

METEOR 1700S WEATHER RADAR

The METEOR 1700S uses cutting-edge klystron technology to optimize the forecasting of extreme precipitation and severe thunderstorms at long ranges. Its technological superiority is based on a highly sophisticated klystron transmitter, which delivers excellent data quality. The METEOR 1700S combines maximum clutter suppression capability with the inherent penetration power of S-Band transmission.

The powerful METEOR 1700S is typically employed in severe weather regions, where extremely heavy rainfalls pose a challenge to precise measurement and long range surveillance. Its outstanding performance and reliability have made the METEOR 1700S one of the most popular weather radar systems in this field of specialization.

METEOR PRODUCT LINE ADVANTAGE

- Optimized for Rainbow[®] 5, the most advanced meteorological software available on the market today
- Cutting-edge 16 bit signal processor GDRX® 5
- · Dynrex receiver technology

- Unattended remote operation 24 hours a day, 365 days a year
- Long-life, state-of-the-art technology
- Full remote surveillance and control capability based on Ravis® maintenance tool
- Comprehensive BITE system
- Full network capability in heterogeneous networks
- Maximum use of COTS components (e.g. PC-based signal processing)
- Simultaneous dual polarization capability available in conventional and receiver-over-elevation configurations

METEOR 1700S SYSTEM ADVANTAGES

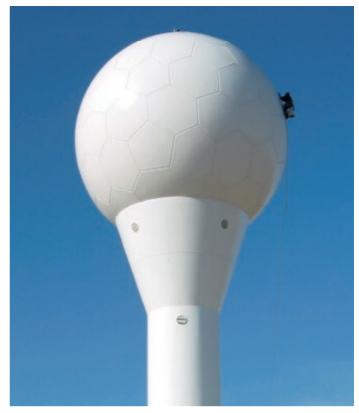
- Cutting-edge klystron technology
- Improvement of up to 15 dB in stability and clutter suppression compared to coaxial magnetron systems
- Improved data quality, scanning speed and range resolution through frequency agility and multi-trip echo recovery



METEOR 1700S



- Less interference with other radio transmitters due to less occupied RF bandwidth
- Wide dynamic range receiver, based on Dynrex dual-channel implementation
- S-Band advantage: Optimized for long-range surveillance under conditions of extreme precipitation



TECHNICAL DATA

SYSTEM	METEOR 1700S
Mode	Doppler, Dual-Polarization
Operating Frequency Range	2700 - 2900 MHz (S-Band)
Pulse Width Range	0.4 - 4.5 μs
Pulse Widths	410, freely selectable in increments of 10 ns
Pulse Repetition Frequency [PRF]	250 - 1400 Hz, user selectable
Typical Operational Range /Technical Range	400 km / 600 km
Maximum Doppler Velocity	± 146 m/s
System Phase Stability	≤ 0.05°
ANTENNA	
Туре	Parabolic, prime-focus reflector with elevation-over-azimuth positioner
Reflector Diameter	8.5 m
Minimum Gain	≥ 44.5 dBi
Maximum Half Power Beam Width	≤ 1.0°
Step Response Time for 2° step ± 0.1°	≤ 1.5 s
Polarization	Horizontal / Horizontal and vertical
Angle Span	0° - 360° continuous in azimuth, -2° - +182° in elevation
Angular Positioning Accuracy	± 0.05°
Maximum AZ Scanning Speed	6 rpm
RADOME	
Size	11.8 m
Туре	Sandwich, fiberglass with foam core; quasi-random panel cut
Transmission Losses - one-way, dry surface	0.2 dB
TRANSMITTER	
Туре	Klystron with solid state, IGBT- switched modulator
Peak Power	1000 KW

≤ 2.0 dB ≥ 118 dB ESSOR Modular, multi-channel digital receiver, connected to commercial-off-the-shelf industrial PC as signal processor 50 MHz 16 bit, 180 MHz, 6 channels 10.000 per polarization @ fully activated algorithm chain
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16 bit, 180 MHz, 6 channels 10.000 per polarization @ fully activated algorithm chain
10.000 per polarization @ fully activated algorithm chain
activated algorithm chain
15 m
PPP, FFT/DFT, Trip recovery and filtering
IR, DFT linear or GIP (Gaussian terative) interpolation
Dynamic pulse-to-pulse, TNC
Commercial Off-the-Shelf Notebook
Linux or Windows
Commercial Off-the-Shelf PC
Linux or Windows
PPI, MPPI, RHI, CAPPI, Pseudo-CAPPI, MCAPPI, MAX, VCUT, MVCUT, EHT
Hydrological, Aviation, Shear, Short- Term Forecasting, Phenomena Detection, Dual-Polarization, Pre- and Post-Processing, Warning

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