

TC-5977DU Shield Box



Features

- Reliable RF shielding from 0.1 GHz to 12 GHz
- Specifically designed for laptop size devices
- Easy open/close
- EMI filters on all data ports and power lines
- Customizable I/O interface panels
- Side cooling fans (optional)

Specifications

RF Specifications

Frequency Range	0.1 GHz to 12 GHz
------------------------	-------------------

*Shielding Effectiveness

0.5 GHz to 3 GHz	> 70 dB (meas.)
3 GHz to 6 GHz	> 60 dB (meas.)
6 GHz to 12 GHz	> 60 dB (meas.)

* The shielding effectiveness is measured with blank panels mounted; other I/O interface panel may result in different shielding effectiveness.

Mechanical Specifications

Basic RF Connector	One(1), N(f) outside and SMA(f) inside
---------------------------	--

Dimensions

Inside	802(W) x 762(D) x 644(H) mm
Outside	916(W) x 940(D) x 856(H) mm
Door	588(W) x 588(H) mm

Weight	Approx. 81 kg
---------------	---------------

*Packing

Size	1100 (W) x 1100(D) x 1030(H) mm
Weight	Approx. 101 kg

* The size or weight of a package may vary depending on how the product is packed.

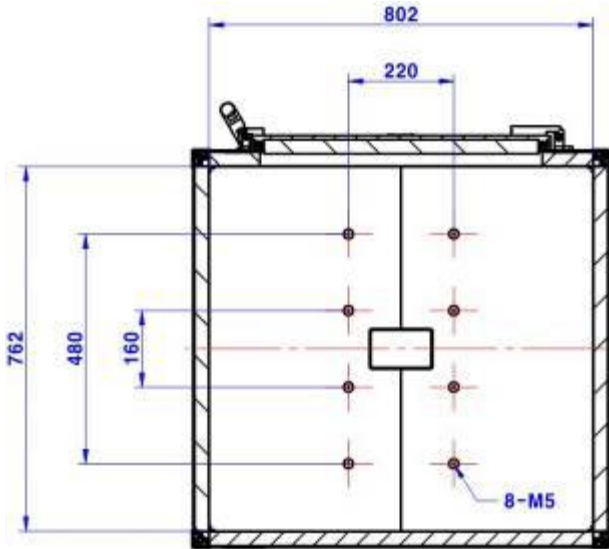
Absorber Reflectivity

Referring to a metal plate (0 dB @ 0.5 GHz to 12 GHz), signal reduction is measured with the RF absorber is inserted.

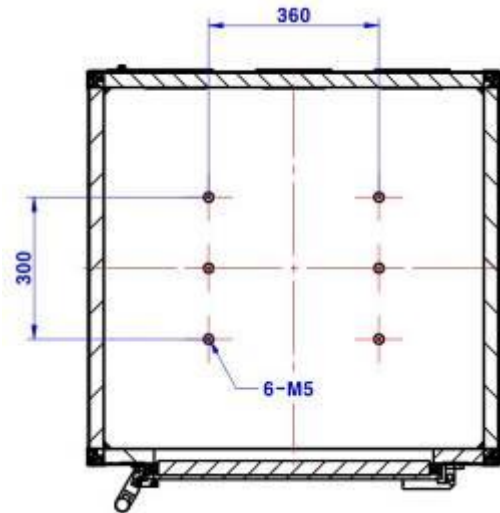
Frequency	Reflectivity [dB]
0.5 GHz to 2 GHz	10 dB (Typ.)
2 GHz to 12 GHz	20 dB (Typ.)

Dimensions

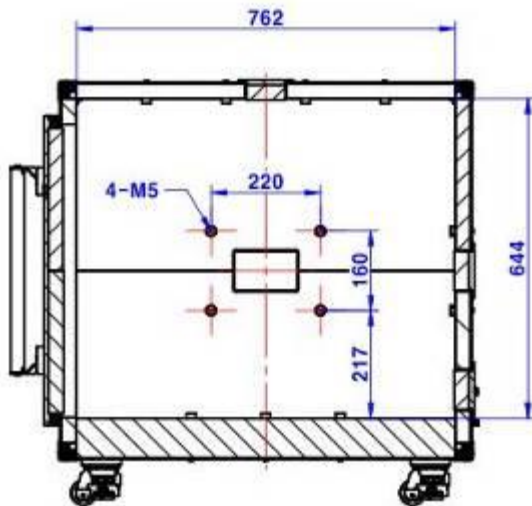
- TC-5977DU Inner Dimensions: 802(W) x 762(D) x 644(H) mm



