S.A.I.L.

Signal Acquisition Identification and Location TSCM Signal Analyzer

TSCM

S.A.I.L. is a handheld portable Signal Analyzer designed by Technical Surveillance Countermeasure Practitioners with an idea of delivering the most comprehensive and practical solution for the actual TSCM professionals' needs.

The device is much more than a Signal Analyzer. S.A.I.L. is a complete TSCM sweep service in one device which analyses all aspects of the spectrum in detail.

S.A.I.L. has a number of unique features that can rarely be found combined in a single compact device, such as Bluetooth and BLE devices detection and analysis, LTE direction find on uplink devices, identification of WIFI terminals with prevailing uplink traffic and much more.

Signal Analyzer : Signal analysis 70 MHz to 6 GHz

Directional Finding : Proprietary DF technique using pre-spaced antenna array

GSM : Real time cellular analysis , passive interception of devices

LTE : LTE analysis with the ability to directional find on uplink device

Wi-Fi : Location analysis of devices and APs, identification of prevailing uplink traffic

DECT : Automatic scans of DECT frequency's identifying base stations and mobile devices

Bluetooth/BLE : Real time Bluetooth analysis of both passive and active

DVB/ATSC : Real time DVB / ATSC analysis

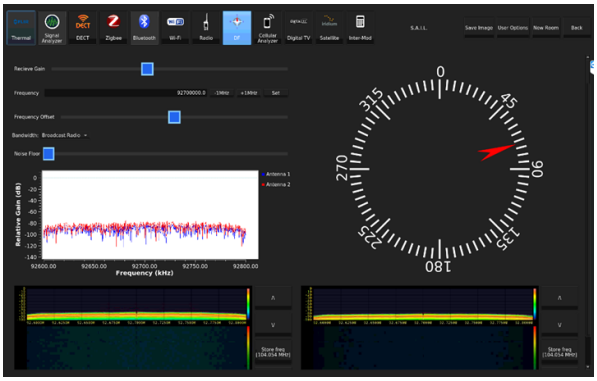
Digital Analog Radio : Real-time Radio communication P25, NXDN, X2, DStar

Zigbee Networks : Analysis of low power digital communication devices

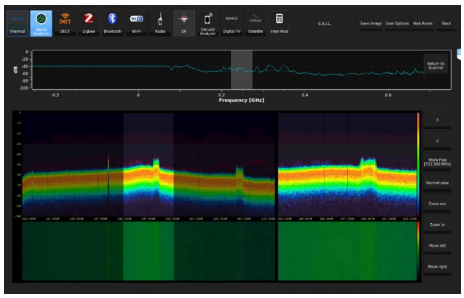
Tetra : 4 Channel analysis with audio demodulation

Flir : Thermal and digital imaging

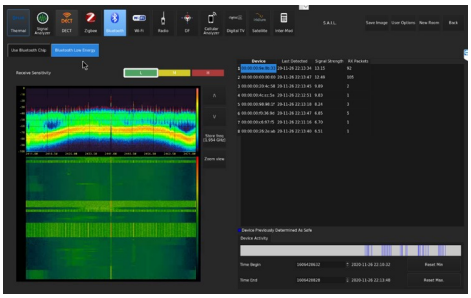
Iridium : Real time Iridium satellite analysis



