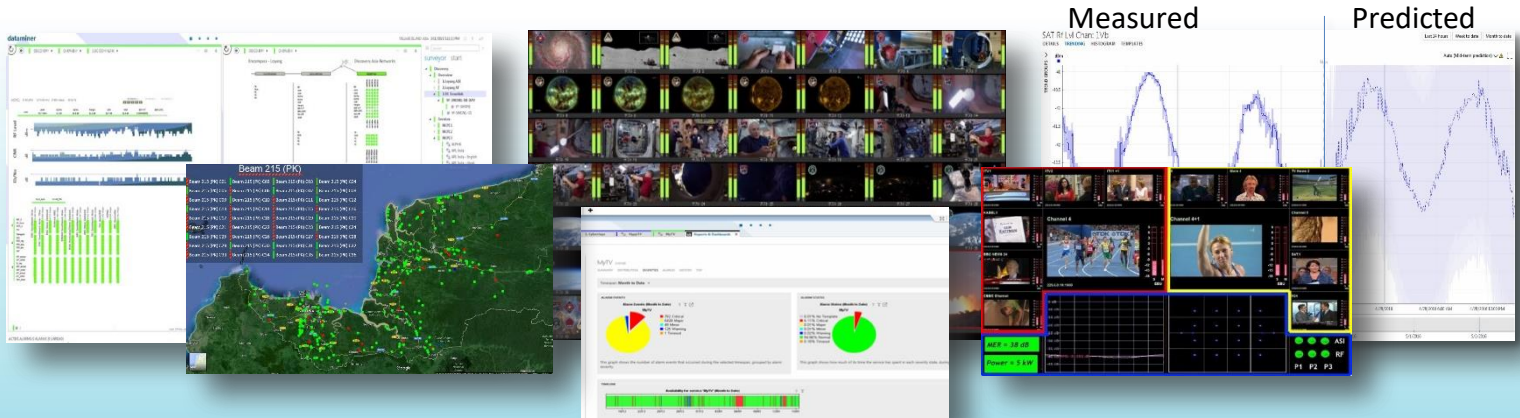




Village Island presents the Village Flow RF / TS / Video monitoring streams. Configure the server to receive and monitor any type of input, set thresholds on any parameter for alarming, send notifications and reports based on alarm triggering and data values. View timeline graphs for any parameter values, real-time and historical trending, and cross check among services and location.



### [Any Input]

- Any Input (RF, IP, ASI, Analogue)
- RF - DVB-S/S2, DVB-T/T2, DVB-C/C2, ISDB-T, ISDB-S
- IP - Unicast/Multicast/HLS
- Multiple Services up to 10Gbps of data per server.
- Scalable - stack multiple servers for additional monitoring
- Only order the required interfaces

### [Extensive Monitoring]

- Physical layer parameters (RF demodulation, IP Encapsulation)
- TS layer parameters (Services, PIDS, ETR101290)
- Video parameters (Video black/freeze, Audio loss)
- Each parameter is retrieved every 100ms
- Granularity of data is configurable (1s, 10s average etc.)
- Data is stored 30 days if NMS connectivity is lost

### [NMS Integration]

- Advanced Views for real time data display
- Intuitive fault finding using color coding
- Notifications through alarms, email, SMS
- Service template: follow a service through your infrastructure
- Trending of data / alarms configurable (standard 1 year)

### [Advanced Features]

- Automatic TS recording upon alarm
- NEW** Video thumbnails extraction and Multiviewer display
- SCTE35 logging, Subtitles decoding and archiving
- Automatic Service discovery and monitoring (no manual input)
- NEW** DVB-S2X Carrier ID report
- IP forward to other device (Multiviewer, Archive, etc...)

### [Specification - Hardware]



CHAS-1RU	Compact Rack mounted – 2x interface slots
CHAS-4RU	Scalable Rack Mounted – 10x interface slots
CHAS-FIELD	Compact Portable – for field test measures
DVB-T/T2	F-type, max 10x inputs per machine
DVB-S/S2	F-type, max 10x inputs per machine
DVB-C/C2	F-type, max 24x inputs per machine
Gb IP	Gb Ethernet, max 10x ports per machine

### [Ordering information]

VF-SMON-BAS	Base license, for one stream
VF-SMON-STS	Additional SPTS monitoring
VF-SMON-MTS	Additional MPTS monitoring
VF-SMON-CAR	Physical layer monitoring (RF, IP)
VF-SMON-ADV	Advanced RF monitoring (SFN, Graphs)
VF-SMON-DPI	SCTE35 triggers logging
VF-SMON-T2MI	T2MI analysis license
VI-MOSAIC	Multiviewer and baseband alarming
VI-NMS	Dataminer Agent for reporting, trending



