FF-ZP128 Spectrum Analyzer

Wireless Communication Spectrum Analyzer,
9kHz to 43.05GHz Frequency Scanning

FFT

FFT

Wide Frequency

Multi Functions

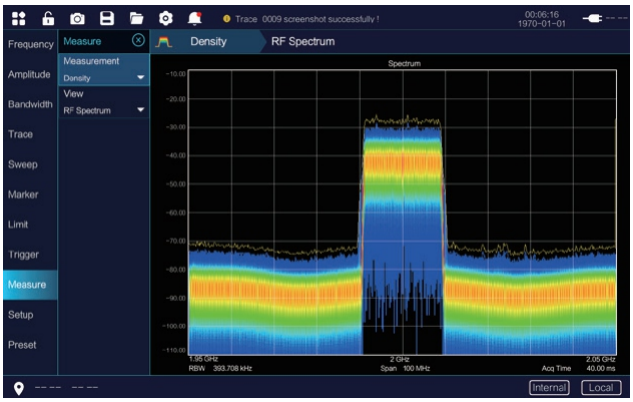
FR1 & FR2 Measurement

Map Mark

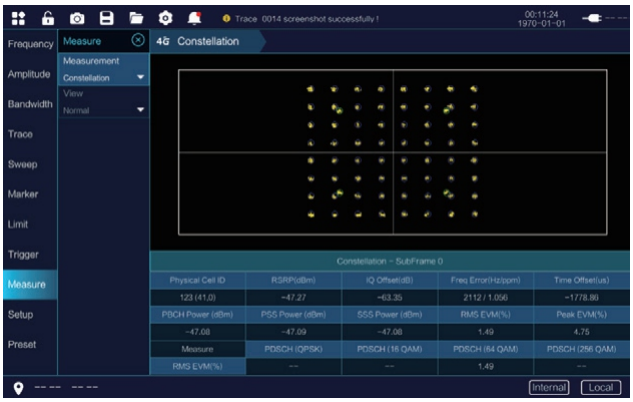
3 Years Warranty

Measurement Options

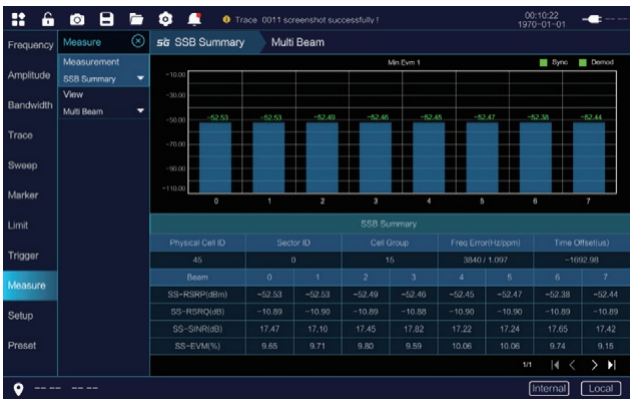
Spectrum Analyzer



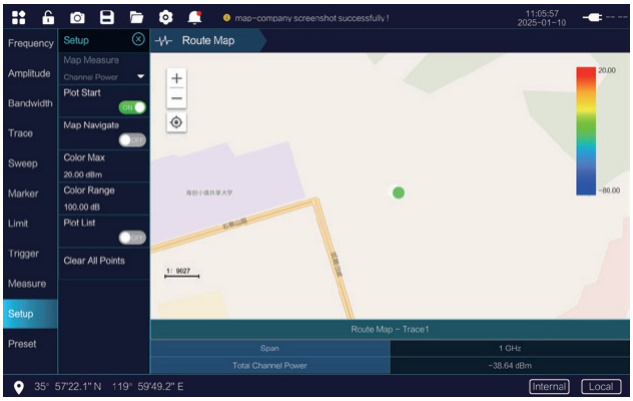
Real Time Spectrum



4G LTE Measurement



5G NR Measurement



Map Rout Point

Please visit the link for more information
https://firstfiber.cn/products/spectrum-analyzer

Measurement Senarios

Wireless Communication

- Wireless Spectrum Management
- Base station measurement and monitoring
- Cable and antenna measurement
- Interference analysis and localization

Satellite Communication

- Satellite communication system debugging
- Troubleshooting of Satellite Communication System
- Performance optimization of satellite communication system

