

ShinewayTech® CAA-100 cable & antenna analyzer can test DTF/ Frequency Return Loss, VSWR and Cable Loss. Users can easily evaluate the connection of cable & antenna system. CAA-100 series comply with 2G/3G/4G/5G/WiFi systems covering frequency range from 1MHz to 6GHz and dynamic range up to 60dB. CAA-100 series is an essential measuring instrument for testing new generations of wireless network and indoor signal distribution.



Cable & Antenna Analyzer

CAA-100

Features

- Frequency range: 1MHz to 6GHz ; suitable for 2G/3G/4G/5G/WiFi system etc.
- Dynamic Rang up to 60dB
- Intelligent limit /marker /curve calculations
- Optional electronic calibration modules
- More than 8 hours long battery life
- 7-inch color LCD touch screen
- Optimized batch file management: edit/delete/filter
- Excellent Man-Machine interface for easy operation

Functions

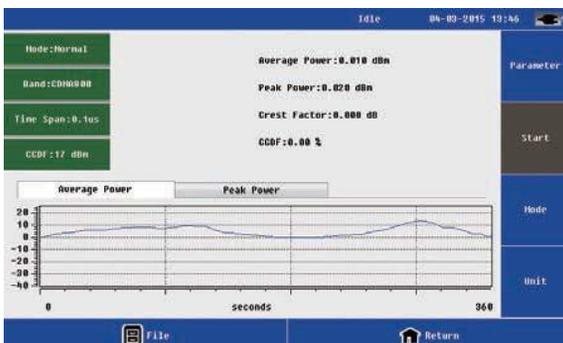
1. Multiple Standard measurement mode

Power Meter, Distance-to-fault (DTF) Return Loss, DTF Voltage Standing Wave Ratio (VSWR), Frequency Return Loss, Frequency VSWR and Cable Loss testing. Main interface designs beautifully, user operation is convenient.



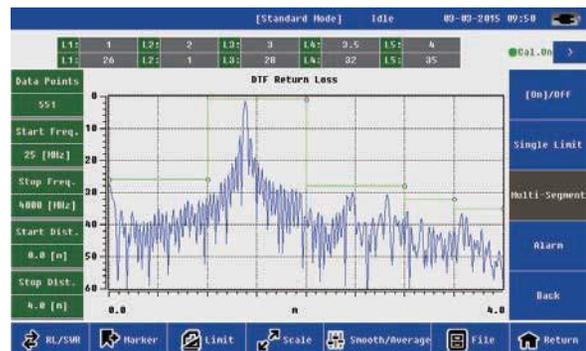
2. Optional Power Meter

USB high-precision power meter probe not only can connect the instrument to test and display the power, but also can connect the PC to analyze the result. Terminal power meter, In Line Digital Power Meter and In-Line digital frequency spectrum power meter can test a variety of signals, which can meet the demand of different level users.



3. Intelligent analysis and judgment of the trace

CAA-100 series can analyze single or multi-segment limit line, marker and the curve calculation accurately.



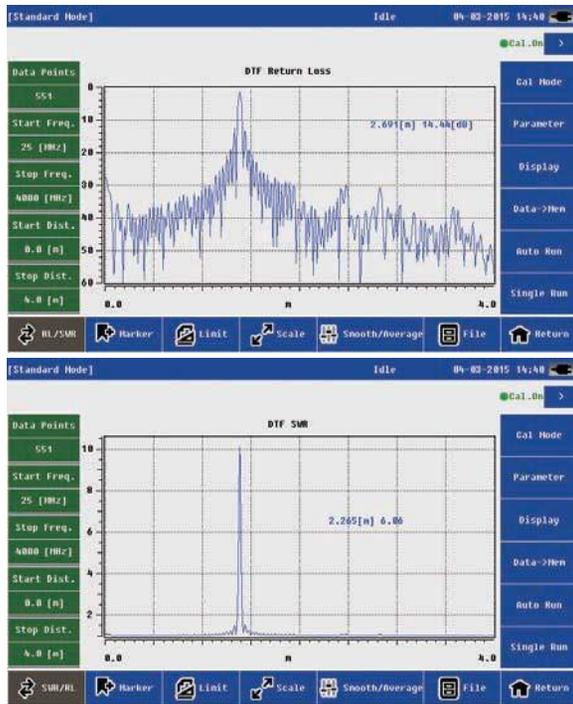
4. Convenient and precise calibrator: 1-port and "T-type" Calibration Kit

It can calibrate precisely and conveniently. When the calibrated data points decrease, there is no need to recalibrate, which will increase the service efficiency.



