

EnMAP Instrument Parameters	
Instrument Type	Hyper spectral imager with two prism imaging spectrometers, Split FOV between VNIR and SWIR
Scanning method	push-broom, pointing capability up to $\pm 30^\circ$ off nadir across track
Telescope	Focal length: 522.4 mm Aperture: 174 mm in diameter F- Number F# 3.0 Type: TMA
Spectrometer slit size (both channels)	24 μ m x 24 mm
Swath width (nadir)	30 km (for the chosen orbit height of 653km) (equivalent to an FOV of 2.63 deg across track)
Geometric sampling distance (nadir), GSD	30 m x 30 m (@ $\sim 48^\circ$ northern latitude) (equivalent to an IFOV of 9.5 arcsec)
Integration time per GSD along track	Max. 4.4 ms, integration time is selectable by software from 1 ms to 4.4 ms (tbc)
System MTF on ground as measured from orbit	> 0.25 @ 60m across track > 0.16 @ 60m along track > 0.64 @ 240m across track > 0.62 @ 240m along track
Noise Equivalent Radiance at ref. radiance [mW/cm ² sr μ m]	VNIR (420-1000 nm): 0.005 SWIR I (900-1390 nm): 0.003 SWIR II (1480- 1760 nm): 0.003 SWIR III (1950-2450 nm): 0.001
SNR	VNIR: 500 @ 495nm, SWIR:150 @ 2200nm at ref. radiance
Radiometric calibration accuracy	5%
Radiometric stability	$\pm 2.5\%$ between two consecutive calibrations
Spectral accuracy / stability	< 0.5 nm
Polarisation sensitivity	< 5 %
Spectral smile and keystone	< 20% of a pixel
On board calibration	Full aperture diffuser; Integrated sphere with various calibration lamps; Shutter for dark measurements;
Instrument Mass	250 kg (with 20% margin)
Instrument Power Consumption	Standby : c.a. 170 W Peak (Calibration) : c.a. 221 W