

# BB60D Real-Time Spectrum Analyzer & RF Recorder

9 kHz to 6.0 GHz



---

Now Includes Preselector  
Filters from 130 MHz to 6 GHz

---

---

Major Performance  
Increase of 10dB More  
Dynamic Range Vs. BB60C

---

---

Selectable Streaming  
Bandwidths from 4 kHz up  
to 27 MHz

---

---

Exceptionally Clean Spurious  
and Residual Responses

---

---

Includes powerful Spike™  
spectrum analyzer software

---

---

Sweeps 24 GHz / sec  
-40°C to +65°C Operating  
Temperature Range Available

---

# BB60D Real-Time Spectrum Analyzer

20 May 2022

The Signal Hound BB60D is a high speed real-time spectrum analyzer (RTSA) and RF recorder. With a tuning range from 9kHz to 6GHz, it collects 80M samples/second, and streams I/Q data to your computer via USB3.0 at 140MB/sec.

The BB60D comes with the Spike™ API and spectrum analyzer application, with selectable color persistence display mode, 2-D color waterfall, spectrum emission masks, and the following analysis modules: analog/digital/WLAN modulation analysis, EMC precompliance measurements, noise figure, and interference hunting measurements.

## FREQUENCY

- Range: 9 kHz to 6.0 GHz
- Streaming calibrated I/Q data: 4 kHz to 27 MHz of selectable IF bandwidth that is amplitude corrected
- Resolution Bandwidths (RBW): 10 Hz to 10 MHz
- Internal Timebase Accuracy:  $\pm 1$ ppm per year
- Sweep Speed (RBW  $\geq 30$  kHz): 24 GHz/sec
- VSWR: < 1.4 typical

## AMPLITUDE (RBW $\leq 100$ KHZ)

- Range: +10 dBm to Displayed Average Noise Level (DANL)
- Absolute Accuracy:
  - $\pm 2.0$  dB (arbitrary & non-native RBW's)
  - +2.0dB/-2.6dB (native RBW's-faster DSP)

## DISPLAYED AVERAGE NOISE LEVEL

Input Frequency Range	DANL
9 kHz to 500 kHz	-140dBm/Hz
500 kHz to 30 MHz	-154dBm/Hz
30 MHz to 6 GHz	-158dBm/Hz + 1.0dB/GHz

## RESIDUAL RESPONSES: REF LEVEL $\leq -30$ dBm, 0dB ATTENUATION

Input Freq. Range	Residual Level
500 kHz to 6 GHz	-120dBm

LO LEAKAGE  $\leq -80$  dBm

## PHASE NOISE AT 1 GHz

Frequency Offset	dBc/Hz
100 Hz	-80
1 kHz	-90
10 kHz	-93
100 kHz	-97
1 MHz	-117

## SPURIOUS & IMAGE REJECTION (any ref level from -30dBm to +10dBm, using 5dB increments and input signal 10dB below ref level) [Auto ATTEN, $\leq 30$ kHz RBW]

Input Frequency Range	Spurious Level
9kHz to 6GHz	-50dBc

## IP2 (-10dBm ref level)

100 k-30 M	+55 dBm
30 M-130 M	+36 dBm
130M-6 GHz	+55 dBm

IP3 (-10dBm ref level) +10 dBm

## SYNCHRONIZATION ( $\leq 20$ MHz IBW)

1 PPS GPS input port enables  $\pm 50$ ns time stamping

## OPERATING TEMPERATURE

32°F to 149°F (0°C to +65°C) Standard;  
-40°F to 149°F (-40°C to +65°C) for Option-1

## SIZE AND WEIGHT

- 8.63" x 3.19" x 1.19" (219mm x 81mm x 30mm)
- Net, 1.10 lbs. (0.50 kg)

## POWER

- One USB 3.0 port and one adjacent USB 2.0 or USB 3.0 port
- 6 W active, 1 W idle

## CONTROL AND COMMUNICATION

- USB 3.0 serial bus

## SYSTEM REQUIREMENTS

Intel i7, 3rd generation or later with a quad core processor, Microsoft® Windows® 10 or Ubuntu™ Linux, one USB 3.0 port, and one adjacent USB 2.0 or USB 3.0 port Note: RF recording using streaming I/Q bandwidths > 8MHz requires the computer's mass storage drive to have at least 250MB/sec of sustained write speed such as an SSD, RAID-0, or RAID-5.