



FIG 1 The MPEG-2 Monitoring System R&S®DVM 50 is cost-efficient and compact.

The new MPEG-2 Monitoring System

R&S®DVM 50 (FIG 1) can monitor up

to two MPEG-2 transport streams

and integrates seamlessly into the

R&S®DVM family.

MPEG-2 Monitoring System R&S®DVM 50

Cost-efficient monitoring of up to two transport streams

Systems for any task

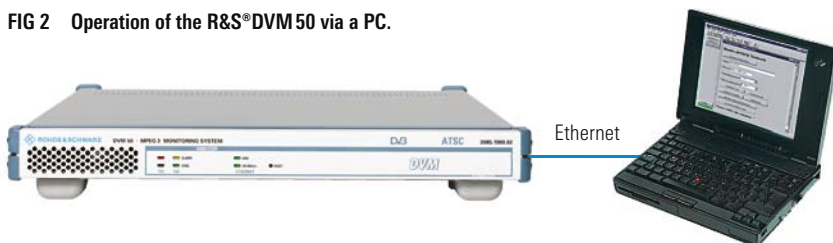
With its outstanding price/performance ratio, the new MPEG-2 Monitoring System R&S®DVM50 is designed primarily for users who wish to monitor up to two MPEG-2 transport streams at a favourable price, such as terrestrial

broadcasting network operators. To read about other members of the DVM family, the R&S®DVM100 / R&S®DVM120, refer to [1]. News No. 182 focused on the family flagship, the R&S®DVM 400 [2]. For an overview of the main differences between the systems, see page 48.

R&S®DVM 50: seamlessly integrated

Occupying only one height unit, the R&S®DVM50 is equipped with a fast analyzer board and monitors one transport stream and optionally two in parallel. It is operated either locally on a PC –

FIG 2 Operation of the R&S®DVM 50 via a PC.



## Instruments of the R&amp;S®DVM family in comparison

The **R&S®DVM 400** was designed specifically for use in development and for portable use at different points in the network. It features a high-resolution colour display and a keypad, making it easy to operate without additional accessories. It also has a parallel transport stream interface (*SPI*) and a reference clock input for high-precision time measurements such as *PCR* jitter and data rates. It can be expanded into a powerful recorder and generator by adding the necessary options.

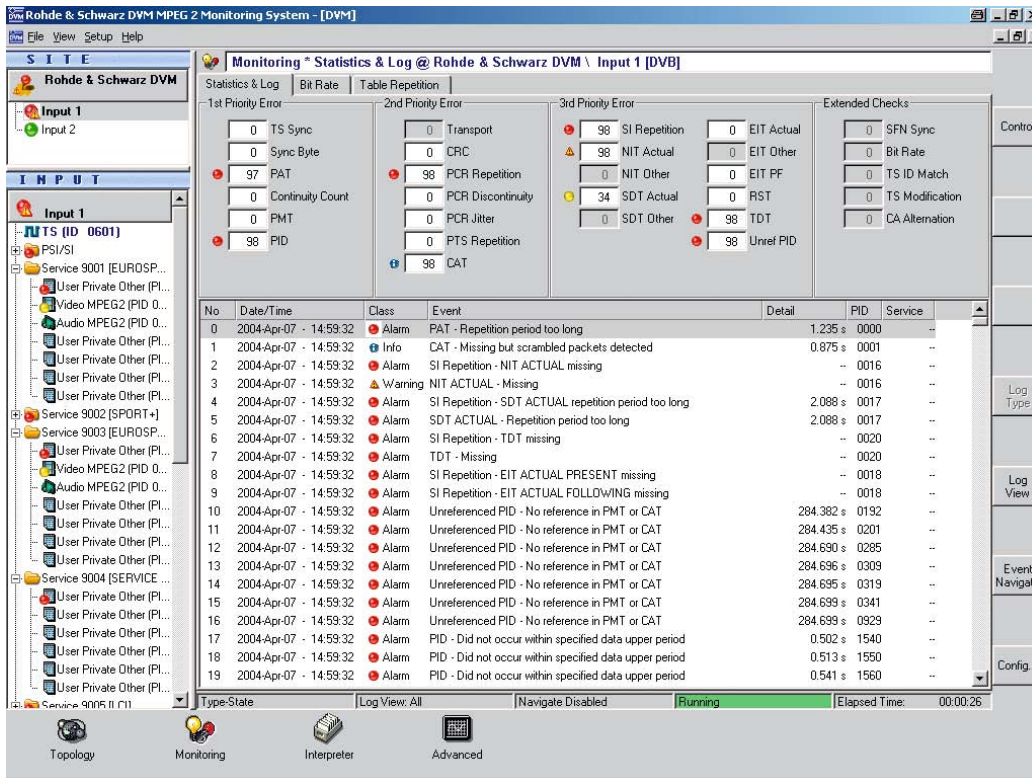
The **R&S®DVM 100** and **R&S®DVM 50** are especially suitable for monitoring transport streams. The R&S®DVM100 can – together with the R&S®DVM120 and other options – monitor up to 20 transport streams in a minimum of space. The R&S®DVM50 is designed for cost-efficient monitoring of one or two transport streams in one place. Operation of the R&S®DVM50 requires a local PC.

