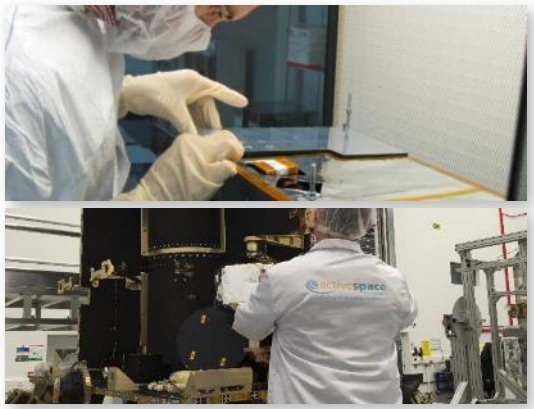
Active Space Technologies

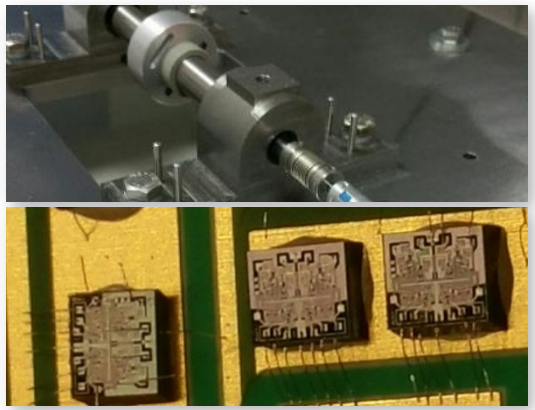
space | aeronautics | industry | LRF

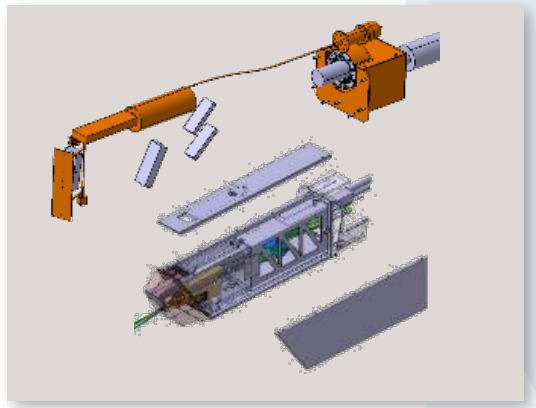
activespace technologies

making space a global endeavour

Active Space Technologies: Product Mix







Space

Aeronautics

Large Research Facilities

Industry

activespace automation

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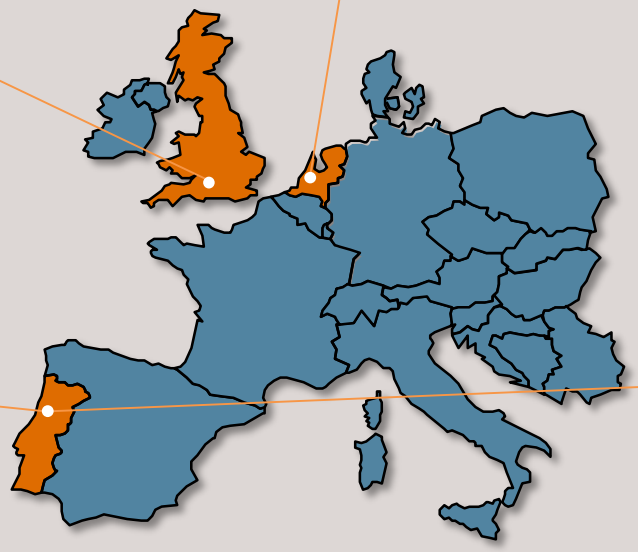
Active Space Technologies: Locations



