

STEREO
TUNED



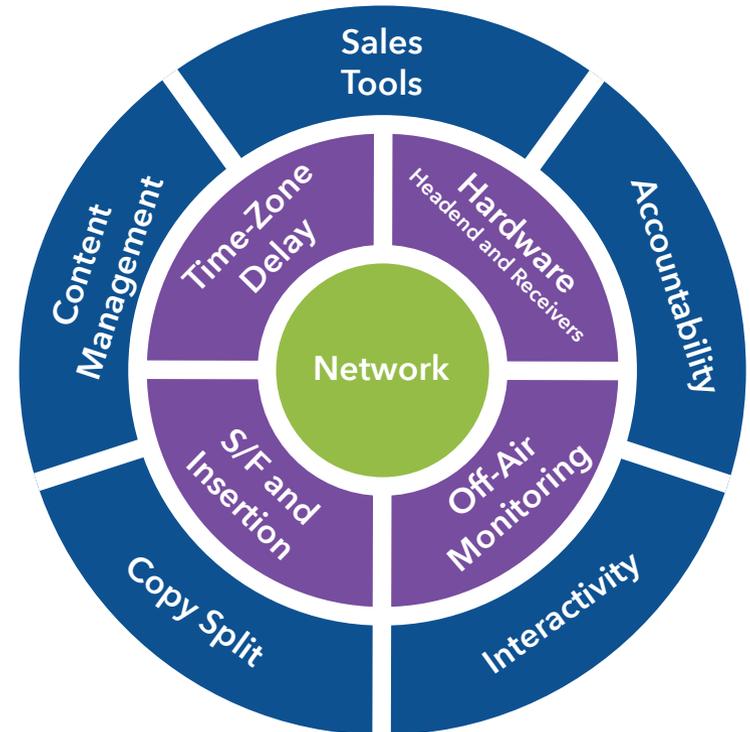
XDS Radio Platform

The World's Most Innovative, Advanced and Cost-Effective Audio Distribution & Content Management Solution



Business Value Today

- ✓ Distribution of live and pre-recorded content
- ✓ Spot insertion, program replacement
- ✓ Time-zone delay/delayed playback
- ✓ Advanced scheduling
- ✓ Prerecorded channels and virtual channels
- ✓ Complete integration with sales, traffic and automation systems
- ✓ Off-air play monitoring and verification
- ✓ Accountability (at receiver and broadcast levels)



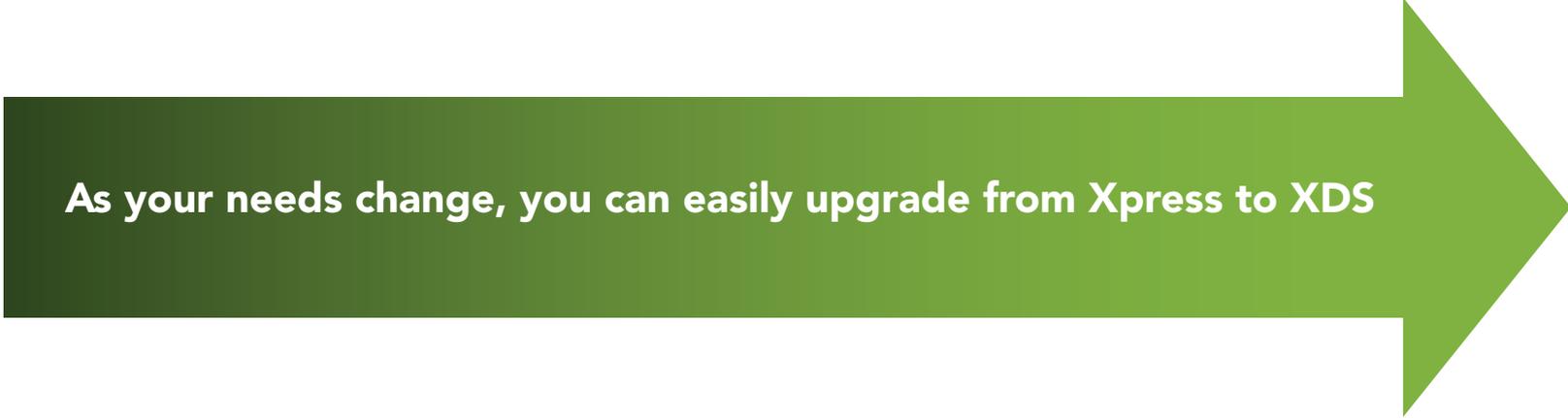
Which System Best Fits your Business Today?

