

Digital and Analog TV Signal Tester

ASA 5510 Series

- **Compact Analog and Digital Signal Analyzer**
- **Optical and RF Input**
- **DVB-C HD/SD Input**
- **Support Smart Card Slot**
- **Support both Channel and Frequency Mode**
- **Spectrum Display**
- **TV Monitor and Audio Amplifier**
- **Built-in Lithium Battery**
- **Robust Water-Proof**



ASA 5510 Integrated Digital and Analog Signal Analyzer is an all-in-one CATV signal analyzer/tester providing today's engineers a complete portable tool in resolving digital video broadcast, transport, or reception challenges. The 5510 Series is capable of testing and analysing optical or RF CATV signals, DVB-C HD/SD digital broadcast channels with integrated TV video monitor and audio amplifier.

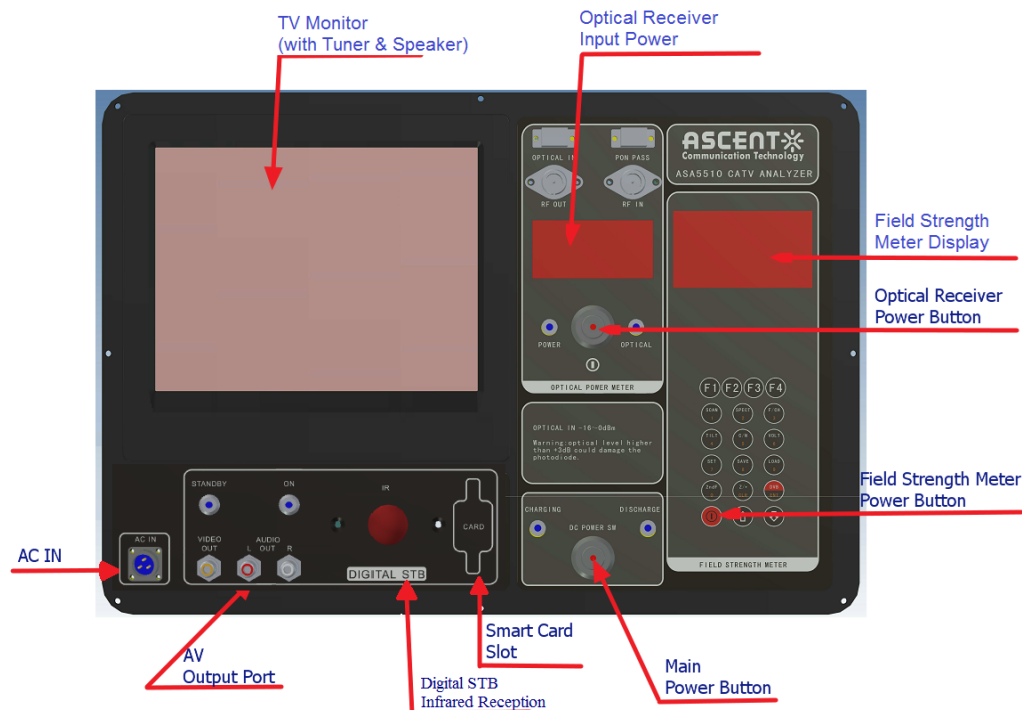
The ASA 5510 provides powerful analog RF and digital TV analysis including CNR, MER, BER, EVM, power level, noise margin, and constellation diagrams. It provides a full arsenal of unique special tests and video monitoring features to assist field technicians in maintaining and troubleshooting all cable and TV transport and reception systems. The user friendly user interface, touch buttons are easy to use and display measured values and TV images at the same time.

ASA 5510 Integrated Digital and Analog Signal Analyzer can be used in variety of analog and digital signal detection and measurement and is a compact and effective tool for network construction, maintenance and acceptance. The signal analyzer is packaged in a robust, water proof travel case with built-in battery.