## [SAT RF] [DVB-S/S2] [ISDB-S]

- Type
- Packet Lock
- Vit Lock
- EIRP
- MER
- SNR
- RF Level Channel
- Link Margin
- Es/NO
- Eb/NO
- Symbol Rate
- RF Frequency
- Occupied Bandwidth
- Roll-off Factor
- Modulation
- Code Rate
- BER Pre LDPC (DVB-S2)
- BER Post LDPC (DVB-S2)
- BER Pre Vit (DVB-S)
- BER Post Vit (DVB-S)
- FEC Lock
- Spectrum Inversion
- BER Pre BCH (DVB-S2)
- BER Post BCH (DVB-S2)



### **NEW** DVB-S2X Carrier ID

- Carrier ID
- User Data
- Telephone
- Latitude/Longitude

## [QAM RF] [DVB-C/C2]

- Packet Size
- Interleaving
- Annex
- BerPreRS
- Bad Packet Count
- MER
- RF Level Channel
- Lock
- Carrier Lock
- SNR
- Temp Tuner
- Symbol Rate
- Modulation
- RF Frequency

## [Gb IP] [UNICAST/MULTICAST]

- Packet Size
- IP Address
- Port
- Protocol
- Source Address
- Port Source Filter
- VLAN ID
- Received IP Packets
- TS Packets in IP Packet
- IP FEC Mode
- IP FEC Rows Count
- IP FEC Columns Count
- IP Version
- Expected IP Packets
- Lost IP Packets
- Lost IP Packets Before FEC
- Lost IP Packets After FEC
- IP Packet Error Ratio After FEC 1min
- IP Packet Error Ratio After FEC 1sec
- Max IP Jitter 1min\_us
- Max IP Jitter 1sec\_us
- Min IP Packet Interval 1min\_us
- Min IP Packet Interval 1sec\_us
- Max IP Packet Interval 1min\_us
- Max IP Packet Interval 1sec\_us

## [ASI]

- Packet Size
- Carrier Detected
- Lock
- Inverted





## [DVB-T2 UHF/VHF]

### Advanced Graphs (DVB & ISDB)

- Spectrum – resolution <2kHz
- Constellation – supports DVB-T2 rotation
- MER per carrier
- Impulse response – Echo pattern
- Transfer Function

- **Signal lock**
- **RF Level** – Power sensitivity between -90 to -20 dBm
- **Frequency** – UHF/VHF 42...870MHz
- **Modulation mode**
- **SNR** – 50 dB
- **MER** – Accurate from 10 to 42 dB
- **L1 pre Parameters:**

- |                                 |                                     |                                      |
|---------------------------------|-------------------------------------|--------------------------------------|
| ▪ T2 L1-Pre Locked              | ▪ T2 L1-Pre L1 Code Rate            | ▪ T2 L1-Pre L1-Post Info Size        |
| ▪ T2 L1-Pre Type                | ▪ T2 L1-Pre L1 FEC Type             | ▪ T2 L1-Pre Pilot Pattern            |
| ▪ T2 L1-Pre Bandwidth Extension | ▪ T2 L1-Pre L1-Post Size            | ▪ T2 L1-Pre Tx ID Availability       |
| ▪ T2 L1-Pre S1                  | ▪ T2 L1-Pre T2 Version              | ▪ T2 L1-Pre Cell ID                  |
| ▪ T2 L1-Pre S2                  | ▪ T2 L1-Pre T2 Lite in Base Profile | ▪ T2 L1-Pre Network ID               |
| ▪ T2 L1-Pre L1 Repetition       | ▪ T2 L1-Pre L1-Post Extension       | ▪ T2 L1-Pre T2 System ID             |
| ▪ T2 L1-Pre Guard Interval      | ▪ T2 L1-Pre #RF Channels            | ▪ T2 L1-Pre #T2 Frames in Superframe |
| ▪ T2 L1-Pre PAPR Reduction      | ▪ T2 L1-Pre Current RF Index        | ▪ T2 L1-Pre #Data Symbols            |
| ▪ T2 L1-Pre L1 Modulation       | ▪ T2 L1-Pre L1-Post Scrambling      | ▪ T2 L1-Pre Regeneration Flag        |

- **L1 post Parameters:**

- |                                 |                                     |                           |
|---------------------------------|-------------------------------------|---------------------------|
| ▪ T2 L1-Post #Auxiliary Streams | ▪ T2 L1-Post #Subslices in T2 Frame | ▪ T2 L1-Post FEF Interval |
| ▪ T2 L1-Post FEF Type           | ▪ T2 L1-Post #PLPs in Superframe    | ▪ T2 L1-Post Locked       |
| ▪ T2 L1-Post FEF Length         |                                     |                           |

