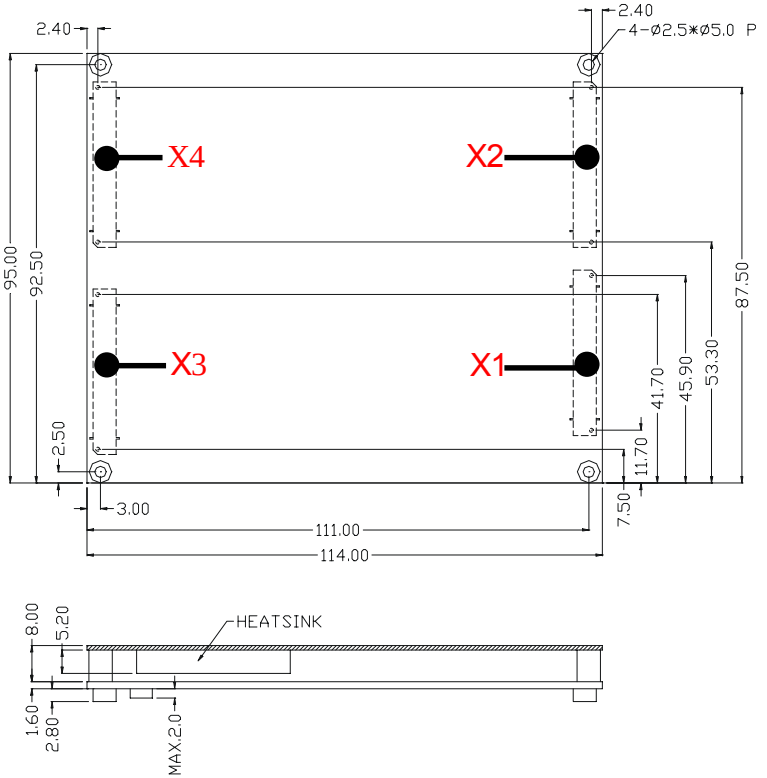
Connector Locations Correction Notice

This notice is to correct page 23 of the SOM-ETX Design Specification Rev 2.1

The tables below shows the function of each of the board's connectors: (Released May 2002)



(The above heatsink reference refers to SOM-4470 only)

3. PINOUT OF ETX INTERFACE

3.1. Connector X1 (PCI-Bus, USB, Sound)

Pin	Signal	Pin	Signal
1	GND	2	GND
3	PCICLK3	4	PCICLK4
5	GND	6	GND
7	PCICLK1	8	PCICLK2
9	REQ#3	10	GNT#3
11	GNT#2	12	3V
13	REQ#2	14	GNT#1
15	REQ#1	16	3V
17	GNT#0	18	N.C.
19	VCC	20	VCC
21	SERIRQ	22	REQ#0
23	AD0	24	3V
25	AD1	26	AD2
27	AD4	28	AD3
29	AD6	30	AD5
31	CBE#0	32	AD7
33	AD8	34	AD9
35	GND	36	GND
37	AD10	38	AUXAL
39	AD11	40	MIC
41	AD12	42	AUXAR
43	AD13	44	ASVCC
45	AD14	46	SNDL
47	AD15	48	ASGND
49	CBE#1	50	SNDR

Pin	Signal	Pin	Signal
51	VCC	52	VCC
53	PAR	54	SERR#
55	GPERR#	56	N.C.
57	PME#	58	USB20
59	LOCK#	60	DEVSEL#
61	TRDY#	62	USB30
63	IRDY#	64	STOP#
65	FRAME#	66	USB21
67	GND	68	GND
69	AD16	70	CBE#2
71	AD17	72	USB31
73	AD19	74	AD18
75	AD20	76	USB00
77	AD22	78	AD21
79	AD23	80	USB10
81	AD24	82	CBE#3
83	VCC	84	VCC
85	AD25	86	AD26
87	AD28	88	USB01
89	AD27	90	AD29
91	AD30	92	USB11
93	PCIRST#	94	AD31
95	IRQY	96	IRQZ
97	IRQW	98	IRQX
99	GND	100	GND

