

Parameter	Numeric value
Operating frequency	C band: 5.35–5.45 GHz (FAA requirement)
Antenna aperture	1.9 m major and 1.8 m minor diameter ellipse.
Maximum full panel thickness (radome + antenna + T/R modules and MMIC + heat sink and mounting/support frame)	≤ 23 cm
Maximum weight for each AESA assembly	≤ 205 kg
Scan extent	$\pm 50^\circ$ in elevation; $\pm 50^\circ$ in azimuth
–3 dB beamwidth	$< 2.2^\circ$ (broadside on Tx)
Sensitivity	-11 dBZ at 10 km with 0 dB SNR
Reflectivity variance	< 1 dB
Doppler velocity variance	< 1 m s ⁻¹
Produce full polarimetric matrix	$Z, V, W, Z_{DR}, LDR, \Phi_{DP}, \rho_{HV}$
Calibrated Z_{DR} for particle shape and quantitative precipitation estimation	$Z_{DR} \leq 0.2$ dB
Differentiate liquid and ice	$LDR < -22$ dB
Differentiate melting	$LDR < -27$ dB
Collect uncorrupted weather data near surface	Within 400 m of surface, < -10 dBZ at 5 km range
Polarization Tx and Rx	H or V linear