

TC-5570A mmWave Shield Box



Features

- Specifically designed for Millimeter wave test
- Reliable High RF Shielding from 0.1 GHz to 67 GHz
- EMI filters on all Data ports
- Easy Opening/Closing of Door
- Customizable Data connections

Specifications

Mechanical Specifications

Basic RF connector	One(1) 1.85 mm(f) outside and 1.85 mm(f) inside
Dimension	
Inside	802(W) x 762(D) x 644(H) mm
Outside	916(W) x 940(D) x 856(H) mm
Door	624(W) x 624(H) mm
Weight	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 on how to pack a package.

Typical RF Shielding

The shield effectiveness below is measured when the blank panel is mounted; other I/O interface panel results a different shielding effectiveness of the shield box.

Frequency Range	Shielding Effectiveness [dB]
0.1 GHz to 30 GHz	> 60 dB
30 GHz to 67 GHz	> 70 dB

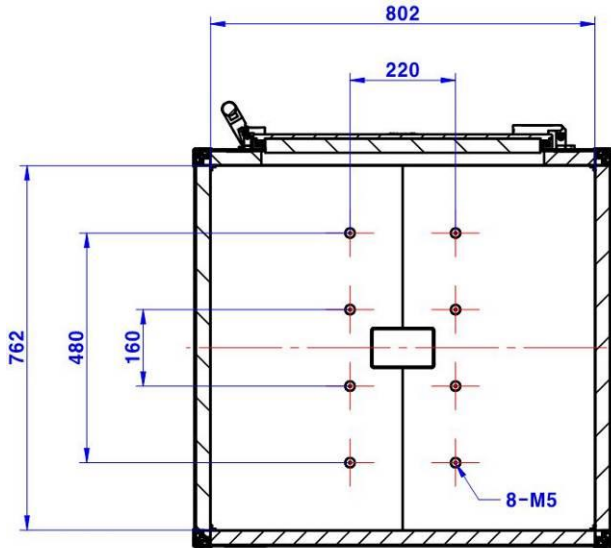
Absorber Reflectivity

Being measured based on the metal plate (0 dB @ 18 GHz to 67 GHz), and measures the value that is reduced when the radio wave absorber is inserted,.

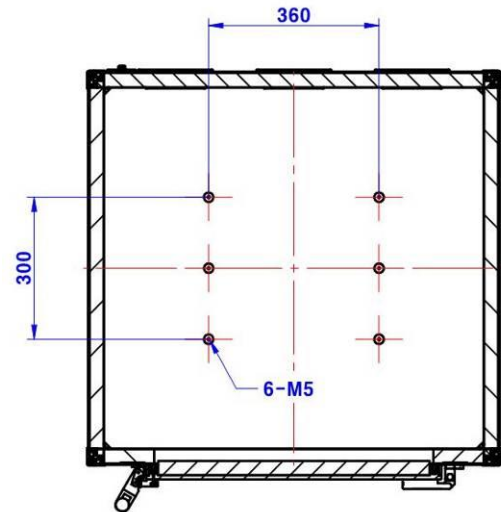
Frequency Range	Reflectivity [dB]
0.5 GHz to 2 GHz	15 dB (Typ.)
2 GHz to 67 GHz	20 dB (Typ.)

Dimensions

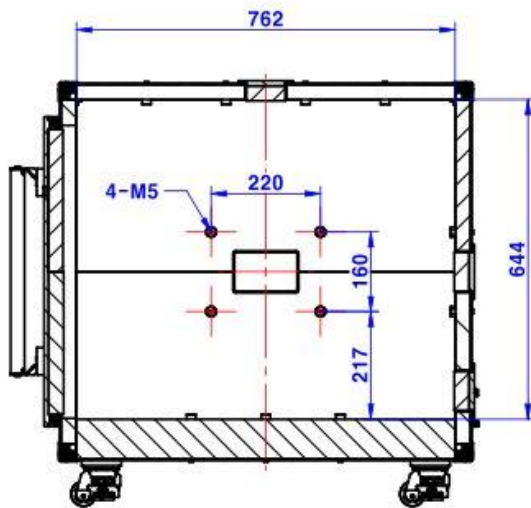
- TC-5570A Inside size : 802(W) x 762(D) x 644(H) mm