Xpress System

- May have aging SCPC systems
- Need live program distribution only
- Need Relay Closure commands
- Need simple local IDs payout
- Need RDS data
- No need to verify playout at central location

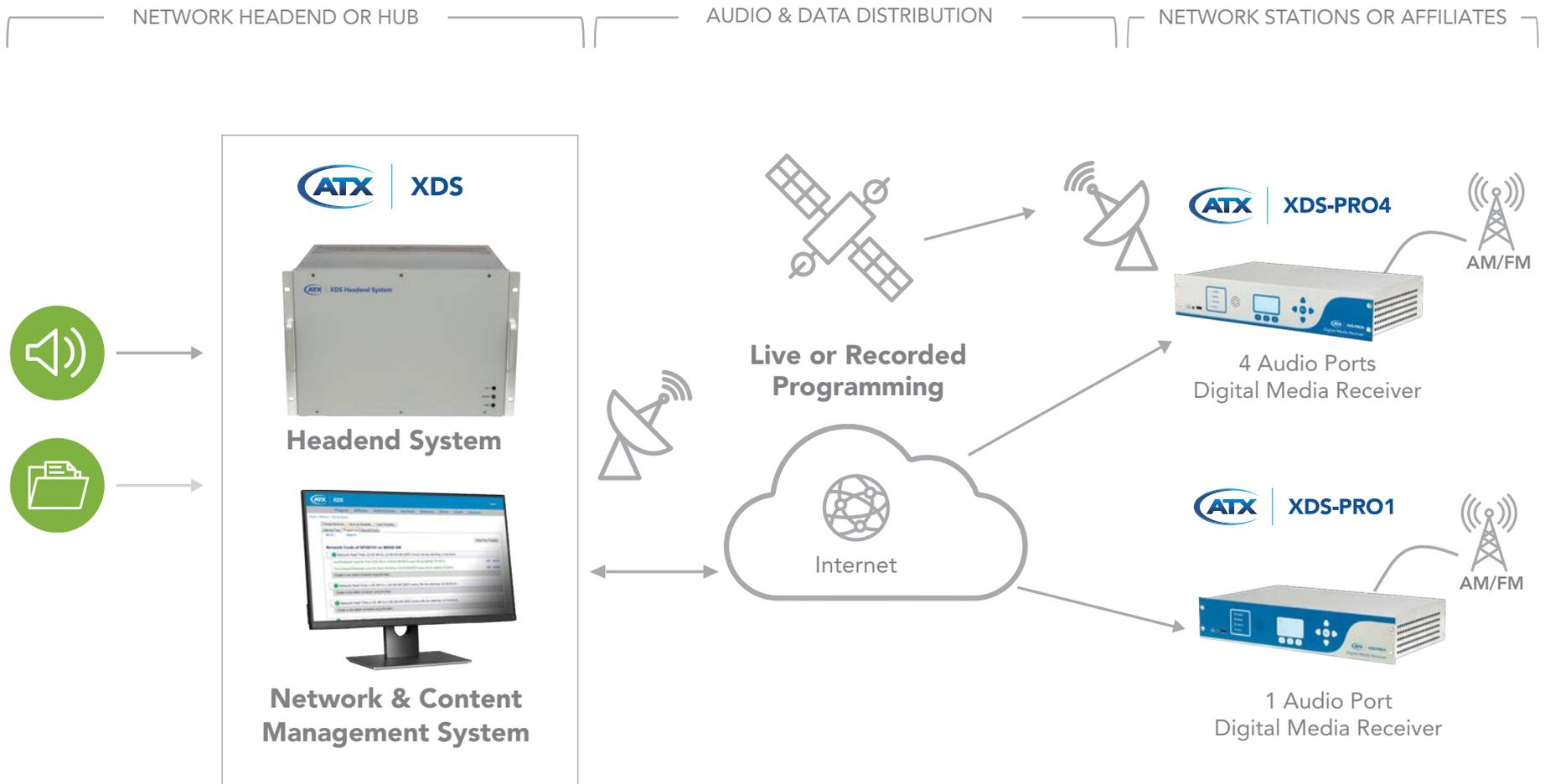
XDS System

- Need distribution of live and prerecorded content
- Need automated management and scheduling of live and prerecorded content
- Need ability to insert localized content
- Need to be able to monitor and verify playout for affiliate affidavits



