Active Radar Calibrator (ARC)

ARC Provides Uniform and Highly Stable RCS

- Uniform RCS by the automatic satellite tracking system
- Highly stable RCS by the temperature control of the ARC system
- Monitoring and analyzing the SAR signal from a satellite by using the Digital Receiver
- Polarimetric ARC functionality

**Modules**

- Antenna Module: Receives the SAR signal from a satellite and transmits it to the satellite after amplified in the Electronics Module.
- Tracking Module: Has Az- and El-axes and tracks the satellite automatically by using orbit data.
- Electronics Module: Amplifies the SAR signal with highly stable amplifiers not affected by the ambient temperature changes (Refer to the right figure).
- Control Module: Controls the Tracking Module and sets the RCS of the ARC. Monitor signals from the Electronics Module are received and displayed by the spectrum analyzer.
- Digital Receiver: Analyzes, displays, and records the SAR signal from the satellite.
Specifications Example

- Frequency: L-band (C- and X-band are also possible)
- RCS: 0 - 60 dBm² (example)
- RCS stability: within ±0.2 dB
- Satellite tracking: automatic tracking by using the orbit data
- Quantization bits: more than 8 bits
- Power: AC 100 - 120 V, 50/60 Hz
- Environmental condition: temperature -10 - +50 °C, humidity 35 to 100 %RH, wind speed 0 to 15 m/sec (operating) 0 to 30 m/sec (non-operating)

-- Notes --

RCS: Radar Cross Section
SAR: Synthetic Aperture Radar