Key Features

- Compact all-in-one CATV signal analyzer/tester
- Display measured values and TV images at the same time
- Support analog TV signal parameter measurement
- Support DVB-C digital signal features: average peak power, MER, BER, C/N, EVM, constellation diagram
- Built-in audio amplifiers, left and right channels
- Built-in lithium battery
- Conditional Access Verimatrix Smart card Slot
- Support both at channel and frequency mode
- Scan all channels and store signal level
- Carry out spectrum display and test for a certain frequency range
- Can measure CATV TILT, C/N, trunk cable Voltage, etc.
- Can measure DVB-C digital signal features: average peak power, MER, BER, C/N, EVM, constellation diagram
- LCD displays all testing results as well as CATV images
- Water proof travelling casing design

Application Diagram



Specifications

ASA 5510 Integrated Digital and Analog Signal Analyser Kit

Frequency

Frequency Range	5 MHz to 1000 MHz
Frequency Accuracy	± 50 ppm (@ 20°C $\pm 5^\circ\text{C}$)
Frequency Resolution	10kHz

Channel Type

Analog TV	PAL/ NTSC
Digital TV	QAM 16/32/64/128/256 with constellation diagram plus QPSK and COFDM
FM Radio	Single frequency

Digital Channel

Demodulation Type	Standard ITU-T J.83 Annex A/B/C
Support	QAM 16/32/64/128/256
Symbol Rate	1 MS/sec to 7 MS/sec
Bandwidth	280 kHz to 10 MHz
MER (Modulation Error Ratio)	39 dB (QAM)
Accuracy	± 2.0 dB
BER (Bit Error Rate)	1E^{-3} to 1E^{-8} before and after R-S decoding (QAM)
Power Measurement Type	QAM, QPSK and COFDM

Digital Channel Average Power

Level Range -30 dBmV to +60 dBmV

Constellation

Accuracy ± 2.0 dB from 10°C to 30°C and ± 3.0 dB from -10°C to 40°C

Resolution 0.1 dB

Display Mode QAM 64 and QAM 256 with zoom in and zoom out capability

Analog Level Measurement

Range -35 dBmV to +60 dBmV

Accuracy ± 1.5 dB

Resolution 0.1 dB

Input Impedance 75 Ω ("F" type connector)

HUM Modulation

Range 2% to 5%

Channel Scan

Number of Channels 160 channels max

Scanning Speed 5 channels per second

Scale 1, 2, 5, 10 dB/div

Zoom 1X, 2X, 3X, 4X, 5X five levels of magnification or full channel scan

Frequency Spectrum

Bandwidth 2.5MHz, 6.25 MHz, 12.5 MHz, 25 MHz, 62.5 MHz and full span

Scale 1 dB, 2 dB, 5 dB and 10 dB/div

Tilt Measurement

Number of Frequencies maximum 12 with 0.1 dB of resolution

Limit Test Parameters

Min/Max Video Level 0 dBmV to + 30 dBmV

Min/Max Δ V/A 10 dB to 20 dB

Min/Max Power Level 10 dBmV to +30 dBmV

Minimum MER 33 dB (varies with modulations and systems)

Max PRE/POST BER 1.0×10^{-9}

Auto-Test

Number of Programs Maximum 7 test parameters

Line Voltage Measurement

Range 0 V to 100 V (AC/DC) with accuracy of ± 2 V

RF Signal Optical Input Measurement

Wavelength 1200 to 1600nm

Optical Input Power -14 to +3dBm (AGC: -8 to 0dBm)

Optical Return Loss -55dB

Output Level 80dBuV@(-8 to 0dBm)

RF Flatness ± 1 dB

RF Return Loss ≥ 14 dB

Carrier/Noise

Level Range: 80dB μ V to 105dB μ V

Storage

Memory 512K byte

Accessories

Battery Charger	Battery charger
RF Input/Output Port	F Type (2)
Optical Attenuator	2
RF Jumper	1
RF Connector	2

Environment

Dimension	415 mm × 320 mm × 170 mm
Weight	7.2 kg
Working Temperature:	-10 °C to +40 °C

Ordering Information

Model

ASA-5510

Description

ASA 5510 Integrated CATV Digital and Analog Signal Analyzer Kit

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