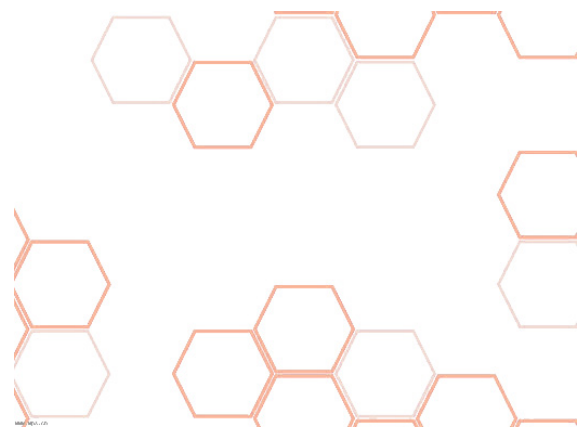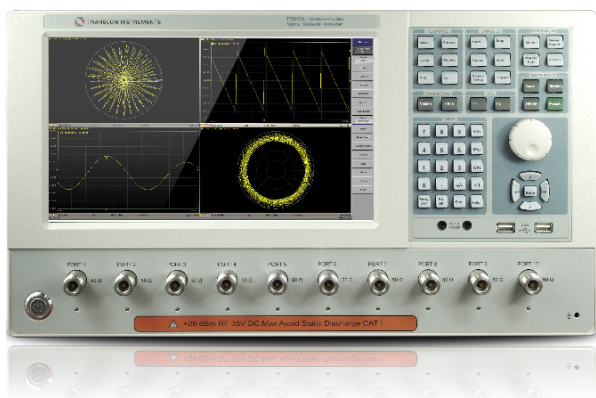# TRANSCOM INSTRUMENTS
Product Brochure

TRANSCOM INSTRUMENTS

T5840 Matrix Vector Network Analyzer

Overview

T5840 is a new generation of multiport matrix network analyzer developed by Shanghai Transcom Instrument Co., Ltd. It can be widely applied to the research, development and test of RF devices in the fields of communication, medical care, scientific research and electronics. The instrument has made a breakthrough in conventional multiport test scheme of 2/4 port VNA+matrix switch. It can carry out parallel test on DUT with 10 ports under standalone operation, thereby greatly improving test efficiency and reducing test cost.

Key Facts

- Frequency range: 100MHz to 4GHz
- Number of test ports：4-port basic unit (4 to 10 ports to be selected arbitrarily)
- Dynamic range：>120dB（IFBW 10Hz）typ. 123dB
- Power range：-50 to +10dBm
- Power accuracy：±1.0dBm
- IF bandwidths：10Hz to 100kHz
- Trace noise：0.002dBrms
- Simple configuration of multiport measurements
- Up to 128 traces and channel
- It supports standard VISA remote control command and is compatible with test cases of products of the similar type

Innovative Features & Benefits

- Real Multiport Network Analyzer
- Multiport all S-parameters Measurement
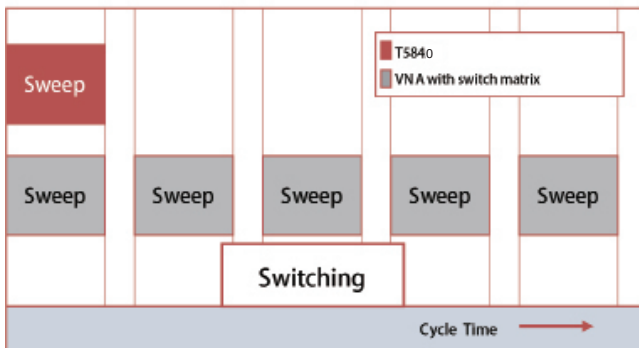- Multi-DUT Measurement