- **PLP Specific parameters:**

- |                         |                                 |                                 |
|-------------------------|---------------------------------|---------------------------------|
| ▪ PLP Type              | ▪ PLP Time Interleaver Length   | ▪ PLP LDPC Average # Iterations |
| ▪ PLP Payload Type      | ▪ PLP Time Interleaver Type     | ▪ PLP LDPC Maximum # Iterations |
| ▪ PLP FF Flag           | ▪ PLP In-Band A Flag            | ▪ PLP LDPC Minimum # Iterations |
| ▪ PLP First RF index    | ▪ PLP In-band B Flag            | ▪ PLP MA Layer                  |
| ▪ PLP Frame Index       | ▪ PLP Mode                      | ▪ High Efficiency Mode          |
| ▪ PLP Group ID          | ▪ PLP Last PLP_Num_Blocks       | ▪ Null Packet Deletion          |
| ▪ PLP Code Rate         | ▪ PLP Min PLP_Num_Blocks        | ▪ ISSY Mode                     |
| ▪ PLP Modulation        | ▪ PLP Max PLP_Num_Blocks        | ▪ ISSY BUFS                     |
| ▪ PLP Rotation          | ▪ PLP BER post BCH / pre BCH    | ▪ ISSY TTO                      |
| ▪ PLP FEC Type          | ▪ PLP BER post LDPC / pre LDPC  | ▪ #CRC Errors for BB Header     |
| ▪ PLP Max Number Blocks | ▪ PLP MER – up to 42dB accuracy | ▪ #CRC Errors for Packets       |
| ▪ PLP Frame Interval    | ▪ PLP Static Flag               | ▪ SYNCD/DFL/UPL Errors          |
|                         | ▪ PLP Static Padding Flag       | ▪ #Common PLP Resyncs           |

## [ISDB-T UHF/VHF]

- **Signal lock**
- **RF Level** – Power sensitivity between -90 to -20 dBm
- **Frequency** – UHF/VHF 42...870MHz
- **SNR** – 50 dB
- **MER** – Accurate from 10 to 42 dB
- Sample rate offset in ppm
- Broadcast Type
- Transmission Mode
- Guard Interval
- Partial reception indicator
- Per layer: segments, modulation, code rate, time interleaving

#### Reed-Solomon decoder info:

- Decoder lock
- Bytes skipped while looking for sync
- Decoded packets
- Uncorrected packets
- Byte error count
- Bit error count

#### Viterbi decoder info:

- Input bit count
- Bit error count





## [TS / SERVICE / PID]

- Treeview structure
- PSI/SI Tables
- TS input bitrates
- Services bitrates
- PID bitrates & type
- Service Templates
- Track a service through multiple locations
- Alarm on PID presence, PID type changed
- 

### Transport Alarms - ETSI ETR101290

- |  |  |   |
|--|--|---|
| <ul style="list-style-type: none"> <li>- Priority 1           <ul style="list-style-type: none"> <li>• TS_sync_loss</li> <li>• Sync_byte_error</li> <li>• PAT_error_2</li> <li>• Continuity_count_error</li> <li>• PMT_error_2</li> <li>• PID_error</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>- Priority 2           <ul style="list-style-type: none"> <li>• Transport_error</li> <li>• CRC_error</li> <li>• PCR_repetition_error</li> <li>• PCR_discontinuity_error</li> <li>• PCR_accuracy_error</li> <li>• CAT_error</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>- Priority 3           <ul style="list-style-type: none"> <li>• NIT_actual_error</li> <li>• NIT_other_error</li> <li>• SI_repetition_error</li> <li>• Unreferenced_PID</li> <li>• SDT_actual_error</li> <li>• SDT_other_error</li> <li>• EIT_actual_error</li> <li>• EIT_other_error</li> <li>• TDT_error</li> </ul> </li> </ul> |
|--|--|---|

## [SCTE35/DPI Triggers]

Flexible parameters according to SCTE standard:

- Service Name
- Date
- Start Time
- End Time
- Pin (1-8)
- Pin State (0-1)
- DTMF tone (3 CHAR)
- DTMF State (\* or #)
- Out\_of\_network\_indicator
- Immediate\_flag
- Program\_splice flag
- Splice time: from PTS to real time" 14

Advanced detection features:

- Scheduling
- Automatic comparison with Playout
- Alarming on missing/delayed triggers

## [Advanced]

(please contact us for a technical discussion)

- Video thumbnails extraction and display
- Subtitles decoding and archiving
- Automatic TS recording upon alarm
- Automatic Service discovery and monitoring (no manual input)
- IP forward to other device (Multiviewer, Archive, etc...)

