



# NIR SERIES

High-Performance Near Infrared (950-1700nm)

## Hyperspectral Imaging Camera Series

The NIR-HR and NIR-HR+ are **high speed, high sensitivity and high-frame rate**

Hyperspectral Cameras that cover the near infrared spectral range from 950 to 1700nm. Fully compatible with all of our scanning systems and software

**Highly versatile**, and ideal for a wide range of scientific and industrial process applications in the NIR spectral range, including for example: colour measurements, art and conservation heritage, phenotyping, machine vision, food quality and security as well as package seal integrity inspection, as well as forensic trace evidence determination.



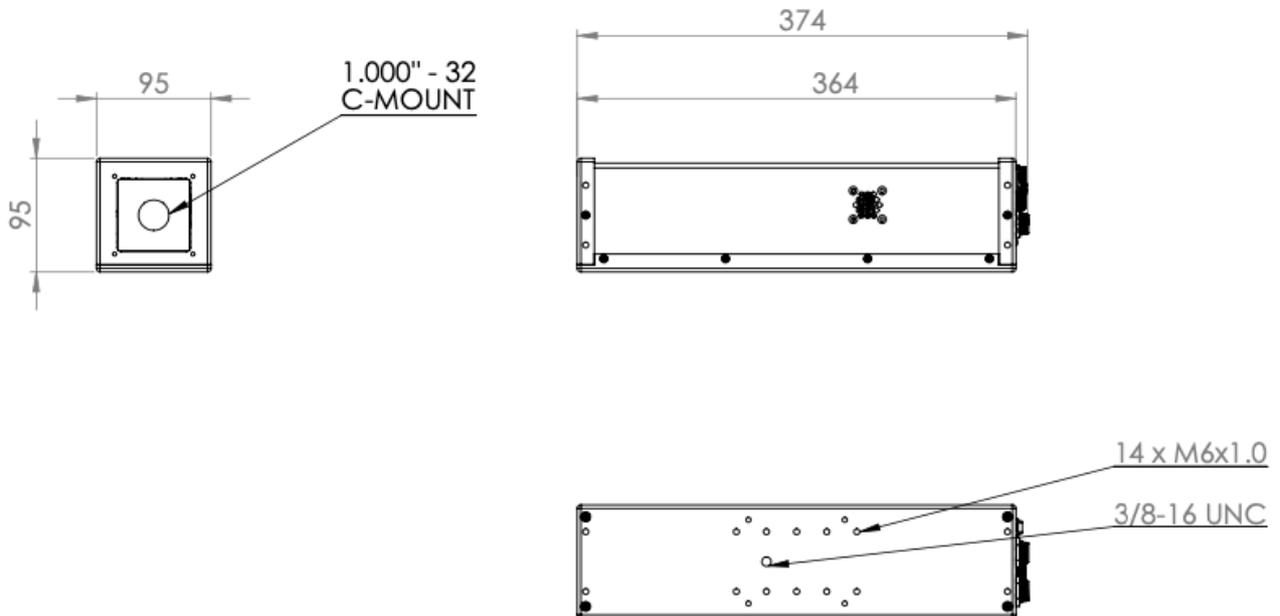
## Technical Specifications

Parameter	Value		Units
	NIR-HR	NIR-HR+	
Model	NIR-HR	NIR-HR+	
Spectral Range	950-1700		nm
Spectral Resolution	<5		nm
Spectral Sampling/pixel	3	1.5	nm/pix
Spectral Bands (Optical Resolution)	5		nm
Spectral Bands (Dispersion)	250	500	Nm
Pixels (Spatial Line)	320	640	pix
Effective Slit Width	30		µm
Effective Slit Length	9.6		mm
SNR @ Max Signal	1400:1		
Bit Depth	14		bit
Frame Rate <sup>a</sup>	Up to 344	Up to 300	lfps
Binning	1 (default), 2, 4		
Camera Output	Up to 14		bit
Camera Interface	USB-3, GiGE or Camera LINK		
Weight	2.5		kg

**Notes:**

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

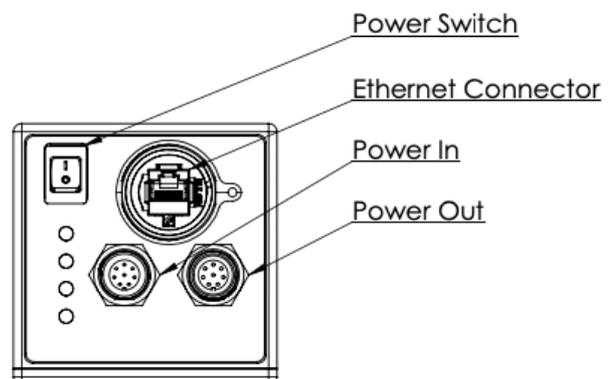
## Dimensions



## Connectivity

As with all ClydeHSI hardware and software, the NIR Hyperspectral Camera Series has been designed from the ground up with **user convenience and functionality** in mind. As a result, all cameras in our NIR series are fully compatible with all of our hyperspectral scanning solutions and software, and come provided with a mounting plate which is **universally compatible** with all of our systems to ensure efficient and safe operation.

The NIR series interface pictured below is designed for **user functionality and high performance**. One power cable and one USB input allow the cameras to be powered up and connected to our software in seconds, where they can be fully operated by the user **easily and efficiently**.



## Lenses for NIR-HR and NIR-HR+ cameras (950-1700 nm)

ClydeHSI supplies 5 lenses compatible with our NIR Hyperspectral Camera Series, each with a different focal length and subsequent field of view.

Note: the table shows the lens performance with a standard spectrograph slit and is dependent on specifications.

Focal Length (mm)	F-Number	Spatial Image Size (mm)
15	2.1	9.6
22	2.0	12.8
30	2.0	12.8
56	2.0	9.6
73.3	4.0	10.0

## 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.

Our mission is to provide each and every one of our clients with a complete, end-to-end hyperspectral imaging solution, each 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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