



## Meteorology

### **RAINSCANNER WEATHER RADAR**

RAINSCANNER® is an easy-to-use weather radar system designed for the detection of rainfall intensity at short ranges. Its combination of high resolution and rapid data update means RAINSCANNER® is ideally suited to provide forecasters with detailed information about local rainfall and early warnings of approaching storms.

Thanks to its compact and lightweight design, RAINSCANNER® is the perfect choice for mobile applications. RAINSCANNER® fits on virtually any building, flat roof or lightweight tower, so it is well suited for fixed or semi-permanent installations. Excellent price performance is guaranteed with low purchase, construction, installation and operating costs.

#### **BENEFITS**

- High resolution and street-level rainfall detail
- Rapid data update and precise early warnings
- Excellent sensitivity at short ranges
- Radar based nowcasting up to 60 minutes
- X-Band magnetron transmission
- High-precision parabolic antenna systems
- Easy-maintenance and modular design
- Simple and user-friendly control software
- Real time data visualization and remote control
- High impact meteorological software

- Mobility kit including ruggedized housing, 16 m sectional mast and transportation cases
- Low cost, hassle-free fixed installation
- Flexible methods of data transfer (e.g. LAN, WLAN, fiber optics)

#### **APPLICATIONS**

- **Outdoor Events**  
Whether you are planning a tennis tournament, motor racing, golf championships or a music festival, rain makes conditions unpleasant for players, spectators and organizers alike. Heavy rain can stop an event, so organizers need to know how much rain to expect and when it will finish. RAINSCANNER® shows minute-by-minute information on the path and intensity of rainfall right down to street level.
- **Local Media**  
Precise display and forecasting of the local weather situation makes RAINSCANNER® an ideal tool for local television and radio broadcasters, newspapers and internet portals. Audiences and users profit from reliable and up-to-date rainfall maps for their area, so that they can plan leisure activities accordingly.
- **Military & Research**  
Designed for easy transport and quick assembly, RAINSCANNER® is the ideal choice for tactical operations requiring meteorological support or short term research campaigns at multiple locations. RAINSCANNER® has been engineered to withstand harsh environments and field operations.

- **Diverse Applications**

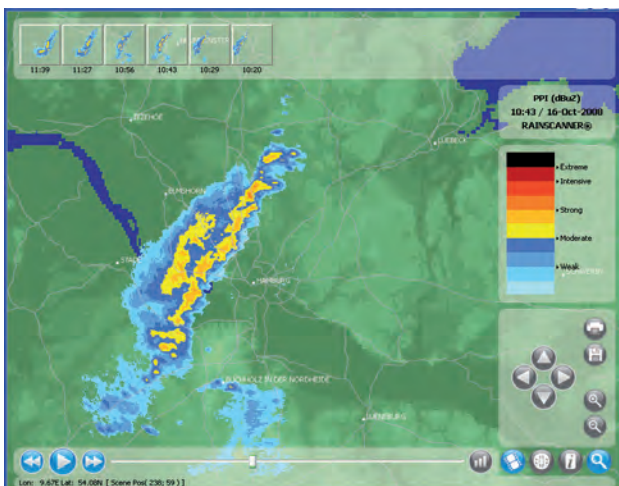
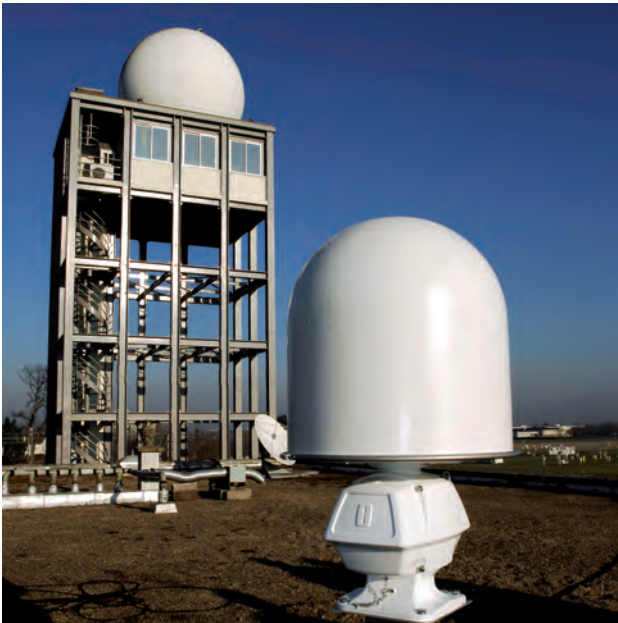
Thanks to the key benefits of RAINSCANNER®, it is suitable for a wide range of other applications including use in civil protection and offshore platforms or gap filling in existing radar networks.

### SYSTEM COMPONENTS

RAINSCANNER® consists of an antenna, head unit, interface unit, signal processor and user workstation running RainView® Analyzer. The antenna is mounted on the head unit, which contains the transmitter and receiver. Together the head unit and antenna can be installed on a mobile mast, building or tower.

RainView® Analyzer provides forecasters with advanced features for the display and analysis of local rainfall in a simple application including:

- Data quality enhancement (e.g. clutter correction)
- Nowcasting of rainfall dispersion over next 30 – 60 minutes
- Data export via ftp (e.g. ASCII, HDF5, PNG)
- Typical display functions (e.g. zoom, animation, mouse pointer orientation)



### TECHNICAL SPECIFICATIONS

	RS60	RS90	RS120
<b>Antenna</b>			
Gain	32 dB	37.5 dB	38.5 dB
Azimuth Beam Width	4°	2.5°	2°
Elevation Beam Width	4°	2.5°	2°
Rotation Rate	12 rpm	12 rpm	12 rpm
Azimuth Accuracy	± 0.5°	± 0.5°	± 0.5°

#### Transmitter

Peak Power	25 kW
Frequency	9410 (± 30 MHz) or 9375 (± 30 MHz)
PRF	833 – 1500 Hz
Pulse Duration	1200 – 500 ns
Pulse Length (Resolution)	180 – 75 m

#### Receiver

Bandwidth (1200 ns / 500 ns)	2.5 MHz / 7 MHz
Minimum Detectable Signal	-100 dBm
Dynamic Range	70 dB
Noise Figure	6 dB

#### Signal Processor

CPU	Intel Pentium Dual Core
Operating System	LINUX
Memory (RAM)	2 GB
Radar A/D Converter	14 bit, 20 MS/s

### DIMENSIONS

	RS60	RS90	RS120
<b>Head Unit</b>			
Width	468 mm	468 mm	468 mm
Height	430 mm	430 mm	430 mm
Depth	300 mm	300 mm	300 mm
Weight	31 kg	31 kg	31 kg

#### Antenna & Radome

Width	680 mm	1040 mm	1650 mm
Height	680 mm	1100 mm	1981 mm
Weight	8 kg	26.3 kg	101 kg

#### Outdoor Interface Box

Width	534 mm	534 mm	534 mm
Height	564 mm	564 mm	564 mm
Depth	925 mm	925 mm	925 mm
Weight	40 kg	40 kg	40 kg

#### Sectional Mast

Extended height	16 m	16 m	N/A
	On request	On request	
	30 m	30 m	
Weight	216 kg	216 kg	N/A

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