

Puts You A Generation Ahead Of The Competition

RANGER

And An Even Smaller Price Tag

Ranger packs the latest X-Band radar technology into a size so compact it's mobile and at a price so low you can actually own and operate two Rangers for less than the cost of one C-Band radar. It's never been so affordable to get the proprietary local radar weather data that protects your community and sets your station apart from competitors.

Ranger's compact design and smaller footprint eliminates the need for expensive towers and results in a 30% savings on installation and 50% savings on the radome compared to C-band radars.

Now it's cost efficient to build your own radar network. Two Rangers provide better coverage of the lower atmosphere than a single radar, providing you a competitive advantage and a unique sponsorship opportunity.

You'll save on maintenance costs with Ranger, too. Our patented sealed pedestal design eliminates costly lube and bearing maintenance costs for at least 10 years. And the solid-state transmitter saves more than \$20,000 over a 10-year period when compared to C-Band magnetron radars.

At less than 400 lbs., Ranger is suitable for mounting on the back of larger pickup trucks and trailers. Now you can be the storm chasing experts, providing better science and more accurate radar coverage of severe storms. You'll keep your DMA safe and local sponsors lining up.

But Ranger isn't just a more affordable and mobile radar, it's better in every way. Our unique pulse compression strategy provides superior range (up to 120km) and resolution (4000 range bins) using lower power and removing the blind spot occurring in other systems in the closest 15km to the radar.

And unlike other radar vendors, our algorithms are designed specifically for X-Band, providing superior identification of tornadoes, severe thunderstorms, hail, strong winds, and heavy rains.



WSI[®]
WEATHER CENTRAL

RANGER

SYSTEM		DWSR 2001X
Operating Frequency		8500-9600 MHz
Pulse Width		0.2 – 2.0 usec
Range Resolution		Minimum 16m
Pulse Repetition Frequency		200-2400 Hz, user selectable
Range		Minimum 600 km
Maximum Velocity (Unambiguous)		Up to 64 m/s
Sensitivity-Reflectivity		-18 dBz at 30km
Clutter Suppression Capability		≥ 46dB
Data Output		UZ, Z, V, SW (dual-polarization moments Zdr, Phv, dp, KDP, LDR)

ANTENNA/PEDESTAL	
Type	Parabolic, Prime Focus Reflector
Reflector Diameter	2.4m (typical) – other sizes available
Gain-Minimum	> 45.0 dB
Half Power Beam Width (typical)	0.95°
Polarization	Linear Horizontal Feed Horn Dual-Polarization Linear Horizontal/Vertical
Angular Positioning Accuracy	≤ 0.05°
Scanning Speed	Up to 10 rpm

TRANSMITTER	
Type	High-Power Coaxial Magnetron
Peak Power (per channel/total)	200 kW

RECEIVER	
Type	Superheterodyne, Single or Dual Down Conversion with Image Reject Mixing
Minimum Discernible Signal	-114 dBm typical
Linear Dynamic Range	Up to 105 dB

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DIGITAL RECEIVER/SIGNAL PROCESSOR

Type	16-bit Modular, multi-channel Digital Receiver, Signal Processor
Maximum No. of Processed Range Bins	up to 8192
Minimum Processing Resolution	as low as 16m
Clutter Filters	Time Domain or Spectrum-Based Time Estimation and Processing (STEP) - An advanced adaptive clutter identification, mitigation and noise reduction algorithm

METEOROLOGICAL USER SOFTWARE

METEOROLOGICAL USER SOFTWARE	EDGE
Computer System	Commercial Off-the-Shelf PC
Meteorological Products	See EDGE Data Sheet for additional details.