3.2. Connector X2 (ISA-Bus)

Pin	Signal	Pin	Signal
1	GND	2	GND
3	SD14	4	SD15
5	SD13	6	MASTER#
7	SD12	8	DREQ7
9	SD11	10	DACK#7
11	SD10	12	DREQ6
13	SD9	14	DACK#6
15	SD8	16	DREQ5
17	MEMW#	18	DACK#5
19	MEMR#	20	DREQ0
21	LA17	22	DACK#0
23	LA18	24	IRQ14
25	LA19	26	IRQ15
27	LA20	28	IRQ12
29	LA21	30	IRQ11
31	LA22	32	IRQ10
33	LA23	34	IO16#
35	GND	36	GND
37	SBHE#	38	M16#
39	SA0	40	OSC
41	SA1	42	BALE
43	SA2	44	TC
45	SA3	46	DACK#2
47	SA4	48	IRQ3
49	SA5	50	IRQ4

Pin	Signal	Pin	Signal
51	VCC	52	VCC
53	SA6	54	IRQ5
55	SA7	56	IRQ6
57	SA8	58	IRQ7
59	SA9	60	SYSCLK
61	SA10	62	REFSH#
63	SA11	64	DREQ1
65	SA12	66	DACK#1
67	GND	68	GND
69	SA13	70	DREQ3
71	SA14	72	DACK#3
73	SA15	74	IOR#
75	SA16	76	IOW#
77	SA18	78	SA17
79	SA19	80	SMEMR#
81	IOCHRDY	82	AEN
83	VCC	84	VCC
85	SD0	86	SMEMW#
87	SD2	88	SD1
89	SD3	90	NOWS#
91	DREQ2	92	SD4
93	SD5	94	IRQ9
95	SD6	96	SD7
97	IOCHK#	98	RSTDRV
99	GND	100	GND

3.3. Connector X3 (VGA, LCD, Video, COM1, COM2, LPT/Floppy, IrDA, Mouse, Keyboard)

Pinout LCD LVDS

Pin	Signal	Pin	Signal
1	GND	2	GND
3	R	4	B
5	HSY	6	G
7	VSY	8	DDCK
9	N.C.	10	DDDA
11	LCDDO16	12	LCDDO18
13	LCDDO17	14	LCDDO19
15	GND	16	GND
17	LCDDO13	18	LCDDO15
19	LCDDO12	20	LCDDO14
21	GND	22	GND
23	LCDDO8	24	LCDDO11
25	LCDDO9	26	LCDDO10
27	GND	28	GND
29	LCDDO4	30	LCDDO7
31	LCDDO5	32	LCDDO6
33	GND	34	GND
35	LCDDO1	36	LCDDO3
37	LCDDO0	38	LCDDO2
39	VCC	40	VCC
41	JILI_DAT	42	LTGIO0
43	JILI_CLK	44	BLON#
45	BIASON	46	DIGON
47	COMP	48	Y
49	SYNC	50	C
		52	N.C.

Pinout LCD digital

Pin	Signal	Pin	Signal
1	GND	2	GND
3	R	4	B
5	HSY	6	G
7	VSY	8	DDCK
9	DE	10	DDDA
11	B0	12	B2
13	B1	14	B3
15	GND	16	GND
17	G5	18	VSYNC
19	G4	20	HSYNC
21	GND	22	GND
23	G0	24	G3
25	G1	26	G2
27	GND	28	GND
29	R4	30	B5
31	R5	32	B4
33	GND	34	GND
35	R1	36	R3
37	R0	38	R2
39	VCC	40	VCC
41	JILI_DAT	42	LTGIO0
43	JILI_CLK	44	BLON#
45	BIASON	46	DIGON
47	COMP	48	Y
49	SYNC	50	C
		52	SHFCLK

