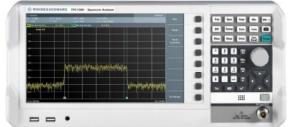
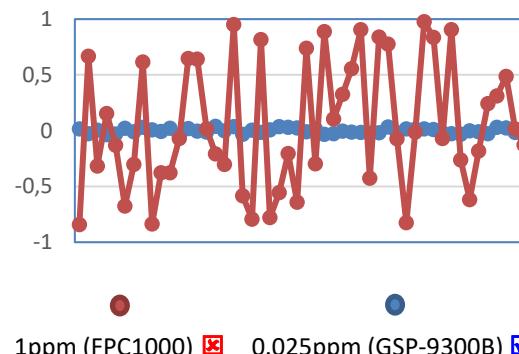


GW Insteek GSP-9300B vs. R&S FPC1000 Competitive Fact Sheet

Comparison on key functions		
Frequency Range	<input checked="" type="checkbox"/> 9 kHz ~ 3 GHz	<input checked="" type="checkbox"/> 5 kHz ~ 1/2/3GHz *upgrade
Frequency Stability	<input checked="" type="checkbox"/> 0.025ppm, 1ppm/year	<input checked="" type="checkbox"/> 1ppm, 1ppm/year
RBW Range	<input checked="" type="checkbox"/> 1Hz to 1MHz in 1-3-10 sequence EMI Filter standard	<input checked="" type="checkbox"/> 1 Hz~3 MHz in 1-3-10 sequence EMI Filter (Option, receiver mode)
Pre-amplifier	<input checked="" type="checkbox"/> Built-in 18 dB internal standard	<input checked="" type="checkbox"/> 16dB internal (Option, PA)
Measurement Function	<input checked="" type="checkbox"/> SEM, ACPR, OCBW, CHPW, N-dB BW, Phase Jitter, Harmonic, TOI, CNR, CSO, CTB, P1dB, TDP	<input checked="" type="checkbox"/> OCBW, CHPW (Option Adv. Meas)
Display Modes	<input checked="" type="checkbox"/> Spectrogram, Topographic, Split-Window	<input checked="" type="checkbox"/> Spectrogram (Option Adv. Meas.)
Other Function	<input checked="" type="checkbox"/> Sequence, Limit Line, Correction Table	<input checked="" type="checkbox"/> Limit Line
Tracking Generator	<input checked="" type="checkbox"/> 100 kHz ~ 3 GHz (optional), 0 ~ -50 dBm	<input checked="" type="checkbox"/> N/A
Demodulator	- AM / FM standard	<input checked="" type="checkbox"/> AM/FM, ASK/FSK (Option Demod.)
Interface	- USB, RS-232, GPIB(Opt), Lan, MicroSD	- USB, Lan, WiFi(Option WiFi)
Trace Number	<input checked="" type="checkbox"/> 4	<input checked="" type="checkbox"/> 2
Wireless function	- 3G/4G LTE SIM	- WiFi Connection (Option, WiFi)

Frequency Stability

The frequency stability of GSP-9300B is 0.025ppm, which is 40 times of FPC1000's 1ppm. The diagram on the right shows the difference. Higher frequency stability stabilizes frequency measurement. Therefore, users do not need a frequency counter to measure frequency. Users also do not need external reference time base signal to increase frequency stability.



The importance of Tracking Generator

Spectrum analyzer collocating with tracking generator can conduct various tests, including filter's frequency response, antenna's working frequency, RFID test, cable loss test, amplifier's frequency response and $P_{1\text{dB}}$ test, etc. GSP-9300B has TG option while FPC1000 cannot operate TG that significantly reduces FPC1000's applications.

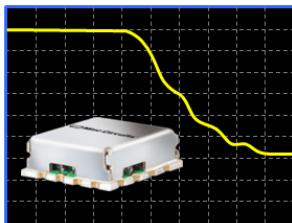


GSP-9300B
TG option.