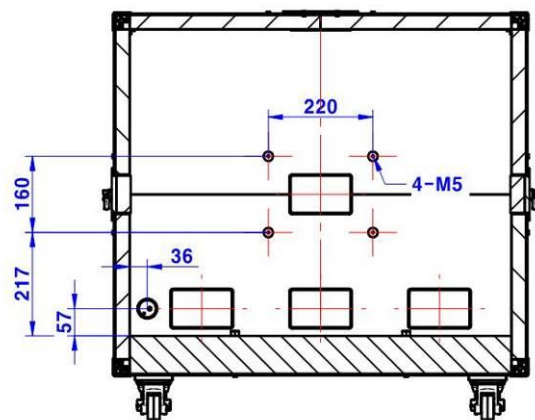
[Top View]



[Bottom View]

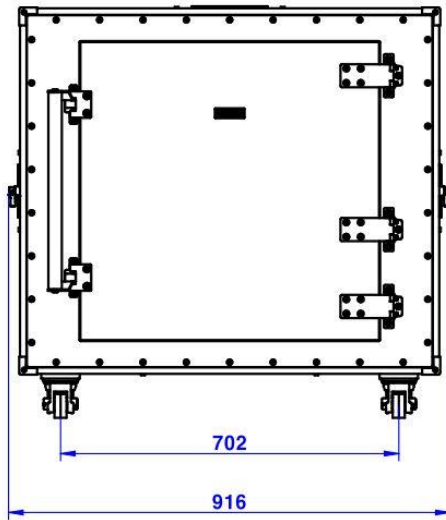


[Both Side View]

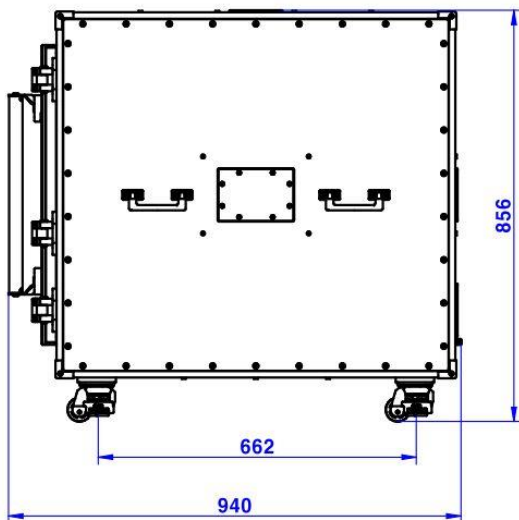
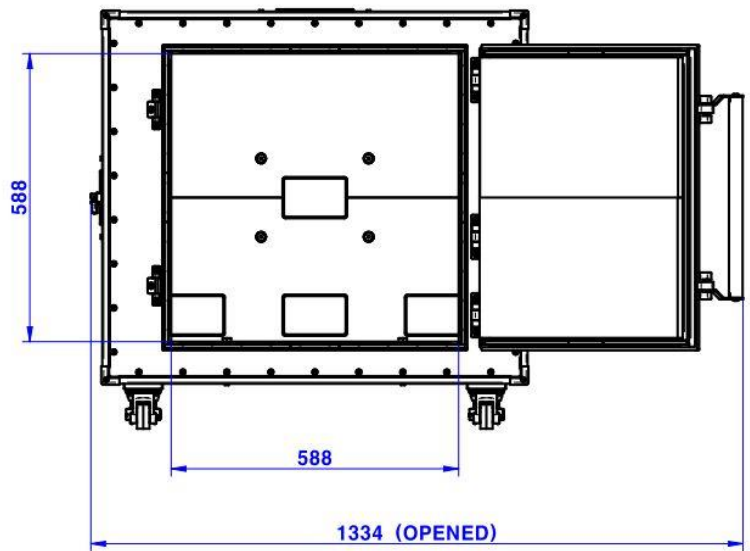