Directional Finding



Spectrum Analyser — Zoom View

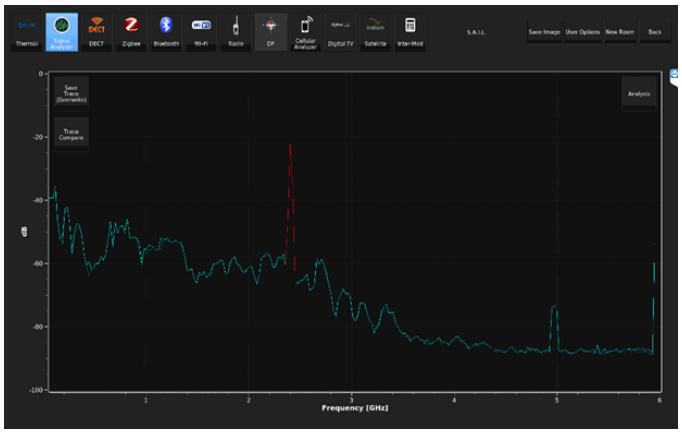


Bluetooth Analyser

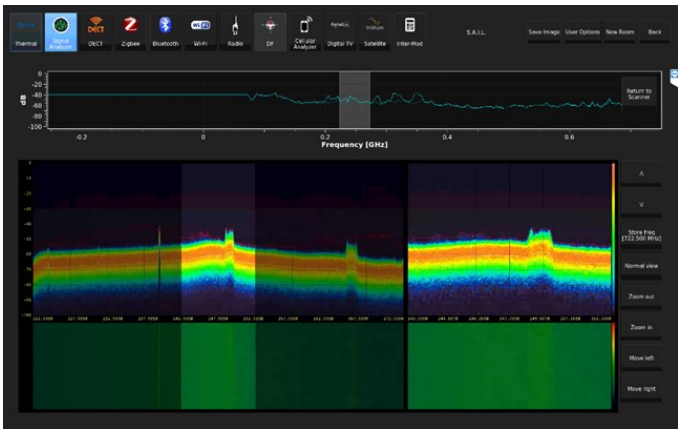
FEATURES

SIGNAL ANALYZER

Signal Analysis 70 Mhz – 6 GHz.
Real Trace, Peak Trace and Saved Reference Trace
Touch screen selection



Signal Analyzer - Scan View



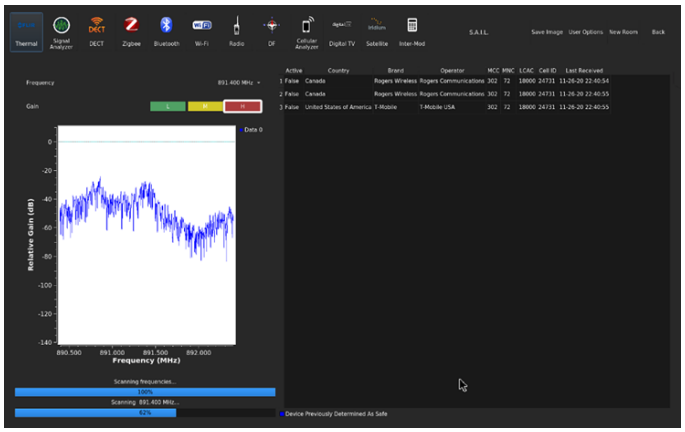
Signal Analyzer - Zoom View

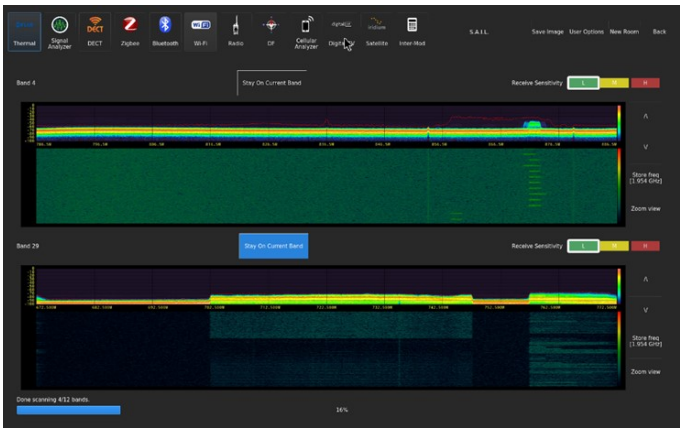
GSM CELLULAR ANALYZER

Real time GSM cellular analysis
Pre-select bands for the local GSM networks
Passive interception of devices “NO” man in the middle scenario
Displays active devices in your proximity

LTE ANALYZER

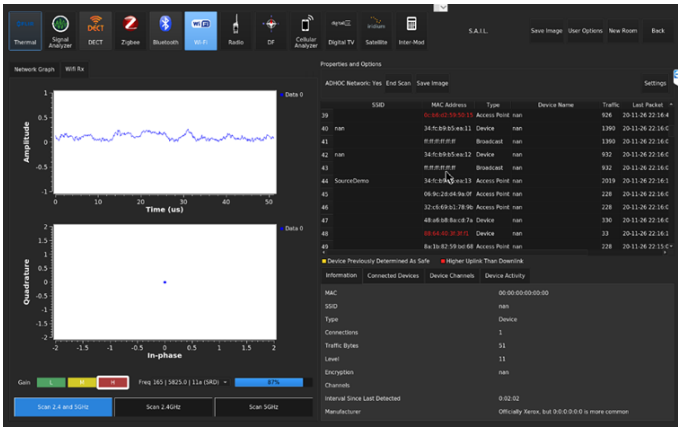
Real time LTE Cellular analysis
The only device capable of scanning cellular handheld devices for activity
Ability to direction find and locate the handheld device



