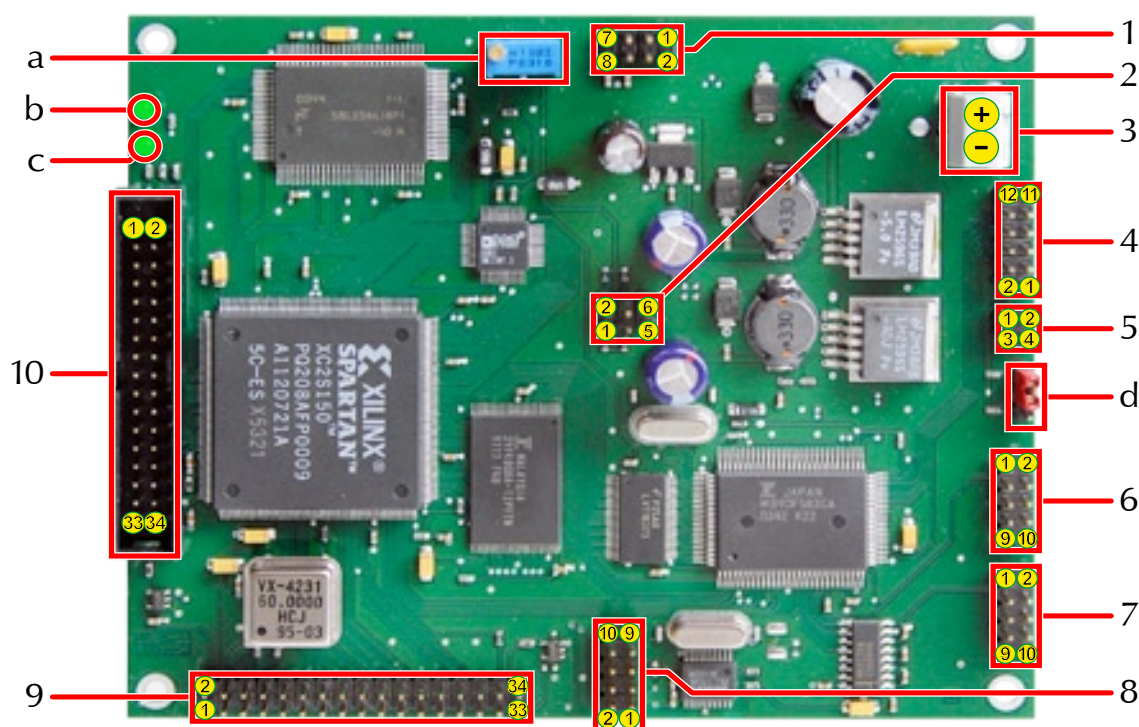


1 Connector description



board dimensions: 120×100 mm

Connectors	1	8pin Header	Connector to I/Q-Modulator (U_B)
	2	6pin Header	Connector to I/Q-Modulator (diff. IQ)
	3	2way screw terminal	Power input (10–24 V DC)
	4	12pin Header	Optional connector
	5	4pin Header	IE-Bus connector (not used)
	6	10pin Header	Serial interface COM1 (used for programming, baudrate 19k2 8N1)
	7	10pin Header	Serial interface COM2
	8	10pin Header	Connector to I/Q-Modulator (PLL-Control)
	9	34pin Header	TS1 input
	10	34pin Header	TS2 input

LEDs		
a	8pin DIP switch	set operational mode
b	LED green	On: Microcontroller executes firmware Blinking: Encoder-Firmware is being loaded to all encoder boards Off: Successful start of encoder software On after off: one or more encoders couldn't start.  Note: Encoders can be connected only to the TS-Input, for which these have been programmed! If a tuner/ext. Clock is connected instead an encoder, the LED will be continuous on after switching on the device.
c	LED green	lightens up after loading and starting code
d	3pin Jumper	MCU-Mode Jumper (run/program)

2 Pin description

1 – I/Q-Modulator (U_p)			
1	GND	2	V_{in}
3	GND	4	V_{in}
5	GND	6	5.0 V
7	GND	8	5.0 V

2 – I/Q-Modulator (diff. IQ)			
1	$Q_{out} A$	2	$I_{out} A$
3	$Q_{out} B$	4	$I_{out} B$
5	GND	6	GND

3 – Power input	
+	9–24 V DC
–	GND

4 – optional			
1	5.0 V	2	SCK0
3	SCK1	4	ADTG
5	DA1	6	AN4
7	AN5	8	AN6
9	AN7	10	P81
11	P82	12	GND

5 – IE-Bus (not used)			
1	Rx	2	GND
3	Tx	4	GND

6 – COM1 (19k2, 8N1)			
1	con with 4+6	2	TxD
3	RxD	4	con with 1+6
5	GND	6	con with 1+4
7	RTS	8	CTS
9	not connected	10	GND

7 – COM2			
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

9 – SPI (TS) Input			
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 A	12	PSYM A
13	not connected	14	DVAL A
15	TS A6	16	TS A7
17	TS A4	18	TS A5
19	TS A2	20	TS A3
21	TS A0	22	TS A1
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

8 – I/Q-Modulator (PLL-Ctrl.)			
1	PLL-Clk	2	PLL-Data
3	PTT	4	PLL-Ena
5	PLL-Lock	6	GND
7	Bandswitch 2	8	GND
9	Bandswitch 1	10	GND

10 – SPI (TS) Input			
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 B	12	PSYM B
13	not connected	14	DVAL B
15	TS B6	16	TS B7
17	TS B4	18	TS B5
19	TS B2	20	TS B3
21	TS B0	22	TS B1
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

Errata/corrections:

05.05.2006 Turned numbering of con. 1, 5, 6, 7 and 10 in picture

20.03.2008 coloured TS connectors