Radar Communication

- Radar signal measurement
- Diagnosis and troubleshooting of radar system faults

Military and Defense

- Electronic Warfare and Spectrum Monitoring
- Radio communication reconnaissance and military equipment spectrum management
- Interference source search and spectrum network cleaning

Others

- Drone Countermeasure
- Electromagnetic compatibility and electronic testing
- Research and Education
- Artificial intelligence, semiconductor, automotive, new energy, power electronics testing
- Physics and Medicine
- Radio, television, and audio testing

Spectrum analysis

Frequency range	9kHz～43.05GHz
Real time bandwidth	100MHz
Scanning speed	10.74ms@ Span=0.31GHz RBW=VBW=100kHz 65.4ms@ Span=4.24GHz RBW=VBW=5MHz 450.04ms@ Span=27.0GHz RBW=VBW=3MHz 58.6ms@ Span=2.8GHz RBW=VBW=300kHz 645.5ms@ Span=40GHz RBW=VBW=5MHz
Intermediate frequency bandwidth	10MHz/100MHz
100%POI	≥9.3us
RBW	1Hz～10MHz
VBW	1Hz～10MHz
Measuring range	DANL～+20dBm
Attenuation range	0dB～60dB (step 5dB)
Preamplifier	+20dB
Maximum input level	+20dBm,±50 VDC (Measurable), +27dBm,±50 VDC (Not Damaged)
Amplitude accuracy	9 kHz ～ 2 MHZ: ±2.0 dB(Typical ±1.5dB) 2 MHz ～ 15 GHZ: ±1.0 dB(Typical ±0.5dB) 15 GHz ～ 23 GHZ: ±1.1dB(Typical ±0.6dB) 23 GHz ～ 43 GHZ: ±1.8dB(Typical ±0.8dB)
Preamplifier (off) DANL 23+/-5°C	9 kHz ～ 10 MHz: -138 dBm, -140 dBm (Typical) 10 MHz ～ 4.0 GHz: -143dBm, -145 dBm (Typical) 4.0 ～ 14 GHz: -141 dBm, -142 dBm (Typical) 14 ～ 20 GHz: -140 dBm , -142dBm (Typical) 20 ～ 32 GHz: -142 dBm, -143 dBm (Typical) 32 ～ 43 Ghz: -142 dBm, -145 dBm (Typical)
Preamplifier (on) DANL 23+/-5°C	9 kHz ～ 10 MHz: -160 dBm, -162 dBm (Typical) 10 MHz ～ 4.0 GHz: -160 dBm , -161 dBm (Typical) 4.0 ～ 14 GHz: -159 dBm , -160dBm (Typical) 14 ～ 20 GHz: -160 dBm , -162 dBm (Typical) 20 ～ 32 GHz: -160 dBm, -162 dBm (Typical) 32 ～ 43 GHz:-161 dBm, -162 dBm (Typical)
SSB Phase Noise	-107 dBc/Hz @ 1GHz offset 10 kHz (typical value) -111 dBc/Hz @ 1GHz offset 100 kHz (typical value) -122 dBc/Hz @ 1GHz offset 1 MHz (typical value)
SFDR	<-75 dBc
Dynamic Range	>102 dB @ 2 Ghz
Second harmonic distortion	≥20MHz:<-45dBc ≥3GHz:<-65dBc ≥10GHz:<-75dBc (test conditions: 0dB attenuation, -30dBm input)
Trigger	Free trigger, video trigger, periodic trigger, external trigger, RF burst trigger
Measure Item	Channel power, occupied bandwidth, adjacent channel ratio, spectrum transmission template

interference analysis

Spectrum analysis, waterfall plot analysis	
Interference source search	channel power, received signal strength indication, GPS antenna
Interference positioning	Map, directional antenna

Demodulate

Demodulation mode	AM, FM
Demodulation analysis	Baseband time-domain waveform, transmission power, carrier frequency offset, modulation depth (amplitude modulation), demodulation frequency offset (frequency modulation), signal-to-noise ratio
Demodulate audio play	
Demodulate audio play	

