



DVMon

Compact, Portable Analyzer

- ✓ DVB-T/DVB-T2
- ✓ DVB-C
- ✓ DVB-S/DVB-S2
- ✓ IP and ASI Analysis
- ✓ Real Time Alarms
- ✓ Historical Logging
- ✓ DPI Insertion Logging
- ✓ DVStation-compatible MIB

DVMon Family

Compact MPEG-TS, Cable, Satellite & IPTV Monitor



The Torque DVMon provides exceptional performance and economy for remote monitoring of television transmissions. Built on the latest technology and utilizing a stable, robust enterprise grade Linux operating system, DVMon can be used with remote control or directly via any standards-compliant web browser. The line up includes compact rack-mount as well as portable palm-sized versions. Interface options are available for IP, ASI, Satellite, Cable and DVB-T/T2.

KEY FEATURES

DVMon offers immediate visibility of QoS/QoE issues by combining extensive real-time analysis and troubleshooting features with a comprehensive historical logging system, giving insights into past trends and incidents.

ASI, RF & IP MONITORING

DVMon also allows simultaneous monitoring of traditional ASI or RF interfaces together with multi-stream IP monitoring. The QAM version extends signal integrity measurements for DVB-C and J.83-B, while the DVB-T/T2 model provides monitoring of RF and transport stream parameters.

TRANSPORT STREAM

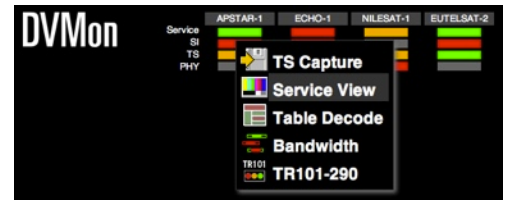
TS stability has fluctuated over the years. With its in-depth analysis and monitoring, deploying the DVMon can resolve complex issues.

FLEXIBLE CONFIGURATIONS

DVMon is available in several configurations including ASI, DVB-C, DVB-S/S2 and DVB-T/T2. Additionally, simultaneous IP monitoring can be added to any configuration.

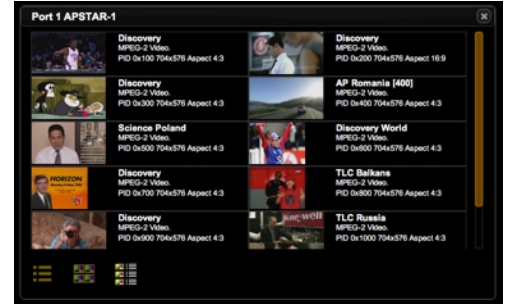
CONTENT MONITORING

Beyond technical analysis and monitoring of physical and TS parameters, DVMon facilitates direct monitoring and analysis of MPEG stream content. This includes detection and alarming of audio tone or silence, and video freeze or blackout.



COMBINED IP MONITORING

Using a dedicated Ethernet port for monitoring, DVMon surveys all of the IP flows detected containing MPEG Transport Streams. Streams can be unicast or multicast. For multicast streams, DVMon supports a straightforward GUI for IGMP JOIN/LEAVE where commonly used flows can be easily bookmarked. Further in-depth transport stream monitoring and analysis using the same TS features available for ASI and/or RF, can also be done.



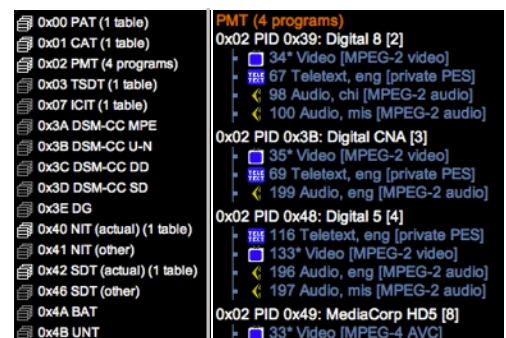
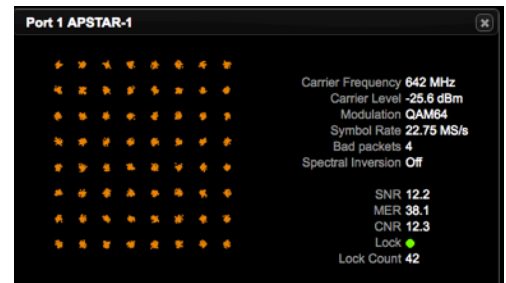
MONITORING & DEEP TECHNICAL ANALYSIS

In addition, to its monitoring features, DVMon provides deep technical analysis of all TS parameters, including bit rates by PID, a breakdown view of each service and the respective components, the standard TR101-290 health checks, plus a detailed decode of SI tables and descriptors.



HISTORICAL LOGGING

DVMon can be configured to take periodic samples of most measurement parameters, for example, service bit rate, RF modulation quality, or IP bit rate. The sample interval can be individually set for each measurement type. Log files can be searched and/or exported in CSV or plain text formats.

