

PRODUCT
PORTFOLIO

Extend RF Boundaries.

RF INSTRUMENTS
AND EMBEDDED RF SYSTEMS
UP TO 40 GHz



ROHDE & SCHWARTZ



Extend RF Boundaries.

RF INSTRUMENTS
AND EMBEDDED RF SYSTEMS
UP TO 40 GHz

HAROGIC combined compact, robust RF hardware with agile, intelligent software to help our customers extend RF boundaries. HAROGIC delivers innovative, flexible RF instruments and embedded RF system up to 40 GHz that empower engineers, researchers, and developers to create their own RF systems.





HANDHELD SPECTRUM ANALYZER

- Frequency range up to 40 GHz
- 1 GHz phase noise < -100 dBc/Hz@10 kHz
- Analysis bandwidth up to 100 MHz
- Channel power, AM/FM demodulation, OBW, auto phase noise and more (std.)
- IEC IP68 certified (rugged version)



HANDHELD VECTOR SIGNAL GENERATOR

- Light as 1.4 kg with 10.1-inch touchscreen
- Frequency range: 9 kHz to 6 GHz
- Maximum level output: 7 dBm to 14 dBm
- Minimum level output: < -100 dBm
- 1 GHz phase noise: < -132 dBc/Hz@10 kHz (PGF-60)
- Instantaneous bandwidth: 100 MHz/320 MHz (opt51)
- Battery life: around 2.5 hours (typ.)



ACTIVE DIRECTIONAL ANTENNA

- Frequency range: 500 MHz to 10/20 GHz
- Passive gain of 5 dBi, active gain up to 16 dBi (typ.)
- Typical noise figure (NF): ≤ 1.9 dB
- Internal electronic compass support (std.)



USB SPECTRUM ANALYZER

- USB 3.0/2.0 type C interface supported
- Frequency range: 9 kHz to 4.5/6/9/20/40 GHz
- Sweep speed up to 1.1 THz/s (RBW=250 kHz)
- Compact module design
- Linux and Windows operating systems supported



USB VECTOR SIGNAL GENERATOR

- Frequency range: 9 kHz to 6 GHz
- Maximum level output: 7 dBm to 14 dBm
- Minimum level output: < -100 dBm
- 1 GHz phase noise: < -132 dBc/Hz@10 kHz (SGF-60)
- Maximum real-time bandwidth: 50 MHz
- Maximum playback output bandwidth: 100 MHz/320 MHz (opt51)



OMNIDIRECTIONAL ANTENNA

- Compact omnidirectional antenna
- Frequency range: up to 9 GHz
- Passive gain up to 3 dBi
- VSWR (typ.): < 3:1 (typ.)
- SMA RF connection

RF Performance Within Reach.

HANDHELD REAL-TIME
SPECTRUM ANALYZER
UP TO 40 GHz



PX Series

RF Performance Within Reach.

HANDHELD REAL-TIME
SPECTRUM ANALYZER
UP TO 40 GHz

Multi-touchscreen Ease Operation

PX series spectrum analyzers offer a 10.1-inch multi-touch display, which is the intuitive interface consistent with benchtop instruments. Weighing as light as 1.5 kg (e.g., PXN-400), it allows effortless single-handed operation.



Benchtop-Class Solid RF Performance

PX series supports frequency from 9 kHz to 40 GHz with bandwidth up to 100 MHz. Its phase noise is typically < -100 dBc/Hz at a 1 GHz carrier and 10 kHz offset, ensuring accurate measurement.

Unlocking Premium Performance

With HAROGIC, you can stop paying extra for options. PX series provides most measurements for free.



