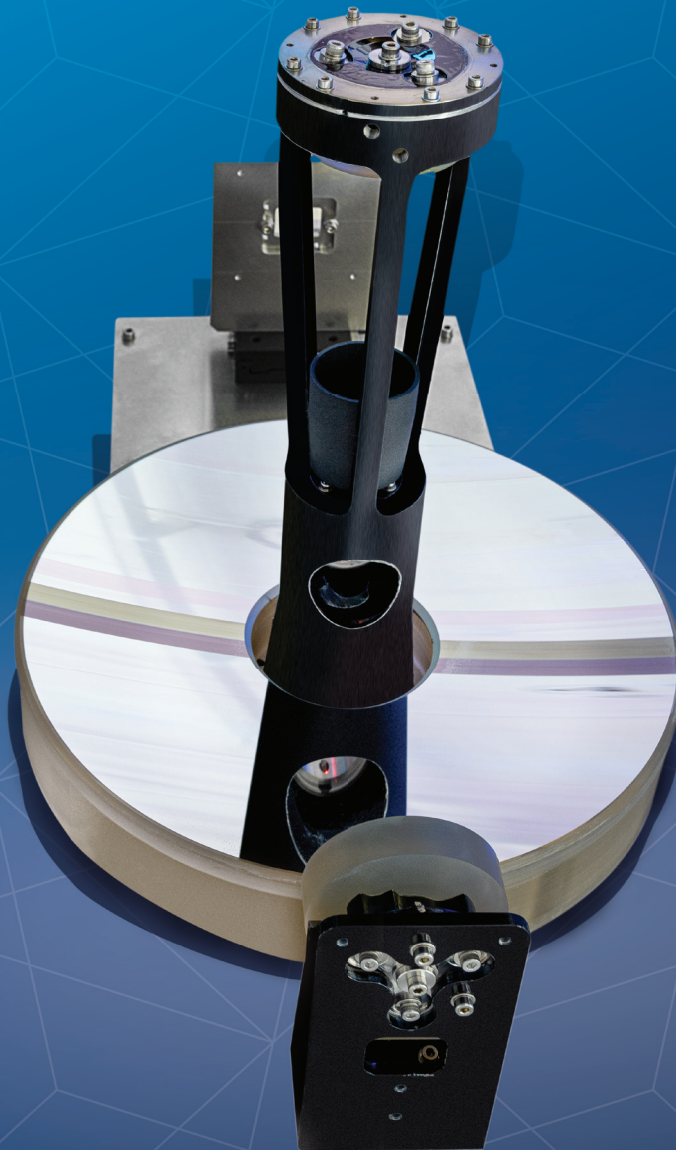


MicroMHiDe A MULTISPECTRAL HIGH DEFINITION IMAGER

FOR MICROSATELLITES



umec

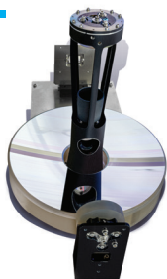


aerospacelab



MicroMHiDe

A MULTISPECTRAL HIGH DEFINITION IMAGER



MicroMHiDe is a compact, lightweight and cost-effective system capturing sub-metric multispectral images of high radiometric quality. It relies on a new generation of hybrid detectors, known as CCD-in-CMOS, leveraging Time Delay Integration (TDI) to achieve high SNR. Thanks to a cutting-edge telescope design with a low cross section in the flight direction, MicroMHiDe minimizes the atmospheric drag. It can therefore fly longer, at lower altitude, while achieving the required pupil diameter for sub-meter resolution. These unique assets make it very suitable for small platforms with high pointing stability and accuracy. In addition, its optimized telescope assembly design reduces the recurrent costs in view of deployment within large constellations.

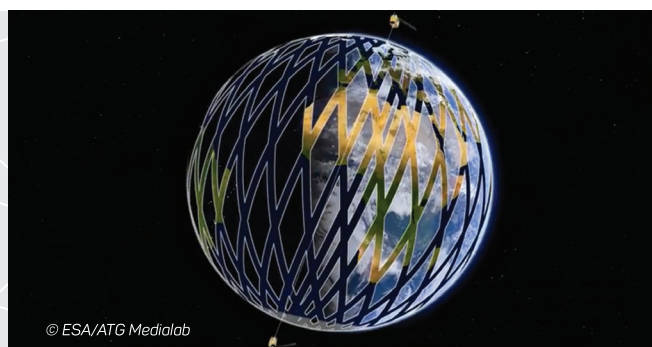


INNOVATIVE PROCESSES AND MATERIALS

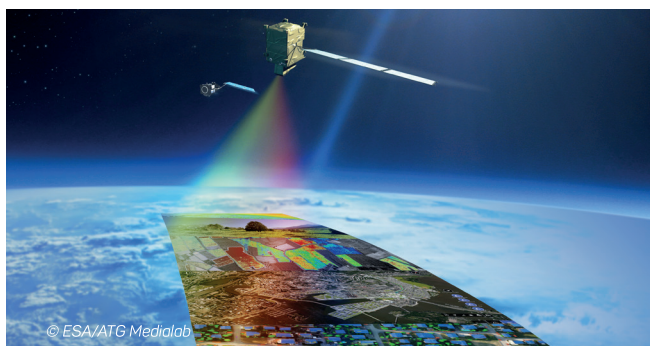
AMOS developed an exclusive and efficient approach for manufacturing freeform- and highly aspherical mirrors enabling new telescope configurations that can fit into a microsatellite. Together with the use of ultra-stable materials - such as Carbon Fiber Reinforced Polymer and Zerodur - and state-of-the-art manufacturing processes, MicroMHiDe provides a unique combination of high thermal stability and optical performance and low mass, volume and cost.

CONSTELLATIONS

Thanks to MicroMHiDe, it will soon be possible to continuously monitor and perform in-depth remote sensing analyses of any area on Earth with an unprecedented level of detail from such a small satellite platform. Affordable imaging constellations delivering sharp and rich pictures serving a wide range of terrestrial applications now becomes a reality.



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APPLICATIONS

- Object detection and identification thanks to Artificial Intelligence
- Change detection and multi-temporal analysis
- Land management and urban planning
- Infrastructures management and monitoring
- Business intelligence and market insight
- Defense and Intelligence

SPECTRO IMAGER SPECIFICATIONS

Spectral range	400 to 1000nm	Reference orbit	370 to 450km
Spectral bands	1 PAN + up to 6 MS	GSD	0,7 to 1m
Dynamic range	8 bit	Swath	2,5 km to 3 km
SNR	> 100 at 110W/(m ² *sr*μm)	Mass	< 20 kg
MTF	> 0,1 @Nyquist frequency	Volume	400 x 400 x 600 mm



For more information about MicroMHiDe, feel free to get in touch with Vincent TIGNY at sales@amos.be