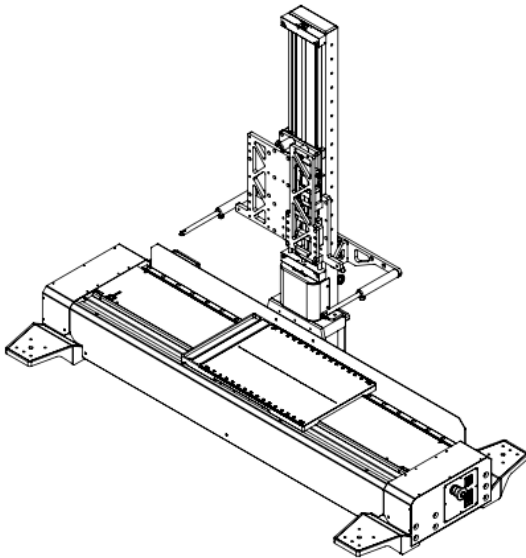




# TRANSLATION

Versatile, High-Performance, Turn-key

## Hyperspectral Scanning Solution



ClydeHSI Translation Series Hyperspectral Scanning Solutions are complete turnkey hyperspectral solutions that include: spectral camera(s), scanning stage, lighting system, built-in focus target and reflectance standard, as well as data acquisition, viewing and analysis software.

ClydeHSI Translation Series systems are available in several scanning size options from A5 to A1 equivalent areas, are quick and easy to set up on standard tables, and can acquire high resolution spectral images in seconds. The system can operate up to two spectral cameras simultaneously, and is fully compatible with all ClydeHSI hyperspectral cameras and configurations.

Other key features: auto-focus and auto-product height adjustment, fully integrated lighting stage with auto-exposure calculation.

### Key Features:

**A5 to A1 Sizes Available**

**Integrated White Tile and Focus Chart**

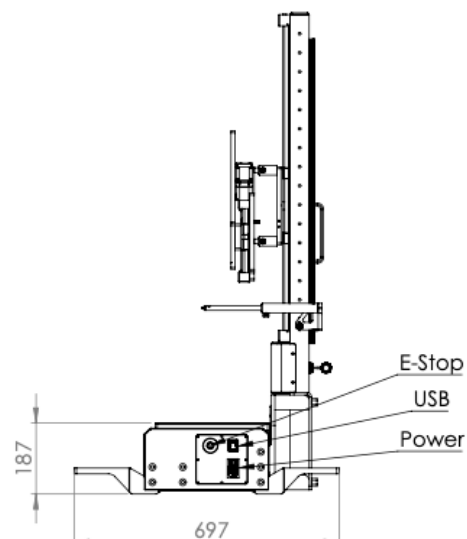
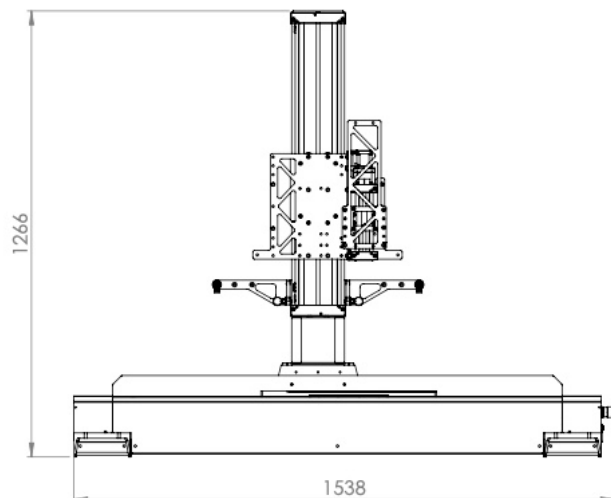
**Auto-focus of Spectral Cameras**

**Auto-exposure Setting**

**Auto-square-pixel Facility**

**Simultaneous Dual Camera Acquisition**

**Integrated Illumination System**



## Scanning Stage Technical Specifications

Parameter	Value	Units	Comment
Spectral Range	400-2500	nm	Raman options available: consult ClydeHSI
Scanning Area	A5, A4, A3, A2, A1 options		
Scan Speed	0.2 to 300	mm/s	Automatically synchronised with camera frame rate by software
Camera Stand-off Distance	Up to 1400 for A1 scanner	mm	Fully motorised adjustment via software
White Tile and Focus Grid	Reference position for white tile and focus chart		For automatic exposure time calculation, reflectance corrections, and focussing of spectral cameras
Power	90-260 50/60	V AC Hz	Automatic, universal voltage input. System supplies cameras, lighting, and stage.

## ClydeHSI Hyperspectral Cameras

ClydeHSI manufacture push-broom (line-scan) hyperspectral imaging cameras of high spatial and spectral purity, and measurement systems that are used in a wide range of applications, ranging from scientific research to industrial inspection tasks. These hyperspectral cameras measure a line image one line at a time and register spatial position across the line while simultaneously recording the optical spectrum at each spatial position.

ClydeHSI Translation Series scanners are capable of single and dual camera operation with simultaneous data acquisition, and are fully compatible with all ClydeHSI hyperspectral cameras, light sources, and our unique hyperspectral data acquisition and analysis software. This ensures broad adaptability to applications and the capability to capture hyperspectral data from a broad spectral range.