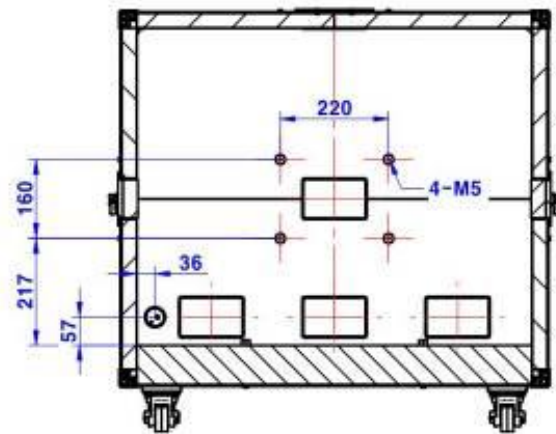
[Bottom View (Top Side)]



[Top View (Bottom Side)]

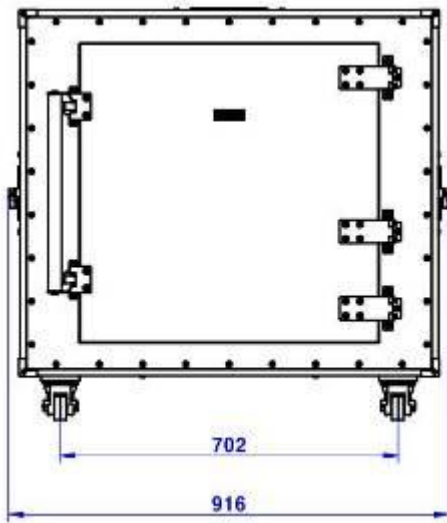


[Side View]

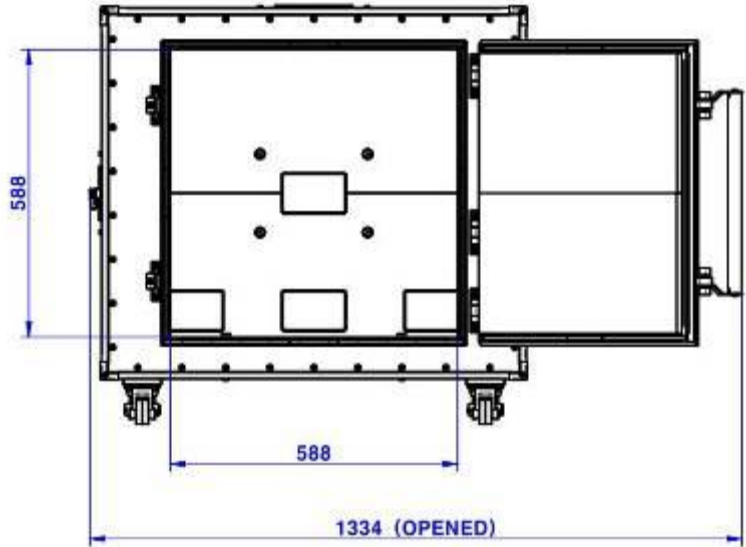


[Rear View]

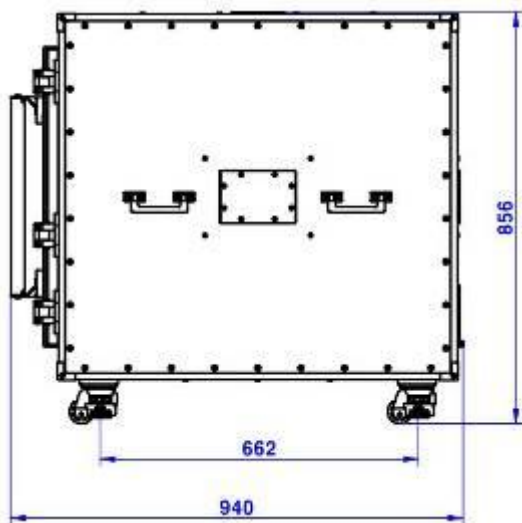
- TC-5977DU Outer Dimensions: 916(W) x 940(D) x 856(H) mm



