

HDE 400

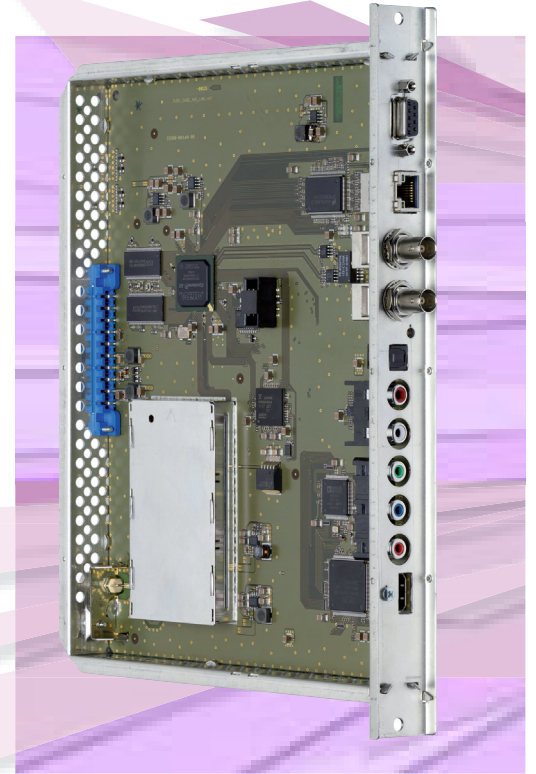


Grundig SAT Systems

Digital HD Encoder

Features

- MPEG4 encoder (H.264/AVC high profile level 4.0)
 - Input optionally HDMI, YPbPr or CVBS
 - Audio input level of cinch and HDMI input adjustable
 - Resolution up to 1920 × 1080p
 - Service ID adjustable
 - Programme name editable
 - Total Output Bit rate 1...30 Mbps adjustable
 - Audio bitrate 32...384 kbps adjustable
 - Video "Group of Picture" IBBP/IPPP/IBP
- QAM/COFDM modulator
 - Electronically adjustable output level
- ASI input/output
 - ASI data rate adjustable
 - Multiplexing: Cassette can be cascaded
- LAN output
 - MPTS transport stream acc. to UDP or RTP protocol
- Signal output
 - Encoder signal in parallel via modulator/ASI/LAN
or
 - Encoder signal in parallel via ASI/LAN and ASI input via modulator
=> Encoder > ASI output > external processing > ASI input > modulator
- Transport Stream Processing:
 - Stuffing
 - Transport stream and ORGNET-ID adjustable
 - Multiplexing: ASI input with encoder signal
 - Station filter: Programmes can be removed
(Programme data stream incl. modification/creation of the tables)
 - Substitute signal in the case of an incorrect input signal (Single Carrier, Tables)
 - Network Information Table (NIT, for complete head-end station)
- Remote Control (via PSW 1000*)
- Remote Update (via BEflash*)
(* and a corresponding management unit)



