



BIRD RF Company Profile

BIRD & SANKO



On April 16, 2021, Sanko Technologies and Bird Technologies officially signed an agreement that Sanko, which headquartered in Malaysia, will be responsible for manufacture and sales of signal source, signal analyzer, network analyzer and other products with “Bird” brand. Through this cooperation, more stable and reliable products and test solutions will be provided to customers.

<https://birdrf.com/en/AboutUs/News/Bird-and-Sanko-Technologies-Sign-Brand-License-Agreement.aspx>



Overview



COST EFFECTIVE About 40% less price compare to K- company.

PERFORMANCE Comparable with "K- Company"

WIDE Support 300kHz up-to 8.5GHz wide band test

CUSTOMIZE Support software customize

FEATURES Multiple analysis options including time domain



Advantages



Wide band: BN100-1MHz to 6.5GHz ; BN1000- 300KHz to 6.5/8.5GHz

Effective directivity:BN100 ->42dB ;BN1000 – >45dB

IFBW: Adjustable, from 1Hz to 2MHz

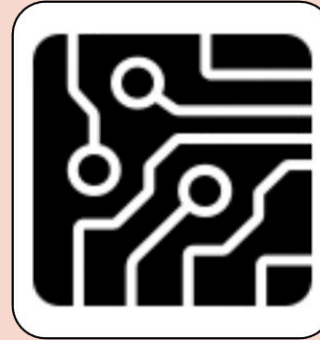
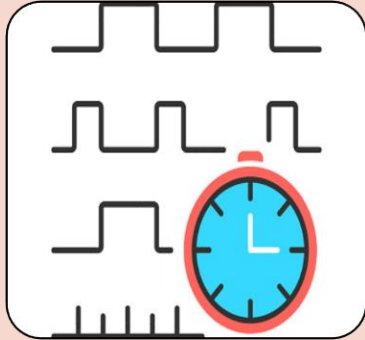
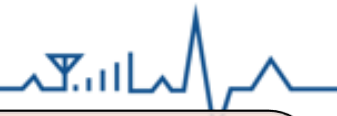
Measurement Speed:BN100- 120uS/point ; BN1000-42uS/point

