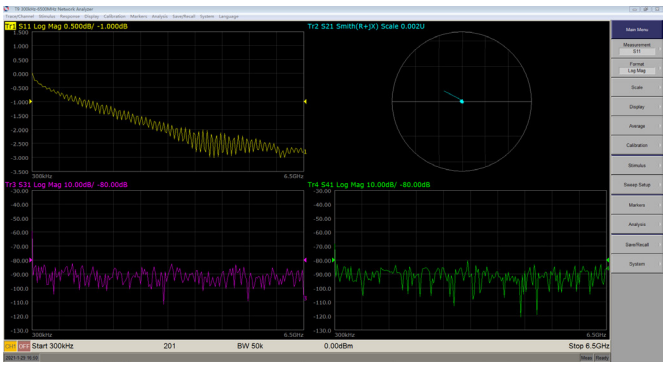
# S3600 Series Vector Network Analyzer


## Overview

The S3600 series vector network analyzer has the performance of a desktop vector network analyzer, with large dynamic range, low trace noise, and high measurement speed. It can meet the testing needs of laboratories, scientific research and teaching, production and manufacturing, system integration and other fields. Covering the frequency range from 300kHz to 20GHz, it is a modular vector network analyzer that is lightweight, portable, and easy to integrate.

## Key features

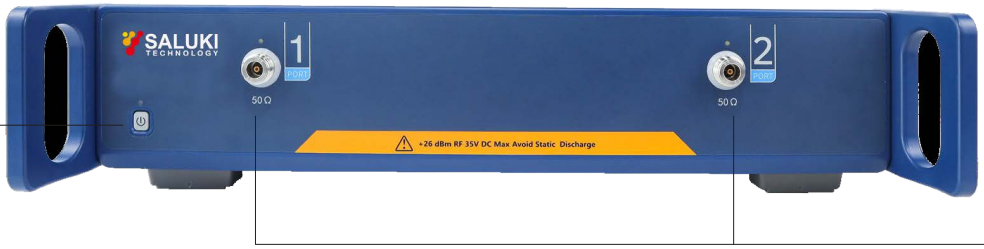
- Frequency Range：300kHz~20GHz
- large dynamic range：typ.120dB @(IFBW=10Hz )
- Low trace noise：5mdB rms @(IFBW=1kHz )
- Fast measurement speed：70μs/point @(IFBW=500kHz)




## Product features and applications

- With the performance of desktop network points
- Compact size design, easy to carry
- Open interface allows for secondary development

# Panel description




Switch

Test port


USB communication interface

Power interface

Ground terminal

Reference signal
Input / Output
External trigger

# Specifications

| | | |
|---|---|---|
| **Measuring range** | | |
| Model | S3600-285/S3600-485 | S3600-2KU |
| Impedance | 50Ω | 50Ω |
| Port connector | N-type, female | NMD 3.5mm Male |
| Port number | 2/4 | 2 |
| Frequency range | 300kHz ~8.5GHz | 1MHz-20GHz |
| Frequency accuracy | ±5ppm | ±1ppm |
| Frequency resolution | 1Hz | |
| Number of measuring points | 2~20,001 | |
| Measurement bandwidth | 1 Hz to 2MHz | |
| Dynamic range（IFBW 10Hz） | 115 dB, typ. 118 dB (300kHz ~ 10MHz)<br>125 dB, typ. 130 dB (10MHz ~ 6.5GHz)<br>123 dB, typ. 128 dB (6.5GHz ~ 8GHz)<br>115 dB, typ. 120 dB (8GHz ~ 8.5GHz) | 115dB,typ.120dB(1MHz~8GHz)<br>113dB,typ.118dB(8GHz ~18GHz)<br>110dB,typ.115dB(18GHz ~20GHz) |
| **Equivalent directionality①** | | |
| Equivalent directionality | 38~49dB | 38~44dB |
| Equivalent source matching | 35~41dB | 34~36dB |
| Equivalent load matching | 37~49dB | 36~42dB |
| ①This specification applies after 40 minutes of power-on warm-up, temperature at 23° C ± 5° C, full dual-port calibration, 0dBm power output, IF bandwidth 10Hz. | | |
| **Measurement accuracy** | | |
| **Reflection measurement accuracy (amplitude)** | | |
| -15dB to 0dB | 0.4dB | 0.6dB |
| -25dB to -15dB | 1.0dB | 1.5dB |
| -35dB to -25dB | 3.0dB | 4.0dB |
| **Trace stability** | | |
| Trace noise (IFBW=3kHz) | 2mdB rms | 8mdB rms |
| Temperature stability | 0.01dB/℃ | |
| **Measurement speed** | | |
| Single point measurement time | 42μs/point | 70μs/point |
| **Test port output** | | |
| Port output power range | - 50dBm to + 10dBm（300kHz ~ 7GHz）<br>- 50dBm to + 8dBm（7GHz ~ 8.5GHz） | -30dBm to +10dBm |
| Power accuracy | ±1.5 dB | |
| **Test port input** | | |
| Maximum input level | + 26dBm | |
| Maximum input voltage | + 35V | |