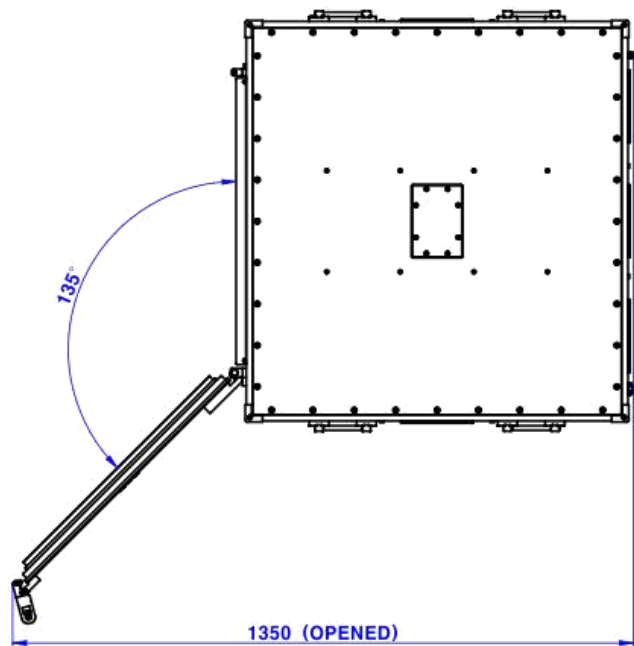
[Front View]



[Front View (Door Open)]

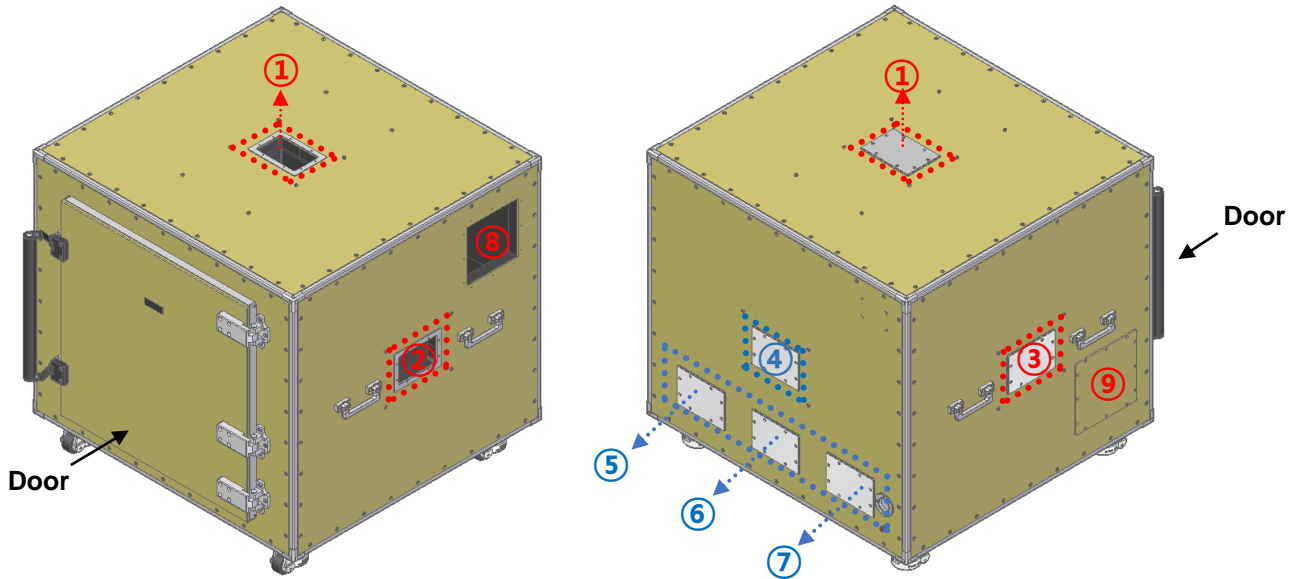


[Side View]



