



# Concentric Technology Solutions Inc

Solutions for the Wireless Industry

## TC-5970DU 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	> 70 dB (meas.)
6 GHz to 12 GHz	> 60 dB (meas.)

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

### Mechanical Specifications

**Basic RF Connector** Six(6) N(f) outside and SMA(f) inside

**Dimensions**

Inside	544(W) x 546(D) x 425(H) mm, 201(D) mm Top side
Outside	662(W) x 703(D) x 537(H) mm, lid closed, 810(H) mm, lid open

**Weight** Approx. 38 kg

**\*Packing**

Size	870(W) x 850(D) x 720(H) mm
Weight	Approx. 54 kg

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

### Absorber Reflectivity

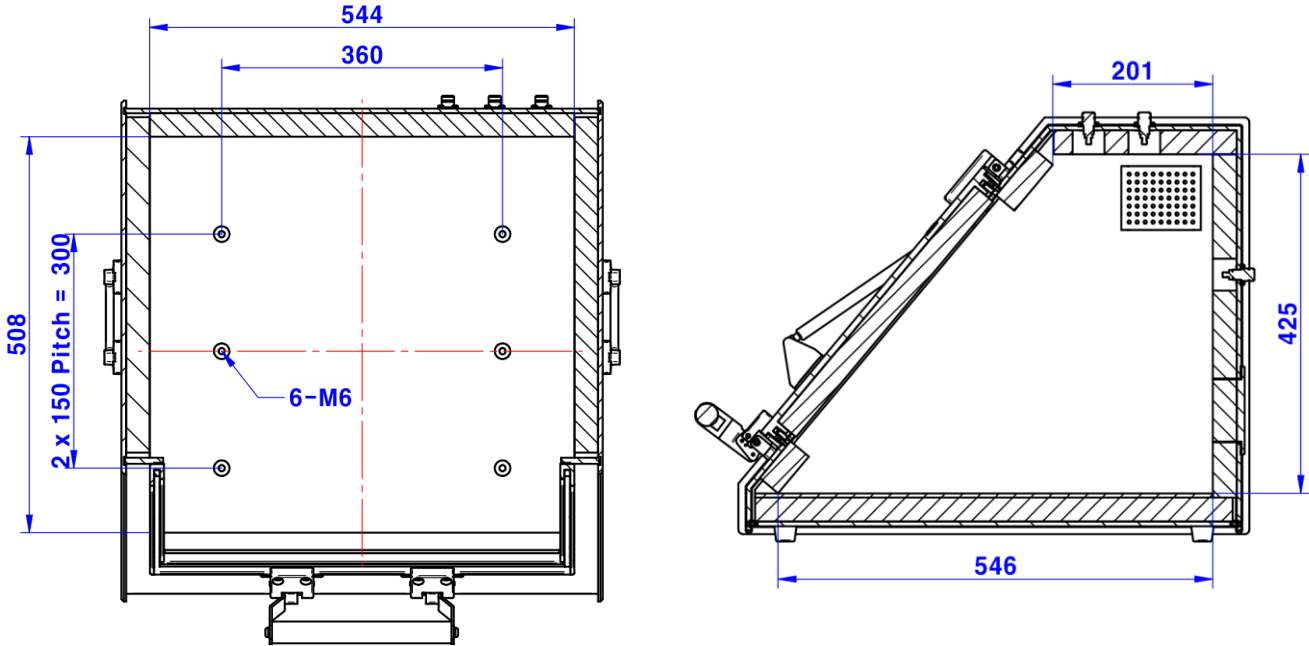
Referring to a metal plate (0 dB @ 0.5 GHz to 12 GHz), signal reduction is measured with the RF absorber inserted.

