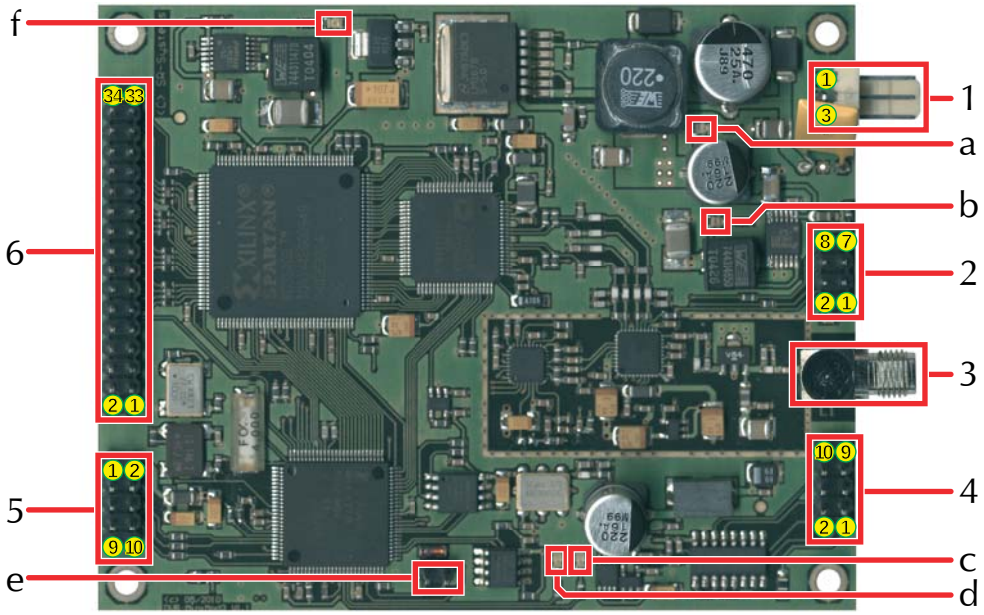
1 Connector description



Board dimensions: 100×80 mm

Connectors	1	Power Input	7–24 V=
	2	8pin Header	Optional f. ext. Upconverter control
	3	SMA	RF out 50 Ω note: RF_{OUT} is **not** filtered!
	4	10pin Header	RS232 (115k2, 8N1)
	5	10pin Header	I^2C-Bus
	6	34pin Header	TS_{IN}

LEDs and switches	a	LED green	+5,0 V
	b	LED green	+3,3 V
	c	LED green	Status
	d	LED green	Status
	e	2pin Header	MCU Prog if set
	f	LED green	+2,5 V

2 Pin description

1 – Power supply			
1	V_{IN} 8–24 V=	2, 3	GND

2 – opt. ext. Upconverter control			
1	GND	2	16 MHz Ref.
3	PTT	4	PLL-ENA
5	PLL Lock	6	PLL-CLK
7	+5.0 V	8	PLL-DATA

4 – RS232			
1	ext. mode	2	Control TxD
3	Control RxD	4	Data Rx
5	GND	6	Data Tx
7	con. with 8	8	con. with 7
9	Reset	10	GND

5 – I^2C-Bus			
1	+5.0 V	2	+5.0 V
3	SDA	4	SDA
5	SCL	6	SCL
7	Reset-In	8	IRQ
9	GND	10	GND

e – Mode jumper	
open	run mode
closed	program mode

6 - TS_{IN}			
1	+5.0 V	2	+5.0 V
3	+5.0 V	4	+5.0 V
5	SDA	6	not connected
7	SCL	8	xReset
9	GND	10	GND
11	TSCLK in/out	12	PSYM
13	not connected	14	DVAL
15	TS 6	16	TS 7
17	TS 4	18	TS 5
19	TS 2	20	TS 3
21	TS 0	22	TS 1
23	GND	24	GND
25	SD Out (f. E.*)	26	PLL THR (f. E.*)
27	SDCLK (f. E.*)	28	SD In (f. E.*)
29	GND	30	GND
31	MCLK 27 MHz	32	ASCLK (f. E.*)
33	RST Vid. Codec	34	not connected
*f.E. = for Encoders			

3 Specifications

Board dimensions	100×80 mm
Board weight	<50 g
Voltage	7–24 V=
Power consumption	~5 W
TS Input	Raw TS input: Clock direction and Clock edge switchable Tuner TS input: DVB-S/C/T NIM Encoder input
RF Frequency range	70 MHz–2200 MHz in 1 kHz-steps

DVB-S	Constellation	QPSK
	Modulation Error Rate (MER)	>25 dB
	FEC	½, ⅔, ¾, ⅚, ⅞
	Symbolrate	1–45 MSymbol/s in 1 kSymbol-steps
	RF_{out}	~110 dBµV@50 Ω
DVB-C	Constellation	QAM16, QAM32, QAM64, QAM128, QAM256
	Modulation Error Rate (MER)	>45 dB
	Symbolrate	1000–7000 kSymbol/s in 1 kSymbol-steps
	RF_{out}	~107 dBµV@50 Ω
DVB-T	Constellation	QPSK, QAM16, QAM64
	Modulation Error Rate (MER)	>40 dB
	FEC	½, ⅔, ¾, ⅚, ⅞
	Guard Interval	¼, ⅛, 1⁄16, 1⁄32
	IFFT Mode	2k
	Bandwidth	5, 6, 7 and 8 MHz
	RF_{out}	>100 dBµV@50 Ω
ATSC	Constellation	8VSB
	Modulation Error Rate (MER)	>35 dB
	Bandwidth	6 MHz
	RF_{out}	~107 dBµV@50 Ω

note: RF_{OUT} is **not** filtered!

Errata/corrections:

15.07.2010 First release

24.07.2010 ATSC Modulation Error Rate added

The information in this manual was compiled with high care and to our best knowledge; nevertheless there might be some errors left in this document. We do not take legal or any other responsibility for the correctness of any information.

We are happy to receive your comments and questions:

SR-Systems
Brüder-Grimm-Straße 130
36396 Steinau

Tel.: +49 (66 63) 91 88 66
Fax: +49 (66 63) 91 88 67
eMail: info@SR-Systems.de