XDS Broadcast Gateways

Media Distribution

Patents Pending

XDS-PRO1R
Audio Digital Media Receiver

The XDS-PRO1R digital audio receiver allows radio stations to receive audio broadcasts from distributed satellite or IP networks for live broadcasting or storage for later play-out. The unit provides targeted advertising capabilities, allowing radio networks to play localized ads & other content relevant to specific locations. In addition to copy splitting, the cost-effective XDS-PRO1R supports audio insertion & digital live recording with playback to delay time zone feeds. It also has advanced station automation interfaces via IP, RS-232, relay closures, OPTOs & commands to seamlessly interface with automation systems. Finally its advanced scheduling capabilities allow networks & stations to automatically switch between live & pre-recorded channels & programs.

Applications

- **Live Broadcasting:** News, talk & sports
- **Distribute Over Satellite or Internet:** Live or pre-recorded
- **Data & File Delivery:** Over satellite or Internet with confirmation
- **Spot/Program Insertion:** Localized advertising & programming

Features

- Low bitrate down to 100 Ksps (optional), 256 Ksps standard
- Can fit in a 150 kHz carrier (optional), 400 kHz standard
- DVB® S/S2 - QPSK/8PSK
- MPEG-2, AAC-LC, HEv1 & HEv2*
- One balanced analog output
- One digital AES/EBU output
- One IP AES67 output (one stream)
- 128-GB M2SATA solid-state drive
- Store & forward file delivery
- Receives live IP streams
- Locally input LIDs, liners & spots
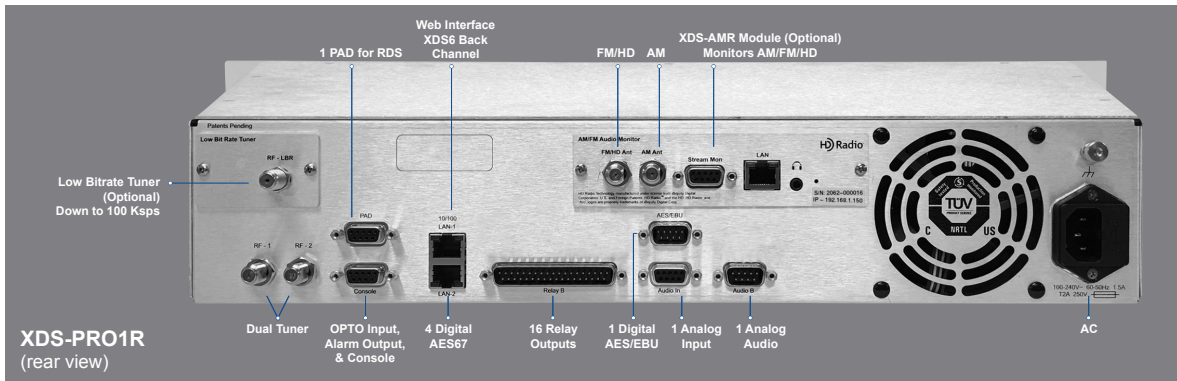- Import/export content locally
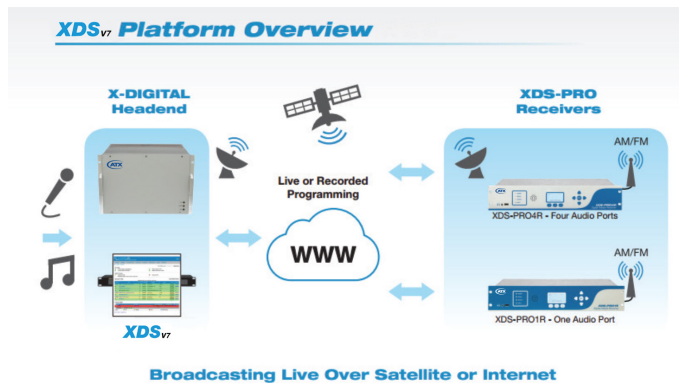- Store & forward

- Audio input for network automation
- One PAD output port for RDS
- 16 relays closures (hard, RS-232 & IP)
- Program station automation via WebUI
- Two 100BaseT Ethernet ports w/VLAN
- DHCP, NFS, HTTP & Telnet
- Alarms via relay closure, email & SNMP
- In-field firmware upgradable
- Record & insertion of media
- Remote control via Xpress or XDSv7
- For satellite or streaming networks
- Cost-effective

* Certain limits apply

XDS-PRO1R (rear view)

Labels (clockwise/top):
1 PAD for RDS — Web Interface XDS6 Back Channel — FM/HD — AM — XDS-AMR Module (Optional) Monitors AM/FM/HD

Low Bitrate Tuner (Optional) Down to 100 Ksps — Dual Tuner — OPTO Input, Alarm Output, & Console — 4 Digital AES67 — 16 Relay Outputs — 1 Digital AES/EBU — 1 Analog Input — 1 Analog Audio — AC

Network Audio Solutions

Broadcast radio networks enjoy unprecedented audio quality, centralized programming & control of receivers, live & stored programs, localized advertizing & a cost-effective end-to-end solution.