Pinout LPT

51	LPT/FLPY# **= nc**		
53	VCC	54	GND
55	STB#	56	AFD#
57	i.c.	58	PD7
59	IRRX	60	ERR#
61	IRTX	62	PD6
63	RXD2	64	INIT#
65	GND	66	GND
67	RTS2#	68	PD5
69	DTR2#	70	SLIN#
71	DCD2#	72	PD4
73	DSR2#	74	PD3
75	CTS2#	76	PD2
77	TXD2#	78	PD1
79	RI2#	80	PD0
81	VCC	82	VCC
83	RXD1	84	ACK#
85	RTS1#	86	BUSY#
87	DTR1#	88	PE
89	DCD1#	90	SLCT#
91	DSR1#	92	MSCLK
93	CTS1#	94	MSDAT
95	TXD1	96	KBCLK
97	RI1#	98	KBDAT
99	GND	100	GND

Pinout Floppy

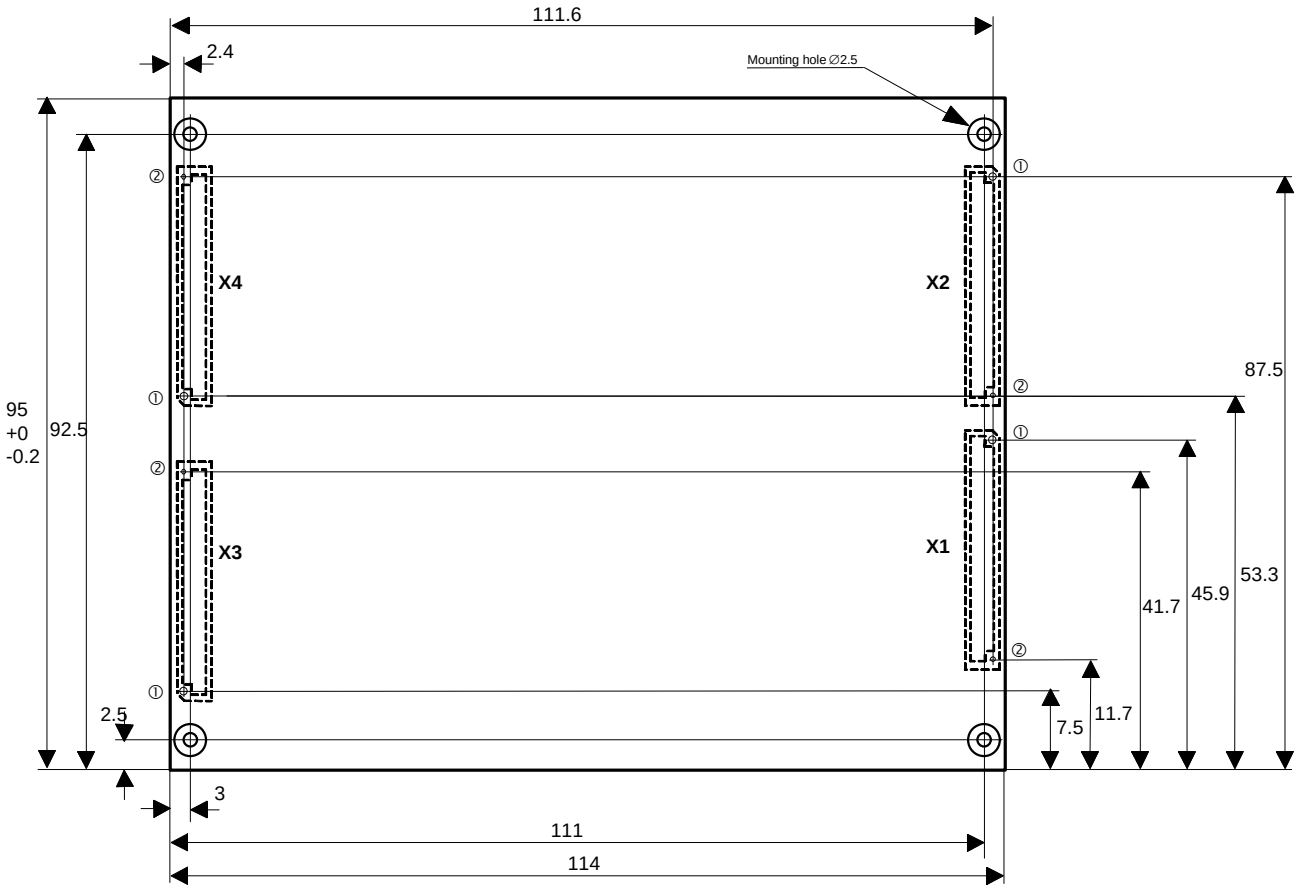
51	LPT/FLPY# **= GND**		
53	VCC	54	GND
55	i.c.	56	DENSEL
57	i.c.	58	nc.
59	IRRX	60	HDSEL#
61	IRTX	62	MOT0
63	RXD2	64	DIR#
65	GND	66	GND
67	RTS2#	68	nc.
69	DTR2#	70	STEP#
71	DCD2#	72	DSKCHG#
73	DSR2#	74	RDATA#
75	CTS2#	76	WP#
77	TXD2#	78	TRK0#
79	RI2#	80	INDEX#
81	VCC	82	VCC
83	RXD1	84	i.c.
85	RTS1#	86	i.c.
87	DTR1#	88	WDATA#
89	DCD1#	90	WGATE#
91	DSR1#	92	MSCLK
93	CTS1#	94	MSDAT
95	TXD1	96	KBCLK
97	RI1#	98	KBDAT
99	GND	100	GND

