



ENCODER/MODULATOR HDTV REFS.563822/32



## Generate your own DTT content in High Definition

- Intuitive and easy configuration through an embedded web server
- Remote management via Internet connexion
- High output signal power without additional amplification
- Configurable COFDM/QAM output
- Energy efficient due to its low power consumption



HDTV



REMOTE  
MANAGEMENT



LOW  
CONSUMPTION



H.264  
STANDARD



100% Designed, Developed & Manufactured in Televes Corporation  
televescorporation ■ televes.com ■ televes@televes.com

**Televes**<sup>®</sup>

## ENCODER / MODULATOR HDTV

### DESCRIPTION

An encoder/modulator is a device which generates a Digital TV channel (multiplex) from A/V sources like cameras, PCs, or TVSAT receivers.

The encoder/modulator Ref. 563832 generates a HDTV channel with two services; each service can come from three different input formats (HDMI, YPbPr or composite CVBS).

On the other hand, Ref. 562822 generates 4 services from 4 different analogue sources (CVBS).

Both modules are able to encode either in MPEG-2 or H.264(HDTV) format.

They can be configured with the PCT5.0 handset or using the Web Server incorporated in each module. This server enables a remote or local management and configuration.

The highest gain of the output signal (up to **115dB $\mu$ V** or 103dB $\mu$ V with the loop-through active) avoid the need of using additional amplifiers.

You can choose between generating DVB-T (DTT) channels or DVB-C (QAM) to use in Cable TV operator networks.



- High quality output (MER>40dB).
- Compatible with many formats, resolutions and TV screen dimensions.
- Fully configurable modulation and codification parameters.
- Compatible with multiple input signals: HDMI, CVBS, YPbPr, SPDIF audio (Ref. 563832), ...
- HDCP (High-Bandwidth Digital Content Protection) incorporated, can be disabled in case of having authorization from the TV provider.

REF.	DESCRIPTION	EAN 13
563822	T.OX ENCODER QUAD COMPUEST.-COFDM/QAM	8424450174883
563832	T.OX ENCODER TWIN HDMI/COMP.-COFDM/QAM	8424450175729
567401	STANDALONE/WALL ENCODER T.OX SUPPORT	8424450177297

### HIGHLIGHTS

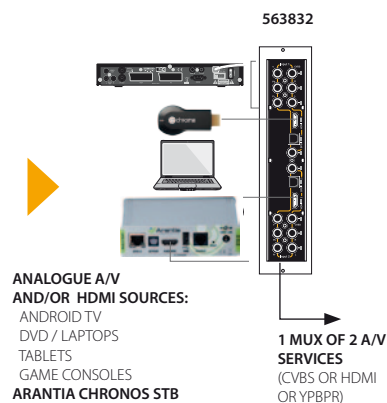
- User friendly configuration using **an embedded web server**.
- **Remote control** through the Internet.
- **High output gain** with no need of extra amplification.
- Configurable **COFDM or QAM output**.
- Energy efficient due to its **low power consumption**.



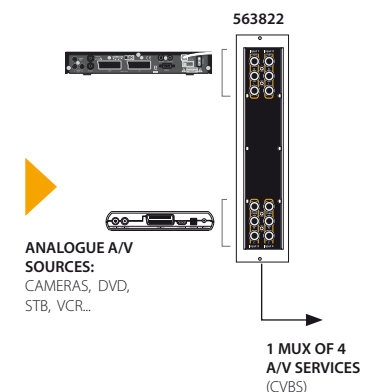
GENERATED SERVICES using a T.OX headend for "Weather Nation TV" in Greenwood Village - Colorado (USA)