[Top View]

TC-5977DU Sample Configurations



[Sample Configurations]

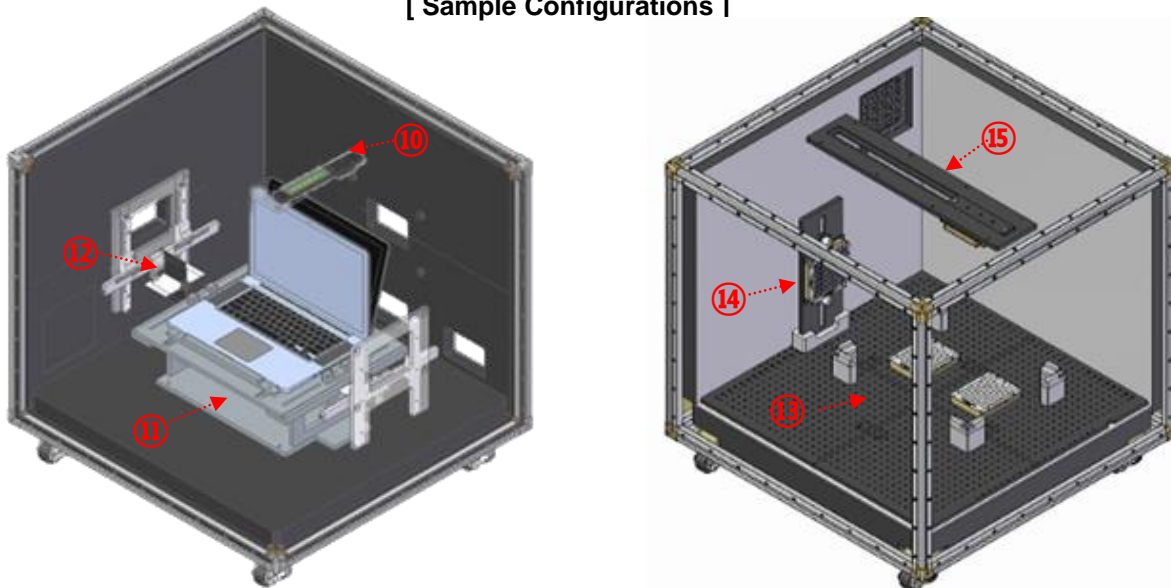


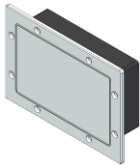
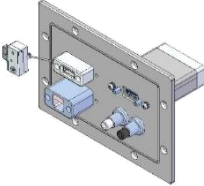
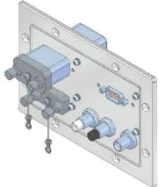
Table 1. TC-5977DU Optional Components

No.	Description	No.	Description
①	Top I/O Interface Panel	⑩	F55702A, Top LED Assembly
②	Right Side, I/O Interface Panel	⑪	F55706B, Laptop Fixture
③	Left Side, I/O Interface Panel	⑫	F55708A, DPV Antenna Fixture
④,⑤,⑥,⑦	Rear, I/O Interface Panel	⑬	F59772A, Bottom Grid Fixture
⑧	M557002B, Cooling Fan Panel (Right)	⑭	F59773A, Side Fixture
⑨	M557002A, Cooling Fan Panel (Left)	⑮	F59771B, Top Fixture

Ordering Information



Order Number	Description
TC-5977DU	Shield Box (including accessories below) ----- Test Report

Pre-Configured I/O Interface Panels

I/O Interface Panel	Order Number	Configuration
	M07001A	<ul style="list-style-type: none"> • Blank panel (with absorber)
	M07003A	<ul style="list-style-type: none"> • One(1) USB 2.0 outside and inside • One(1) USB 3.0 outside and inside • One(1) RJ-45 outside and inside • One(1) Banana Jack outside and inside
	M09009A	<ul style="list-style-type: none"> • One(1) DB9(p) outside and DB9(s) inside, 100 pF pi filter • One(1) USB 3.0 outside and inside • One(1) RJ-45 outside and inside • One(1) Banana Jack outside and inside • One(1) DC Jack outside and inside

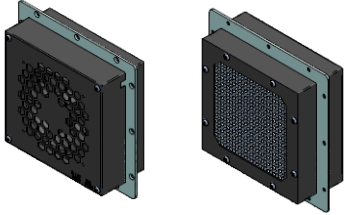
■ Custom RF Connector Panel

- Custom RF Connector Panel is available by selecting or combining the below RF Connectors.

