

dbSAFE RME



Isolate. Test. Adapt.

Isolate test environments from unwanted signals. The dbSAFE RME is a rackmount RF test enclosure with a double wall design that offers the best RF shielding in its class; 100 dB isolation over a wide frequency range.

Test wireless devices in a cost-effective RF enclosure. The double wall design guarantees more than 100 dB of isolation that is required for testing emerging low-power wireless devices. RF connections are made with minimum path loss to ensure higher RF quality.

Adapt the dbSAFE RME to your test requirements. In addition to having three standard sizes, the dbSAFE RME can also be manufactured to any dimension. DVTEST's customizable I/O panels offer flexible testing options for a wide range of applications. The dbSAFE RME can also be configured for thermal testing.



RF Absorber Foam Liner

The dbSAFE RME minimizes reflections across its interior through the use of a broadband RF absorber. This lossy foam liner is precision cut and installed to ensure the test enclosure exhibits high reflection loss and guarantees the highest performance. Custom RF absorbers can also be installed to further reduce any internal reflections or extend the frequency range.



RF Gaskets

- RF gaskets are used in all seams and I/O connections to eliminate leakage.
- The main RF seal uses a braid over foam gasket precisely installed on the enclosure's integrated lip channel, providing a perfect seal each and every time.



Double Wall Construction

The exterior of the dbSAFE RME is composed of two layers of aluminum. This form of construction not only improves the structural strength of the test enclosure, but provides an additional 20 dB of RF isolation. Thus, the double wall design provides higher shielding effectiveness which is required for testing low power sensitive devices.



User-Defined I/O Panel

DVTEST offers various custom I/O panels to accommodate almost any test setup. This is made possible through an almost endless combination of I/O interface modules that are available including an ever-growing collection of the latest technology of I/O connectors, data interface and power modules. Our design engineers are always ready to cater to a wide array of custom requests.

Specifications for dbSAFE RME

Isolation

Shielding Effectiveness (dB) (Isolation measurements taken adjacent to each seam)	300 MHz - 2 GHz \geq 100 dB 2 GHz - 3 GHz \geq 100 dB 3 GHz - 6 GHz \geq 90 dB 6 GHz - 13 GHz \geq 80 dB
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Construction

Wall Type	Double Wall Welded Aluminum Structure
Door Style	Front Opening Single/Dual Lever Latch
RF Gasket	Dual Layer Braid Over Foam
Absorber	Broadband Lossy Foam Absorber

Enclosure Options

Compatible Rack Types	19" or 24" EIA Standard Racks
Cooling	Passive Waveguide Vent Active Waveguide Ventilation Module with AC Fan (110 cm)
Waveguide Optical Data Feedthrough	6 Position Modules Available
USB to Fiber Interface	USB 2.0/3.0/3.1
Ethernet to Fiber Interface	Up to 10 GBps
Thermal	Extreme Temperature Testing Forced Air -45°C to +90°C Forced Air -45°C to +90°C

Accessories

OTA Performance Verification	Noise Source and Power Sensor
Test Probe Antenna	dbDIRECT Cross Polarized Vivaldi
Calibration Antenna	dbDIRECT Series Standard Gain Horn
Antenna Couplers	dbCOUPLER or dbCOUPLER mini

Measurement Software (Optional)

(System Controller Not Included)	Antenna Under Test OTA DUT Near-Field to Far-Field Spherical Measurement 3D Antenna Patterns Near-Field to Far-Field and Direct Far-Field
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Positioning System (Optional)

Manual	Manually Adjusted Rotational and Translational Probe and DUT Mounts
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All Dimensions WxDxH Inch (mm)

19" 4U	Int: 14" (355) x 20" (510) x 4" (100) Ext: 19" (480) x 25" (635) x 7" (180)
19" 7U	Int: 14" (356) x 20" (508) x 9.25" (235) Ext: 19" (480) x 25" (635) x 12.25" (311)
19" 10U	Int: 14" (355) x 20" (510) x 14" (355) Ext: 19" (480) x 25" (635) x 17" (430)
24" 10U	Int: 21" (533) x 20" (508) x 14.5" (368) Ext: 24" (610) x 25" (635) x 17" (432)
24" 13U	Int: 21" (533) x 20" (508) x 19.75" (502) Ext: 24" (610) x 25" (635) x 22.75" (578)

Weights lbs(kg)

19" 4U	38 (17)
19" 7U	48 (22)
19" 10U	62 (28)
24" 10U	71 (32)
24" 13U	78 (35)

I/O Panel Options

RF Connectors	SMA, N, BNC, TNC
I/O Connectors and Data Modules	USB 2.0/3.0/3.1 Ethernet up to 1 GBps with POE Audio 3.5 mm (2, 4 or 20 position) HDMI 1.4 Data Module D-Sub: DB-9, DB-15, DB-25, DB-37 (50 position and HD D-sub available on request). 50 V/5 A Per Pin
AC Power	120/250 V - 15 A, 50/60 Hz AC Module
DC Power	0-100 VDC - 20 A, Two Position DC Module

Ordering Information

dbSAFE RME Models	19" 4U	251005
	19" 7U	99126
	19" 10U	99118
	24" 10U	99168
	24" 13U	99169
Warranty	2 Years, Parts and Labor (with product registration)	

Please contact factory for custom sizing, additional options, and unique design application ideas.

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