Microwave Instruments

Microwave Radiometers for Airborne and Ground Use

Features

- High stability and accuracy
- Internal calibration
- Efficient thermal stabilization
- Modular & expandable design
- CE marking
- Optional features
  - Polarimetry
  - RFI detection
  - Frequency sub-banding



Typical applications

- Remote sensing
- Atmospheric science
- Spectrum management

Description

These microwave radiometer modules are designed for various remote sensing applications, where high radiometric stability and accuracy are required. Examples include remote sensing of Earth's surface from tower-based and airborne platforms using frequency bands at 1.4, 6.9, 10.9, 18.7, and 36.5 GHz.

The radiometers can be customized to meet special needs, such as various frequency bands, application specific antennas, demanding operating environments and different mechanical form-factors, and custom digital signal processing and data filtering.

The radiometer designs feature a noise-injection (balanced Dicke switching) architecture with a powerful digital backend. The sensitive RF electronics in the radiometers are thermally stabilized. Current realizations have bandwidths up to 400 MHz, extendable up to 2.5 GHz. Optional features include advanced Radio Frequency Interference (RFI) detection, digital sub-banding, and fully polarimetric operations. Several independent radiometers can be included in a common control unit.



PRELIMI

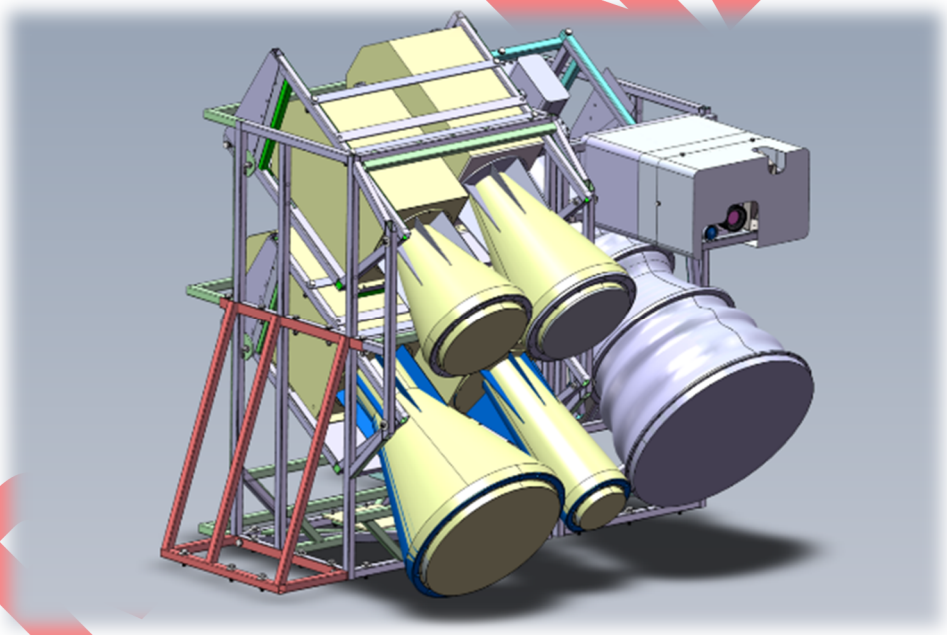
© HARP TECHNOLOGIES LTD
Address: Tekniikantie 12, 02150 Espoo, FINLAND
Tel.:+358-50-3002625
Email: salesharp@harptechnologies.com
Website: https://harptechnologies.com

Microwave Instruments

Microwave Radiometer Instrument					
	L	**C**	**X**	**K**	**Ka**
Centre frequency (GHz)	1.425	6.875	10.65	18.7	36.5
Bandwidth (MHz)	50	400	100	200	300
Footprint size [1] (m)	1200	450	450	200	200
Observation angle (deg)	55				
Polarization	Full Stokes vector				
Accuracy (K)	0.5	0.5	0.5	0.6	0.8
Integration time (ms)	500	200	200	100	100
Radiometric resolution (K)	0.08	0.04	0.07	0.28	0.16

[1] At 1000 m flight altitude

PRELIMINARY



© HARP TECHNOLOGIES LTD
Address: Tekniikantie 12, 02150 Espoo, FINLAND
Tel.:+358-50-3002625
Email: salesharp@harptechnologies.com
Website: https://harptechnologies.com