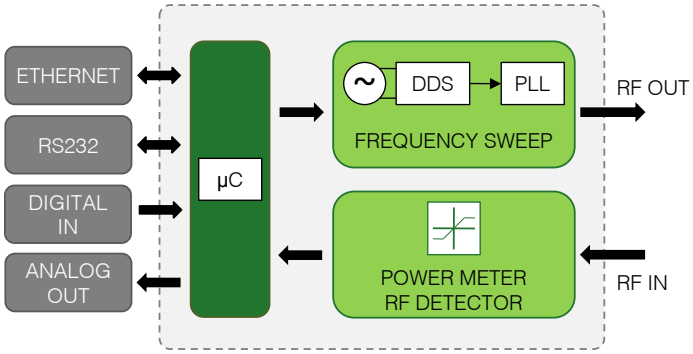
PM microwave

NBA

NARROW BANDWIDTH ANALYZER

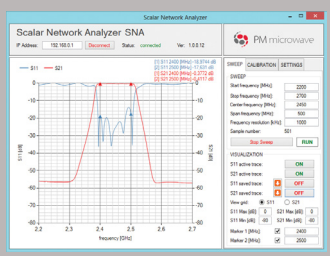


The Narrow Bandwidth Analyzer is a compact and versatile device which allows to measure the frequency response of a generic 2-port network. It mainly consists of a frequency sweep generator and of an RF logarithmic detector that captures the S_{21} response of the device under test.
Optionally the analyzer is equipped also with a directional coupler and with a second RF detector, both external, which allow to measure the reflected power S_{11} too (refer to the diagram on the next page). In addition to communication interfaces (Ethernet and RS232), the NBA also has 2 digital inputs to handle external events, and 2 analog outputs (0 to 2.4 V), optionally set in current (industrial standard 4 ÷ 20mA).
The applications range from the field of telecommunications to sensing systems, namely those systems of measurement and real-time control of physical parameters (temperature, humidity, density of matter, unburnt residues, etc.) during the industrial process. Many are the advantages of a microwave measurement of these parameters: being a non-invasive technique, the measurement is dramaticaly accurate, rapid and independent of the environmental working conditions.

Applications

- Characterization of RF networks
- Automatic testing systems
- Realization of compact test set for measurements on installations

The NBA can be controlled with the same software of the SNA, or through software developed ad hoc for the specific application. Alternatively, PM Microwave provides the communication protocol to the client, which provides development in autonomy.



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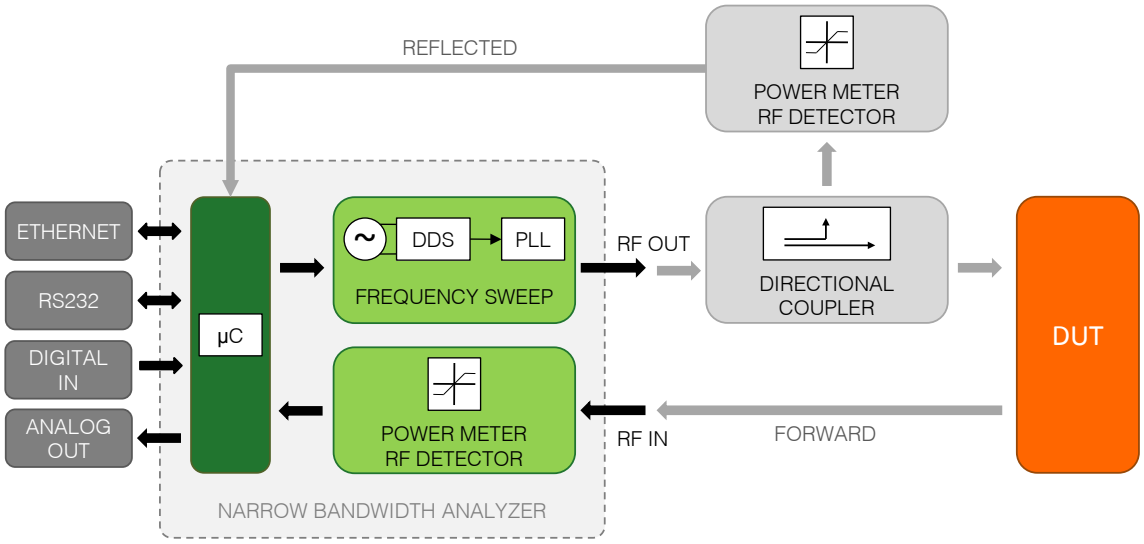

▲ External RF directional coupler and detector are available as an option in order to make even measures of return loss.

TECHNICAL SPECIFICATIONS*

*specifications may be changed in accordance with the technical department

SWEEP GENERATOR	
Frequency range	0.5 ÷ 3.5 GHz in sub-bands (others on request)
Output level	7 dBm
Level flatness	1 dB
RF DETECTOR	
Dynamic range	60 dB
Accuracy	± 1 dB over 60 dB of dynamic range
Resolution	16 bit
DIGITAL INPUTS	
Number of inputs	2
Logic input low	4 V max
Logico input high	12 ÷ 24 V
ANALOG OUTPUTS	
Numbers of outputs	2
Resolution	12 bit
Voltage level	0 ÷ 2.4 V
Current level	4 ÷ 20 mA
GENERAL	
Connectors	2 × SMA female 50 Ω
Number of acquisitions	20 sweep/sec
Communication interface	RS232 and Ethernet 10baseT
Power supply	24 Vdc (18 ÷ 28 Vdc), 48 Vdc opt.
Power consumption	6 W
Operative temperature	-10 ÷ +55 °C
Storage temperature	-20 ÷ +80 °C
Storage relative humidity	10% ÷ 80%
Dimensions	80 × 32 × 95 mm
Weight	0.32 kg
Protection degree	IP50

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