3.4. Connector X4 (IDE 1, IDE 2, Ethernet, Misc)

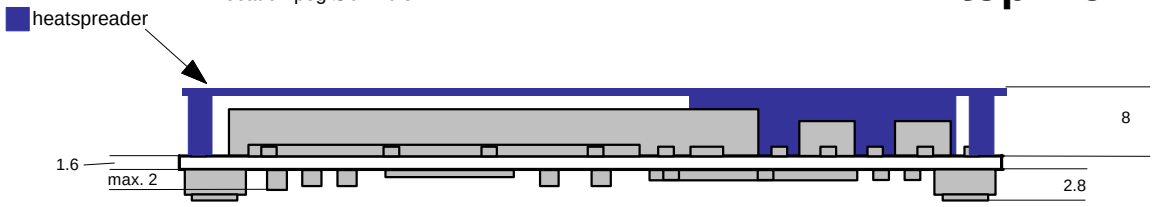
Pin	Signal	Pin	Signal		Pin	Signal	Pin	Signal
1	GND	2	GND		51	SIDE_IOW#	52	PIDE_IOR#
3	5V_SB	4	PWGIN		53	SIDE_DRQ	54	PIDE_IOW#
5	PS_ON	6	SPEAKER		55	SIDE_D15	56	PIDE_DRQ
7	PWRBTN#	8	BATT		57	SIDE_D0	58	PIDE_D15
9	KBINH	10	LILED		59	SIDE_D14	60	PIDE_D0
11	WDTRIG	12	ACTLED		61	SIDE_D1	62	PIDE_D14
13	ROMKBCS#	14	SPEEDLED		63	SIDE_D13	64	PIDE_D1
15	EXT_PRG	16	I2CLK		65	GND	66	GND
17	VCC	18	VCC		67	SIDE_D2	68	PIDE_D13
19	OVCR#	20	GPCS#		69	SIDE_D12	70	PIDE_D2
21	EXTSMI	22	I2DAT		71	SIDE_D3	72	PIDE_D12
23	SMBCLK	24	SMBDATA		73	SIDE_D11	74	PIDE_D3
25	SIDE_CS3#	26	N.C.		75	SIDE_D4	76	PIDE_D11
27	SIDE_CS1#	28	DASP_S		77	SIDE_D10	78	PIDE_D4
29	SIDE_A2	30	PIDE_CS3#		79	SIDE_D5	80	PIDE_D10
31	SIDE_A0	32	PIDE_CS1#		81	VCC	82	VCC
33	GND	34	GND		83	SIDE_D9	84	PIDE_D5
35	PDIAG_S	36	PIDE_A2		85	SIDE_D6	86	PIDE_D9
37	SIDE_A1	38	PIDE_A0		87	SIDE_D8	88	PIDE_D6
39	SIDE_INTRQ	40	PIDE_A1		89	N.C.	90	N.C.
41	N.C.	42	N.C.		91	RXD-	92	PIDE_D8
43	SIDE_AK#	44	PIDE_INTRQ		93	RXD+	94	SIDE_D7
45	SIDE_RDY	46	PIDE_AK#		95	TXD-	96	PIDE_D7
47	SIDE_IOR#	48	PIDE_RDY		97	TXD+	98	HDRST#
49	VCC	50	VCC		99	GND	100	GND

