

Camera	VNIR	InSb
Unique Features	High Dynamic Range	
Spatial Resolution	2560 pixels	640 pixels
Dispersion	1.5 nm/pixel	7.2 nm / pixel
# of Spectral Channels	399	204
Second Order Rejection	Built In OSF	
Spectral Range	400 – 1000 nm	1,000 – 2,500 nm
Peak Grating Efficiency	90% @ 500 nm	90% @ 1,700 nm
Scanning Mechanism	Rotation stage	
Scanning Resolution	3 μ rad	
Scan Angle (Field of Regard)	>180 deg	
f/#	2.5	
Imaging	Pushbroom Hyperspectral	
Slit Width	10 to 25 μ m (Interchangeable) (custom widths available)	
Dark Frame Collection	Automatic (w/built-in shutter)	
Keystone Smile	<1 pixel	
Calibration	Radiometric, Spectral	
Lenses	Interchangeable, 25, 35, and 50 mm typical, others can be accommodated	
All-reflective optics (Optional)	20 mm , 60 mm and 120 mm TMA	
Detector (Others may be accomplished on a custom basis)		
Pixel Size	6.5 μ m	20 μ m
Detector Resolution	2560 \times 2160	640 \times 512
Detector Diagonal	21.7 mm	16.4 mm
Full Well e- (No Binning)	30,000	7 M
SNR (Full Well e-, No Binning)	173	~2600
Peak QE	57% @ 600nm	90% @ 2,200 nm
Max Frame Rate (Full Dispersion)	100 Hz	120 Hz
Detector Type	sCMOS	InSb with 2.5 μ m short pass filter
Exposure Control	10 μ s - 100 ms	5 μ s - 300 ms
Binning	Post processing	
Bit Depth	16 bits	14 bits
Digital Interface	Camera Link (Base Mode)	
HyperVision Software		
Software control	HyperVision: full control of sensor, data capture, and real time display	
Camera Control	Camera Link	
Scan Control	Via USB 2.0	

Frame rate / exposure time	Independent frame rate & exposure time control	
GPS / AHRS / IMU (Optional)	Recorded in sync with image data	
Data Time Stamping	IRIG or GPS Source (Optional) or computer clock (standard)	
System Monitoring	Input Voltage Monitoring and Recording System Temperature Monitoring and Recording Real Time Waterfall and Frame Display	
Display	False Color and Monochrome Auto-stretch Spectral Profiles Free run(scan) & during scan / recording Waterfall display rendered in realtime on system GPU	
Data Processing	Custom OKSI ENVI Tools for Calibration and Analysis IDL / ENVI Integration Full System Control and Display via Wireless LAN	
Control	From (i) local computer, (ii) remote via Ethernet, (iii) remote wireless control from ground station	
Miscellaneous Features	Automatic Dark Field Collection Histogram Feedback IRIG / GPS Time Stamping	
Mechanical		
L x W x H	13.6"×6.9"×11.8" (345×175×300 mm)	20.6"×12.1"×8.1" (523×307×206 mm)
Mass	20 lbs.	~40 lbs.
Sensor Mount	Side, Up, or Down Looking Airborne Application with Locked Stage Lab & field – with rotation stage sync'd to frame rate	
Electrical		
Supply Voltage	12 VDC	28 VDC
Max Current	5 Amps	6.4 Amps
Max Power	60 Watts	150 Watts
Power sources	Works on DC or AC 1000W flight inverter + Line Interactive UPS with proper AC-to-DC are available	
Environment		
Temperature control	TEC (optional) for operations in up to 110°F ambient	