2018 Revenues: 3.2 M€
2018 Staff: 45

Backlog: 4.3 M€

Figures for Active Space Technologies S.A. only

Luigi Gerardo Napolitano Society

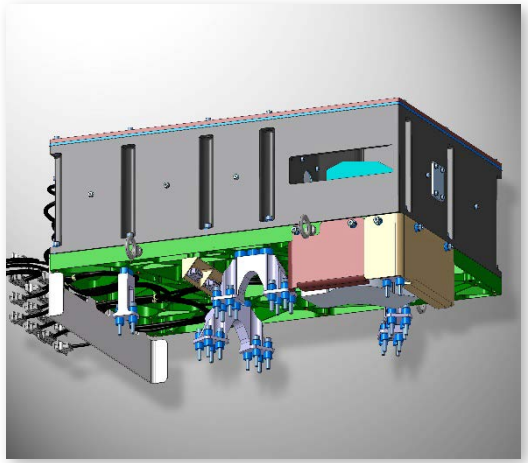
Capabilities: Mechanics

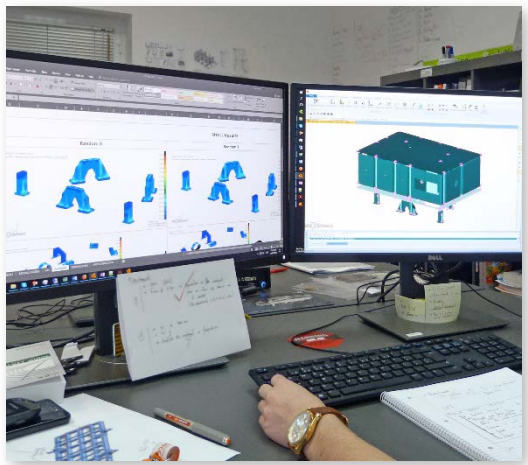
Mechanical Design
CAD/CAE (Catia, SolidEdge)
FEM (Nastran, ANSYS)
Thermal (ESATAN)
CFD (ANSYS)

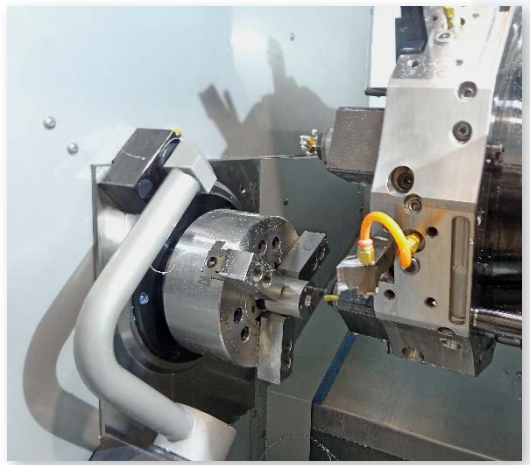
Manufacturing & Prototyping
5 axis Mill CNC
3 axis Minimill CNC
Lathe CNC
Surface treatements
ABS 3D printing

Assembly
Cleanroom assembly,
Ultra sound cleaning, Plasma cleaning

Testing
Dimensional control, FARO Arm,
Laser tracker, metrologic instruments.







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Capabilities: Electronics

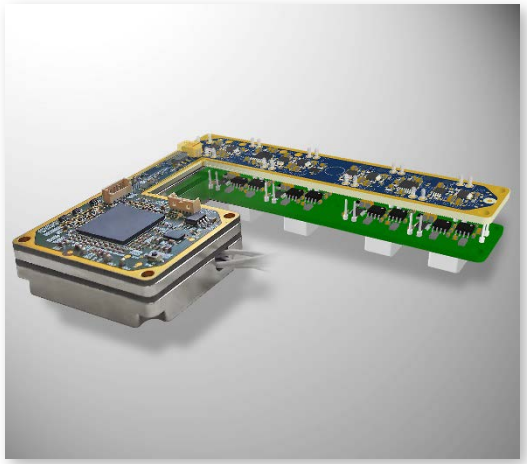
Design
Analog, digital, and power electronics
Embedded SW, RTOS
VHDL, LabVIEW

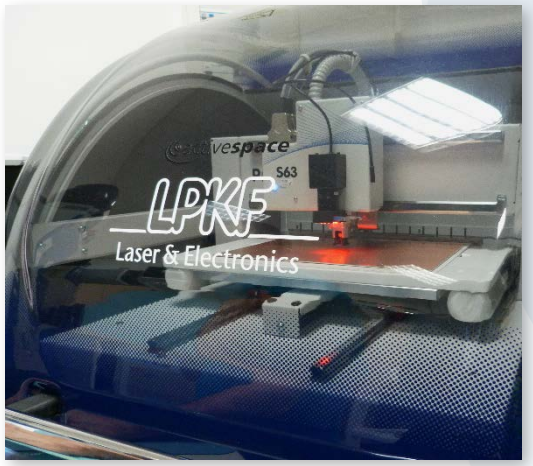
Manufacturing & Prototyping
Electrical Ground Support Equipment
Flight level Harnesses
PCB Manufacturing (etching and machining)
PCB Assembly