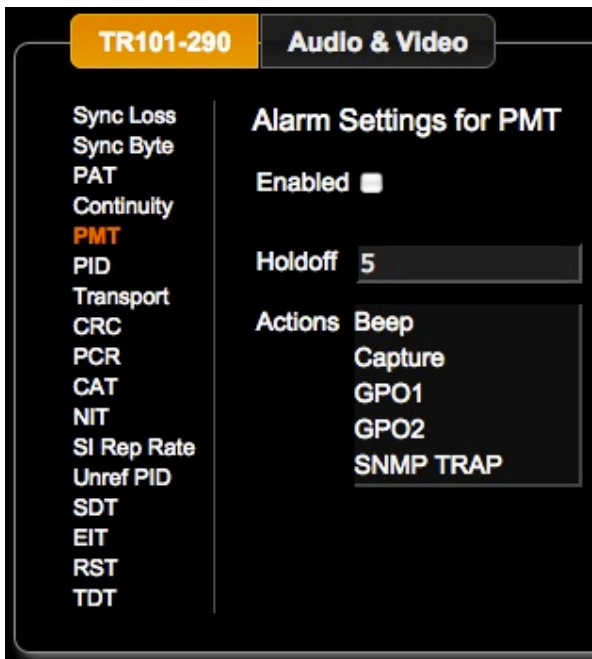


Bandwidth Log						
Date	Time	Port	Profile	PID	PIDType	MeanBW_bps MinBW_bps MaxBW_bps IntPeriod_s
2015-11-24	19:31:20	1		0x0023 (Digital CNA [3])	Video	3632120 3628710 3635481 30
2015-11-24	19:31:20	1		0x0043 (Digital 8 [2])	Teletext, eng	303858 303207 304712 30
2015-11-24	19:31:20	1		0x0045 (Digital CNA [3])	Teletext, eng	303908 303207 303959 30
2015-11-24	19:31:20	1		0x0074 (Digital 5 [4])	Teletext, eng	303909 303207 304712 30
2015-11-24	19:31:20	1		18	SI (EIT)	141646 133170 151227 30
2015-11-24	19:31:20	1		0x0061 (Digital 5 [4])	Audio, eng	132819 132418 133170 30
2015-11-24	19:31:20	1		0x0062 (Digital 8 [2])	Audio, chi	132869 132418 133922 30

DASHBOARDS

DVMon includes a handy dashboard which provides status-at-a-glance for all services of all streams, enabling quick search and diagnose of RF, Transport Stream and audio/video problems.

Dashboard customization is also possible, allowing tailoring of monitoring telemetry with exact requirements.



FLEXIBLE ALARMS

DVMon contains a powerful and flexible alarm action engine, such that customized actions when alarm conditions occur can be specified.

User-defined alarm actions can also be added via a simple scripting language. Once installed, custom alarm actions are globally available throughout the system.

JSON API

DVMon provides a comprehensive JSON API, enabling control and retrieval of measurement data from a remote system.

```
* getIpFlowList.php
*
* Returns
* - flows being monitored 'flowList'
* - joined flows 'joinedList'
* - configured multicast flows 'mcastList'

* getBandwidthMeas.php
*
* Fetch Bandwidth Measurement results for all indicated ports
*
* use:
* getBandwidthMeas.php?port=1,2,3
```

FEATURE SUMMARY

MPEG-TS FEATURES	<ul style="list-style-type: none"> • HTML5 GUI, historical logging & reporting • DVB/ATSC/ISDB/DCII compliant • TR101-290 • PID Bandwidth • Service Bandwidth • Packet Interval • Table decode and display • On-air Service Validation • 2 GB Stream Capture • Video Thumbnails • Blackout & freeze-frame detection for H.264 & MPEG-2 services • Audio loss & tone alarms • DVStation-compatible MIB
IP FEATURES	<ul style="list-style-type: none"> • UDP & RTP Packet Formats • IGMP v1/v2 Multicast • RJ-45 Gigabit Ethernet input • Provides bandwidth & MDI measurement on all IP flows • Detailed transport stream measurements & audio/video alarms on single flow

RF SPECIFICATIONS

	DVB-S/S2	DVB-C	DVB-T/T2
RF Input	F-Type	BNC	F-Type
Impedance	75 Ω	75 Ω	75 Ω
Signal Level	-60 to -30dBm	-60 to -30dBm	-90 to -20dBm
Frequency Range	950 to 2150 MHz (L band)	VHF, UHF 54 to 1002MHz	VHF, UHF 42 to 880MHz
Modulation Formats	QPSK, 8PSK, 16APSK ¹ , 32APSK ¹ , 128APSK ^{1,2} , 256APSK ^{1,2}	16/32/64/256-QAM	Per standard
Measurements	<ul style="list-style-type: none"> • Graphical Constellation Display • Carrier level • MER • RS uncorrected • Post LDPC BER 	<ul style="list-style-type: none"> • Graphical Constellation Display • Carrier level • MER • Pre RS BER 	<ul style="list-style-type: none"> • Graphical Constellation Display • Carrier level • MER • Pre/Post BER

Notes:

1. Licensed option
2. Requires DVB-S2X hardware option

SPECIFICATIONS

	DVMon	DVMon XS
CPU	Intel® Core-i5	Intel® Atom
RAM	4 GB	
OS	Enterprise Linux	
UI	HTML5 via standards-compliant web browser	
Management Interface	10/100/1000 RJ-45 Ethernet	
Alarm Outputs	Four Relay Contacts	
Other Interfaces	<ul style="list-style-type: none"> • Full HD HDMI Video Output • Display Port Video Output • Dual GigE Ethernet • USB 2.0 	<ul style="list-style-type: none"> • Full HD HDMI Video Output • Dual GigE Ethernet • USB 2.0
Size	19" rack mount 250 mm deep	185 x 115 x 35 mm
Weight	2.5 kg	800 g
Power	88 to 250V AC 50/60 Hz	12V DC, 88 to 250V AC with provided external power supply

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