

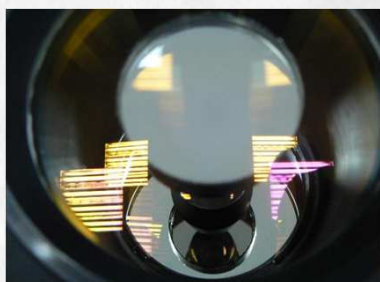


**State Space
Agency of Ukraine**



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Optical Scanner

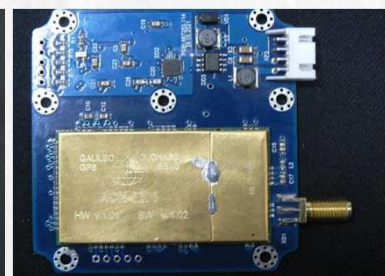


Scanner optical system

Light diameter (aperture)	100 mm
Relative hole	$\frac{1}{4}$
Focal length	400 mm
Useful field of view	4 ang. degree
Diameter of the field of view	28 mm
Distance from the apex of the first surface of the input lens to the focal plane	190 mm
Total width of the orbit from a height of 600 km	42 km
Optical system	Riccardi - Honders

UNITS FOR NANO- & MICRO- SATELLITES

Satellite GNSS receiver



Satellite navigator

Position accuracy	< 10 m
Speed accuracy	< 25 cm / s
Systems	GPS, GLONAS, GALILEO

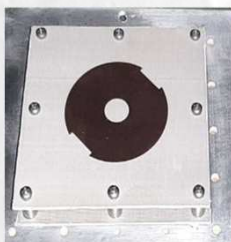
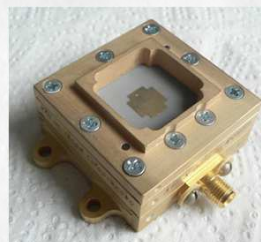
Magnetometer



Magnetometer

Number of orthogonal channels, pcs.	3
Operating range of magnetic induction, μT	± 200
Resolution, no worse, nT	$\pm 0,5$

Transceiver with inline antenna



Magnetic orientation system



Magnetic orientation system

Number of orthogonal channels, pcs.	3
Nominal moment, Am^2	± 2.0
Resolution, mAm^2	0.5

Sun orientation system

Sun orientation system

Number of sensors, pcs.	6
Field of view (FOV), °	± 60
Accuracy, °	< 0,3
Precision, °	< 0,05



Channel name	Frequency, MHz	Speed	Antenna diagram	Polarization
Space-Earth Telemetry Channel	438 - 440	9600 bit/s	not directed	linear
Earth-Space Telemetry Channel	144 - 146	2400 bit/s	not directed	linear
Space-Earth Control Channel	2025 - 2110	10 Mbit/s	100 °	left circle
Earth-Space Control Channel	2200 - 2300	1 Mbit/s	100 °	left circle
Space-Earth High-Speed Channel	7900 - 8500	100 Mbit/s	105 °	right circle

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