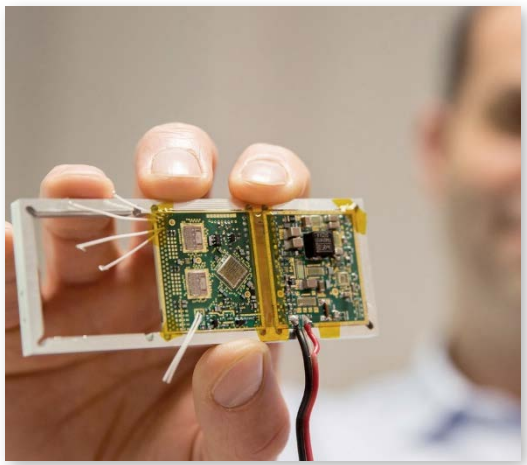
Assembly
Electrical Ground Support Equipment
PCB Integration

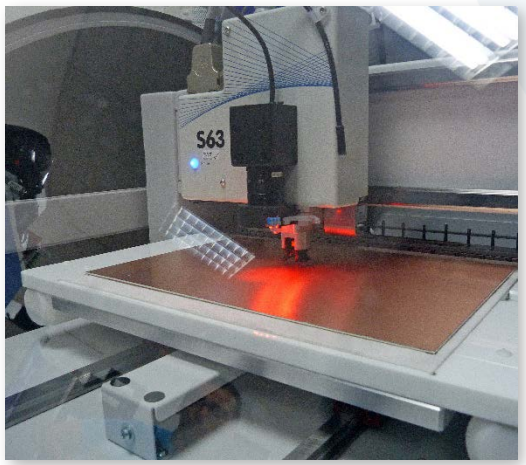
Testing
Tensile testing
Harness Testing
RF spectrum analyser, VNA

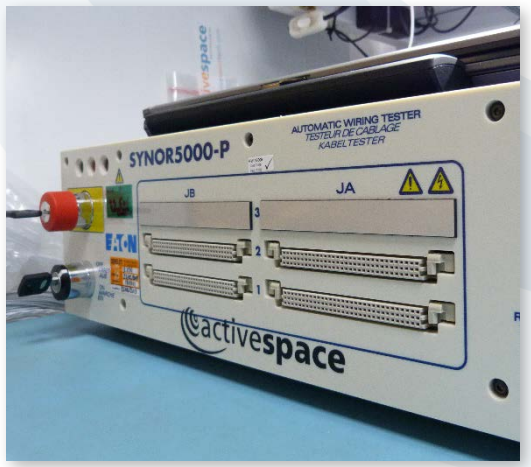
Certification
Crimping ECSS-Q-ST-70-26
Soldering ECSS-Q-ST-70-08
SMD ECSS-Q-ST-70-38











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Capabilities: Environmental testing

Cleanroom

- ISO 7;
- Dimensions [cm]: 873 x 810 (L x W);
- Temperature: 23 ± 2°C;
- Relative Humidity: 55±10%;
- TelStar Laminar ISO 4.

Activities: assembly of parts, dimensional control of parts, hardware cleaning, electronics soldering, manufacturing of electrical harnesses, electrical assemblies, PCB assembly.

Thermal Vacuum Chamber

- ISO 7;
- Feedthroughs: 3 Sub-D 25
- Data acquisition: 40 Channels

Thermal cycling tests of space materials and hardware between 200 K and 473 K in vacuum environment (< 1x10^-5 mbar) with a temperature change rate up to 2 K/min.