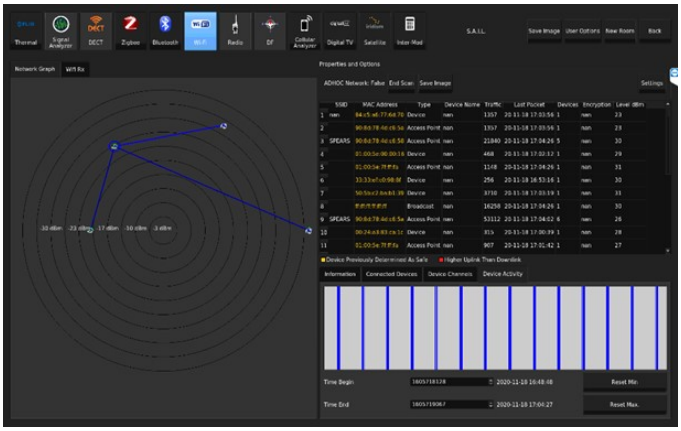


Wi-Fi ANALYZER

Wi-Fi analysis of 802.11b,g,n,ac protocols
Access point and device analysis on 2.4 and 5 GHz spectrum
Packet flow analysis to identify potential threats
Location analysis of devices and AP's



WiFi Analysis - Connected Devices



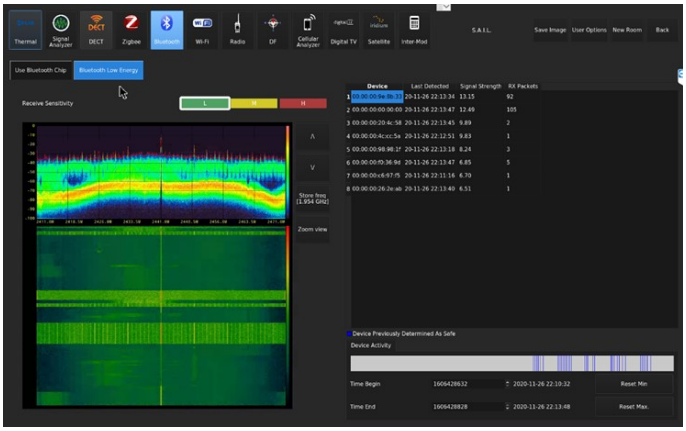
WiFi Analysis - Network Graph

BLUETOOTH ANALYZER

Real time Bluetooth analysis
Ability to analyze both passively and actively
>80 MHz Instantaneous Bandwidth

DECT ANALYSIS

Automatic scanning of DECT frequencies
Identify base stations and paired portables
Listen to the selected DECT device audio
Direction-Find on the selected device



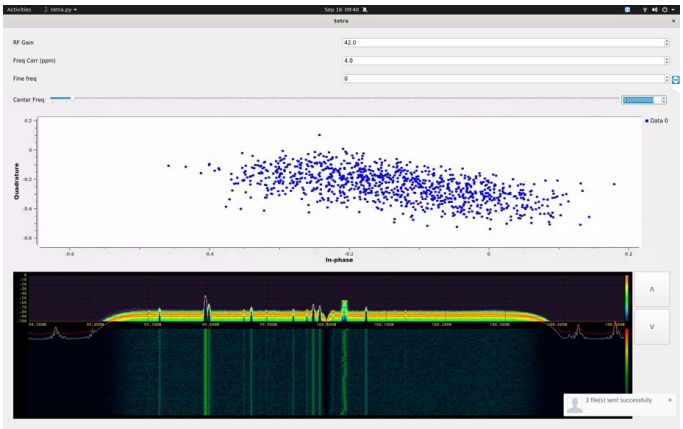
TETRA RADIO ANALYZER

Tetra Radio Analysis

4-channel Analysis

Audio Demodulation

Direction Finding



COMMERCIAL RADIO ANALYZER

Real time Radio Communications analysis

Analog signal demodulation

Digital signal identification for P25, NXDN, DMR, X2 and DStar.

DIGITAL TV

Record both thermal and digital video of your room

Images saved of your database by room

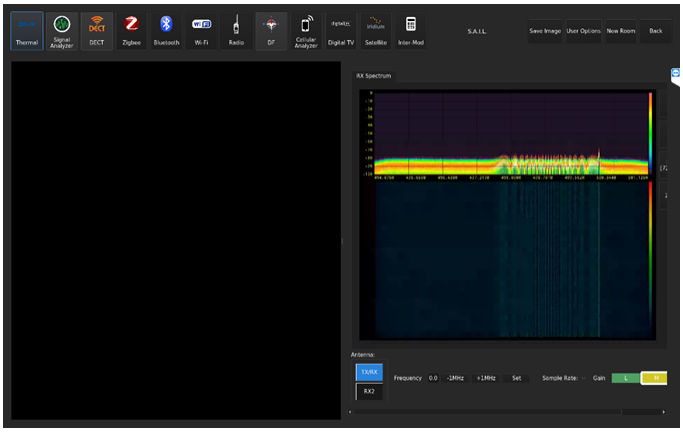
Post processing of the video to create individual images for your report

