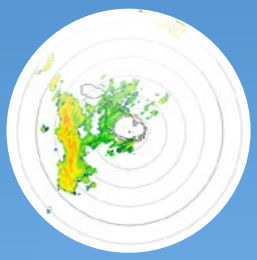
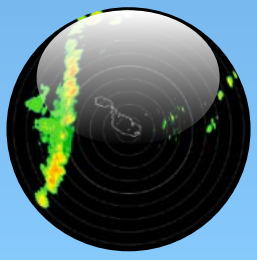
MMR Mini Meteorological Radar





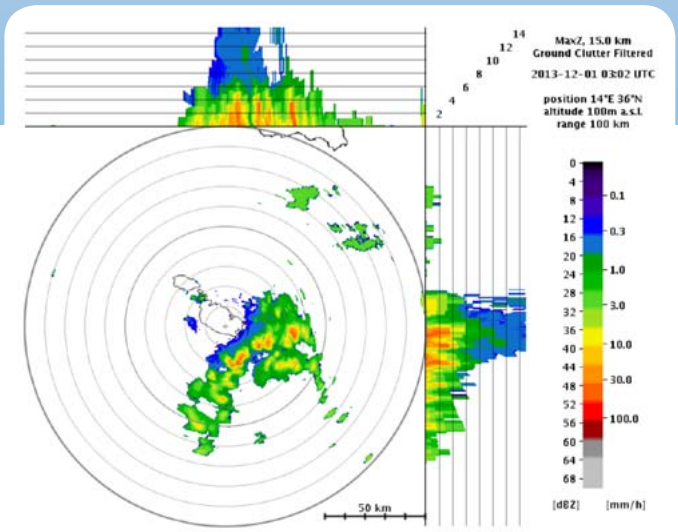
Unique Portable X-band Weather Radar

MMR-50

Mini Meteorological Radar

FEATURES:

- Unique portable X-band weather radar
- Large amount of functionality integrated in small device
- Real time insight to weather situation
- Up to 200 km range



Mini Meteorological Radar MMR is a unique portable X-band weather radar with large functionality integrated in small device sold for favorable price. It provides real time insight to weather situation up to 200 km range.

MMR Radar answers the increasing demand for water management tools and hazardous meteorological phenomena detection. Watersheds management, global warming adaptation strategies, flood protection, operative weather forecast, military and civil defense actions or aviation safety are supported by this radar.

Combination of its size and low price implies wide use in the water management, tourism, media, transport, military and an civil defense, aviation and agriculture.

MMR-50 small weather radar comes with Radar Processor and MMR Software, displaying meteorological spatial data in user-friendly graphic form.

MMR-50 Meteorological Radar provides:

- scan of backscatter from the radar horizon volume
- data transformation into spatial matrix
- input data processing
- data distribution to customer graphic workstation

MMR Mini Meteorological Radar

General description

Basic features of MMR-50

- simple
- small demand on installation and maintenance
- fully automatic operation without servicing personnel
- stationary as well as mobile or portable
- low weight and small dimension
- antenna diameter 55 cm, optimum reach
- frequency 9410 MHz, low pulse power 50 kW
- advanced technology and technical equipment
- data transfers over TCP/IP connection (LAN, private networks, internet etc.)
- possibility to connect the radar to the radar network
- user-friendly graphic according to requirements and customer needs
- easy service
- competitive price
- PPI, CAPPI, RHI, Composite Reflectivity, Rainfall Accumulation, EchoTops, VIL

MMR-50 Software

The data processing is based on web server architecture and therefore all products are available over HTTP interface and easily accessible to any user using web browser. The access to the web interface is secured by encrypted (https) protocol, and protected by password. The data processing software takes the earth curvature and atmospheric refraction into account. During the data processing, the non-meteorological data, like ground clutters, are removed (filtered) in final visualisation products.

The data processing software offers interpretation of the 3D data in following standard outputs:

- PPI (Plan Position Indicator) one radar elevation
- CAPPI (Constant Altitude PPI) horizontal cross section
- RHI (Range Height Indicator) vertical cross section
- Echo Tops heights of cloud tops
- Composite Reflectivity (Column max) maximas in columns
- VIL (Vertically Integrated Liquid Water) column sums
- Rainfall Accumulation

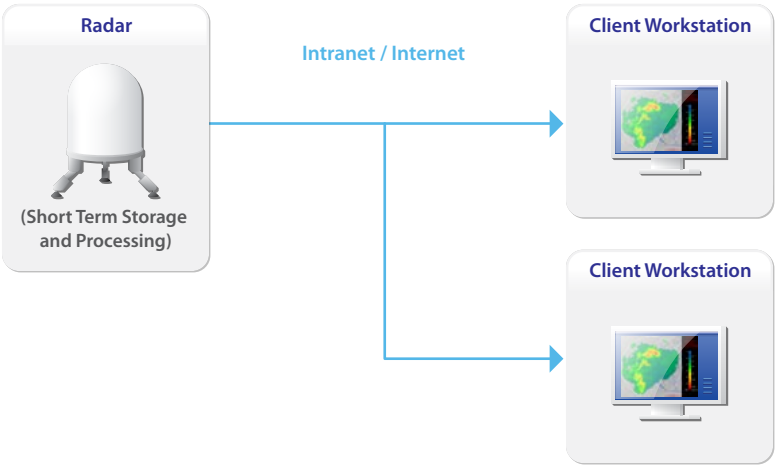
Low pulse capacity enables to monitor important dangerous radar meteorological objects up to distance of 100 km (200 km). Radar meteorological objects with lower intensity can be monitored only up to distance of 60 km (higher intensity - up to 100 km, early warning system - up to 200 km). The device thus complies with standards for operation in settled areas (towns, airports, highways, yachts, etc.).
MMR can complete “white spots” in existing large radar network or a complete network of MMRs can be established in ares with no radar coverage. Small size and low weight enables easy installation and operation.