PX Series Comparison Table

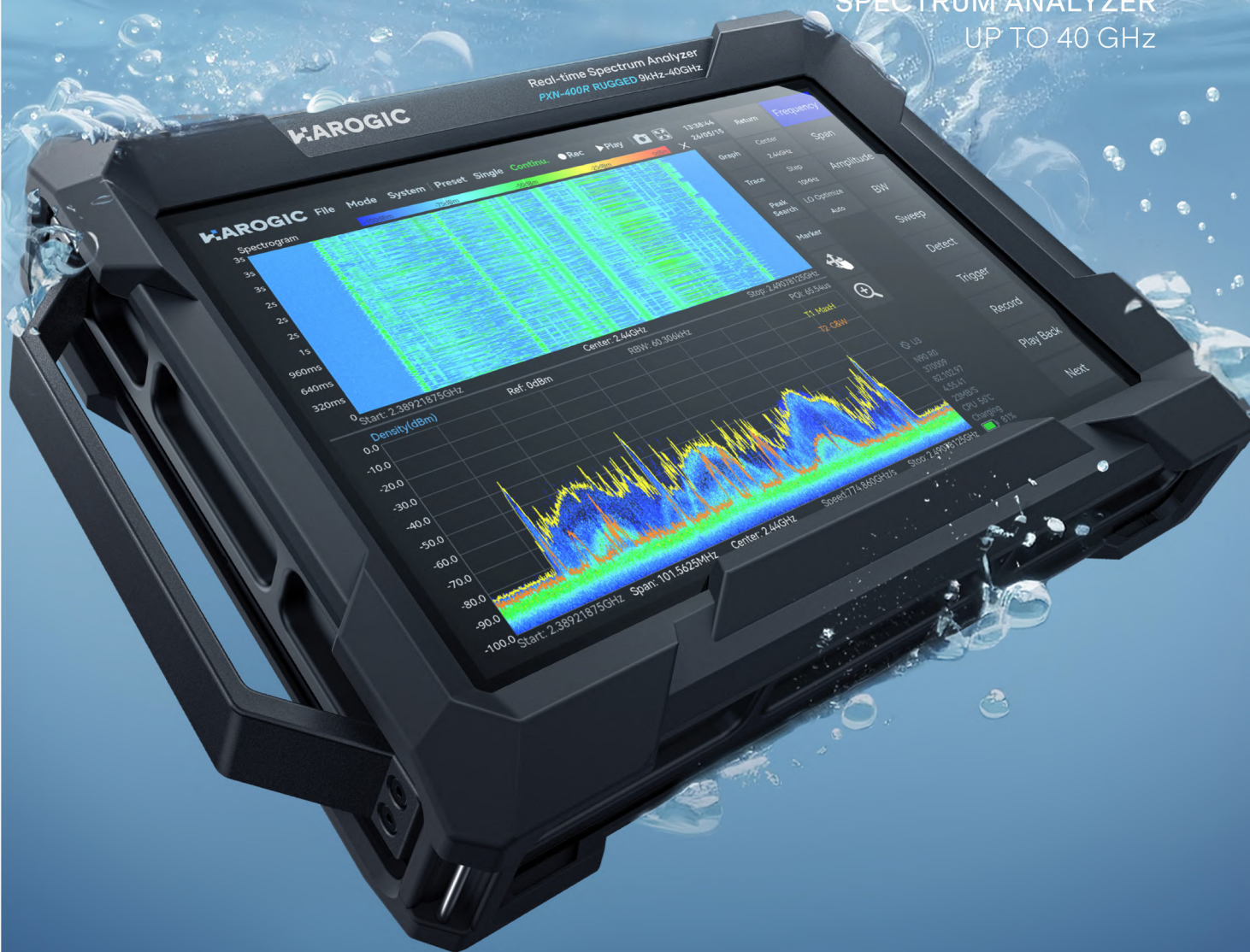
Model	New PXN-45/60/90	PXE-200	PXN-400
Frequency range	9 kHz-4.5/6/9 GHz	9 kHz-20 GHz	9 kHz-40 GHz
Analysis bandwidth	50 MHz/100 MHz (opt.)	100 MHz	100 MHz
Phase noise 1 GHz@10 kHz	-110 dBc/Hz	-100 dBc/Hz	-107 dBc/Hz
1 GHz DANL	-168 dBm/Hz	-166 dBm/Hz	-160 dBm/Hz
Sweep speed (RBW=250 kHz)	About 1 THz/s		
Data Interface	USB A/Type C/LAN		
Touchscreen and weight	10.1-inch, 1.5 kg		
Typical battery life	About 2.5 h	About 3 h	About 3 h
Standard measurement functions	Advanced measurements including channel power, OBW, automatic phase noise, automatic harmonic, SEM, AM/FM demodulation, heat map, MSCAN and more.		

