

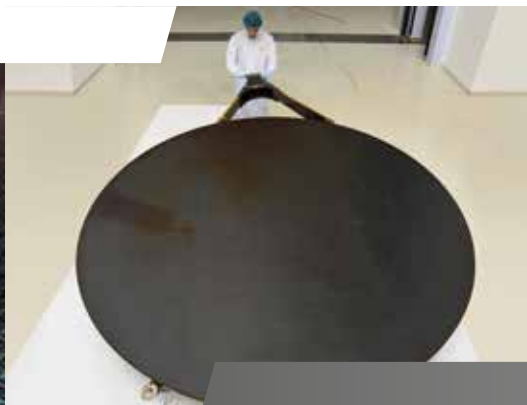
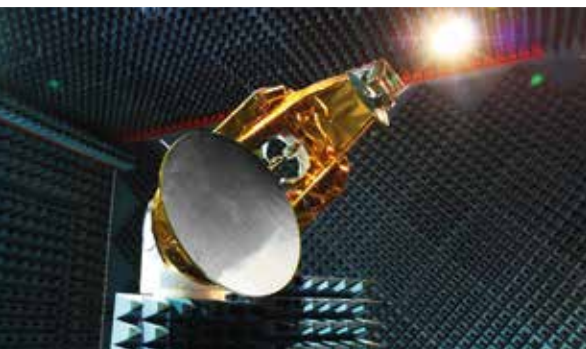
X-, K-, Ka-, Q/V-Band Antennas

for Satcom, Science and Exploration
Applications

HPS Germany is a „turnkey supplier“ for reflector antennas and performs all related tasks like design, analysis, manufacturing, testing and final verification. Our antenna subsystems include the reflector assembly, feed chain, hold-down-and-release-mechanism, deployment- and pointing-mechanism, thermal hardware. In case of request we deliver also just the antenna reflector assembly.

The HPS Group:

- **HPS GmbH, Munich, Germany:**
Reflector Antennas, Reflectors only,
Large Deployable Reflector Subsystems,
Deployable Cubesat Antennas,
Mobile Manpack Antennas.
- **HPS S.R.L., Bucharest, Romania:**
Thermal Hardware, Secondary Structures,
Antenna Components, MGSE.
- **HPtex, Münchberg, Germany:**
Metallic Meshes for reflective surfaces.



Contact



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Solid Reflector Antennas

in various configurations:



High-Gain Downlink Antennas

0.7 m Class Antenna Reflector Assembly:

- K-Band
- High manufacturing accuracy: 15 μm RMS
- Low in-orbit depointing $< \pm 0.005^\circ$
- Diameter: 0.7 m
- Delivery of three models in 2017, 2018, 2019
- Heritage: EUCLID (ESA-mission)
- Launched: 07/2023

1.2 m Class Antenna:

- X-Band
- Diameter: 1.2m
- Mass: 8,4 kg
- Heritage: HERA (ESA Mission)
- Launch: 10/2024

1.2 m Class Antenna:

- Multiband Antenna (MBS Mission), Satellite SIGI, launch Q4/2024
- ESPRIT Ka-Band Reflector for Lunar Gateway (Endcustomer TAS-I/ESA)

X-/Ka-band Antennas

- Heritage: HERA (ESA Mission)
- 3D Printed Antennas

Side-Deployable Telecommunication Antennas

1.2 m Class Antenna:

- Ka-Band
- In-orbit beam pointing error $< 0.006^\circ$
- In-orbit TED < 0.017 mm RMS
- First eigenfrequency > 140 Hz
- Heritage: Heinrich Hertz Satellite (DLR-Mission)
- Launch: 07/2023

1.6 m Class Reflector:

- Ka-Band, Q/V-Band
- In-orbit beam pointing error $< 0.02^\circ$
- In-orbit TED < 0.03 mm RMS
- First eigenfrequency > 130 Hz

2.4 m Class Reflector:

- Ka-Band, Q/V-Band
- Very low mass, full CFRP-design



Top Deck Antennas

Feeder Link Example:

- Q/V-Band for telecom applications
- European coverage
- 8 gateways for nominal operations
- 2 gateways as diversity sites
- Scan losses < 0.5 dB
- Main reflector diameter: 1.2 m
- First eigenfrequency > 60 Hz