Large Dynamic Range: BN100- >117dB ; BN1000 – >125dB

Low Trace Noise : BN100 – 10mdB rms; BN1000- 2mdB rms

Remote: BN100- Support Standard Visa ; BN1000-LAN

Additional Options



**Time
Domain**

***High
stability
clock option
0.05ppm**

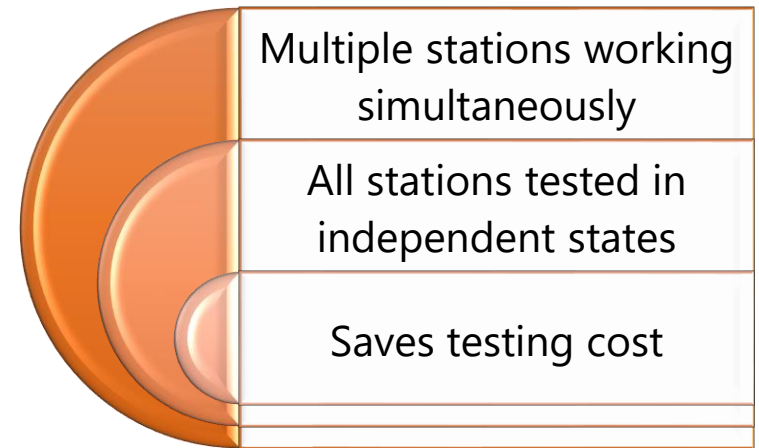
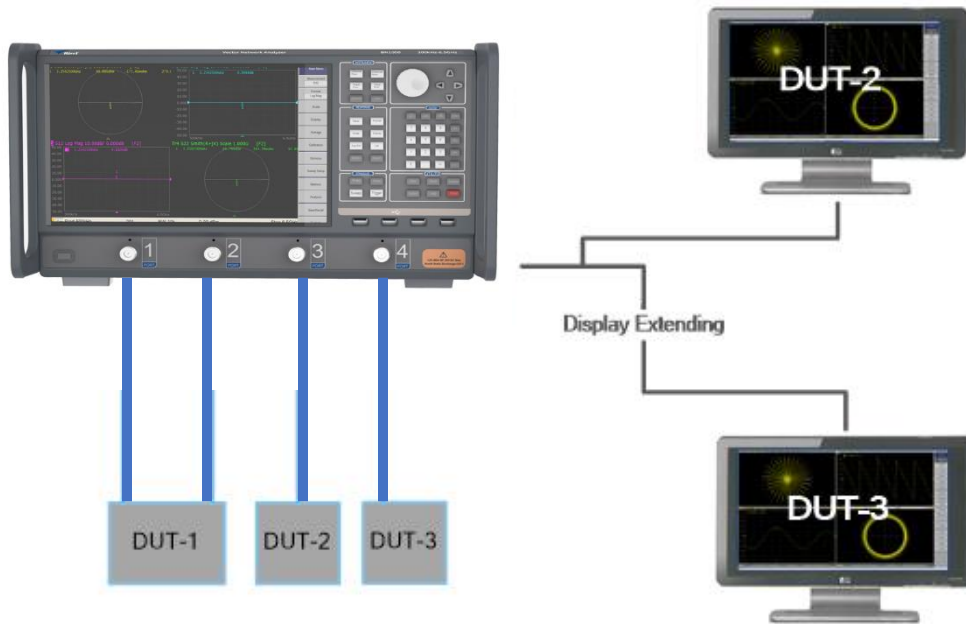
***Fixture
circuit
simulation
function**

***Power range
expansion
-70 ~ +10dBm**

* Only available on BN1000

Application 1- Multi-Stations of Test in a VNA

Multi-stations Test



Benchtop VNA-Comparison



Parameters	BN1000	Keysight E5071C	R&S ZNB8
Frequency Range	100kHz to 8.5GHz	9kHz to 8.5GHz	9kHz to 8.5GHz
Frequency Resolution	1 Hz	1 Hz	1 Hz
Frequency Accuracy	±5 ppm, Option±0.05 ppm	± 7 ppm Option±0.05 ppm	N/A
Power range	-50dBm - +10dBm (option: -70dBm to +10dBm)	-55dBm - +10dBm	-55dBm - +13dBm
Power accuracy	±1.5dB(@0dBm); ±3.0dB(Continuous scanning)	±0.65dB(@0dBm); ±2.5dB(Continuous scanning)	±0.5dB (@-10dBm)
Power resolution	0.05dB	0.01dB	0.01dB
Harmonic +5dBm	100kHz~2GHz: <-25dBc 2GHz~8.5GHz: <-20dBc	9kHz~2GHz: <-25dBc 2GHz~8.5GHz: <-20dBc	20kHz~2GHz: <-30dBc 2GHz~8.5GHz: <-35dBc [Noted: @ 0dBm]
Non-harmonic +5dBm	<-30dBc	<-30dBc	N/A
Trace line noise amplitude IFBW 3kHz	0.002~0.005dB rms	0.003~0.006dB rms	0.001~0.004dB rms
IFBW	1Hz ~2MHz	10Hz ~ 1.5MHz	N/A
Sweep points	1 ~ 1601	1 ~ 1601	1 ~ 5001
Amplitude stability	< ±0.04dB/°C	<: ±0.04dB/°C	N/A
Phase stability	<±0.8°/°C	< ±0.8°/°C	N/A
System dynamic range IFBW 10Hz	97dB - 125dB	97dB - 123dB	N/A
Effective directivity	<49dB	<49dB	<46dB
System dynamic range IFBW 10Hz	125dB	123dB	N/A
Sweep speed 1~1.2GHz 201points	IFBW 100kHz Uncalibrated : 13ms	IFBW 100kHz Uncalibrated : 9ms	N/A
Sweep speed 1~1.2GHz 401points	IFBW 100kHz Uncalibrated : 15ms	IFBW 100kHz Uncalibrated : 14ms	N/A
Port connection	2 or 4	2 or 4	2 or 4
Display	12.1 inch LCD, resolution 1280×800	10.4 inch LCD, resolution 800×600	12.1 inch LCD, resolution 1280×800

