WORLDCAST SYSTEMS

POWERFUL PERFORMANCE CONTROL SAVINGS SERVICES

dab+

RADIO WORLD WINNER BEST OF SHOW AWARDS 2019

Audemat DAB Probe

QoS Monitoring. Measurements. Analysis.

The Audemat DAB Probe is a complete DAB radio monitoring solution to perform advanced signal analysis, on-site and of broadcast coverage area.

Designed to be installed in **SFN or MFN** networks (Single or Multiple Frequency Networks), the Audemat DAB Probe is feature-packed with a user-friendly web interface, alarm notification by email or SNMP traps, and is equipped with telemetry board (via ScriptEasy) and audio output connectors.

The advanced software tools provide a deep signal and content analysis with impulse response representation, TII, audio streaming, ETI recording, and more. Also designed for optimal monitoring of the user experience, **Audemat DAB Probe** includes visual slide-shows, DLS and services display to enable users to hear and see in real-time the same content as their audience of listeners.

MONITORING ANALYSIS STREAMING RECORDING TELEMETRY

Benefits

Monitoring Expertise

Audemat DAB Probe is the result of the company's 25 years of expertise developing analog and digital signal monitoring solutions for radio & TV. The Audemat range is recognized worldwide for its level of quality, accuracy, and reliability.

Time & Operational Cost Saving

Users benefit from standard tools to remotely control the quality of their DAB broadcast as well as the good operating conditions of their facility.

Comprehensive & Scalable Platform

Designed to meet market needs after extensive customer feedback, Audemat DAB Probe is a feature-rich hardware platform that is ready for optimal performance of monitoring, measurement, and analysis. Highly scalable, it can be enhanced with new software versions or options through a simple, remote upgrade.

Engineered for:

Service Operator

- Ensure the quality and the continuity of the RF signals
- Immediately notify a problem on the broadcasting network.
- Remotely control the facility and do the first troubleshooting

Regulation authorities

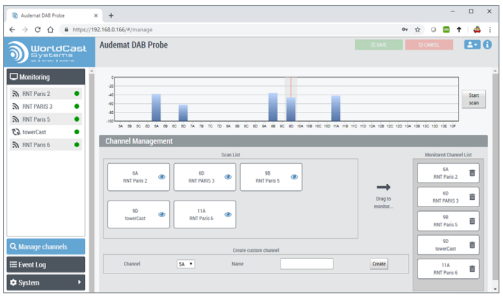
- Ensure the conformity with the broadcasting rules
- Analyze the causes of possible disturbances
- Give a history of the situation over several weeks.

MUX operator & Content Providers

- Monitor the quality of the broadcast services
- Confirm the programs are ON-AIR 100% of the time
- Verify the Ensemble content
- Check the audio presence and level
- Verify the PAD/Audio association

Detect BROADCAST CHANNELS

A quick DAB band scan is available to visualize the DAB spectrum. It also can be used to facilitate the monitoring configuration.



Scan

Qualify THE MUX RECEPTION QUALITY

The advanced measurements and relevant parameter values are represented graphically. Trends can be consulted over 3 rolling months.

RF Measurements

Monitor AN SFN NETWORK

To detect any failure or variation, the transmitter peaks (up to 5) are evaluated by time / levels and the decoding of the TII makes it possible to identify the transmitters.

Analyze the CONTENT

In addition to decoding of the FIG tables, the details of each service are clearly displayed including the real audio and PAD bitrates.

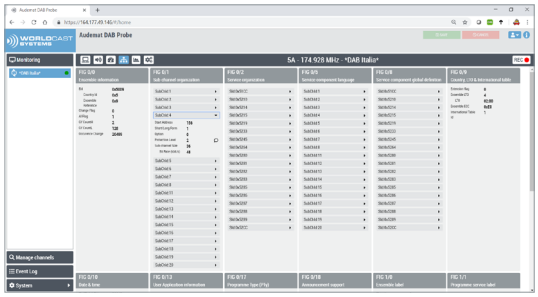


FIG Tables

Alarm notification & USER MANAGEMENT

Several user accounts can be created with personal access levels and rights. Depending on the user access level and rights configuration, an alarm notification can be sent to 1 or several users, by E-mail or SNMP, to the network management system(s).

Stream the service / ON-AIR VERIFICATION

Following an alarm, on-air verification is possible. Users can remotely stream the audio, in compressed or in native format, and visual the associated DSL and slideshow.

