T.0X

T.0X ENCODER TWIN IP REF.563852

Made in EU

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 STANDARD

100% Designed, Developed & Manufactured in Televes Corporation
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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

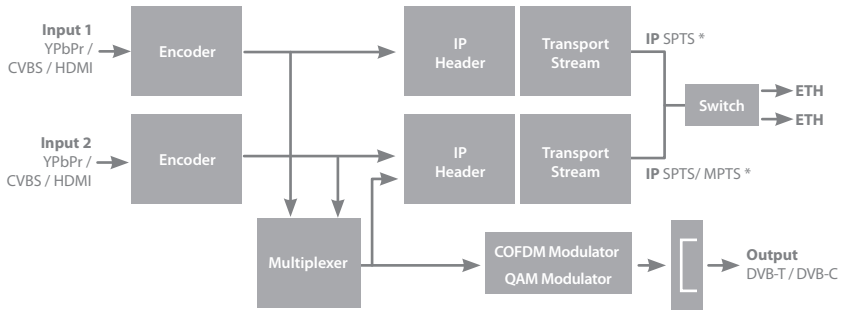
- Easy and intuitive installation thanks to the built-in web server.
- **High output level with no need for extra amplification**
- Multi-standard output format
- Monitorisation of the device and the signal through LEDs on the unit
- The IP Encoder / Modulator has a MPTS mode (two input connections for 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/Vídeo input types (HDMI, CVBS, YPbPr, audio SPdIf)
- Multiplexing 4 sets of services at the same time (2 IP and 2 A/V)
- Output video format: MPEG-2 or MPEG-4 (H.264)
- Annex A QAM output or COFDM
- Integrated input loop through
- Excelent quality of the RF signal created (MER > 40dB)

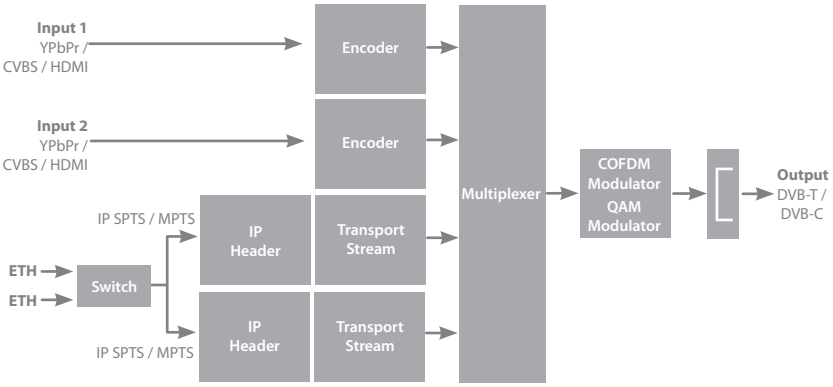
BLOCK DIAGRAM

AV – IP / RF MODE



** The output mode will be MTPS or SPTS, just never at the same time both formats.*

AV / IP – RF MODE



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

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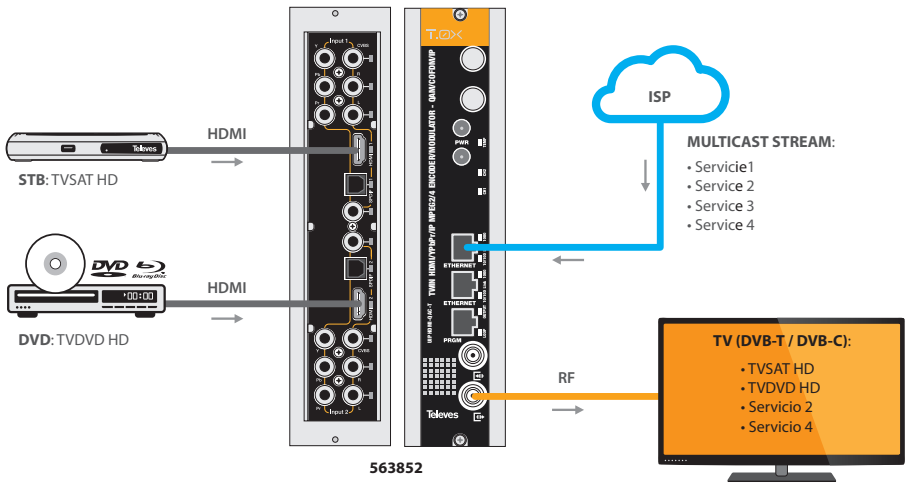
APPLICATION EXAMPLE

