

# CAA-100A

## Cable & Antenna Analyzer

**ShinewayTech®** CAA-100 Cable & Antenna Analyzer can test Return Loss and VSWR of load' frequency. Also can get Return Loss, VSWR of DTF (distance-to-fault) and Cable Loss. Users can be easy to know the connection of cable & antenna system is reliable whether or not.

CAA-100 Series with frequency range 1MHz - 6GHz and 60dB dynamic range can suitable for 2G / 3G / 4G / WiFi system etc. CAA-100 Series are the necessary measuring instrument for the new generation of wireless network development, upgrade and maintenance.



Cable & Antenna Analyzer

# CAA-100

**ShinewayTech**  
receives Frost & Sullivan  
Global FOTE Price Performance Value  
Leadership Award



## Features

- Frequency range: 1MHz to 6GHz ; suitable for 2G / 3G / 4G / WiFi system etc.
- Dynamic rang up to 60dB
- Intelligent limit / marker / curve calculations
- 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

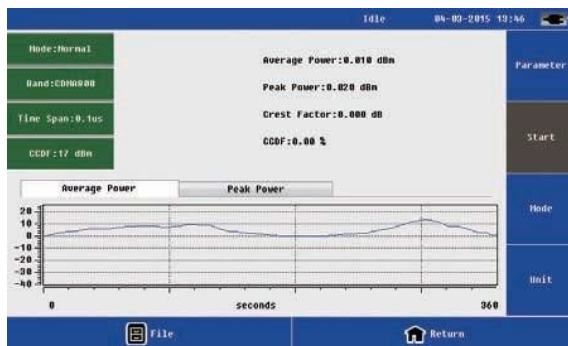
### ◆ 5 Standard measurement mode

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.



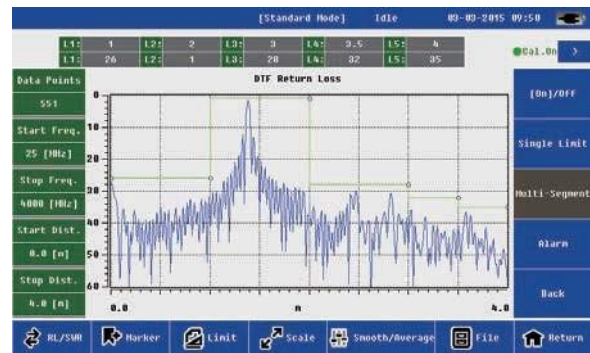
### ◆ Optional Power Meter

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 analysis the result, which is greatly satisfy user. Terminating power meter and In-Line digital frequency spectrum power meter can test a variety of signal, which can meet the demand of different level users.



### ◆ Intelligent analysis and judgment the trace

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



### ◆ Convenient and precise calibrators:

- (1) ECAL Electronic Calibrator (Standard)
- (2) 1-Port "T-type" Calibration Kit (Optional)

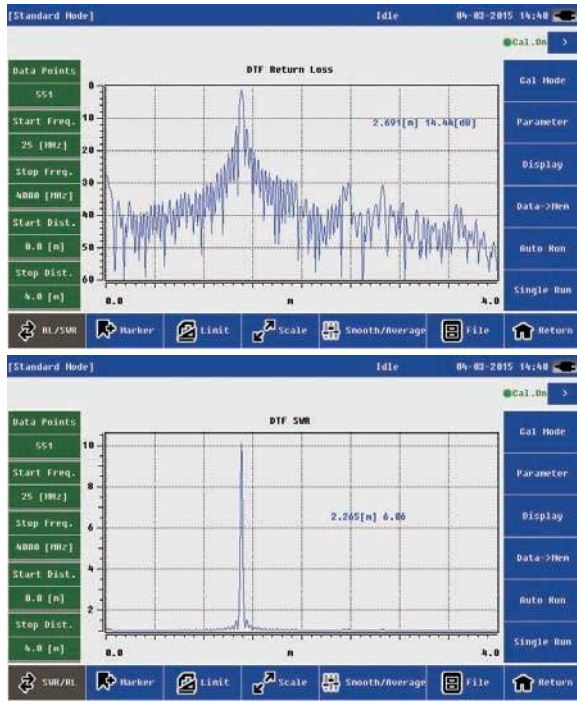
Electronic Calibrator ECAL-01 provides consistent calibration results, and removal the possible error of manual calibration.

1-Port "T-type" Calibration Kit can calibrate precisely and conveniently. When the calibrated data points decrease, it is no need to re-calibrate, which will increase the service efficiency.



◆ **Instant switching the Return Loss and VSWR**

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



◆ **Optimized batch file management function**

CAA-100 Series file filter function is easy to implement batch editing and analysis the results.



◆ **Field calibration cable and obtaining the parameters**

CAA-100 Series can supply user input the cable parameters (propagation velocity, cable loss) or choose a known cable type. If user knows nothing about the cable parameters, he can make a field calibration by the equipment cable calibration tool to get the accurate cable parameters.



◆ **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.



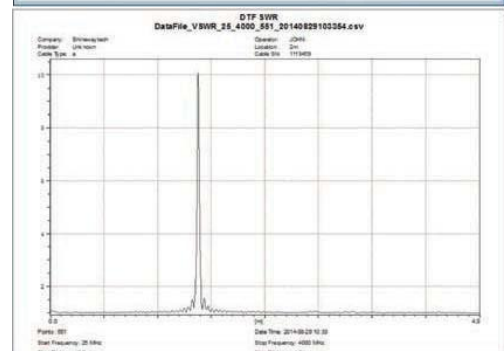
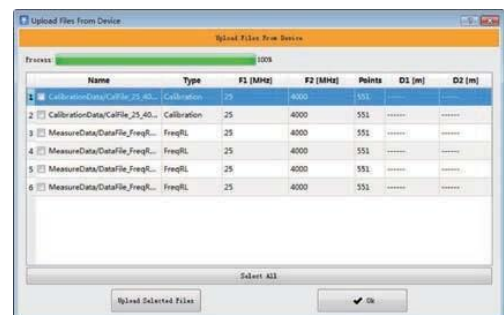
◆ **Energy saving, environmental protection and ergonomic interface design**

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.

