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
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.

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### TECHNICAL SPECIFICATIONS

#### PERFORMANCES

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spectral range</td>
<td>7.7 μm to 9.3 μm</td>
</tr>
<tr>
<td>Spectral resolution</td>
<td>0.25 - 64 cm(^{-1})</td>
</tr>
<tr>
<td>Typical NESR</td>
<td>20 nW/cm²sr cm(^{-1})</td>
</tr>
<tr>
<td>Radiometric accuracy</td>
<td>&lt; 1.0 K</td>
</tr>
<tr>
<td>Acquisition software</td>
<td>Reveal Pro, Reveal D&amp;I</td>
</tr>
<tr>
<td>Data transfer</td>
<td>Camera Link</td>
</tr>
</tbody>
</table>

#### PHYSICAL PROPERTIES

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
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<tbody>
<tr>
<td>Image size</td>
<td>320 x 256 pixels</td>
</tr>
<tr>
<td>Field of view</td>
<td>25.2° x 20.3°</td>
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<tr>
<td>Operating temperature</td>
<td>-20°C to 40°C</td>
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<tr>
<td>Certification</td>
<td>IP42</td>
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<tr>
<td>Size</td>
<td>19&quot; x 19&quot; x 10&quot;</td>
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<tr>
<td></td>
<td>482.6 mm x 482.6 mm x 254 mm</td>
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<tr>
<td>Weight</td>
<td>31 kg</td>
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<tr>
<td>Power consumption</td>
<td>150 W</td>
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</tbody>
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Actual product may differ and specifications are subject to change without notice.