TE0603 GigaBee Header Baseboard

User Manual

Overview

Trenz Electronic TE0603 Header baseboard provide interface extensions for TE0600 module. The following parts are available for application purposes: 4 LEDs, Ethernet connector, Micro SD connector.
A 14-pin JTAG connector for Xilinx parallel cable III, IV and USB cable HW-USB is made available for easy attachment.
Flexible power supply is possible through screw terminals (J10) or dedicated DC jack (J13).

Features

- Board power supply via screw terminals, DC jack
- JTAG header compatible with Xilinx parallel cable III, IV and USB cable HW-USB
- Small form factor: 115x70 mm
- Micro SD connector
- 5 Header connectors with up to 114 user IOs
- 2 Push-buttons for reset and user function

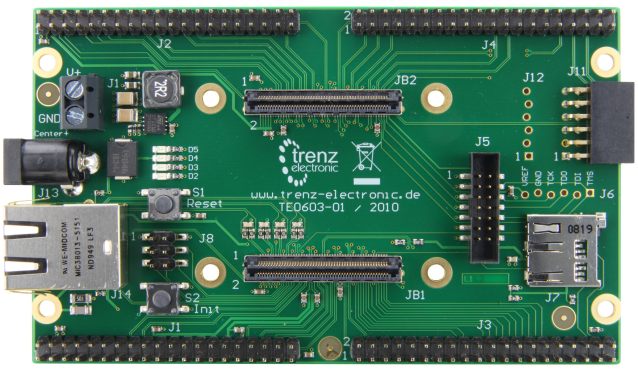

Figure 2: TE0603 without TE0600 module (top view)

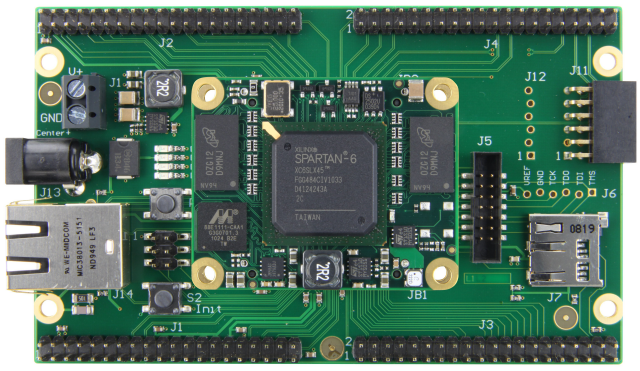

Figure 1: TE0603 with TE0600 module (top view)

