

OneAdvisor 800 EMF Analyzer

Mobile service providers must continuously perform radiation measurements to ensure compliance as well as the personal safety of employees and customers. OneAdvisor-800's EMF Analyzer performs simple and accurate radiation and emissions measurements.

Fast evolution of wireless technology accelerates the densification of wireless network in line with the increasing demand for higher data throughput. The evolution of cellular networks and proliferation of transmitters, is significantly increasing human exposure to electromagnetic fields (EMF).

VIAVI has been adopted by major mobile operators due to its comprehensive measurement capabilities of the radio access network including the operation and performance of cell sites and the radiofrequency (RF) environment including interference and EMF analysis.

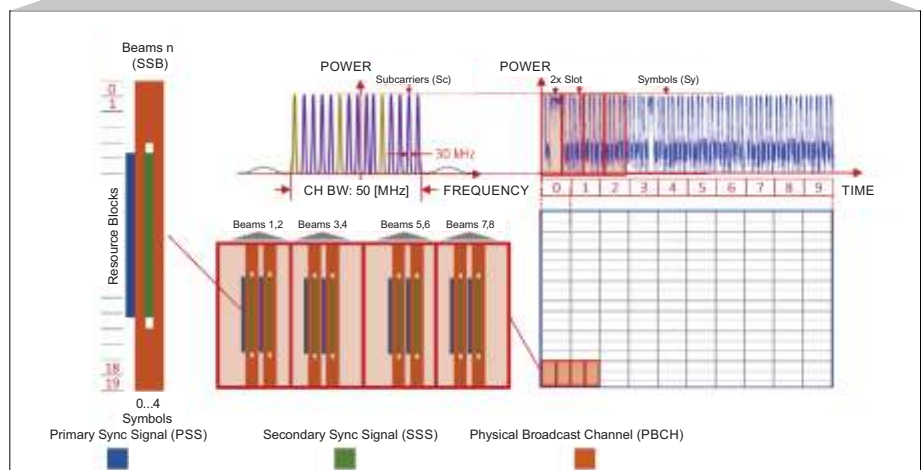
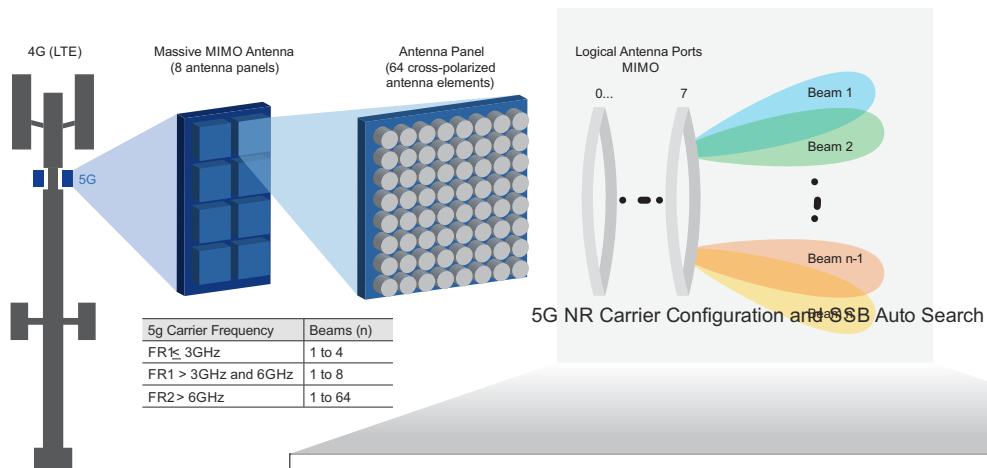
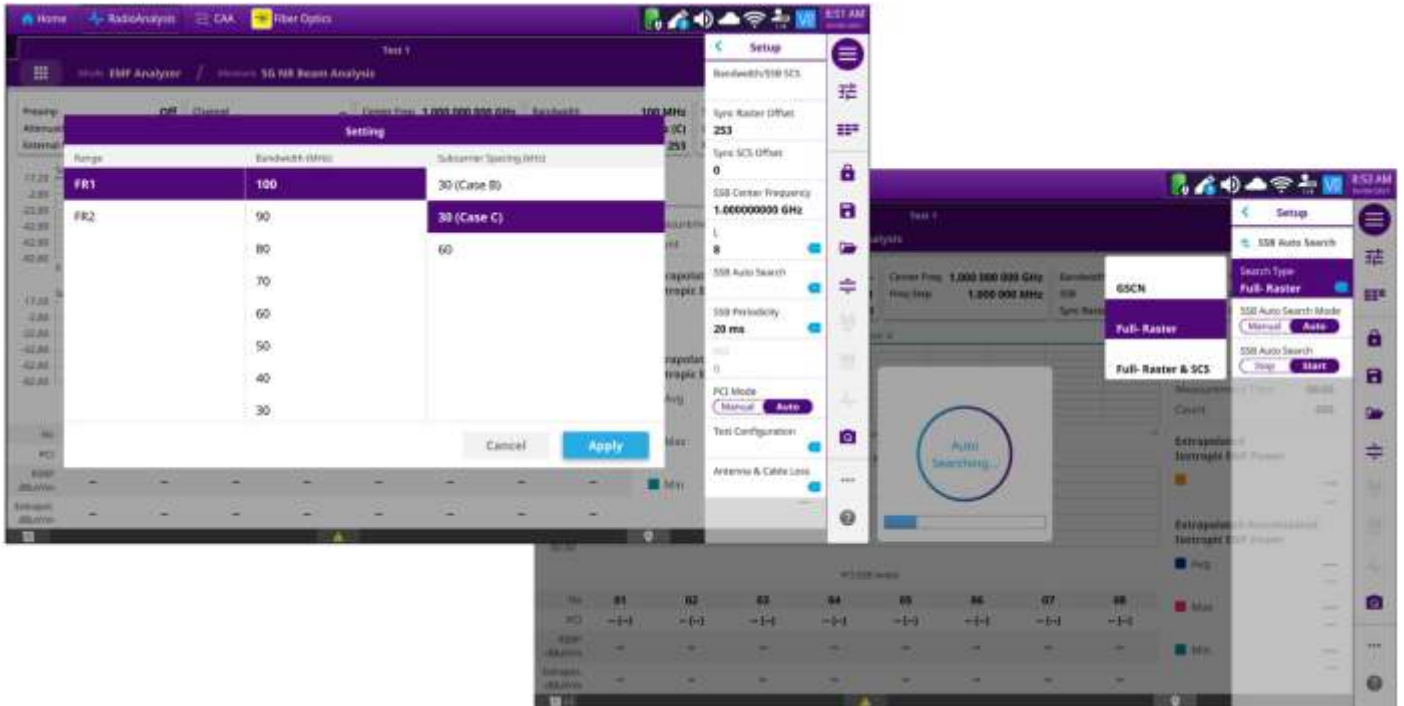
OneAdvisor-800 EMF analyzer option detects RF field strength and EMF using an isotropic antenna performing simple and accurate radiation emissions measurements on site with clear PASS/FAIL indication based on the radiation levels compared to the permissible limits.

