



RAMAN-532

High-Performance Raman (520-635nm)

Hyperspectral Imaging Camera



The **ClydeHSI Raman-532** is an **ultra-high resolution** push-broom hyperspectral Raman imaging camera, enabling users to obtain Raman spectral fingerprints across large areas at high speed in a non-contact, non-destructive manner.

Electron multiplying CCD detector ensures the **highest possible spectral and sensitivity performance** for all Raman spectroscopy applications.

Fully compatible with all ClydeHSI hyperspectral scanning solutions and software packages. Supplied with a universally compatible mounting plate to ensure efficient and safe operation on all ClydeHSI system configurations.

Key Applications:

Materials Science

Heritage Science

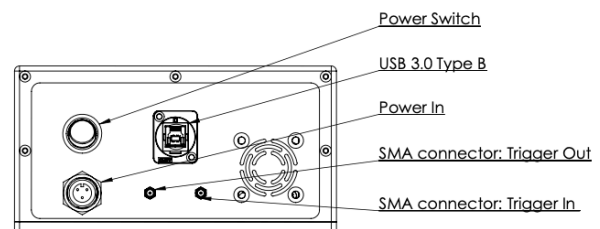
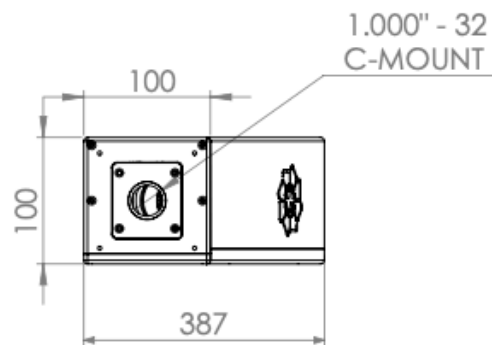
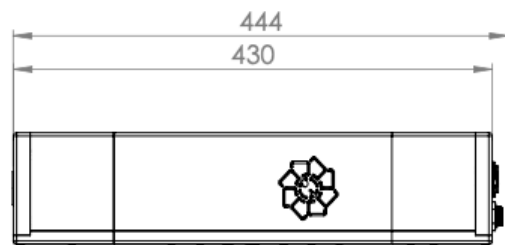
Forensic Trace Evidence Detection

Foreign Body Detection

Pharmaceuticals and Cosmetics

Life Sciences

Geology and Mineralogy



Technical Specifications

Parameter	Value	Units
Model	Raman-532	
Mode of Operation	Push-broom	
Spectral Range	520 to 635 18900 - 15900	nm cm ⁻¹
Spectral Resolution	0.3 10	nm FWHM cm ⁻¹
Pixels (Spatial Line)	1280	pix
Spectral Pixels	1024	pix
Pixel Size	8	µm
Dark Current	0.0001	e ⁻ /s
Readout Noise	EM Gain ON: <0.01 EM Gain OFF: <60e-	e-
Dynamic Range	55	dB
Full Well Capacity	>20	ke-
Sensor Material	Back thinned frame transfer cooled EMCCD	
Sensor Cooling	TEC, with fan	
Smile and Keystone	Sub-pixel across output field	
Effective Slit Width	30	µm
Effective Slit Length	12	mm
Objective Lens Options	17 23 35 50	mm
Lens Mount	C-Mount	
Bit Depth	12	bit
Frame Rate ^a	25	Hz
Integration Time ^b	10 to 8,000,000	µs
Shutter ^c	Integrated global shutter	
Camera Interface	USB-3	
Input Voltage	24	V DC
Operating Temperature	-20 to +55	degC
Humidity	5%-95%	
Weight	7.5	kg
Dimensions	444 x 387 x 100	mm

Notes:

a. Frame rate depends also upon the computer performance and operating system. It also depends upon the interface chosen, the bit resolution, and the binning conditions.

b. Integration time is independent of frame rate in the case that Integration time < 1/frame-rate

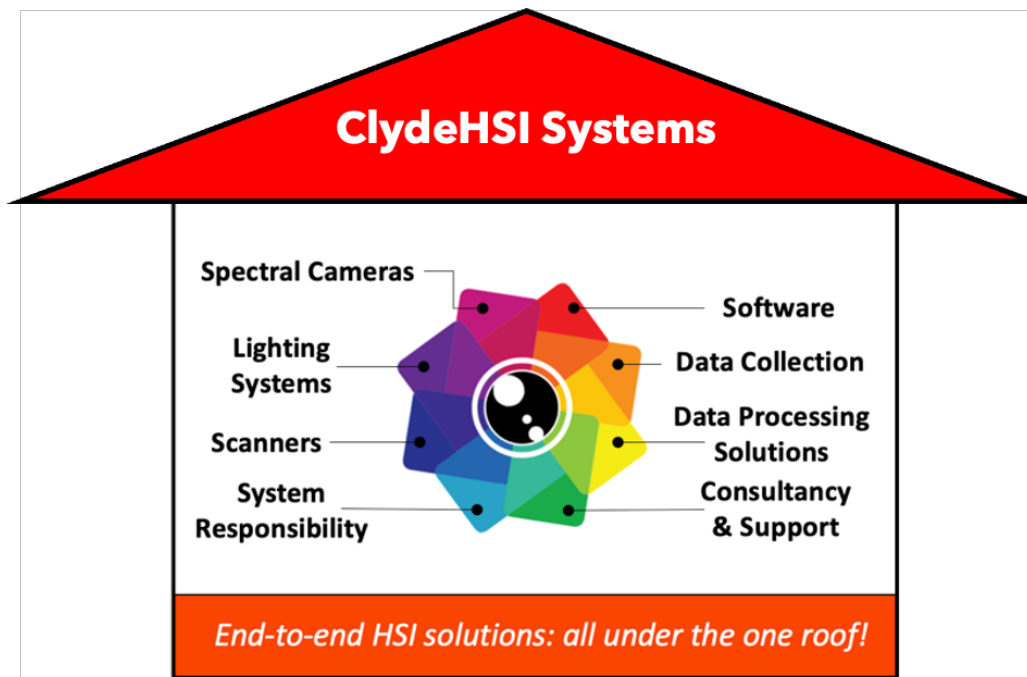
c. Shutter operation controlled by software for dark signal and bad pixel mapping

About Us

We make and measure rainbows.

ClydeHSI are specialists in optical spectroscopy and provide a wide range of both hyper-spectral and conventional spectroscopy instruments and full systems. All our products are supported by leading software for data acquisition, analysis and display.

We take care of the technology, so you can focus on what matters to you: the spectroscopy, the imaging and the science.



Our mission is to provide each and every one of our clients with a complete, end-to-end hyperspectral imaging solution, designed and rigorously tested to ensure **robust, reliable, accurate and repeatable** hyperspectral imaging measurements across a range of academic and industrial applications. Our ultimate goal for all of our systems is to **make hyperspectral imaging easy** for any and all end users.

We believe in **high quality engineering and design**, allowing us to develop market leading products and services. Within our Photonics Research Facility, we have the capability to rapidly develop new products and systems, and welcome the opportunity to partner with our customers on new developments - both within the scientific research community and for equipment for industrial applications

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