

EMC Site Automation



To enable full EMC Site Automation D.A.R.E!! Instruments introduced a broad range of products. These products provide a complete solution to automate antenna emission measurements at multi-height (1 to 4m scan or 1 to 6m scan) and EMC measurements at different EUT angles.

RadiControl®

The RadiControl® is a versatile controller plug-in card that fits into one of the RadiCentre® mainframes and provides full control of the RadiTurn® turntable and/or RadiTower® antenna mast. Next to this it supports frequency inverters, potential-free contacts (up/down & on/off) and 12V signals. The RadiControl® can be used manually using the TFT touchscreen display of the RadiCentre® mainframe or using the RadiMation® software package, thus realizing fully automated EMC tests.



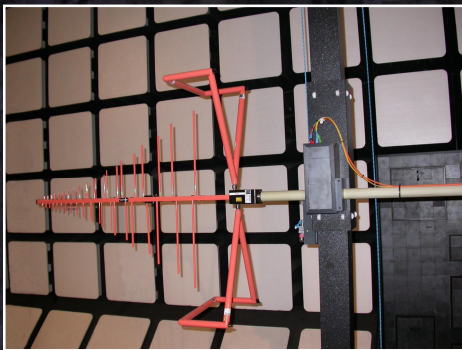
RadiTurn®

The RadiTurn® is a low profile RF transparent surface mounted turntable. In many applications it is difficult to install a turntable. This is especially true for Open Area Test Sites and Anechoic chambers. Not only the space beneath the floor is limited or absent, but also the electrical connection of the turntable with the surrounding metal groundplane often leads to great disturbance problems and high maintenance costs. This is why D.A.R.E!! Instruments has designed a low profile RF transparent turntable. With a height of less than 80 mm and no reflective planes, this turntable is excellent for use in both new and existing EMC test environments. This combined with a maximum load capacity of up to 10.000 kg and a point load capacity of 250 kg, makes the RadiTurn® a highly unique product.



RadiTower®

The RadiTower® is a robust antenna tower dedicated for EMC use. The tower is completely RF transparent because of use off polycarbonate/PVC, and is weather proof and non hygroscopic. This is an excellent solution for use on an Open Area Test Site or Antenna calibration site. The engine can be mounted next or under the tower, depending on the specific site situation. The position of the antenna is measured by means of an absolute encoder on the engine. This delivers a standard accuracy of approximately 10mm. For extended use of antenna calibrations, a high precision sensor can be mounted to the centre of the antenna, thus obtaining an increased height accuracy of 1 mm. A software protection is implemented that controls the upper- and lower limit, motor direction and motion detector.



RadiPol®

The RadiPol® is an antenna H/V positioner that is driven by a LASER powered electromotor that is contained in a small box attached to the antenna mast. The box is fully covered by ferrite tiles, so it will not cause reflections. Compared to a compressed air antenna positioned the RadiPol® operated very smoothly and has calibration potentiometers for the horizontal and vertical antenna position. The RadiPol® can be used with any type of antenna using adapters and has a feedback loop to check the exact antenna angle at any point.

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The Standard for Consultancy, (Re)design
and Training in EMC and Product Safety

DARE!!

Instruments

Technical Specifications

RadiControl[®] Universal Controller plug-in card

Performance	
Control	: Manual and/or software controllable
Range	: 1 – 6 m (tower), 360 degrees (turntable)
Accuracy	: ± 1 mm (tower), ± 1 degree (turntable)
Form factor	: Occupies one slot of RadiCentre [®] mainframe
Inputs	: Upper- and Lower limit, emergency shutdown, absolute encodes, and four (4) general purpose inputs
Outputs	: Four (4) general purpose outputs

RadiTurn[®] Transparent low profile Turntable

Performance	
Diameter	: Between 1 m – 4 m
Height	: 75 mm on top of surface
Maximum load	: 10.000 kg
Maximum point load	: 250 kg
EMC performance	: Transparent
Engine control	: 1 kW electromotor
Rotation speed	: 30 seconds for 360° (HW preset speed)
Angle data	: 0° - 360° with 1° resolution

RadiTower[®] Robust EMC antenna tower

Performance	
Height	: 5,5 m or 7,5 m
EMC performance	: RF transparent
Engine control	: 1 kW electromotor
Height data	: 1 – 4m or 1-6m with selectable resolution (1cm or 1mm)
Versions	: Free standing (indoor) or Cable stayed (outdoor)

RadiPol[®] LASER powered H/V positioner

Performance	
Dimensions of H/V motor unit	: 100 mm x 120 mm 2 250 mm
Weight of H/V motor unit	: Approx. 3 kg
Maximum antenna weight	: 20 kg
Moment of inertia	: 15 Nm
LASER specifications	: Class IIIb / 500 Mw / 808 nm / FC-PC connector
LASER switch on-off time	: On: < 90 ms (typical 70 ms) / Off: < 10 ms (typical 7 ms)

More information

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