Solution Highlights
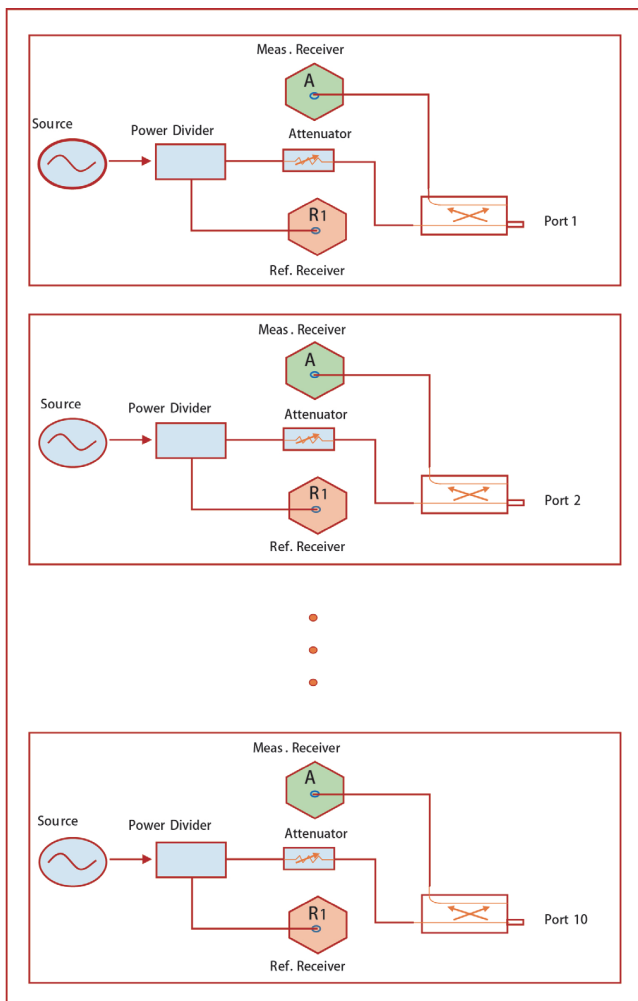
Real Multiport Network Analyzer

T5840 is a real multiport network analyzer with independent source, independent reference receiver and independent measuring receiver equipped for each test port. It supports user-defined number of port and calibration of all N ports, and therefore is the most ideal multiport test solution.
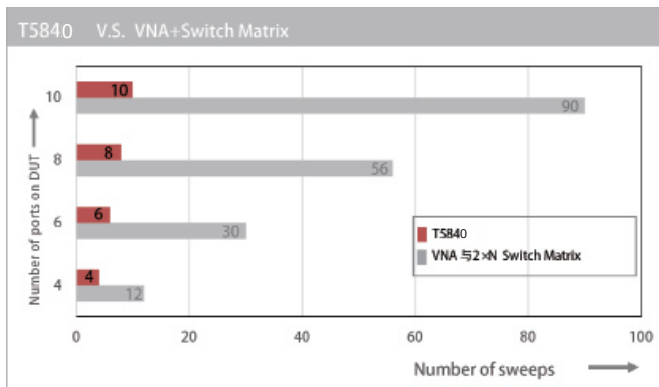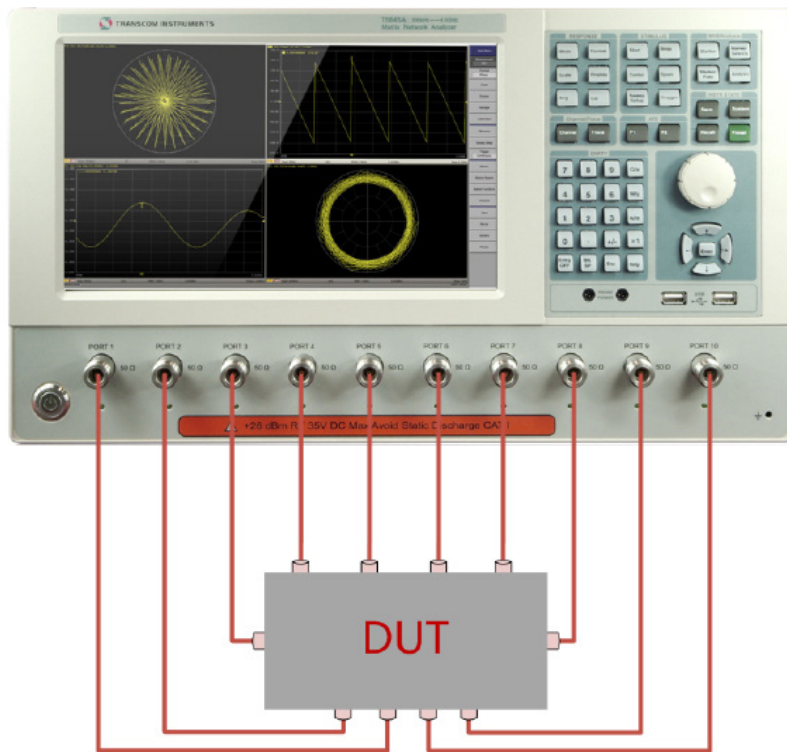
Multiport all S-parameters Measurement

