5G NR Scanning Receiver
E816

Key Benefits

- Frequency range - 350MHz to 6,000MHz
- Precise planning and design optimized for 5G networks
- Low power consumption, small form factor and light weight
- Powerful PC based post-analysis software
- Spectrum clearing of existing and/or new bands.
- 8 frequency bands can be viewed simultaneously
- 4G/5G base station coverage test and a maximum of 32 frequency point tests are done in parallel.
- Spectrum and 4G/5G base station coverage testing
- Simultaneous TDD uplink and downlink spectrum testing for easy interference management

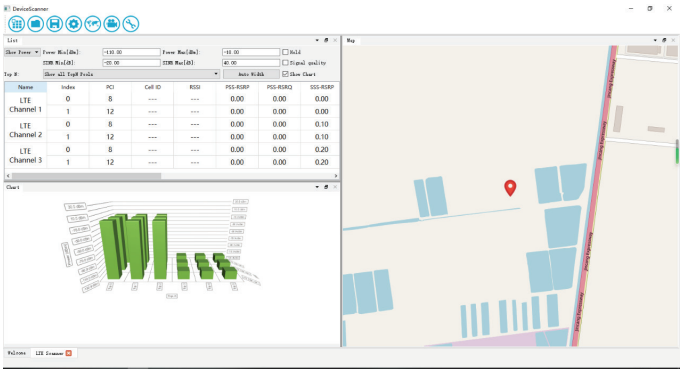
Overview

The E816 Scanning Receiver is the ideal tool for Telecom and Wireless operators to plan, perform network surveys and construction. It incorporates a powerful suite of testing features, including spectrum analysis, spectrum clearing, 4G/5G base station coverage test and TDD uplink/downlink interference analysis. The E816 Scanning Receiver is highly accurate and allows high-speed measurements to make deployment, optimization and maintenance of 5G NR networks easier and faster.

Features & Applications

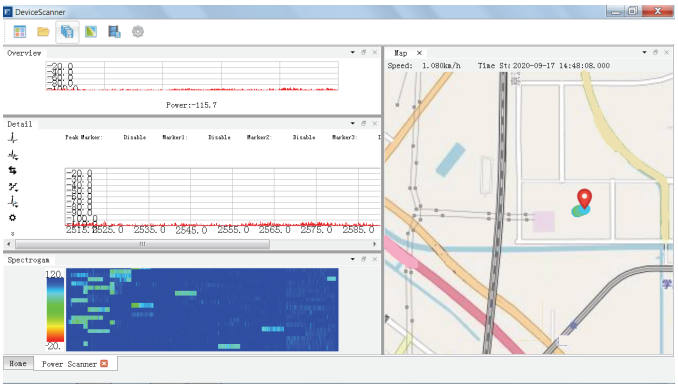
(1) 4G/5G demodulation function: the E816 can demodulate up to 32 frequency points simultaneously with decoded Beam ID, Beam Index, RS-RSRP, RS-RSRQ, and RS-SINR parameters of a compliant base station.

The graphic below shows how the measurement of 4G/5G demodulation works. The diagram on the left shows the PCI of all base stations with user configured demodulated frequency points, corresponding PCI power and SINR. The list can be sorted by power or SINR. The diagram on the right shows the map with the current geographical position of the test point.



(2) The Spectrum Analysis function supports measurements up to 8 frequency bands with spectrum trace, spectrogram and channel power for spectrum clearing and interference analysis.

The graphic below highlights the spectrum analysis function. The diagram on the left shows the full span of all set segments of spectrum. The diagram beneath it displays zoomed spectrum and spectrogram of specific segment. The diagram on the right is the map showing current geographical position of test point



Technical Specifications

Size	
E816-A: 262mm x 160mm x 80m (embedded host computer) 10.31 in x 6.30 in x 3.15 in	E816-B: 166 mm x 97mm x 42mm 6.54 in x 3.82 in x 1.65 in
Weight	
<2 kg <4.40 lb	
Power supply	
19V DC vehicle power supply	
Host data communications interface	
USB3.0 (communication with PC); GPS(SMA); Antenna (SMA)	
Frequency range	
350 MHz – 6,000 MHz	
Demodulations	
TDD-LTE，FDD-LTE，5G NR	
Demodulation sensitivity	
LTE -136 dBm@15kHz SCS	5G NR -132 dBm@30kHz SCS
Measurement accuracy	
±1.5dB	
5G NR decoding parameters	
PCI, SSB Index, SS-RSRP, SS-RSRQ, SS-SINR, DM-RS RSRP, DM-RS RSRQ, NR-ARFCN, Time Offset	
LTE decoding parameters	
Subframe RSSI, PCI, PSS-RSSI, PSS-RSRP, PSS-RSRQ, SSS-RSSI, SSS-RSRP, SSS-RSRQ, EARFCN, RS-RSRP, RS-RSRQ, RS-SINR	
Frequency band decoding capability	
32 frequency points(bands) simultaneously max	
Co-channel frequency decoding capability	
All SSB that is offset by less than 15dB from the strongest SS-RSRP can be detected All cells that is offset by less than 13dB from the strongest cell SS-RSRP can be detected	
Decoding speed	
Each frequency <=500ms	
Spectrum analyze	
Support RBW: 5 kHz, 10 kHz, 15 kHz, 20 kHz, 30 kHz, 50 kHz, 100 kHz, 200 kHz, 300 kHz Noise floor <= -125 dBm @ 10 kHz RBW	