RWC2010C

DAB/DAB+/DRM30/DRM+ Multiplexer
3xFM RDS/1xAM Transmitter
ETI/MDI Player
Audio Analyzer



GENERAL DESCRIPTION

Digital Radio Multiplexer

The RWC2010C is equipped with Ensemble Multiplexer, which simply enables it to simulate the functions of broadcast stations. Protocol parameters can be easily edited via friendly GUI, and applied immediately to the signal being broadcasted. The built-in Ensemble Multiplexer supports up to 64 Services and 64 Service Components for DAB/DMB and up to 4 Streams for DRM with easy on/off configuration, where the graphical structure helps users understand how to build.

ETI / MDI Player

ETI (or MDI) files describe the characteristics of a signal suitable for transporting a full DAB Ensemble (or DRM Multiplex), where the ETI comprises a number of subchannels and a formatted Fast Information Channel (FIC) between a DAB Ensemble provider and a transmission network provider, and the MDI comprises a number of streams and a formatted Service Description Channel (SDC) between a DRM Multiplex provider and a transmission network provider. It means that if a specific broadcasting station's DAB/DRM signal is recorded as an ETI (or MDI) file, the recorded file contains all the information about the station. Using the RWC2010C's ETI/MDI player function with these files, specific broadcasting stations' DAB signals or DRM signals can be easily regenerated in labs.

Analog Radio Transmitter

The RWC2010C provides analog AM/FM and RDS transmit functions. Most digital radio receivers also have analog AM/FM features, so it is meaningful to integrate the test system with both digital radio functions like DAB/ DRM functions and analog radio functions into a single tester.

Audio Analyzer

The RWC2010C provides an audio analyzer function which can not only measure the audio signal quality (SINAD, THDN and SNR) and frequency, but also show audio waveform and audio spectrum.

Functional Test

The RWC2010C supports high-tech protocol tests such as Reconfiguration, Announcement, and Alternative Frequency. Reconfiguration is a function to provide the required mechanisms for changing the multiplex configuration whilst maintaining continuity of services. Announcement is a function for a compulsory situation or automaton functions.

Service Linking Test

The PC application software Service Linking Test Tool allows users to connect up to four RWC2010Cs and RWC2100Fs and build a wide range of test environments with mixed combinations of DAB, DRM and FM RDS services.

KEY FEATURES

Supporting Protocols

- Supporting DAB, DAB+, DMB, DRM30, DRM+, AM, FM, and RDS

Built-in Ensemble Multiplexer

- Easy to edit Ensemble: 64 service components for DAB and 4 streams for DRM
- Various data services DMB, SLS, and SPI(EPG)
- Reconfiguration, Announcement, Alternative Frequency, TII, and Time functional tests

Compatible File Player

- ETI and MDI file player function with OFDM Modulation
- IQ file player function for DRM30

Service/Seamless Linking Test

- Use of two or more RWC2010C or combination of RWC2010C and RWC2100F
- DAB-DAB, DAB-DRM, DAB-FM, DRM-DRM, DRM-FM, FM-FM
- Supports powerful Alternative Frequency(AF) functions for service linking test

Single Frequency Network (SFN) Test

- Two RWC2010C testers can transmit precisely synchronized DAB or DRM signal
- Adjustable delay between signals with 0.1us resolution through a data cable

Multi-Channel FM & RDS Function

- Up to 3 FM / RDS radio signals can be generated simultaneously
- Provides a dedicated embedded RDS editor

Audio Analyzer

- Make it possible to test receiver sensitivity
- Audio measurement: SINAD / SNR / THDN
- Audio waveform and spectrum

SPECIFICATION

** The specifications are subject to change without notice.*

Modulation

- OFDM
- D-QPSK, 16QAM, 32QAM, 64QAM
- FM/AM

Frequency

- LF/MF/HF Band: 149kHz to 30MHz
- BAND I/II/III: 47 to 68MHz, 76 to 108MHz, 174 to 250MHz
- Resolution: 1kHz
- Accuracy: ±1.5ppm/yr @ operating temperature

Output Level

- -10 to -110dBm (OFDM: -20 to -120dBm) for LF/MF/HF BAND
- 0 to -110dBm (OFDM: -10 to -120dBm) for BAND I/II/III
- Resolution: 0.1dB
- Accuracy: ±1dB

Output Level with RWC9500B (optional)

- +15 to -55dBm (CW/OFDM)
- Resolution: 0.1dB
- Accuracy: ±1dB

Audio Analyzer Characteristics

- Input Frequency: 0.1 to 20 kHz
- Max Input Level: Unbalanced 4 Vrms
- Bandwidth: 20 kHz
- Low Pass fIlter: Off, 1kHz to 30 kHz in 1kHz Step
- Connection Type: 3.5 pi Stereo
- SNR: > 85dB (@ 1Vrms)
- SINAD: > 75 dB (@ 1Vrms)
- THD: < 0.01% (@ 1Vrms)

VSWR

- Better than 1:1.5

Frequency Reference

- Internal Reference & Stability: 10MHz, ±1.5ppm/yr @ operating temperature
- External Reference Input: 10MHz, 0 to +20dBm

Data IO Port

- Ethernet for Remote: RJ45
- RS232 for Remote: D-sub 9
- Data IO: RJ45

Miscellaneous

- Operating temperature: 5 to 40℃
- Line voltage: 100 to 240 VAC, 50/60Hz
- Dimension: 240(W) x 110(H) x 348(D) mm
- Weight: 5kg
- Display: 5” Color LCD, touch screen
- Internal storage: 256GB

ORDERING INFORMATION

C2010C-00	Digital Radio Tester : DAB/DAB+/DRM30/DRM+/RDS/FM/AM
C2010C-01	Digital Radio Tester - DAB+DRM: DAB/DAB+/DRM30/DRM+
C2010C-02	Digital Radio Tester- DAB+Analog: DAB/DAB+/RDS/FM/AM
C2010C-03	Digital Radio Tester - DRM+Analog: DRM30/DRM+/RDS/FM/AM
C2010C-04	Digital Radio Tester - DAB Only : DAB/DAB+/ETI
C2010C-05	Digital Radio Tester - DRM Only : DRM30/DRM+/MDI
C2010C-06	Digital Radio Tester - Analog Only : RDS/FM/AM
O2010C-01	Digital Radio Tester – Adding DRM
O2010C-02	Digital Radio Tester – Adding DAB
O2010C-03	Digital Radio Tester – Adding Analog
O2010C-04	Digital Radio Tester – Adding Audio Analyzer
O2010C-95	Extended Hardware Warranty
O2010C-98	Calibration

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