Option code

50: 100 MHz analysis bandwidth (for new PXN series)
60-62: tracking generator, only for New PXN series
71: basic digital demodulation: 2ASK, 2/4FSK, GMSK, BPSK, QPSK, 8PSK, 16/64/128/256QAM
72: pulse detection, auto pulse width, PRI and duty cycle
74: EMC pre-compliance test

Rugged Performance Reliable Measurements.

IP68 RUGGED
SPECTRUM ANALYZER
UP TO 40 GHz



PXR Series

Rugged Performance

Reliable Measurements.

IP68 RUGGED
SPECTRUM ANALYZER
UP TO 40 GHz

Rugged Performance

Reliable Measurements

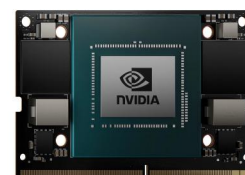
PXR series rugged spectrum analyzer is featured with IP68 standard for water, dust, and vibration protection, meeting the requirement of MIL-STD-810-512.6/514.8/516.8 standards.



All in One

AI Platform

The PXR series includes the Orin NX option, providing up to 117 TOPS of AI computing power. The analyzer also features a highly compatible API, positioning it as an efficient AI-powered spectrum analysis platform for fast spectrum identification and analysis.



PXR Series

Comparison Table

Model	PXE-90R	PXE-200R	PXN-400R
Frequency range	9 kHz-9.5 GHz	9 kHz-20 GHz	9 kHz-40 GHz
Analysis bandwidth	100 MHz	100 MHz	100 MHz
Sweep speed (RBW=250 kHz)	About 1 THz/s		
Environmental adaptability	IEC IP68 certified, MIL-STD-810H method-512.6/514.8/516.8 certified		
Touchscreen and weight	10.1-inch, 2.5 kg		
Typical battery life	About 4h		
Standard measurement functions	Advanced measurements including channel power, OBW, automatic phase noise, automatic harmonic, SEM, AM/FM demodulation and more.		
Option code	08: Jetson Orin NX, 117TOPS 71: basic digital demodulation: 2ASK, 2/4FSK, GMSK, BPSK, QPSK, 8PSK, 16/64/128/256QAM 72: pulse detection, auto pulse width, PRI and duty cycle 74: EMC pre-compliance test		

Create Your RF System Now.

COMPACT MODULAR
SPECTRUM ANALYZER/RECEIVER
UP TO 40 GHz



SA Series

Create your RF System Now.

COMPACT MODULAR
SPECTRUM ANALYZER/RECEIVER
UP TO 40 GHz

Create your RF System Now

This series is based on the SWaP-C optimized design concept. Its compact size and weight are comparable to mainstream smartphones, supporting flexible deployment for spectrum testing in various scenarios, embedded RF systems and mobile spectrum monitoring systems.

Open Platform Complete Ecosystem

The SA Series provides customers with a highly compatible HTRA architecture API, allowing for secondary development using languages such as C/C++/Python/LabVIEW/MATLAB. Furthermore, the same HTRA API architecture is compatible with all spectrum analyzers, eliminating the need for customers to re-develop and thus expanding their application boundaries.