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1 Assembly diagram

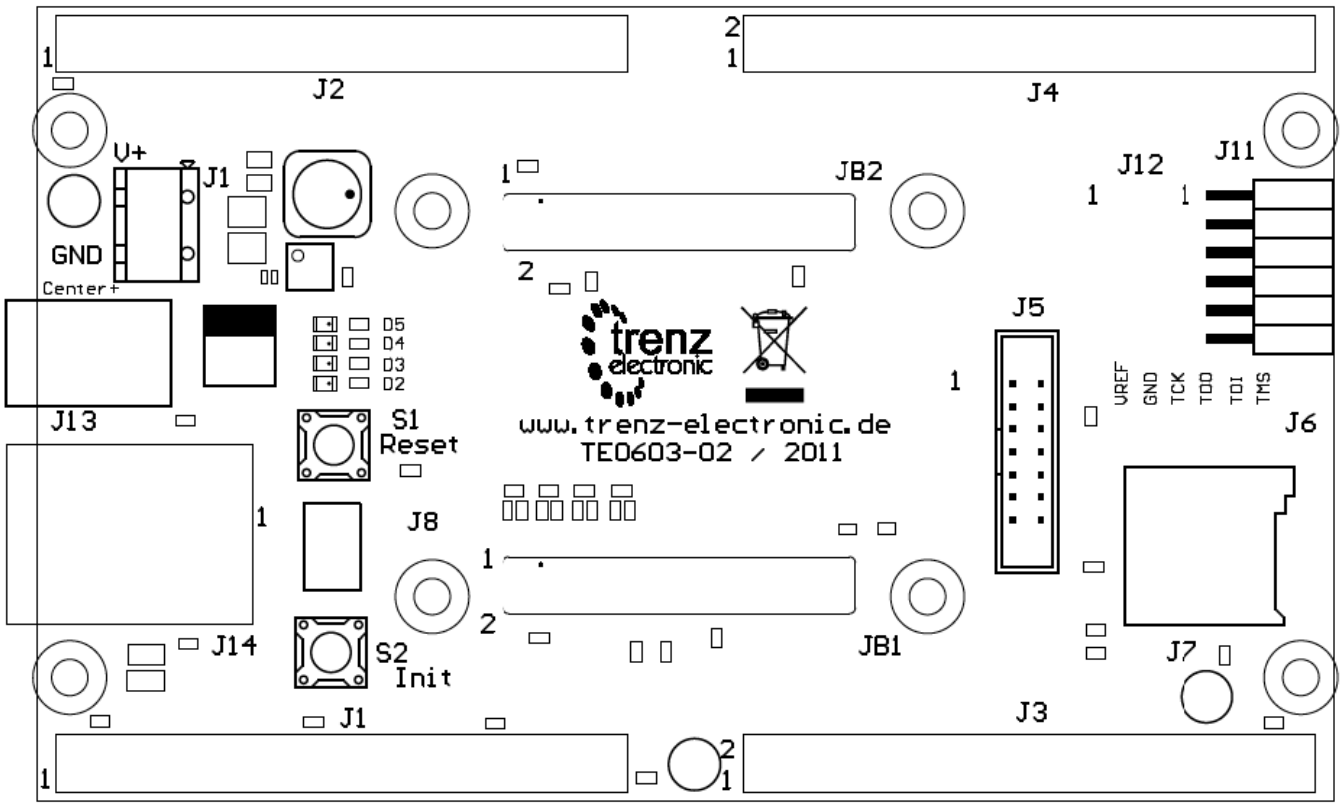

Figure 3: TE0603 assembly diagram

Header designators changed in REV 02

REV01	REV02
J1	JB1A
J2	JB2A
J3	JB1B
J4	JB2B

2 Dimensions

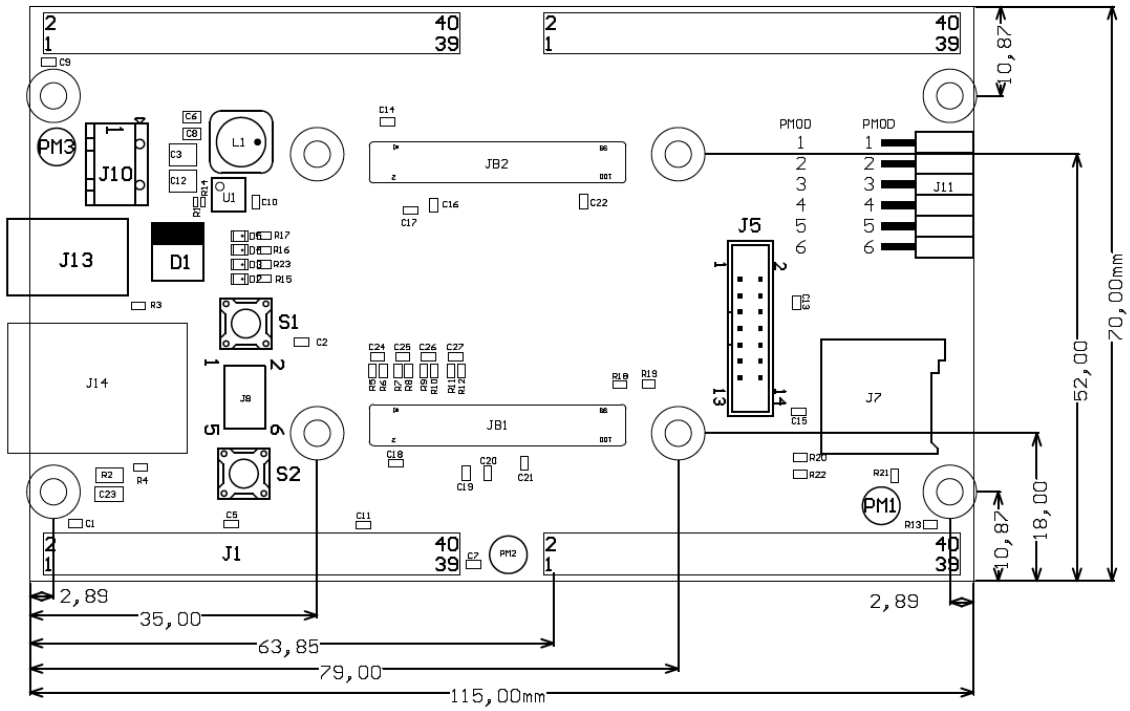

Figure 4: TE0603 dimensions

3 Pin-out tables

Pin	Net	FPGA pin	Type
1	3.3V	-	Power
2	3.3V	-	Power
3	3.3V	-	Power
4	3.3V	-	Power
5	Init	T6	Special
6	EN	-	Special
7	B2B_B2_L60_N	R7	IO
8	B2B_B2_L60_P	T7	IO
9	B2B_B2_L59_P	R9	IO
10	B2B_B2_L59_N	R8	IO
11	GND	-	Power
12	GND	-	Power
13	B2B_B2_L57_P	AA4	IO
14	B2B_B2_L57_N	AB4	IO
15	B2B_B2_L49_P	AA6	IO
16	B2B_B2_L49_N	AB6	IO
17	2.5V	-	Power
18	2.5V	-	Power
19	B2B_B2_L44_P	W10	IO
20	B2B_B2_L44_N	Y10	IO
21	B2B_B2_L18_N	W13	IO

