

**ShinewayTech**<sup>®</sup> 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.



**ShinewayTech**<sup>®</sup>

**Cable & Antenna Analyzer**

**CAA-100**

## 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

### 1. Five Standard measurement mode

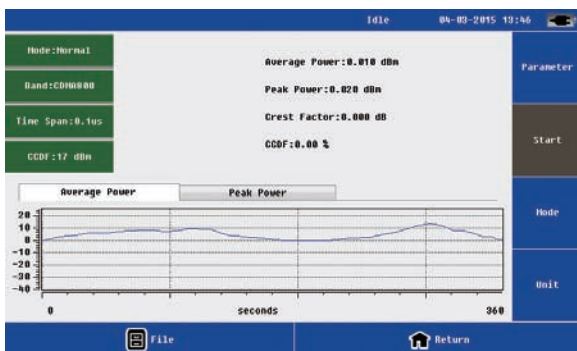
Distance-to-fault (DTF) Return Loss, DTF Voltage Standing Wave Ratio (VSWR), Frequency Return Loss, Frequency VSWR and Cable Loss testing. Main interface designs beautifully, user operation is convenient.



### 2. Optional Power Meter

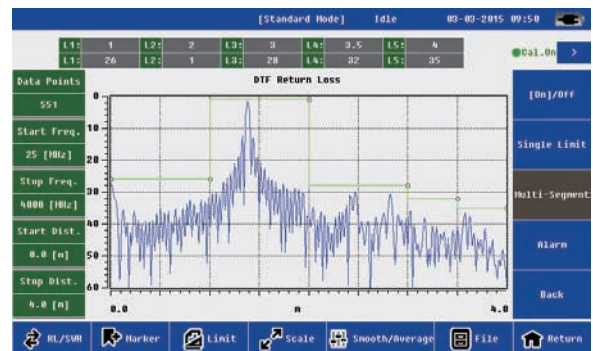
USB high-precision power meter probe not only can connect the instrument to test and display the power, but also can connect the PC to analysis the result, which is greatly satisfy user.

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.



### 3. Intelligent analysis and judgment the trace

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



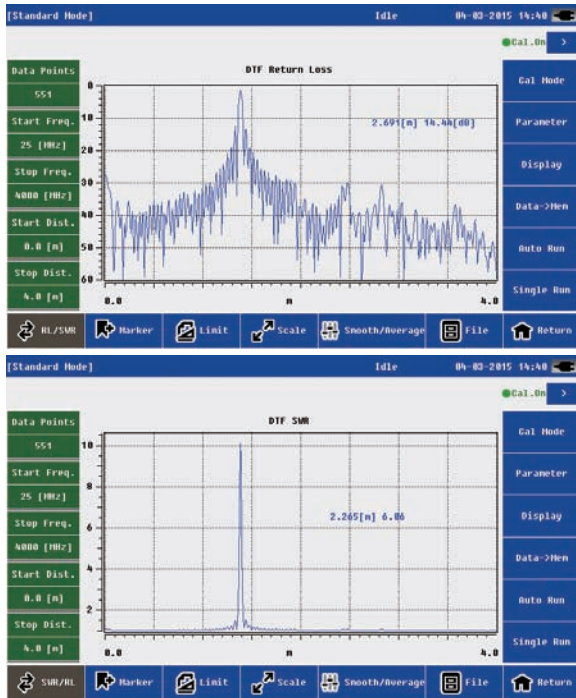
### 4. Convenient and precise calibrator: 1-port and "T-type" Calibration Kit

It can calibrate precisely and conveniently. When the calibrated data points decrease, it 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.



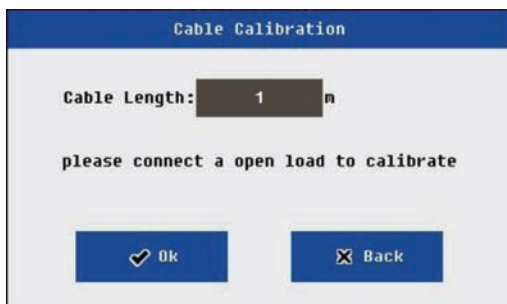
## 6. Optimized batch file management function

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



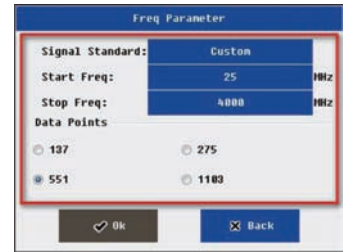
## 7. Field calibration cable and obtaining the parameters

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.



## 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.



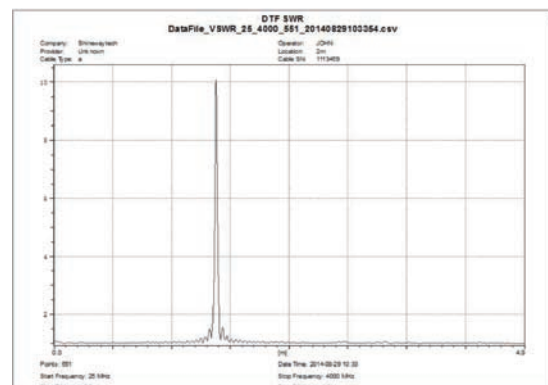
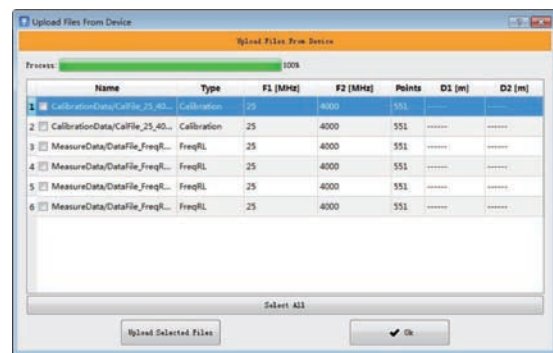
## 9. Energy saving, environmental protection and human interface design

