dbSAFE DUO
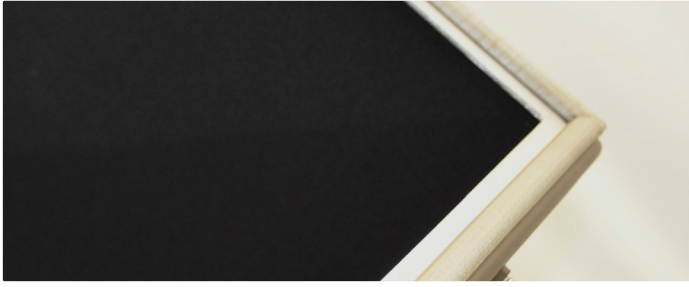
DVTEST
Best Isolation. Better Results.

QUICK**SHIP**

Isolate. Test. Adapt.

Isolate test environments from unwanted signals. The dbSAFE DUO is an RF test enclosure with a double wall design that offers the best RF shielding in its class; 100 dB isolation from 300 MHz to 13 GHz.
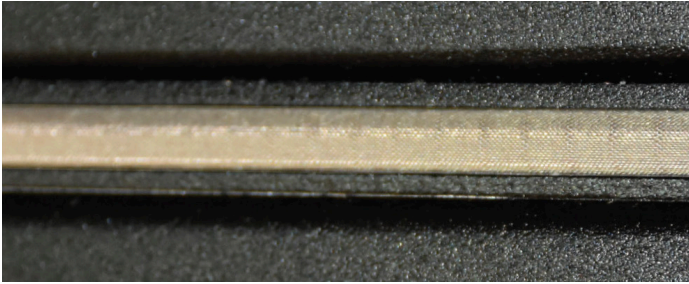
Test wireless devices in a cost-effective RF enclosure. The double wall design guarantees more than 100 dB of isolation that is required for testing emerging low-power wireless devices. RF connections are made with minimum path loss to ensure higher RF quality.

Adapt the dbSAFE DUO to your test requirements. In addition to having three standard sizes, the dbSAFE DUO can also be manufactured to any size. The field upgradeable custom I/O panel offers flexible testing options for different applications. The dbSAFE DUO can also be configured for thermal testing.

RF Absorber Foam Liner

The dbSAFE DUO minimizes reflections across its interior with the use of an RF absorbing foam liner, which is precision cut and fitted to the exact interior dimensions. This allows the DUT to be positioned anywhere with virtually no effect on attenuation caused by reflections or leaks.

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 DUO is composed of two layers of aluminum with a gap between them. 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

The flexible custom I/O panel can be changed onside as well as projects evolve. The options below are available:

- RF Ports: SMA, SMB, BNC, TNC, UHF, N
- RF filtered connectors: USB1.1/2.0/3.0
- Ethernet 10/100/1000 Base-T - 1 Gbps - PoE/PoE+
- Ethernet 10 Gbps - PoE / PoE+
- HDMI 1.4 , 2.0
- Fiber optics: ST and FC
- AC filtered interface; 120/220V
- Data: DB9, DB15, DB25, DB37, DB50, RJ11
- DC filtered interface; 0-150VDC, 20 A
- Waveguide with 6 or 12 ports for fiber insertion
- Air ventilation with AC or DC fan

Specifications for dbSAFE DUO

Isolation

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

Construction

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

Enclosure Options

Test Equipment Rack	19" Rack
Cooling	Passive Waveguide Vent Active Waveguide Ventilation Module with AC Fan (110cm)
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
Other	Coupling Antenna: 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

All Dimensions WxDxH Inch (mm)

dbSAFE DUO Small	Int: 11" (280) x 8.5" (215)x 6" (150) Ext: 13.5" (340) x 11" (280) x8.5" (215)
dbSAFE DUO Medium	Int: 17" (430) x 11" (280)x 8" (200) Ext: 19.5" (500) x 13.5" (340) x 10.5" (270)
dbSAFE DUO Large	Int: 24" (610) x 15" (380) x 13" (330) Ext: 26.5" (670) x 17.5" (450) x 15.5" (390)

I/O Panel Options

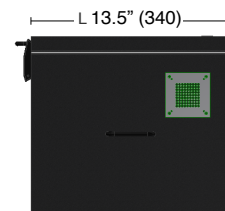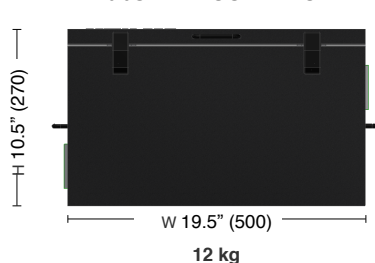|	
RF Connectors	SMA, N, BNC, TNC

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-subs available on request).
	   50V/5A 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

Positioning System (Optional)

Manual	Manually Adjusted Rotational and Translational Probe and DUT Mounts

Ordering Information

Models	dbSAFE DUO Small dbSAFE DUO Medium dbSAFE DUO Large
Warranty	2 Years, Parts and Labor (with product registration)

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

dbSAFE DUO MEDIUM

H 10.5" (270)
W 19.5" (500)
12 kg

L 13.5" (340)

Size Comparison

Small　　**Medium**　　**Large**