◆ **CAA Workbench PC software**

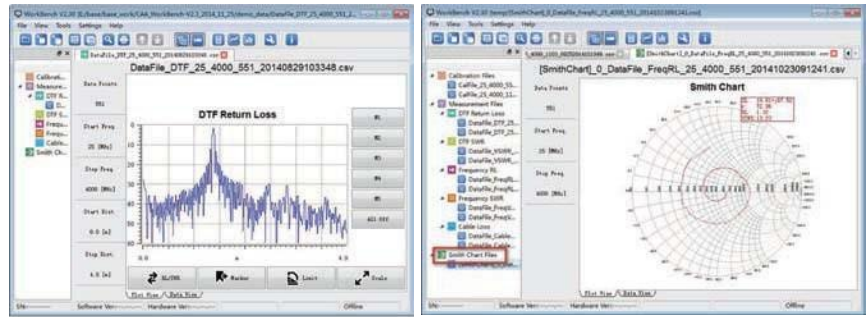
(1) **Data Management Function**

- 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.



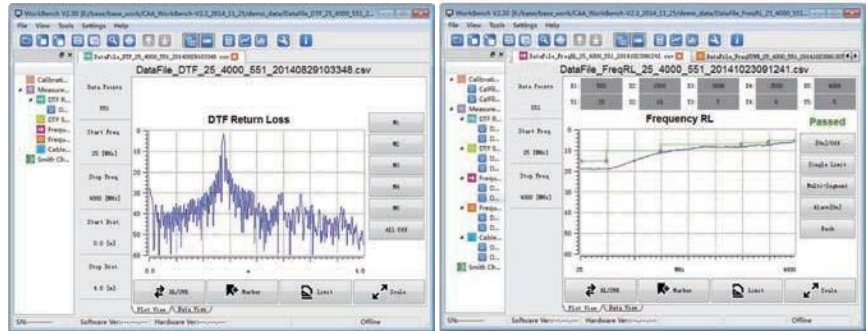
**(2) Application Tools Function**

- 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



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	
<b>Anti-jamming Capability</b>		
Frequency	-5dBm	
Channel	+17dBm	
Directivity	42dB (after calibration)	
<b>Return Loss</b>		
Return Loss Range	0 - 60 dB	
Return Loss Resolution	0.01dB	
<b>VSWR</b>		
VSWR Range	1 - 65	
VSWR Resolution	0.01dB	
<b>Cable Loss</b>		
Cable Loss Range	0 - 30dB	
Cable Loss Resolution	0.01dB	
<b>Distance-to-Fault</b>		
Distance-to-Fault Return loss Range	0 - 60 dB	
Distance-to-Fault SWR Range	1 - 65dB	
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	38dB, 1MHZ-4.4GHz; 32dB, 4.4GHz-6GHz; N(m), 50Ω
<b>General Information</b>	
Connector Type	N - Type female
Input Impedance	50 Ohm
Display	7 inch resistor touch screen, resolution 800×480
Data Interface	1*USB Host Port, 1*USB Device Port, 1*10M/100M Adaptive LAN Port
Memory Space	16G, >2000 traces
Languages	Chinese, English, Spanish
Internal Battery	11.1V 7800mAh Rechargeable Lithium Battery
External Adapter	110 - 240V, 50 - 60Hz, AC input; 16V, 3.75A, DC output
Battery Life	10 hours continuous operation
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)	290×175×75mm
<b>TPM Module (Optional)-RF Terminal Power Meter</b>	
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)	105(125)×45×35mm
Anti-vibration properties	Conform to MIL-PRF-28800F class 3
Elect. Compatibility Characteristics	Conform to EMC GB/T 18268-2000
<b>DPM Module (Optional)--RF In Line Digital Power Meter</b>	
<b>Average Power Measurement</b>	
Frequency Range	300-4200MHz
Power Range	100mW-200W
Dynamic Range	≥33 dB
Insertion Loss	≤0.1 dB

VSWR	1.05 to 99.9
Directivity	≥30 (<3GHz); ≥28 (>3GHz)
Accuracy	±4%
Impedance	50Ω
Connector	N (Female)
Data Interface	USB
<b>Peak Power Measurement</b>	
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 to12dB
<b>CCDF</b>	
Measurement Range	0.1 to 100%
Measurement Accuracy	±3%
Threshold Measurement Range	0.05W to 500W
<b>Burst Power</b>	
Burst Power Range	100mW to 200W
Burst Width	1us to 60ms
Min. Measurement Frequency	15Hz
Measurement Accuracy	±6%
Duty Cycle	0.0001 to 1
<b>General Specifications</b>	
Power Supply	USB
Operating Temperature	-10°Cto 50°C
Storage Temperature	-20°Cto 70°C
Relative Humidity	0 to 85% (Non-condensing)
Weight	0.48kg
Dimensions (H×W×T)	130××124×34mm

*\*Specifications subject to change without notice.*

## Order Information

### Standard Package:

CAA-100 Host, Lithium Battery, AC Adapter, CD (PC Software, User Manual), Quick Reference, Warranty Card, Carrying Case, ECAL Electronic Calibrator, 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).

### Optional (Module, Test Cable, Adapter, Calibrator):

#### 1. Modules:

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

#### 2. 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

### **3. 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

### **4. Calibrator:**

- T-type Calibration Kits

