



3001320

Version 1.0

User's Manual

**4.5" X 3.7" (114mm X 95mm) Transmeta Crusoe 800MHz PC/104
Board w/512MB SDRAM (max), SMI722G8 3D Video Controller
w/TTL /LVDS /CRT /TV-out, Dual RealTek 8100BL 10/100Mbps
LAN, Audio & Award BIOS**

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Warning

Single Board Computers and their components contain very delicate Integrated Circuits (IC). To protect the Single Board Computer and its components against damage from static electricity, you should always follow the following precautions when handling it :

1. Disconnect your Single Board Computer from the power source when you want to work on the inside
2. Hold the board by the edges and try not to touch the IC chips, leads or circuitry
3. Use a grounded wrist strap when handling computer components.
4. Place components on a grounded antistatic pad or on the bag that came with the Single Board Computer, whenever components are separated from the system
5. The CPU needs the Heat Sink on it.

Technical Support

Please do not hesitate to call or e-mail our customer service if you have any problems

<http://www.globalamericaninc.com>

Specifications

General Specifications

- **CPU** : Transmeta Crusoe TM5800 series (Fan less)
- **3001320**: Transmeta Crusoe TM5800 CPU 800 MHz with 66MHz FSB and 512KB L2 cache
- **Chipset** : Southbridge : VIA VT82C686B
Northbridge : Transmeta Crusoe integrated
- **BIOS** : AWARD® Flash BIOS
- **Green Function** : power saving supported in BIOS. DOZE / SUSPEND modes, ACPI & APM
- **DRAM Memory** : One 200-pin SODIMM socket supports 64M ~512 MB(DDR)

High Speed Multi I/O

- **Chipset** : VIA VT82C686B
- **IDE Interface (carrier board)** : VIA VT82C686B built-in IDE interface supports 2 IDE ports and up to four devices , Ultra DMA 100
- **Serial Ports** : Dual RS-232C port (COM1 & COM2)
- **USB** : Supports 4 ports (ver 1.1)
- **Bi-directional Parallel Port** : SPP, EPP and ECP mode.
- **Keyboard and Mouse** : support one PS/2 Keyboard and one PS/2 Mouse
- **Audio Chipset** VIA VT82C686B, AC97 2.0 compliant, Multithread Direct Sound and Direct Sound 3D acceleration.
- **DOC**: 32MB / 64MB optional

Network Interface Controller

- **Chipset:** RealTek 8100BL, 10/100 Mbps

Display Controller

- **Chipset:** SMI722G8 3D Video Accelerator, 8MB video memory

- **Display Type:**

>LCD TTL Interface: Support 24 bit TTL TFT LCD

>LCD LVDS Interface: Support 1 channel 24 bit LVDS TFT LCD (carrier board)

>TV-OUT: Support NTSC, PAL NTSC-EIA (Japan) format, 640 x 480 resolutions
(Carrier board)

Environmental and Power

- **Power Requirements** : +5V only
- **Board Dimensions** : 95mm x 114mm (3.7" x 4.5")
- **Board Weight** : 0.09kg
- **Operating Temperature** : 0 to 60°C (32 to 140°F)
- **Operating Humidity** : 0~90% (relative humidity, non-condensing system)

Packing list

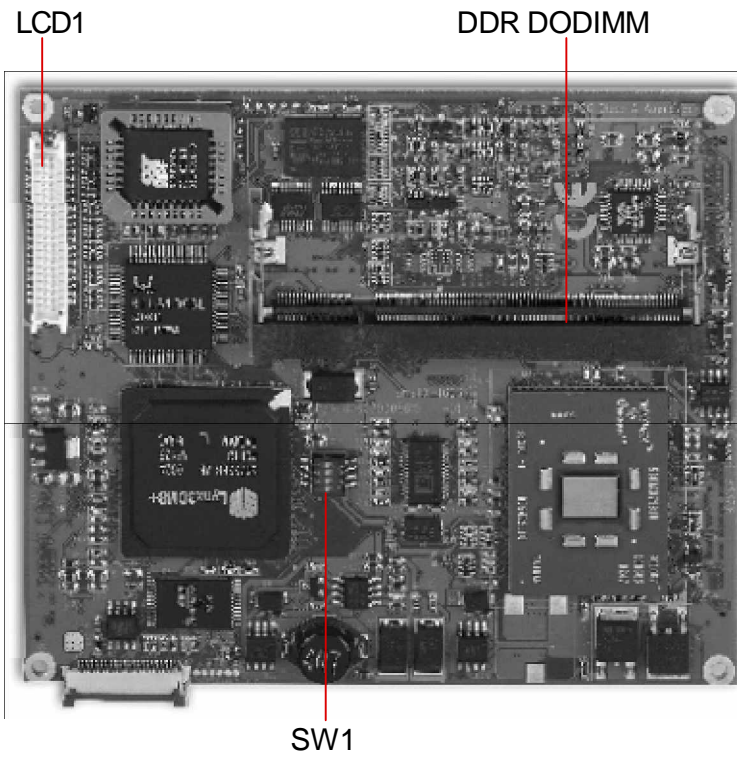
Before you begin installing your single board computer, please make sure that the following materials have been shipped:

