Virtual APT IP Codec

Virtualized APT solutions for Audio/MPX over IP

In line with the market's transition to offer both hardware and virtualized solutions, the famous APT IP Codec is now available as a software solution – **the Virtual APT IP Codec.**

This shift to virtualization is strategic in reducing the amount of equipment to purchase, thereby offering important upfront and operational cost savings to broadcasters.

As its hardware sibling, deployed on thousands of sites worldwide, the Virtual APT IP Codec is a cutting-edge, professional transport solution geared up with unique, market-leading technologies.

It supports **APTmpX,** the highest quality MPX compression algorithm, and SureStream, for robust, low cost, and low latency transport over IP.

The Virtual APT IP Codec is also enhanced by Virtual ScriptEasy for advanced automation, and Kybio, for end to end monitoring and control of the codec fleet.

Server-based, and fed by AES67, the Virtual APT IP Codec solution offers **high availability** and **high-density encoding/decoding** for next generation broadcast performances. Broadcasters can easily centralize and transport a large volume of program signals and scale the solution as they grow. solución a medida que crecen.

Award-winning solution

RADIOWORLD
BEST OF SHOW
AT IBC 2022
WINNER

Benefits

High Availability, Optimized IP Transport
Benefits from the same performances as the field-proven APT hardware solutions with thousands of users worldwide. Designed with the highest reliability, 24/7 operation, and compliant with a High Availability (HA) architecture. Compatible with SureStream to compensate any packet loss, and Time Alignment to remove latency fluctuations.

