts, night clubs, theater and other live stage events such as esports heavily rely on bright, moving lights. Bright lights and dark moments alternate very fast and it's impossible to anticipate movements on the stage. NH-100 uses HDR technology to make sure that the content looks as sparkling on the screen as it did live.

Perfect combination of Virtual and Real Scenes

Glass

## Chromakey studios

The NH-100's proprietary high definition video capturing technology is the best source for virtual studio chromakey applications. The most challenging glass, smoke and hair in the virtual studio can be perfectly demonstrated by combining the NH-100's 12-bit CMOS sensor with the chromakey technology.

# NH-100 Enhancements & Accessories
## The Selection of the camera lenses



### 12-60mm, F2.8-4.0 lenses
Best used for on-site activity EFP shooting. Can provide great image quality that is similar to the high-end broadcasting grade ENG camera in the studio.



### 100-400mm, F4.0 lenses
Best used for long distance shooting, which equals to 200mm to 800mm long distance focal length of the Full Frame camera.



### F1.2 lense
Best used for low-light shooting environment to completely show the delicate image quality by the HDR and high ISO value.



### 12mm, T2.2 lenses
Best used for achieving cinematic style shooting. The T-Stop cinematic standard aperture can achieve consistent exposure value no matter which focal lengths are used.



### 42.5mm, F1.2 lenses
Best used for chromakey studios. It provides you the standard focal length that is similar to the Full Frame camera to achieve a very low distortion rate.

# Accessories for use as a mobile camera

Quick removal camera rig and the carry handle allow you to quickly assemble the camera according to the planned setup.

Hand Grip

XLR Microphone

Top mount monitor/recorder

Hand-held Switch

Battery

Shoulder Pad

# Accessories for use as EFP camera

**TLM-700K** — 7" 4K LCD Monitor

Datavideo 7" Full HD Pixel to Pixel Monitor to provide you a convenient and rapid way for screen monitoring.

**SLD-1** — Shoulder Mount Rig

SLD-1 transforms the NH-100 into a broadcast grade EFP camera. With a clear tally light mounted to the bottom side of the SLD-1 and one on top of the camera the talent will never miss the cues of the director.
The optional V-Mount allows mounting batteries that will give the camera an operation time of more than 8 hours.

The Datavideo NH-100 NightHawk camera is made for professional program production application. Its compact and portable form factor makes it easy to mount to a tripod for general cameras.
Zoom, focus speeds and stable electronic control for photographers to achieve smooth performance just as in the high-end studio.

## Optional microphone

There's a large array of microphones available that are compatible with the NH-100. To pick up long distance sounds the producer can use a hypercardioide microphone such as the Sennheiser pictured below.

## Optional recorders

There are lots of display/recorder combinations available. To achieve the best results, choose a DNxHD or ProRes recorder like the Atomos pictured below.

# Optional  Accessories:

### SLD-1

### Shoulder Mount Rig

### Quick removal camera rig
Convenient for mounting extension accessories.

### Shoulder Pad
Increases shoulder comfort and stability.

### Hand Grip
Convenient for carrying and putting the camera onto the shoulder.

### V-Mount Battery Plate
Powering the NH-100, monitor and recorder simultaneously; it balances the weight on your shoulder for stabilizing the camera.

### Zoom bar/ Focus control
Integrates flexible electric servo motor control to give you a fabulous camera operating experience.

### Shoulder Pad Grip
Enhances the stability when placing the camera onto the shoulder.

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## A.Real-Time High Dynamic Range (HDR)

In this video quality-conscious world, only the HDR(High Dynamic Range) technologies that are provided by very few companies can satisfy the highly-demanding video workers. High Dynamic Range (HDR) brings larger contrast range for videos comparing to the general Standard Dynamic Range (SDR). The HDR technology greatly enhances the stereoscopic and detail of the video.

For example, if the image is shot in the backlighting environment, the image will become overexposed due to the strong light source and the subject of the image will become dark.

It's hard to make up the loss of picture information even using the most advanced post-production technology, not to mention that the EFP on-site program production which every second is counted.

Video shooting with the HDR technology can catch maximum details for the strong light source and the dark part to keep the light and shadow levels at that moment.

Moreover, it can keep great color authenticity, better continuous tone and higher contrast ratio to demonstrate higher quality and delicateness.

The HDR technology helps users to achieve vivid image quality. The value of the real-time HDR technology can be reflected in the EFP on-site activity shooting environment.

## B.Up to 409600 ISO value and 12-bit image processing capability

There are more and more low-light environment EFP shooting applied in e-Sport and evening party in addition to the highest grade cinema productions.

The shooting in this low-light environment is a great challenge for the capability of camera sensor. Generally speaking, there are a great deal of shadow noise when the ISO value of a camera exceeds 5000.

Generally speaking, a cinema-grade camera or a high-price ENG camera is needed for preserving image quality as real in this situation. However, you need a professional team to run those complicated equipments. NH-100's ultra-high 409600 ISO value reserves video details and levels. Moreover, it features excellent signal noise suppressing ability, real-time HDR technology and Full HD 1080P25/30 12-bit image processing ability. The NH-100 achieves exquisite image quality that can be compared to the movie-grade images. Rich and clear levels of the images can be demonstrated within strong light source environments without any overexposing.

Furthermore, the NH-100 achieves the image esthetic feeling that can match to the movie-shooting. The Datavideo NH-100 integrates powerful processing capability within a portable ruggedized enclosure for you to pack all of the devices by one backpack only.

The NH-100 is easy to use and can be applied to any shooting environment as you want. The NH-100 can provide you what you want instantly that only can be achieved by time and energy consuming post production in traditional way.

C. 11 pins electronic lenses mount with interchangeable lenses design. Supports a group of high quality high-end Micro 4/3 professional lenses series such as Panasonic LEICA, Panasonic and Olympus lenses to achieve broadcasting level depth of field effect.

F. Supports WiFi Control by the iOS and WiFi & USB OTG control by the Android OS. Supports Auto Focus for the specific point. Minimizes the WiFi delay to within 4 frames and the USB OTG delay to within 1 frame to reduce the difficulty of using and to make it easier to use a professional camera.



D. Supports external microphone input embedding with Phantom Power (DC+48V) that can achieve long range transmission for the microphone signal while keeping the voice signal to be similar to the original source. Moreover, it brings users a more convenient way to preserve the on-site synchronous reference voice. This helps users to save their efforts for the complicated voice-image synchronizing procedure in post production.



G. Supports live streaming through the 4G handset and shooting screen monitoring and control through the USB interface(Android OS only). Through NH-100, users can experience the feeling to be a popular internet celebrity to attract more audience for your fabulous performance. The NH-100 is a powerful live streaming device for internet celebrities.



E. Integrates HDMI and SDI connectors and can output simultaneously.



H. The NH-100 can be adopted in broadcasting grade production environment including inside/outside the studio, outskirts and indoors. The versatile applications of the NH-100 help you to face difficult challenges in an easy way.

# What kinds of functions must be integrated into an EFP camera?

Generally speaking, most of the EFP cameras focus on high-end and high price market. However, the high end EFP shooting will be limited by its budget. The NH-100 NightHawk camera with a variety of accessories can help you to fulfill broadcasting grade high-end video shooting with limited budget.

A.Tally Light: EFP shooting is normal in most of the EFP applications. However, it is easy for the host to show slack facial expression due to that they can not catch the shooting position. In this situation, a simple and bright tally light can guide the host to know the recording position right away.

F. It is easy to fix the NH-
NightHawk camera to
mount of the EFP cam