RF Connector	Description / Order Number	Frequency Range / Impedance / V.S.W.R
	RF, N-SMA 4H Connector / 3407-0028	From DC to 18 GHz / 50 Ω / 1.3 max
	RF, SMA-SMA 4H Connector / 3408-0098	From DC to 18 GHz / 50 Ω / 1.3 max

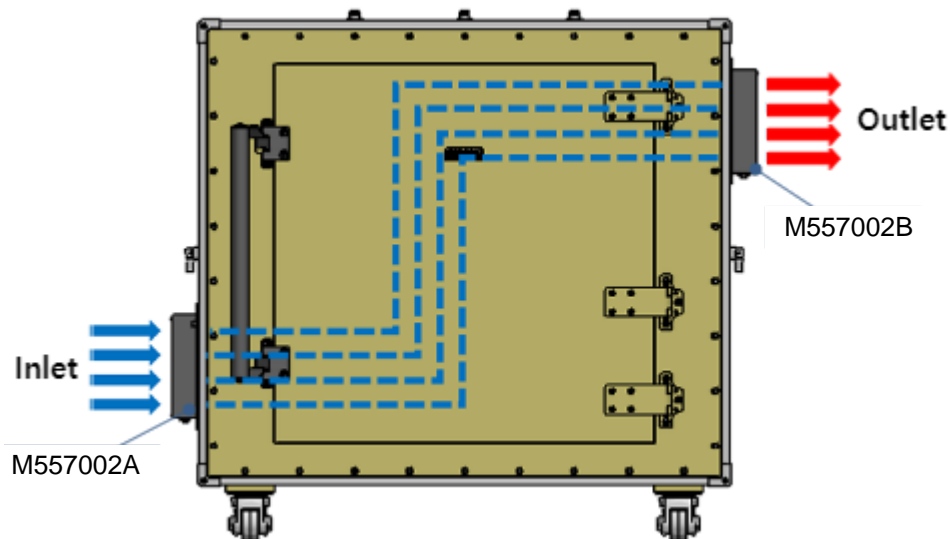
Pre-Configured Side I/O Interface Panel

- Two optional side I/O interface panels available.

I/O Interface Panel	Order Number	Configuration
 <p data-bbox="212 667 424 696">Cooling Fan Panel</p>	<p data-bbox="555 432 687 461">M557002A</p> <p data-bbox="555 472 687 501">M557002B</p>	<ul style="list-style-type: none"> <li data-bbox="751 432 1102 461">• M557002A: Inlet (Left FAN), <li data-bbox="751 472 1134 501">• M557002B: Outlet (Right FAN) <hr/> <ul style="list-style-type: none"> <li data-bbox="523 517 699 546">• Specification <li data-bbox="544 557 922 586">Frequency : 0.5 GHz to 48 GHz <li data-bbox="544 598 938 627">Shielding Effectiveness : > 70 dB <li data-bbox="523 638 1453 696">• M557002A/M557002B are the same parts but the installation direction is different <li data-bbox="523 707 1086 736">• Input voltage: 100 - 240 VAC, 50/60 Hz, 1.8 A <li data-bbox="523 748 906 777">• Output voltage: 24 VDC, 2.5 A <li data-bbox="523 788 794 817">• Including AC Adapter

