

ADVANCED FM AND DAB/DAB+ MONITORING WITH 2 INDEPENDENT TUNERS IN ONE PROFESSIONAL PLATFORM

The DB4012 is a next-generation professional broadcast monitoring receiver developed for continuous monitoring and analysis of both FM and DAB/DAB+ radio services. Equipped with two completely independent tuners, one dedicated to FM reception and the other to DAB/DAB+ it performs simultaneous monitoring of both broadcast standards, providing broadcasters with a complete overview of their transmission quality.

Built around a high-performance RF front end and advanced DSP architecture, the DB4012 delivers precise measurement of all critical broadcast parameters. It continuously analyzes RF level, MPX deviation, stereo performance, RDS/RBDS information, loudness, audio levels and signal quality for FM broadcasts, while the DAB/DAB+ receiver provides complete ensemble, service and subchannel monitoring together with BER measurement, PAD decoding and comprehensive metadata analysis.

The integrated Loudness Analyzer complies with ITU BS.1770-4 and EBU R128 recommendations, enabling accurate loudness monitoring and helping broadcasters maintain consistent on-air audio quality. Advanced RDS/RBDS analysis is complemented by detailed DAB/DAB+ service monitoring, including automatic display of Program Associated Data (PAD), ensemble information, service metadata and transmission parameters.

For long-term performance evaluation, the DB4012 incorporates dedicated 24-channel data loggers for both FM and DAB/DAB+, continuously recording measured parameters, alarms and operational events. Historical data is stored locally and can be easily accessed via the integrated FTP server for analysis, reporting and troubleshooting.

A flexible alarm management system allows users to define thresholds for virtually every monitored parameter, including RF level, audio level, MPX deviation, RDS status, BER, PAD availability, loudness and signal loss. Alarm notifications can be delivered via E-mail, SNMP v2c and rear-panel GPO outputs, ensuring immediate awareness of transmission faults and allowing rapid corrective action.

The DB4012 has been designed for effortless local and remote operation. Its front panel features a high-resolution OLED display, bright LED bar-graph meters and an intuitive navigation system with dedicated soft keys for quick access to all monitoring functions. The built-in web interface enables secure remote control and monitoring from any standard web browser without requiring additional software and is fully compatible with Windows, macOS, Linux, Android and iOS devices.

Engineered for reliable 24/7 operation, the DB4012 provides broadcasters, network operators and regulatory organizations with a powerful, accurate and dependable solution for professional FM and DAB/DAB+ monitoring. By combining comprehensive RF analysis, audio measurement, metadata monitoring, intelligent alarm management and extensive remote capabilities into a single platform, it offers an efficient and future-ready solution for today's hybrid radio networks.



FEATURES

- FM Band 87.1 - 108 MHz Basic Spectrum Analyzer
- Up to 100 dBµV direct RF Antenna Input
- Selectable wide range IF filter bandwidth
- Fully DSP-based core
- Built-in Loudness Analyzer
- Bright bar graph LED metering of the RF and Audio Levels
- Wide angle, easy to read OLED display
- Very Intuitive Navigational Menu
- Levels measurement with data history
- Selectable De-emphasis
- Built-in Stereo Decoder
- RDS and RBDS decoder with BER meter
- Built-in 24 channel FM Data logger
- Real Time Audio Program Streaming
- DAB/DAB+ compliant receiver
- Support for Program Associated Data (PAD)
- Detailed DAB component information
- High-end digital tuner
- Built-in 24 channel DAB/DAB+ Data logger
- Protected access to the device settings
- Headphone output with front panel level control
- SNTP for automatic synchronization of the built-in clock
- Level Adjustable, Balanced Analog Audio Outputs on XLR
- Professional AES/EBU Digital audio output
- LAN port for full TCP/IP remote control and monitoring
- Adjustable MIN/MAX alarms for RF, Left & Right Audio Levels
- Alarm dispatch via E-mail, SNMP ver.2C and GPO
- Built-in WEB and FTP server
- Easy to use WEB interface
- Apple and Android devices support
- Firmware updates will ensure improved operation
- Accurate front-panel metering for local use
- Restore Factory Parameters option
- Easy Installation and Setup

SPECIFICATIONS

DAB/DAB+ Radio Input

RF frequency range	168 - 240 MHz
DAB/DAB+	Band III Channels 5A - 13F
Sensitivity	18 dBμV
Input connector	BNC 50Ω
In compliance with	ETSI EN 300 401
Ensemble acquisition Time	940 ms
L&R Audio	1%, +5.0 to -50.0 dB, 0.1 dB resolution

DAB/DAB+ Radio Metering

Quality indicators	RSSI, SNR, CNR, FIC Quality, FFT Offset
PAD	DLS, MOT
Metadata Displayed	Ensemble Label, Component List & ID, Service List & ID, Dynamic Label, PTY, Sample Rate, Bit Rate, Gain, Mode, Service Mode, Protection Info, Current CU & Address, Country, Language, Time & Date

FM Radio Input

Tuning Range	87.1-108 MHz (CCIR)
Tuning Step	10, 20, 50, 100 kHz
Tuner Sensitivity	30 dBμV
Antenna Ports	BNC Connector, 50Ω
Antenna Ports Isolation	> 40 dB
Dynamic range	100 dB

FM Demod

IF Filter Bandwidth	15 Increments (27kHz - 157kHz, Auto)
Dynamic range	90 dB

Stereo Decoder

Frequency Response (L&R)	±0.1 dB, 10 Hz to 15 kHz
SNR (Stereo)	60 dB, 50 μs de-emphasis
THD	0.15% @ 1kHz, 0.4% from 10 Hz to 15 kHz, 50 μs de-emphasis
Separation	50 dB, 50 Hz to 10 kHz, 50 μs de-emphasis
Crosstalk	52 dB

Size and Weight

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

RDS Decoder

Standards	European RDS CENELEC; United States RBDS NRSC
PI	Yes
PS	Yes
RT	Yes

FM Radio Metering

RF Level	±1 dB, 0 to 100 dBμV
Audio	±1 dB, +10.0 to -55.0 dB, 0.1 dB resolution

Outputs

Composite	+12 dBu @ 75kHz, 75Ω, unbalanced BNC Connector
Audio (L, R)	+6 dBu, 600Ω, balanced XLR Connector
AES3 (L, R)	5.0 Vp-p, 110Ω, balanced XLR Connector
SPDIF (L, R)	3.0 Vp-p, 110Ω, unbalanced BNC Connector
Optical (L, R)	Transmitter, TOSLINK
Alarms	Programmable terminals on rear panel, optoisolated
Headphone	6,3mm (1/4") Phone Jack

Communication Interfaces

Ethernet 10/100 Base-T	RJ45 Connector
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Measurement Storage

Storage	Build-in Memory Card
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



WE NEVER SPARE EFFORTS AND RESOURCES TO TURN OUR IDEAS INTO SUCCESSFUL PRODUCTS