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

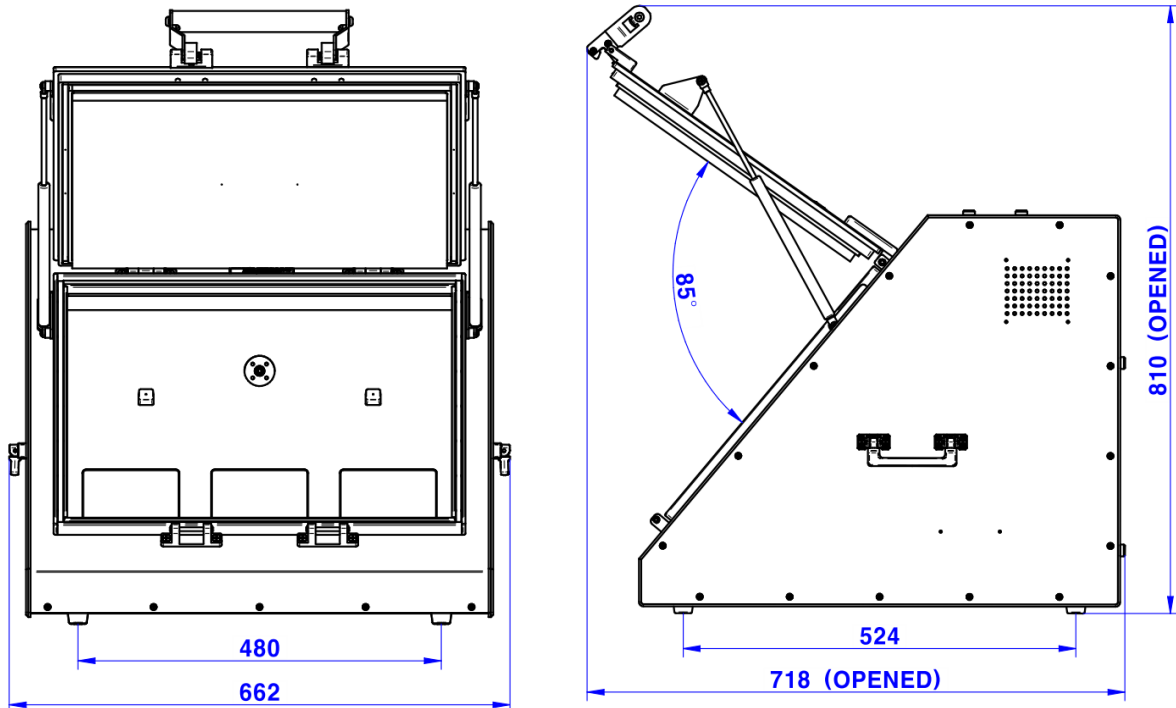


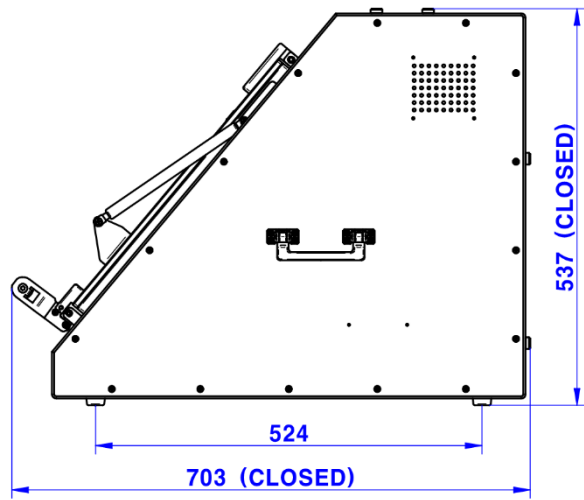
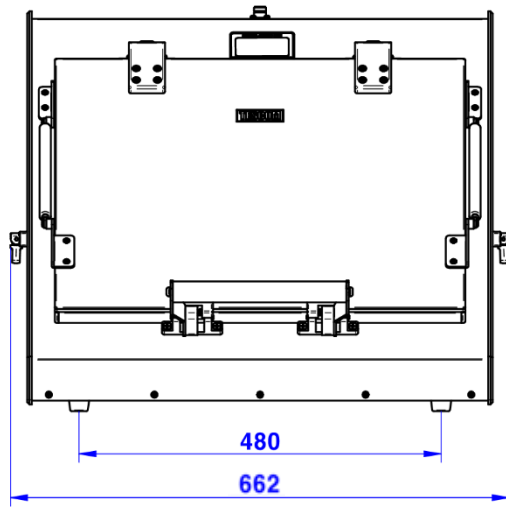
## Dimensions

- TC-5970DU Inner Dimensions (WxDxH) : 544(W) x 546(D) x 425(H) mm



- TC-5970DU Outer Dimensions (WxDxH) : 662(W) x 703(D) x 537(H) mm, lid closed.

