



It is essential in the development of any RDS capable FM receiver to fully validate the reception characteristics in as many real-world situations as possible. This is difficult to achieve with a receiver designed for use in a static location, but becomes far more complex when the receiver is moving such as is encountered with automotive products. Typically this involves extended periods of on-road testing across multiple countries to ensure good coverage of likely scenarios.

Ideally, it would be possible to recreate these situations in the development environment, allowing better testing throughout the process and reducing the amount of expensive on-road testing. The DeskLab RDS is specifically designed to assist engineers in this process by providing 8 individually controllable FM/RDS channels, providing a rich environment to emulate real situations without leaving their desks.

Key Features

Powerful 8 Channel FM/RDS Generator

- All channels independently configurable and controllable
- Supports RDS (Radio Data System) and RBDS (Radio Broadcast Data System)
- Onboard processor offloads RDS management from host computer
- Overall RF output level can be controlled over a 60dB range in 0.5 dB steps
- Controllable from a Windows computer via a standard USB-2 link

Per Channel Features

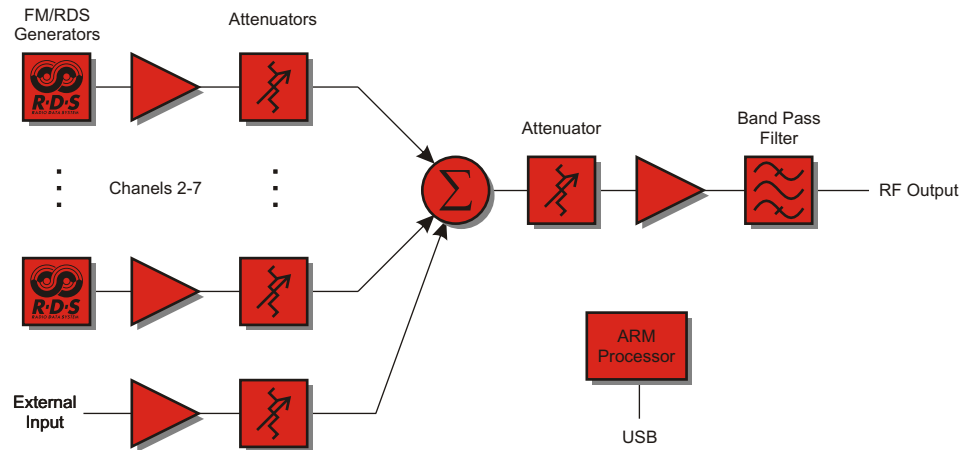
- Transmit frequency adjustable from 76MHz to 108 MHz with 50kHz resolution
- Channel RF output level can be controlled in the range 15 to 70 dBuV in 0.5 dB steps
- Generates stereo audio and RDS multiplex
- Supports all RDS group types in an arbitrary sequence
- Can dynamically switch between multiple group sequences

Audio Capabilities

- External stereo audio inputs on 2 channels
- Onboard mono/stereo DDS tone generation on all channels (500Hz -15kHz)
- Arbitrary waveform replay (1 stream transmitted on 1 or more channels)

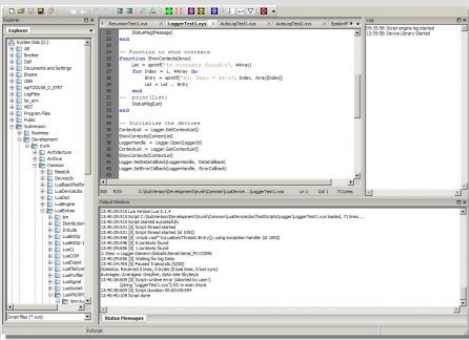
Application Software

- DeskLab Explorer provides a GUI driven configuration interface
- DeskLab Script allows the creation of complex, dynamic scripted tests
- Software supports Windows 10 and 11
- Custom application integration possible via SDK



Applications

- Fully automated FM/RDS receiver testing
- Multi-station AF switch simulation
- Checking of TA handling
- Tunnel entry/exit requirements validation
- TMC message generation to exercise navigation systems
- Replication of real-world RDS scenarios
- DAB-FM link testing
- And many others...



Product Specification

Key Features

- 8 independent FM/RDS generator channels
- Onboard ARM processor
- USB-2 Full Speed interface
- CANbus and RS-232 interfaces
- Includes Xylanta DeskLab software suite (RDS version)

FM Frequency (Per Channel)

- Frequency range 76MHz to 108MHz in 50kHz steps
- Frequency accuracy +/-3.5kHz

FM Modulation (Per Channel)

- Stereo pilot tone range 0Hz to 19kHz in 1Hz steps
- Pilot tone deviation range 0Hz to 90kHz in 10Hz steps
- Audio deviation range 0Hz to 90kHz in 10Hz steps
- RDS deviation range 0Hz to 7.5kHz in 10Hz steps
- Pre-emphasis off/50uS/75uS

FM Output Power (Per Channel)

- Output range 0dBuV to 70dBuV in 0.5dB steps
- Output power accuracy +/-2.5dB

Overall Output Power

- Output attenuation range 60dB in 0.5dB steps
- Output impedance 50ohms

Other

- Requires external power (8-30V DC @ 1.0A)
- Operating temperature 0°C to 40°C, 85% RH (non condensing)
- Extruded aluminium case, 165mm x 110mm x 35mm
- Weight 400g
- FCC and CE compliant

DeskLab Software

Explorer

- Graphical interface for device configuration and management
- Suitable for static testing

Script

- Fully script driven test environment
- Suitable for demanding validation with full repeatability
- Supports script development and debugging
- Can optionally support other third-party devices

SDK

- Allows control and integration via third-party tools (in development)

General

- Requires Windows 10 or 11



RDS Support

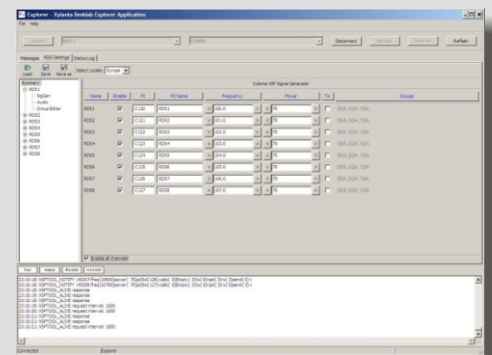
Conforms to IEC 62106 Ed.2 (2009)
Configurable per channel

Basic

- Program Identifier (PI)
- Program Station Name (PSN)
- Dynamic PSN
- Program Type (PTY/PTYN)
- Dynamic PTY
- Traffic Announcement (TA)
- Traffic Program (TP)
- Radiotext (RT)
- Alternate Frequencies (AF)
- Music/Speech Switch (M/S)
- Method A or B AF lists
- Clock Time and Date (CT)
- Decoder Identification (DI)

Advanced

- Flexible group sequencing (GS)
- Enhanced Other Networks (EON)
- TMC single/multi event
- Radiotext Plus (RT+)
- Enhanced Radiotext (eRT)
- FM-DAB Link



For more information email: sales@xylanta.com

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