

## AISA EAGLE – Hyperspectral Imaging Sensor Specifications

Sensor type	push broom	Notes
<b>Mission parameters</b>		
Mission altitude	3800 ft / 1158 m	(1)
Airborne ground speed	110 mph / 50 m/s	(1)
Airborne operator	One	
<b>Detector parameters</b>		
Spatial pixel size (um)	12	
Spectral pixel size (um)	24	
Detector size, spatial (mm)	12.29	
Detector size spectral (mm)	5.86	
<b>Optical parameters</b>		
Smile	< 0.2 pixels	(2)
Keystone	< 0.2 pixels	(3)
Depend. on polarization	< 4%	
Wavelength range (nm)	400-970	
# spectral pixels	244	
# of spatial pixels	1024	
Spectral sampling (nm)	2.3	
Slit width (um)	30	
Spectral resolution (nm)	2.9	
Lens focal length (mm)	17 / 9	
FOV (degrees)	39.7 / 68.6	
IFOV (degrees)	0.039 / 0.067	
Swath width (m)	778 / 1470	(1)
GSD-across track (m)	0.8 / 1.5	(1)
<b>Hyperspectral mode</b>		
# of spectral channels	256 / 128 / 64 / 32	
Spectral bandwidth (nm)	2.3 / 4.6 / 9.2 / 18.4	
Image rate, max (Hz)	40 / 60 / 100 / 100	
<b>Sensor miscellaneous</b>		
Sensor head output	12 bits digital	
S/N	490	(5)
Down welling irradi. sensor	Yes	
Radiometric calibration	Yes	
Operating system	Windows 2000	
Sensor head mass (kg)	6.5	
Sensor head size (cm)	16 x 16,5 x 36	
System total mass (kg)	25	
System power requirement	24 Vdc, 12 A max.	

### Notes:

- 1) These are sample mission parameters only.
- 2) Smile is spectral curvature along spatial axis.
- 3) Keystone is spatial curvature along spectral axis. They scale proportionally with altitude.
- 4) Image rate depends on the # of bands acquired.
- 5) Signal to noise ratio is given as a peak value with typical vegetation target.