Headwall is the proud recipient of these honors and more...

analytik

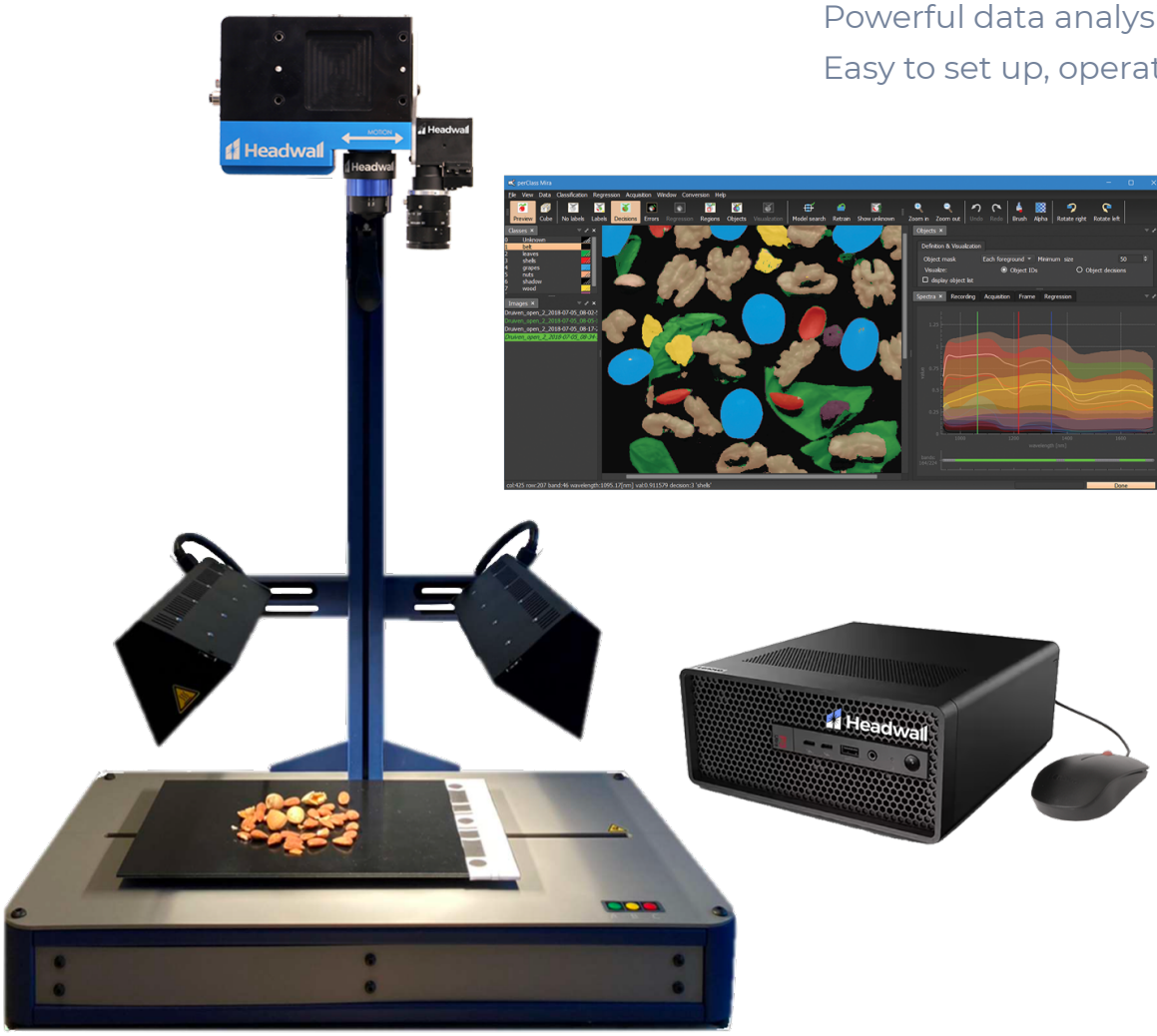
Headwall

MV.Scan Packages

For all your hyperspectral imaging needs

FEATURES

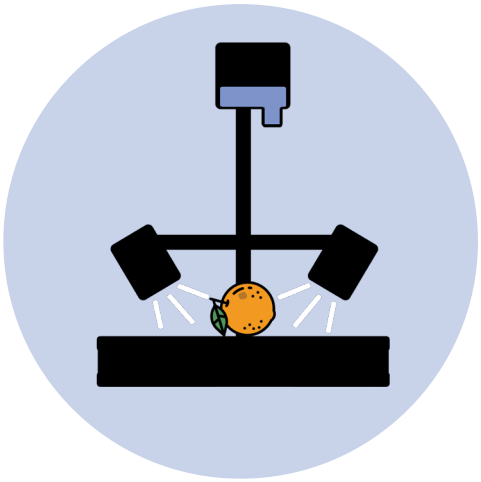
- Complete out of the box solution
- Collect, train, and deploy
- VNIR, NIR, and SWIR configurations
- Highly efficient data acquistion
- Powerful data analysis
- Easy to set up, operate, and succeed!



Does not include monitor.

