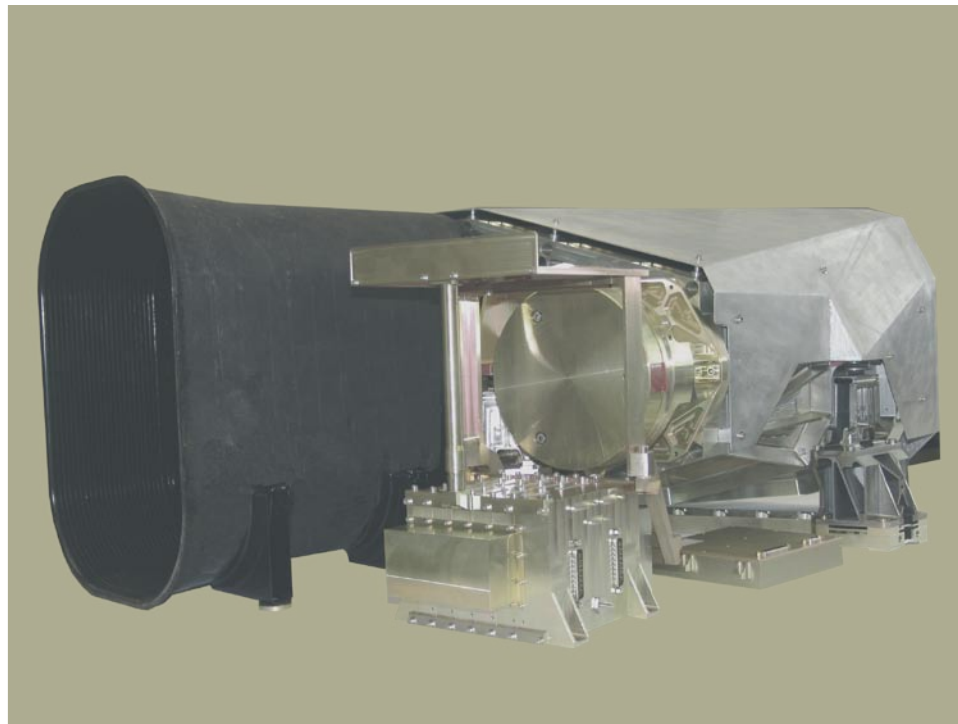




Jena Spaceborne Scanner JSS 56

Jena-Optronik applies modern imaging principles and components to build low-cost optical spaceborne scanners in the VIS/NIR and SWIR wavelength ranges. This leads to instrument designs optimised with respect to minimum size and mass, power consumption, and cost.



Jena-Optronik GmbH

The company belongs to the pioneers of multi-spectral cameras. Following its competence, the Jenoptik subsidiary consequently develops instruments for the scientific research of the universe, stars and planets. More and more, the main emphasis is on the application of opto-electronic technologies for Remote Sensing. Whether scanner or cameras for the acquisition of environmental or geo-information data – the solutions are primarily designed as a long-term, continuous information source.

Product Family

The Jena Spaceborne Scanner product line includes JSS 54 and 56 with five VIS/NIR channels, but also JSS 95 with six VIS/NIR channels and three SWIR channels. Especially the JSS 56 comprises the following features within an extreme compact dimensional envelope and hence prepared to be accommodated on board small satellite platforms.

The first JSS 56 will be the payload of the RapidEye missions.

Jena Spaceborne Scanner Performance

Dimensions [mm]	
Imager	656 x 361 x 824
Electronic Box	280 x 242 x 260
Mass [kg]	
	43 [including Imager & Electronic Box]
Temperature Range [°C]	
Power Consumption [W]	
	93 [peak simultaneous image take & downlink]
Spectral Bands [nm] in VIS and NIR range	
Blue	440...510
Green	520...590
Red	630...685
Red edge	690...730
Near infrared	760...850
Image Field	
Swath width at 620km	> 70km
Ground sampling distance	6.5 m
Resolution	
	end-to-end system modulation transfer function [MTF] in VIS range of > 2% at Nyquist sampling rate
Revisit Capability	
	nominally off-nadir imaging daily revisit capability by tilting up to 25 degrees off-nadir provided by the spacecraft bus
Digital Data	
	12 bit signal digitisation Data storage capability of 48 GBit
Data Compression	
Lossy compression	DCT
Lossless compression	Differential Huffman



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