## Hyperspectral Camera Options for Translation Series

Parameter	Value					Units
Model	VNIR-S	VNIR-HR	NIR-HR	NIR-HR+	SWIR	
Spectral Range	400-1000		950-1700		1000-2500	nm
Optical Spectral Resolution	8	<3	<5		≤12	nm FWHM
Pixels (Spatial Line)	1936		320	640	384	pix
Pixels (Spectral)	1216		256	512	288	pix
Spectral Sampling/pixel	0.3		3	1.5	5.6	nm
Smile and Keystone	Sub-pixel across output field					-
Camera output	Up to 14					bit
Camera Interface	USB-3, GigE				Camera LINK	-
Frame Rate (full frame)	Up to 155		Up to 344	Up to 300	Up to 450	lfps
Shutter	N/A	Integrated				-
Lens Mount	C-mount					
Lens Options	17, 23, 35, 50		15, 22.5, 30, 56, 1:1 Macro			mm

### Example System Configuration

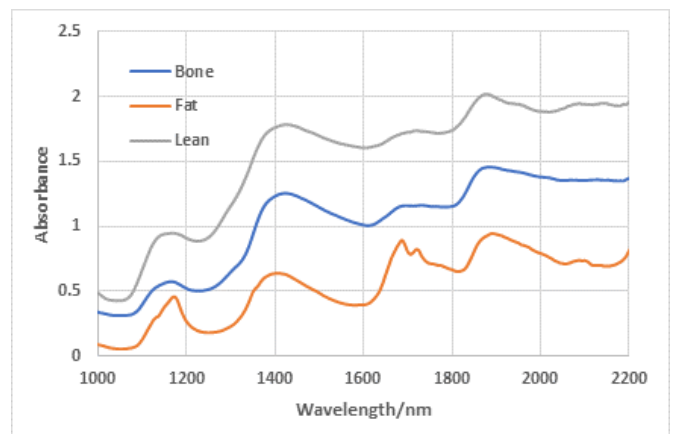
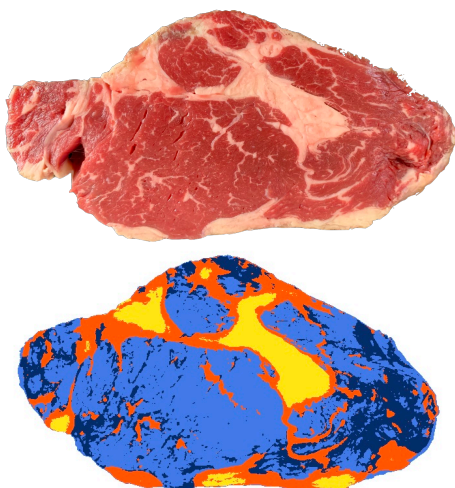
Comprising of the following:

- SC-A3 Translation Series Scanner
- VNIR-HR 400 to 1000nm, hyperspectral camera
- NIR-HR+ 950 to 1700nm hyperspectral camera
- Broad-band illumination
- Fore Objective Lens Kit
- Setup, focus, and calibration tiles
- Workstation computer
- Acquisition, visualisation, and analysis software
- Installation and application support.

### Optional Accessories

Comprising of the following:

- Auto-focus and auto-product height adjustment
- Machine vision systems for production line use
- Model creation for ultra-high speed, real-time production line sorting/grading applications
- SWIR-384 (1000-2500 nm) hyperspectral camera
- UV (320-500 nm) hyperspectral camera
- Raman hyperspectral camera and laser line illuminators

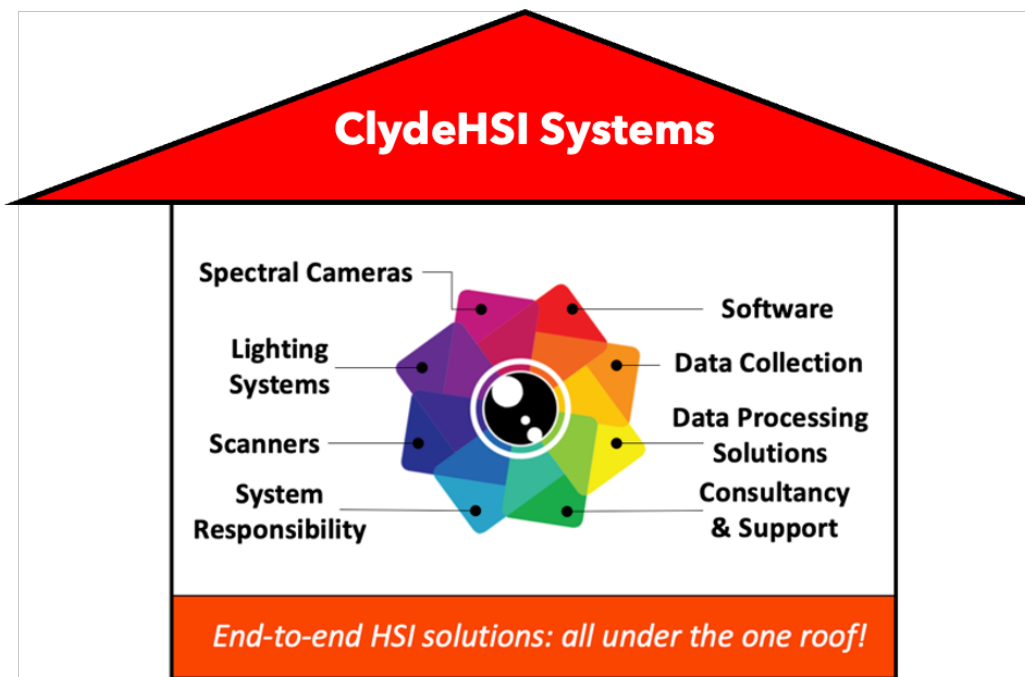


## About Us

### 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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