As your needs change, you can easily upgrade from Xpress to XDS

XDS Platform Overview



Broadcasting Live Over Satellite or Internet

XDS Headend Components



Encoder Features

- Four stereo inputs
- MPEG1 layer II
- AAC-LC, AAC-HEv1, AAC-HEv2 optional
- Multiple rate encoding per source
- RDS data via RS-232
- Relay Closure commands via UDP and RS-232
- Four synchronous MPEG inputs
- DSP-based encoding
- Solid state, Made in USA

DVB-Multiplexer Features

- Generates DVB/MPEG transport
- One ASI input
- Two ASI outputs
- Can generate TDT and PCRs
- 10/100BaseT Ethernet port
- Alarm port and M&C via RS-232
- Can filter PIDs for multiple carriers
- Can generate streams from store playlists and content
- DHCP, NFS, HTTP, Telnet

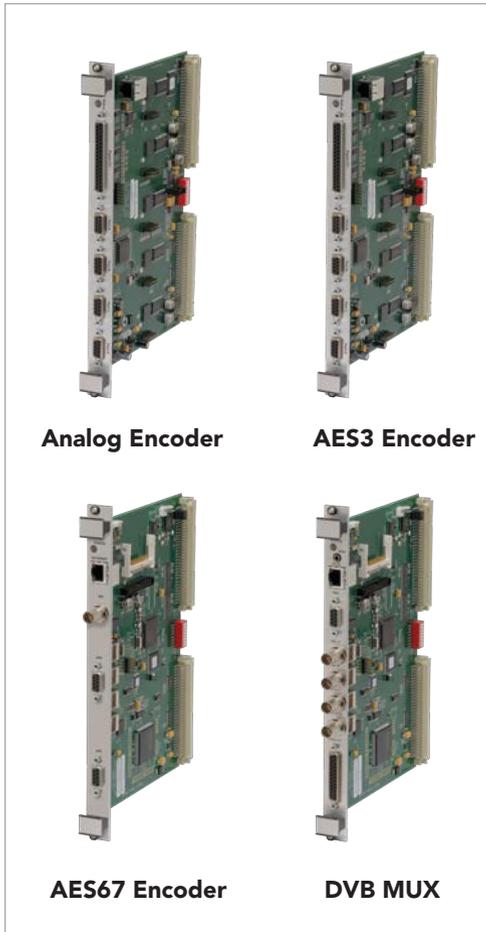
Scalable VME Chassis

- Redundant power supplies
- Can handle from 4 to 80 channels in one chassis.
- Can be daisy chained for more channels.



XDS Headend

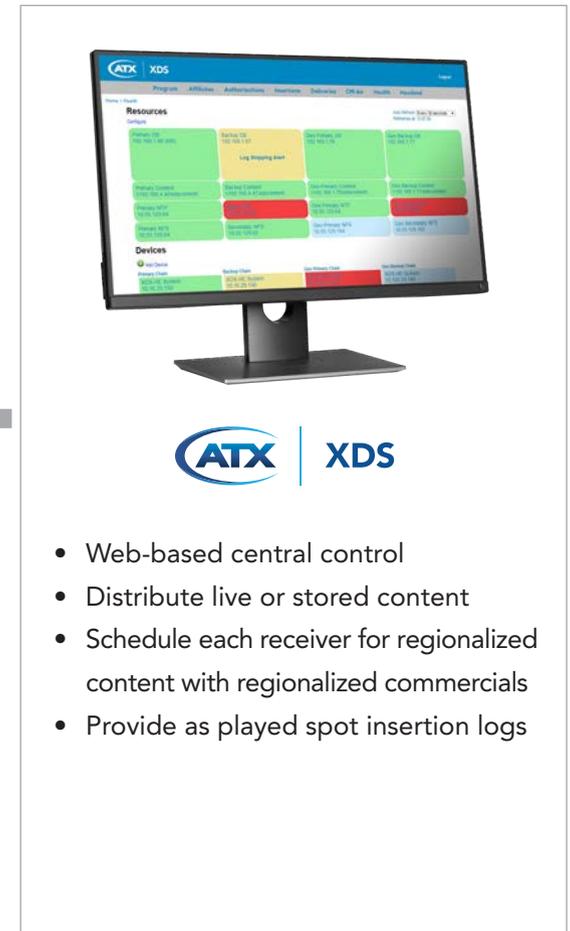
Components



Headend Chassis



Content Management System



XDS Content Management System

Receiver and network configuration management

- Through the satellite or the internet
- Receiver health tracking and monitoring