| Other parameters | | |
|---|---|---|
| External trigger interface | BNC female, input level range: 0~+5 V | |
| External reference input interface | BNC female，10 MHz；2 dBm ± 2 dB | |
| External reference output interface | BNC female，10 MHz；2 dBm ± 2 dB | |
| LAN interface | 10/100/1000 Base T Ethernet，8-pin | |
| Operating temperature | +5° C ~ +40° C | |
| Stored temperature | -20° C ~ +60° C | |
| Working humidity | 90% （25° C） | |
| Working atmospheric pressure | 84 to 106.7 kPa | |
| System calibration cycle | 3 years | |
| System power supply | 220 ± 22 V （AC），50 Hz | |
| System power consumption | 65W | |
| Dimensions | 470×545×105 mm | 455mm×275mm×440mm |
| Net weight | 7.5kg（Options 285） | |
| | 8.1kg（Options 485） | |
| | 12kg（Options 2KU） | |

# Configuration list

| Configuration list | |
|---|---|
| Model | Description |
| **Main machine** | |
| S3600-285 | 2-port 300kHz~8.5GHz vector network analyzer |
| S3600-485 | 4-port 300kHz~8.5GHz vector network analyzer |
| S3600-2KU | 2-port 1MHz~20GHz vector network analyzer |
| **Calibration kit** | |
| SK-CAL-NM_90 | Precision type 9G N type (male) calibration piece T-shaped 4-piece set |
| SK-CAL-NF_90 | Precision type 9G N type (female) calibration piece T-shaped 4-piece set |
| SK-CAL-SMAM_90 | Precision 9G SMA type (male) calibration kit 4-piece set |
| SK-CAL-SMAF_90 | Precision 9G SMA type (female) calibration kit 4-piece set |
| C85052D | 3.5mm precision 50Ω calibration kit 10-piece set 26.5GHz |
| E285A | 2-Port 3.5mm Female Electronic Calibrator 8.5GHz |
| E285C | 2-Port N-Type Female Electronic Calibrator 8.5GHz |
| E485A | 4-Port 3.5mm Female Electronic Calibrator 8.5GHz |
| E485C | 4-Port N-Type Female Electronic Calibrator 8.5GHz |
| **RF test cable** | |
| T5_RFCAB-NmNm_90101 | 9G Precision 50Ω Type N-N Cable |
| T5_RFCAB-NmSMAm_90102 | 9G Precision 50Ω N-SMA Type Cable |
| T5_35NMD_FM265_60CM | 3.5mm Precision 50Ω Test Cable 26.5GHz Female-Male |
| **Other options** | |
| S3600-010 | Time domain option |
| S3600-1F5 | Fixture circuit simulation function |