Conjunction with 5G NR Beam Analysis capability, OneAdvisor-800 EMF Analyzer also support code-centric EMF measurement that shows the EMF power of multiple beams of Multiple PCI including extrapolation using full matching factor.



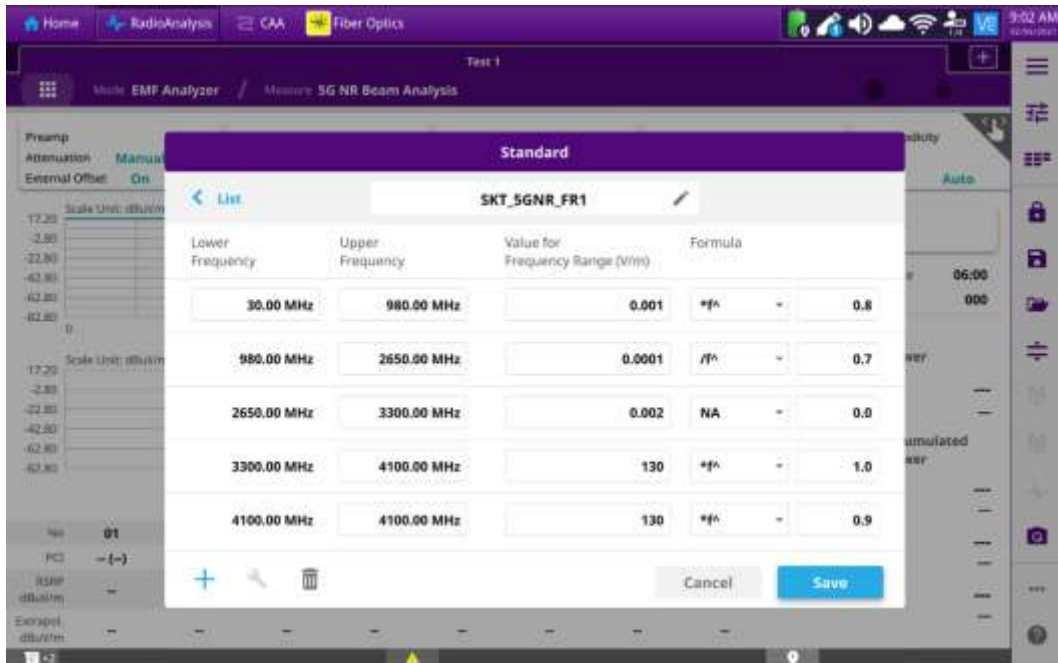
Benefits

- The VIAVI OneAdvisor solution combines in a single solution a general-purpose EMF spectrum-based analysis method with an additional 5G EMF beam-analysis method for 5G NR new networks



Benefits

- Compliant with the Independent Commission of Non-Ionizing Radiation Protection (ICNIRP). User configurable.



