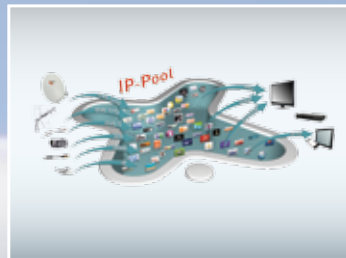




Setting new standards with flexible pool technology




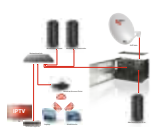

TDH 800 Headend systems



your ultimate connection



Compare of the systems and their capabilities

System technology		TDX	TDH 800
	IP-pool technology	✓	✓
	Multiplexing	✓	✓
	Hot Swap technology	✓	x
Frontends	DVB-S/S2	✓	✓
	DVB-T-T2	✓	✓
	DVB-C	✓	x
	AV	✓	✓
	HDMI	✓	✓
	Backends	PAL	✓
	PAL CI	✓	✓
	PAL-HD	✓	x
	PAL-HD CI	✓	x
	QAM	✓	✓
	QAM CI	✓	✓
	COFDM	✓	✓
	COFDM CI	✓	✓
	IP Backend	✓	x
	CI only	✓	✓
	Additional hardware	Redundant PSU	✓
Functionality	IP-in IP-out	✓	x
	Multi Unit	✓	x
	SID remapping	✓	✓
	Common NIT	✓	x
	LCN HD	✓	✓
	PLP (DVB-T2)	✓	x
	Alternative EIT input	✓	x
	EIT management	✓	x
	Network ID setting	✓	✓
	Network name	✓	✓
	Original network ID	✓	✓
	Nit standard DVB, NorDig	✓	✓
	CAT remove	✓	✓
	FranceSAT NIT	✓	✓
	Transport stream ID setting	✓	✓
	Services	Software updates	✓
	Software for IP-in and IP-out	✓	x

TDH 800 basic unit

| technical specifications



TECHNICAL SPECIFICATIONS

TDH 800 basic unit

- for supporting 16 input modules and 6 quad output modules.

CABINET

Type	TDH 800 main unit	
Art. no..	692890	
Frequency range (tv out)	MHz	47-862
Impedance (RF out):	Ohm	75
Return loss (RF out):	dB	> 14 at 47 MHz (-1.5 dB/octave; min. 10 dB)
Testpoint	dB	-20
Output level max @ 60 dB IMD 24 combined PAL channels:	dB μ V	93.0
Power Supply		
Operating voltage	VAC	190-260 50/60 Hz
Power consumption, max	W	280
Max. LNB control	mA	4 x 305
Connectors:		
AC Power in (1.8 m)	IEC320 (cable)	
Ext. TV-OUT	F-connector	
Ext. Testpoint	F-connector	
PC	RJ 45	
Environment		
Temperature, operating	°C	-10...+50
Temperature, storage	°C	-20...+70
Humidity, operating	%	20...80
Humidity, storage	%	10...90
Mechanical data		
Dimensions product (L x W x H)	mm	440 x 240 x 265
Dimensions cardboard packaging (L x W x H)	mm	546 x 316 x 374
Weight - net	kg	9.8
Weight - gross	kg	11.4

Input modules

| technical specifications



TECHNICAL SPECIFICATIONS INPUT MODULES

TDH 811 frontend - DVB-S/S2 [QPSK/8PSK] module

SD and HD satellite receiver module. Multiplex transmission and routing of all programmes into the TDH 800 pool.



DVB-S/S2 INPUT DEMODULATOR MODULE (FRONT-END)

Type	TDH 811 frontend - DVB-S/S2 module	
Art. no..		692820
Frequency range	MHz	950-2150
Input level	dBμV	42-82
Input impedance	Ohm	75
Input return loss	dB	> 10
Loop through gain	dB	0 - 6
LNB control DiSEqC		1.1
LNB control V/H	V/mA	0-13-18 / 300
Input connector		F-connector
Output connector (loop through)		F-connector

TDH 813 frontend - DVB-T/T2 [COFDM] module

SD and HD terrestrial receiver module. Multiplex transmission and routing of all programmes into the TDH 800 pool.



