7880SA

Spectrum Analyzer

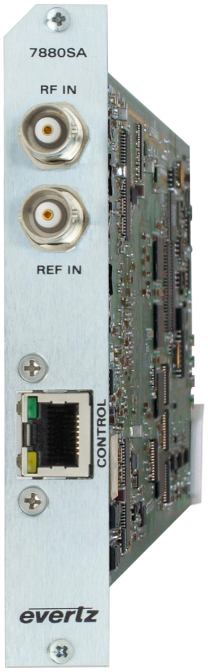
The 7880SA module is Evertz' spectrum measurement and analysis module providing high–end performance at a low price. It is available as a 7800 series module as well as an integrated option on select Evertz RF router matrices. When installed in a 7800 multiframe, it can function as independent spectrum analyzer in a satellite, cable or terrestrial network or as integrated monitoring device with Evertz RF transport and VistaLINK® PRO NMS solution.

7880SA uses state–of–the–art digital technology and Fast Fourier Transformations to make lightning fast and accurate measurements. With a very low noise floor and large dynamic range, it is well–suited to measure any type of satellite, cable or terrestrial wireless carrier, including very small carriers, beacon signals and for carrier monitoring applications. 7880SA accepts all signals from 5MHz to 3GHz and input power levels ranging from –110 to +5 dBm. RBW varies from 1Hz to 15MHz. The 7880SA can be connected to an external 10MHz reference for improved frequency accuracy and stability. All data communications with the 7880SA occurs via its built–in Ethernet port.

The 7880SA's powerful Graphical User Interface (GUI) is available using a Java or Linux–based web browser, or using a standalone application provided by Evertz. The GUI is easy to use and operates like most traditional spectrum analyzers. It provides user–selectable colors for markers and traces, allows storage of multiple traces and provides measurement reporting. The 7880SA GUI also includes a powerful built–in Carrier Monitoring function, which provides notifi cation via email or SNMP of carrier measurements that exceed user–defined limits, offering you peace of mind that up to 100 of your carriers are operating as expected.

The 7880SA provides network access to all technical staff connected to the facility network or a corporate wide area network. This allows all technical staff the ability to monitor feeds and carriers at any time and from any location in the world using only a web browser.

For integration into a satellite terminal or measurement system, the 7880SA can be operated via its built–in GUI or the user can create a separate user interface using the publicly available API. An SNMP status interface is also provided.



Features & Benefits

- Covers full satellite L–band plus cable and wireless bands from 5MHz–3GHz
- Built–in Carrier Monitoring function
- External 10MHz reference or internal reference
- Web browser or API control
- SNMP status interface
- Available as 7800 module as well as integrated +SA option on the XPRF router
- Record, store and play back spectrum traces for future analysis

7880SA

Spectrum Analyzer

Specifications

RF Input:

Number:	1
Connector:	50Ω BNC
Input Frequency:	5–3000MHz
Input Power:	-110 to +5dBm (aggregate)
Max. Safe Input:	+15dBm
Noise Floor:	-160dBm/Hz typical at min. atten; -160dBM/Hz typical at max. atten
Phase Noise:	-80dBc/Hz at 1kHz offset, -95dBc/Hz at 100kHz, -125dBc/Hz at 1MHz

Reference Input:

Number:	1
Connector:	50Ω BNC
Input Frequency:	10MHz, –5dBm to 13dBm

Control:

Number:	1
Connector:	RJ–45, 10/100base–T half or full duplex
Interface:	TCP/IP API, SNMP, HTTP

Electrical:

Voltage:	+12VDC
Power:	18W max.
Temperature:	0–55°C

Physical:

Number of Slots:	1

Measurements:

Amp. Accuracy:	±0.5dB (at 25°C) ±1.0dB (0 to 55°C)
Freq. Accuracy:	±2.6 ppm (internal) or as per external reference
Freq. Resolution:	1Hz
Res. Bandwidth:	1Hz–15MHz
Analysis Bandwidth:	Up to 220MHz
Spurious:	
Images:	< -55dBc (typical)
Aliasing:	< -55dBc (typical)
DC Offset:	< -30dBc (typical)
Averaging:	up to 255 averages