[Rear View]

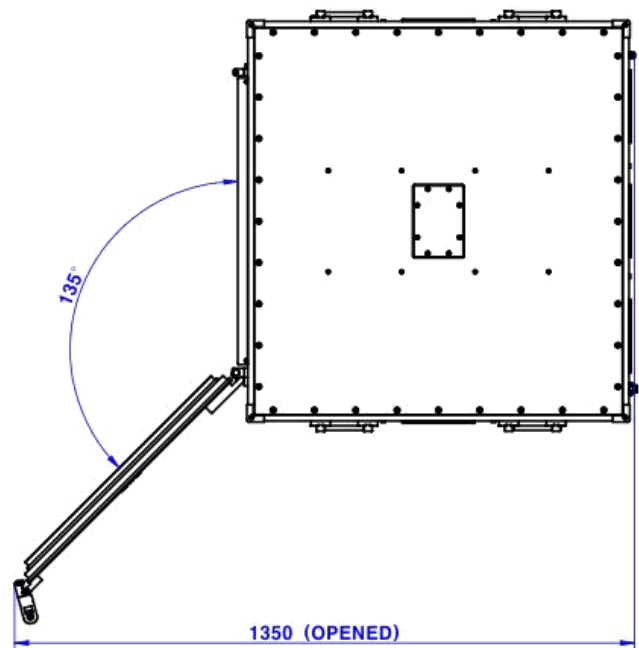
- TC-5570A Outside size : 916(W) x 940(D) x 856(H) mm



[Front View]

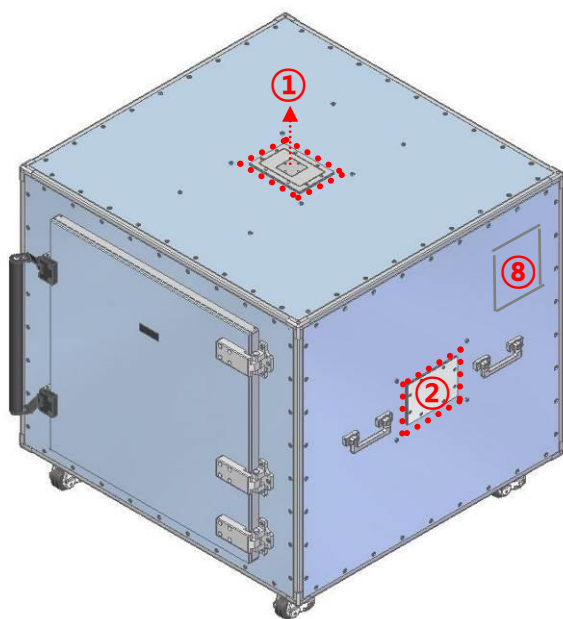


[Both Side View]

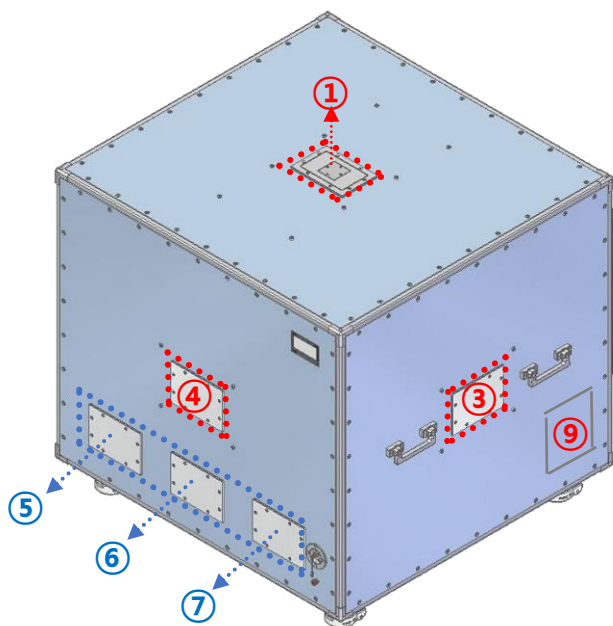


[Top View]