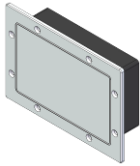
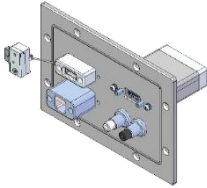




### Ordering Information

Order Number	Description
	Shield Box (including accessories below)
TC-5970DU	Test Report



### Pre-Configured I/O Interface Panels

I/O Interface Panel	Order Number	Configuration
	M5570A10A	<ul style="list-style-type: none"> <li>• Blank panel (with absorber)</li> </ul>
<b>Data Interface Panel</b>		
	M5570A07A	<ul style="list-style-type: none"> <li>• One(1) USB 2.0 outside and inside</li> <li>• One(1) USB 3.0 outside and inside</li> <li>• One(1) RJ-45 outside and inside</li> <li>• One(1) Banana Jack outside and inside</li> </ul>
<b>Data Interface Panel</b>		



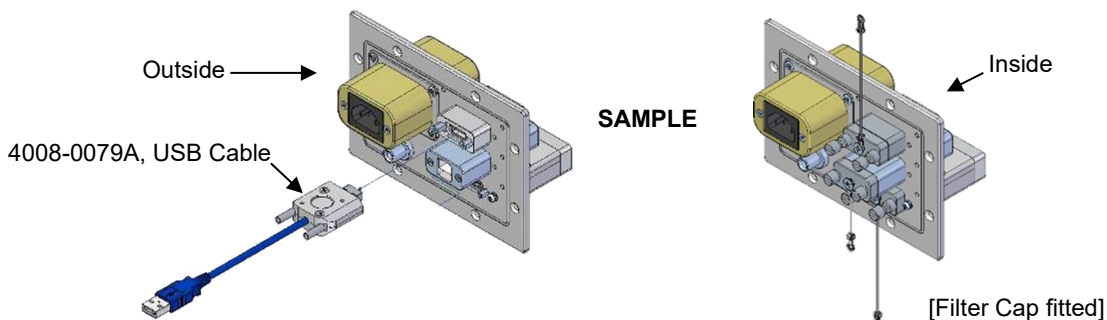
**■ Custom RF Connector Panel**





- Custom RF Connector Panel is available by selecting or combining any of the connectors listed below.

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

**■ Custom I/O Interface Panel**

- Customized I/O Interface Panel is available by selecting any of the listed connectors below.  
Please contact your CTS sales team for any questions.



I/O Interface	Description / Order Number	Typical Data Rate / Line Voltage	Typical Shielding <sup>(*)</sup>
	USB 2.0 Filter / 3409-0018A-3 <sup>(a)</sup>	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 <sup>(a)</sup>	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

- <sup>(a)</sup> : 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 specific I/O interface installed.
- The data above were measured by internal standards, and they may be different depending on the measuring method and environment.

**Fixture**

- We offer standard grid fixtures that allow the changing of the position of the 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 requirements.
- In addition to the fixture, various types of antenna coupler options can form an ideal measuring environment for characteristics of each DUT.

Fixture	Order Number	Description
	F59705A	<ul style="list-style-type: none"> <li>• Antenna Coupler fixed type fixture</li> <li>• Antenna Coupler(Optional): TC-93026A</li> <li>• 280(W) x 390(D) x 52(H)mm</li> </ul>
	F59709A	<ul style="list-style-type: none"> <li>• Radiation Fixture (Table PC, Laptop, etc.)</li> <li>• Antenna Coupler(Optional): TC-93061A</li> <li>• 420(W) x 420(D) x 243(H)mm</li> </ul>
	F597012A	<ul style="list-style-type: none"> <li>• TC-5970 Top Fixture</li> <li>• Antenna Coupler(Optional): TC-93061A</li> </ul>



F597014A

- 5970 Side Fixture
- Antenna Coupler(Optional):  
TC-93061A

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT PRIOR NOTICE