AV / IP - RF MODE

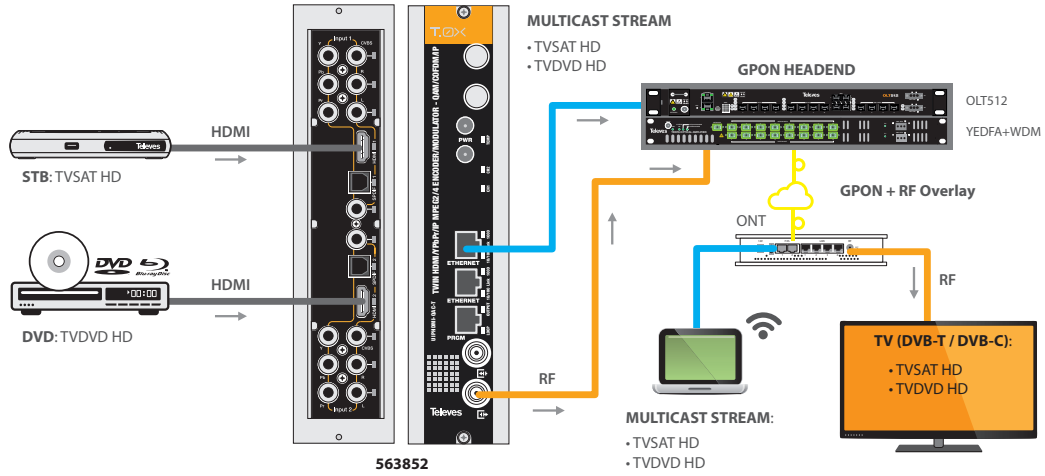


The Encoder / Modulator generates a RF Mux with services transmitted through IP Multicast, supplied by an operator and with A/V signals.

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

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.

AV - IP / RF MODE



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

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

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

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

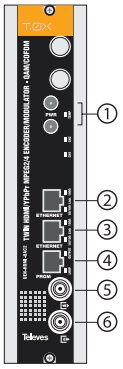
TECHNICAL SPECIFICATIONS

INPUT			
Vídeo			2 sets 3 x RCA (Y, Pb, Pr)
			2 sets 1 x RCA (CVBS)
Audio			2 sets 2 x RCA (L, R)
			2 sets 1 x RCA (Digital)
			2 sets 1 x Toslink (Opical)
Vídeo + 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 (1)
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
	Frequency steps	kHz	250
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
	Frequency steps	kHz	125 / 166
IP	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.

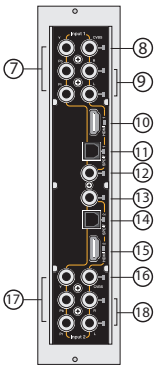
DESCRIPTION

FRONT VIEW

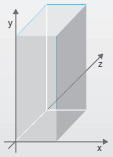


1 Power supply connection
2, 3 Ethernet connection (switch Gbe)
4 Programmer connection / PC through SW TSuite
5 RF input
6 RF output+ 1 channel COFM or QAM

REAR VIEW



7 YPbPr input - service 1
8 CVBS input - service 1
9 Audio L/R input - service 1
10 HDMI input - service 1
11 Optical SPDIF input - service 1
12 Coaxial audio SPDIF input - service 1
13 Coaxial audio SPDIF input - service 2
14 Optical audio SPDIF input - service 2
15 HDMI input - service 2
16 CVBS input - service 2
17 YPbPr input - service 2
18 Audio L/R input - service 2



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