SA Series Comparison Table

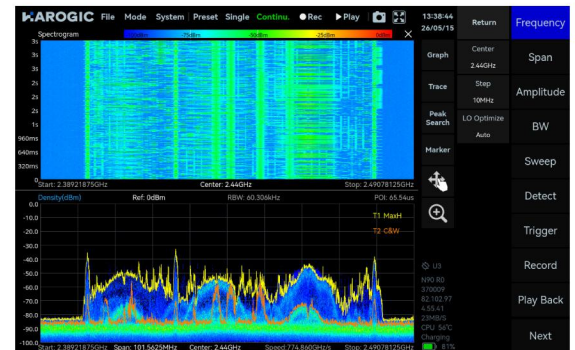
Series	New SAN Series	SAE Series	SAN-400 series
Frequency range	9 kHz-4.5/6/9 GHz	9 kHz-9.5/20 GHz	9 kHz-40 GHz
Analysis bandwidth	50 MHz/100 MHz(opt.)	100 MHz	100 MHz
Phase noise 1 GHz@10 kHz	-110 dBc/Hz	-100 dBc/Hz	-107 dBc/Hz
Interface	USB3.0/2.0	USB3.0/2.0	USB3.0/2.0
Preselect filters	Up to 14	14/19	11
Standard measurement functions	Advanced measurements including channel power, OBW, automatic phase noise, automatic harmonic, SEM, AM/FM demodulation and more.		
Option code	50: 100 MHz analysis bandwidth, only for new SAN series 71: basic digital demodulation: 2ASK, 2/4FSK, GMSK, BPSK, QPSK, 8PSK, 16/64/128/256QAM 72: pulse detection, auto pulse width, PRI and duty cycle 74: EMC pre-compliance test		

SASudio4 Working Modes Overview



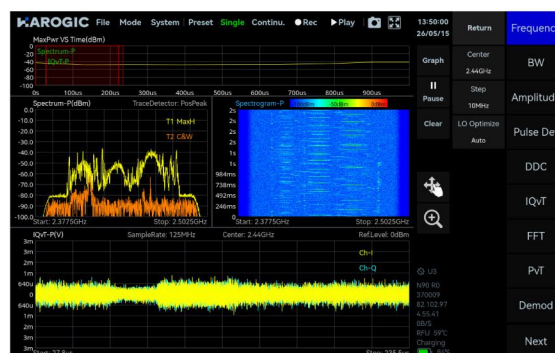
Standard Spectrum Analysis

The mode offers a full spectrum of measurement capabilities. Key functions include panoramic sweeping and dedicated measurement functions.



Real-Time Spectrum Analysis

This mode provides continuous signal monitoring. Specialized functions for frame rate compression and trace detection ensure complete data capture with no gaps or overlaps between the generated FFT frames.



IQ Streaming

The mode supports a maximum analysis bandwidth of 100 MHz, enabling wideband measurement and I/Q data output driven by a diverse selection of trigger methods.



Power Detection

The mode provides the ability to detect and analyze time-domain signals within the analysis bandwidth.

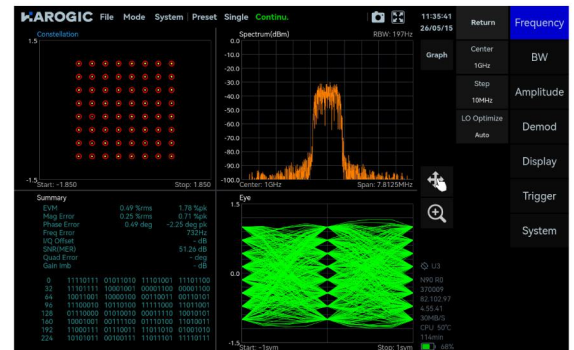
SASStudio4

Working Modes Overview



Memory Scan

This mode instructs the device to rapidly step through a list of pre-programmed memory channels or frequencies that the user has saved.



Digital Demodulation (Opt.)

