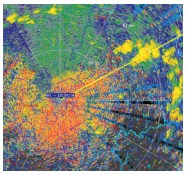
ARC X250PM



X-Band Polarimetric Doppler Weather Radar

Antenna Specifications

- Prime focus circular parabolic reflector with hi-isolation OMT
- Dish Diameter: 6 foot offset feed dish
- Single Polarization Unit
- Beamwidth: 1.15 degrees 3 dB
- Scanning:
  - 36 deg/sec velocity
  - 20 deg/sec2 acceleration
- Scan types:
  - SUR (360 deg) with elevation step
  - PPI sector scan with elevation step
  - RHI scan with azimuth step

Transmitter Specifications

- Magnetron transmitter
- Peak Power: 200 kW (83 dBm)
- Frequency: 9.3 – 9.5 GHz
- PRF: 0 to 2.0 kHz

Signal Processing Specifications

- Digital IF processing by Sigmet RVP8 DSP
- Signal processing algorithms implemented in host PC
- Gate spacing: 25 – 1000 m (150 m typical)
- Variable types:
  - Z (Equivalent radar reflectivity factor, dBZ)
  - V (Doppler radial velocity, m/s)
  - W (Velocity spectrum width, m/s)
  - P (Power received, dBm)
  - SQI (Signal Quality Index) in Sigmet
  - Zcoh (Coherent equivalent radar reflectivity factor, dBZ)
  - Phase (Differential and Absolute phase)
- Screen image capture
- Interfaces directly to NCAR Thunderstorm Identification Tracking Analysis and Nowcasting (TITAN) and Configurable Integrated Data Display (CIDD) systems as used in many countries for polarimetric rainfall estimation, weather modification studies and hydrometeor particle classification. Spectral clutter filtering processing.
- Mobile operations: The radar system will be mounted on a towed flatbed trailer.

Global Expertise

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