Network Management

Each XDS-PRO1R unit can be fully controlled by the ATX XDSv7 Network Management System. Combined with XDSv7, this feature-rich system solution provides closed loop management of each receiver, including digital rights management, live authorizations, content download/local playback, firmware updates & remote storage management. Additionally, receiver health, as-run logging & performance attributes can be collected & forwarded back to the XDSv7.

Proven Solutions

Live Broadcasts Over Satellite or IP Networks
The XDS-PRO1R provides live decoding of broadcast media. It can receive MPEG/DVB via live satellite or IP networks (Internet). Each live stream can be routed to any of the balanced outputs. Additionally, each live stream can be digitally mixed with another live stream or a stored playback file for maximum flexibility.

Store & Forward & File Delivery
Media files can be stored into internal SSD, HDD, or an external NAS.

Copy Spot Insertion
Audio files residing on the mounted device can be inserted into live or recorded media being output via the MPEG decoder. This feature allows localization of live, live stored, or pre-recorded programming.

Advanced Scheduling
Networks or affiliates can schedule live, delayed, or store & forward programs through a friendly web-based interface.

Live Audio Record/Playback (Time Shifting)
The XDS-PRO1R is capable of recording & playing back any broadcast channel. This enables the network/station to time shift content to the proper air-prime. Content can be recorded into its local or networked storage.

Automation Ready
The XDS-PRO1R is equipped with up to 16 programmable Form-A relays. These relays can be actuated via network control or ancillary data channels. This provides a legacy interface for many existing radio station automation systems. Additionally, opto inputs provide automation directly into the XDS-PRO1Q receiver. A balanced audio input is also available to allow station bypassing by network.

Accountability
Each XDS-PRO1R logs its activity. The network can decide what events are logged & how often they are reported to the network. This includes receiver performance, spot play, live play, time zone delays & all other programming controls. The optional off-air monitor module can also record & tag content received via AM/FM signals.

Off-Air Verification Module (Optional – XDS-AMR-MOD)
The network can watermark all audio content that plays out of the receiver. Watermarks include serial number & port of the receiver, program or commercial ID & station ID.

The XDSv7, AMR module in the receiver can record all the off-air content, detect spots & report to the XDSv7.

Specifications

XDS-PRO1R

RF INPUT	
FREQUENCY RANGE	950-2150 MHz
DATA RATES	256 Ksps to 40 Msps (DVB-S) 1 Msps to 40 Msps (DVB-S2) 100 Ksps (optional)
CARRIER LEVEL	-20 dBm to -60 dBm
CONNECTOR	F-type Female
IMPEDANCE	75 Ω
INB DC POWER	+18 VDC @ 500mA
MODULATION	QPSK (DVB-S) / 8PSK (DVB-S2)
FEC	Per DVB-S/DVB-S2 Specifications
IP INTERFACES	
LAN	10/100BaseT RJ45
CONTROL INTERFACES	
NETWORK MANAGEMENT	Via Satellite or TCP/IP
WEB	HTTP, Telnet on 10/100BaseT RJ45
SERIAL	Console RS232C, DB9-F
INPUT PORTS	
AUDIO	1 Balanced (600 Ω) DB9-F 1 AES/EBU DB9-F
OPTO	4 Form-A DB9-F
OUTPUT PORTS	
AUDIO	1 Balanced Output (600 Ω) DB9-M 1 Digital DB9-AES/EBU 1 Digital IP-AES 67 (Livewire+)
PAD	RS232C DB9-F
RELAYS	16 Form-A, NO, DB37-F
AUDIO DECODERS	MPEG-1 Layer II & AAC LC Status Alarm Out
MECHANICAL & ENVIRONMENTAL	
INPUT VOLTAGE	90 VAC to 240 VAC (50/60 Hz)
POWER CONSUMPTION	150W Max.
DIMENSIONS	3.5"H x 19.0"W x 12.0"D (8.89H x 48.26W x 30.5D cm)
MOUNTING	2RU, 19" Rack Mount
WEIGHT	8.0 lbs (3.6 kg)
OPERATING TEMPERATURE	0°C to +50°C (+32°F to +122°F)

Ordering Information

Part Number	Description
XDS-PRO1R	Audio Digital Media Receiver
XDS-LBR	Low-Bitrate 100-Ksps Module
XDS-AMR-MOD	AM/FM/HD Receiver Module

ISO
9001
REGISTERED

ATX Networks
1-501 Clements Road West, Ajax, ON L1S 7H4   Canada
Tel: 905.428.6068 | Toll Free: 800.565.7488 | support@atxnetworks.com