Shaker

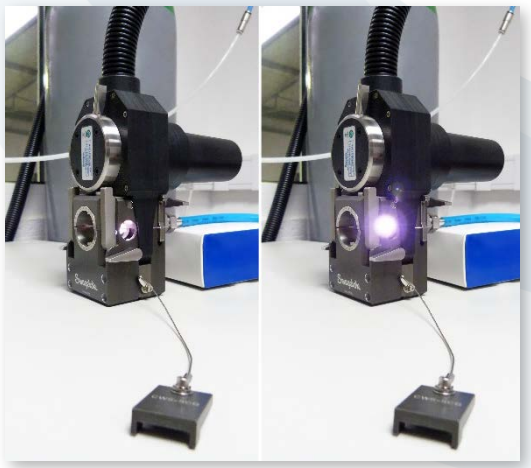
- ISO 5
- Slip Table for 3 axes and increased flexibility
- Total Force:
  22 kN; frequency range: 5 – 3000 Hz
- Half sine peak shock force: 44 kN
- Sinusoidal, random vibrations, shock loads
- Fatigue and long duty cycles

Vibration testing services for small/medium size hardware for space applications, with requirements applicable to other industries

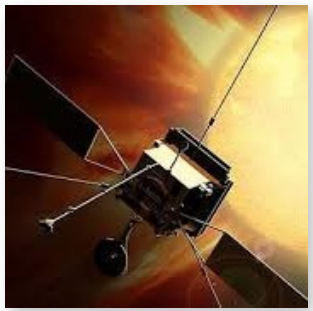
TIG Orbital Welding

TIG Orbital Welding of stainless steel tubes

- Diameters: 1/8'', 1/4'', 1/2'', 6 mm;
- Helium leak testing.

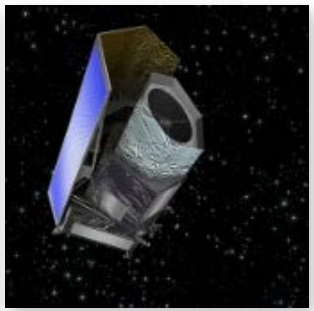


Track Record: Space



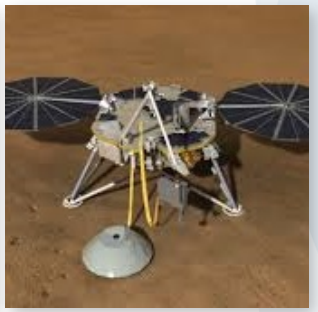
Solar Orbiter
Feedthroughs
MAG Boom
STMs

BepiColombo
MSASI (MMO)
MGA Boom (MPO)

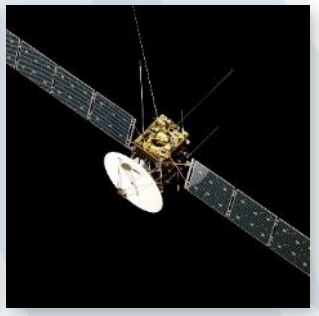


EUCLID
SVM MGSE
TT&C EGSE
FGS EU STM

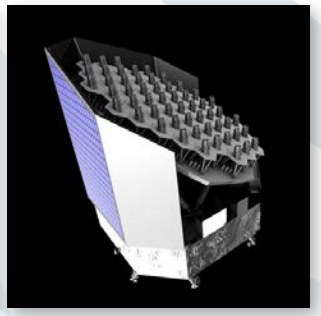
ExoMars 2018
BEMA ADE EGSE
ETM/ATB GSE
CM Solar Array MGSE
CM i-beams
DM OBC STM



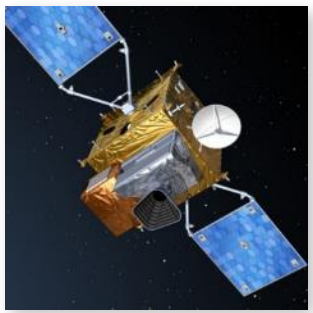
InSight
HP3



JUICE
MGAMA
JMU (Qualif.)
RADEM (Qualif.)



