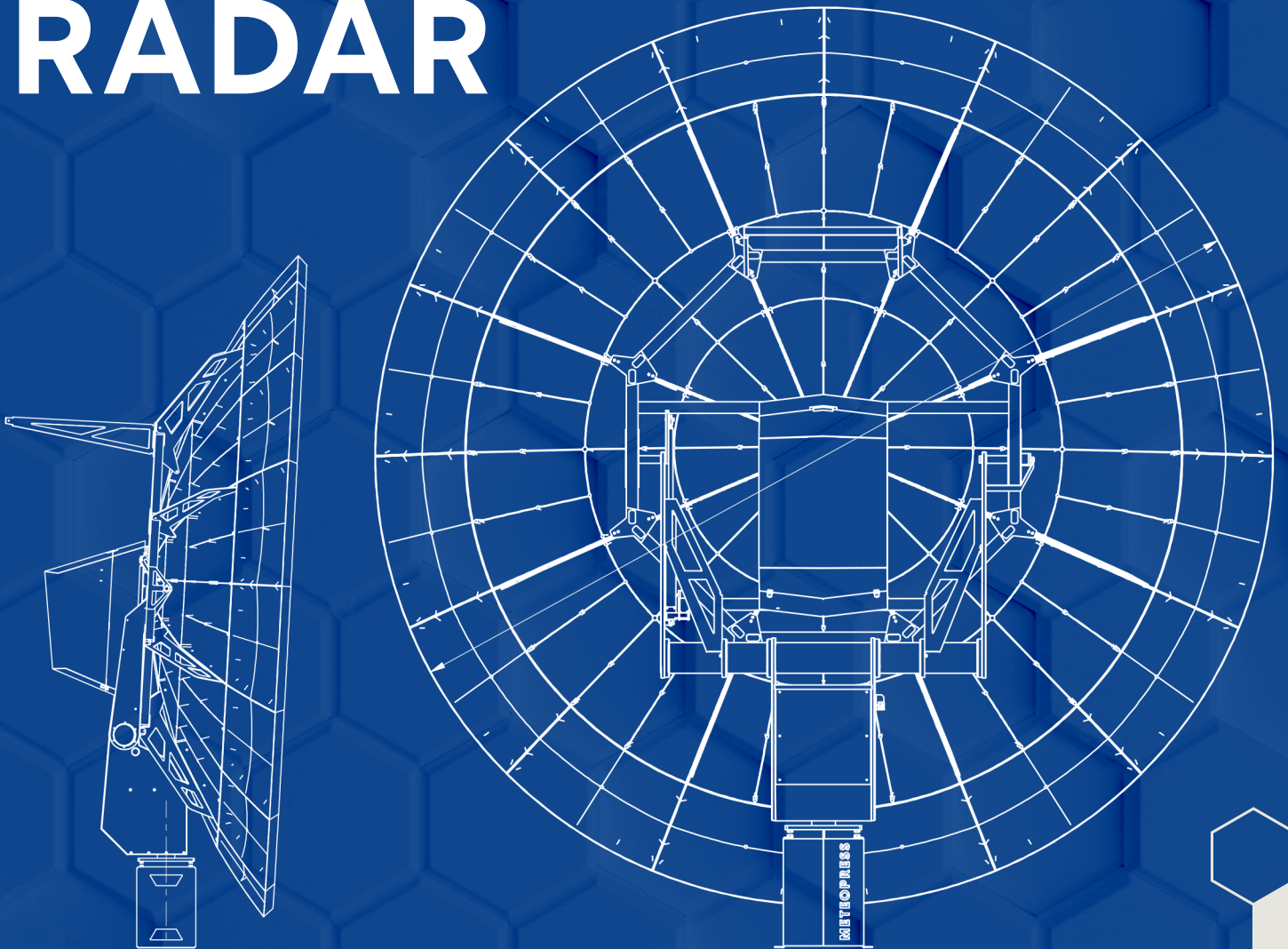


METEOPRESS

S-BAND SOLID-STATE RADAR



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

SW Based
Radar

Solid-State
GaN

Dual-
Polarisation
& Doppler

3D
Scanning

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

METEOPRESS

General

Operating frequency	2700 – 3100 MHz
Typical operating range	280 km
Maximum range	500 km
Measurement modes	Dual Polarization (STAR), Doppler
Range resolution	Down to 60m; 150m typical

Transmitter

Peak output power	5 kW & 10 kW solid-state
Transmitter technology	fully solid-state GaN
Pulse length	2-100 μ s (short pulse / long pulse)
Pulse compression	non-linear FM, progressive pulse compression
Pulse repetition frequency	200 - 2000 Hz
Occupied bandwidth	0.5 - 8 MHz configurable

Signal Processing Unit (Meteopress SD-SPU)

ADC resolution	12 bit (before pulse compression)
Receiver technology	Solid-state limiter (T/R switching) + LNA
Noise figure	≤ 1.7 dB

Antenna and pedestal

Antenna	Prime focus parabolic w/ sidelobe attenuation
Antenna variants:	Size: 4.3m (14ft), Beam Width: 1.9°, Antenna Gain: 38 dBi Size: 4.5m (15ft), Beam Width: 1.7°, Antenna Gain: 39.5 dBi Size: 7.3m (24ft), Beam Width: <1.2°, Antenna Gain: 43 dBi Size: 8.6m (28ft), Beam Width: 1°, Antenna Gain: 44 dBi
Azimuth movement	360° continuous
Scanning speed	configurable: 1 to 5 RPM (up to 30°/sec)
Elevation range	-2 to +93°
Positional accuracy	Better than 0.04°

Radome

Construction	Segmented, fiberglass sandwich, UV-stable hydrophobic gelcoat, pseudo-randomized panel configuration available
Attenuation	≤ 0.12 dB

Data processing and output

Connection	Starlink, 3G-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, SQI, SNR (in H, V channels) ZDR, LDR, PhiDP, KDP
Data output format	ODIM HDF5

Installation requirements

Weight 4.5m system	1 300 kg, approx. 2 900 pounds
Weight 8m system	3 150 kg, approx. 6 950 pounds
Power	Single-phase 100-240V AC or 48V/15A DC
Power consumption	2.5 kW (without optional radome heating/air conditioning)
Data upload speed	100 Mb/s recommended, 20 Mb/s minimum
Additional installation space	None, the entire stack is integrated into the radome