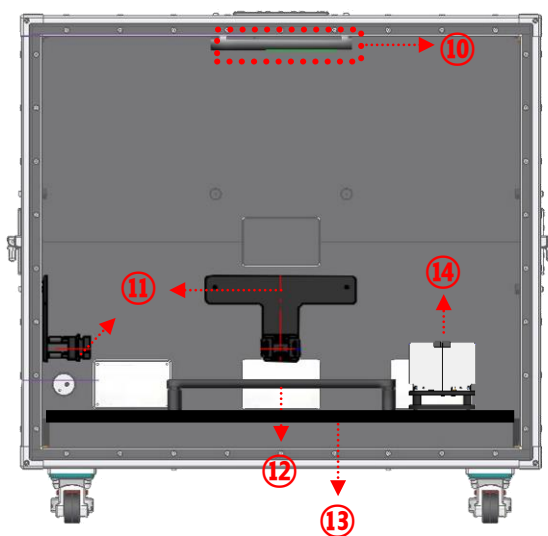
TC-5570A System Configuration



[Front ISO View]



[Rear ISO View]



[Front Inner View]

Table 1. TC-5570A Optional Components

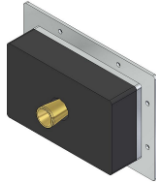
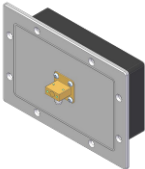
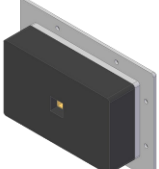
No.	Description
①	Top, Antenna Module
②	Right Side, Antenna Module
③	Left Side, Antenna Module
④	Rear, Antenna Module
⑤,⑥,⑦	Rear, I/O Interface Panel
⑧,⑨	Side Cooling Panel
⑩	Top LED Fixture
⑪	Laser Fixture Set (For Top Antenna)
⑫	Custom Fixture
⑬	Bottom Grid Fixture (F59772B)
⑭	DPV Antenna Fixture

TC-5570A Ordering Information

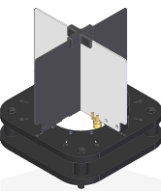
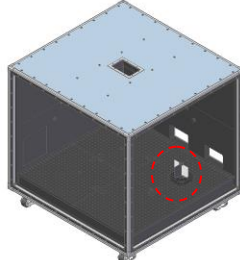
Order Number	Description
TC-5570A	Shield Box (including accessories below)
	Test Report

Pre-Configured I/O Interface Panel

■ Optional Horn Antenna Module

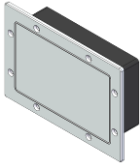
Antenna Interface Panel	Order Number	Configuration
  	H5570A01A	- WR-28 Horn Antenna & 2.92 mm Female Waveguide: - Frequency: 26.5 GHz to 40 GHz - Antenna: TC-93471A - Waveguide: TC-93480A - Antenna Normal Gain 14.5 dBi
  	H5570A02A	- Quad Ridged Horn Antenna (Dual Polarized) - Frequency: 18 GHz to 40 GHz - Antenna: TC-93470A - RF Adapter: K-type 2.92 mm - Antenna Normal Gain 14.5 dBi @ 28 GHz
  	H5570A04A	- WR-15 Rectangular Horn Antenna - Frequency: 50 GHz to 67 GHz - Antenna: TC-93671A - Antenna Normal Gain 16.5 dBi

