

An Affordable Camera for Professional Performance

Features & Benefits

- Industry Proven 1024x256 pixel spectroscopy array
- Air Cooled, 70°C below Ambient Temperature
- USB 2.0 and Ethernet 10/100 for robust communication and lab commonality
- Integrated Compact Package Design
- Software Engineered to integrate with most popular Spectrometers
- Custom or Standard Spectroscopy Mount available
- Software Development Kit (SDK) Ease of control integration into complex setups: Matlab, Labview, Visual Basic or C/C+

Jireh Scientific Imaging

A Division of Jireh Technologies

(JSI) introduces Zion, a Spectroscopy Camera that will fit your needs AND your budget!



Air Cooled Zion 256



Liquid Cooled Zion 256 LQ

The Zion was developed as an innovative camera to be the optimal solution and both be economical and the answer to your research obstacles as well. Finally, a fresh camera design you can appreciate without any financial regrets. Design Excellence. Delivered.

ZION was designed and engineered not only for low noise quantitative spectroscopy applications, but also with the end-user's and OEM applications' budget in mind. This affordable solution is compact, gives the user the options to use USB 2.0 or Ethernet for communication and has a dual spectrometer mount (3.60" (91.44mm) Bolt Circle and a 3.5433" (90mm) x 2.0472 (52mm) x4 thru hole for 6-32 screws), all standard with Zion. Cooling capable to reach **95 degrees Celsius below ambient temperature for a dark current as low as 0.0018 e/pix/sec, ideal for low light-level applications such as fluorescence's, DNA sequencing and measurement of certain biological samples. The 1024 array with 6.656 mm CCD height and 26.624 mm spectral coverage is ideal for multi-stripe spectroscopy and maximum light collecting area. Zion, a Targeted Performance Camera for Professionals.



Summary Specifications

Some Applications

- Raman
- LIBS
- Emission
- Absorbance
- Reflectance
- Fluorescence
- OEM Integrated Systems
- Photoluminescence
- Electroluminescence



System Details

CCD Sensor	Industry Proven e2v CCD 30-11 High Performance Sensor
Pixel Size	26 x 26 μm
Image Area	26.624 x 6.656 mm
Blemishes	Grade 1 According to CCD Manufacturer's Specifications
Standard ADC speed/bits	500 KHz/16 Bits

CCD Performance

Spectrometric Well Capacity	Single Pixel Binned	500 Ke- 1000 Ke-
Dark Current	FI @ -50°C BI @ -50°C OE @ -50°C	0.015 e/pix/sec 0.08 e/pix/sec 0.015 e/pix/sec
Vertical Shift Rate	OE (Full Vert Bin)	65 μsec

Optional Cooling (Below Ambient Temp)
Typical Air Cooling 70°C
Typical Liquid Chilled Cooling 95°C**

Other Optional Single ADC Speeds (Factory Set)
100KHz, 16 Bits
1MHz, 16 Bits

System Read Out Noise
Typical @ 500KHz 13.5 e-
Optional 100KHz 8.0 e-

Data Interface
USB 2.0
100 Mb Ethernet

Zion CCD Options

CCD 30-11 1024x256 26x26 μm
Front Illuminated
Standard
Open Electrode
Deep Depletion

Back Illuminated
Standard
UV Coating
Broadband Coating
Deep Depletion
Deep Depletion IR Coating

Coming Soon!
CCD 42-10 2048x512 13.5x13.5 μm pixel size

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(SPECS ABOVE ARE AVERAGE/TYPICAL AND SUBJECT TO CHANGE)
Cooling of 95 degrees below ambient with 10°C liquid chiller and with Zion Deep Cooling option

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