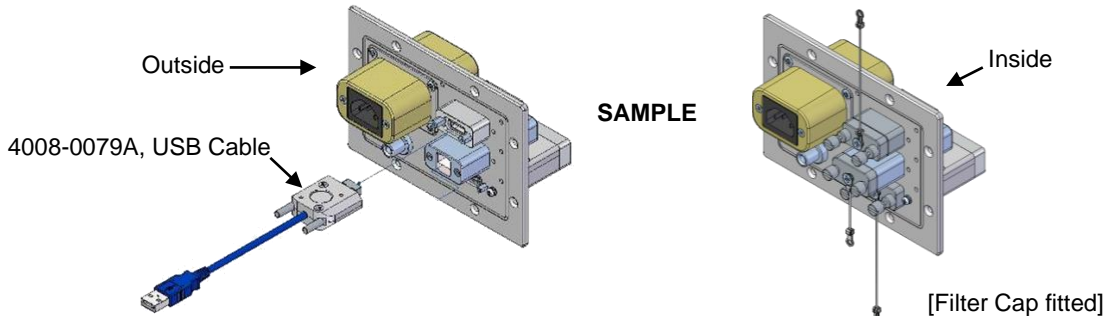
Air Flow Mechanism of Shield Box







- The location of the inlet cooling panel and the outlet cooling panel should be installed as shown below.



■ Custom I/O Interface Panel

- Customized I/O Interface Panel is available by selecting below I/O interfaces and combine.
Please contact Tescom sales team or your local distributor.



I/O Interface	Description / Order Number	Typical Data Rate / Line Voltage	Typical Shielding ^(*)
	USB 2.0 Filter / 3409-0018A-3 ^(a)	480 Mbps / 5 V, 500 mA / Max Current: 5 A	>60 dB from 0.5 to 2 GHz >70 dB from 2 to 3 GHz >70 dB from 3 to 6 GHz >70 dB from 6 to 12 GHz
	USB 3.1 Gen 1 Filter (Active) /3409-0042A-2 ^(a)	5000 Mbps / 5 V, 600 mA / Max Current: 1.5 A	>80 dB from 0.5 to 2 GHz >80 dB from 2 to 3 GHz >75 dB from 3 to 6 GHz >55 dB from 6 to 12 GHz
	RJ-45 Filter / 3904-0296A	RJ45 Filter: 1 Gbit/s Copper Line Ethernet (1000 BASE-T)	>60 dB from 0.5 to 2 GHz >70 dB from 2 to 3 GHz >70 dB from 3 to 6 GHz >60 dB from 6 to 12 GHz
	DC Power Adaptor / 3406-0004A	50 VDC, 3 Amps max	>70 dB from 0.5 to 2 GHz >80 dB from 2 to 3 GHz >80 dB from 3 to 6 GHz >70 dB from 6 to 12 GHz
	DC Power Adaptor (Banana Jack Type) 3406-0005A-1 (Black) 3406-0006A-1 (White)	50 VAC, 10 Amps max	>70 dB from 0.5 to 2 GHz >80 dB from 2 to 3 GHz >80 dB from 3 to 6 GHz >70 dB from 6 to 12 GHz
	AC Power Adaptor / 3103-0009A	250 VAC, 7 Amps max	>70 dB from 0.5 to 2 GHz >80 dB from 2 to 3 GHz >80 dB from 3 to 6 GHz >70 dB from 6 to 12 GHz

- ^(a) : Exclusive cables should be used.

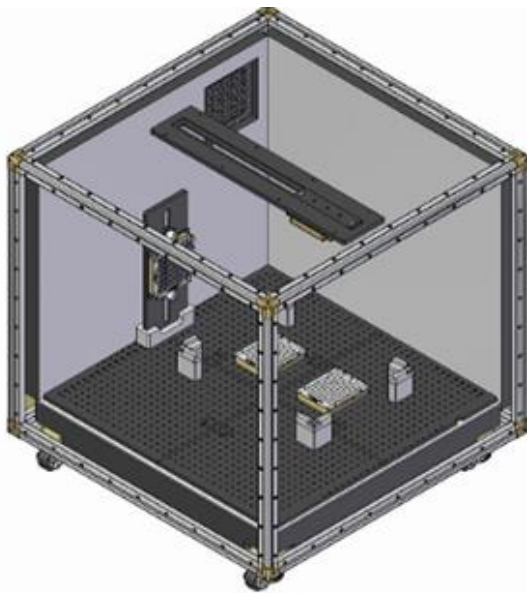
(USB Cable, 4008-0079A, 2 M, USB 3.0 A(M) - USB 3.0 A(M), Housing: Aluminum)

- ***Typical Shielding** is an estimated value with I/O interface applied.
- The data above were measured by TESCOM standards, and they may be different depending on the measuring method and environment.