EXAMPLE OF APPLICATION

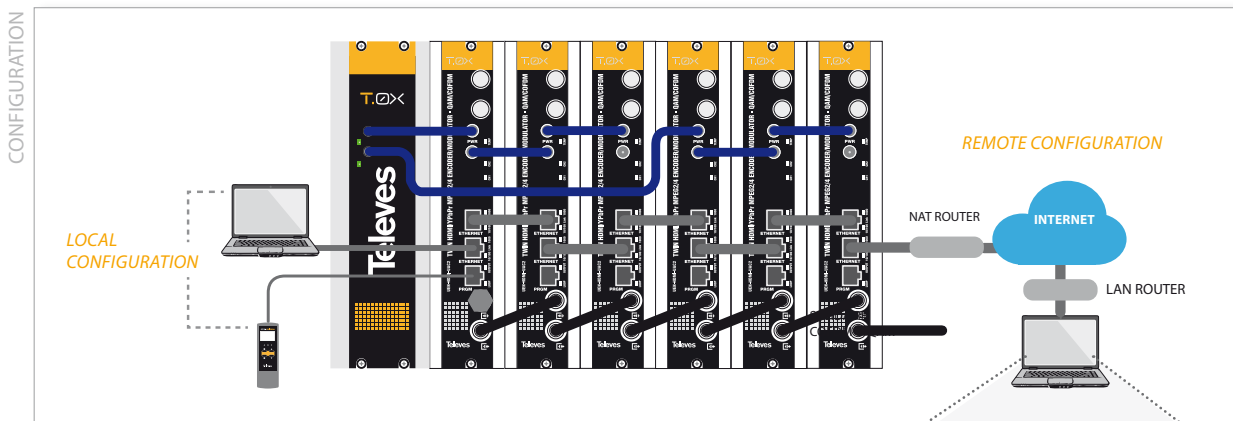
#### GENERATION OF A DIGITAL MULTIPLEX FROM DIGITAL AND/OR ANALOGUE INPUTS



#### GENERATION OF A DIGITAL MULTIPLEX FROM ANALOGUE INPUTS



# GENERATE YOUR OWN DTT CONTENT IN HIGH DEFINITION



## HEADEND PERFORMANCE SCREEN

#	Model	Temp	CH1	CH2	CH3	CH4	OUT	RFLoop	Output Table	Output Channel	Watermarking ID	STATUS
1	<b>563832 - Dual Component/HDMI - web connected</b>	<span style="color: green;">●</span> NORMAL	<span style="color: green;">●</span> LOCK	<span style="color: green;">●</span> LOCK	n/a	n/a	<span style="color: green;">●</span> NORMAL	<span style="color: green;">●</span> ON	CCIR N.Z.Ind	C21	DISABLED	OK
2	563832 - Dual Component/HDMI	<span style="color: green;">●</span> NORMAL	<span style="color: green;">●</span> LOCK	<span style="color: green;">●</span> LOCK	n/a	n/a	<span style="color: green;">●</span> NORMAL	<span style="color: green;">●</span> ON	CCIR N.Z.Ind	C22	DISABLED	OK
3	563832 - Dual Component/HDMI	<span style="color: green;">●</span> NORMAL	<span style="color: green;">●</span> LOCK	<span style="color: green;">●</span> LOCK	n/a	n/a	<span style="color: green;">●</span> NORMAL	<span style="color: green;">●</span> ON	CCIR N.Z.Ind	C23	DISABLED	OK
4	563832 - Dual Component/HDMI	<span style="color: green;">●</span> NORMAL	<span style="color: green;">●</span> LOCK	<span style="color: green;">●</span> LOCK	n/a	n/a	<span style="color: green;">●</span> NORMAL	<span style="color: green;">●</span> ON	CCIR N.Z.Ind	C24	DISABLED	OK
5	563832 - Dual Component/HDMI	<span style="color: green;">●</span> NORMAL	<span style="color: green;">●</span> LOCK	<span style="color: green;">●</span> LOCK	n/a	n/a	<span style="color: green;">●</span> NORMAL	<span style="color: green;">●</span> ON	CCIR N.Z.Ind	C25	DISABLED	OK
6	563832 - Dual Component/HDMI	<span style="color: green;">●</span> NORMAL	<span style="color: green;">●</span> LOCK	<span style="color: green;">●</span> LOCK	n/a	n/a	<span style="color: green;">●</span> NORMAL	<span style="color: green;">●</span> ON	CCIR N.Z.Ind	C26	DISABLED	OK
7	563832 - Dual Component/HDMI	<span style="color: green;">●</span> NORMAL	<span style="color: green;">●</span> LOCK	<span style="color: green;">●</span> LOCK	n/a	n/a	<span style="color: green;">●</span> NORMAL	<span style="color: green;">●</span> ON	CCIR N.Z.Ind	C27	DISABLED	OK

## OUTPUT CONFIGURATION SCREEN

#	Model	Table	Channel	Freq. Adj.	Level	Mode	BW	Guard Interval	FEC	CELL ID	Baudrate	Output	RF Loop	Select
1	<b>563832 - Dual Component/HDMI - web connected</b>	CCIR N.Z.Ind	C21	n/a	99	COFDM(64QAM)	8 MHz	1/32	7/8	0	n/a	NORMAL	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	563832 - Dual Component/HDMI	CCIR N.Z.Ind	C22	n/a	99	COFDM(64QAM)	8 MHz	1/32	7/8	0	n/a	NORMAL	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3	563832 - Dual Component/HDMI	CCIR N.Z.Ind	C23	n/a	99	COFDM(64QAM)	8 MHz	1/32	7/8	0	n/a	NORMAL	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4	563832 - Dual Component/HDMI	CCIR N.Z.Ind	C24	n/a	99	COFDM(64QAM)	8 MHz	1/32	7/8	0	n/a	NORMAL	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5	563832 - Dual Component/HDMI	CCIR N.Z.Ind	C25	n/a	99	COFDM(64QAM)	8 MHz	1/32	7/8	0	n/a	NORMAL	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6	563832 - Dual Component/HDMI	CCIR N.Z.Ind	C26	n/a	99	COFDM(64QAM)	8 MHz	1/32	7/8	0	n/a	NORMAL	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7	563832 - Dual Component/HDMI	CCIR N.Z.Ind	C27	n/a	99	COFDM(64QAM)	8 MHz	1/32	7/8	0	n/a	NORMAL	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>Set Configuration for all Units (7):</b>		Select	Select	Select	Select	Select	Select	Select	Select	Select	Select	Select	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## INPUT CONFIGURATION SCREEN