EMF Limit edit screen

- Supports 3GPP standard 36.113 Base Station and Repeater Electromagnetic compatibility
- Simple PASS/FAIL and Alarm setting in excess of radiation
- Supports a variety of isotropic and directional antenna model options pre-defined in the instrument settings

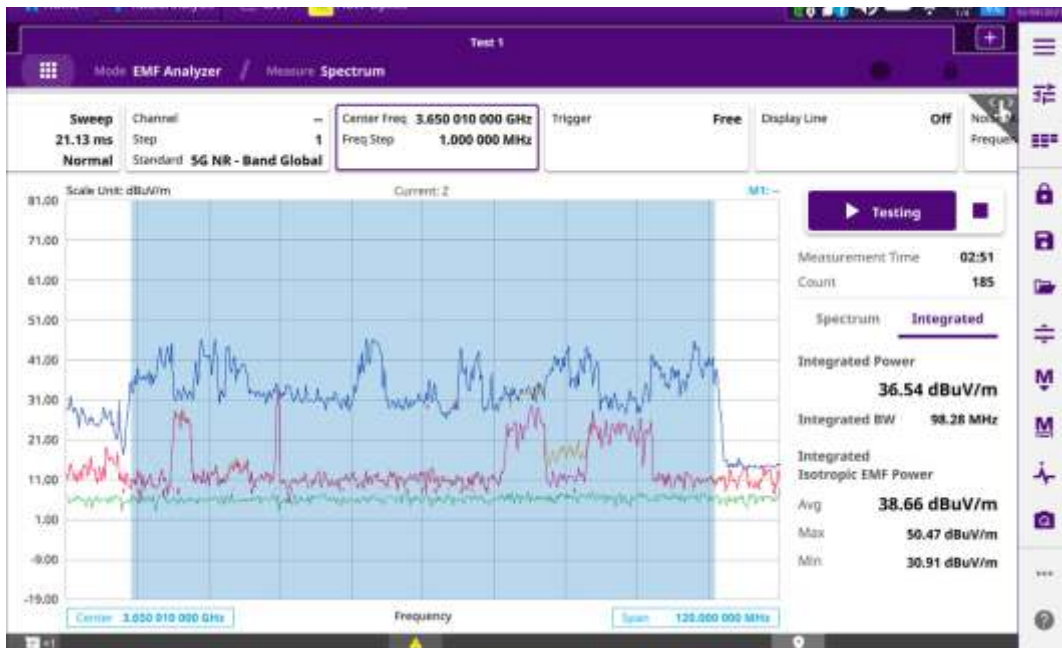
Antenna List		
Model	Frequency Range (MHz)	Antenna Type
G700050381	30.00 - 6000.00	Isotropic E Field (AGOS)
USLP_9143	300.00 - 7000.00	Log Periodic Broadband (Schwarzbeck)
USLP_9143B	450.00 - 8000.00	Log Periodic Broadband (Schwarzbeck)
G700050366	200.00 - 4000.00	Log Periodic Broadband (VIAVI)
G700050367	300.00 - 6000.00	Log Periodic Broadband (VIAVI)
USLP_9142	800.00 - 5000.00	Log Periodic Broadband (Schwarzbeck)

Standard Antenna List

- This EMF testing solution can be combined with an effective Real-time Spectrum Analyzer with 100MHz of analysis bandwidth all integrated in the same tool.

