



PDR Series X Band Portable Doppler Radar

A large, white, dome-shaped radar unit is shown from a low-angle perspective, looking up. The unit is mounted on a black metal tripod stand. The top of the dome is labeled with 'EWR7000' in blue and red, and 'X BAND DOPPLER RADAR' in red below it. The background is a dramatic sky with dark, heavy clouds and a hint of a sunset or sunrise. The radar unit has a red air filter visible on its underside.

EWR7000
X BAND DOPPLER RADAR

**FROM THE WORLD LEADER IN
SOLID STATE WEATHER RADAR SYSTEMS**

Overview and System Specifications

PDR

The Portable Weather Radar of Choice for the U.S. Military

Field Tested and Deployed by the Most Demanding User... the U.S. Military.

EWR Radar Systems has been the industry leader in portable X Band weather radar solutions since 1982. Today, EWR's Portable Weather Radar Systems are in the hands of a broad spectrum of end users including governments, oil companies, emergency management agencies, weather services and airports around the world.

EWR understands what it takes to build a radar system that is compact, rugged and can handle the rigors of mobile and rapid deployment in some of the most hostile conditions. This has led the United States Department of Defense to make EWR its primary supplier of ground based weather radar systems. The E700 PDR Weather Radar System is in use today by the U.S. Air Force Special Operations Command, the United States Marine Corps for their Meteorological Mobile Facility (METMF) Next Generation (NEXGEN) systems and by the U.S. Air Force for its next generation PDR (Portable Doppler Radar) program.

Field Proven EWR Solid State Transmitter with Pulse Compression and Hybrid Pulse Technology.

EWR pioneered the use of solid state transmitters in weather radar systems.

Where other Doppler radars utilize tube transmitters (klystrons, magnetrons, TWTs, etc.) that require frequent maintenance, high voltage and are prone to failure in difficult environments such as those found in mobile applications, the E700 PDR uses a long life solid-state transmitter which is virtually maintenance free and consumes far less power.

EWR solid state transmitters are field proven with over 80 solid state weather radar systems installed around the world today, a statement that no other manufacturer can make!



The E700 PDR is fully ruggedized for field deployment and can be installed in less than 1 hour.



Ideal for Any Installation

The compact, rugged design of the E700 PDR makes it the ideal choice for mobile, temporary, tactical or permanent applications. The E700 PDR is designed to be easily mounted on a retractable mast, tower, rooftop, trailer or vehicle. The E700 PDR is the perfect solution for “gap filling” in existing networks and difficult terrain situations and also as the baseline system for creating a dense network of X band weather radars.

The E700 PDR Radar System is composed of three main components:

- Radar Pedestal Unit (contains receiver, transmitter, antenna, signal processor)
- Radar Server and Power Supply (housed in environmentally controlled ruggedized case included as an option for field deployment)
- Commercial Off The Shelf PC Workstation or Laptop running Windows and EWR WeatherScout® Radar Control and Display software

The E700 PDR uses the newest, industry leading Vaisala Sigmnet RVP901 weather radar processor and IRIS™ software, providing weather radar products and warnings to the user. The WeatherScout® PC Workstation provides all of the user interface and control functionality of the radar. The E700 PDR includes a complete suite of meteorological products including all Vaisala/Sigmnet IRIS and EWR/NEXRAD Level III products.



Unlike other portable radars, the E700 PDR can be purchased as complete ruggedized SYSTEM that can withstand the rigors of field deployment.

PDR KEY ADVANTAGES

- The Radar of Choice for the U.S. Military
- Compact, Lightweight, Rugged Design
- Easily mounted on a retractable mast, tower, rooftop or vehicle with lower infrastructure costs.
- Can be field installed in 1 hour or less
- Commercial Off The Shelf (COTS) product
- Cost Effective - lower unit and infrastructure costs
- Field Proven EWR 250W solid state transmitter design with pulse compression and Hybrid Pulse technology standard
- Industry leading Vaisala/Sigmnet RVP901 processor
- Hybrid Pulse technology eliminates the radar blind range associated with other long pulse width radars
- Easy to use WeatherScout® radar control software on the familiar Windows platform
- The most complete suite of meteorological products available including all Vaisala/Sigmnet IRIS and EWR/NEXRAD Level III
- Perfect for creating a dense network design in difficult terrain and metropolitan areas
- Ideal for “Gap Filling” in existing networks
- Complete remote & network operability included
- EWR 24/7 365 Day Help Desk Support



The E700 PDR is used in the EWR Rapid Response Radar™. Contact EWR for complete information on this unique vehicle.

E700 PDR X BAND SYSTEM SPECIFICATIONS

System Performance

Range	100 -150 km typical
Meteorological Products	All Vaisala IRIS Products plus EWR/Nexrad Level III
Velocity	Single PRF 2,000Hz - 16 m/s (31 kts) Dual PRF 5:4 Stagger 2,000 Hz - 64 m/s (124 kts)

Transmitter

Type	EWR Solid State
Peak Power	250W Standard, 500W Optional
Frequency	9.345 GHz +/- 25 MHz User Selectable
Pulse Widths	1-100 μ s (with EWR Hybrid Pulse and Pulse Compression Technology)
PRF	Variable from 500 Hz to 2000 Hz

Antenna

Type	Slotted Array
Diameter	30" Standard
Beamwidth	3.3°
Azimuth	360° Continuous Rotation
Elevation	-2° to 90°
Scan Rate	0 to 14 RPM
Positioning Accuracy	<0.1°

Digital Receiver and Signal Processor

Type	Vaisala Sigmet RVP901
IF Digitizing	16 Bits up to 100 MHz in 5 Channels
Range Resolution	75 m with 2 MHz Waveform
Range Bins	Up to 4200 per Radial
Compression Processing Gain	13-21.5 dB
Clutter Filters	Fixed, Adaptive or GMAP to >50 dB Clutter Cancellation

Radar Control

Radar Control	EWR WeatherScout®
Processor	Vaisala Sigmet IRIS
Scan Modes	PPI, RHI, Volume and Sector and WeatherScout® 3D
Local and Remote Display	Windows with EWR WeatherScout® Real Time Display and Product Monitor

Mounting

Easily Mounted in Any Situation Including Telescoping Mast, Vehicle, Trailer, Tower, Fixed Base or Marine Mount

System Specifications

Radome Assembly Weight	125 lbs. (57 kg)
Operating Environment	-30° C to +60° C
Input Power	120V - 220V 60Hz

Contact EWR for complete system specifications and available options.



336 Leffingwell Avenue, St. Louis, MO U.S.A. 63122 314.821.1022 www.ewradar.com