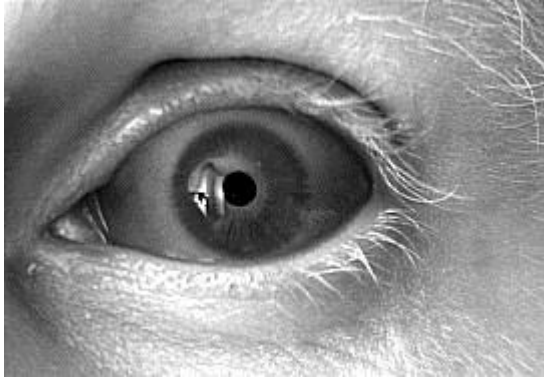


Iris Recognition using SWIR

The image below was taken of an eye using Raptor’s OWL 640. This image shows high resolution and detail in the iris.



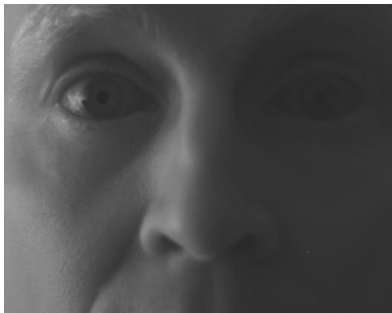
SWIR close-ups of the human eye highlight a unique level of detail. The transparency of the cornea extends well into the SWIR band enabling incredible detail of the iris to be reproduced. This fine structure is a unique identifier of the individual, offering further security than a fingerprint scan.

A key advantage of iris recognition, besides its speed of matching and its extreme resistance to false matches, is the stability of the iris as an internal, protected, yet externally visible organ of the eye.

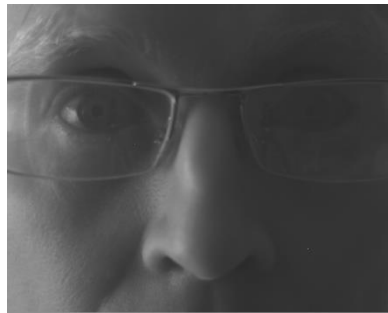
SWIR also allows iris images to be captured at distance with controlled lighting sources that are eye safe and essentially undetectable. SWIR offers the truly unique possibility of capturing iris images even when the individual wears regular eye glasses or even sunglasses.

The following images highlight the benefits of using SWIR.

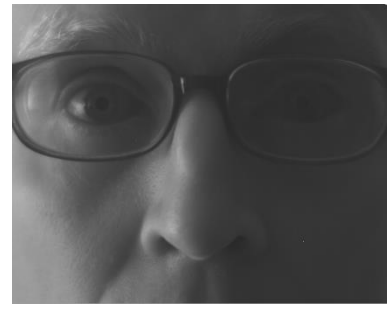
Using SWIR (900nm-1700nm)



Standard



With glasses



With sunglasses

Using a Osprey sCMOS (350nm-1100nm)



Standard



With glasses



With sunglasses

You can easily see the advantage gained from using SWIR

Features and benefits of the OWL 640

- VIS-SWIR technology - Enables high sensitivity imaging from 0.4mm to 1.7mm
- 15µm x 15µm pixel pitch - Enables highest resolution VIS-SWIR image
- < 50 electrons readout noise - Enables highest VIS-SWIR detection limit
- 14 bit CameraLink output - Enables high speed digital video with intelligent auto AGC
- On-board Automated Gain Control (AGC) - Enables clear video in all light conditions
- On-board intelligent 3 point NUC - Enables highest quality images
- Ultra compact, Low power (< 5W) - Ideal for hand-held, mobile or airborne systems
- Rugged, No fan - Enables integration into UAV, handheld or any Electro-Optic system
- Optional Asynchronous Laser Pulse Detection (ALPD)

For more information contact Raptor on sales@raptorphotonics.com

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