Advanced scheduler

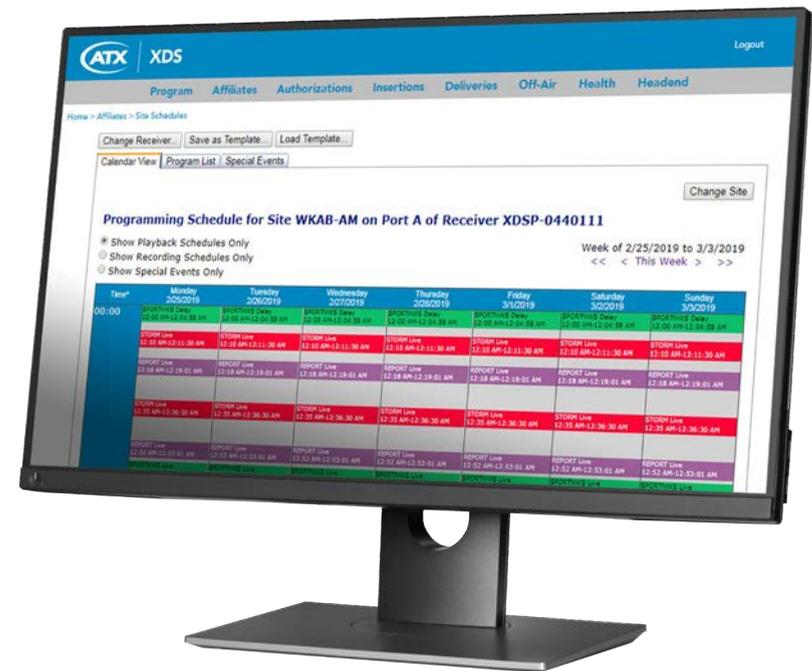
- Schedule network or localized programs for a specific site
- Schedule time-shifting events
- Schedule live or recorded program objects over live and recorded programs

Store and forward and file delivery

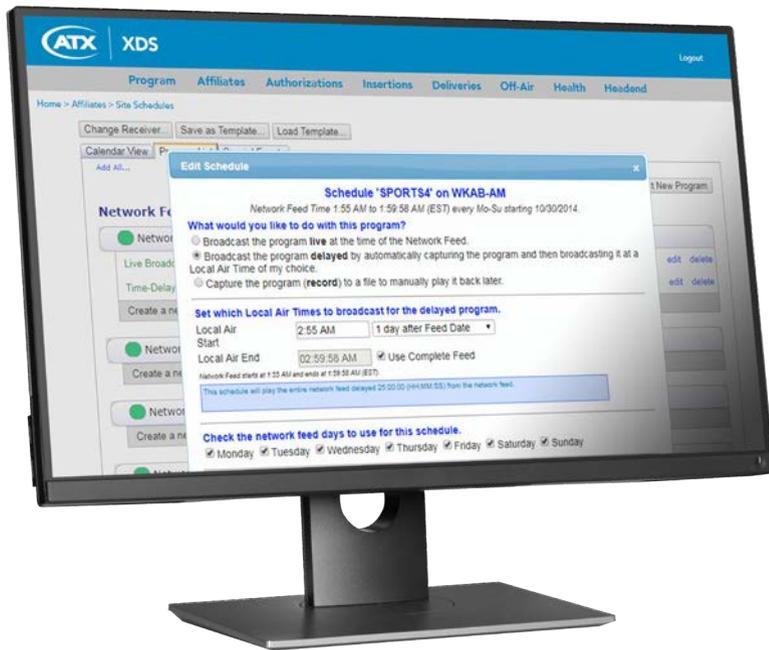
- Through the satellite or the internet
- Content can be delivered to local storage or a network share
- Delivery tracking and confirmation