Audio Streaming

Consult the TRENDS

The unit stores the RF measurements over 3 sliding months in the µSD card provided in standard. The graphical representation allows the identification of trends. The 10000 last events including the alarms can also be consulted and filters are possible to find out relevant information.

This data can be exported in CSV file format.

On-site FACILITY MANAGEMENT

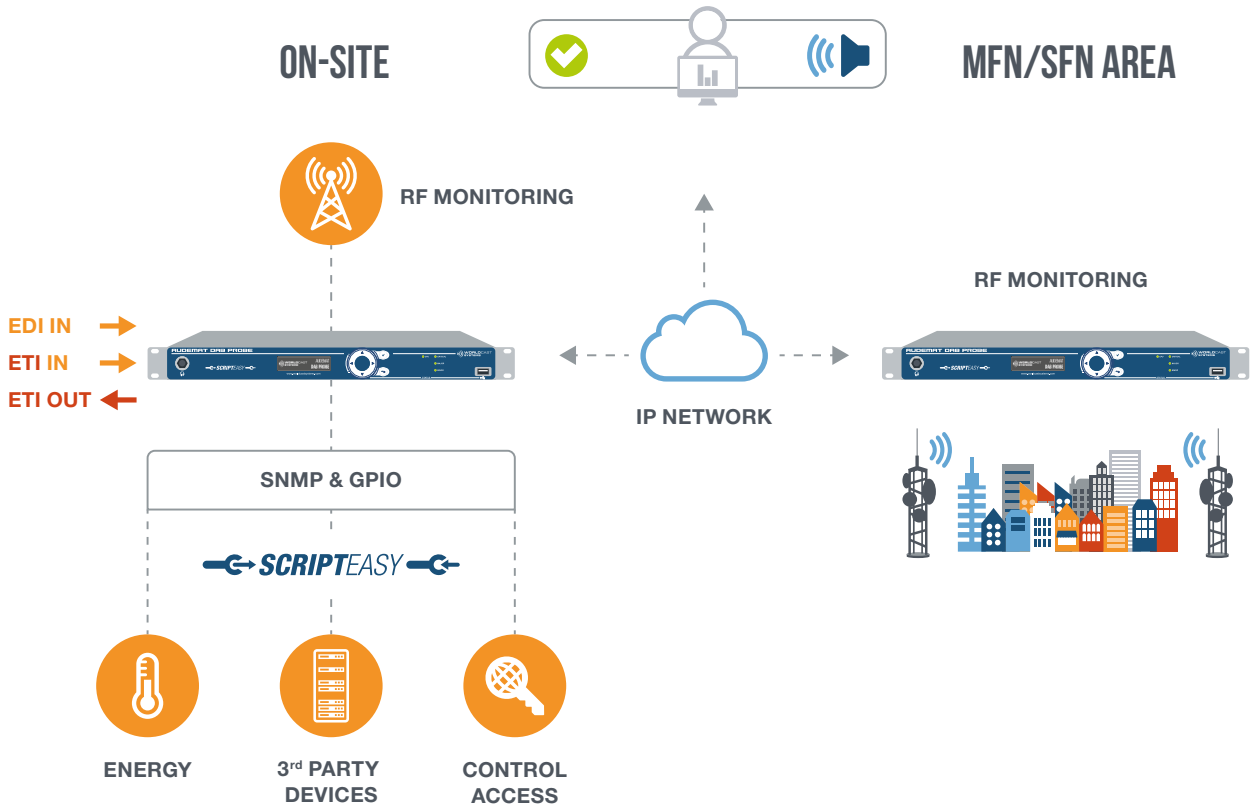
Using the physical inputs/outputs or SNMP commands, it is possible to monitor and control almost all the devices or sensors to combine the information and verify the status of the entire transmitter site.

SCRIPTEASY

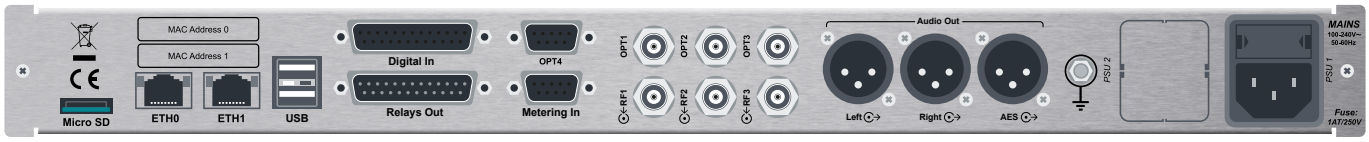
Advanced Telemetry & Facility Management

