

Brochure

VIAVI

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.

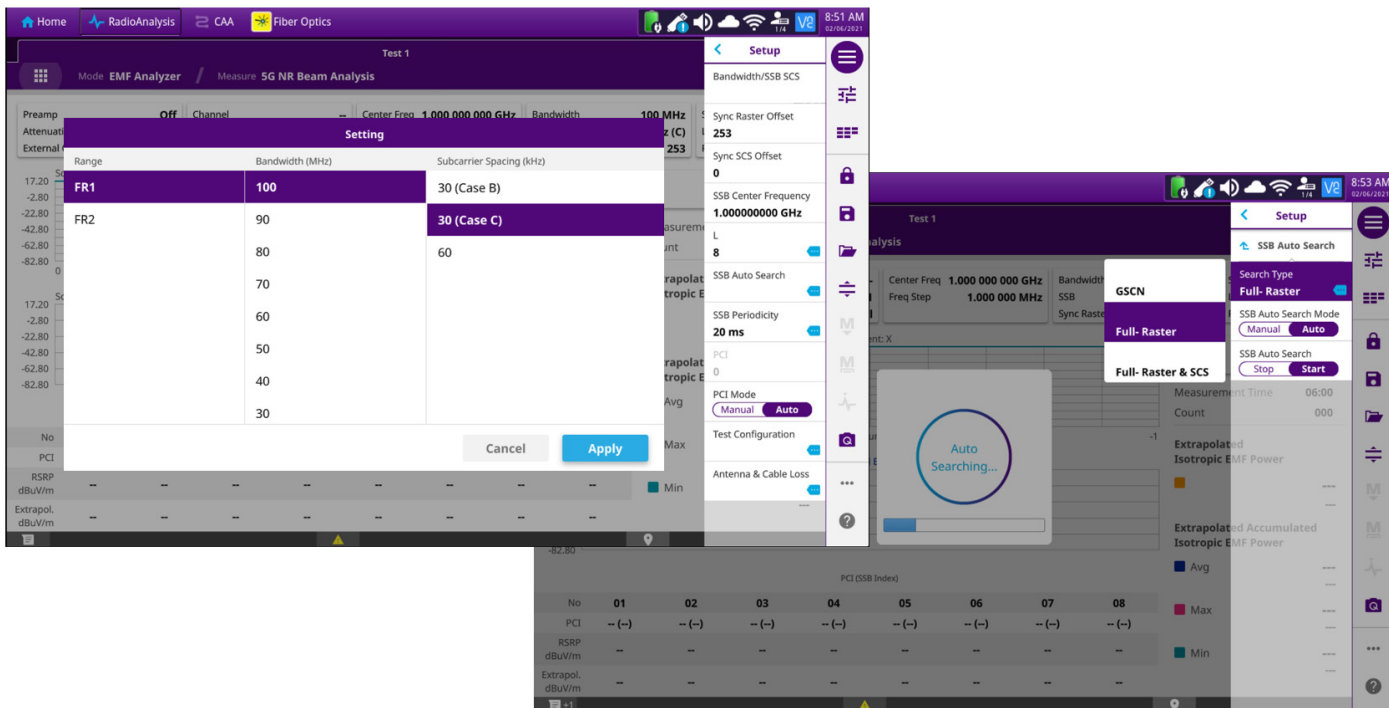
OneAdvisor-800 EMF analyzer option detects RF field strength and EMF using an isotropic antenna performing simple and accurate radiation emissions measurements on site with clear PASS/FAIL indication based on the radiation levels compared to the permissible limits.

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.