Copy split for regional commercial insertion

- Insert regionalized content on each position of every commercial break
- Insert different regionalized content on time-shifted programs
- Insertion tracking and confirmation



XDS Software Components



XDS Features

- Web-based central control
- Distribute live or stored content
- Schedule each receiver for regionalized content with regionalized commercials
- Provide as played spot insertion logs

Web Interfaces

- Five different web interfaces
 1. Administrators portal
 2. Affiliates portal
 3. Web services (traffic, automation, monitoring, reconciliation, digital rights management)
 4. Streaming service
 5. Receivers portal
- Can be placed in DMZ or cloud environment

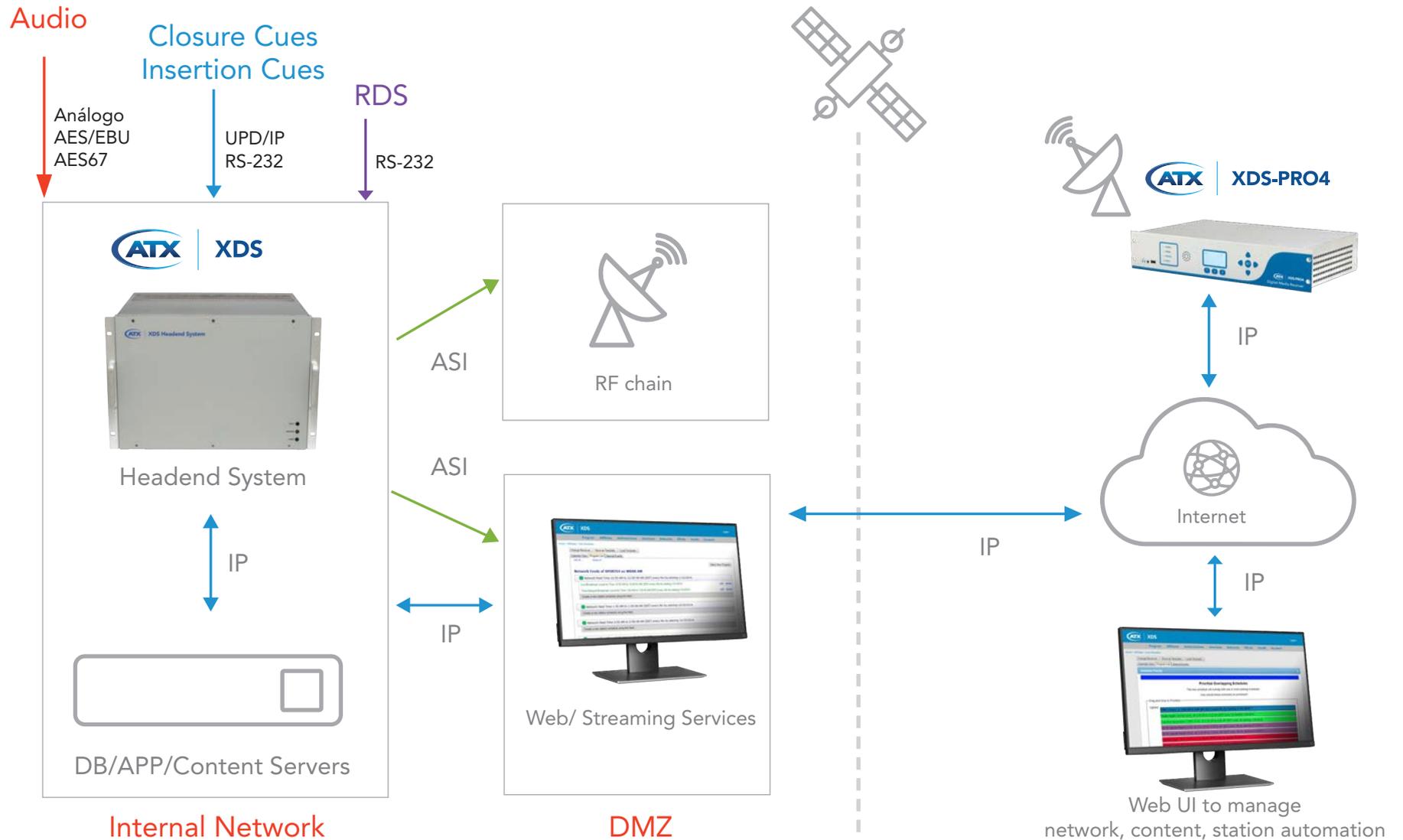
Databases

- Heart of the system is a MS-SQL database
- Content folders for distribution

Applications

- Windows services
- Create and manage in-band control channel
- Distribute content
- Maintain, monitor and keep the system redundant