Pristine Audio Quality & Performance
Using AES67, the Virtual APT IP Codec can be integrated into virtualized studios and ingest audio or MPX content transparently. Highest signal fidelity and lowest coding delay, established from the beginning with Enhanced aptX, are transferred to composite/MPX transmissions with the new APTmpX algorithm.
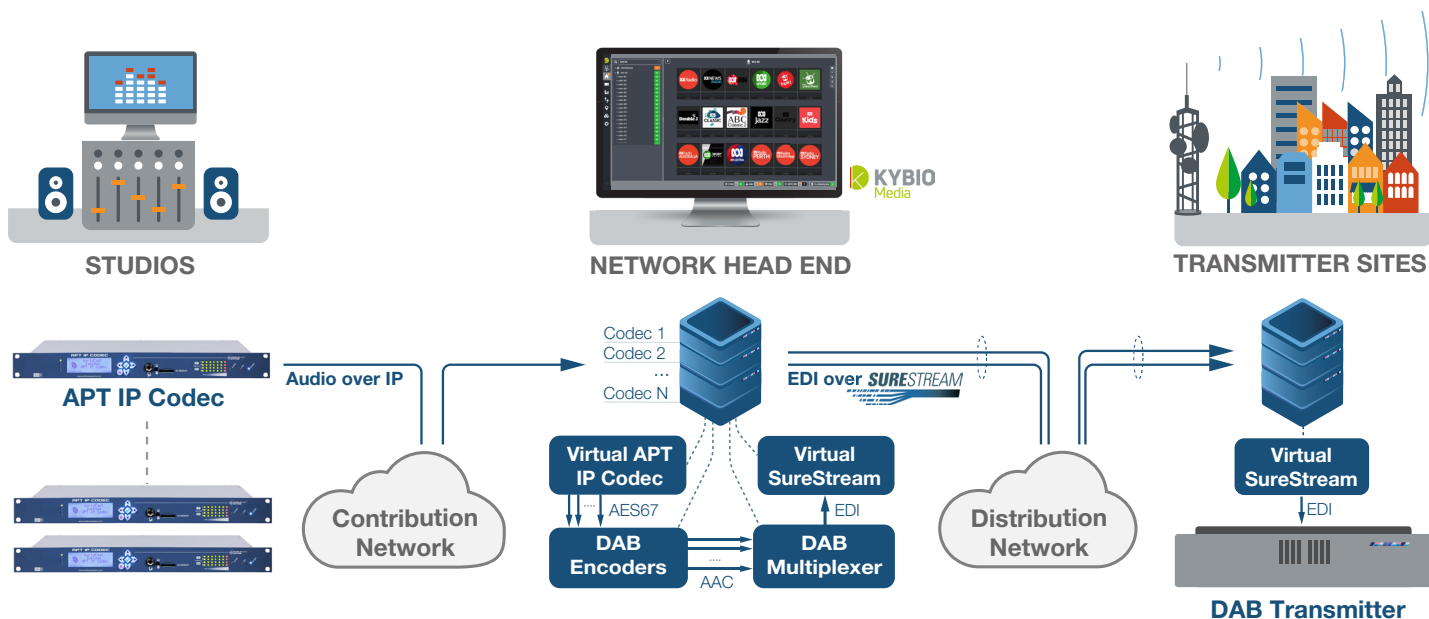
Maximize your Cost Savings
Get rid of hardware with high-density encoding/decoding from a single server. Broadcasters benefit from a flexible and scalable solution and can re-adjust their network size as needed. SureStream, Enhanced aptX, and APTmpX for low bitrate composite/MPX transmissions also contribute to high-quality distribution outside of expensive transmission paths.
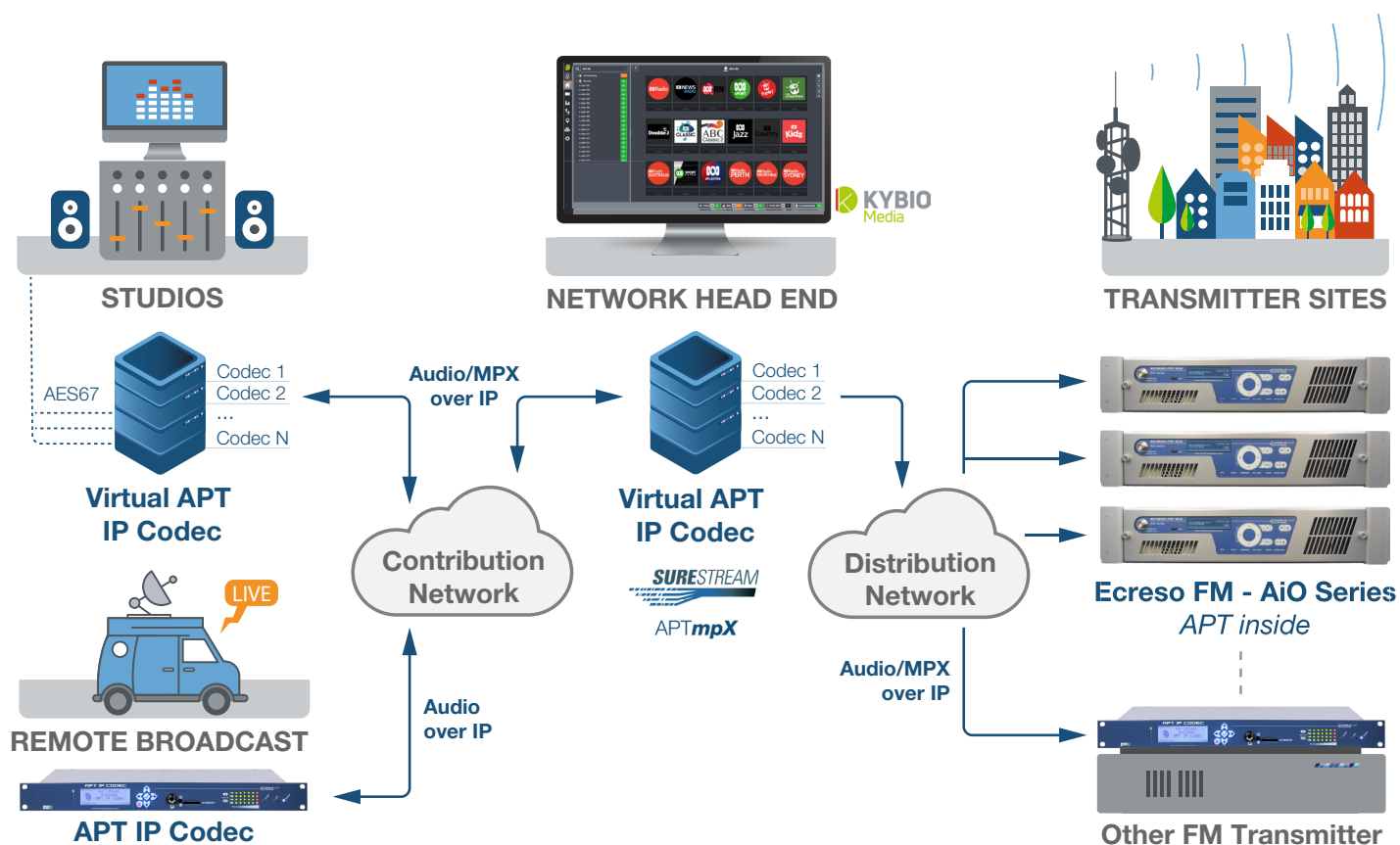
www.worldcastsystems.com

