



NAUDI

National Association of
Ukrainian Defense Industries



SATELLITE MONITORING SYSTEMS

SCPC AND VSAT PROCESSING SYSTEM

The system is dedicated to intercept and process big variety of satellite signals that transmitted via geostationary satellites. It is an integrated solution that includes hardware and software parts that seamlessly united and controlled by common GUI.

It consists from 3 main parts:



ANTENNA SUBSYSTEM:

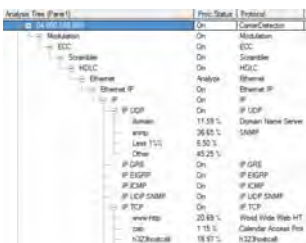


SIGNAL PROCESSING SUBSYSTEM



Performs automated analysis of satellite carriers, signal demodulation and further processing. Results are saved to the Data Base and File servers.

Consist of Signal Analysis Station, set of demodulators, processing and post processing servers, file and database servers.



Signal Analysis Station (SAS) can perform automated scan of satellite polarizations and deep protocol analysis or received signals.



Tiburon 4U Demodulator can demodulate and decode up to 40 carriers within one 4U block.



Tiburon 1U Demodulator can process up to 16 carriers within one 1U block.



Tiburon DVB-S/S2/S2X 1U Demodulator process one or two DVB-S, DVB-DSNG, DVB-S2 and DVB-S2X satellite signals in CCM, ACM and VCM modes.

Types of intercepted data:

- GPS Location
- Spot Beam Number
- Establishment Cause
- C/L-band Mapping
- Called/Calling Number
- Date and Time
- TMSI / IMSI (optional)
- IMEI
- Duplex Voice within 7 spot beams
- SMS
- Low-Speed Data / FAX

Main parts of Thuraya Processing System:



C-band Antenna

Intended to receive downlink signal from Thuraya Satellite to Gateway Earth Station. Only one C-band antenna required and should be installed on "Main" system. Recommended diameter 5.6 - 9m. Considering that both Thuraya 2 and Thuraya 3 satellites are located in geosynchronous orbit, C-band antenna must have auto-tracking system.



L-band Antenna

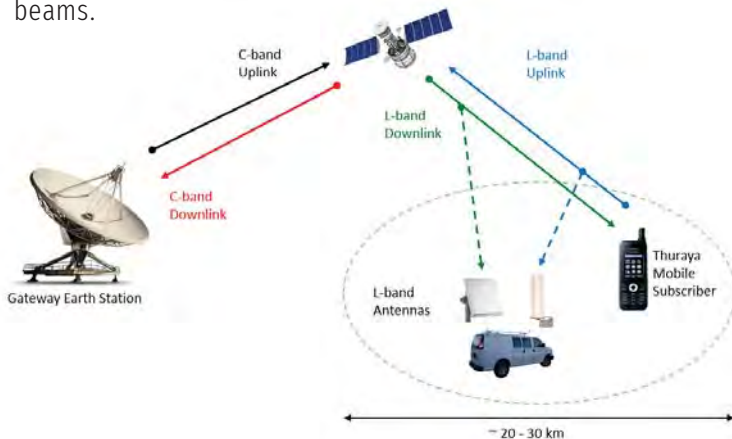
Required to receive downlink signal from Thuraya Satellite to Mobile Subscriber. Each "Main" and "Remote" site requires one L-band antenna.

Demodulator unit

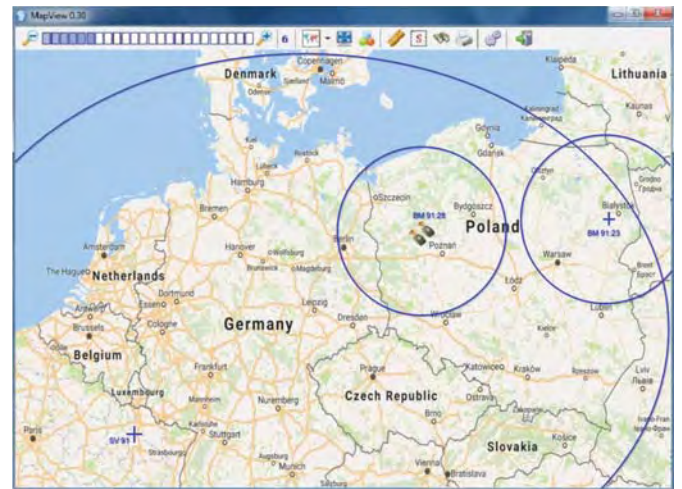
is designed for real-time demodulation of FDMA & TDMA L-band (950-1750 MHz) radio signals in 36 MHz bandwidth. It can provide simultaneous processing of up to 256 duplex traffic sessions channels. Remotely controlled via Ethernet interface.

THURAYA Tactical (mobile) system:

Thuraya Tactical (mobile) system receives duplex signals within line of sight zone and simplex signals in spot beam where antennas are located and for up to 3 neighbor spot beams.



Iridium Map View:



THURAYA Tactical + IRIDIUM combined system

System unites Thuraya Tactical and Iridium system.

It contains:

- L-band 1.5 MHz Antenna
- Omni-directional 1.6 MHz L-band antenna
- Omni-directional active L-Band antenna
- Demodulator unit
- Rugged laptop

Laptop contains Thuraya and Iridium software.

Demodulator unit can be switched between "Thuraya" or "Iridium" mode in GUI.



2, Bankova St., Kyiv, 01024, Ukraine
 tel.: +38 (044) 252 32 22
 E-mail: office@naudi.com.ua
 www.naudi.com.ua