XDS System Topology

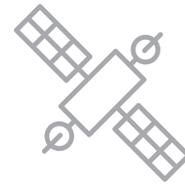


Xpress Radio System for Small Networks

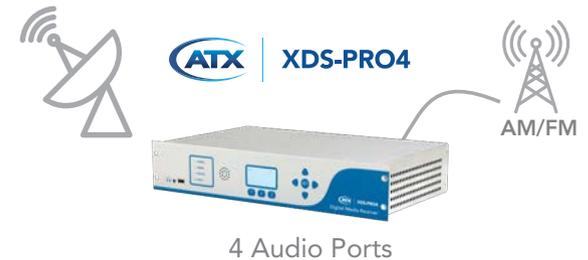
Xpress Headend



- Control systems via IP or RS-232
- Encodes up to 4 channels
- Controls receivers through in-band channel
- Supports receiver groupings



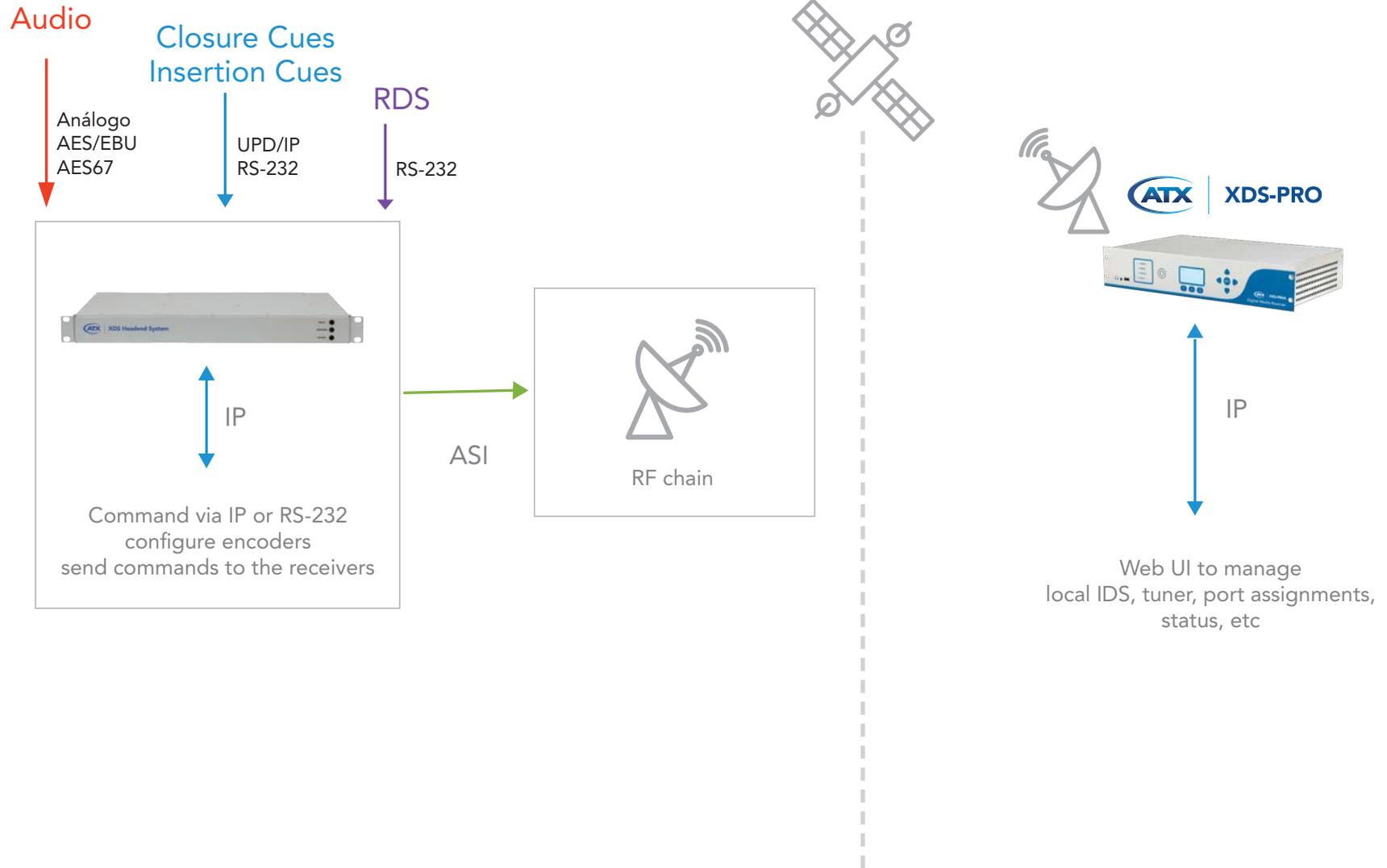
Live Programming



- Locally or centrally controlled
- Supports low-bitrate carriers down to 256 Kbaud

Low-Cost Replacement of Aging One or Two Channel SCPC Systems

Xpress System Topology



XDS-PRO1 Digital Media Receiver



- 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
- MPEG2, AAC-LC, HEv1 and HV2
- 1 balanced analog output
- 1 digital AES/EBU output
- 1 IP AES67 output
- 128 GByte M2SATA solid state drive
- Receives live IP streams
- Locally input LIDs, liners, spots
- Import/export content locally
- Store and forward
- Audio input for network automation
- 1 PAD output port
- 16 relays closures (hard, Rs-232, & IP)
- Program station automation via WebUI
- 2 100BaseT Ethernet ports w/VLAN
- DHCP, NFS, HTTP, Telnet
- Alarms via relay closure, email, SNMP
- In-field firmware upgradable
