

# Specim IQ

## Hyperspectral goes mobile

Capture image and view results immediately on the camera display

Specim IQ is a portable carry on hyperspectral camera that contains features needed for hyperspectral data capturing, data processing, and result visualization.



### Main features

- Spectral camera
- Viewfinder camera
- Scanner & motor
- Embedded data processing unit
- Operating software for data acquisition and processing
- Replaceable data storage
- Rechargeable battery power supply

### Easy to use



Main functionalities	
Operational modes	Default recording mode Automatic screening mode Application mode (user definable) Time lapse mode
User adjustments	Integration time adjustment Focus adjustment (manual) Metadata and tag addition
Data format	Specim dataset with ENVI compatible data files
Data export	With SD card or through USB connection
Operational time	Appx. 100 measurements with one SD card and battery

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Technical hardware specifications	
<b>Device operation</b>	
User interface sw	by Specim
<b>Device hardware</b>	
Viewfinder camera	5 Mpix
Focus camera	1.3 Mpix
Spectral camera	VNIR 400 - 1000 nm (CMOS)
SD-card reader	UHS-1 SD (Max. 32 GB SD memory card)
Processor	NVIDIA Tegra K1
CPU	Kepler Mobile
Memory	2 GB DDR3L RAM and 8 GB Emme
Operating voltage	3.7 V
Battery	5200 mAh Li-Ion battery (Type 26650)
<b>User interface</b>	
Buttons	12 physical buttons
Display & keyboard	4.3" touch screen
Buzzer	Indication sounds for the user
Connector	USB Type-C
<b>Dimensions</b>	
Size	207 x 91 x 74 mm (depth with lens 125,5 mm)
Weight	1.3 kg

Spectra camera specifications	
<b>Optical</b>	
F/number	1.7
Wavelength band	400 - 1000 nm
Magnification (sensor/slit)	1/1.3
Keystone	Corrected
Smile	Corrected
Spectral resolution FWHM	7 nm
Input slit length	11.70 mm
Slit height	42 µm
<b>Sensor</b>	
Sensor type	CMOS
Number of pixels in active area (horizontal/spectral)	204 pix
Number of pixels in active area (vertical/spatial)	512 pix
Active pixel pitch	17.58 µm
Data output	12 bit
QE peak	>45%
Full-well capacity	>32000 e-
PeakSNR	>400:1
<b>Objective</b>	
Object distance	100 – ∞ mm
Focal length	21 mm
F/number	2.2
Full field of view	40 deg
Full field of view at 1 m	0.5 x 0.5 m
QE peak	>45%
Full-well capacity	>32000 e-
PeakSNR	>400:1

Environmental specifications	
<b>Device operation</b>	
Temperature, operational	+0 °C - +40 °C
Temperature, storage	-20 °C - +50 °C
Humidity operational	95% non-condensing
<b>Standards</b>	
Shock	STD-810G Method 516.6 Procedure VI
EU directive	Radio Equipment Directive 2014/53/EU