PLATO
OBA Parts



Sentinel-4
UVN Aperture Cover MGSE
UVN Aperture Cover EGSE

Sentinel-3
Solar Array MGSE

SEOSAT
UVAS Telescope Assembly
UVAS Electronics Assembly

GEO Kompsat 2
Test Cap

ORION MPCV
TCU STA

MetOp-SG
SCA SAS Structure
SG PCDU STM

NEOSAT
Primary Module MGSE

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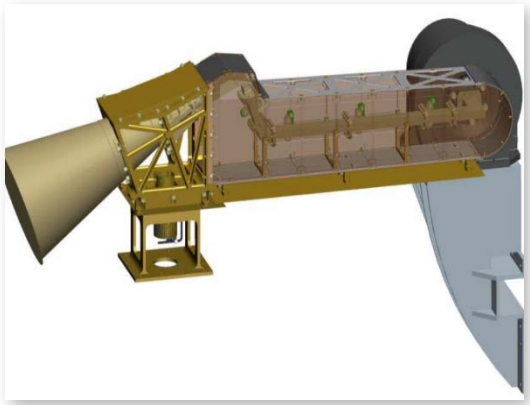
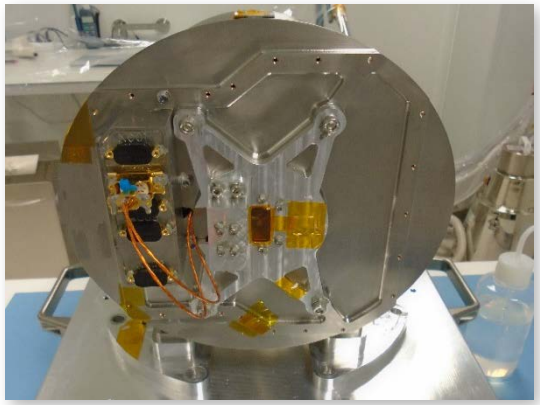
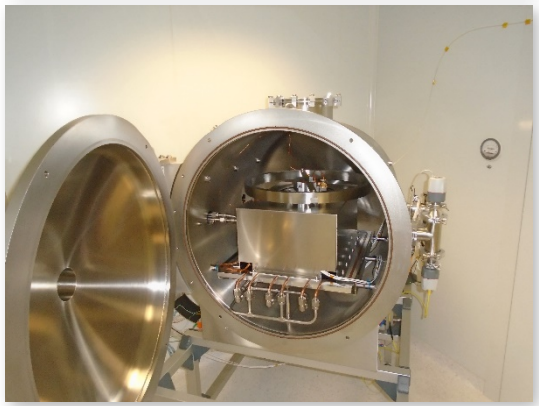
Space: Main ongoing projects

JUICE - SENER/MGAMA

NEOSAT – TAS-I/Mating Kits, ½ Half Frame
Syracuse-4, BB44, SES-17, KOV

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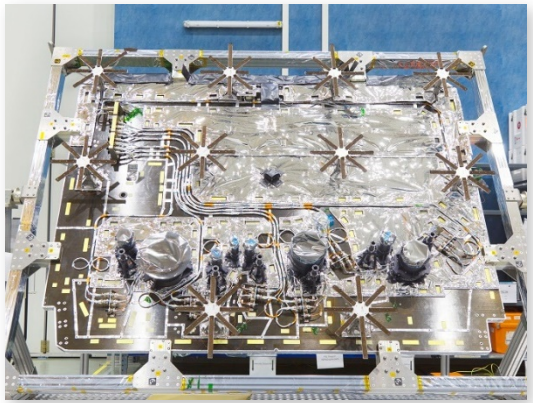
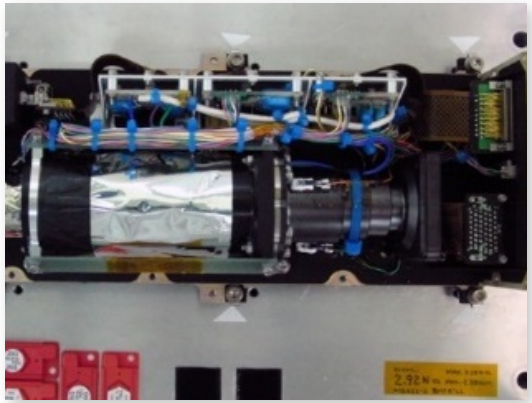
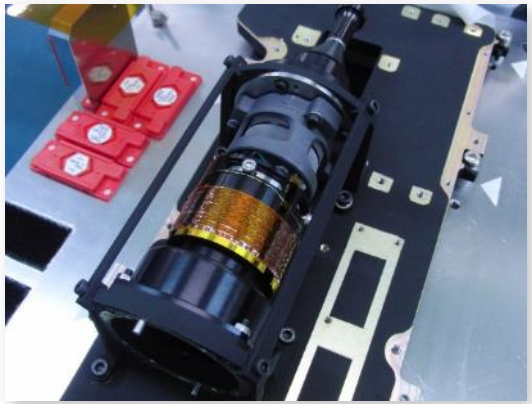
Space: Flight Hardware