5. Instant switching the Return Loss and VSWR

CAA-100 series can test the return loss and VSWR simultaneously and switch the result instantly.



6. Optimized batch file management function

CAA-100 series file filter function is easy to implement for batch editing and analyzing the results.



7. Field calibration cable and obtaining the parameters

CAA-100 series allows user to input the cable parameters (propagation velocity, cable loss) or choose a known cable type. If user has no knowledge of the cable parameters, he can make a field calibration by the Equipment Cable Calibration tool to get the accurate cable parameters.



8. Manually set frequency or select the preset frequency

According to the demand, it is convenient for user to manually set or select the preset frequency.



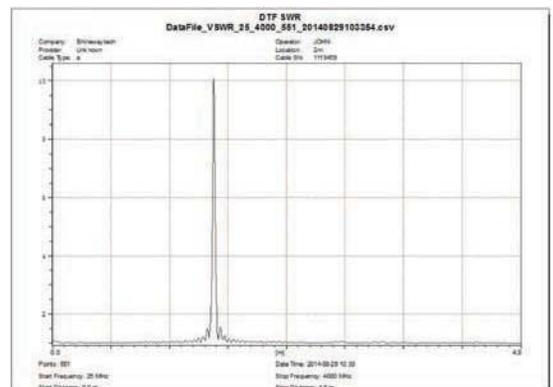
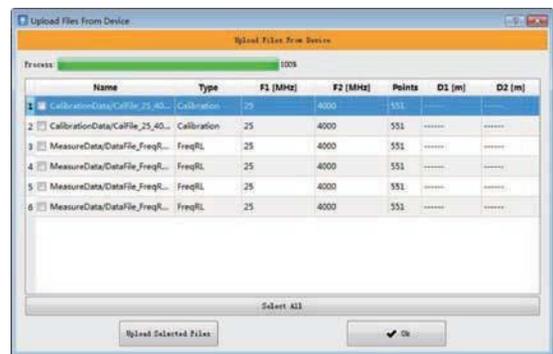
9. Energy saving, environmental protection and Man-Machine interface design

CAA-100 series is low-power designing, has high-capacity rechargeable lithium battery and AC adapter dual power supply, and more than 8 hours of continuous battery operation. The shortcut keys can set up four display modes: normal, black and white, highlight and night vision for different ambient.

10. CAA Workbench PC software

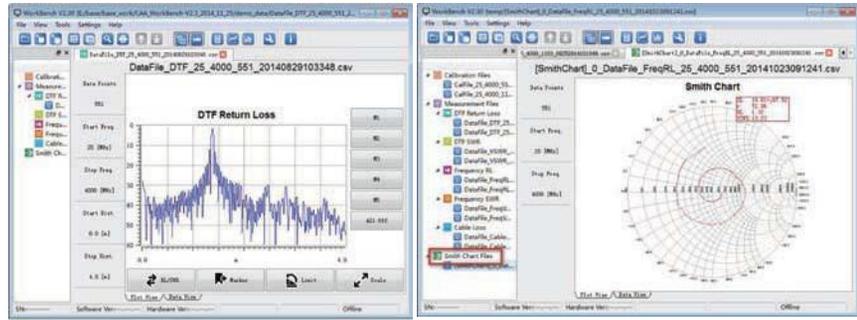
1. Data Management Function

- Uploading and downloading files between the CAA-100 host and PC
- Interact files with PC, including open the local file and save the file to the local
- Support report print preview and print. Fully display the information such as company name, test parameters and measuring time etc.