Compared to conventional multiport test scheme of VNA+matrix switch, T5840 not only eliminates the insertion loss between test port and receiver, but also eliminates the sweep test required for multiport DUT test, and thereby greatly shortens test time. With parallel signal acquisition and processing mechanism, T5840 can measure S parameters of multiport DUT and conduct real-time synchronization for multipath signals.

DUT-2

DUT-1

USB
Multi-Display

DUT-5

DUT-1 DUT-2 DUT-3 DUT-4 DUT-5
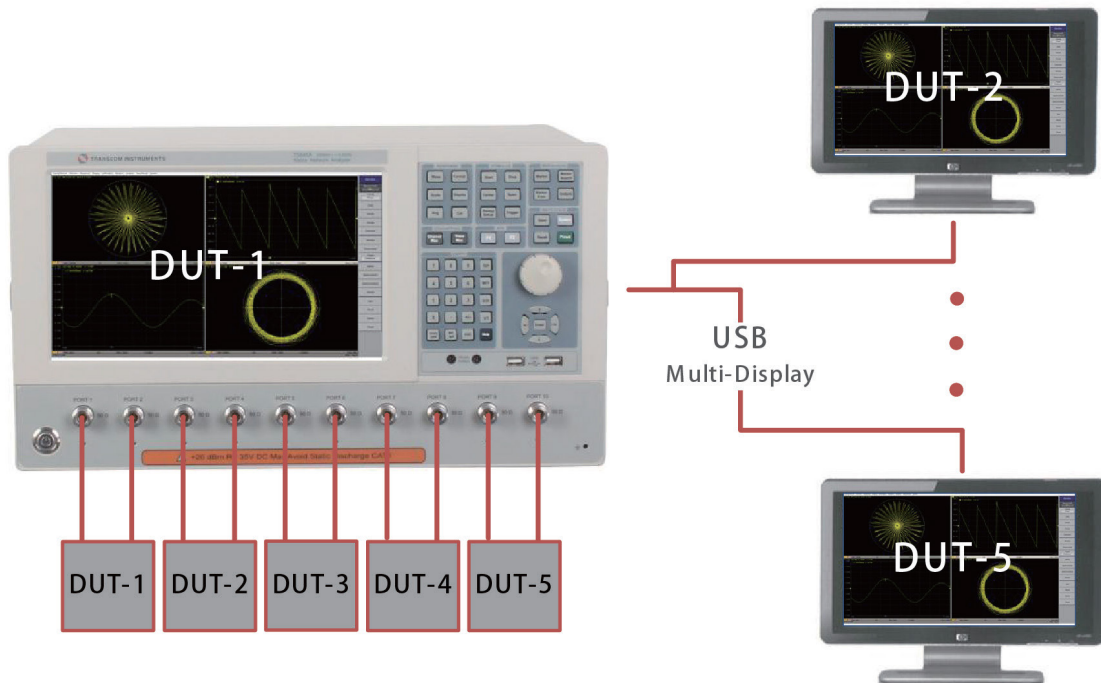
Multi-DUT Measurement

Compared to conventional multiport test scheme of VNA+matrix switch, T5840 supports synchronous test of DUTs. Each DUT has its own test interface to achieve completely parallel operation. Therefore, the "multi-purpose" functions of T5840 are achieved without losing stability, accuracy and repeatability.

