Radar signal analyzer

The RATAN is a universal radar signal analyzer. It is designed to extend the analysis capabilities of both new and existing systems. Combined with our proven and intuitive software it enables the detection, survey, and automatic identification of all types of radar signals.

It provides the tools for analysis of both PDWs (Pulse Descriptor Words) and raw digital intrapulse samples. Universal applicability is ensured by compact 2U rack-mount chassis, wide IF frequency range, and several expansion options. Data is transferred using standard gigabit ethernet with optional fiber connection enabling any combination of local and remote use.

Key features:

- Mobile ELINT surveillance and reconnaissance system
- High variability – Video, IF, and IQ input
- Automatic identification of radars including LPI targets
- Data recording for detailed post-mission analysis
- Compact 2U rack-mount chassis
- Variable power supply options
- Advanced analysis software
- Variability based on user requirements (direction finding option, frequency range modification)
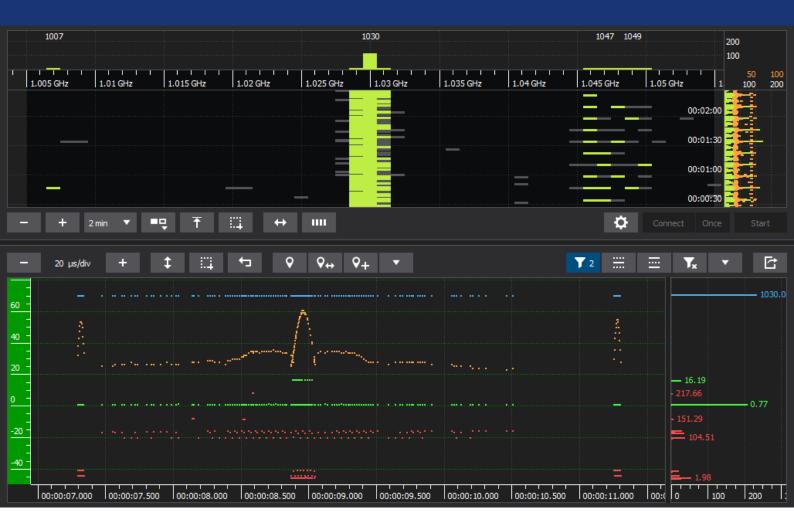
Analyzer Inputs

Video input (impedance 50 Ω / 1 MΩ):
- Frequency range 0–50 MHz
- PW min 100 ns / PRI min 1 µs
- Amplitude range ±2 V

IF input (impedance 50 Ω):
- Frequency range 50–500 MHz
- Bandwidth up to 200 MHz
- PW min 450 ns / PRI min 3 µs
- Dynamic range 50 dB (-85 to -35 dBm)
- Adjustable attenuator to 31.5 dB

IQ input (impedance 50 Ω):
- Frequency up to 500 MHz
- Dynamic range 60 dB (-50 to +10 dBm)

Software:
- Flexible GUI with multiple layout options
- Spectral waterfall plot with adjustable thresholds
- Automatic identification of radars including LPI targets
- Powerfull analysis tools
- Data recording for detailed post mission analysis

Additional features:
- Build-in GNSS receiver
- 2x LAN (1 Gb/s)
- 1x optional OPT (10 Gb/s)
- 1x optional RS485
- Power supply 110-230 VAC or 24 VDC
- Operating temperature 0 - 50 °C