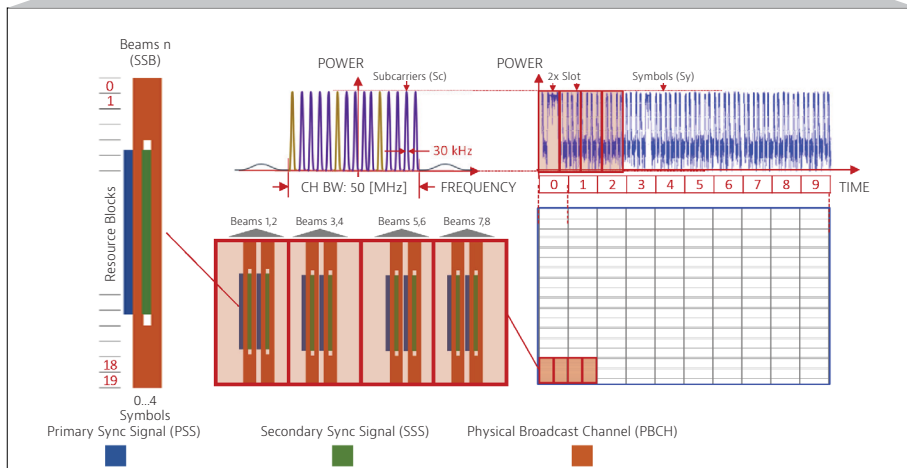
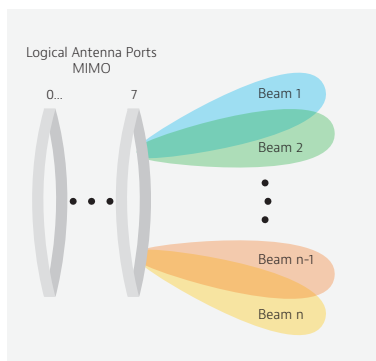
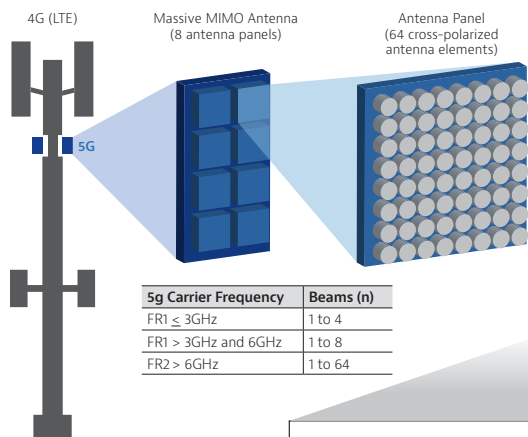


Benefits

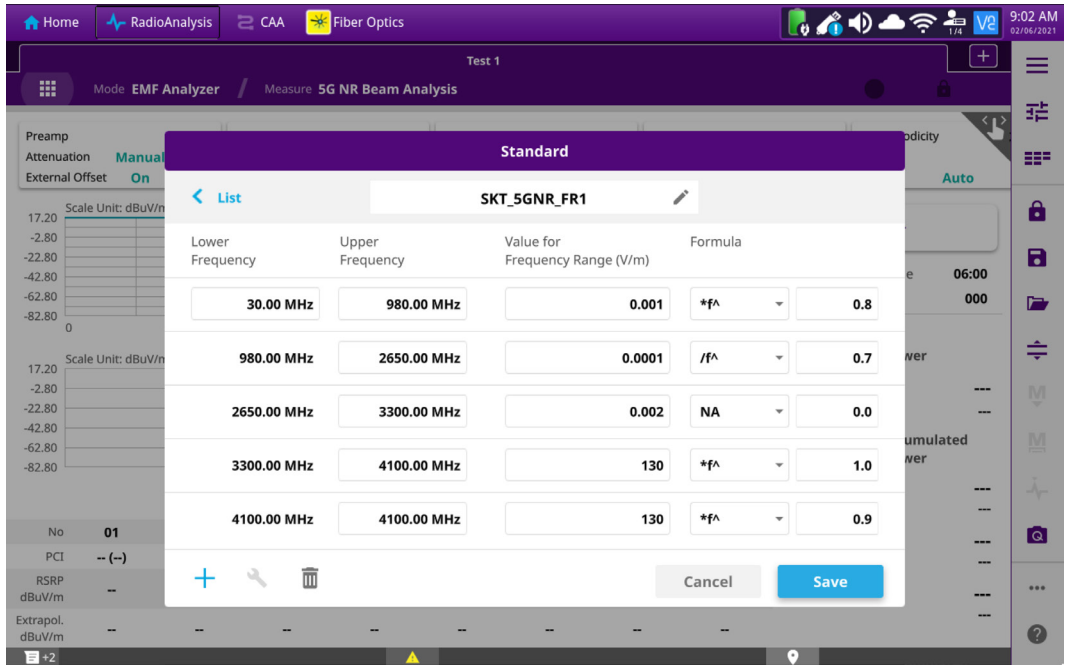
- The VIAVI OneAdvisor solution combines in a single solution a general-purpose EMF spectrum-based analysis method with an additional 5G EMF beam-analysis method for 5G NR new networks