Control Elements

LCD touch screen (11.6 inch)

USB I/O

On/Off button

Test port

Digital video interface

PS/2 Mouse & keyboard interface

High definition multimedia interface

LAN interface for remote control

220V AC power

Audio interface
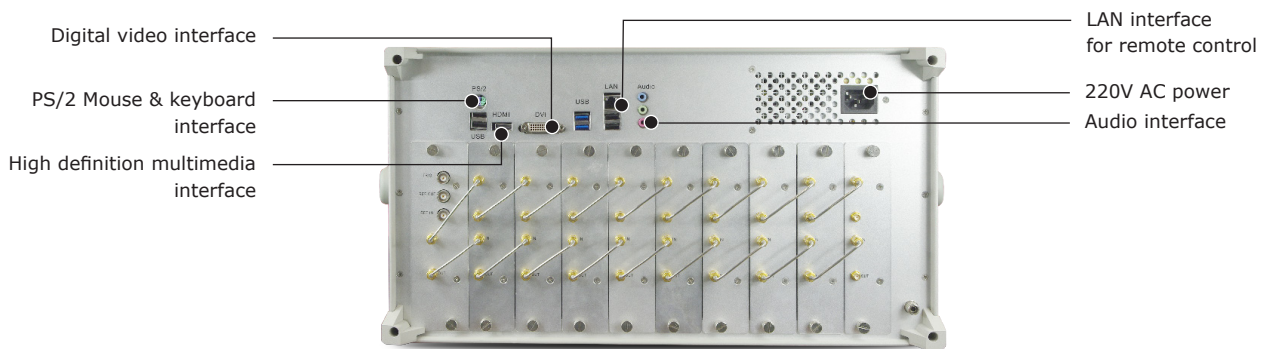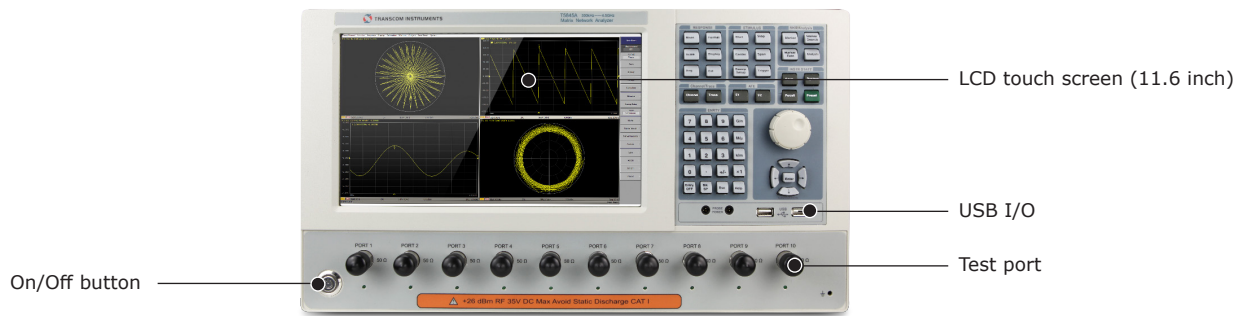
Specifications

Basic Parameter	
Frequency Range	100MHz to 4GHz
Impedance	50Ω,75Ω[1]
Test Port Connector	N-Type, Female
Number of Test Ports	4 to 10
IF Bandwidth	10Hz to 100kHz
Dynamic Range	IFBW 3kHz: 300kHz to 10MHz : 80dB; 10MHz to 4.5GHz : 95dB IFBW 10Hz: 300kHz to 10MHz : 105dB; 10MHz to 4.5GHz : 123dB
Frequency Accuracy	5.0 ppm

