

Real-Time Spectral Imaging:
introducing the **FireflEYE**

Q285



**Robust and fast, turnkey ready
imaging spectrometer**

Short facts

The Q285 is the first of its kind full frame non-scanning, imaging spectrometer. Our technology combines the simplicity of a point-and-shoot camera with the precision of hyperspectral imaging. This Vis to near-infrared imaging spectrometer was designed having industry, laboratory and outdoor use in mind. With its IP67 certification it is especially designed for rough environments and long term stability.

The unique working principle guarantees easy access to hyperspectral images, real time processing up to hyperspectral video frame rates.

Principal applications

- Remote sensing
- Process control
- Food production
- Color industry
- Microscopic applications
- Archeology
- Biological and medical applications
- Chemical imaging
- Precision farming
- Water spectroscopy



Q285 FireflEYE

Camera properties

Detector	Si CCD
Digitization	14 bit
Measurement time	down to 100 μ s
Camera interface	2x Gigabit Ethernet
Hyperspectral cube rate	up to 20 cubes/s
Cube resolution	1 megapixel
Spectral throughput	2 500 spectra / cube
Processing software	included
Software development kit	included

Optical properties

Objective	selectable
Mount	C-mount objective
FOV	selectable (microscope to fisheye)

Physical properties

Certification	CE and IP 67 (waterproof)
Operating temperature	0 - 40 °C
Weight	300 g
Power	DC 12 V, 15 W

Spectral properties

Wavelength range	450 – 950nm
Sampling interval	4nm
Spectral resolution	8 nm @ 532nm
Channels	125

What you should know

The goal of our development was an easy to handle imaging spectrometer with no need for scanning (like push broom technology) or image combination after fast filter shifts. Instead of the slit of a push broom scanning device we use a spatial grid which images two dimensional data points through the spectral apparatus onto the CCD.

Recalculation of the interwoven spatial and spectral information gives us direct access to the hyperspectral cube with every frame captured. This process takes as little as 1/1000 of a second. Thus there are no moving artifacts, no hassle with translation stages and no restrictions in speed.

All that technology was packed into a waterproof, dustproof and shock-resistant housing which guarantees long term stability and lets you use the system where you need it.

With this technology you get unique advantages above all available systems on the market, which enables absolutely new and outstanding applications.

Your benefits

- Rapid hyperspectral cube acquisition: 1/1000s!
- No moving artifacts
- Real hyperspectral videos
- Rugged and robust (IP67)
- Plug and play