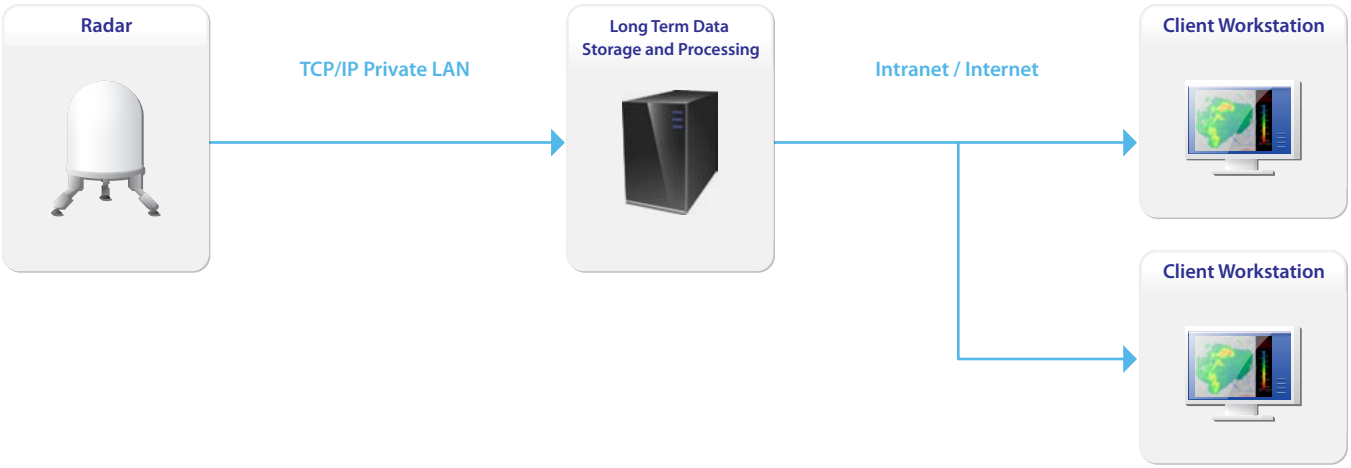
Technical Specification

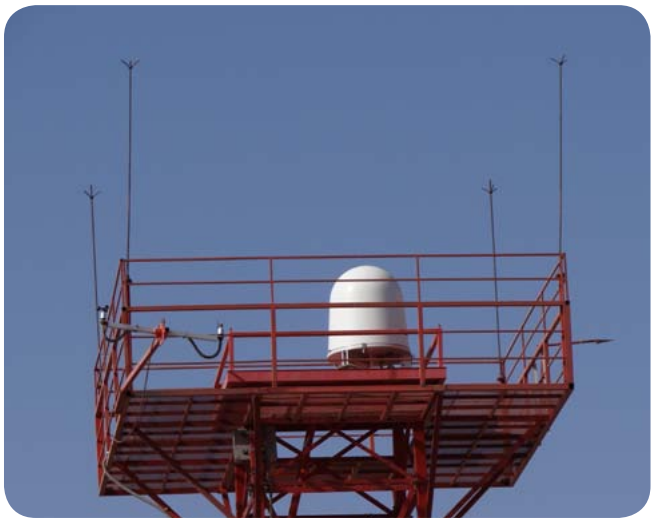
Dimensions • height • width	 125 cm 92 cm x 92 cm
Weight	90 kg
Antenna	Parabolic, 55 cm
Antenna Elevation **- Angle Span**	–1 to +90°
Antenna Scanning Speed	0 to 60 rpm
Transmitter Tube	Magnetron
Receiver Sensitivity	–111 dBm
Modulator Type	Solid-state
Dynamic Range	80 dB
Operating Frequency Range	9410 MHz (X-band)
Half Power Beam Width	4°
Polarization	Linear, horizontal
Antenna Gain, typical	32 dBi
Transmitter Power Peak	50 kW
Raw Data Resolution	32 bit
RF Pulse Width	3 µs
Pulse Repetition Frequency	500 Hz
Maximum Range	100 km (200 km for the detection of early warning system)
Radial Resolution	300 m (600 m)
Consumption	250 W
Data Update Rate	3D full scan @min. 4 minutes interlacing scan refresh 2 min. (depending on configuration)

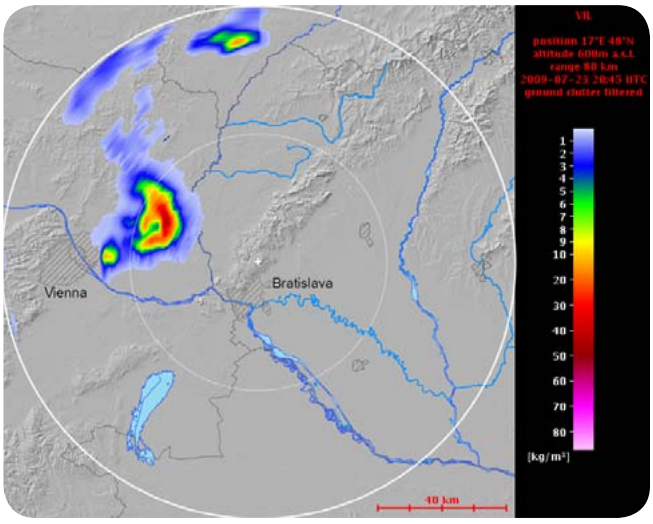
Mini Meteorological Radar

Scheme









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