USB VNA-Comparison



Parameters	Sanko BN100	Copper Mountain S5065	MEGIQ VNA0460 (NL)	PICO VNA 106 (UK)	Anritsu MS46122B (JP)	Keysight P9371A
Frequency Range	1MHz to 6.5GHz	9kHz-6.5GHz	400MHz to 6 GHz,	300 kHz to 6/8GHz	1MHz to 8GHz	300 kHz to 6.5GHz
Number of Test Ports/ Connector	2/N-type, Female	2/N-type, Female	2/SMA, Female	2/N-type, Female	2/N-type, Female	2/SMA, Female
Full CW Frequency Accuracy	± 5 ppm	± 5 ppm	± 2 ppm	± 10 ppm	± 1 ppm	± 1 ppm
Frequency Resolution	10Hz	1Hz	10Hz	10Hz	1Hz	<12 Hz
Number of Measurement Points	2 to 20,001	2 to 200,001	max: 20001	max: 10 001	2 to 16,001	max: 16001
Measurement Bandwidths	1 Hz to 50 kHz	1 Hz to 30 kHz	12 kHz	10 Hz to 140 kHz	N/A	1 Hz to 1.2 MHz
Dynamic Range (dB) (IFBW 10 Hz)	117	120	N/A	90	110	114
Measurement Parameters	S11, S21, S12, S22	S11, S21, S12, S22	S11, S21, S12, S22	S11, S21, S12, S22	S11, S21, S12, S22	S11, S21, S12, S22
Effective Directivity	42 dB	46 dB	45 dB	47dB	42dB	42dB
Effective Load Match	42 dB	46 dB	N/A	Parameters 46 dB	42 dB	42 dB
Power Range (dBm)	-50 to +5	-5 to +5	-30 to +5	-20 to +6	-20 to +5	-40 to +7
Power resolution	0.05dB	0.05dB	0.5dB	0.1dB	0.01dB	0.01dB
Power Accuracy	± 1.5 dB	± 1.5 dB	± 1 dB	± 1.5 dB	N/A	± 1.5 to 4.5 dB
Noise Level	-120 dBm	> -130dBm	N/A	-118 dBm	N/A	-98 to -108dBm
Trace Noise (dB RMS)	0.01	N/A	N/A	<0.006	0.005	0.003
Measurement speed perpoint	120us	70us	N/A	45us	220us	N/A

BG100-USB Vector Signal Generator



Key Facts

- Frequency range: 10MHz~6GHz
- Full range of communication standard: GSM/EDGE/TD-SCDMA/WCDMA/TDD-LTE/FDD-LTE/NB-IoT/LoRa/5GNR
- Digital modulation: BPSK/QPSK/OQPSK/8PSK/16QAM/32QAM/64QAM/128QAM/256QAM/MSK/FSK
- Modulation width: 20MHz (can upgrade to 100MHz)
- API library is provided for secondary development



File Setup Mod Baseband About

Frequency 2.30000000000 GHz Amplitude -6.00 dBm

PEP: -6.00 dBm Mod Off RF ON

EUTRA/LTE

State On

Set To Default Set To Default

3GPP Version 3GPP 36.211 V8.7.0(June 09 Baseline)

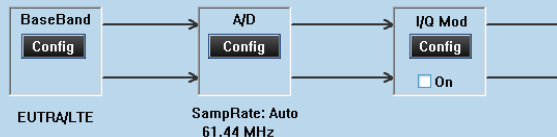
Duplexing FDD LTE

Link Direction Downlink(OFDMA)

Test Setups/Models... E-TM1_1__15MHz

General DL Settings...

Frame Configuration...

