



GAOTek High Performance Transmission Line and Antenna Analyzer

Product ID GAO-TLAA-101



GAOTek High Performance Transmission Line and Antenna Analyzer is designed for on-site testing of cable and antenna system in various communication networks and in the base stations including GSM, PCS/DCS, CDMA, WCDMA, GPRS, LTE, paging system with a wide frequency range from 1 MHz~8 GHz.

This compact, lightweight, high-speed, highly accurate, portable, and rugged instrument adopts advanced techniques such as hybrid integration design of RF circuit and digital circuit, wideband fundamental wave-mixing, digital IF processing, intelligent power management. Additionally, this device offers the advantages of battery-powered, touch screen operation and automatic adjustment of backlight brightness features. Besides testing VSWR, return loss and phase, it can precisely locate the fault points as well.

The cable and antenna analyzer helps to improve the maintenance efficiency of the running base stations and speed up the installation and calibration of new base stations. It can help users to quickly estimate the status of the transmission line and antenna system during the installation, calibration, and routine maintenance of cable and antenna system. This device can also be used for the reflection parameter test of RF devices and components in scientific research, teaching and manufacturing.

ASK AN EXPERT!
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1-416-292-0038 x 601

Within North America
Anywhere Else

APPLICATIONS

- ❑ Performance measurement and maintenance of cable and antenna system.
- ❑ Testing the status of the transmission and feed line system.
- ❑ Test the daily measurement of the cable system and offers multiple measurement modes for testing the cable loss, return loss, VSWR of the cables.
- ❑ Test and speed up the installation and calibration of the new base station.

KEY FEATURES

- ❑ Supports multiple measurements like return loss, VSWR, cable loss, DTF return loss, DTF VSWR, smith chart, phase. It can also conduct the comprehensive measurement and fault diagnosis on cable and antenna system.
- ❑ The instrument has a 7 inch LCD touch screen operation. Besides menu operation, users can also set the parameters by clicking all the displayed information on the touch screen.
- ❑ Each window can display different measurement types, with its independent maker function.
- ❑ Supports list sweep function. Multiple frequency segments can be simultaneously measured, and each sweep segment can be set with different points and frequency range.

KEY FEATURES

- ❑ The measurement wizard guides users to finish the measurement and helps them to rapidly get familiar with the instrument operation.
- ❑ Data save/recall feature to save measurement traces or state. FLASH memory inside the instrument, SD card, and USB device are all available to choose from.
- ❑ Has embedded electronic calibration kit to perform “one-click” operation, without any external connection.
- ❑ Power measurement option is available to perform accurate power measurement along with external power sensor options.
- ❑ Suitable for field operation with its resistance to wind, sand, impact and vibration.
- ❑ Multiple display modes and function of screen brightness adjustment.
- ❑ Build-in GPS receiver.
- ❑ Remote operation and tool software.
- ❑ High-capacity lithium-ion rechargeable battery.

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TECHNICAL SPECIFICATIONS

Model	GAO-TLAA-101-A	GAO-TLAA-101-B
Frequency Range	1 MHz ~ 4 GHz	1 MHz ~ 8 GHz
Initial Frequency Error	$\pm 2 \times 10^{-6}$ (73.4 °F) (23 °C)	$\pm 2.5 \times 10^{-6}$ (73.4 °F) (23 °C)
Frequency Temperature Stability	$\pm 1 \times 10^{-6}/10$ °C (73.4 °F) (23 °C)	$\pm 1 \times 10^{-6}/10$ °C (73.4 °F) (23 °C)
Frequency Resolution	1 kHz	1 kHz
Directivity	≥ 42 dB (Mechanical Calibration) ≥ 35 dB (Embedded Electronic Calibration)	≥ 42 dB (1 MHz ~ 6 GHz) ≥ 36 dB (6 GHz ~ 8 GHz)
Source Match	≥ 31 dB (Mechanical Calibration)	≥ 31 dB
Reflection Track	± 0.08 dB (Mechanical Calibration)	± 0.08 dB
Battery capacity	8 h (Without embedded calibration option, 70% brightness) 6 h (With embedded calibration option)	4 h
Power Consumption	≤ 15 W (No battery charging) ≤ 54 W (Battery charging)	≤ 18 W (No battery charging) ≤ 54 W (Battery charging)
Sweep Time	1 ms/Frequency point (10 kHz IF bandwidth)	
Power Adapter	AC Power: 110 V (1 \pm 10%) or 220 V (1 \pm 10%), 50 Hz (1 \pm 5%)	
Size (W x H x D)	11.61 in x 8.07 in x 2.75 in (295 mm x 205 mm x 70 mm)	

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TECHNICAL SPECIFICATIONS

Weight	5.5 lbs (2.5 kg) (with battery)
Operating Temperature	14 °F ~ 122 °F (-10 °C ~ +50 °C)
Storage Temperature	-40 °F ~ 158 °F (-40 °C ~ +70 °C)
Electromagnetic Compatibility	Conforms to Regulations of GJB3947A-2009 3.9.1
Test Port	Type N, Female
10 MHz Input/Output Port	BNC
GPS Antenna Interface	BNC

ORDERING INFORMATION

Main Unit	Frequency Range
GAO-TLAA-101-A	(1 MHz ~ 4 GHz)
GAO-TLAA-101-B	(1 MHz ~ 8 GHz)

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PACKAGING LIST

Serial No.	Item Description	Quantity
1	Power Cord (Standard tri-core power cord)	1
2	Power Adapter	1
3	Quick Start Guide	1
4	PC Tool Software CD	1
5	USB Cable	1
6	Built-in Rechargeable Lithium ion Battery	1
7	Charger on Vehicle	1
8	Certificate of Conformity	1

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OPTIONAL ACCESSORIES

Serial No.	Item Name	Function
1	USB Power Measurement	Power measurement
2	USB CW Power Sensor	9 kHz ~ 6 GHz Power Sensor
3	USB CW Power Sensor	10 MHz ~ 18 GHz Power Sensor
4	USB CW Power Sensor	50 MHz ~ 26.5 GHz Power Sensor
5	USB CW Power Sensor	50 MHz ~ 40 GHz Power Sensor
6	Rechargeable Lithium-Ion Battery	Spare Battery
7	Type N Male Calibration Kit	DC ~ 18 GHz Calibration Kit
8	Type N Female Calibration Kit	DC ~ 18 GHz Calibration Kit
9	Type N Male Calibration Kit	DC ~ 9 GHz Calibration Kit
10	Type N Female Calibration Kit	DC ~ 9 GHz Calibration Kit
11	Functional Bag	
12	Carrying Backpack	
13	Transit Case	
14	N-DIN Adapter L29/N-KJ-T	N-DIN Adapter

OPTIONAL ACCESSORIES

Serial No.	Item Name	Function
15	N-DIN Adapter L29/N-JJ-T	N-DIN Adapter
16	GPS Antenna	GPS External Antenna
17	Low-loss cable N-JK (80 cm)	Test Port Extending Cable
18	Low-loss cable N-JJ (80 cm)	Test Port Extending Cable
19	Cat5e cable (2 m)	Point-to-Point Cable
20	MicroSD Class4	8G
21	Power Adapter	Power Adapter
22	Embedded Electronic Calibration Kit	Built-in (only for A0070010tek-A)
23	Economical Calibration Kits (Male)	DC ~ 9 GHz Calibration Kit
24	Economical Calibration Kits (Female)	DC ~ 9 GHz Calibration Kit