DVB-T/T2/S/S2/C, ISDB-T Advanced Monitoring Probe

Continuing its mission to deliver innovative, high-performance technology, DEVA proudly presents a next-generation device that brings together the best of three worlds – terrestrial, satellite, and cable – in a single, advanced platform. Designed with versatility and performance in mind, this all-in-one monitoring probe ensures full compliance with DVB-T/T2, DVB-S/S2, DVB-C, and ISDB-T standards, delivering unmatched functionality and precision in one compact solution.

Built around a powerful, DSP-based high-end digital tuner, this unit guarantees accurate and dependable monitoring with detailed component information, PID alarms, and advanced MPEG transport stream decoding. It also supports comprehensive TR 101 290 and ETR290 monitoring (priorities 1, 2, and 3), ensuring full adherence to professional broadcast requirements across all signal types.

This multi-standard monitoring probe provides PLP extraction and TS PLP analysis, as well as sequential monitoring of multiple channel frequencies or PLPs. It also includes adjustable MIN/MAX alarms for RF, SNR, BER, and MER, with flexible alarm dispatch options via email, SNMP ver. 2C, or GPO.

Designed for maximum usability, the device features an intuitive navigational menu, a wide-angle OLED display for easy local monitoring, and built-in WEB and FTP servers for seamless configuration and control. The wide IF filter bandwidth, advanced QAM analyzer, RF Spectrum and Constellation displays allow for in-depth signal analysis and precise carrier inspection. Users can choose between predefined DTV channel scans or manual tuning for each signal type.

The device also includes **built-in storage for transport stream recording and playback**, enabling detailed diagnostics, off-line analysis, and incident review – an essential feature for quality assurance and compliance verification.

Professional-grade features such as a scalable built-in RF attenuator on the antenna port, Service Availability Error and Service Degradation Error functionality further solidify this product as a premium tool for modern broadcast operations. Full remote access is available through a LAN port with TCP/IP control, while compatibility with both Apple and Android devices ensures effortless integration into any workflow.

Firmware upgrades and protected access to device settings guarantee security and continued optimal performance, making this multi-standard monitoring tool the definitive solution for DVB-T/T2, DVB-S/S2, DVB-C, and ISDB-T environments alike.

Reliable. Versatile. Professional. The ultimate DTV monitoring platform!

FEATURES

- **DVB-T/T2/S/S2/C,ISDB-T Compliant Receiver**
- **Adjustable MIN/MAX alarms for RF, SNR, CNR, BER, MER**
- **Advanced MPEG Monitoring and PID Alarms**
- **Advanced QAM Analyzer**
- **Alarm dispatch via E-mail, SNMP ver.2C and GPO**
- **Antenna port with built-in RF attenuator**
- **Apple and Android devices support**
- **BandScanner and RF Spectrum Analyzer**
- **Built-in easy to use WEB and FTP server**
- **Detailed DVB-T/T2/S/S2/C,ISDB-T component information**
- **Easy Installation and Setup**
- **ETR290 Monitoring, Priority 1, 2 and 3**
- **Firmware updates will ensure improved operation**
- **LAN port for full TCP/IP remote control and monitoring**

- **Levels measurement with data history**
- **PLP extraction and TS PLP analysis**
- **Predefined DTV channels scan or manual tune**
- **Protected access to the device settings**
- **RF Spectrum & Constellation display**
- **SAE - Service Availability Error**
- **SDE - Service Degradation Error**
- **Selectable wide range IF filter bandwidth**
- **Service Availability Error & Service Degradation Error**
- **SNTP for automatic synchronization of the built-in clock**
- **Spectrum analyzer allowing checking of the RF Carrier**
- **TR 101 290 Monitoring, Priority 1, 2 and 3**
- **Up to 110 dBµV direct RF Antenna Input**
- **Very Intuitive Navigational Menu**

SPECIFICATIONS

RF Input - DVB-T/T2, ISDB-T

Tuning Range	Frequency Agile 474-786 MHz; UHF 21-60 Channel
Tuning Step	1 MHz
Tuner Sensitivity	30 dBµV
Antenna Port	N Connector, Female, 50Ω
Internal Attenuator	0, 10, 20 and 30 dB
RF input level	up to 120 dBµV
Supported Standards	DVB-T – ETSI EN 300 744; DVB-T2 & T2 Lite – ETSI EN 302 755 v1.3.1, ETSI TS 102 831; T2-MI – ETSI TS 102 773; ISDB-T

RF Input - DVB-S/S2

Tuning Range	950 to 2150 MHz (LNB down conversion required)
Antenna Port	F Connector, Female, 75Ω
Supported Standards	DVB-S, DVB-S2
DVB-S	QPSK, code rates: 1/2, 2/3, 3/4, 5/6, 7/8
DVB-S2	CCM, VCM and ACM Modes Support; QPSK code rates: 1/4, 1/3, 2/5, 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10; 8PSK code rates: 3/5, 2/3, 3/4, 5/6, 8/9, 9/10; 16APSK code rates: 2/3, 3/4, 4/5, 5/6, 8/9, 9/10; 32APSK code rates: 3/4, 4/5, 5/6, 8/9, 9/10
Symbol rates	DVB-S 65Msps QPSK; DVB-S2 65Msps QPSK , 60Msps 8PSK, 45Msps 16APSK

