

GENHAWK™ Vector Signal Generator

GH-60



Field Ready. Lab Accurate.

Use precision RF test signals wherever you go with GenHawk! Our vector signal generator keeps up with a durable form factor made popular in Bird's SiteHawk and SignalHawk families of Cable & Antenna Analyzers and Spectrum Analyzers. Field engineers, technicians, product designers, and compliance engineers will find use in the GH-60's 5 hour battery life, touch-screen interface, 145 dBm dynamic range, and many supported digital modulation formats.

The GH-60 is a versatile tool for testing in applications like Distributed Antenna Systems (DAS)/Indoor Coverage, field interference, noise immunity, EMC susceptibility, receiver sensitivity, and more. With a base frequency range up to 6 GHz and 20 MHz modulation bandwidth (optionally up to 100 MHz), the GH-60 supports emulating the most common wireless standards from 5G to WCDMA. Custom digital modulation options allow easy generation of QPSK, FSK, and QAM signals while an arbitrary mode allows generation of near any possible RF signal.

PRODUCT FEATURES

- **High portability & long life battery:** With a form factor that can easily slip into a bag, the GenHawk still offers up to 5 hours of usage and can be charged without interrupting the RF output
- **Versatile operating system:** Based on Android, GenHawk allows users to install other applications as needed, allowing a wider variety of field testing on a single device.
- **Rich functionality for general digital modulation:** Digital modulation is an important signal modulation method for modern telecommunications. It has better anti-interference ability and safety that allows an output of a variety of digital modulated signals as used in standards like Wi-Fi, DVB or ATSC, IEC 60601 and more.

Truly portable signal generation that mirrors the real world - backed by over 80 years of RF expertise.

GH-60

Specifications

RF OUTPUT

Frequency Range	10 MHz to 6 GHz (upgradable to 300 kHz to 6.5 GHz with MTX-S020)
Frequency Accuracy	+/- 0.5 ppm
Frequency Resolution	0.1 Hz
Output Settling Time	<1.5 ms (CW)
Power Range	-110 dBm to +10 dBm when $f < 2$ MHz -130 dBm to +15 dBm when $f \geq 2$ MHz
Power Resolution	0.1 dB
Power Accuracy	± 0.75 dB @ ≥ -80 dBm ± 1.5 dB @ -110 dBm to -80 dBm ± 2.5 dB @ < -110 dBm
VSWR	<2.0 (typ.)
Max Reverse Power	0.01 W
Harmonic CW, $\leq +10$ dBm	≤ -22 dBc @ $300 \text{ kHz} \leq f < 2 \text{ MHz}$ ≤ -30 dBc @ $2 \text{ MHz} \leq f \leq 6.5 \text{ GHz}$
Nonharmonic CW, $\leq +10$ dBm	≤ -25 dBc @ $300 \text{ kHz} \leq f < 10 \text{ MHz}$ ≤ -35 dBc @ $10 \text{ MHz} \leq f < 500 \text{ MHz}$ ≤ -50 dBc @ $500 \text{ MHz} \leq f < 6.5 \text{ GHz}$
Phase Noise	≤ -119 dBc/Hz (typ.) @ 1 GHz ≤ -110 dBc/Hz (typ.) @ 3 GHz ≤ -104 dBc/Hz (typ.) @ 6.5 GHz
Temperature Stability	± 1 ppm @ 0°C to 50°C
Error Vector Magnitude (EVM)	$\leq 2\%$ (typ.)
Wave Quality ρ	> 0.9999

MODULATION

Modulation Bandwidth	20 MHz (upgradeable to 100 MHz with MTX-S019)
Pulse Modulation (with MTX-S010)	Pulse Period: 10 μs to 40 s Pulse Width: 100 ns to 40 s Width Resolution: 10 ns
Analog Modulation Types (optional)	Analog Modulation: AM FM PM Multi-Tone: MSB USB LSB
Mobile Communication Standards (optional)	GSM WCDMA TDD-LTE FDD-LTE NB-IoT LoRa 5G NR
Digital Modulation Types (with MTX-S008)	BPSK QPSK OQPSK 8PSK MSK FSK ASK 16QAM 32QAM 64QAM 128QAM 256QAM
LTE Channels (with MTX-S003, MTX-S004)	PSS SSS CSRS PBCH PCFICH PHICH PDCCH PDSCH PUSCH PUCCH PRACH SRS

CONNECTIONS

Connections	RF Output: Type N, female, 50 Ω USB (for communication): USB type-C Power: DC 12V barrel
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ENVIRONMENTAL

Operating Temperature	0°C to 50°C
Storage Temperature	-20°C to $+70^\circ\text{C}$

System

Power Supply	AC Input: 110 to 240 V, 1.5 A, 50 to 60 Hz DC Output: 12V, 3A
Recommended Calibration Interval	1 Year
Warranty	3 Years

PHYSICAL

Size	7.8 in (h) x 3.7 in (w) x 2.4 in (d) 197 mm (h) x 93 mm (w) x 61 mm (d)
Weight	2 lbs. / 0.9 kg

STANDARD ACCESSORIES

Hard Carrying Case	7002A218-2
Soft Carrying Case	7002A219-1
AC Adapter (12 VDC)	SK05T-1200300Z
Touch Pen (stylus)	SK-TP-112
USB Adapter (USB-C to USB-A)	SK-CONN-OTG-2
USB Drive	5A2745-1
Lithium Ion Battery	SK-BTY-7468

OPTIONAL ACCESSORIES

RF Cable	
50 Ohm N-N cable	T5-RFCAB-NmNm-90101
50 Ohm N-SMA cable	T5-RFCAB-NmSMAm-90102

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Configurations, Options & Ordering

MODEL NUMBER

GH-60 Handheld Vector Signal Generator

SOFTWARE OPTIONS

- MTX-S001 GSM Modulation License
- MTX-S002 WCDMA Modulation License
- MTX-S003 TDD-LTE Modulation License
- MTX-S004 FDD-LTE Modulation License
- MTX-S005 NB-IoT Modulation License
- MTX-S006 LoRa Modulation License
- MTX-S008 Digital Modulation License
- MTX-S009 ARB License
- MTX-S010 Pulse Modulation License
- MTX-S011 Analog Modulation License
- MTX-S012 Sweep Mode License
- MTX-S013 Multi-Tone License
- MTX-S014 5G NR License
- MTX-S016 Linear Frequency Modulation License
- MTX-S018 Additive Noise Generator
- MTX-S019 100 MHz Modulation Bandwidth
- MTX-S020 300 kHz to 6.5 GHz Frequency expansion

Do you like this solution?

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