5. MECHANICAL CHARACTERISTICS

5.1. Dimensions of SOM-ETX



top view



side view

without heatsink

The SOM-ETX without heat sink has a maximum thickness of 12 mm while the top components are up to 8 mm high and the bottom components are up to 2 mm high. The headers X1 to X4 (FX8-100P-SV) on SOM-ETX are 2.8mm high and will be connected to their counterparts the receptacles (FX8-100S) on the Carrier Board.

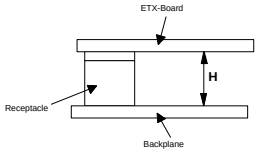
Please refer to chapter 2.2 Specification of receptacles FX8-100S for specification and chapter 2.3 Carrier Board layout for exact placement of receptacles FX8-100S.

The heatspreader (i.e. aluminum, thickness 2mm) provides thermal coupling to the ETX board. Heat dissipation devices (e.g. heat sink with fan, heatpipe etc.) may need to be attached to the heatspreader. Heat dissipation will vary between different CPU boards. He is directly thermal connected to the CPU surface. Please refer to according manual of SOM-ETX for exact definition and cooling requirements of the heatspreader.

5.2. Specification of receptacles FX8-100S

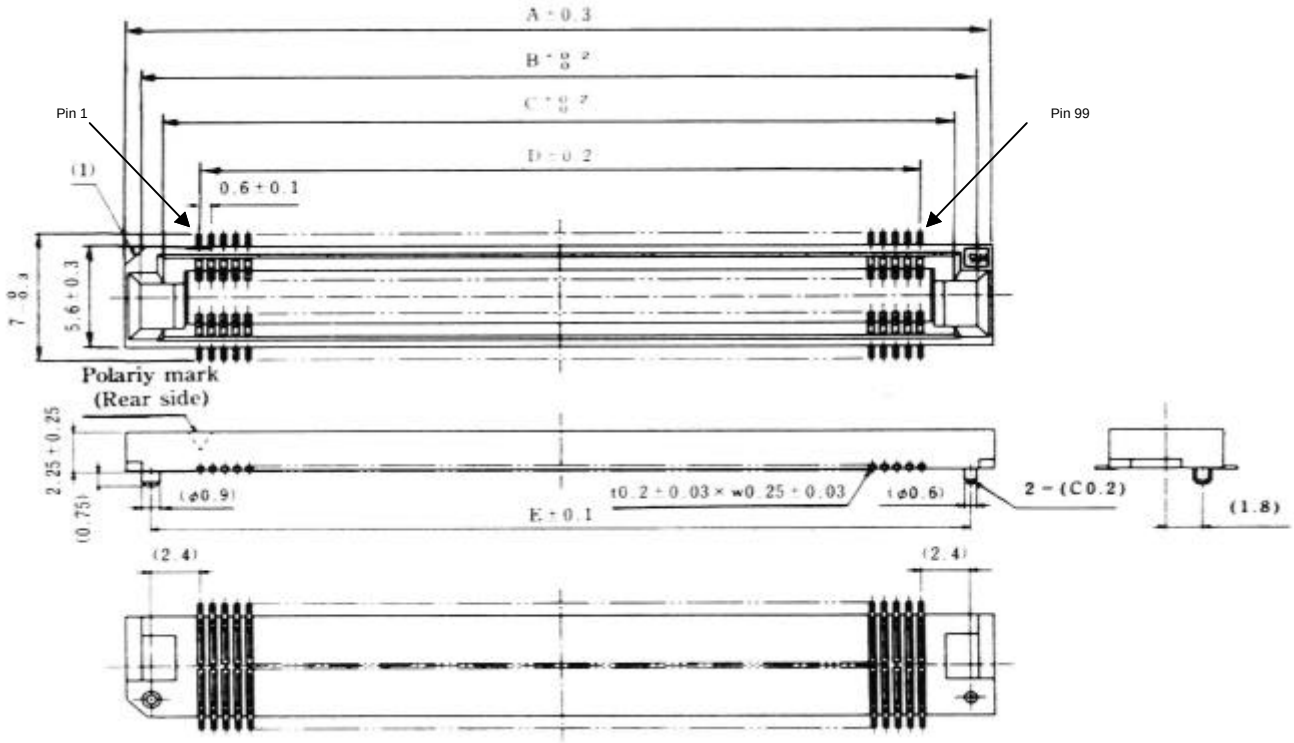
To achieve different stacking height the receptacles on base board for connection of SOM-ETX are available with different heights.