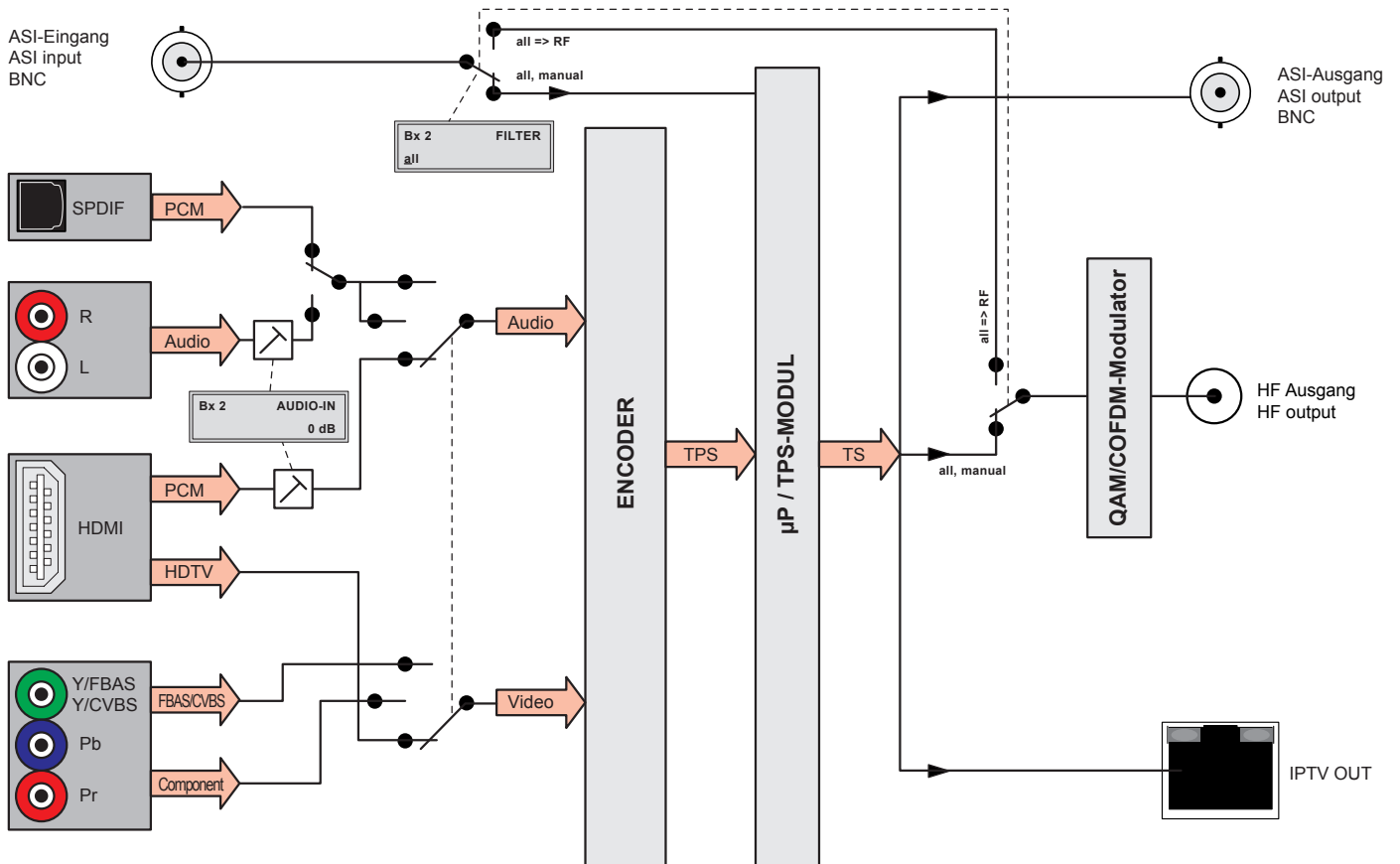
HDTV **DVB** multi **MD**
Digital Video Broadcasting **digital**®



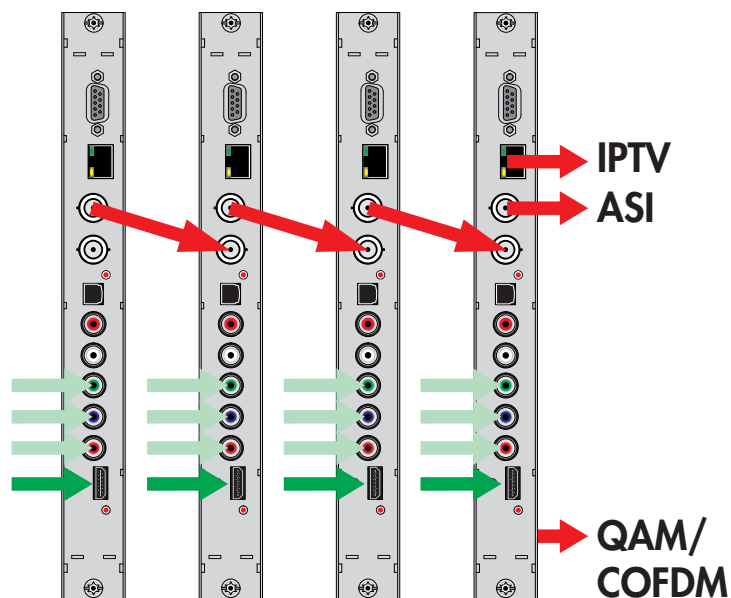
PSW 1000 Features

- Comfortable user interface
- LCN for the complete station
- NIT for the complete station (several head-end stations)
- Save/export the configuration

