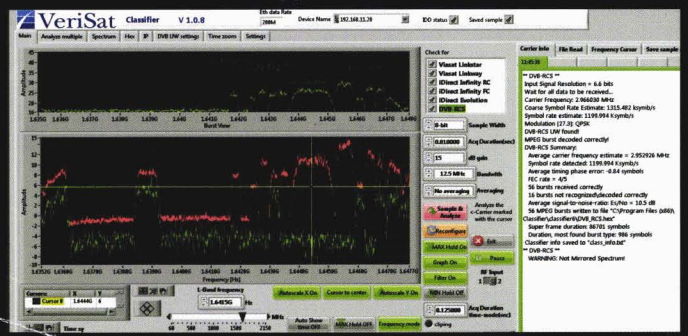
SatProbe 4000 VSAT Interception IP Probe

- Affordable
- Powerful
- Flexible
- State-of-the-art
- Future-proof COTS and SDR architecture
- Multiple VSAT system protocols, e.g.:
  - o DVB-RCS
  - o ViaSat
  - o iDirect

The SP4000 provides state-of-the-art VSAT network interception from the forward and return links. The software radio architecture and the user-friendly design enables IP packet capture from operational networks provided by major VSAT manufactures, such as DVB-RCS, ViaSat and iDirect networks.

SP4000 may start as a small single protocol system and then be expanded to multiple protocols and multiple carriers.

The VSAT TDMA Classifier assists the operator in classifying the bursty carrier technology, simplifying spectrum surveillance and classification of the applied network technology.



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VSAT Interception SatProbe 4000

The software defined radio front end together with commercial off-the-shelf hardware provides affordable, future-proof, flexible and scalable solutions. The unique multiprotocol architecture allows analysis the VSAT networks currently of interest, minimizing equipment costs and maximizing capturing performance.

Technical Description

The SP4000 consists of:

- Capture Front End
- Controller
- Signal Processing Array

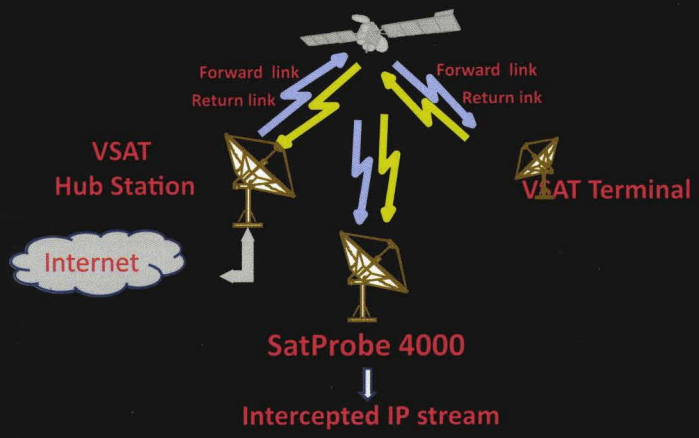
The Capture Front End is a Software Defined Radio with an integrated wideband receiver, performing:

- Downconversion from L-band (or IF)
- Analogue to digital conversion
- Channel filtering

Multiple Capture Front Ends may be connected to the same system, allowing flexible carrier selection from different transponders.

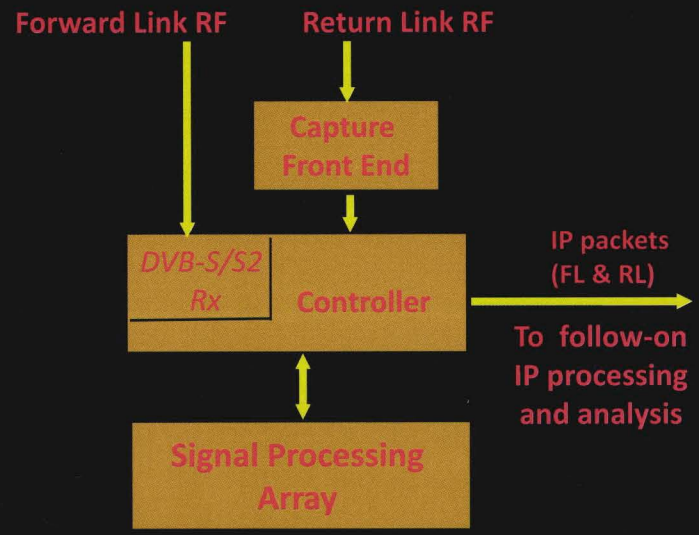
The Controller performs:

- System management and control
- IP assembly from the DVB-S/S2 receiver card
- Distribution of the digitized capture stream to the RL decoders
- Collection of the decoded bursts from the decoder processes
- FL and RL IP assembly



The flexible and scalable architecture allows flexible and user-friendly configuration and management of multiple frequencies and multiple VSAT protocols.

The Signal Processing Array performs the demodulation and decoding of TDMA bursts and return the resulting burst payloads to the Controller.



Specifications

Forward Link

- L-band RF signal
- DVB-S/DVB-S2
- Symbol rates 2-45 Msps
- IP protocols: MPE, proprietary

Return Link

- L-band RF signal
- Modulation : QPSK, 8PSK
- Waveforms: DVB-RCS, proprietary
- Symbol rates 50 ksps – 6 Msps
- Protocols:
  DVB-RCS, DVB-RCS2
  Proprietary, e.g. iDirect, ViaSat

Output

- Intercepted IP packets on several formats (e.g. pcap files, forwarded IP packets)
- Statistics, metadata

System

- User friendly interface
- Scalable capacity
- COTS hardware
- Software defined radio capture front end

Options

- Customization at request
- Ruggedized, mobile version

Use Cases

- Contra espionage
- Surveillance
- Counter intelligence
- Internal state security