RF Input - DVB-C

Tuning Range	40-1000 MHz, Frequency Agile
Tuning Step	10kHz
Tuner Sensitivity	30 dBµV
Antenna Port	N Connector, Female, 50Ω
RF input level	up to 120 dBµV
Channel bandwidth	6 & 8 MHz
Symbol rate Modulation	1.8 to 7.2 M symbols/s
Symbol rate Modulation	16QAM, 64QAM, 128QAM, 256QAM, 1024QAM, 4096QAM
Supported Standards	DVB-C

Monitoring Features - DVB-T/T2

RF input level	30-110 dBµV ±1 dB
MER	0 to 40 dB (±1 dB)
SNR	0 to 40 dB (±1 dB)
BER Before-Viterbi(DVB-T)	1x10-2 to 1x10-5
BER Post-Viterbi(DVB-T)	1x10-2 to 1x10-8
BER (DVB-T2)	Before/Post-LDPC, Post-BCH
Signal Lock	Lock/Unlock
Modulation parameters	L1 signaling in DVB-T2, TPS in DVB-T
SFN Monitor	Channel Impulse Response (CIR); Echoes Delay and Power Level alarms
ETSI TR 101 290 Monitor	ETSI TR 101 290 Priority 1, 2 and 3; MPEG-2 TS Monitor, TS (with MIP packet) Network Delay
T2-MI Monitor	Single/Multi-PLP support; ETSI TR 101 290 T2-MI packet, L1 pre/post signaling; T2-MI Network Delay; PLP extraction and TS PLP analysis (ETR 101 290)
QoS	SAE (Service Availability Error), SDE (Service Degradation Error)
Round-Robin Logger	Monitor sequentially multiple channel frequencies or PLPs
RF Spectrum Display	RF Spectrum with SPAN 10 MHz
Constellation Display	QPSK, 16QAM, 64QAM, 256QAM
Other Features	Audio/Video Freeze Detection, DOCSIS Monitoring

Monitoring Features - DVB-S/S2

RF input level	30-110 dBµV ±1 dB
MER	0 to 40 dB (±1 dB)
CNR	up to 40 dB ±0.5 dB
BER (DVB-S)	Pre-Viterbi, Post-Viterbi

SPECIFICATIONS

BER (DVB-S2)	Pre-LDPC, Post-LDPC, PER; Eb/N0, link margin, modulation parameters; MultiStream support, PLS support
Signal Lock	Lock/Unlock
Modulation parameters	L1 part 2 signaling in DVB-C
ETSI TR 101 290 Monitor	ETSI TR 101 290 Priority 1, 2 and 3; MPEG-2 TS Monitor
T2-MI Monitor	Single/Multi-PLP support; PLP extraction and TS PLP analysis (ETR 101 290); SAE (Service Availability Error), SDE (Service Degradation Error); Monitor sequentially multiple channel frequencies or PLPs
QoS Monitor	ETSI TR 101 290 SAE, SDE
Round-Robin Logger	up to 40 channels
RF Spectrum Display	RF Spectrum with SPAN 10 MHz
Constellation Display	QPSK
Other Features	Audio/Video Freeze Detection, DOCSIS Monitoring

Monitoring Features - DVB-C	
RF input level	30-110 dBμV ±1 dB
MER	0 to 40 dB (±1 dB)
SNR	0 to 40 dB (±1 dB)
BER	Viterbi, RS
Signal Lock	Lock/Unlock
Modulation parameters	L1 part 2 signaling in DVB-C
ETSI TR 101 290 Monitor	ETSI TR 101 290 Priority 1, 2 and 3; MPEG-2 TS Monitor
T2-MI Monitor	Single/Multi-PLP support; PLP extraction and TS PLP analysis (ETR 101 290); SAE (Service Availability Error), SDE (Service Degradation Error); Monitor sequentially multiple channel frequencies or PLPs
RF Spectrum Display	RF Spectrum with SPAN 10 MHz
Constellation Display	16QAM, 64QAM, 128QAM, 256QAM, 1024QAM, 4096QAM
Other Features	Audio/Video Freeze Detection, DOCSIS Monitoring

Communication Interfaces	
Type	RJ45 Connector, Ethernet 10/100 Base-T
Supported Protocols	HTTP, FTP, SMTP, SNMP v2/v2C
Device Discovery	UPnP support

Measurement Storage	
Storage	32GB Build-in Memory Card
Monitoring Logs Data format	Text, CSV

Operating conditions	
Temperature	-15°C to 55°C
Humidity	< 95%, non-condensing
Altitude	0 to 5000m above sea level

Power	
Voltage	100-240V / 50-60 Hz
Power Consumption	20VA
Connector	IEC320, Fused and EMI-suppressed

Size and Weight	
Dimensions (W;H;D)	485 x 44 x 180 mm
Shipping Weight	540 x 115 x 300 mm / 2.700 kg
HS Code	8527212000