■ Optional DPV Antenna Fixture

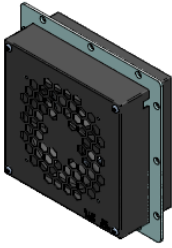
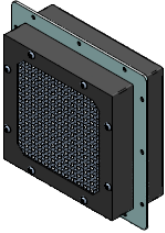
Antenna Interface Panel	Order Number	Configuration
 	F59777A	- DPV Antenna Fixture - Frequency: 0.6 GHz to 7.2 GHz - Antenna: TC-93083A - F59772B Grid Fixture option required.

Pre-Configured I/O Interface Panel

■ Optional Data Interface Panel

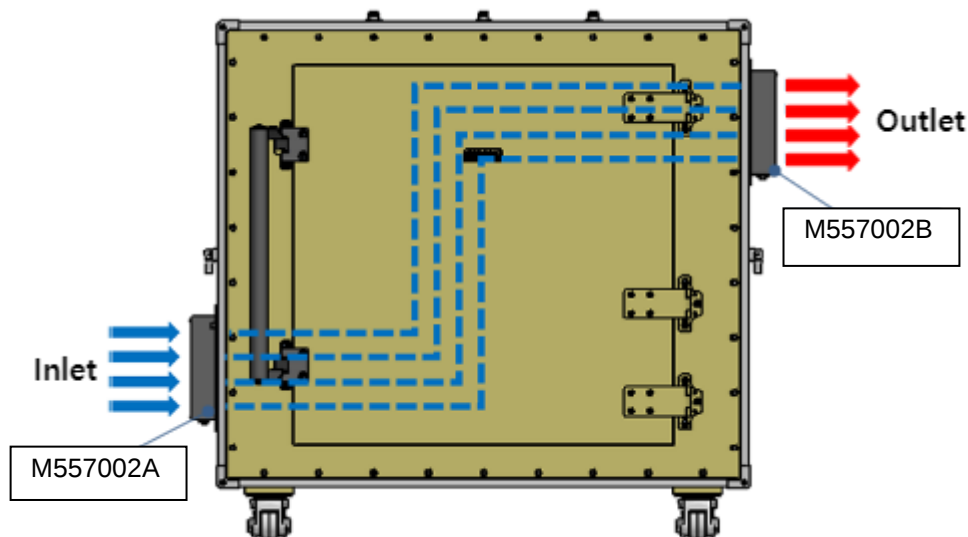
I/O Interface Panel	Order Number	Configuration
	M5570A10A	Blank module (Absorber)
	M5570A08A	- Two(2), 2.92 mm RF Connector - One(1), USB3.0 Adaptor

■ Optional Side I/O Interface Panel

I/O Interface Panel	Order Number	Configuration
	M557002A	M557002A: Inlet (Left FAN)
	M557002B	M557002B: Outlet (Right FAN)
- Specification Frequency : 0.5 GHz to 48 GHz Shielding Effectiveness : > 70 dB - M557002A/M557002B are the same parts but the installation direction is different - Input voltage: 100 - 240 VAC, 50/60 Hz, 1.8 A - Output voltage: 24 VDC, 2.5 A - Including AC Adapter		