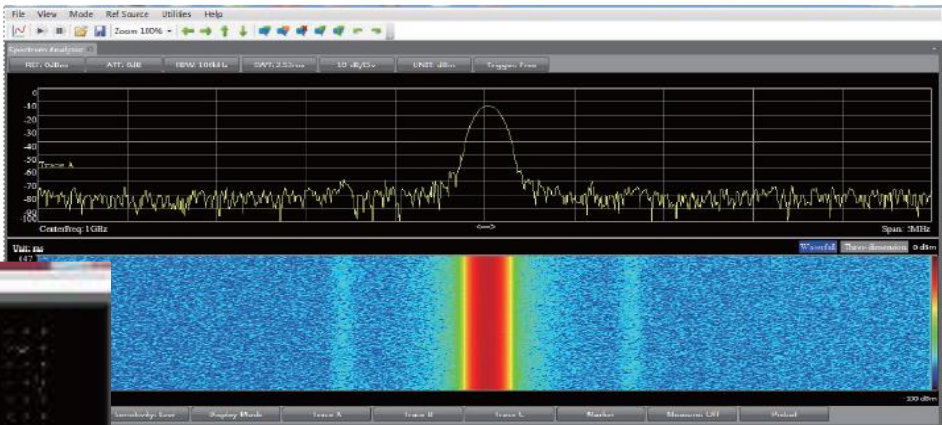


BA100-USB Vector Signal Analyzer



Key Facts

- Frequency range: 9kHz~6GHz
- DANL: -168 dBm @1GHz
- Signal demodulation: Digital signal & TDD & FDD-LTE
- Signal storage depth of 1Gbit for signal capture and analysis
- IQ Signal Capture
- 10MHz reference in/out, USB interface for control
- SCPI & API library is provided for secondary development

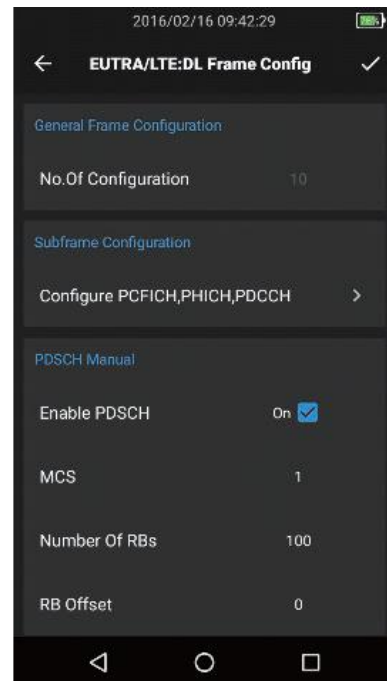
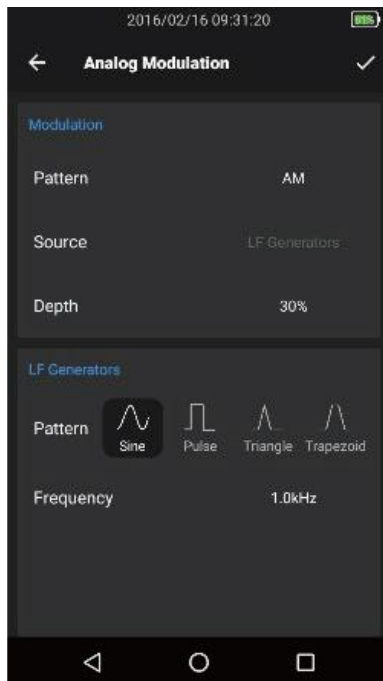


GeneMini Handheld Signal Generator



Key Facts

- Frequency range: 10MHz~6GHz
- Full range of communication standard: GSM/EDGE/TD-SCDMA/WCDMA/TDD-LTE/FDD-LTE/NB-IoT/LoRa/5G NR
- Digital modulation: BPSK/QPSK/OQPSK/8PSK/16QAM/32QAM/64QAM/128QAM/256QAM/MSK/FSK
- Modulation width: 20MHz (can upgrade to 100MHz)
- API library is provided for secondary development



ROADMAP