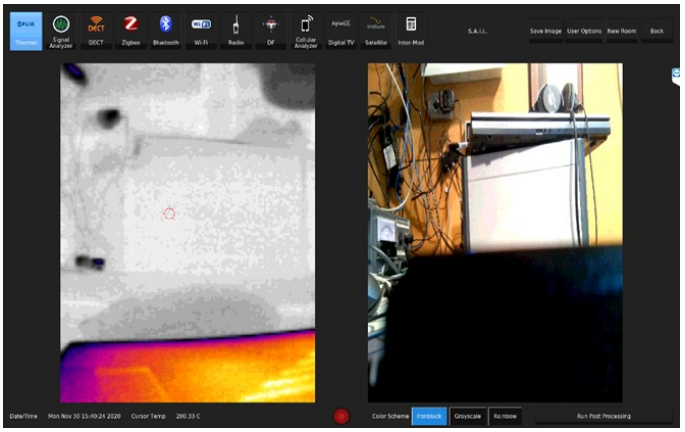
THERMAL & DIGITAL IMAGING

Record both thermal and digital video of your room

Images saved of your database by room

Post processing of the video to create individual images for your report





IRIDIUM STAELLITE ANALYZER

Real time iridium satellite analysis

Ability to check the building for active satellite transmissions

ZIGBEE

Zigbee is an IEEE 802.15.4-based specification for a suite of high-level communication protocols used to create personal area networks with small, low-power digital radios, such as for home automation

SPECIFICATIONS

PRODUCT CAPABILITIES	
Radio Frequency Detection	Yes
Spectrum Analysis	Yes
Direction Finding	Yes
Built-in Display	Yes
Signal Analysis	Yes

SPECIFICATION	
ADC Sample Rate (Max)	61.44 MS/s
ADC Resolution	12 bits
ADC Wideband SFDR	78 dbc
DAC Sample Rate (max)	61.44 MS/s
DAC Resolution	12 bits
Host Sample Rate (16b)	61.44 MS/s
Frequency Accuracy	+/- 2.0 ppb
GPS Locked TCXO Reference	<1 ppb

RADIO FREQUENCY SPECIFICATIONS	
Detection Bandwidth	70 MHz - 6 GHz
Scanning Bandwidth – Single Channel	10 Khz-56 Mhz
Scanning Bandwidth – Multi-Cannel	10 Khz – 30.72 Mhz
Instantaneous Bandwidth	>80 Mhz

GPS MODULE	
Channels	56 Searching Channel
Frequency	GPS L1, SBAS L1, QZSS L1
Receiving Format	GPS, SBAS, QZSS
Tracking	-162dBm
Re-Acquisition	-160dBm
Cold Start	-148dBm
Position Horizontal	2.0 m (Typical Open Sky)
Velocity	0.1m/sec 95% (SA off)
Timing	0.1m/sec 95% (SA off)
Cold Start	29s
Warm Start	25s
Hot Start	1s
Altitude	<50,000m
Velocity	<515m/s
Acceleration	<4g
Operating Temp	-40 °C ~ +85°C

5MP CAMERA	
Sensor	OV5640
FOV	72 degrees
Static Images	2592 x 1944 pixel
Support Formats	MJPEG & YUV
Operation Temperature	-30~70°C

FLIR CAMERA	
Function	Passive thermal imaging module for mobile equipment
Sensor Technology	Uncooled VOx microbolometer
Spectral Range	Longwave infrared, 8um to 14um
Array Format	160 × 120, progressive scan
Pixel Size	12 um
Effective Frame Rate	8.8 Hz (exportable)
Thermal Sensitivity	<50 mK (0.050° C)
Temperature Compensation	Automatic. Output image independent of camera temperature
Non-uniformity Corrections	Shutterless, automatic (with scene motion) Shuttered (for stationary applications and best image quality)
FOV - Horizontal	56 degrees
FOV - Diagonal	71 degrees
Depth of Field	28cm to infinity
Lens Type	f/1.1 silicon doublet
Optical Distortion	13.3% (nominal corner magnitude)
Optical Temperature Range	-10° C to 65° C
Maximum Operation Temperature	80 °C
Shutter Operating Temperature	10° C to 65° C 2
Shock	1500 G @ 0.4 ms
Battery life	5 hours
Battery Charge Time	2 hours

POWER	
Power	12V 5A
Battery life	5 hours
Battery Charge Time	2 hours