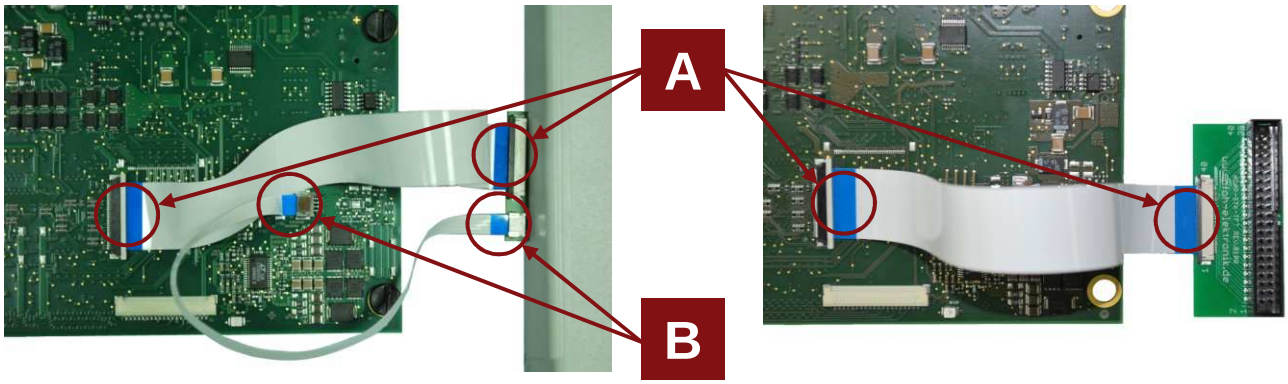
STKa28 Quick-Start Guide

A Connect display / adapter board to the STKa28

Use the provided 40-pin FFC cable to connect the display respective the adapter board to connector X22 of the STKa28. Make sure, the contacts of the FFC cable face towards the pc-boards on both ends (blue reinforced ends of FFC cable facing up).

B Connect the touch controller of the display box to the STKa28

Use the provided 4-pin FFC cable to connect the touch controller to connector X8 of the STKa28. Make sure, the FFC cable is connected as shown in the image.



C Connect Host PC and STKa28

Use the supplied null modem cable to connect COM1 of the STKa28 (X32B) to a serial port on your host PC (e.g. COM1 / ttyS0).

Run terminal emulator and configure serial port

Run your favourite terminal emulator on the host PC (we recommend *Tera Term Pro*) and configure the serial port as follows:

Baud rate	Data bits	Parity	Stop bits	Handshake
115200	8	none	1	XON/XOFF

D Power-up STKa28

Verify the mains voltage required for the power supply, then connect it to connector X6 of the STKa28.

E Boot an operating system

By default, the STKa28 is configured to boot from SD card.
The supplied SD card contains a bootable image of the evaluation BSP for the operating system chosen with your order. If asked for login name and/or a password enter "root".

Documentation: http://www.tq-group.com/en/tqma28
Support Wiki / BSPs: http://support.tq-group.com/doku.php?id=en:arm:tqma28

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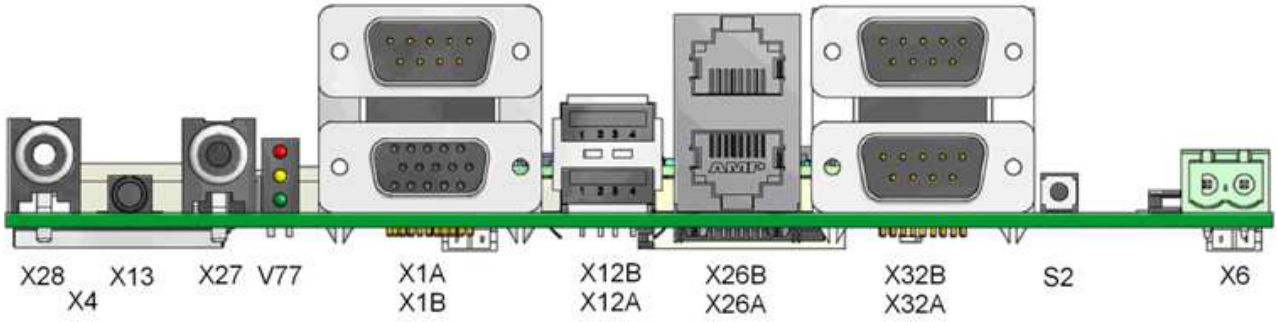
External interfaces



