



T.OX ENCODER TWIN IP REF.563852



## TWO MODULES IN ONE

CONTENT IP STREAMER OR IP/AV TO RF MODULATOR

- Two operating modes: AV - IP/RF or IP/ AV - RF
- High output signal power without additional amplification
- DVB-T and DVB-C output or configurable IP
- Energy efficient due to its low power consumption



HDTV



REMOTE  
MANAGEMENT



LOW  
CONSUMPTION



H.264  
MPEG-4/AVC



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## IP ENCODER MODULATOR

### DESCRIPTION

An "Encoder / Modulator" is a device that generates a DTT channel (Multiplex) which includes Audio / Video services from other devices like cameras, computers, TVSAT receivers, etc.

The Encoder / Modulator ref. 563852 has an additional feature which makes a multicast streaming possible.

The device has two operating modes:

#### AV - IP/RF Encoder

It transforms two Audio / Video signals into an IP stream or into a RF multiplex (DVB-T or DVB-C). In this mode, the Audio / Video content (in HDMI, YPbPr or CVBS composite formats) is available for a multicast stream in the IP output and also as a RF multiplex (DVB-T or DVB-C).

#### AV/IP - RF Encoder

It transforms two Audio / Video signals or IP streaming services into a RF multiplex (DVB-T or DVB-C). This configuration allows the creation of multiple RF (DVB-T or DVB-C) with content transmitted through IP multicast and Audio / Video signals (cameras, STB, DVD, computers, etc.) from an HDMI connection, YPbPr or composite CVBS.

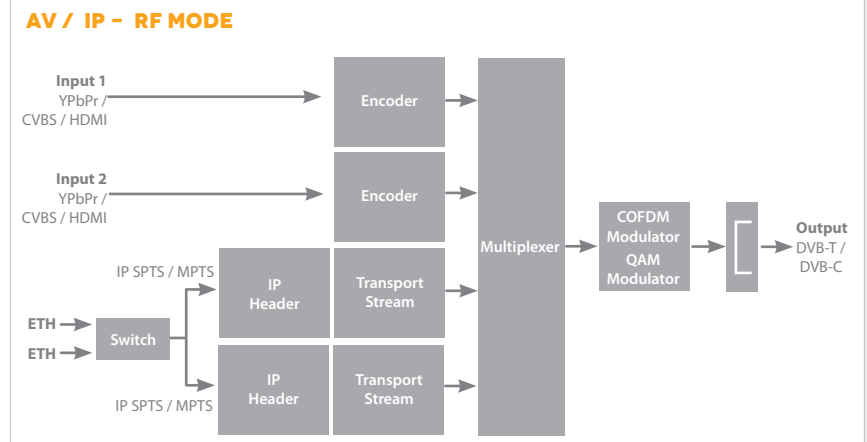
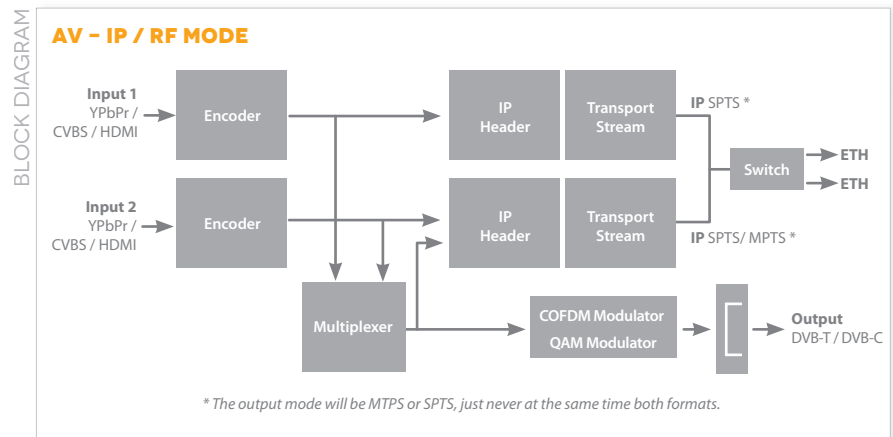
### HIGHLIGHTS

- Easy and intuitive installation thanks to the built-in web server.
- **High output level with no need for extra amplification**
- Multi-standard output format
- Monitorisation of the device and the signal through LEDs on the unit
- The IP Encoder / Modulator has a MPTS mode (two input connections for the same IP) or **SPTS** (two input connections for two different IP's)



### MAIN FEATURES

- Compatible with many formats, resolutions and TV screen dimensions.
- Different Audio/Video input types (HDMI, CVBS, YPbPr, audio SPDif)
- Multiplexing 4 sets of services at the same time (2 IP and 2 AV)
- Output video format: MPEG-2 or MPEG-4 (H.264)
- Annex A QAM output or COFDM
- Integrated input loop through
- Excellent quality of the RF signal created (MER > 40dB)

