

THERMAL NARROW-BAND HYPERSPPECTRAL CAMERA

HYPER-CAM NARROW BAND

TEL@PS

NARROW BAND DETECTION, IDENTIFICATION AND IMAGING

The Hyper-Cam Narrow Band is an advanced high performance, thermal hyperspectral imaging camera that combines high spatial, spectral and temporal resolution providing unmatched performance. It is a versatile research tool for remote detection and identification in a laboratory setting.



A SPECTRUM FOR EACH PIXEL

The unique spectral features of gases and solids are obtained upon modulation of the incoming infrared radiation from the scene by a Michelson interferometer. A high resolution spectrum is then recorded at each pixel of a focal plane array (FPA) detector.

By comparing a measured spectrum with spectral signatures of known gases and solids, the constituents of a target can be easily identified.

APPLICATIONS

Benefit from easy to use, operational flexibility while getting accurate measurements over the camera's entire operation range.

Camera includes:

Defense and Security

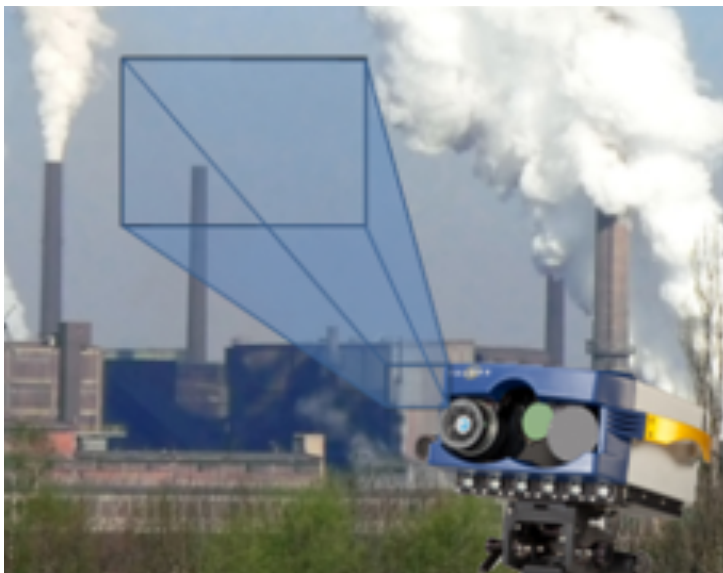
- Smoke Candles
- Camouflage
- Signatures
- Energetic Materials

Industrial and Research

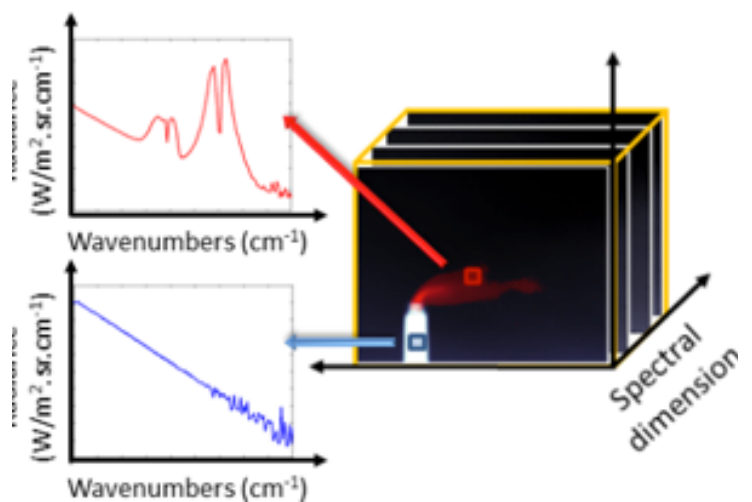
- Toxic Industrial Chemicals (TICs)

Environmental

- Flares and Smokestacks
- Gas and Aerosol Clouds



A high resolution spectrum for each pixel



PERFORMANCES

Spectral range	7.7 μm to 9.3 μm
Spectral resolution	0.25 - 64 cm^{-1}
Typical NESR	20 $\text{nW}/\text{cm}^2\text{sr cm}^{-1}$
Radiometric accuracy	< 1.0 K
Acquisition software	Reveal Pro Reveal D&I
Data transfer	Camera Link

PHYSICAL PROPERTIES

Image size	320 × 256 pixels
Field of view	25.2° × 20.3°
Operating temperature	-20°C to 40°C
Certification	IP42
Size	19" × 19" × 10" 482.6 mm × 482.6 mm × 254 mm
Weight	31 kg
Power consumption	150 W

Actual product may differ and specifications are subject to change without notice.

GET THE ADVANTAGE IN HYPERSPECTRAL RESEARCH

The Hyper-Cam Narrow Band is useful for conducting spectral analysis of multiple gases and solids including:

- Butane
- Isopropanol
- Acetone
- Dimethyl methylphosphonate
- Sulfur dioxide
- Sarin
- Nitrous oxide
- Toluene
- Ammonium sulfate
- Quartz
- Alunite
- Polypropylene
- Polystyrene

And more...

Spatial Resolution and Imaging Quality

Hyper-Cam Narrow Band provides an excellent image quality using a 320 x 256 pixels FPA detector. The 6.4 x 5.1 degree field of view can be easily modified using different optics.

High Spectral Resolution

The Hyper-Cam offers the best spectral resolution available. The spectral features of targets can be well resolved providing good selectivity.

Temporal Resolution

Hyperspectral datacubes are recorded as a function of time allowing characterization of time-dependent events like gas cloud dispersion and combustion. Measurement time varies with acquisition parameters; this allows the fastest recording of dynamic events.