- Record and insertion of media
- Remote control via Xpress or XDS
- For satellite or streaming networks
- Cost effective

XDS-PRO4 Digital Media Receiver



- 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
- MPEG2, AAC-LC, HEv1 and HV2
- 4 balanced analog output
- 4 digital AES/EBU output
- 1 IP AES67 output
- 128 GByte M2SATA solid state drive
- Receives live IP streams
- Locally input LIDs, liners, spots
- Import/export content locally
- Store and forward
- Audio input for network automation
- 4 PAD output port
- 32 relays closures (hard, Rs-232, & IP)
- Program station automation via WebUI
- 2 100BaseT Ethernet ports w/VLAN
- DHCP, NFS, HTTP, Telnet
- Alarms via relay closure, email, SNMP
- In-field firmware upgradable
- Record and insertion of media
- Remote control via Xpress or XDS
- For satellite or streaming networks
- Cost effective

AM/FM/HD Monitoring and Verification

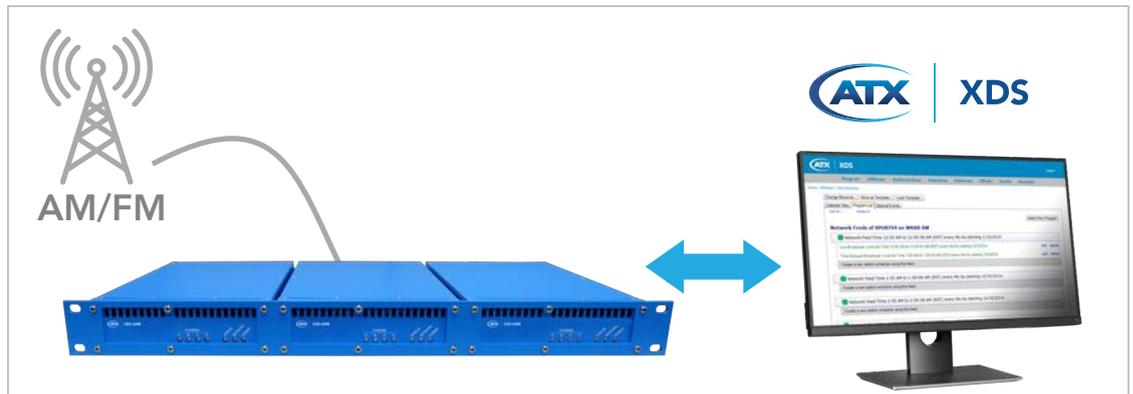
Standalone Monitoring



The diagram shows a single blue ATX XDS-AMR device connected to an AM/FM radio tower icon. The device has a control panel with buttons for CHANNEL, SILENCE, and RECORD. The text 'AM/FM' is written below the tower icon.