Manufacturer	Order number	Resulting height H between backplane and ETX-Board
HIROSE	FX8-100S-SV	3 +0.3/-0.2mm
	FX8-100S-SV1	4 +0.3/-0.2mm
	FX8C-100S-SV5	9.5 +0.3/-0.2mm

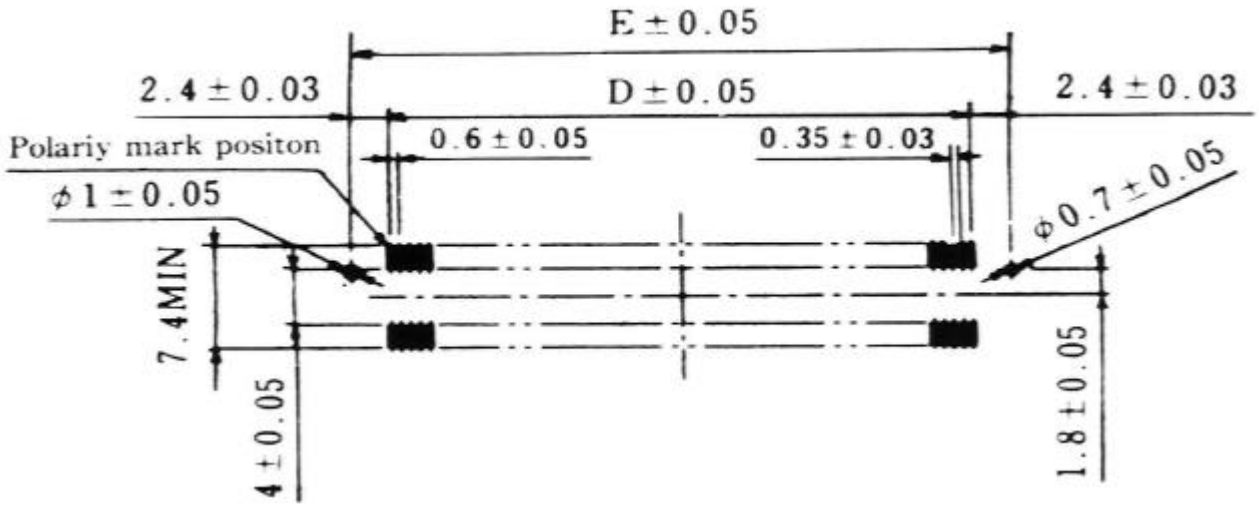


Current capacity:	0.4A per pin
Rated voltage:	100V AC
Insulation resistance:	100MΩ or greater @ 250V DC
Withstand voltage:	300V AC r.m.s.
Contact resistance:	45mΩ or less @ 100mA DC
Insulation:	PPS resin (Light brown, UL94V-0)
Contacts:	Phosphor bronze (Contacts and leads – gold plating)