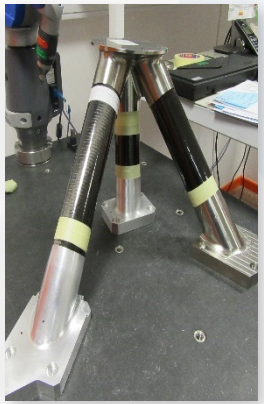




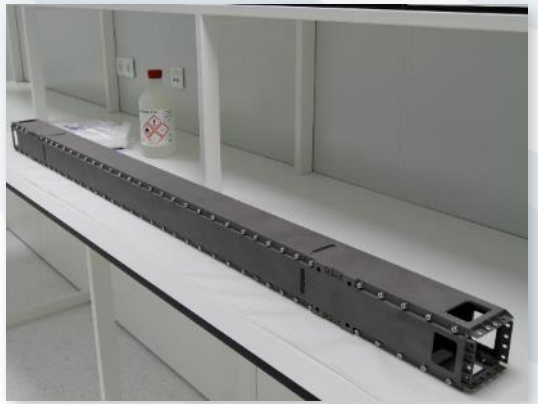
Solar Orbiter/Feedthroughs
MTD, STM, EQM, FM



BepiColombo (MMO)/MSASI
STM, EQM, FM



Solar Orbiter/MAG Boom
EQM, FM



BepiColombo/MGA Boom
EQM, PFM, FM

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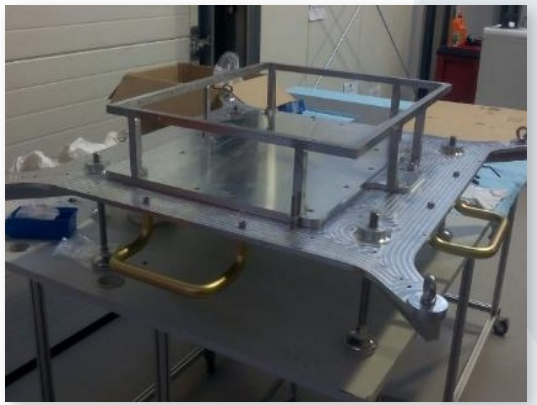
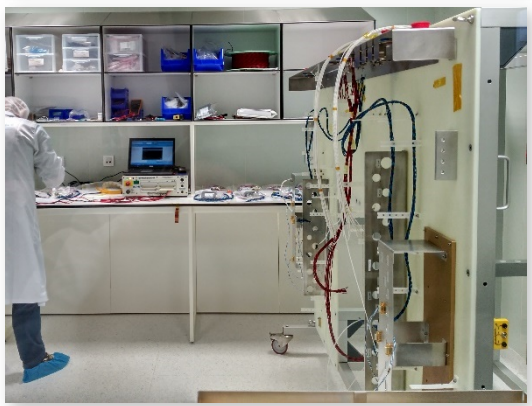
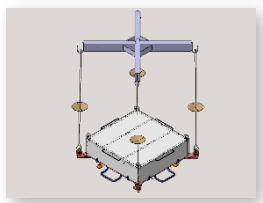
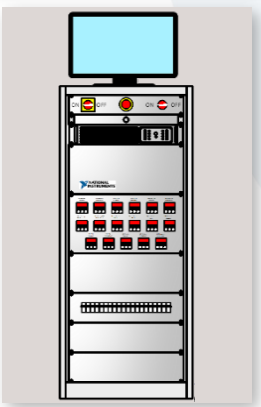
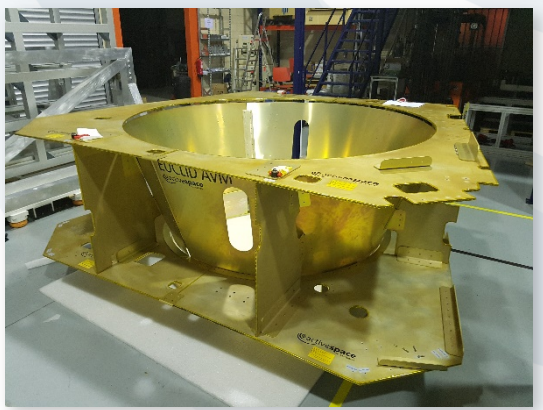
Space: Ground Support Equipment