ScriptEasy is a revolutionary facility control software for connected devices, enabling the automatic correction of any critical errors that may occur. Across its intuitive web interface, ScriptEasy includes management of the GPIO, serial communications, SNMP, logic operators, live user inputs, timers, and more. This enables the “scripting” of site operations for evaluating multiple parameters and automatically engaging back up systems, while simultaneously alerting relevant technical personnel. **Integrated in the Audemat DAB Probe, ScriptEasy is the core technology used for the product’s telemetry input-outputs.**

Example of installation configurations:



AUDEMAT DAB PROBE | Technical specifications



Rear panel

	AUDEMAT DAB PROBE	
RF parameters	**Measures**	**Monitoring**
DAB, DAB+, DMB / Bande III, Mode I	X	
Reception level	X	X
Sync, CNR, SNR, MER	X	X
Freq offset (internal reference)	X	X
TII: Transmitter Identification Information	X	X
Transmitter SFN freq Peaks	X	X
Shoulders measurement, Link Margin	X	X
MSC errors, RS errors	X	X
Constellation, MER and QPSK per carrier	X	
Content parameters	**Decoding**	**Monitoring**
Mode, service mode	X	O
Protection info	X	O
CU and address	X	O
Ensemble label	X	O
Country, language	X	O
Service list & ID	X	O
Component list & ID	X	O
Dynamic label, PTY	X	O
Bitrate	X	O
FIG Tables	X	
DAB, DAB+: Audio functions		
Audio Mode and Level (L+R)	X	X
Audio and PAD bitrates	X	
Audio streaming with Slide Show, DLS Native format or MP3 (8 to 320 kbps)	X	
Recording and history		
ETI recording (data flow)	Up to 10 mn on request	
Readings with export in CSV format	24h in RAM and 3 months on supplied µSD card	
Event log with export in CSV format	10 000 last events with filters	

o : Monitoring of Sid/SubCId pairs.

Interfaces (standard delivery)	
RF inputs	1 to 3 depending on version - BNC type (Max 2 for DAB, 1 for future use)
Audio outputs	
Analog	2 - XLR type / Left + Right
Digital	1 - XLR type / AES
Headphone	Professional Jack 6.35mm on front panel
µSD card slot	1 - For measurement history storage
Telemetry	Including ScriptEasy Software
Relays	8 - SPDT 1A-30V
Digital inputs	16 - Internal or external power supply (5-25VDC)
Metering inputs	4 - 0-50V (4 ranges-ADC: 10 bits)
Screen	1 - For IP configuration, device information and status
LED indicators	4 - for alarm status and CPU operation
LAN ports	2 - RJ45 ports Base-T 10/100/1000M
Power Connector	1 - IEC type
Inputs: GPS antenna, ETI NI (G703), 1PPS	Optional board. Factory mount. BNC connectors.

EDI Information
FEC, transport addressing, src/dest ID
FIC presence, STAT, ATST Flag
UTC0 offset for FCT=0
EDI Date for FCT=0 / TSTA for FCT=0
Sub-channel Stream Characterization
Multiplex Network Signaling Channel

ETI Information
Status Field (STAT)
Number of Streams (NST)
Frame Length (FL)
TIST for FCT=0
Sub-channel Stream Characterization
Multiplex Network Signaling Channel

MAIN characteristics	
Dimensions (l x h x d)	483(19'') x 42 (1U) x 180mm
Weight	2.35 kg
Main power supply	100-240VAC / 50-60 Hz
Power consumption	25 VA
Temperature Working temperatures Storage	 0°C - +50°C -30°C - +80°C
Humidity	10-95% Non-condensing RH

Order information

REF	**DESCRIPTION**
TF01086	AUDEMAT DAB PROBE Standard version including ScriptEasy
Software options	
CD01011	Optional dual-receiver
CD01014	Optional EDI input
CD00064-10	ScriptEasy extension to manage 10 additional SNMP devices (1 license included, 1 other can be added)
Hardware options	
CD01012	1PPS and GPS antenna input
CD01013	ETI input/output

Technical specifications are subject to change without prior notice - On project, WorldCast Systems may offer distinct specifications. Spécifications on the offer prevail those in this document.

Headquarters
20 avenue Neil Armstrong
33700 Mérignac (Bordeaux) **FRANCE**
+33 (0)5 57 928 928

US Subsidiary
20233 NE 15th Court
Miami, FL 33179 **USA**
+1 305 249 3110