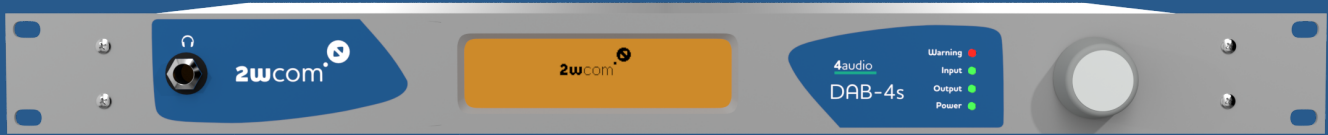


DAB-4s EDI/ETI satellite receiver

High-density DAB distribution extractor
EDI/ETI extraction from DVB-S/S2
Multi-format EDI/ETI and ETI/EDI converter



DAB-4s – EDI/ETI satellite receiver



General

- ▶ The DAB-4s is a professional DAB EDI/ETI satellite receiver and converter for up to 4 DAB multiplexes
- ▶ The DAB-4s demodulates up to 4 EDI/ETI data streams from DVB-S or DVB-S2
- ▶ It can flexibly be configured as 4 x EDI/ETI converter, 4 x ETI/EDI converter or 4 x EDI Level converter. Additionally, it monitors all EDI/ETI streams.
- ▶ A pair of input sources ETI/EDI can work together in a redundant master / slave configuration.

Input

- ▶ SAT-input for EDI/ETI
- ▶ 4 ETI E1 G703/G704 interfaces
- ▶ ASI for ETI (MPEG2-TS)
- ▶ 1 BNC 10 MHz for reference clock
- ▶ Optional: EDI over UDP/IP on data interfaces
- ▶ Optional: DAB tuner for monitoring

Output

- ▶ 4 ETI E1 G703/G704 interfaces
- ▶ ASI for ETI (MPEG2-TS)
- ▶ IP EDI on data interfaces

EDI level converter

- ▶ FEC level conversion for outgoing IP EDI streams

SAT receiver

- ▶ Integrated satellite tuner with loop-through output
- ▶ Upgrade options: Dual tuner module with 2 inputs, Advanced single tuner for 16APSK/32APSK and GSE support
- ▶ Extraction of 4 EDI/ETI streams
- ▶ Optional: Conditional access decryption (BISS-1)

Converter

- ▶ Up to 4x EDI/ETI converter
- ▶ Up to 4x ETI/EDI converter
- ▶ Up to 4x EDI level converter

ETI/EDI redundancy switch

- ▶ ETI link redundancy
- ▶ EDI stream redundancy
- ▶ Seamless switching and alarming for 2 redundant inputs (master/slave)
- ▶ Redundancy on device level

Control

- ▶ Revised configuration via web user interface for easier setup
- ▶ Remote control with various possibilities: HTTP/S, FTP, SSH, NMS, SNMP
- ▶ Remote Control via Satellite (on request)
- ▶ Relays, inputs



