

Network Receiver

RLX-800



The WiNRADiO RLX-800 Network Receiver consists of a software-defined radio receiver and a web server on a Linux-based industrial computer platform.

No additional hardware such as a PC, keyboard or monitor are required on the server side. The unit contains a highly reliable low-power Linux-based computer for server-side processing and storage.

The actual receivers are well proven WR-G313i (9 kHz to 30 or 180 MHz) or WR-G315i (9 kHz to 1.8 GHz) models. Simply plug the unit to a LAN or Internet network via a standard RJ-45 connector, and it is ready to be used.

Features

- Frequency range from 9 kHz up to 1800 MHz
- Linux-based server for reliable unattended performance
- Java-based client applets for platform independence
- Multi-user and multiple-connection support
- Encrypted communication
- Clustering support
- User authentication
- TCP/IP or UDP protocols for streaming
- Compressed or uncompressed streaming
- Audio and IF recording and playback
- Easy configuration via web interface

The web-based configuration interface makes it possible to fully configure the communication parameters, such as the IP address, ports, users, passwords and user access rights.

Each user can be assigned different access privileges, which may specify the extent of the receiver control and access to the saved information.



RLX-800 Java Applet (Client-Side user Interface)

Both audio and IF recording and playback are possible. As monitoring activities take place in the server, this makes it possible to start a monitoring task remotely and then disconnect the client. The task then keeps running autonomously. A typical task may include recording, spectrum sweeping or activity monitoring. The results can be saved on the server and later downloaded for later processing and analysis. Web-based user control makes it possible to create separate user accounts.

Recorded files are saved on the server and can be organized in folders. The client-side Java applet includes a file manager that makes it possible to organize and view recorded files.

Apart from a standard web browser, the RLX-800 Network Receiver does not require any additional application software on the client side; all is provided by the built-in Java applet which runs on most common platforms. The Java applet makes it possible to observe the signal spectrum, measure the signal strength, tune the receiver, set the demodulation mode, control the IF filter bandwidth and other parameters such as volume, notch or audio filter, and listen to or record the demodulated audio.



Specifications

Receiver type	DSP-based SDR with DDS-based dual-conversion super heterodyne front end		
Frequency range	9 kHz - 1800 MHz (3500 or 8599 MHz with optional)		
Tuning resolution	1 Hz		
Mode	AM, AMS, LSB, USB, DSB, ISB, CW, FM (wide-FM with optional WFM demodulator)		
Image Rejection	1.8-150 MHz : 60 dB typ.		
	150-1800 MHz : 50 dB typ.		
IP3	0 dBm @ 20kHz		
Spurious-free dynamic range	90 dB		
MDS	-135 dBm		
Phase noise	-148 dBc/Hz @ 100 kHz		
Internal spurious	Typically less than equivalent antenna input of -105 dBm		
RSSI accuracy	2 dB		
RSSI sensitivity	-137 dBm		
Bandwidth	50 - 15000 Hz (adjustable in 1 Hz steps) 230 kHz (WFM option only)		
Scanning speed	50 channels/s		
Sensitivity (AM/SSB/CW 10dB S/N) (FM/WFM 12dB SINAD)	Mode	0.15-500 MHz	500-1800 MHz
	AM, AMS (30% modulation)	-108dBm (0.89μV)	-104dBm (1.4μV)
	AM, AMS (80% modulation)	-116dBm (0.35μV)	-112dBm (0.56μV)
	LSB, USB, ISB, DSB	-119dBm (0.25μV)	-115dBm (0.40μV)
	CW	-126dBm (0.11μV)	-122dBm (0.18μV)
	FM	-113dBm (0.50μV)	-109dBm (0.80μV)
	WFM (WFM option only)	-104dBm (1.40μV)	-102dBm (1.78μV)
Intermediate frequencies	IF1: 109.65 MHz IF2: 16 kHz		
Roofing filter	2 x 4-pole 20 kHz crystal filter		
Tuning accuracy	1 ppm (25°C ±2°C)		
Frequency stability	0.5 ppm (0 to 60° C)		
Antenna input	50 ohm (SMA connector)		
Maximum input level	+18 dBm		
Output	600 ohm line audio		
Size	Length : 237 X Width 213 X Height: 105 mm		
Weight	4.6Kg		