This mode supports the demodulation of 2ASK, 2/4FSK, GMSK, BPSK, QPSK, 8PSK, 16/64/128/256QAM signals.



Harmonic Analysis

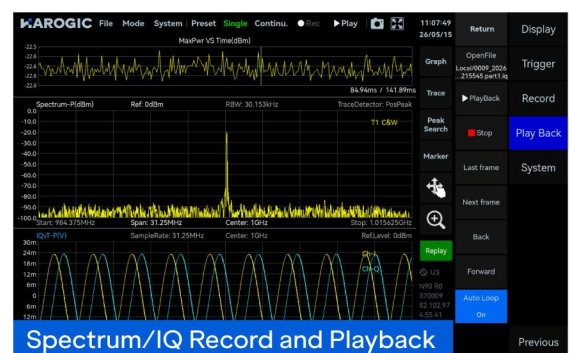
This mode supports the detection and measurement of harmonic components within 10 times, including harmonic peak, harmonic channel power measurement and THD.



Auto Phase Noise

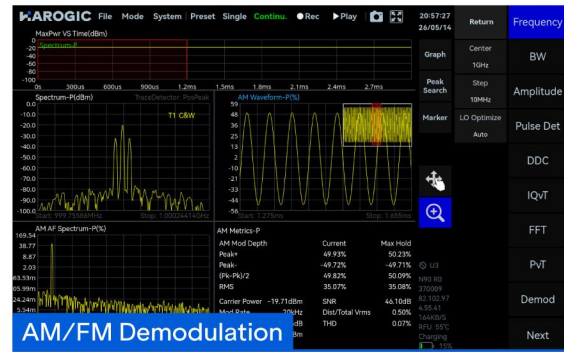
This mode supports an offset range of 1 Hz to 10 MHz, which is used to evaluate the phase stability of the carrier.

SASudio4 Analysis Functions Overview

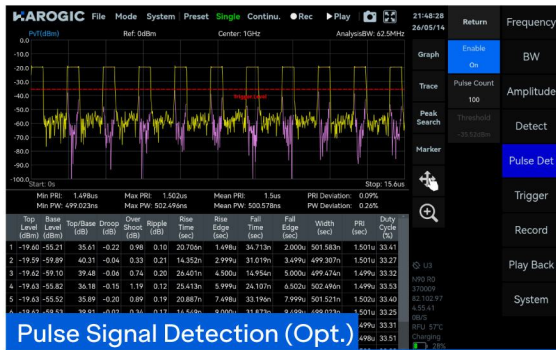




SEM



AM/FM Demodulation



Pulse Signal Detection (Opt.)