[1]75Ω CONNECTOR VIA ADAPTERS

Effective Data	
Effective Directivity	45 dB
Effective Source Match	40 dB

Measurement Speed	
Measurement Time Per Point	220us
Source to Receiver Port Switchover Time	10 ms

Measurement Accuracy	
Trace Noise Magnitude	0.003dBrms (Typ.)
Trace Noise Phase	0.02°rms (Typ.)
Power Range	-50 to +10dBm
Power Accuracy	±1.0dBm
Power Resolution	0.05 dB
Temperature Dependence	Magnitude：0.006dB /°C Phase：0.15° /°C

General Data	
Display Screen	100MHz to 4GHz
Input Connector Type	50Ω,75Ω
Input Reference Connector Type	N-Type, Female
Output Reference Connector Type	4 to 10
Video Output Connector	DVI
USB Connector	8 connectors (including 2 connectors with USB3.0); Female
LAN Connector	10/100/1000 Base T Ethernet, 8-pin
Operating Temperature Range	+5 to +40°C
Storage Temperature Range	-45°C to +60 °C
Humidity	90% (22°C)
Atmospheric Pressure	84 to 106.7kPa
Calibration Interval	3 year
Power Supply	220±22V (AC), 50Hz
Damage Voltage on Port	+26dBm, ±35V(DC)
Power Consumption	260W
Dimensions (W*H*D) mm	470*257*360
Weight	22kg

Ordering List

Model	Description
Host machine	
T5840A-P04	4 Ports Matrix Vector Network Analyzer
T5840A-P05	5 Ports Matrix Vector Network Analyzer
T5840A-P06	6 Ports Matrix Vector Network Analyzer
T5840A-P07	7 Ports Matrix Vector Network Analyzer
T5840A-P08	8 Ports Matrix Vector Network Analyzer
T5840A-P09	9 Ports Matrix Vector Network Analyzer
T5840A-P10	10 Ports Matrix Vector Network Analyzer
Calibration kits	
SK-CAL-Set6	High Precision, DC to 6.0GHz, 50Ω, N-type Calibration kit Set, case included
SK-CAL-MN-C6	High Precision, Calibration Standard Termination, (M)N - Combination Open-Short Load, 50Ω, DC to 6.0GHz
SK-CAL-FN-B6	High Precision, Calibration Standard Termination, (M)N - Combination Open-Short Load, 50Ω, DC to 6.0GHz
SK-CAL-MMN-A6	High Precision, THROUGH N(m) - N(m), 50Ω, DC to 6.0GHz
SK-CAL-FFN-A6	High Precision, THROUGH N(f) - N(f), 50Ω, DC to 6.0GHz

Keep innovating for excellence!

About us

Transcom Instrument Co., Ltd. founded in 2005 and headquartered in Shanghai, is a leading manufacturer and provider of RF and wireless communication testing instruments and overall solutions in China. Based on its independent brands and a wide range of core patented technologies, Transcom became national high-tech enterprise with independent intelligent property rights and has been listed into Shanghai Enterprise Recognition Award for High Growth SMEs in Technology.

Transcom is backed by a experienced and dedicated research team in mobile communication, radio frequency and microwave, and network optimization testing instrument. Through "Industry-University-Research" cooperation with universities, Transcom founded Southeast University-Transcom Electronic Measurement Technology Center at Southeast University to futher ensure technology and talent reserve, and secure future visionary and sustainable technology development.

Transcom's product portfolios focus 4 areas: cellular network critical communication planning/maintenance/optimization, Manufacturing testing solution, educational instrument/equipment, spectrum monitoring sensor for system integration.

IQNet
ISO14001

R CQM
ISO9001

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Company Profile