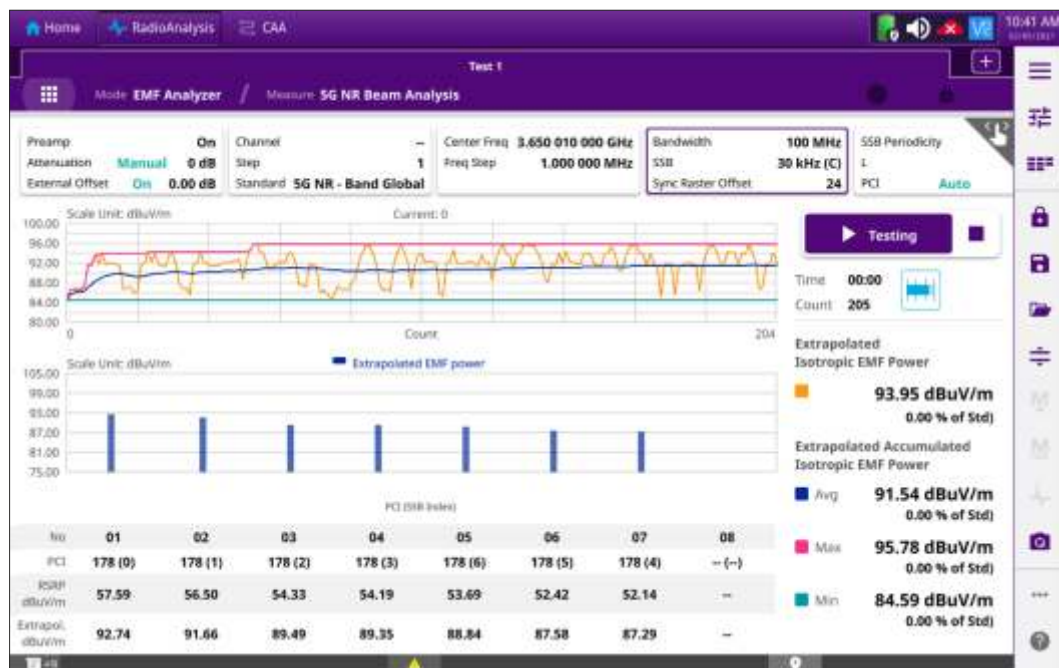
Features

- Spectrum centric EMF Power measurement with Trace statistics including Average, Max, and Min Isotropic EMF power accumulated over measurement time and trace averaged.



Spectrum centric EMF Power measurement

- EMF Power measurement on a 5G NR Beam Analysis base.
- Support Multi-beams and Multi-PCI decoding and shows EMF Power of RSRP of multiple beams with Extrapolated value.



EMF Power measurement on a 5G NR Beam Analysis base

Ordering Information

Description	Part Number
EMF Analysis (Spectrum Analysis base)	ONA-SP-EMF-SA
EMF Analysis (NR Beam Analysis base)	ONA-SP-EMF-NR
Isotropic Antenna (400 MHz – 6 GHz), usable from 30MHz	G700050381

G700050381 Isotropic Antenna Specification (supplied by AGOS)

Parameter	Part Number
Antenna Type	Isotropic E Field
Frequency range	400 MHz to 6 GHz (usable from 30MHz)
Frequency correction factors	Stored in EEPROM
Transducer type	Isotropic transducer with 3 orthogonal dipole antennas, with RF absorbing boom
Polarization	Linear, tri-axial polarization selection by means of internal electronic solid state RF switch
Axis selection	By PC via USB axis selection SDSW-03 interface
Linear dynamic range	0.2mV/m to 200 V/m (1dB compression point)
Sensitivity	<0.3 mV/m (depend of RBW and noise quality of spectrum analyzer)
Max applicable field strength	300 V/m
Linear dynamic range	Up to 200V/m (1dB compression point)
Isotropic error on rms total electric field	±1.5 from 400 MHz to 1500 MHz
	±2.0 from 1500 MHz to 2000 MHz
	±2.5 from 2000 MHz to 3500 MHz
	±3.5 from 3500 MHz to 6000 MHz
Dimension	Antenna radome ø130mm, total length 390mm
Antenna Weight	0.6 kg
RF connector	N type Male, 50Ω
Protection class	IP 45
Temperature range	-20°C to +55°C
Humidity	Max 95% at 40°C without condensation
Recommended calibration interval	2 years

Typical Antenna factors

Individual calibration data. Paper calibration certificate enclosed

Frequency (MHz)	Antenna factor (dB/m) typical	Frequency (MHz)	Antenna factor (dB/m) typical	Frequency (MHz)	Antenna factor (dB/m) typical
400	51.9	1400	43.2	4400	46.5
600	50.2	2600	42.2	4600	47.7
800	46.5	2800	42.2	4800	46.8
1000	45.1	3000	43.5	5000	49.0
1200	43.1	3200	43.3	5200	47.6
1400	44	3400	45.0	5400	48.8
1600	41.8	3600	44.1	5600	49.0
1800	43.3	3800	45.9	5800	48.5
2000	43.9	4000	45.1	6000	49.6
2200	42.9	4200	46.7		

Standard Accessories

- SDSW-03, USB to UART converter
- 1.7m composite cable, ferritized, with calibration certificated of attenuation and return loss
- Vertical support for fixing to ¼" thread
- Hard carrying case