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

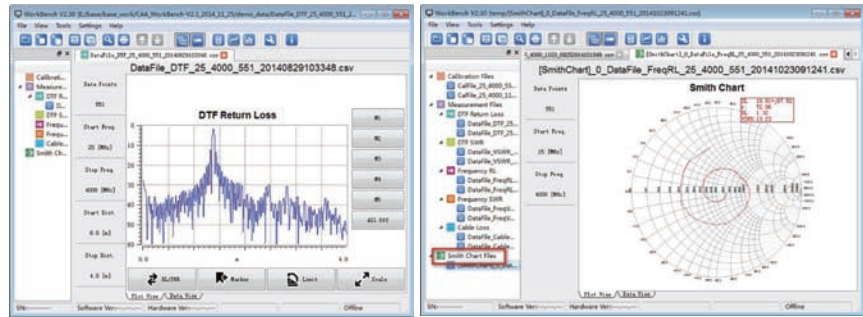
### 1. Data Management Function

- 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



## Specifications

Model	CAA-100	CAA-100B
Frequency Range	25MHz - 4GHz	1MHz - 6GHz
Frequency Resolution	100kHz	1kHz
Frequency Accuracy	+/-25ppm	+/-2.5ppm
Output Power	0dBm(typ.)	
Measurement Speed	3.5ms/point	
Data Points	137, 251, 551, 1103	
<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	0.01	
<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 - 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

General Information	
Connector Type	N - Type female
Input Impedance	50 Ohm
Display	7 inch resistor touch screen, resolution 800×480
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 (Suttle)
Dimensions (L x W x H)	290×175×75mm

TPM Module (Optional)--RF Terminal Power Meter	
Frequency Range	50 - 4000MHz
Power Range	-40 - 20 dBm
Maximum Power	<23 dBm
Measure Uncertainty	$\leq \pm 0.3\text{dB}$ (15°C - 35°C), $\leq \pm 0.5\text{dB}$ (0°C - 50°C)
Input VSWR	<1.2
Burst Width	1 $\mu$ s - 60ms
Min Repetition Period	15Hz
Video Band	5MHz
Minimum Pulse Width	200ns
Time Resolution	0.1 $\mu$ s, 1 $\mu$ s, 15 $\mu$ s, 150 $\mu$ s
Peak Average Ratio	<12dB
CCDF Range	0.1% - 100%
CCDF Uncertainty	$\pm 3\%$
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>SPM Module(Optional)--In Line Digital Frequency Spectrum Power Meter</b>	
Frequency Range	400MHz - 4000MHz
Return Loss	0 - 23dB
Max. Power	57dBm
Input VSWR	<1.1
Insertion Loss	≤0.1dB
Directivity	≥30dB (<3GHz); ≥28dB (>3GHz)
Operating Mode	Full Span/Arbitrary Span/Zero Span
<b>Frequency Scanning Parameters (Full Span, Any Non-zero Span)</b>	
Filter Bandwidth	20M/300K optional
Scan Data Points	Max. 551 points
Frequency Measurement Resolution	100KHz
Power Range	10dBm - 57dBm
<b>Power Measurement (Zero Span) Parameters</b>	
Power Range	Average: 100mW - 200W or 20dBm - 53dBm
	Peak: 100mW - 500W or 20dBm - 57dBm
Peak-to-Average Ratio	<12dB
CCDF	0.1 - 100%
Power Resolution	±0.01dBm
Power Accuracy(Zero Span)	±0.5dB
<b>Burst Signal Measurement Parameters</b>	
Burst Width	30μs - 100ms
Sampling Rate	300K/30K/5K optional
Duty Cycle	0.001 - 1
Burst Average Power	100mW - 200W or 20dBm - 53dBm
<b>Others</b>	
PC Interface	USB/RS-232
RF Interface	N-Type female
Power Supply	USB Power supply: 5V, 500mA
Power Consumption	≤ 2W
Operating Temp. Range	-20°C - 50°C
Storage Temp. Range	-20°C - 70°C
Humidity	0 - 95% (Non-Condensing)
Weight	490g
Dimensions (L x W x H)	130 (95)×124×34mm

\*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, Quick Reference, Warranty card

### Optional:

- TPM Module (Optional)--RF Terminal Power Meter
- SPM Module(Optional)--In Line Digital Frequency Spectrum 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

- T-type calibrator(OPEN-SHORT-50 Ohm), N(m), DC to 6GHz, 50 Ohm
- Calibrator Kit(OPEN×1, SHORT×1, 50 Ohm×1), N(m), DC to 6GHz, 50 Ohm
- OPEN Calibrator×1, N(m), DC to 6GHz
- SHORT Calibrator×1, N(m), DC to 6GHz
- 50 Ohm Calibrator×1N(m), DC to 6GHz, 50 Ohm

