TFN FAT150 Handheld Spectrum Analyzer

6GHz high-performance portable spectrum analyzer, a professional tool for 5G testing

Product Overview

The FAT150 spectrum analyzer is a high-performance portable instrument designed for modern wireless communication testing. Covering a frequency range from 9kHz to 6GHz, it seamlessly supports testing of multiple standards, including 2G/3G/4G/5G. With an exceptionally low displayed average noise level of -165dBm/Hz and a dynamic range of 100dB, the FAT150 achieves industry-leading sensitivity and measurement accuracy. Its 7-inch high-resolution capacitive touchscreen, lightweight design, and 4.5-hour battery life make it an ideal choice for both field and laboratory testing.

Core Feature Highlights

- Excellent RF performance

Wide frequency coverage: 9kHz ~ 6GHz, fully supporting Sub-6GHz 5G band testing
Ultra-high sensitivity: DANL as low as -165dBm/Hz (preamplifier on), easily capturing weak signals
Excellent phase noise: -90dBc/Hz @10kHz offset, ensuring signal purity
100dB dynamic range: supports simultaneous measurement of high power and small signals

- Comprehensive communication test functions

Communication power test: support adjacent channel power (ACLR), channel power, OBW/EBW, carrier-to-noise ratio, etc.
Multiple demodulation modes: support AM, FM, FFT, IQ demodulation in zero-frequency mode
Multi-trace analysis: supports 4 traces with multiple modes including maximum hold, minimum hold, power average, etc.

- Advanced display and operation experience

7-inch capacitive touch screen: 1024×600 high resolution, smooth and intuitive operation
Multiple display modes: support normal, black and white, night vision, high brightness and other modes to adapt to different environments
Powerful file management: supports batch editing, deletion, filtering and other functions

- Portable design and long battery life

Lightweight body: only 2.8kg, easy to carry
Long-lasting battery: 4.5 hours of battery life, meeting all-day field testing needs
Wide operating temperature range: -10°C to 55°C, suitable for various environments

Customer Pain Points & Solutions

1. 5G high-frequency band testing requirements cannot be met : 6GHz frequency range, perfect coverage of Sub-6GHz 5G band
2. Difficulty in detecting weak signals : -165dBm/Hz ultra-high sensitivity, easily capturing weak signals
3. Field test equipment is bulky and inconvenient : 2.8kg lightweight design, 4.5 hours of battery life, truly portable
4. Single test function : integrated ACLR, OBW, multiple demodulation and other communication test functions
5. Complex operation and low efficiency : 7-inch capacitive touch screen, intuitive operation interface

Product Parameters

Item	Specification
Frequency range	9kHz ~ 6GHz
Displays the average noise level	Preamplifier on: ≤-165dBm/Hz (10MHz-2GHz)
Phase noise	-90dBc/Hz @10kHz offset (typical)
Resolution bandwidth	1Hz ~ 3MHz (1-3-10 sequence)
Video bandwidth	1Hz ~ 3MHz (1-3-10 sequence)
Dynamic Range	100dB
Reference level range	-160dBm ~ +40dBm
Attenuator range	0~55dB (5dB step)
Maximum input power	+27dBm (Continuous Wave)
Measurement accuracy	±1.5dB
Display screen	7-inch capacitive touch screen, 1024×600
Battery life	4.5 hours
Weight	2.8kg (including battery)
Operating temperature	-10℃ ~ +55℃

Application Scenario

- 5G communication testing: base station installation and maintenance, network optimization
- Wireless equipment R&D: mobile phones, IoT modules, and RF device testing
- Field signal monitoring: interference troubleshooting, signal coverage testing
- Education and research: communication principle experiments, radio frequency circuit teaching
- Production Line Testing: Wireless Product Performance Verification

Why choose FAT150?

The FAT150 offers near-benchtop performance in a portable package. Whether it's 5G base station maintenance, wireless device R&D, or field signal monitoring, it provides professional-grade testing solutions. Its ultra-high sensitivity, wide frequency coverage, and comprehensive communication test capabilities make it an indispensable tool for modern wireless testing.