Sentinel-3/Solar Panels
Transport container
MGSE

ExoMars/Rover
Avionics Test Bench
Electronics Test Bench

Sentinel-4/UVN Aperture
MGSE / EGSE

EUCLID/SVM
Assembly Tool
Avionics Module

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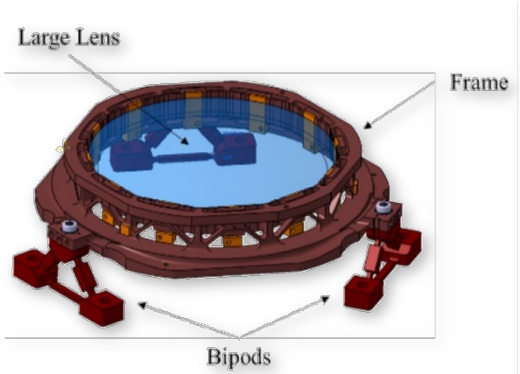
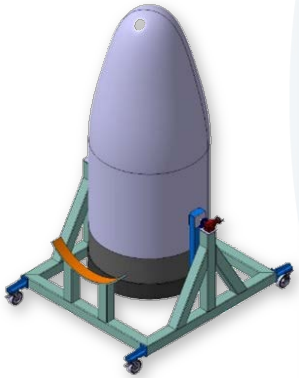
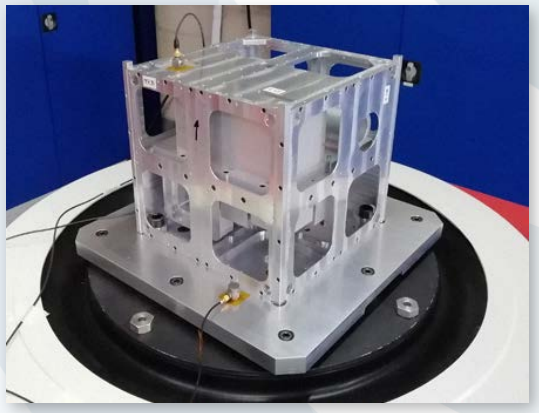
Space: New Space