5G NR

RF channel power	Total channel power, peak to average power ratio, total power spectral density, and limit line testing
RF occupies bandwidth	Bandwidth occupancy, peak to average power ratio, total power, x dB bandwidth reduction, and limit line testing
Equivalent Isotropic Radiated Power	Receiving antenna gain, receiving cable loss, distance, path loss, maximum holding quantity, channel bandwidth, equivalent omnidirectional radiation power, maximum equivalent omnidirectional radiation power, limit line test
Single beam	Physical cell identification, sector identification, cell grouping, frequency error, time offset, auxiliary synchronization reference signal received power (dBm), auxiliary synchronization reference signal reception Received quality (dB), auxiliary synchronization signal signal-to-noise ratio (dB), synchronization and demodulation status identification, average error vector amplitude, peak error vector amplitude, power (dBm)
Multi-beam	Physical cell identification, sector identification, cell grouping, frequency error, time offset, auxiliary synchronization reference signal received power (dBm), auxiliary synchronization referenceSignal reception quality (dB), auxiliary synchronization signal signal-to-noise ratio (dB), synchronization and demodulation status identification, power (dBm)
Physical cell identification scanning	Multi physical cell identification, beam index, auxiliary synchronization reference signal received power (dBm), auxiliary synchronization reference signal received quality (dB), auxiliary synchronization Signal signal-to-noise ratio (dB), auxiliary synchronization signal error vector amplitude for each beam
Frequency range	100MHz~43.05GHz
Frequency error	≤ 10 Hz
Bandwidth	5,10,15,20,25,30,40,50M,60,70,80,90,100MHz
Channel power accuracy	±1.0 dBm
EVM	± 2.0% (typical value, physical broadcast channel)

LTE

Constellation map	Reference signal received power, root mean square/peak error vector amplitude, data error vector amplitude (QPSK, 16QAM, 64QAM, 256QAM), frequency offset (Hz, ppm), time offset (nanosecond) ± 2.0% (typical value, physical broadcast channel)
Data channel	RB power diagram, constellation diagram, demodulation type, RB power, root mean square/peak error vector amplitude, IQ offset
Channel	P-SS, S-SS, PBCH, PCFICH, PHICH, PDCCH, RS power (dBm), error vector amplitude (%), demodulation type, frequency offset
Power and Time Frame Analysis	Frame average power (dBm), frequency offset (Hz), orthogonal frequency division multiplexing symbol power (dBm), IQ offset (dB), root mean square/peak of error vector amplitude, root mean square/peak of data error vector amplitude
RF Analysis	Channel power, occupied bandwidth
Frequency error	⩽ 10 Hz
Bandwidth	1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz
Channel power accuracy	±1.0 dBm (typical)
EVM	±2.0 % (typical)

Ordering

Part Number	Description
FF-ZP128	Spectrum analyzer plateform
128-S01	SA interference analysis
128-S02	RTSA interference analysis
128-S03	Outdoor map
128-S04	Analog demodulation analysis
128-S05	Simulate demodulation audio playback
128-S06	Zero sweep wide intermediate frequency output
128-S07	Time gate function
128-S08	orientation analysis
128-S09	Real time spectrum analysis with a bandwidth of 50MHz
128-S10	Real time spectrum analysis with 100MHz bandwidth
128-S11	LTE analysis
128-S12	5GNR measurement
128-S13	vector signal analysis
128-S14	phase noise measurement
128-H01	GPS/Beidou function
128-H02	WiFi wireless communication
128-H03	Transportation engineering box
128-H04	Off site measurement software package
128-H05	The power adapter
128-H06	10Ah rechargeable lithium-ion battery
128-H07	9K-30MHz directional antenna
128-H08	20M-200MHz directional antenna
128-H09	200M-500MHz directional antenna

Ordering

Part Number	Description
128-H10	500M-8GHz directional antenna
128-H11	6G-20GHz directional antenna
128-H12	18G-40GHz directional antenna
128-H13	9K-8GHz handheld amplifier+USB electronic compass
128-H14	Antenna transport box
128-H15	120MHz real-time analysis bandwidth
128-H16	300MHz-8GHz omnidirectional antenna
128-H17	20MHz-3GHz omnidirectional antenna
128-H18	3GHz-40GHz omnidirectional antenna
128-H19	300MHz-18GHz Omnidirectional Antenna

Tech Support
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