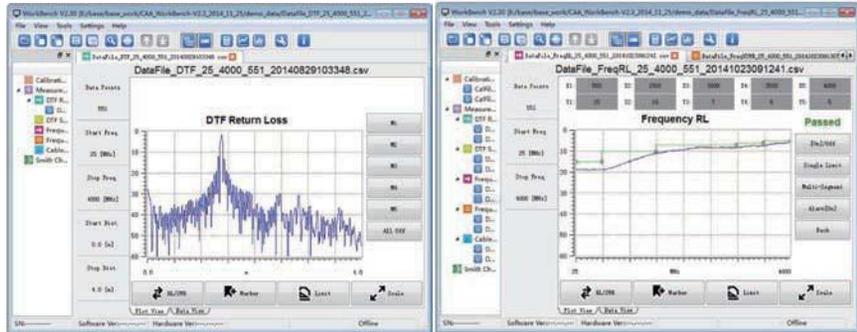
2. Application Tools Function

- Distance-To-Fault
- Transform into Smith Chart
- Calculator
- Edit Signal Standard
- Edit Cable Parameter



3. Data Analysis

- Marker
- Limit line
- Scale
- Switching the Return Loss and VSWR



11. Optional Electronic Calibrator

Electronic calibrator ECAL provides consistent calibration results, and removal the possible error of manual calibration.

Specifications

Model	CAA-100	CAA-100B
Frequency Range	1MHz - 4GHz	1MHz - 6GHz
Frequency Resolution		1kHz
Frequency Accuracy		+/-2.5ppm
Output Power		0dBm(typ.)
Measurement Speed		1.5ms/point
Data Points		137, 251, 551, 1103,2207,3310
Anti-jamming Capability		
Frequency		-5dBm
Channel		+17dBm
Directivity		42dB (after calibration)
Return Loss		
Return Loss Range		0 - 60 dB
Return Loss Resolution		0.01dB
VSWR		
VSWR Range		1 - 65
VSWR Resolution		0.01
Cable Loss		
Cable Loss Range		0 - 30dB
Cable Loss Resolution		0.01dB
Distance-to-Fault		
Distance-to-Fault Return loss Range		0 - 60 dB
Distance-to-Fault SWR Range		1 - 65
Measuring Length		1500m

Resolution Ratio	$(1.5 \times 10^8) \times (V_p) / (F_2 - F_1)$ Where V_p is the cable's relative propagation velocity. where F_2 is the stop frequency and F_1 is start frequency
Data Points	137, 251, 551, 1103, 2207, 3310
Electronic Calibrator (Optional)	38dB, 1MHZ-4.4GHz; 32dB, 4.4GHz-6GHz; N(m), 50Ω

General Information	
Connector Type	N - Type female
Input Impedance	50 Ohm
Display	7 inch resistor touch screen, resolution 800x480
Data Interface	One USB Host Port One USB Device Port One 10M/100M Adaptive LAN Port
Memory Space	>2000 traces
Internal Battery	11.1V 7800mAh Rechargeable Lithium Battery
External Adapter	110 - 240V, 50 - 60Hz, AC input; 16V, 3.75A, DC output
Operating Temp. Range	-10°C - +50°C
Storage Temp. Range	-40°C - +70°C
Humidity	0 - 85% (Non-Condensing)
Weight	2.5kg
Dimensions (L x W x H)	290x175x75mm

DPM Module (Optional)—RF In Line Digital Power Meter	
Average Power Measurement	
Frequency Range	300-4200MHz
Power Range	100mW-200W
Dynamic Range (dB)	≥33
Insertion Loss (dB)	≤0.1
VSWR	1.05 to 99.9
Directivity	≥30 (<3GHz); ≥28 (>3GHz)
Accuracy	±4%+0.05W (0°C~+15°C or +35°C~+50°C increase 3%)
Impedance	50Ω
Connector	N (Female)
Data Interface	USB
DPM Interface	DB9
Peak Power Measurement	
Peak Power Range	100mW to 500W
Peak Power Accuracy	Burst width >200us: ±7%; 1us<Burst width< 200us: ±10%; 0.5us<Burst width< 1us: ±15%; Burst width< 0.5us: ±20%;
Peak Average Ratio	0 to 12dB
CCDF	
Measurement Range	0.1 to 100%
Measurement Accuracy	±3%
Threshold Measurement Range	0.05W to 500W
Burst Power	
Burst Power Range	100mW to 200W
Burst Width	1us to 60ms
Min. Measurement Frequency	15Hz
Measurement Accuracy	±6% +0.05W
Duty Cycle	0.0001 to 1