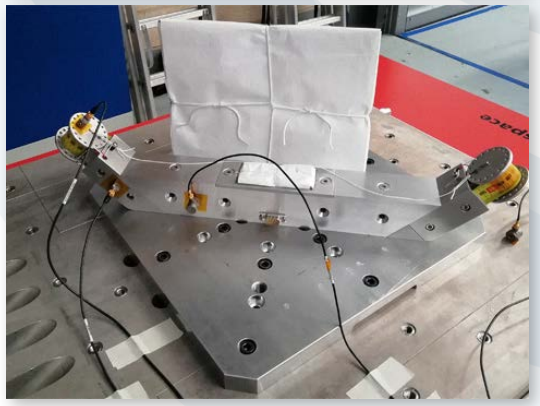




INFANTE
Power sub-system

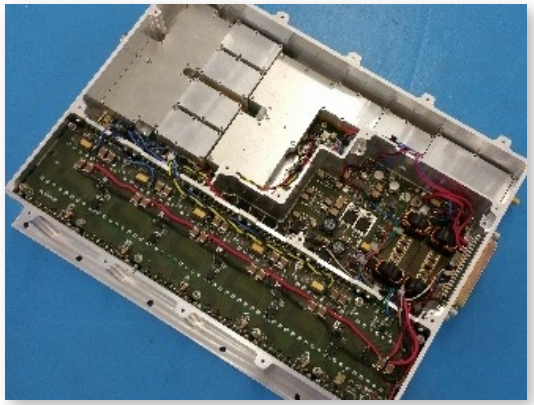
ALM
OHB

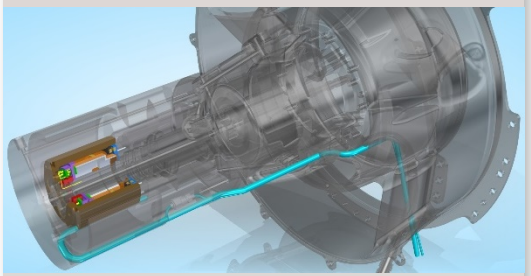
Small Launcher
-

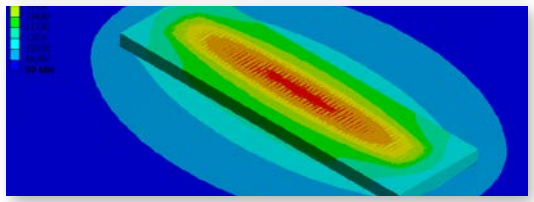


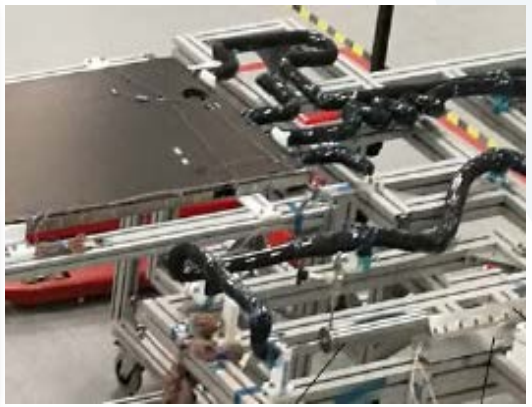
Redshift
Deimos

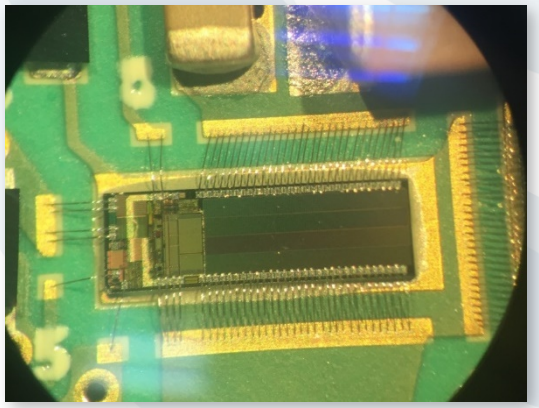
Participation in FP7 / H2020











Clean Sky/Turbomeca

Telemharsh

Wireless communication
Wireless power transfer through mutual induction
Operate at temperatures in the order of 150 °C
Operate at centripetal accelerations up to 40,000 g
Measurement of temperature and strain along the shaft
Arrano: Turboshaft engine

FP7/SLOGAN

Design, analysis, manufacturing

H2020/NeoSat

Deployable radiator mechanism
MGSE (vibration, transport, zero-g)

Clean Sky/Avio Aero

RTMGear

Hybrid Multi Chip + Surface Acoustic Waves
Wireless communication, Wireless power (mutual induction)
Measure directly in static and in the rotating gears
Measure temperature, vibration and strain
Harsh environments: high temperature, oil lube
Power reduction gearbox (geared open rotor engine)

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Main H2020 topics

SPACE-10-TEC-2018-2020: Technologies for European non-dependence and competitiveness

JTF-2018/20-9 – Design and prototype of ultra-reprogrammable SoCs [N50]
JTF-2018/20-16 – Active discrete power components [U14]

SPACE-11-TEC-2018: Generic space technologies

very high power systems , Advanced materials, structures and production techniques (e.g. additive manufacturing):

namely in relationship with: mechanisms, berthing systems, tugs, etc

SPACE-13-TEC-2019: SRC – In-Space electrical propulsion and station keeping power
SPACE-28-TEC-2020: SRC - In-space electrical propulsion and station keeping - Incremental technologies

SPACE-15-TEC-2018: Satellite communication technologies
Flexible broadband passive and active antenna techniques
RF and active components

SPACE-16-TEC-2018: Access to space
GSE, integration, use of COTS

SPACE-12-TEC-2018: SRC – Space robotics technologies
SPACE-27-TEC-2020: SRC - Space robotics technologies

Contact us

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