

dbSAFE DUO

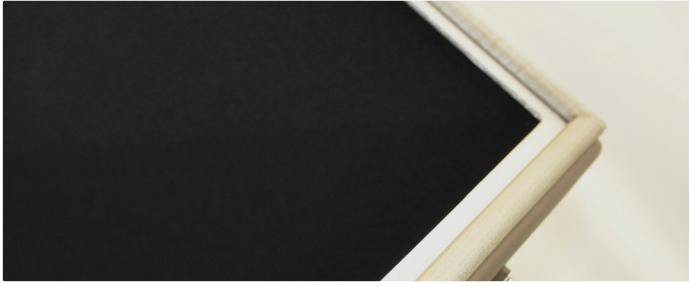


Isolate. Test. Adapt.

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 over a wide frequency range.

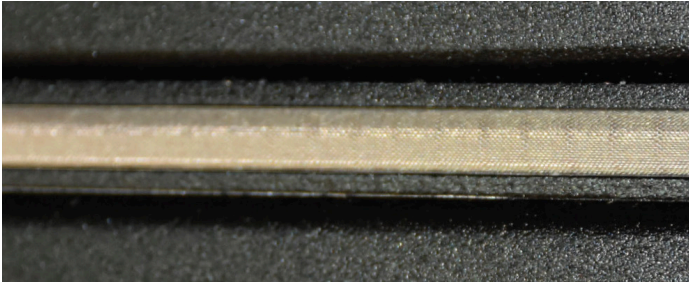
Test wireless devices in a cost-effective RF enclosure. The double wall design guarantees more than 100 dB of isolation that is required for testing emerging low-power wireless devices. RF connections are made with minimum path loss to ensure higher RF quality.

Adapt the dbSAFE DUO to your test requirements. In addition to having various standard sizes, the dbSAFE DUO 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 DUO can also be configured for thermal testing. Additional testing accessories, such as antenna positioners and mounting brackets can be added to accommodate different test setups.



RF Absorber Foam Liner

The dbSAFE DUO 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 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 onsite 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
- Filtered AC interface module; 120/220 V
- Data: DB9, DB15, DB25, DB37, DB50, RJ11
- Filtered DC interface module; 0-150 VDC, 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)	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/Top Opening Single/Dual Lever Latch
RF Gasket	Dual Layer Braid Over Foam
Absorber	Broadband Lossy Foam Absorber

Enclosure Options

Test Equipment Rack	19" Rack
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
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
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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) x 8.5" (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-sub's 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)

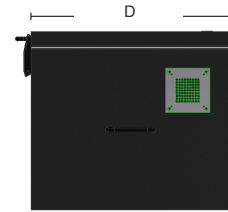
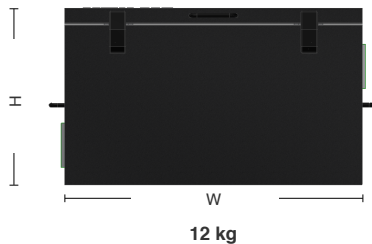
Manual	Manually Adjusted Rotational and Translational Probe and DUT Mounts
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Ordering Information

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



Size Comparison