Antenna Factor



Unit Switch



Amplitude Correction



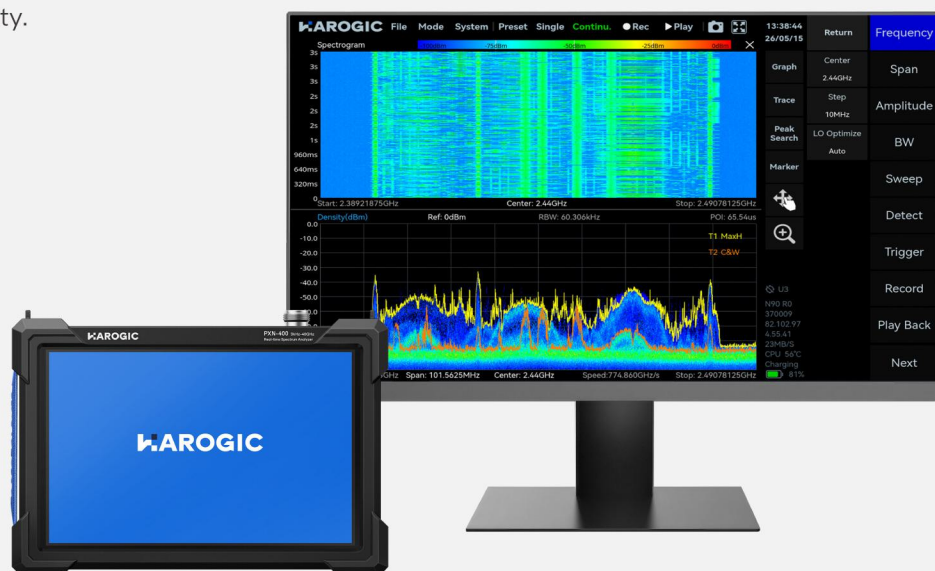
API and SCPI VITA 49 Overview

HAROGIC API Overview

- Most interfaces are provided free of charge (excluding options)
- Compatible with all HAROGIC spectrum analyzer
- C/C++/C#/MATLAB/LabVIEW language supported
- Windows and Linux OS supported

**In addition to the API interface,
HAROGIC provides a SCPI command set that complies with
international standards.**

- Based on a standardized command system, facilitating coordinated control and automated testing with other instruments.
- Remote calling via methods such as TCP Socket, enabling flexible integration across different platforms and environments.
- Seamlessly integrates with test software like LabVIEW and Python, enabling fast application within existing automated test platforms.
- VITA 49 data transmission format supported, further enhancing system-level interoperability.



Compact Form Massive Capability.

NEW SG SERIES
VECTOR SIGNAL GENERATOR
9 kHz TO 6 GHz



NEW SG Series

Compact Form Massive Capability.

NEW SG SERIES
VECTOR SIGNAL GENERATOR
9 kHz to 6 GHz

Benchmark USB Vector Signal Generator

SG series is designed to have frequency range from 9 kHz to 6 GHz and 100 MHz instantaneous bandwidth with option up to 320 MHz, complemented by 50 MHz of real-time streaming bandwidth. Its maximum output level could be up to 25 dBm.



Signal Within Reach

The SG series offers superior signal flexibility, outputting CW, AM/FM, multitone, Pulse, Chirp, and OFDM. Capable of handling complex modulations, this versatile generator provides an all-in-one solution for advanced RF testing and embedded RF system.



New SG Series Comparison Table

Model	SGA-60	SGF-60
Frequency range	9 kHz-6 GHz	9 kHz-6 GHz
Maximum output level	7-14 dBm, up to 25 dBm (opt10)	
Analysis bandwidth	100 MHz	100 MHz std/320 MHz (opt51)
Phase noise 1 GHz@10 kHz	<-124 dBc/Hz	<-132 dBc/Hz
Standard measurement functions	CW, Multitone, Frequency/Level sweep, OFDM, AWGN, Ramp/Chirp, Pulse, AM/FM/PM, IQ playback, IQ streaming, 16/64/256/1024 QAM, ASK, FSK, QPSK, BPSK and more.	
Options	01: built-in OCXO; 10: 25 dBm output port; 51: 320 MHz bandwidth, only for SGF series.	

Generate Without Limits.

NEW PG SERIES
HANDHELD VECTOR SIGNAL GENERATOR
UP TO 6 GHz



NEW PG Series Generate Without Limits.



NEW PG SERIES
HANDHELD VECTOR SIGNAL GENERATOR
UP TO 6 GHz

True Benchtop Power in Your Hand

PG series delivers high-performance, 6 GHz vector signal generation in a lightweight, standalone handheld design.

