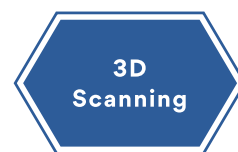


METEOPRESS

SOLID-STATE WEATHER RADARS



Meteopress is proud to introduce a fully solid-state GaN radar product line. It features **Dual-Polarisation**, **Doppler**, and **3D volumetric scanning**.



Easy to install, light and rigid structure, ultra low life-cycle costs thanks to advanced GaN solid-state power amplifiers operating in C-Band, S-Band and X-Band frequency range, COTS components and fully remote autonomous operation.

	X-Band			C-Band				S-Band				
General												
Operating frequency	9300 - 9600 MHz			5500 – 5700 MHz				2700 – 3100 MHz				
Typical operating range	200 km			300 km				500 km				
Maximum range	500 km			500 km				700 km				
Measurement modes				Dual Polarization (STAR and LDR), Doppler								
Range resolution				Down to 30m; 150m typical								
Transmitter												
Peak output power	1.6kW solid-state			5 kW or 10 kW solid-state				5 kW or 10 kW solid-state				
Transmitter technology				fully solid-state GaN								
Pulse length				0.5-100 µs (short pulse / long pulse)								
Pulse compression				non-linear FM, progressive pulse compression								
Pulse repetition frequency				200 - 3000 Hz, arbitrary staggered PRT								
Occupied bandwidth				0.5 - 8 MHz configurable								
Signal Processing Unit (Meteopress SD-SPU)												
				Software defined radio-based dual down conversion receiver and transmitter fully software-based signal processing“								
ADC resolution				16 bit (before pulse compression)								
Receiver technology				Solid-state limiter (T/R switching) + LNA								
Noise figure	≤ 3 dB			≤ 1.7 dB				≤ 1.7 dB				
Antenna and pedestal												
Antenna				Prime focus parabolic w/ sidelobe attenuation								
Antenna diameter	1.2 m	1.8 m	2.4 m	2.4 m	3.0 m	3.7 m	4.5 m	4.3 m	4.5 m	7.3 m	8.6 m	
Antenna gain	39 dBi	42 dBi	44.5 dBi	40 dBi	41.5 dBi	43 dBi	45 dBi	38 dBi	39.5 dBi	43 dBi	44 dBi	
Half-power beam width	1.85°	1.4°	0.95°	1.7°	1.3°	~1°	<0.9°	1.9°	1.7°	<1.2°	1°	
Weight	250 kg	350kg	550 kg	550 kg	780kg	1100kg	1300 kg	1250kg	1300 kg	3150 kg	4000kg	
Azimuth movement				360° continuous								
Scanning speed	configurable: 1 to 15 RPM (up to 90°/sec)			configurable: 1 to 15 RPM (up to 90°/sec)				configurable: 1 to 5 RPM (up to 30°/sec)				
Elevation range	-2 to +110°			-2 to +110°				-2 to +93°				
Positional accuracy				Better than 0.04°								
Radome												
Construction				Segmented, fiberglass sandwich, UV-stable hydrophobic gelcoat, pseudo-randomized panel configuration available								
Attenuation	≤0.15 dB			≤0.12 dB				≤0.12 dB				
Data processing and output												
Connection				Starlink, 4G/5G, WISP, Ethernet								
Clutter removal				Adaptive IIR, Dynamic Declutter, User-defined masks								
Interference Avoidance				WiFi Packet Detection and Blanking (WiPAD)								
Configuration				Web interface, API, SSH								
Built-in visualization				Web-based map, single elevation view, vertical cut, live sweep								
Data output				"UZ, Z, V, W, SQL, SNR (in H, V channels) ZDR, LDR, PhiDP, KDP, CCOR (RhoHV)"								
Data output format				ODIM HDF5, NetCDF, MSG31, PNG								
Installation requirements												
Power				Single-phase 100-240V AC or 48V DC								
Power consumption	300W-600 W (without optional radome A/C)			800-1500 W (without optional radome A/C)				2.5 kW (without optional radome A/C)				
Data upload speed				20+ Mb/s recommended, 64 kb/s basic operation								
Additional installation space				Not required, the entire stack is integrated into the radome								