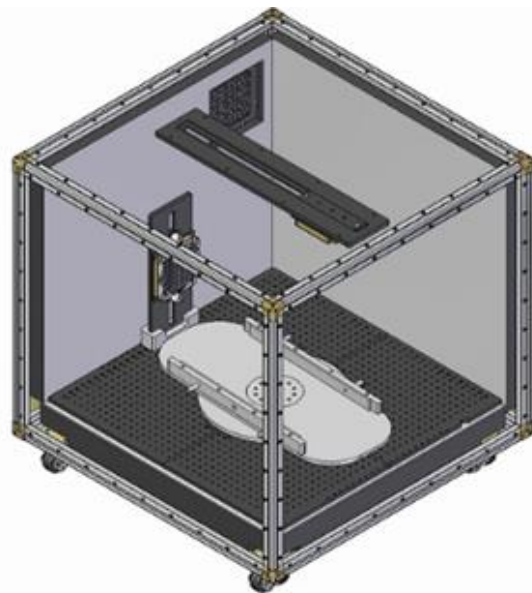
Fixtures

- TESCOM offers standard grid fixtures that can change the position of DUT holding blocks. An optimal fit for different shapes of DUT can be made within seconds. Also, fully customized fixtures can be manufactured and supplied if necessary to meet the customer's demands.
- In addition to the fixture, various types of antenna coupler options can form an ideal measuring environment for characteristics of each DUT.

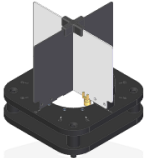
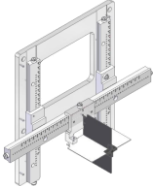
[Bottom Grid Fixture Concept]



[Rotator Fixture Concept]



■ DPV Antenna Fixtures

Antenna Fixture	Order Number	Configuration
	F59777A	<ul style="list-style-type: none"> • DPV Antenna Fixture - DPV Antenna(Optional) <ul style="list-style-type: none"> ▫ TC-93083A: 0.6 GHz to 7.2 GHz ▫ TC-93076A: 0.7 GHz to 6 GHz ▫ RF Connector: Two(2) SMA Connector (Female) - F59772B Grid Fixture required
	F55708A	<ul style="list-style-type: none"> • DPV Antenna Rail Fixture - DPV Antenna(Optional): TC-93076A <ul style="list-style-type: none"> ▫ Frequency Range: 0.7 GHz ~ 6 GHz ▫ RF Connector : two(2) SMA Connector (Female)

■ Optional Fixtures

Fixture	Order Number	Description
	F59771B	<ul style="list-style-type: none"> • Top Fixture - 620(W) x 130(D) x 12(H) mm - Fixture Motion: <ul style="list-style-type: none"> ▫ Position adjustment range: ± 190 mm from the center antenna - Antenna Coupler(Optional): TC-93061A
	F59772B	<ul style="list-style-type: none"> • Bottom Grid Fixture, 4 divisions - 802(W) x 762(D) x 10 (H) mm - Components: <ul style="list-style-type: none"> ▫ 1 ea, Antenna Coupler holding bracket ▫ 2 ea, guide block(L) ▫ 4 ea, guide block(S) ▫ 4 ea, assembly bracket - F59777A DPV Antenna Fixture option selectable
	F59773A	<ul style="list-style-type: none"> • Side Fixture - 150(W) x 44(D) x 460 (H) mm - Fixture Motion: <ul style="list-style-type: none"> ▫ Position adjustment range: ± 120 mm from the center Antenna - Antenna Coupler(Optional): TC-93061A - F59772B Grid Fixtures required
	F59775A	<ul style="list-style-type: none"> • Rotator Fixture - 600(W) x 350(D) x 44 (H) mm - F59772B Grid Fixtures required
	F55702A	<ul style="list-style-type: none"> • Top LED Assembly - Power ON/OFF switch - Power supplied by USB - Requires USB 2.0 or USB 3.1 Gen 1 interface
	F59778A	<ul style="list-style-type: none"> • Camera Fixture - Camera: Logitech, C270 - Power supplied by USB - Requires USB 2.0 or USB 3.1 Gen 1 interface

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT PRIOR NOTICE