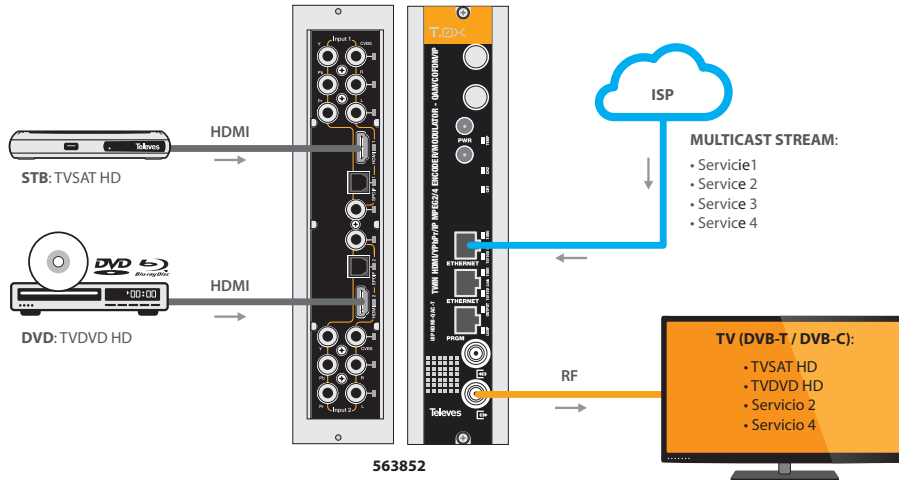


REF.	DESCRIPTION	EAN 13
563852	T.OX ENCODER TWIN IP/HDMI - ANNEX A/IP COFDM/QAM	842445018 0204

# GENERATE IP STREAMING & HIGH DEFINITION DTT CHANNELS

APPLICATION EXAMPLE

## AV / IP - RF MODE

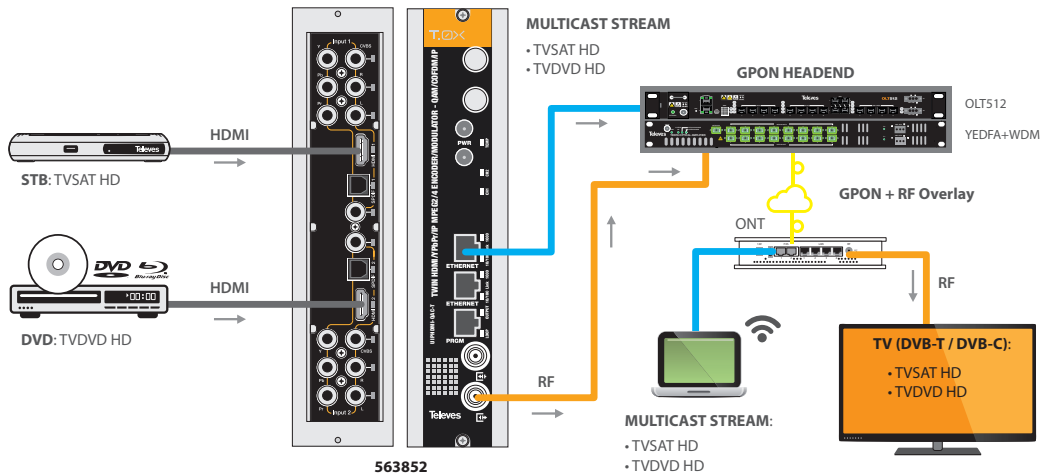


The Encoder / Modulator generates a RF Mux with services transmitted through IP Multicast, supplied by an operator and with A/V signals.

In the example, the amount of services in the output RF MUX will vary depending on the modulator's configuration and the capacity available on the MUX.

The Mux with all the services is distributed through the coaxial network and is received by the TV's.

## AV - IP / RF MODE



The Encoder / Modulator generates a RF Mux and a Multicast stream with A/V signals.

The RF Mux is received by the TV's with the same content.

The multicast stream with A/V services are distributed through the data network and they are received in devices and specific applications.

This application is recommended in FibreData solutions which need an optimisation of the RF Overlay bandwidth (reallocation of A/V services between the data network and the TV network).

# IP ENCODER MODULATOR

TECHNICAL SPECIFICATIONS

INPUT			
Video	2 sets 3 x RCA (Y, Pb, Pr) 2 sets 1 x RCA (CVBS) 2 sets 2 x RCA (L, R)		
Audio	2 sets 1 x RCA (Digital) 2 sets 1 x Toslink (Optical)		
Video + Audio	2 sets 1 x HDMI		
IP Multicast	2 ports RJ45 switch Gbe SPTS or MPTS (UDP/RTP)		
VIDEO ENCODER			
Output format	MPEG-2 / H264		
Resolution	480i, 480p, 576i, 576p, 720p, 1080i & 1080p Auto-scan of input resolution <sup>(1)</sup>		
Aspect ratio	4:3, 16:9 and pass through		
GOP	10, 12, 15, 16, 18, 20, 24 ó 30		
AUDIO ENCODER			
Output format	Dolby Digital AC-3 (only Digital Loop) or MPEG1 Layer2 (analogue input HDMI PCM)		
Sampling rate	kHz	48	
Output			
Frequency bands	MHz	46...862	
Maximum output level	dBµV/ dBmV	115/55 (103/43 with active loop-through)	
MER	dB	>40	
Spurious	dBc	-60	
Annex A QAM	Modulation	16, 32, 64, 128, 256	
	BaudRate	Mbaud	6.9
	Roll-off	%	15
	Code	Reed Solomon	
	Spectrum mode	Normal / Inverted	
COFDM	Modulation	QPSK, 16QAM, 64QAM	
	Guard interval	µS	1/4, 1/8, 1/16, 1/32
	FEC	1/2, 2/3, 3/4, 5/6, 7/8	
	Bandwidth	MHz	6, 7, 8
	Cell_id	Yes	
IP	Frequency steps	kHz	125 / 166
	Transport Stream SP/MP	2 SPTS IP multicast outputs (UDP o RTP) / 1 MPTS output	
PSI	Transport Stream ID	Editable	
	Original Network ID	Editable	
	Network ID	Editable	
	LCN	Editable	
	NIT	Editable	
	SDT	Editable	
	LCN type	Generic / UK / NorDig V1 / NorDig V2	
	Network Name	Editable	
	Service PID	Editable	
Service Name	Editable		
Service ID	Editable		
GENERAL			
Voltage	Vdc	24	
Consumption	W	<20.4	
Protection index	IP	20	
Dimensions (xyz)	mm	50 x 216 x 180	

(1) The output resolution is the same as the input signal source.

DESCRIPTION