REV0124

YOUR COMPLETE HYPERSPECTRAL SOLUTION

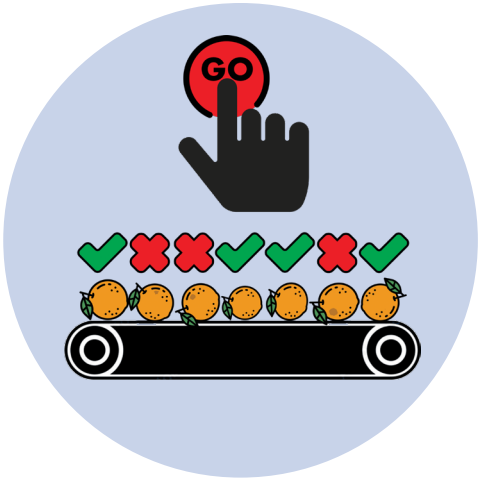


COLLECT

- Ready to operate out of the box
- Highly efficient, single-button data acquisition
- Versatile, robust, portable
- VNIR to SWIR
- Simultaneous dual-camera acquisition of VNIR and NIR data
- Integrated data acquisition control
- Data compression

TRAIN

- Powerful graphical data analysis
- Data visualization/classification/ regression analysis
- Object segmentation
- Easily define training and test data
- Powerful statistical analysis



DEPLOY

- Simple operator mode
- Immediate results
- Contact-free
- Non-destructive
- Adaptable for many applications
- Perfect tool for quality and process analysis
- Easy to set up, operate, and succeed

MV.SCAN PACKAGES
For all your hyperspectral imaging needs

Headwall's MV.Scan packages are pre-configured and tested systems with the sensor, illumination, mounts, sample stage, and software for automated operation suitable for both researcher and technician. On the **perClass Mira Scanning Stage,** a sample tray sits atop a solidly built but lightweight and portable stage with mounts for a variety of Headwall hyperspectral sensors covering the VNIR, NIR, and SWIR wavelength ranges.

These Headwall hyperspectral sensors accept C-mount lenses (sold separately) appropriate for their wavelength range in several focal lengths. A compact, powerful, pre-configured **MV.PC** is strongly recommended, and runs **perClass Mira® Software**, the industry standard for intuitive capture and interpretation of hyperspectral imaging data.

MV.Scan packages fit into check-in travel cases so that they can go where they are needed. Perform quick product checks right next to busy production lines, or fine-tune spectral classification models that run in real time on the line. Setup can be done in just a few minutes from unpacking and attaching the hyperspectral sensor, to clicking the scan button, to model development, and then running in real time.

MV.Scan packages can be used for all different types of applications, including food, plastics, recycling, textiles, pharmaceuticals, electronics, and anything else that can fit onto the tray. Place a sample on the tray under the broadband QTH lights, focus the lens, click in the software, and within seconds your scan is complete. One scanning stage can support multiple sensors, such as an **MV.C VNIR** and **MV.C NIR** for data from 400 to 1000nm *and* 900 to 1700nm.

The included **perClass Mira Software** enables even non-domain experts to rapidly build solutions for automatic segmentation of hyperspectral images. The perClass Mira Software controls all acquisition hardware, provides an intuitive analysis interface, and enables model deployment with visual feedback—no switching between acquisition, analysis, and deployment interfaces.

The system can be configured to shorten repetitive feasibility studies where the user can simply place a sample on the stage, click a button, then replace the sample and click again. No exact placement is required, no parameters need to be re-entered, and no reset switch needs to be used.

EASY TO USE • EASY TO SUCCEED
Contact us to discuss your application!

MV.SCAN SPECIFICATIONS






SPECIFICATIONS	VNIR			NIR	SWIR	VNIR+NIR
Spectrometer[1]	MV.C VNIR	MV.X VNIR	VNIR E-Series	MV.C NIR	SWIR 640	VNIR-NIR
Wavelength Range	400 – 1000 nm	400 – 1000 nm	400 – 1000 nm	900 – 1700 nm	900 – 2500 nm	400 – 1000 nm / 900 – 1700 nm
Camera Technology	CMOS	CMOS	sCMOS	InGaAs	MCT	CMOS / InGaAs
Spatial Pixels	1024	1024	1600	640	640	1024 / 640
Spectral Bands[2]	301	301	369	201	267	301 / 201
Digital Interface(s)	USB 3.1	Dual GigE	USB 3.0	GigE Vision	Camera Link®	USB 3.1 / GigE Vision

perClass Mira Software	
Data Acquisition	Stage and spectrometer control; exposure, square pixel, and focus wizards
Data Preprocessing	Smoothing, 1st and 2nd derivative
Data Analysis	Classification, object segmentation, regression, feature extraction, spectral indices
Analysis Verification	Confusion matrix, cross validation, regression statistics
User Modes	Developer, Operator
Data Export	ENVI, Excel™, MatLab™, XML, PNG

perClass Mira Stage	
Sample Plate	400 x 250 mm
Max. Sample Weight	2 kg (4.4lbs)
Illumination	2 Halogen banks (100 W each)
Control	3 Programmable buttons on stage, perClass Mira Developer Software
Scan Speed (min/max)[3]	10 mm/s - 70 mm/s
Dimensions Travel Case	700 x 432 x 761 mm
Dimensions / Weight Stage + Case	780 x 493 x 284 mm / 27 kg (60 lbs)

MV.PC[4]	
OS	Windows 11 Pro 64
Processor / Graphics	Intel Core i7 / NVIDIA RTX A2000 12 GB
RAM	64 GB
Storage	1 TB M.2 SSD (OS) + 4 TB M.2 SSD (data storage)
Interfaces	Dual Ethernet™ (1 x 1 Gbps, 1 x 2.5 Gbps), 2 x Thunderbolt™ 4 (USB-C, 40 Gbps) 5 x USB-A 3.2 Gen 2 (10 Gbps)
Optional Interfaces	Camera Link® (PCIe board)

[1] For more detailed specifications, please refer to respective spectrometer datasheets on Headwall's website

[2] With standard resampling

[3] Contact us for slower-speed options

[4] PC specifications are subject to change without notification.

Manufactured by Headwall Photonics, distributed in the UK and Ireland by **analytik**.