5.2.1. Dimensions of receptacles FX8-100S

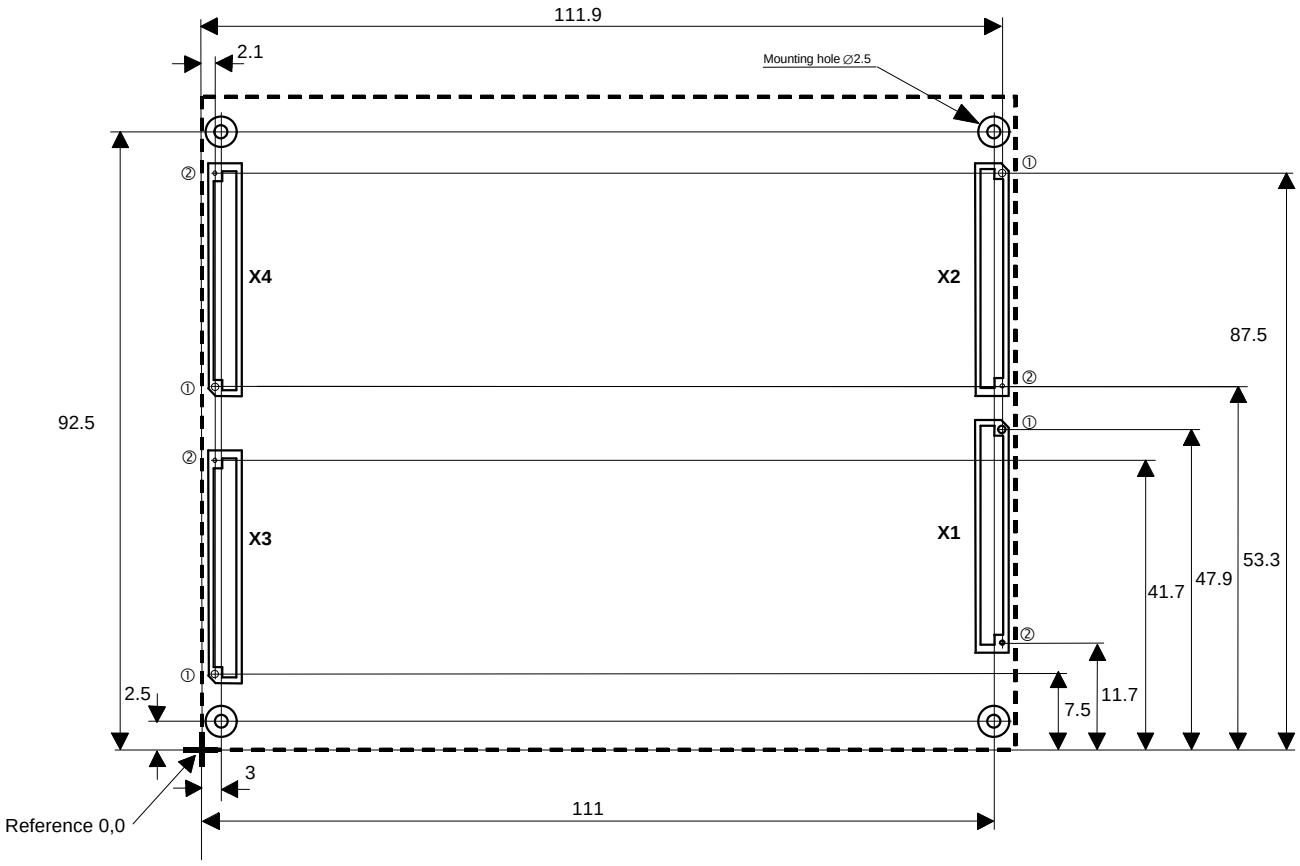


5.2.2. Footprint of receptacles FX8-100S



A	B	C	D	E
36.6	35.05	32.80	29.40	34.20

5.3. Backplane layout



①: Location peg ∅1.0±0.5mm

②: Location peg ∅0.7±0.5mm

All dimensions without tolerance ±0.2mm