Pin	Net	FPGA pin	Type
22	B2B_B2_L18_P	V13	IO
23	B2B_B2_L8_P	U17	IO
24	B2B_B2_L8_N	U16	IO
25	GND	-	Power
26	GND	-	Power
27	B2B_B2_L11_N	W17	IO
28	B2B_B2_L11_P	V17	IO
29	1.2V	-	Power
30	1.2V	-	Power
31	B2B_B2_L48_P	Y7	IO
32	B2B_B2_L48_N	AB7	IO
33	B2B_B2_L45_P	AA8	IO
34	B2B_B2_L45_N	AB8	IO
35	B2B_B2_L43_P	Y9	IO
36	B2B_B2_L43_N	AB9	IO
37	B2B_B2_L41_P	AA10	IO
38	B2B_B2_L41_N	AB10	IO
39	1.5V	-	Power
40	1.5V	-	Power

Table 1: JB1A - J1 Pin-out

Pin	Net	FPGA pin	Type
1	VCCIO0	-	Power
2	3.3V	-	Power
3	B2B_PROGB	-	Special
4	HSWAPEN	A3	Special
5	MR	-	Special
6	PFI	-	Special
7	B2B_B0_L1	A4	IO
8	GND	-	Power
9	B2B_B3_L59_N	H8	IO
10	B2B_B3_L59_P	J7	IO
11	B2B_B3_L9_P	T4	IO
12	B2B_B3_L9_N	T3	IO
13	B2B_B3_L60_P	B2	IO
14	B2B_B3_L60_N	B1	IO
15	B2B_B0_L2_P	C5	IO
16	B2B_B0_L2_N	A5	IO
17	B2B_B0_L4_N	A6	IO
18	B2B_B0_L4_P	B6	IO
19	GND	-	Power
20	GND	-	Power
21	B2B_B0_L5_N	A7	IO
22	B2B_B0_L5_P	C7	IO
23	B2B_B0_L6_N	A8	IO

Pin	Net	FPGA pin	Type
24	B2B_B0_L6_P	B8	IO
25	B2B_B0_L3_P	D6	IO
26	B2B_B0_L3_N	C6	IO
27	B2B_B0_L32_P	D7	IO
28	B2B_B0_L32_N	D8	IO
29	B2B_B0_L33_N	C10	IO
30	B2B_B0_L33_P	D10	IO
31	GND	-	Power
32	GND	-	Power
33	B2B_B0_L34_N	A10	IO
34	B2B_B0_L34_P	B10	IO
35	B2B_B0_L37_N	A12	IO
36	B2B_B0_L37_P	B12	IO
37	B2B_B0_L8_N	A9	IO
38	B2B_B0_L8_P	C9	IO
39	B2B_B0_L35_N	A11	IO
40	B2B_B0_L55_P	C11	IO

Table 2: JB2A - J2 Pin-out

Pin	Net	FPGA pin	Type
1	B2B_B2_L21_P	Y15	IO
2	B2B_B2_L21_N	AB15	IO
3	B2B_B2_L15_P	Y17	IO
4	B2B_B2_L15_N	AB17	IO
5	B2B_B2_L6_P	W18	IO
6	B2B_B2_L6_N	Y18	IO
7	B2B_B2_L9_N	V18	IO
8	B2B_B2_L9_P	V19	IO
9	GND	-	Power
10	GND	-	Power
11	B2B_B2_L5_P	Y19	IO
12	B2B_B2_L5_N	AB19	IO
13	B2B_B2_L4_N	T17	IO
14	B2B_B2_L4_P	T18	IO
15	B2B_B2_L10_N	R15	IO
16	B2B_B2_L10_P	R16	IO
17	B2B_B2_L31_N	AB12	IO
18	SUSPEND	N15	Special
19	GND	-	Power
20	GND	-	Power
21	VBATT	R17	Power
22	VFS	P16	Special
23	RFUSE	P15	Special
24	AWAKE	T19	Special
25	CSO_B	T5	Special

Pin	Net	FPGA pin	Type
26	CCLK	Y21	SPI
27	MISO	AA20	SPI
28	MOSI	AB20	SPI
29	MISO3	U13	SPI
30	MISO2	U14	SPI
31	GND	-	Power
32	GND	-	Power
33	B2B_B2_L2_N	AB21	IO
34	B2B_B2_L2_P	AA21	IO
35	B2B_B2_L42_P	V11	IO
36	B2B_B2_L42_N	W11	IO
37	B2B_B2_L29_N	Y12	IO
38	B2B_B2_L32_N	AB11	IO
39	GND	-	Power
40	GND	-	Power