DVB-T/T2 (1 TUNER) INPUT DEMODULATOR MODULE (FRONT-END)

Type	TDH 813 frontend - DVB-T/T2 module	
Art. no..		692823
Frequency range	MHz	177.5 - 226.5 / 474 - 858
Input level	dBμV	35...75
Input impedance	Ohm	75
Input return loss	dB	> 6
Loop through gain	dB	-
Demodulator mode		QPSK, 16QAM, 64QAM 256QAM / 1k 2k 8k 16k 32k
Bandwidth	MHz	7 / 8
Input connector		F-connector
Output connector (loop through)		-

TDH 814 frontend - AV encoder module

Converting analogue audio/video signal into an MPEG2 or MPEG4 stream and forwarding to the TDH 800 pool.



AV ENCODER MODULE (FRONT-END)

Type	TDH 814 frontend - AV encoder module	
Art. no..		692880
Video level	Vpp	1
Video impedance	Ohm	75
Video S/N ratio	dB	> 52
Video input standards		PAL, Secam
Audio level	Vpp	< 2.4
Audio impedance	kOhm	10
Video input connector		15 pol high density sub-D
Audio input connector		15 pol high density sub-D
Remarks		Use high quality cable art. no 153420

Output modules

| technical specifications

COFDM module - Quad-COFDM modulator, adjacent channel operation, automatic multiplexing, available as FTA or CI variant.

COFDM OUTPUT MODULE (BACK-END)		
Type	TDH 843 FTA / TDH 844 CI	
Art. no..	692860 / 692861	
Output frequency range	MHz	50.5-858
Spurious signals	dB	> 60
QAM modes	16 QAM, 64 QAM, QPSK	
Bandwidth	MHz	6, 7 or 8
Carriers supported	2k	
Guard interval	1/32, 1/16, 1/8, 1/4	
Error correction	Viterbi FEC Reed Solomon	1/2, 2/3, 3/4, 5/6, 7/8 204 byte mode
MER	dB	≥35
Output level (system)	dBμV	90.0
Output level adjustment	dB	+3 / -17 (0.5 dB step)
CI slots	0/2	



QAM module - Quad-QAM modulator, adjacent channel operation, automatic multiplexing, available as FTA or CI variant.

QAM OUTPUT MODULE (BACK-END)		
Type	TDH 845 FTA / TDH 846 CI	
Art. no..	692855 / 692856	
Output frequency range	MHz	50.5-858
Spurious signals	dB	> 60
QAM modes	QAM	16, 32, 64, 128, 256
Symbol rate	Mbps	2-40 (SCPC/MCPC)
Viterbi decoder	1/2, 2/3, 3/4, 5/6, 7/8	
Reed Solomon decoder	204, 188, t=8	
Deinterleaver	l = 12	
Output spectrum	Normal, Inverted Random	
Symbol rate	Mbaud	3.5-7200
Roll-off factor	%	15
FEC block code	RS 204, 188	
MER	dB	>35
Output level (system)	dBμV	90.0
Output level adjustment	dB	+3 / -17 (0.5 dB step)
CI slots	0/2	



Analogue / PAL module - Quad-PAL modulator, adjacent channels, available as FTA or CI variant.

PAL OUTPUT MODULE (BACK-END)		
Type	TDH 841 FTA / TDH 842 CI	
Art. no..	692850 / 692851	
TV standard	Pal/SEcam B/G, I, L, D/K	
TV system	VSB VHF/UHF/mono/A2/Nicam	
Output frequency range	MHz	47-862
Picture carrier stability	kHz	< ±30
Spurious signals ref picture carrier	dB	> 60
Output level system	dBμV	93.0
Output level adjusting	dB	+3.0...-17.0 (0.5 dB step)
Output impedance	Ohm	75
Return loss	dB	> 10
Differential gain	%	< 8
Differential phase	degrees	< 8
Crominance/luminance delay	ns/m	< 80
Luminance non-linearity	%	< 8
Video S/N ratio (typical)	dB	54
CI slots	pcs	0/2





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