

## 34.4MHz – 4.4GHz RF Signal Generator plus RF Power Detector

### Features

- Open source Labview GUI software control via USB
- Works with USB power or external DC power (6-9 Volts)
- Run all features with or without a PC
- 1KHz or smaller generator step size
- 150 $\mu$ S generator lock time
- 2.5ppm generator frequency accuracy
- Phase noise ~ 93dBc/Hz @ 1KHz offset and 117dBc/Hz @ 100KHz offset with a 1GHz carrier
- 10MHz – 100MHz external reference input
- 10MHz internal reference output
- +19dBm output power
- 1/2 dB amplitude output power step size
- Two 31.5dB ranges for over 60dB of power control
- Absolute power display and calibration for software version 2.5 and above
- -60dBm to +10dBm broadband RF power detector
- 0.1dB power detector resolution
- Up to 1dB RF power detector accuracy
- Up to 0.1dB Network Analyzer accuracy
- 1% reference for power detector on board
- 200 $\mu$ S power detector measurement time
- Pulse Modulation with 1 $\mu$ S minimum pulse width and resolution
- Amplitude Modulation
- AM with sinusoid, ramp, saw tooth or programmable arbitrary waveforms

### Overview Description

The Windfreak Technologies SynthNV is a 34.4MHz to 4.4GHz software tunable RF signal generator, sweeper and RF power detector controlled and powered by a device running Windows, Linux or Android via its USB port. It includes an on board 34MHz to 4GHz RF power detector which can be used as a generic RF power meter or with the sweep function as a basic RF network analyzer. Set the RF Signal Generator, then measure RF power in less than 400 $\mu$ S.

The SynthNV also has nonvolatile on board memory so it can be programmed to fire up by itself on any frequency, power, sweep and modulation setting. This makes for a highly mobile, low power and light weight solution for your RF signal generation needs.

### Applications

- Wireless communications systems
- RF and Microwave radios
- Software Defined Radio (SDR)
- Radar
- Automated Test Equipment (ATE)
- EMC - radiated immunity pre-compliance testing
- Scalar Network Analysis (SNA)
- Electronic Warfare (EW) and Law Enforcement
- Local Oscillator replacement
- Quantum device research
- Plasma physics
- Education

### SynthNV Functional Diagram

