LUMANTEK

WEIVER

RF Capture and Playback System

Weiver is a must-have instrument for RF engineers, device manufacturers and terrestrial broadcasters, alike, where field testing is mission critical. Weiver records in real-time and regenerates RF signals covering the bandwidth range of 8M and/or 24M in almost any environment, in the lab or in the real world.

Capture worldwide broadcasting standards of DTV (ATSC, DVB-T/H, DVB-C, DMB, CMMB, DTMB, ISDB-T/B, OpenCable, and ATSC-M/H), ATV (NTSC, PAL), FM Radio, RDS and TMC.

Because Weiver is shipped with both frequencies pre-installed it equates to hassle-free, one-click SDR upgrades without costly downtime due to unnecessary trips to the factory.

Standard, competitive features

- Real-time capture and playback
- Arbitrary waveform generator with I/Q data
- External trigger function
- 1 Hz frequency resolution (capture & playback)
- Highly-stable, internal SSDs with lightning-fast read/write speeds

Convenience & hassle-free mobility

- Ultra-small footprint & featherweight (5kg)
- Ultra-low power consumption (50 W) for in-car deployment
- Secure Ad-Hoc (WiFi) wireless connectivity

Versatility & flexibility

- e-SATA connectivity for external SSD (opt.) for real-time capture & playback / back-up
- Export signal data for reporting and documentation
- Built-in A-GPS module with data compatible with third-party mapping services

Upgradeability

- Instant, one-click programmable bandwidth upgrades without costly downtime and unnecessary trips to the factory

- Attractive sales point
- Value for money features
- Low TCO
- Rapid, global technical & warranty services

Capture Mode

Frequency

- Frequency band: 50Mhz ~ 1GHz
- Real-time bandwidth: 8M, 24M
- Frequency resolution: 1Hz
- Resolution bandwidth
  - 8M: 9.76KHz, 4.88KHz, 2.44KHz, 1.22KHz, 610.35 KHz
  - 24M: 29.29KHz, 14.64KHz, 7.32KHz, 3.66KHz, 1.83KHz
- Temperature stability: ±1PPM
- Initial achievable accuracy: ±2PPM
- Aging (annually): ±1PPM

SpectralPurity

- Phase Noise @1KHz offset, 1GHz: ≤ -80dBc/Hz
- Phase Noise @10KHz offset, 1GHz: ≤ -95dBc/Hz
- Phase Noise @100KHz offset, 1GHz: ≤ 100dBc/Hz

Noise Density

- < -160dBm

Amplitude

- Input level accuracy: ± 1dB
- Input dynamic range (CW tone): -130dBm ~ 0dBm
- Gain range: -5dB ~ +45dB
- Input level resolution: 0.01dB
- Max. DC input: ± 50 VDC

RF In

- 50ohm, N-type, DC-coupled

IF Band

- Resolution: 16-bit
- Sampling rate: 60 MS/s
- Frequency: 75MHz

Storage

- Internal (def.): 256 GB SSD
- Storage time
  - BW 8M: 100 minutes
  - BW 24M: 30 minutes
- External (opt.): 256 GB SSD, e-SATA

Calibration

- 1 year

Environment

- Operating temperature: 0 ~ +50°C
- Relative humidity: 90%
- Storage temperature: -20 ~ +70°C

Playback Mode

Frequency

- Frequency band: 50Mhz ~ 1GHz
- Real-time bandwidth: 8M, 24M
- Frequency resolution: 1Hz
- Temperature stability: ± 1PPM
- Initial achievable accuracy: ± 2PPM
- Aging (annually): ± 1PPM

SpectralPurity

- Phase Noise @1KHz offset, 1GHz: ≤ -90dBc/Hz
- Phase Noise @10KHz offset, 1GHz: ≤ -95dBc/Hz
- Phase Noise @100KHz offset, 1GHz: ≤ -100dBc/Hz

Spurious Responses

- 2nd Harmonic: ≤ -50dBc
- 3rd Harmonic: ≤ -60dBc
- LO Leakage: ≤ -90dBm

RF Output Characteristics

- GainRange: -30~ +30dB
- Amplitude resolution: 0.1dB step
- Amplitude accuracy: ± 1dB

RF Out

- 50ohm, N-type, DC-coupled

Overload Protection on RF Output

- Max. reverse RF power: 1 W (max.)
- DC input: ±50 VDC (max.)