X28	X13	X27	V77	X1A	X1B	X12B	X12A	X26B	X26A	X32B	X32A	S2	X6
Audio out left	Mic in	Audio out right	Status LED ext.	CAN 1 CAN 2	GPIO	USB 2.0 Host	USB 2.0 Host	Ethernet 2	Ethernet 1	RS232	RS485	Reset button	Power-In

DIP switch settings

On-board eMMC

	S4				S5			
DIP	1	2	3	4	1	2	3	4
ON						note		N/A
OFF	•	•	•	•	•		•	

SD card

	S4				S5			
DIP	1	2	3	4	1	2	3	4
ON				•	•	note	•	N/A
OFF	•	•	•					

USB Recovery

	S4				S5			
DIP	1	2	3	4	1	2	3	4
ON		•			•	note		N/A
OFF	•		•	•			•	

GPIO mapping X1B and V77

Signal name at X1B	I²C base address	I/O port	Direction
OUT0	0x20	IO0	O
OUT1		IO1	O
OUT2		IO2	O
OUT3		IO3	O
OUT4		IO4	O
OUT5		IO5	O
OUT6		IO6	O
OUT7		IO7	O
IN0	0x21	IO0	I
IN1		IO1	I
IN2		IO2	I
IN3		IO3	I
Signal name (internally used)		I/O port	Direction
USER_LED1		IO4	O
USER_LED2		IO5	O
LCD_BKL_ON		IO6	O
LCD_LVDS-ON		IO7	O

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Pinout plug connector X22 / adapter board

PowerView + Data Image (X22)	Signal	Type	Remark
1	GND	P	Ground
2	GND	P	Ground
3	PowerView: NC Data Image: ADJ	– O	PowerView: 100 kR Data Image: LCD_CONTRAST (PWM)
4	PowerView/Admatec: VCC3V3 Data Image: VCC5V	P P	Supply
5	PowerView/Admatec: VCC3V3 Data Image: VCC5V	P P	Supply
6	PowerView/Admatec: VCC3V3 Data Image: VCC5V	P P	Supply
7	VCC3V3	P	Supply
8	PowerView: NC Data Image: VCC3V3	– P	PowerView: not connected Data Image: Supply
9	DATA Enable	O	LCD_OE (22 R in series)
10	GND	P	Ground
11	GND	P	Ground
12	GND	P	Ground
13	Blue 5	O	LCD_D5 (22 R in series)
14	Blue 4	O	LCD_D4 (22 R in series)
15	Blue 3	O	LCD_D3 (22 R in series)
16	GND	P	Ground
17	Blue 2	O	LCD_D2 (22 R in series)
18	Blue 1	O	LCD_D1 (22 R in series)
19	Blue 0	O	LCD_D0 (22 R in series)
20	GND	P	Ground
21	Green 5	O	LCD_D11 (22 R in series)
22	Green 4	O	LCD_D10 (22 R in series)
23	Green 3	O	LCD_D9 (22 R in series)
24	GND	P	Ground
25	Green 2	O	LCD_D8 (22 R in series)
26	Green 1	O	LCD_D7 (22 R in series)
27	Green 0	O	LCD_D6 (22 R in series)
28	GND	P	Ground
29	Red 5	O	LCD_D17 (22 R in series)
30	Red 4	O	LCD_D16 (22 R in series)
31	Red 3	O	LCD_D15 (22 R in series)
32	GND	P	Ground
33	Red 2	O	LCD_D14 (22 R in series)
34	Red 1	O	LCD_D13 (22 R in series)
35	Red 0	O	LCD_D12 (22 R in series)
36	GND	P	Ground
37	GND	P	Ground
38	DCLK	O	LCD_SCLK (22 R in series) / 10 pF
39	GND	P	Ground
40	GND	P	Ground