



Falcon Eye KC-2000 SWIR (Short-Wave InfraRed) Portable Video Camera System: See Through Smoke, Fog, Clouds and more!

KOMAMURA CORPORATION (Japan), the manufacturer of the Falcon Eye Color Night Vision Video Camera System, announced it will soon be releasing the **Falcon Eye KC-2000 SWIR (Short-Wave InfraRed) Portable Video Camera System**.

In the world of wildfires, surveillance, and rescues, the biggest problem is visibility. Being able to see through smoke, fog, clouds, and haze is crucial and has the potential to save lives and property. Unlike visible light, NIR, and LWIR (thermal) imagers, the **Short-Wave InfraRed (SWIR)** sensors used in the Falcon Eye KC-2000 SWIR camera system can see through these adverse conditions for long-range ground, sea and airborne surveillance and recognition of subjects or targets! Based on lab and field tests, the Falcon Eye KC-2000 SWIR will be a game-changer when it comes to field applications of SWIR cameras!

SWIR (Short-Wave InfraRed) technology makes vision and surveillance possible in extreme conditions and ensures capturing discernible profiles of objects under poor visibility conditions such as smoke, fog, clouds, and haze.

Unlike conventional, incomplete SWIR camera modules, most of which are geared toward industrial vision applications, the **Falcon Eye KC-2000 SWIR System** will be a completely portable, self-contained, battery-powered video camera system with onboard viewing, recording and storage capabilities (up to 256gb!). The USA manufactured SWIR camera module's capabilities have been refined and expanded with proprietary enhancement software, electronics, and algorithms for increased performance. It offers scalability and flexibility under a wide range of scenarios by accepting optional accessories, including external power supplies, microphones, recording devices, viewing monitors and transmitters for remote observation.

LIMITATIONS OF VISIBLE/NEAR INFRARED CAMERA SYSTEMS

While visible/NIR (Near Infrared) camera systems provide unique attributes of their own, notably high-fidelity color reproduction coupled with high resolution, they come with limitations as well.

Despite the recent advancements, low visibility scenes remain a problem for VIS/NIR cameras. Fog and haze are still serious challenges. Even with a defogging feature, the overall contrast and ability to distinguish details drops dramatically, due to the limited spectral range that visible light sensors are dealing with. And smoke is impossible to penetrate with VIS/NIR camera systems.



ONLY SWIR SYSTEMS CAN HANDLE THESE EXTREME CONDITIONS

SWIR cameras can easily address these issues, thanks to their spectral bandwidth sensitivity. Fog, haze and smoke do not severely affect the visibility of the objects. As an added bonus, the visual look of SWIR imaging is very similar to VIS/NIR cameras (because of its spectral proximity to human vision), making viewing and analyzing the images faster and easier.

The Falcon Eye KC-2000 SWIR Portable Video Camera System expands the scope and range of applications by taking advantage of SWIR's superior properties and the major refinements and enhancements made by Komamura Corporation. By integrating the highly efficient sensor and packaging all of the critical functionalities of a video camera system (viewing, storage, and recording) into one portable device, the Falcon Eye KC-2000 SWIR Portable Video Camera System can produce results not possible from other systems.

SWIR INTERCHANGEABLE LENSES

Featuring the industry-standard C-series lens mount as a mechanical interface, the Falcon Eye KC-2000 SWIR Portable Camera can be coupled with lenses specifically designed for SWIR and an array of CCTV/IP lenses with customized coatings tuned for the SWIR bandwidth. The added benefit of being able to use optics with different focal lengths, from wide-angle to telephoto, lets this camera system serve the purpose for detection and recognition at close and far distances – ideal for wildfires, surveillance and rescues.

TOTAL PORTABILITY FOR IN-THE-FIELD OPERATIONS

Based on lab and field tests, the Falcon Eye KC-2000 SWIR Camera System will be a game-changer when it comes to field applications of SWIR cameras. Unleashing its use outside of the lab or the production line, this portable video camera system can provide critical videos and/or still images needed for operations in the field – for firefighting, law enforcement, military, border patrol, or forensics – under previously impossible conditions.

Key features of the Falcon Eye KC-2000 SWIR Portable Video Camera System:

1. 1A completely portable, self-contained, battery-powered video camera system with onboard viewing, recording and storage capabilities
2. Fog or smoke, which tends to become problematic for conventional VIS/NIR cameras, does not disrupt image capturing capabilities.
3. Covert operations requiring shooting through or seeing through windshield/window glass can be performed, a distinctive difference from LWIR (Long-wave Infrared) cameras even though SWIR is a part of thermal imaging.



4. **VGA (640x512) resolution provides high image quality and, coupled with 30 or 60 fps, delivers excellent video streaming as well as recording.**
5. **Laser beams of specific wavelengths commonly used for weapon sights can be detected due to the sensitivity characteristic of the InGaAs sensor.**
6. **Hidden markings or disguises, that cannot be captured by VIS/NIR cameras, are clearly revealed, which contributes to the easy identification of a person of interest.**
7. **The C-series lens mount accepts a wide range of lenses for close and distant objects.**

Customizable Technology

Komamura Corporation's exclusive enhanced SWIR technology can also be configured into customized housings for use on vehicles, aircraft, vessels, PTZ, etc.

Specifications:

- **Indium Gallium Arsenide (InGaAs) detector (uncooled): 640x512 active pixels**
- **Sensitivity: 0.9-1.7 μ m (peak bandwidth)**
- **VGA resolution 640x512 at 60 or 30 fps**
- **C-mount lenses specifically designed for InGaAs sensor and/or visible/NIR lenses with coatings optimized for 0.7-1.7 μ m spectrum.**
- **Maximum on-camera storage capacity: 256GB (SDHC/SDXC Class 4 or higher memory card recommended).**
- **Dimensions w/o lens (w x h x d): Approx. 4.2 x 3.9 x 8.3 in. (108 x 100 x 210mm)**
- **Weight (w/o lens, battery and accessories): Approx. 2.5 lb. (1.1kg)**

Note: Specifications are subject to change without prior notice. Specifications for the final production product (expected Q3 2020) may vary slightly from the above information.

Designed and manufactured in Japan.

For more details on the **Falcon Eye KC-2000 SWIR or Falcon Eye Color Night Vision Video Camera Systems**, please visit our website at www.falconeyecnv.com or contact Komamura Corporation at:

Komamura Corporation

Japan HQ Office

+81-3-3808-0118

tosh@komamura.co.jp

US Sales Office

+1 973-769-8988

jeffreymkarp@gmail.com

European Sales Office

+45 42952882

allan@falconeyecnv.com