The **R&S®DVM120** is not a stand-alone unit; it is used to expand the R&S®DVM100 and R&S®DVM400 for monitoring additional transport streams and is operated via the R&S®DVM100 or the R&S®DVM400.

Despite their focus on monitoring applications, the R&S®DVM100 and R&S®DVM50 also provide detailed analysis options. The analysis functions of the R&S®DVM100 and R&S®DVM400 can also be used for the transport streams monitored by the R&S®DVM120.

Main differences between the instruments of the R&S®DVM family.

	R&S®DVM 50	R&S®DVM 100	R&S®DVM 400
<b>Height</b>	1 unit	1 unit	4 units
<b>Number of transport streams monitored in parallel</b>	1 to 2	1 to 4 (2 in basic version); expandable to 20 with 2 × R&S®DVM 120 and options	1 to 4 expandable to 20 with 2 × R&S®DVM 120 and options
<b>Local operation</b>	PC required	via external monitor, keyboard and mouse	integrated colour display, keypad and rotary knob; external keyboard and mouse if necessary
<b>Signalling of results:</b>			
<b>User interface</b>	●	●	●
<b>Front panel LEDs</b>	●	●	–
<b>Alarm relay</b>	–	●	●
<b>SNMP</b>	● (via local PC)	●	●
<b>Remote control</b>	via <i>VNC</i> server on local PC	via <i>VNC</i> server on the instrument	via <i>VNC</i> server on the instrument
<b>Monitoring and analysis functions</b>			
<b>TS capture (automatic recording of TS with up to 384 Mbytes)</b>		available with all models	
<b>Recorder and generator options</b>	–	–	●
<b>Reference clock input</b>	–	–	●
<b>SPI input and output</b>	–	–	●



**FIG 3**  
Graphical user interface of the R&S®DVM 50 with report and error counter display.

► with which it is connected via Ethernet – or remotely via network access to this PC. It can also be easily integrated into a network management system via the *SNMP*, the control software running on the PC supports this protocol (FIG 2).

The graphical user interface – which is identical on all the instruments of the R&S®DVM family – provides a straightforward display of the measurement results in different views and allows the system to be easily operated and quickly configured (FIG 3).

The measurement functionality is also as extensive as that of the R&S®DVM 100. The system monitors all parameters listed in the Measurement Guidelines TR 101 290<sup>\*)</sup> under priorities 1, 2 and 3 plus many other parameters necessary for effective monitoring. Analysis functions that can be optionally activated allow the R&S®DVM 50 to be used for detailed analyses of *PCR* jitter, table contents and many other parameters, including data broadcast applications such as *MHP* transmissions or *SSU*.

## Summary

The R&S®DVM family from Rohde & Schwarz provides flexibly configurable instruments for MPEG-2 monitoring, development and production applications: from the favourably priced monitoring instrument for one or two transport streams to the portable MPEG-2 allrounder. Additional functions can be added later – often simply via a key code.

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## Abbreviations

MHP	Multimedia home platform
PCR	Program clock reference
SNMP	Simple network management protocol
SPI	Synchronous parallel interface
SSU	System software update
TS	Transport stream
VNC	Virtual Network Computing (remote-control software from RealVNC company)

\*) The only measurement not supported is the buffer fill (priority 3.3).

Data sheets and Technical Information on the R&S®DVM50 at [www.rohde-schwarz.com](http://www.rohde-schwarz.com) (search term: DVM)

### REFERENCES

- [1] MPEG-2 Monitoring System R&S®DVM 100/120: Comprehensive monitoring of MPEG-2 transport streams. News from Rohde & Schwarz (2003) No. 179, pp 29–33
- [2] Digital Video Measurement System R&S®DVM 400: Comprehensive MPEG-2 analysis – also for mobile use. News from Rohde & Schwarz (2004) No. 182, pp 46–49