High-Bandwidth Wireless Simulation

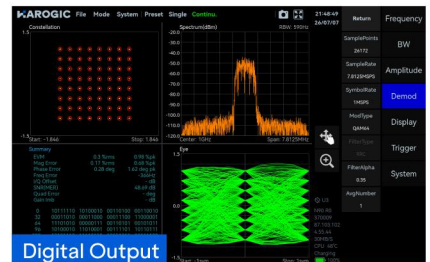
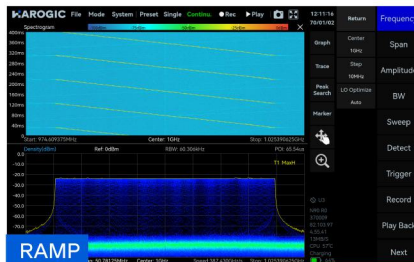
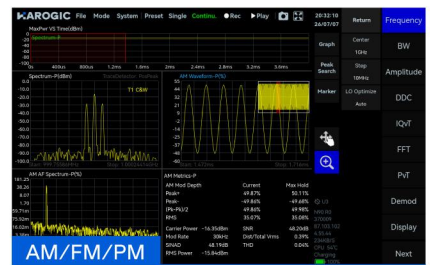
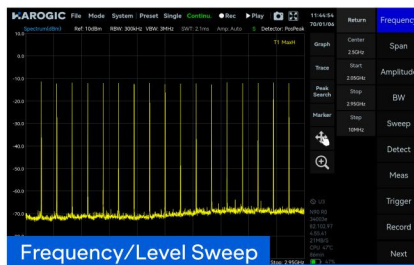
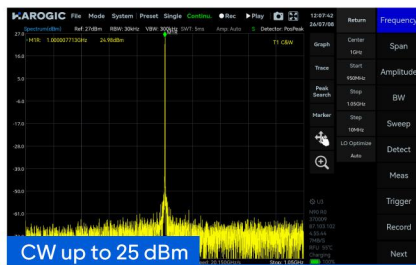
PG series generates complex, wideband signals up to 320 MHz, making it the ultimate tool for on-site drone, radar, and EW testing.



New PG Series Comparison Table

Model	PGA-60	PGF-60
Frequency range	9 kHz-6 GHz	9 kHz-6 GHz
Maximum output level	7-14 dBm, up to 25 dBm (opt10)	
Analysis bandwidth	100 MHz	100 MHz std/320 MHz (opt51)
Phase noise 1 GHz@10 kHz	<-124 dBc/Hz	<-132 dBc/Hz
Size and weight	10.1-inch and 1.4 kg	
Battery life	2.5 h	
Standard measurement functions	CW, Multitone, Frequency/Level sweep, OFDM, AWGN, Ramp/Chirp, Pulse, AM/FM/PM, IQ playback, IQ streaming, 16/64/256/1024 QAM, ASK, FSK, QPSK, BPSK and more.	
Options	10: 25 dBm output port; 51: 320 MHz bandwidth, only for PGF series.	

SGStudio Vector Signal Generator Software



Track Smarter See Higher.

HD SERIES
ACTIVE DIRECTIONAL ANTENNA
500 MHz TO 20 GHz



HD Series

Track Smarter See Higher.

HD SERIES
ACTIVE DIRECTIONAL ANTENNA
500 MHz TO 20 GHz



HD series Comparison Table

Model	HDA-100	HDA-200
Frequency range	500 MHz-10 GHz	500 MHz-20 GHz
Passive gain	5 dBi	5 dBi
Active gain	up to 25 dBi	up to 16 dBi
VSWR	< 2.0 (typ.)	< 2.0 (typ.)
RF connection	N(F), 50 Ω	N(F), 50 Ω
Internal Electronic Compass	Std	Std

HO Series

Omni-Directional Omni-Affordable.



HO SERIES

OMNIDIRECTIONAL ANTENNA

UP TO 9 GHz



HO series

Comparison Table

Model	HOA-80	HOA-90
Frequency range	400 MHz-8 GHz	150 MHz-9 GHz
Passive gain	2 dBi	3 dBi
VSWR	3.0	2.5
Polarization	Linear	Linear

HAROGIC Care



Global Sales
Network



Professional Pre-
and After-sales



Calibration
Service



3-year
Warranty

 www.harogic.com

 info@harogic.com

 +65-8299 8857