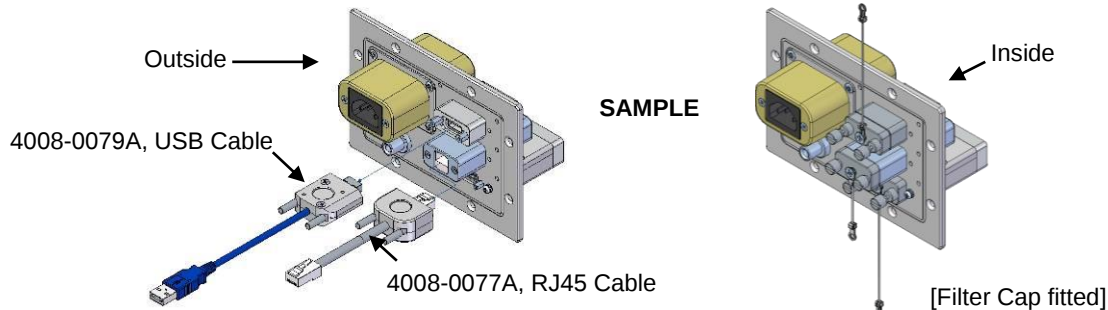
Air Flow Mechanism of Shield Box

- 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.



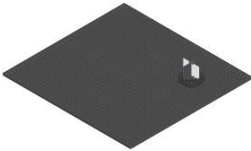
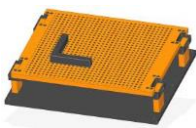
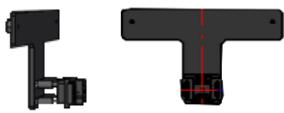
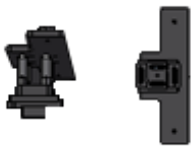
I/O Interface	Description / Order Number	Typical Data Rate / Line Voltage	Typical Shielding ^(*)
	USB 2.0 Filter / 3409-0018A-3 ^(a)	480 Mbps / 5 V, 500 mA / Max Current: 5 A	>60 dB from 0.5 to 2 GHz >70 dB from 2 to 3 GHz >70 dB from 3 to 6 GHz >70 dB from 6 to 67 GHz
	USB 3.0 Filter(Active)/ 3409-0042A-2 ^(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 67 GHz
	RJ-45 Filter / 3409-0022A ^(b)	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 67 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 67 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 67 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)
- ^(b) : Exclusive cables should be used.
(RJ-45 Cable, 4008-0077A, 2 M, RJ-45(M) – RJ-45(M), Housing: Aluminum)
- ^(*) : 1) Shielding effectiveness is measured when each I/O interface panel, which is shown above, is mounted.
2) Above data was measured by Tescom, The Shielding Effectiveness might be different based on the measuring method and condition.
3) This data has been measured under the condition that the cables are not connected to each filters.
When the cables are connected it can affect the shielding performance.

■ Optional RF Connector

RF Connector	Description / Order Number	Frequency Range / Impedance / V.S.W.R
	RF, 2.92 mm Thru Adapter / 3407-0024	From DC to 40 GHz, 50 Ω , 1.3 max
	RF, 2.4 mm Thru Adapter / 3407-0027	From DC to 50 GHz, 50 Ω , 1.3 max
	RF, 1.85 Thru Adapter / 3412-0001	From DC to 67 GHz, 50 Ω , 1.5 max
	RF, N-SMA Connector / 3408-0038	From DC to 6 GHz / 50 Ω / 1.15 max
	RF, SMA-SMA Connector / 3408-0039	From DC to 8 GHz / 50 Ω / 1.15 max

Optional Fixture

Fixture	Order Number	Configuration
 Top LED Fixture	F55702A	• Top LED Assembly - Power ON/OFF slide switch - USB Power Cable
 	F59772B	• Bottom Grid Fixture, 4 division - 802(W) x 762(D) x 10 (H) mm - F59777A DPV Antenna Fixture option selectable
 DUT Guide Fixture	Custom Fixture	• DUT Guide Fixture - Grid Fixture Type - Fixture size can be changed
 Laser Fixture Set1	TBD	• Laser Fixture Set1 - Select when the horn antenna module is mounted on the TOP. - One(1), Side Laser Fixture - One(1), Rear Laser Fixture
 Laser Fixture Set2	TBD	• Laser Fixture Set2 - Select when the horn antenna module is mounted on the right side or left side. - One(1), Side Laser Fixture - One(1), Top Laser Fixture

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT PRIOR NOTIC

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