

TRANSCOM INSTRUMENTS

Product Brochure

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Electronic Calibration Module

Overview



Transcom Electronic Calibration Modules (TECM) are ideal for users who want fast and easy calibration of various VNAs. (Refer to 1.2 Vector Network Analyzer Compatibility). These TECMs are powered up via USB or 5.5 DC connector and communicate with VNA via USB or LAN and designed for full one-port through four-port calibrations of VNAs by one-push START button. These units work as host systems, measure and calculate calibration coefficients and send it to VNA.

Key Facts

- Provide various VNAs compatibility, include Transcom VNA series and Keysight E5071C
- Single-connection for full N-port calibration
- Easy port extension using RF adaptor and microSD memory
- Embedded operating system communicates with VNA directly (No need external PC and software)
- Easy firmware update for more VNAs compatibility and more functionality

Inovative Features

• Adaptor Port Extension

Many kinds of Electronic Calibration Kit with different connector types used for fast and easy calibration. TECMs offers easy and cost-effective solution for port connector type change just by connecting RF adaptor and microSD memory before start calibration.

Transcom provide various high-performance RF adaptors optionally. Characteristic data files of RF adaptor stored in microSD memory in binary and touchstone format provided together.

• Thermal Compensation

Thermal compensation is used to enhance TECM calibration accuracy in the entire range of the displayed TECM temperatures of 20° C to 30° C.

TECM can be work out of range of recommended temperature but accuracy can be degraded. Temperature dependence data of TECM impedance states is collected and stored internal memory. Displayed temperature on front OLED is RF module temperature of TECM and can be different with room temperature.

- **Vector Network Analyzer Compatibility**

VNAs manufacturer provide Electronic Calibration Kit solution but most of all Electronic Calibration Kit can work on same manufacturer's VNAs only.

TECM provide cost-effective calibration solution to user by supporting various VNA models. TECM is compatible with Transcom T series VNA and Keysight E5071C

Specification

Model	Connector type		
	Port 1	Port 2	Frequency range
C9502A	3.5mm, female	3.5mm, female	100 kHz to 9.5 GHz
C9502N	N-type, female	N-type, female	100 kHz to 9.5 GHz

Parameter	Frequency range		
	100 kHz ~10 MHz	10 MHz ~2 GHz	2 GHz ~9.5 GHz
Directivity (dB)	> 35	> 45	> 42
Source match (dB)	> 32	> 42	> 40
Load match (dB)	> 32	> 42	> 40
Reflection tracking (dB)	< 0.12	< 0.08	< 0.07
Transmission tracking (dB)	< 0.15	< 0.1	< 0.07

Parameter	C9502A/ C9502N
Impedance	50 Ohm
Operating Temperature	+20°C ~ +30°C
Port max power	+10 dBm
Port max DC voltage	10 V
Ethernet interface	LAN/micro USB
DC supply	5V/500mA, Φ 5.5
Dimension	94.5 x 108 x 28.5 mm
Weight	343 g

Ordering list

Contents of Automatic Calibration Modules are listed below.



Index	Description
1	Automatic Calibration Module
2	Torque wrench, 8 mm, 0.9 N · m
3	Power supply- Input -AC 100~240V, 50~60Hz -Output: USB Type -A female, 5V/2.1A
4	DC power cable -Connector type: USB Type -A male to $\Phi 5.5$ DC plug -Length: 2 meters
5	USB cable -Connector type: USB2.0 Type -A male to micro-USB 5pin -Length: 80 cm
6	USB Driver

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.



ISO14001



ISO9001

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Company Profile