5G NR Carrier Configuration and SSB Auto Search



- 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) |

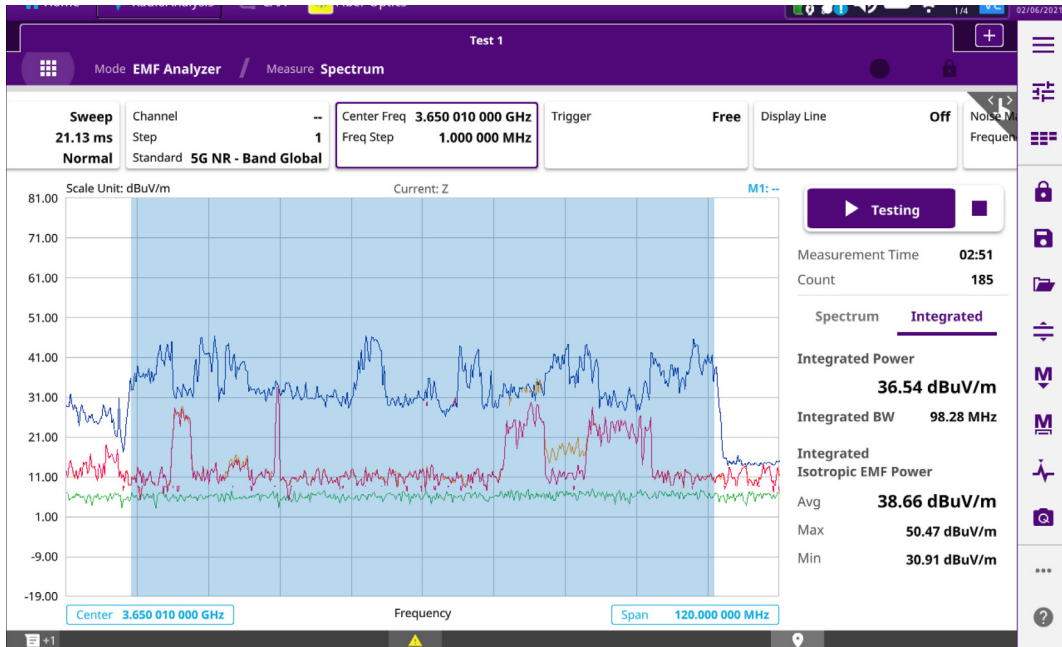
Standard Antenna List

- 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

3 OneAdvisor-800 EMF Analyzer

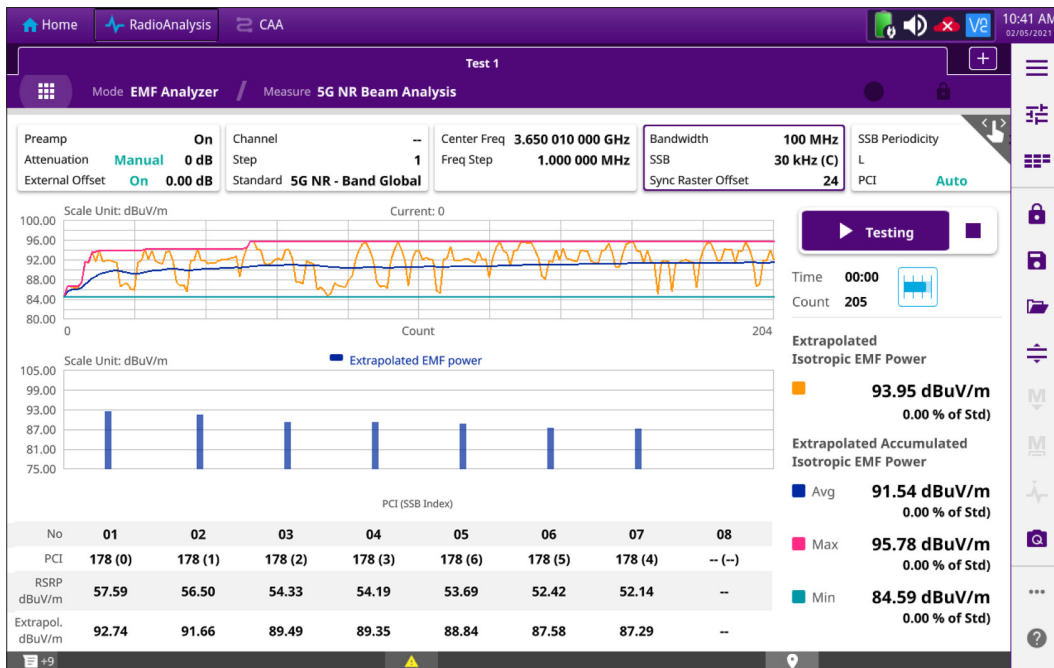
Features

- 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 | |
|---|--|
| 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



Contact Us +1 844 GO VIAVI
(+1 844 468 4284)

To reach the VIAVI office nearest you,
visit viaisolutions.com/contact

emitec
industrial

Emitec Messtechnik AG
Birkenstrasse 47
6343 Rotkreuz

+41 41 748 60 10
info@emitec.ch
www.emitec-industrial.ch

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The complex block contains the Emitec logo, contact information for Emitec Messtechnik AG, and a small image of a green calibration device with blue cables. The background is dark blue.