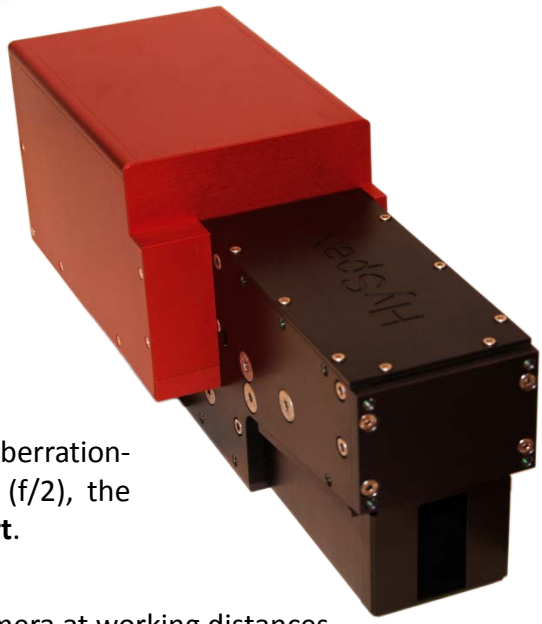
HySpex

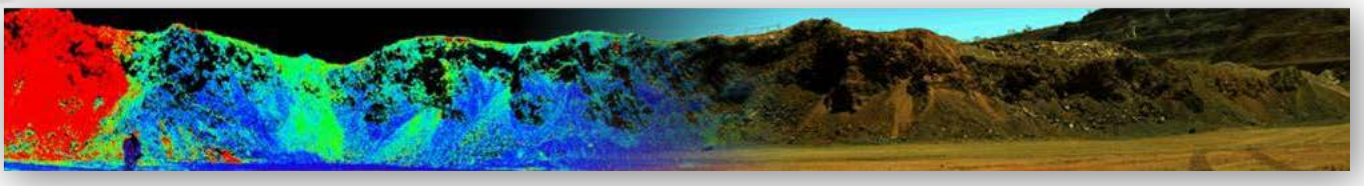
HySpex SWIR-384



The new HySpex SWIR-384 hyperspectral camera from NEO, is developed for **field**, **laboratory, airborne and industrial applications**. The new state of the art MCT sensor with deep cooling yields low background noise, high dynamic range and **exceptional SNR levels**.

With a max frame rate of **450 fps**, combined with an aberration-corrected optical system with high optical throughput (f/2), the **data quality**, **speed** and **sensitivity** is truly **state of the art**.

A wide range of **close-up lenses** allows the use of the camera at working distances ranging from a few cm with a spatial resolution of **60 µm** to infinity for e.g. airborne remote sensing.



Main specifications

Wavelength range*	930-2500
Spatial pixels	384
Spectral channels	288
Spectral sampling	5.45nm
FOV**	16°
Pixel FOV across	0.73mrad
Pixel FOV along	0.73mrad
Binning modes	-
Bit resolution	16bit
Max speed	450fps
Power consumption	30 W***
Dimensions (l–w–h)	38 – 12– 17.5 cm
Weight	5.7 kg

* somewhat adjustable during manufacturing

** can be doubled with a FOV expander

***during start-up/cool down period. Operational power consumption ~12W

Rugged portable Data Acquisition Unit (DAU)

A **portable**, **rugged** DAU with transreflective display is supplied for field operations. The DAU is equipped with a custom designed powerboard, supporting four **exchangeable battery packs** for field use, and can power and operate up to two HySpex cameras.

To ensure **stability and ruggedness**, all field DAUs are supplied with **exchangeable SSDs** for storage.

The DAU is equipped with fast a processor and a large RAM, also making it an excellent tool for **fast data processing** on-site.

Rugged tablet

To **control the cameras remotely**, the system can be supplied with a rugged tablet. The rugged tablet is especially well suited for operations in harsh work environments and for regular field work where a **flexible setup** is needed.

The acquisition software is specially **adapted for ease of use with touch devices**, and provides the operator with full control of the camera settings and operation.

Rigid tripod and rotation stage

For lab and field use, a scanning stage is needed to scan the cameras and build the hyperspectral data cube of the scene. For **field operations**, NEO supplies a range of **high precision rotation stages** tailored to fit the number of cameras and the operational scheme.

For fast and precise scanning of larger areas such as a **mine face, outcrop or building**, NEO can supply an **automatic pan-tilt scanner**. By inputting the number of degrees and scan lines to scan in both the horizontal and vertical direction, the stage will automatically scan the **pre-programmed area**, ensuring the desired overlap between scan lines.

To ensure **stable and reliable** acquisitions in challenging field conditions, **a rugged, yet portable**, tripod is supplied. NEO supplies a variety of tripods with pan/tilt-heads that will accommodate the payload capacity of the cameras and rotation stage used.

A user friendly table-top **lab setup** with translation stage and VNIR-SWIR light source can also be supplied for scanning of e.g. **drill cores** and other samples.