General Specifications	
Power Supply	USB
Operating Temperature	-10°C to 50°C
Storage Temperature	-20°C to 70°C
Relative Humidity	0 to 85% (Non-condensing)
Weight	0.48kg
Dimensions (H×W×T)	130×124×34mm

TPM Module (Optional)--RF Terminal Power Meter	
Frequency Range	50 - 4000MHz
Power Range	-40 - 20 dBm
Maximum Power	<23 dBm
Measure Uncertainty	≤ +/-0.3dB (15°C - 35°C), ≤ +/-0.5dB (0°C - 50°C)
Input VSWR	<1.2
Burst Width	1μs - 60ms
Min Repetition Period	15Hz
Video Band	5MHz
Minimum Pulse Width	200ns
Time Resolution	0.1μs, 1μs, 15μs, 150μs
Peak Average Ratio	<12dB
CCDF Range	0.1% - 100%
CCDF Uncertainty	±3%
Duty cycle	0.1% - 100%
Power Supply	USB
Operating Temp. Range	0°C - 50°C
Storage Temp. Range	-20°C - 70°C
Humidity	0 - 85% (Non-Condensing)
Weight	0.3kg
Dimensions (L x W x H)	125×45×35mm
Anti-vibration properties	Conform to MIL-PRF-28800F class 3
Elect. Compatibility Characteristics	Conform to EMC GB/T 18268-2000

*Specifications subject to change without notice.

Order Information

Standard Package:

CAA-100 Host, Lithium Battery, AC Adapter, CD(PC Software, User Manual), Carrying Case, T-type Calibration Kits, Test cable (1.5m, N(m)-N(f), DC to 6GHz, 50 Ohm), Adapter (7/16 DIN(f)-N(m), DC to 6GHz, 50 Ohm), Quick Reference, Warranty card

Optional (Module, Test Cable, Adapter)

- DPM Module (Optional)--RF In Line Digital Power Meter
- TPM Module (Optional)--RF Terminal Power Meter

Test Cables

- 1.5m, N(m)-N(f), DC to 6GHz, 50 Ohm
- 1.5m, N(m)-N(m), DC to 6GHz, 50 Ohm
- 1.5m, N(m)-7/16 DIN(f), DC to 6GHz, 50 Ohm
- 1.5m, N(m)-7/16 DIN(m), DC to 6GHz, 50 Ohm
- 3m, N(m)-N(f), DC to 6GHz, 50 Ohm
- 3m, N(m)-N(m), DC to 6GHz, 50 Ohm

Adapters

- SMA(m)-N(m), DC to 6GHz, 50 Ohm
- SMA(f)-N(m), DC to 6GHz, 50 Ohm
- SMA(m)-N(f), DC to 6GHz, 50 Ohm
- SMA(f)-N(f), DC to 6GHz, 50 Ohm
- BNC(f)-N(m), DC to 6GHz, 50 Ohm
- 7/16 DIN(f)-N(m), DC to 6GHz, 50 Ohm
- 7/16 DIN(f)-N(f), DC to 6GHz, 50 Ohm
- 7/16 DIN(m)-N(m), DC to 6GHz, 50 Ohm
- 7/16 DIN(m)-N(f), DC to 6GHz, 50 Ohm
- 7/16 DIN(m)-7/16DIN(m), DC to 6GHz, 50 Ohm
- 7/16 DIN(f)-7/16DIN(f), DC to 6GHz, 50 Ohm
- N(m)-N(m), DC to 6GHz, 50 Ohm
- N(f)-N(f), DC to 6GHz, 50 Ohm
- N(m) 50Ohm – N(f) 75Ohm, DC to 3GHz
- N(f) 50Ohm – N(m) 75Ohm, DC to 3GHz

Calibrators

- ECAL Electronic Calibrator