Block diagram:



Cascading:



Technical data:



Assembly instruction

The devices meet the EU directives 2006/95/EC and 2004/108/EC.
The product fulfils the guidelines and standards for CE labelling.

Unless otherwise noted all values are specified as "typical".

HDMI Input

Tested Video Formats 1920x1080p24/i50/p50/i60, 1280x720p50/p60, 720x576i50/p50
720x480i59/p59
Supported Audio Formats Linear PCM

Component Video Input

Input level..... Y 1 V_{ss}, Pb/Pr 0,7 V_{pp}
Input impedance 75 Ω
Tested Video Formats 1920x1080i50, 1280x720p50, 720x576p50, 720x480p59

CVBS Video Input

Input level..... 1 V_{pp}
Input impedance 75 Ω
Frequency range 20 Hz ... 5 MHz
Supported standards..... PAL BG

Audio Input

Input level..... 500 mV_{rms}
Frequency range 20 Hz ... 15 kHz

MPEG4 Encoder

Transport stream..... H.264/AVC High Profile Level 4.0
Setting range of total data rate (video + audio + tables) 1 Mbit/s...30 Mbit/s
Video data rate:
1920x1080p 6 Mbit/s...30 Mbit/s
1920x1080i 6 Mbit/s...24 Mbit/s
1280x720p 4 Mbit/s...24 Mbit/s
720x576i 1 Mbit/s...10 Mbit/s
720x480i 2 Mbit/s...10 Mbit/s
Audio data rate.....32 kb/s...384 kb/s

RF Output COFDM

Frequency range 42.0 MHz ... 860.0 MHz
Channels..... C5 ... C12, C21 ... C69
Transmission mode..... 2k
Kinds of modulation..... QPSK, 16 QAM, 64 QAM
Code rates 1/2, 2/3, 3/4, 5/6, 7/8
Guard intervals 1/4, 1/8, 1/16, 1/32
Return loss.....> 8 dB
Output level..... 96 dB_μV
Output impedance..... 75 Ω

RF Output QAM

Frequency range	42.0 MHz ... 860.0 MHz
Channels	S21 ... C69
Kinds of modulation	QAM 4, 16, 32, 64, 128, 256
Output level	96 dB μ V
Output impedance	75 Ω

ASI Interfaces

Norm	DIN EN 50083-9
Format	MPEG ISO IEC 13818-1
Max. data rate	108 Mbit/s
User data rate	2 ... 90 Mbit/s
Impedance	75 Ω
Level (input / output)	800 mVpp \pm 10%
Return loss (input)	> 17 dB (5 ... 270 MHz)

LAN Interface

Standard	10/100/1000 MB/s
Transport stream	MPTS (Multi Programme Transport Stream)
Protocols	UDP (User Data Protocol), RTP (Real-Time Transport Protocol)

Connections

Video Inputs:

HDTV	1 HDMI 1.4a (typ A, 19 Pin)
Component YPbPr	3 Cinch sockets
CVBS	1 Cinch socket

Audio Inputs:

PCM	1 HDMI 1.4a
S/PDIF (PCM)	1 optical socket
Analogous Stereo	2 Cinch sockets

LAN	1 RJ 45 socket
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ASI input	1 BNC socket, 75 Ω
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ASI output	1 BNC socket, 75 Ω
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RF output	1 IEC socket 75 Ω
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Connection strip (10-pin):	for supply voltages and control circuit
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RS-232 socket:	serial update interface
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