Measurement Speed[3]:

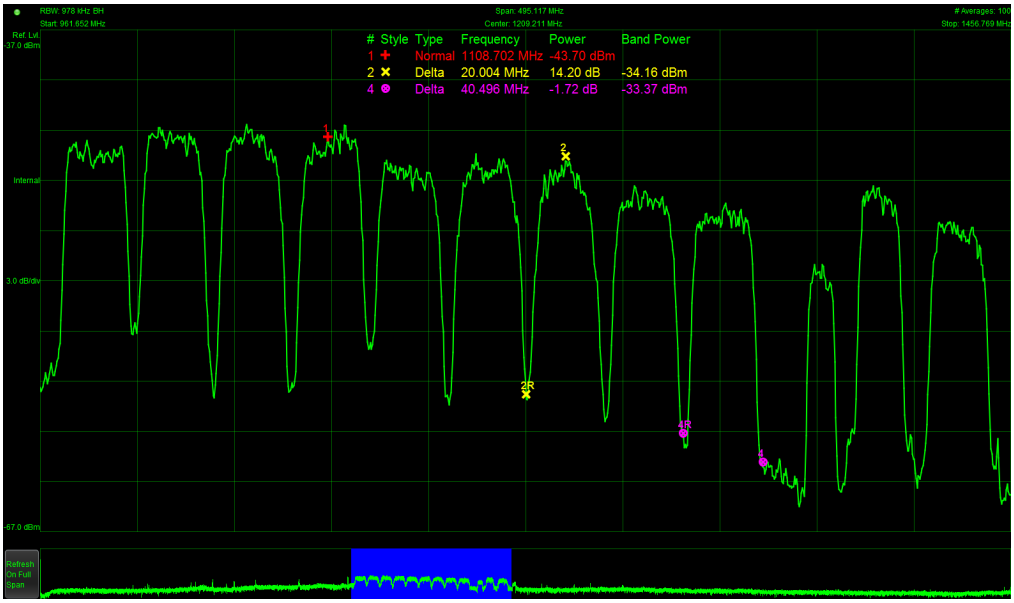
- 500MHz span, 1MHz RBW, 200ms
- 200MHz span, 30kHz RBW, 630ms
- 80MHz span, 100kHz RBW, 170ms
- 3.5MHz span, 8kHz RBW, 90ms

Modes of Operation:

- Raw Snapshot Mode: Number of IQ time samples is approximately 32 million
- Linear Power/Bin (4096 samples, up to 255 averages)
- Log Power/Bin (4096 samples, up to 255 averages)
- Raw IQ Samples — decimated 16–4092 in steps of 4 — sampling frequency up to 3.7MHz
- Selectable Spectral Inversion
- Programmatic measurement and control over Ethernet–based API

Notes:

1. *Measurement conditions: 10 averages, input level between -8dBm and -68dBm, 3 sigma*
2. *Resolution bandwidth auto or manual adjustable*
3. *Expected rates with 10 averages, speed optimization*
4. *All specification at 25°C unless otherwise noted and are subject to change*



FFT Specifications

FFT Windows	FFT Sizes
• Flattop • Hanning • Hamming • Rectangular • Blackman–Harris	128, 256, 512, 1024, 2048, 4096, 8192

Ordering Information

7880SA	5MHz to 3GHz Spectrum Analyzer with Carrier Monitoring

Ordering Options:

+S50	50 Ohm SMA connector
+F75	75 Ohm, F–Type rear connector
SpecAn–FK–CM	Feature Key to enable enhanced Carrier Monitoring on RF Spectrum analyzer. One license is available per HW module.

Rear Plate Suffix:

+3RU	3RU rear plate for 350FR, 7700FR–C, 7800FR or 7801FR multiframes