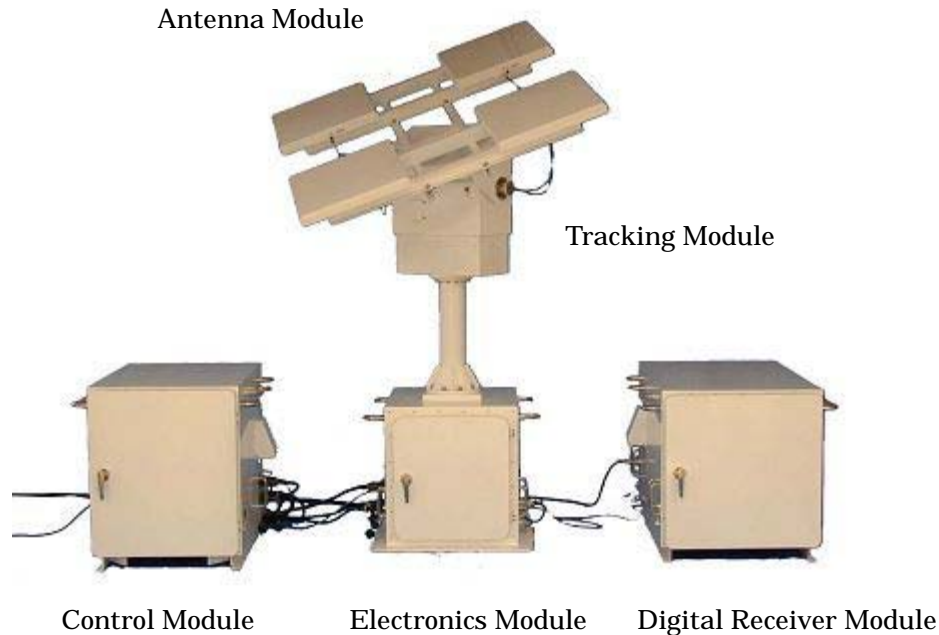


# Active Radar Calibrator (ARC)

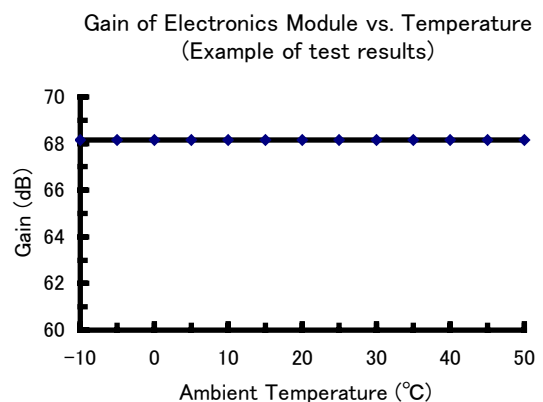


## ARC Provides Uniform and Highly Stable RCS

- ✧ 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 dBm<sup>2</sup> (example)
- RCS stability : within  $\pm 0.2$  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