Technical details 1/3



Input/output

SAT

	Basic Single Tuner (default)	Adv. Single Tuner (option)	Dual Tuner (option)
Connector RF1	F connector female (input)	F connector female (input)	F connector female (input)
Connector RF2	F connector female (loop-through)	F connector female (loop-through)	F connector female (2 nd input)
Frequency range	950 ... 2.150 MHz, step 1 kHz All LNB oscillator frequencies possible	950 ... 2.150 MHz, step 1 kHz All LNB oscillator frequencies possible	950 ... 2.150 MHz, step 1 kHz All LNB oscillator frequencies possible
Input level, impedance	-75 ... -20 dBm, 75 Ω	-75 ... -20 dBm, 75 Ω	-75 ... -20 dBm, 75 Ω
LNB Control	13 V vertical, 18 V horizontal, off 0 kHz low band, 22kHz high band	13 V vertical, 18 V horizontal, off 0 kHz low band, 22kHz high band	13 V vertical, 18 V horizontal, off 0 kHz low band, 22kHz high band
Noise figure	Typical 6dB, max. 12 dB	Typical 6dB, max. 12 dB	Typical 6dB, max. 12 dB
DVB-S Demodulation/Decoding	QPSK CCM VITERBI and Reed-Solomon decoder 1/2, 2/3, 3/4, 5/6, 6/7, 7/8	QPSK CCM VITERBI and Reed-Solomon decoder 1/2, 2/3, 3/4, 5/6, 6/7, 7/8	QPSK CCM VITERBI and Reed-Solomon decoder 1/2, 2/3, 3/4, 5/6, 6/7, 7/8
DVB-S2 Demodulation/Decoding	QPSK and 8PSK CCM LDPC and BCH decoder	QPSK, 8PSK, 16APSK and 32APSK CCM, VCM and ACM LDPC and BCH decoder 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10	QPSK, 8PSK, 16APSK and 32APSK CCM, VCM and ACM LDPC and BCH decoder 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10
Symbol rates	0.128 ... 45 MSym/s	0.64 ... 45 MSym/s	1 ... 45 MSym/s
Data processing	MPEG TS (EDI MPE); MPEG TS (ETI SC/PC, MC/PC)	MPEG TS (EDI MPE); MPEG TS (ETI SC/PC, MC/PC); GSE (EDI)	MPEG TS (EDI MPE) MPEG TS (ETI SC/PC, MC/PC)
PL scrambling	ID 0... 262144	ID 0... 262144	ID 0... 262144
IF Filter bandwidth	Automatic selection	Automatic selection	Automatic selection
MPEG decoding	according to ETSI TR 101 154	according to ETSI TR 101 154	according to ETSI TR 101 154

Technical Details 2/3

ETI

ETI in	4x BNC E1/ETI in
ETI out	4x BNC E1/ETI out

ASI

Connector	1x BNC 75 Ω output 1x BNC 75 Ω configurable to be either ASI input or 1PPS SYNC input (option)
Data	MPEG2 TS 270 Mbps (ETI)

DAB tuner (optional)

Connector	1x F-jack 50 Ω input
Frequency range	168-240 MHz (DAB Band III)
RF sensitivity	10 dB μ V
Max. RF input	100 dB μ V

Ethernet

Connector	3x RJ45 (Control, 2x Data)
Type	Auto switching 10/100/1000 BASE-T, Unicast, Multicast

Serial/USB

DTE	8x RS-232C (rear) Sub D-15
USB 2.0	interface for service, configuration and firmware updates

Contact closure

Connector	26 pole sub-D male
Inputs	8 inputs
Outputs	7+1 floating relays 7 relays SPST (from A) 1 relay SPDT (from C) Optional: 16 relays DC: max. 30 V, 1 A, 10 W

Internal Storage (optional)

Data	internal audio files
Size	7 GB (optional 1000 GB)
Type	eMMC (optional SSD)

Time synchronization

10 MHz	BNC connector
NTP	Network synchronization
PTP v2	Network synchronization according to IEEE 1588-2008
SYNC / AUX1	BNC – 75 Ω – 1PPS

Technical Details 3/3

Control and monitor

GUI and interfaces

User interface	Integrated WebGUI, LCD display
Protocols	HTTP(S), FTP, Telnet, Ember+, JSON, NMS, SNMP

Front panel

LCDisplay	Graphical, 264x64 pixel
Jog wheel	Impulse, enter button
LED	4 Duo LEDs: Power, input, output, warning

General data

Power consumption	< 20W
Case dimensions	19", 1 RU, Depth: 310 mm, Width: 424 mm, Front panel: 484 mm
Weight	< 5 kg
Material	Steel plate (aluminium-zinc coated)
Operating temp. range	0 ... +45°C
Storage temp. range	-40 ... +70°C
Language	English

Power supply

Standard AC	1 internal IEC power connector voltage range 90 – 260 VAC (nominal 100–240 VAC) frequency range 47 – 63 Hz (nominal 50 – 60 Hz)
Standard DC (optional)	1 internal (Neutrik powerCON) voltage range -40 – -60 VDC (nominal -48 VDC)
Dual internal (optional)	Two internal redundant power supplies (AC or DC) automatic switchover and prioritization
Dual hot-plug (optional)	Two hot-swappable redundant power supplies (AC or DC) automatic switchover and prioritization