Spanalytics PANalyzr

PANalyzr is a state-of-the-art wireless Personal Area Network (PAN) protocol analyzer with a sensitive, yet portable wideband SDR front-end. Capable of capturing packets in the 2.4-2.5 GHz ISM band. PANalyzr processes and displays all in-range Bluetooth Low Energy, Classic Bluetooth (BR/EDR), IEEE 802.15.4-based, and Wi-Fi traffic (concurrently).

KEY FEATURES

- Packet timestamps (250ns), RSSI (1dB), and device identifiers (LAP, AdvA, etc.)
- Extracts vendor info, device names, and Bluetooth addresses
- Full-channel simultaneous capture across all protocols

SUPPORTS

- Bluetooth (v5.4 & earlier): Monitors all 79 BR/EDR and 40 LE channels. Supports BR, EDR (2 & 3), LE 1M/2M, and LE coded PHY's
- 802.15.4 (Zigbee): Captures all 16 channels (11–26)
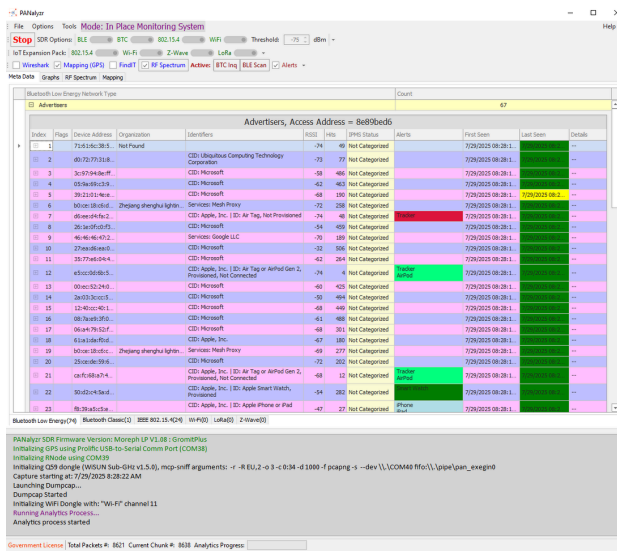- Wi-Fi (802.11b/g): Monitors all 14 channels (1–14), metadata only

PRODUCT SPECIFICTIONS

Frequency Range	2402MHZ - 2483.5MHz
Receiver Bandwidth	90MHz instantaneous
Noise Figure	5dB @ maximum sensitivity
Receiver Gain	32dB automatic gain control range
Receiver Maximum Input	+27dBM
Frequency Accuracy	±0.28ppm over temperature ±1 ppm over first year ±3 ppm over 20 years

Operating System	Windows 10 & 11, Ubuntu Linux
Power	USB-C 5V, 4.5W max, 3.5W regularly
Enclosure	3.5" x 3.07" x 0.78"
Weight	0.25lbs, 110g
Environmental	0°C to 45°C, Humidity 0% to 90%
Regulatory Approvals	EN61326-1 (EMC immunity) EN55011 / EN55032 (EMC emissions) FCC Part 15B (Unintentional radiation)

PANalyzr Software

The PANalyzr system offers unparalleled flexibility and user customization options. Our host software enables easy visibility into devices and traffic captures. Available for Windows and Linux enables easy configuration and streaming to Wireshark for packet analysis.

Get more detailed analysis of your wireless traffic captures using our customized version of Wireshark. Included with the installation package and designed to work with the PANalyzr SDR.

- Display of every packet captured from the PANalyzr and IoT Expansion Pack
- Packet and Data Filtering
- Includes PANalyzr specific profiles with custom columns and colorization
- Decrypt Bluetooth, IEEE 802.15.4, and IEEE 802.11 packets (keys required)

- Statistics:
  - Conversations between devices
  - Tailorable I/O Graphs for timing-based analytics
  - Flow Graphs of packets sent between devices

SOFTWARE MODES

- Test and measurement
- In place monitoring
- Intrusion detection
- Demo mode

DISPLAY OPTIONS

- Device meta data
- RSSI graphing
- RF spectrum
- Mapping with GPS
- Geolocation

ADDITIONAL FEATURES

- Pipe to Wireshark
- Previous capture review
- Custom filters
- Device printing