#	Model	Enabled	Video Input	Video Codec	Video Bitrate (Mbps)	Aspect Ratio	GOP	Audio Input	Audio Bitrate (Kbps)	Audio Level	Select
1	<b>563832 - Dual Component/HDMI - web connected</b>	I1 <input checked="" type="checkbox"/>	HDMI	H264	12,00	PASS	15	HDMI	384	14	<input checked="" type="checkbox"/>
		I2 <input checked="" type="checkbox"/>	HDMI	H264	12,00	PASS	15	HDMI	384	14	
2	563832 - Dual Component/HDMI	I1 <input checked="" type="checkbox"/>	HDMI	H264	12,00	PASS	15	HDMI	384	14	<input checked="" type="checkbox"/>
		I2 <input checked="" type="checkbox"/>	HDMI	H264	12,00	PASS	15	HDMI	384	14	
3	563832 - Dual Component/HDMI	I1 <input checked="" type="checkbox"/>	HDMI	H264	12,00	PASS	15	HDMI	384	14	<input checked="" type="checkbox"/>
		I2 <input checked="" type="checkbox"/>	HDMI	H264	12,00	PASS	15	HDMI	384	14	
4	563832 - Dual Component/HDMI	I1 <input checked="" type="checkbox"/>	HDMI	H264	12,00	PASS	15	HDMI	384	14	<input checked="" type="checkbox"/>
		I2 <input checked="" type="checkbox"/>	HDMI	H264	12,00	PASS	15	HDMI	384	14	
5	563832 - Dual Component/HDMI	I1 <input checked="" type="checkbox"/>	HDMI	H264	12,00	PASS	15	HDMI	384	14	<input checked="" type="checkbox"/>
		I2 <input checked="" type="checkbox"/>	HDMI	H264	12,00	PASS	15	HDMI	384	14	
6	563832 - Dual Component/HDMI	I1 <input checked="" type="checkbox"/>	HDMI	H264	12,00	PASS	15	HDMI	384	14	<input checked="" type="checkbox"/>
		I2 <input checked="" type="checkbox"/>	HDMI	H264	12,00	PASS	15	HDMI	384	14	
7	563832 - Dual Component/HDMI	I1 <input checked="" type="checkbox"/>	HDMI	H264	12,00	PASS	15	HDMI	384	14	<input checked="" type="checkbox"/>
		I2 <input checked="" type="checkbox"/>	HDMI	H264	12,00	PASS	15	HDMI	384	14	
<b>Set Configuration for all Units (7):</b>			Select	Select		Select	Select	HDMI	Select	Select	<input type="checkbox"/>

		563822	563832
<b>INPUT</b>			
Video		4 sets 1 x RCA (CVBS)	2 sets 3 x RCA (Y, Pb, Pr) 2 sets 1 x RCA (CVBS)
Audio		4 sets 2 x RCA (L, R)	2 sets 2 x RCA (L, R) 2 sets 1 x RCA (Digital) 2 sets 1 x Toslink (Optical)
Video + Audio		-	2 sets 1 x HDMI
<b>VIDEO ENCODER</b>			
Output format		MPEG-2 / H264	
Resolution		480i & 576i Auto-scan of input resolution	480i, 480p, 576i, 576p, 720p, 1080i & 1080p Auto-scan of input resolution
Aspect ratio		4:3, 16:9 and pass through	
GOP		10, 12, 15, 16, 18, 20, 24 ó 30	
<b>AUDIO ENCODER</b>			
Output format		MPEG1 Layer 2	Dolby Digital AC-3 (only Digital Loop) or MPEG1 Layer2 (analogue input or HDMI PCM)
Sampling rate	kHz	48	
<b>OUTPUT</b>			
Frequency bands	MHz	46...862	
Output maximum level	dBµV	115 (103 with active loop-through)	
MER	dB	>40	
Spurious	dBc	-60	
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	Configurable	
PSI	Frequency steps	kHz	125 / 166
	Transport Stream ID	Configurable	
	Original Network ID	Configurable	
	Network ID	Configurable	
	LCN	Configurable	
	NIT	Manual / Automatic	
	SDT	Manual / Automatic	
	LCN mode	Generic / UK / NorDig V1 / NorDig V2	
	Network Name	Configurable	
	Service PID	Configurable	
Service Name	Configurable		
Service ID	Configurable		
<b>GENERAL</b>			
Power supply	Vdc	24	
Consumption	W	<16	<20,4
Ingress Protection	IP	20	
Dimensions (W x H x D)	mm	50 x 216 x 180	