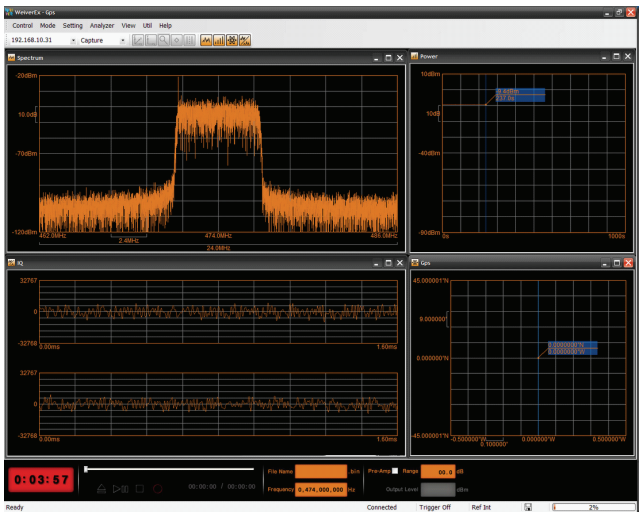
Calibration

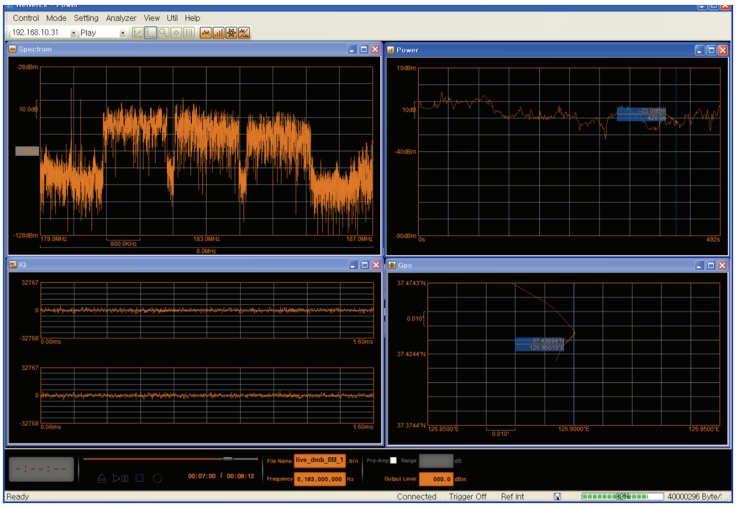
- 1 year

Environment

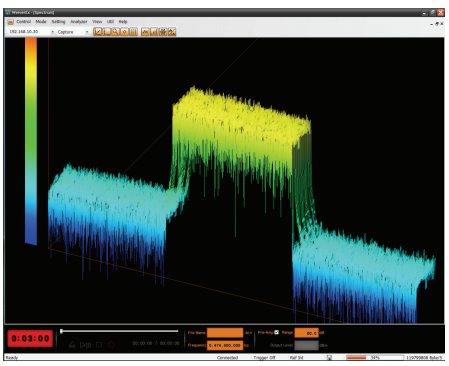
- Operating temperature: 0 ~ +50°C
- Relative humidity: 90%
- Storage temperature: -20 ~ +70°C

Spectrum Analysis / RF Power / IQ Signal / GPS

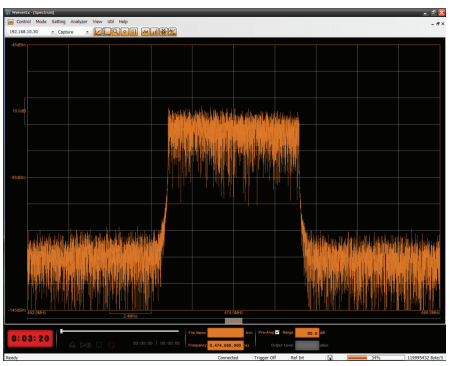




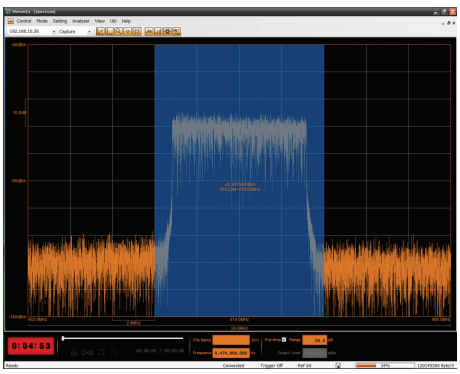
Spectrum Analyzer Detail



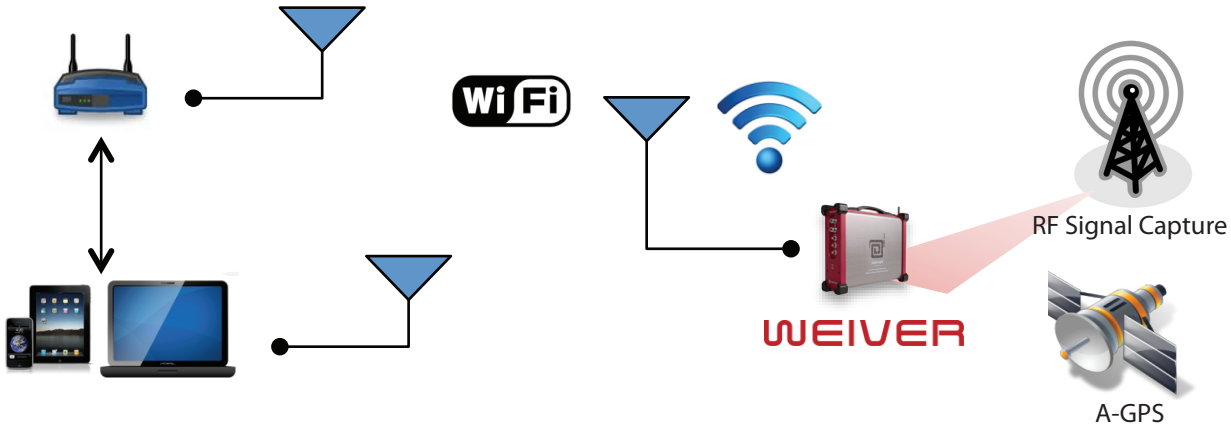
Spectrum 3D

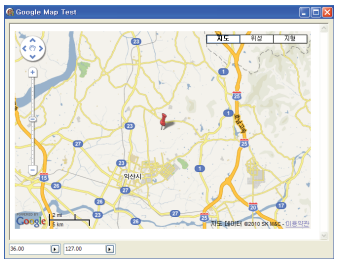


Spectrum 2D



Band Power





Compatibility to
third-party mapping services