Virtualized DAB/DAB+ Network

STUDIOS

NETWORK HEAD END

KYBIO Media

TRANSMITTER SITES

APT IP Codec

Audio over IP

Contribution Network

Codec 1
Codec 2
...
Codec N

EDI over *SURESTREAM*

Distribution Network

Virtual APT IP Codec

AES67

Virtual SureStream

EDI

DAB Encoders

AAC

DAB Multiplexer

Virtual SureStream

EDI

DAB Transmitter

Virtualized FM Network

STUDIOS

NETWORK HEAD END

KYBIO Media

TRANSMITTER SITES

AES67

Virtual APT IP Codec

Codec 1
Codec 2
...
Codec N

Audio/MPX over IP

Contribution Network

Virtual APT IP Codec

Codec 1
Codec 2
...
Codec N

SURESTREAM

APT*mpX*

Distribution Network

Ecreso FM - AiO Series
APT inside

Audio/MPX over IP

LIVE

REMOTE BROADCAST

Audio over IP

APT IP Codec

Other FM Transmitter

KYBIO

Kybio is an end-to-end, unified monitoring and control software (NMS) for media and broadcast that simplifies how you oversee all your IP equipment and infrastructures.

Regardless of network size and complexity, Kybio centralizes your key data and provides, across an intuitive web interface, access to powerful insights and tools to streamline your operations. Open, scalable, and easy to deploy, Kybio provides a unique combination of built-in modules for real-time supervision, operation support, control, as well as an advanced analytics and reporting engine.

SureStream

Low Latency-Low Costs: SureStream enables broadcasters to turn imperfect, but much cheaper services, into true broadcast grade, low-latency IP connections.

Scalability and Flexibility: SureStream is the most flexible and scalable solution for content transmission protection, able to combine multiple paths from any combination of MPLS, Satellite, Microwave, xDSL and/or Cellular (4G/5G), creating a unified, super-robust connection to get your audio from point A to B.

APTmpX

Compressed Composite/MPX: APTmpX is the world's first and only non-destructive MPX/composite algorithm to save network bandwidth. It protects the sonic signature generated by the station's sound processor settings.

Low Bitrate, Low Delay: An APTmpX sample is decodable on its own. Packet losses in the network have as little effect as those of base-band audio samples. Low delay transmission is inherent and with a bandwidth requirement of 300, 400, 600 or <900 kbps, non-dedicated IP connections can be used.

Virtual ScriptEasy

Protects your investment: ScriptEasy technology allows you to avoid off-air time using intelligent scripts and automation. Your facility becomes autonomous and can apply automatic actions for an instant service restoration.

Reduces your costs: When an intervention is necessary, Virtual ScriptEasy displays all the information needed to identify and correct equipment failure. With preventive alarm settings, you can proactively perform equipment maintenance before it fails.

DOCKER & KUBERNETES

Docker - Deployment of Virtual APT IP Codec has been made easy by our team of DevOps engineers with the usage of Docker containers providing a very powerful IP Audio Codec with a small footprint on the host server.

Kubernetes - The management of a large number of Virtual APT IP Codec instances is handled by Kubernetes, the market's best-in-class container orchestrator. Mastering this technology is part of our solution to provide the best Audio over IP distribution in a multi-node environment with built-in high availability features.