Table 3: JB1B - J3 Pin-out

Pin	Net	FPGA pin	Type
1	B2B_B0_L38_P	C13	IO
2	B2B_B0_L38_N	A13	IO
3	B2B_B0_L50_P	B14	IO
4	B2B_B0_L50_N	A14	IO
5	B2B_B0_L51_P	C15	IO
6	B2B_B0_L51_N	A15	IO
7	B2B_B0_L63_P	B16	IO
8	B2B_B0_L63_N	A16	IO
9	B2B_B0_L49_N	C14	IO
10	B2B_B0_L49_P	D14	IO
11	GND	-	Power
12	GND	-	Power
13	B2B_B1_L10_P	F16	IO
14	B2B_B1_L10_N	F17	IO
15	B2B_B1_L21_N	J16	IO
16	B2B_B1_L21_P	K16	IO
17	B2B_B1_L9_P	G16	IO
18	B2B_B1_L9_N	G17	IO
19	B2B_B1_L61_N	K18	IO
20	B2B_B1_L61_P	L17	IO
21	B2B_B1_L59	P19	IO
22	GND	-	Power
23	B2B_B1_L20_N	A21	IO
24	B2B_B1_L20_P	A20	IO
25	B2B_B1_L19_N	B22	IO
26	B2B_B1_L19_P	B21	IO
27	B2B_B0_L66_N	D17	IO

Pin	Net	FPGA pin	Type
28	B2B_B0_L66_P	E16	IO
29	B2B_B0_L62_N	C16	IO
30	B2B_B0_L62_P	D15	IO
31	GND	-	Power
32	GND	-	Power
33	B2B_B0_L65_P	B18	IO
34	B2B_B0_L65_N	A18	IO
35	B2B_B0_L64_P	C17	IO
36	B2B_B0_L64_N	A17	IO
37	B2B_B0_L36_P	D11	IO
38	B2B_B0_L36_N	C12	IO
39	B2B_B0_L7_N	C8	IO
40	B2B_B0_L7_P	D9	IO

Table 4: JB2C - J4 Pin-out

Pin	Net	FPGA pin	Micro SD pin
1	B2B_B2_L42_N	W11	SD DAT2
2	B2B_B2_L42_P	V11	CD/DAT3
3	B2B_B2_L32_N	AB11	CMD
4	3.3V	-	VDD
5	B2B_B2_L29_N	Y12	CLK
6	GND	-	VSS
7	B2B_B2_L2_P	AA21	DAT0
8	B2B_B2_L2_N	AB21	DAT1
9	-	-	N/C
10	-	-	N/C

Table 5: J7 Micro SD Socket pin-out

Pin	Net	FPGA pin	Type
1	B2B_B0_L65_P	B18	IO
2	B2B_B0_L62_N	C16	IO
3	B2B_B0_L65_N	A18	IO
4	B2B_B0_L62_P	D15	IO
5	B2B_B0_L64_P	C17	IO
6	B2B_B0_L7_P	D9	IO
7	B2B_B0_L64_N	A17	IO
8	B2B_B0_L7_N	C8	IO
9	GND	-	Power
10	GND	-	Power
11	3.3V	-	Power
12	3.3V	-	Power

Table 6: J11 Pin-out

J11 First pin mark “1” at PCB placed at incorret place, please refer Assembly diagram for correct pin 1 position.

Pin	Net	FPGA pin	Type
1	B2B_B0_L66_N	D17	IO
2	B2B_B0_L66_P	E16	IO
3	B2B_B0_L36_N	C12	IO
4	B2B_B0_L36_P	D11	IO
5	GND	-	Power
6	3.3V	-	Power

Table 7: J12 Pin-out

J12 First pin mark “1” at PCB placed at incorret place, please refer Assembly diagram for correct pin 1 position.

4 Glossary of Abbreviations and Acronyms

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API	application programming interface
B2B	board-to-board
DSP	digital signal processing; digital signal processor
EDK	Embedded Development Kit
IOB	input / output blocks; I/O blocks
IP	intellectual property
ISP	In-System Programmability
PB	push button
SDK	Software Development Kit
TE	Trenz Electronic
XPS	Xilinx Platform Studio

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Presence of hazardous substances in electrical and electronic equipment results in potential effects on the environment and human health. The symbol consisting of the crossed-out wheeled bin indicates separate collection for waste electrical and electronic equipment.

Document Change History

ver.	date	author	description
1.00	28-09-2012	AIK	Release.
1.01	03-09-2015	THT	Header designator change