- Radio tuner - tunes to 4 AM/FM/HD signals simultaneously
- Audio logger for air checks – records content in its storage for up to 30 days.
- Audio streamer - streams tuned AM/FM/HD audio via IP/Internet
- Silence Monitor – sends alerts when silence is detected
- Web interface to manage device and recorded content

Play Verification and Monitoring with XDS



The diagram shows a rack of three blue ATX XDS-AMR devices connected to an AM/FM radio tower icon. A double-headed blue arrow connects the rack to a computer monitor displaying the XDS web interface. The ATX | XDS logo is positioned above the monitor. The text 'AM/FM' is written below the tower icon.

- Fully managed by the XDS Off-air play verification monitor identifies spots or programs and reports them back to the XDS for true play-out confirmation
- XDS provides verification affidavits for networks and stations
- Recorded air checks for specific time range can be requested through its webpage or the XDS
- Silence Detector – sends email when silence is detected

XDS-AMR AM/FM/HD Quad Tuner Receiver



- Cost effective
- Four AM, FM, HD tuners
- 32 GB solid state storage expandable to 128 GB
- 10/100 BaseT Ethernet port
- DHCP, HTTP, FTP, TELNET, SSH, SMTP
- Encodes and records tuned audio in MP3 or AAC-LC format
- Records content in unit for up to 30 days
- Can FTP recorded content to multiple cloud locations

- Stream tuned audio via IP/Internet using RTP or HLS
- Adjustable silence detector that can be configured to send email alerts
- Detects XDS watermarks to identify commercials or other content
- Local web page control or remote control via XDS
- In-field firmware upgradable

AMR Module for XDS-PRO



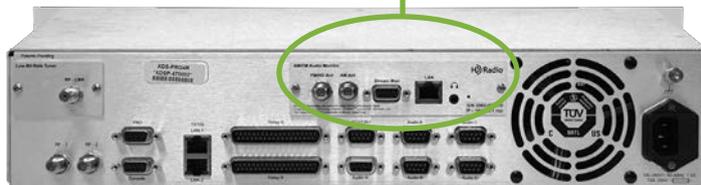
AMR module
for XDS-PRO

- The AMR module is optional for XDS-PRO1 and XDS-PRO4 receivers
- All the advantages of XDS-AMR but in one unit

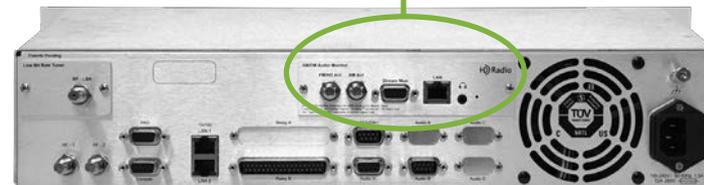
ATX | XDS-AMR



Note: Module must be added during manufacturing



ATX | XDS-PRO4



ATX | XDS-PRO1

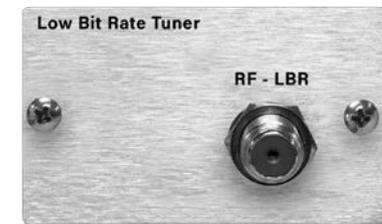
Low-Bandwidth Module for XDS-PRO



Low-Bitrate Receiver
100 Ksps

- Optional low-bitrate module for XDS-PRO1 and XDS-PRO4 receivers
- Low-bitrate receiver down to 100 Ksps

Low-Bitrate Module



Note: Module must be added during manufacturing



ATX | XDS-PRO4



ATX | XDS-PRO1



About ATX Networks

ATX Networks is disrupting the future of broadband access. Every second of every day, our market-leading and award-winning solutions shuttle more than 2,500 terabytes of data between smart devices and intelligent networks. ATX is teaming with the world's most innovative cable, satellite, fixed telecom, wireless and media broadcast service providers to usher in a new generation of ubiquitous gigabit broadband. For further information, visit ATX at www.atx.com, and follow us on Twitter [@ATXNetworksCorp](https://twitter.com/ATXNetworksCorp) or LinkedIn www.linkedin.com/company/atx/.



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