> " Virtual APT solution is a great opportunity for radios to simplify and improve their program delivery while reducing their cost. "

Gregory Mercier
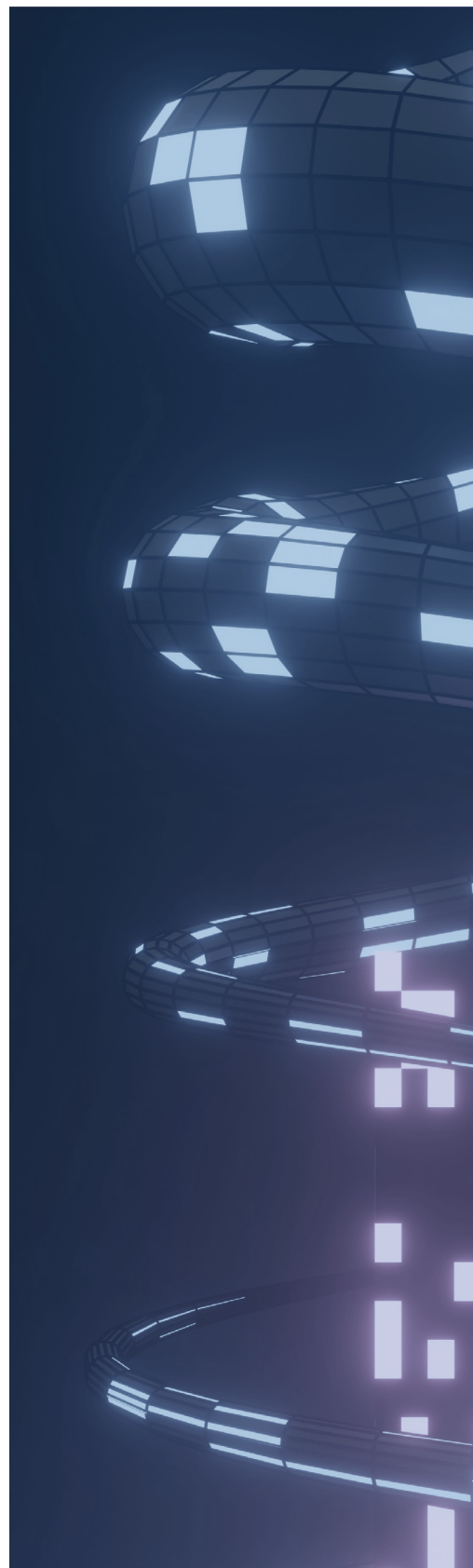Director of Product Marketing

AUDIO FORMATS	
Input/Output	AES67
Audio algorithm	E-aptX 16/24bit, lin. PCM 16/24bit
MPX algorithm	Linear MPX 16/24bit, APTmpX @300/400/600 kbps
STREAMING MODES	
Stream types	Multiple stereo Audio, UDP and RTP forwarding, format auto-detection, Reply-to-Sender, NAT traversal mode
Jitter buffer	2 - 5000 ms, packet re-sequenzer
QoS	DiffServ (RFC 2474) per stream
Redundant streaming	2 - 5000 ms, packet re-sequenzer
NETWORK	
Port configuration	Flexible WAN and/or LAN (Management) configuration
Dynamic DNS clients	Multiple clients
Standard protocols	DHCP, FTP, HTTPS, ICMP, IGMP v2/3, SMTP, SNMPv2c, NTP
Security	TLS, Service Filter and Firewall
MANAGEMENT	
Web browser GUI	
SNMPv2c	
API	
MONITORING & ALARMS	
Adjustable Silence Detectors (Inputs & Outputs)	
Event logs	
SNMP traps / notifications	

Order information

REF	DESCRIPCIÓN
SW-VAPT-HA	Virtual APT IP Codec High Availability
SW-VAPT-1	Virtual APT IP Codec Single License Standalone
CD00123	APT SureStream option
LC00074	MPX over IP option
SW-KYB-CORE	KYBIO Media
SCE-VAPT	Deployment Service
SU-VAPT	Yearly support for Virtual APT IP Codec and Kybio Media
FORM-APT	Training or technical assistance

Technical specifications are subject to change without prior notice - On project, WorldCast Systems may offer distinct specifications. Specifications on the offer prevail those in this document.

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Environnement
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