

# GMWR-400-SST

## GAMIC Mini Weather Radar (Solid State / Dual Polarization)

*Your affordable and transportable X-Band Doppler Weather Radar*

### TECHNOLOGY

**GMWR-400-SST** is a cost effective, short-range dual polarization Doppler Weather Radar designed for reliable operation range of minimum 50 up to 100 km.

GMWR-400-SST features include the **ENIGMA IV** digital receiver and signal processor, 2D and 3D scans and analysis products of scientific quality and accuracy controlled by **FROG-MURAN** software.

**GMWR-400-SST** is the **ONLY** small transportable Weather Radar on the market that provides **> 50dB** coherency for DPOL Doppler measurement functions !

### PERFORMANCE

Low phase noise integrated receivers and the ultra-low phase noise STALO, developed by GAMIC, allow the best possible sensitivity and coherence. Digital Doppler velocity measurement gives accurate velocity data over the entire range and optimum clutter cancelation.

### RELIABILITY

GMWR-400-SST employs well-proven design and components (fully solid state). Hardware maintenance can be performed by any local technical service with experience in radar maintenance.

### FLEXIBILITY

GMWR-400-SST can be configured to meet virtually any weather radar requirements for a city, metropolis, water reservoir subcatchments, airport surveillance or other medium range applications.

Its antenna mounted transceiver minimizes waveguide losses at optimum, using 2 x 200 W transmitters and a 1.2 m parabolic dish.

### AVAILABLE OPTIONS

**Antenna Size** 1.2 m or 1.8 m diameter

**TV interface** to broadcast quality radar and weather images.

**Web interface** to send images to internet web servers.

**Hydrological software** provides full analysis product generation capability including volume scan products and hydro-meteo rainfall analysis.

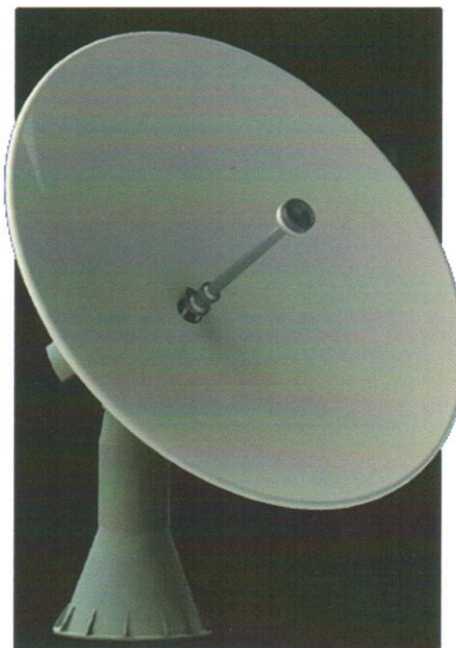
**Radome** for optimal protection of your radar.

**Vehicle mounted** on truck or trailer for optimal transportability.

**Self-erecting mast** pneumatic or hydraulic.

**Mosaic** Radar network for the full use of multiple radars.

**Multiple user workstations** with managed user levels.

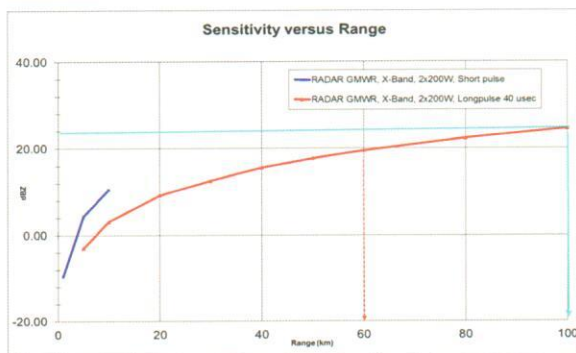
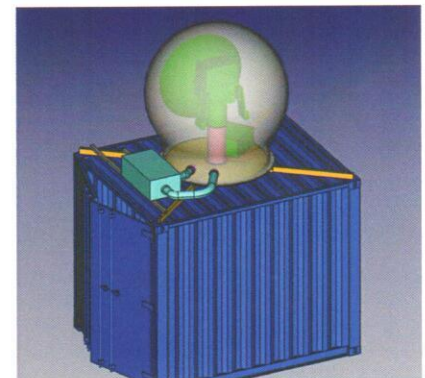


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# GMWR-400-SST

TRANSMITTER		GMWR-400-SST	
Polarization		Dual polarization H / V STAR mode	
Operating frequency		9410 MHz $\pm$ 100 MHz	
Transmitter		Solid State GaNi	
Peak Power		400 W (2 x 200W)	
Pulse Width		SP: 2 $\mu$ sec & LP: 40-80 $\mu$ sec	
Typical Pulse Width		SP: 2 $\mu$ sec & LP: 40 $\mu$ sec	
Pulse Compression Gain		80-100 depending on chirp and pulse length detected	
Pulse Repetition Frequency (PRF)		200 Hz - 2000 Hz	
Modulator		n/a	
TX Signal Generation		TXGEN-NG	
RECEIVER			
Type		Dual Pol / Doppler	
A/D Conversion		16 bit (2 x 16 bit)	
Sample Rate		76.8 MHz	
Dynamic Range		> 90 dB - Typ. 110 dB	
Sensitivity		-110 dBm to -112 dBm	
Intermediate Frequency		60 MHz	
IF Bandwidth		10 MHz	
LNA		< 1 dB	
Tuning		AFC	
ANTENNA		1200	1800
Type		Parabolic / Pencil beam/ Center fed	Parabolic / Pencil beam/ Center fed
Diameter		1.2 m	1.8m
Horizontal Lobe Width		< 2°	Typ. 1.3°
Vertical Lobe Width		< 2°	Typ. 1.3°
Side Lobes		- 25 dB within 10°	- 25 dB within 10°
Gain		38 dB	42 dB
Cross Polarization		Typ. 35 dB	Typ. 35 dB
Antenna Motion		Volume Scan	
AZ Maximum Speed		36° / sec	
EL Maximum Speed		15° / sec	
Azimuth		360° continuous	
Elevation		-2° to 95°	
Weight (Antenna & Pedestal)		< 100 kg	
Radome		2.5 m / 150 kg	
Radome Type		Laminated GF (8')	
SIGNAL PROCESSOR			
Type		ENIGMA IV (2 Channels)	
Processed Bins		> 4000 (Max 8000)	
Generated Polar Moments		Z, W, V, ZDR, PhiDP, RhoHV, KDP, LDR, SNR, CCR, SQL...	
Clutter Correction		DFT, PPT, CMAP, CPA, ...	
Pulse Integration		Fixed or Angle Sync	
Calibration		Manual with support tools	
SOFTWARE		FROG-MURAN	
OS		Linux	
Data Resolution (raw)		8, 16, 32 Bit, IEEE Floating	
Maximum Range		Data Acquisition 50 km to 400 km	
Range Scale		User selected (5, 10, 25 or 50 km)	
Range Resolution		25 m to 10 km	
Vertical Resolution		< 100 m	
Horizontal Resolution		100 m to 1 km	
Number of available SW products for Synoptics, Hydrology, ATC, ...		> 50 Please consult us	
GENERAL DATA			
Power Consumption		500 W average, < 2000 W peak	
Total Weight		< 300 kg	

## MOUNTING OPTIONS



## SENSITIVITY IN RANGE

- < 20 dBZ @ 60 km range
- < 30 dBZ @ 100 km range

GMWR-400-SST shows an excellent sensitivity in the range of 100 km, with our following features :

- 1.2 m dish antenna
- 2 x 200W pulse power
- 2° HPBW pencil beam



Feel free to contact us for any further information

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