FPC1000
Does not support TG.

Filter test



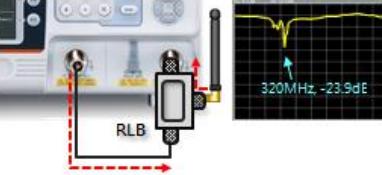
Cable loss test



Cable	Z ₀	Attenuation*
RG-8X	50	13.5
RG-174/U	50	31
RG-214/U	50	9

*: 1GHz, dB/100 ft

Measurement of antenna's working frequency



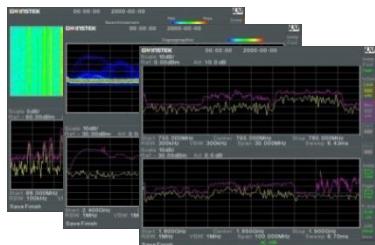
Amplifier's $P_{1\text{dB}}$ test



TG(dBm)	G(dBm)	TG	Gain	TG	Avg. Gain	
+30	14.27	+29	12.46	+0	5.92	14.07
-28	14.22	-29	11.46	-8	3.94	13.56
-27	14.19	-37	10.63	-7	3.94	13.54
-26	14.02	-35	10.46	-10	3.94	13.50
-25	14.01	-35	10.46	-5	3.94	13.48
-24	13.98	-34	10.46	-4	3.98	13.42
-23	13.92	-32	10.46	-2	3.98	13.32
-22	13.87	-32	7.71	-2	0.73	13.22
-21	13.12	-11	6.68	-3	0.13	13.06

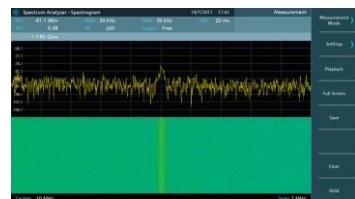
Graphic processing capability

Built-in spectrogram and topographic modes and split- window not only quickly analyze waveform variation but also independently measure two different frequencies via split-window.



GSP-9300B

Various built-in graphic display mode



FPC1000

Spectrogram is the only option available

Various measurement applications

Spectrum analyzer is not only for basic signal strength and accuracy measurements. It is also applied to various tests, including channel power, CATV system, component's linearity and harmonic test. GSP-9300B provides various applications.



GSP-9300B

Various built-in applications provided

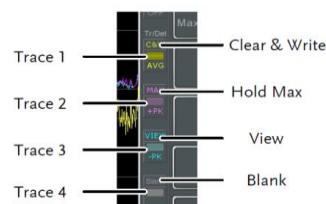


FPC1000

Less measurements are available

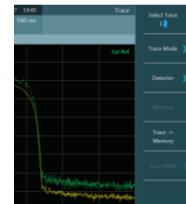
The number of Trace

While analyzing signals, users, other than considering the difference of background signals, use Max/Min Hold to understand signal' s variation limit. Therefore, three or more Traces are required to complete tests.



GSP-9300B

Provides four Traces



FPC1000

Provides only two Traces

Battery module for outdoor usage

GSP-9300B provides a dedicated battery module for outdoor measurements such as cellular phone signal test, electric wave sweep monitor, and cell site signal test. With a battery module, users will no longer look for a power socket.



GSP-9300B

Optional battery module for field measurements



FPC1000

No battery module option making outdoor measurement impossible

Wireless Communication support

Three key winning factors

1. High frequency stability : 0.025ppm which outperforms

GSP-9300B supports 3G/4G USB Dongle internet card. Insert internet card to directly connect 3G/4G wireless signals and then send information to remote server. The instrument can be remotely controlled and the data can be retrieved.



Provides 3G/4G connections



Provides WiFi and App connections

FPC1000

2. Emphasize the importance of TG applications
3. Various measurement application software are included with the purchase of GSP-9300B. Users do not have to spend extra money on application software.