

# ATSC Rocket™

**Cost Effective, Fully Standards Compliant, Linux Based, Remotely Manageable, Addressable, ATSC Compliant IP Encapsulator for Terrestrial Mobile Data Distribution in USA, Canada, and Korea**



a t s c  
Advanced Television Systems Committee



## Overview

ATSC is a specification for digital terrestrial video distribution. It is used for transmitting high definition television (HDTV), data distribution, and video on demand in America.

Our new **ATSC Rocket** is the first ATSC compliant IPv4 / IPv6 encapsulator available in the market. It is the latest addition to our product family of IP/ATSC encapsulators. ATSC Rocket gives customers the ability to seamlessly integrate IP and other data services over ATSC technology in existing ATSC compliant video broadcast distribution systems. It fully implements ATSC standard for transmitting IP data over ATSC systems and other customized transmission modes.

ATSC Rocket is based on x86 hardware and Linux® operating system software. This makes our encapsulator a very stable but also simple system. Drivers are fully embedded in the OS kernel, thus improving performance.

## Features

- Allows a smooth system upgrade to IP protocol based multimedia services
- Supports IPv4 and IPv6 packet transmission in concurrent sessions
- Provides UDP/IPv4 to UDP/IPv6 conversion
- Easy to use remote monitoring and control via secure shell access and Web interface
- PSIP table implementation according to MPEG-2 and ATSC standards
- Input PID filtering and NULL packet cancellation
- User level access is controlled by password security
- RFC 1112, RFC 2464 for IP multicast and IPv6 multicast address mapping
- Addressable section packing for enhanced packet throughput
- Encapsulation and transmission at full ATSC speed
- Based on embedded Linux®

## Applications

- Deliver IP video and data content over ATSC
- HDTV broadcasting
- Interactive Internet services
- Video on demand

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# Routing Capabilities

ATSC Rocket uses IETF standard routing policies. Static routes are configured for IP-unicast packets (e.g. TCP and UDP user traffic) and for IP-multicast (UDP) traffic. The IP/ATSC switch completes the routing information with the MPEG-2 transport stream packet identifier (PID) and receiver's Ethernet MAC address information.

In standard ATSC mode the encapsulator accepts incoming packets according to its switching table and forwards packets after adding appropriate section information (header and trailer) and MPEG-2 transport headers to a connected ATSC compliant modulator or multiplexer via the SMPTE310M interface.

# GUIs



Main Screen

Module Index List Channel Entries

channel	type	SIS/MIS	ACM/CCM	ISSYI	NPD	roll-off	frame	modcode	delay (ms)
1	TS	SIS	ACM	ISSYI=OFF	NPD=OFF	0.25	short	16APSK-8/9	20
2	TS	SIS	ACM	ISSYI=OFF	NPD=OFF	0.25	short	QPSK-8/9	60
3	TS	SIS	ACM	ISSYI=OFF	NPD=OFF	0.25	normal	QPSK-1/3	20
4	GS	SIS	ACM	ISSYI=OFF	NPD=OFF	0.25	short	8PSK-2/3	20

Return to IP/DVB-S2 Encapsulator

List Channel Entries

Module Index Add Table Entry

destination IPv4 or IPv6 address	prefix	MAC	PID	CHN	mode	delay (ms)
	32			255	MPE	40

Return to IP/DVB-S2 Encapsulator

Add Table Entry

# Ordering Information

ATSC Rocket  
 ATSC Rocket with optional SMPTE310M input port

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# Specifications

## Input and Output Ports

- Two one-Gigabit input ports/output ports
- One optional SMPTE 310M input port
- One optional SMPTE 310M output port

## PSIP Tables

- MPEG-2 program specific information: PAT, CAT, PMT
- ATSC service information

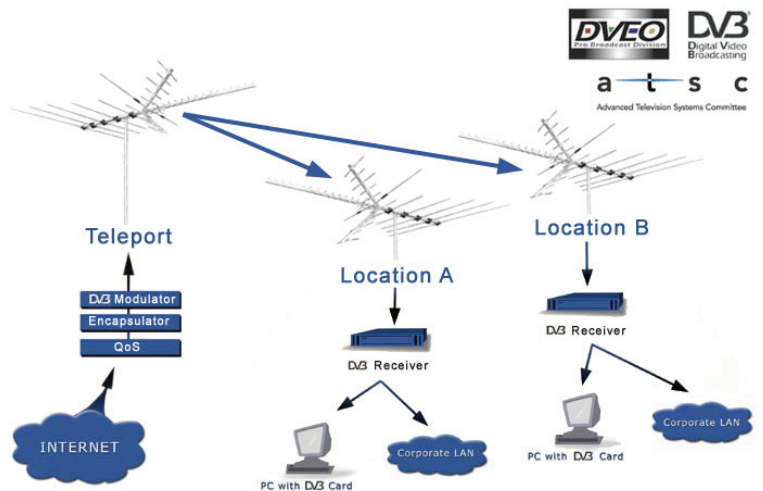
## Hardware and Software

- 1 RU 19" chassis
- Linux® operating system
- Web based management

# Inputs/Outputs



# Block Diagram



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