- > 1 x **3001320** ETX CPU module
- > 1 x Quick Installation Guide
- > 1 x CD driver
- > 1 x Warranty Card

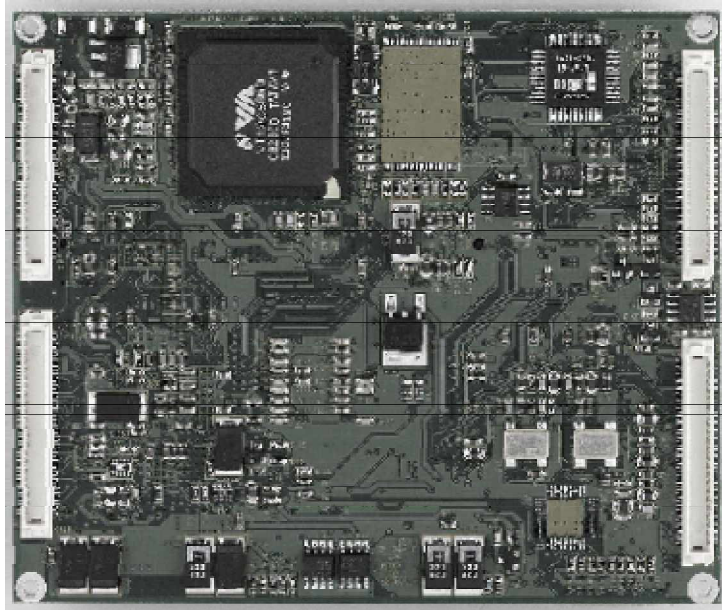
Ordering Codes

- | | |
|----------------|---|
| 3001320 | ETX Module Transmeta Crusoe TM5800 Series
with Flat Panel / CRT / TV-out, Audio, LAN |
| 2107631 | Heat Sink without fan for 3001320 |

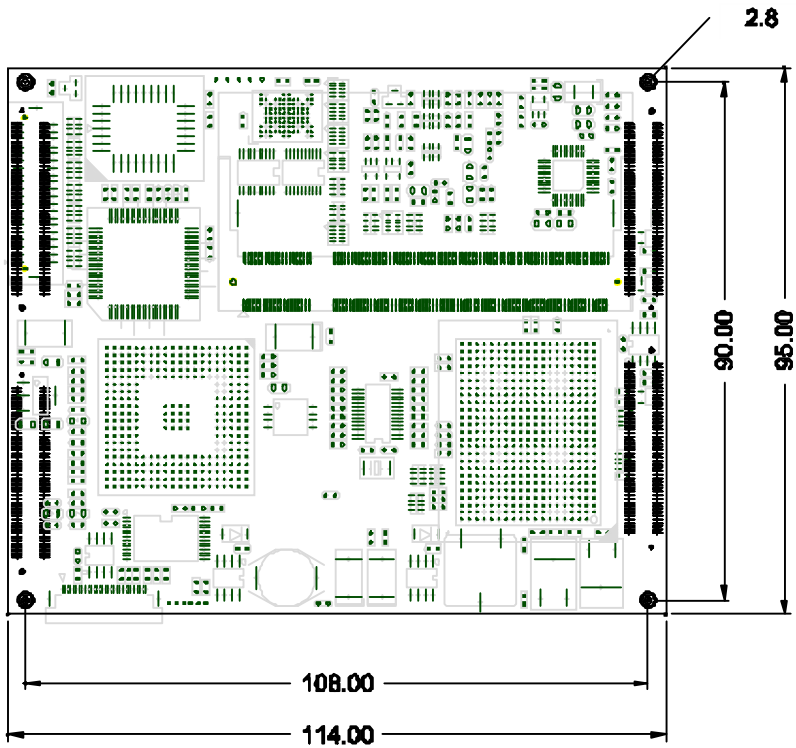
Board Layout Top View (Front)



Board Layout Top View (Back)



Board Dimension



Jumper/Connector Quick Reference

Connectors

Label	Function
LCD1	LCD TTL Connector 1
ETX1	PCI Bus, USB, Audio
ETX2	ISA Bus
ETX3	VGA,LCD,Video,COM1,COM2,LPT,IrDA,M/K
ETX4	IDE1,IDE2,Ethernet,Miscellaneous
SW1	Panel resolution selection

Flat Panel VGA

LCD1

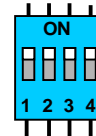
Type : Onboard 40-pin Box Header (Hirose DF-40DS-1.25C)

Pin	Description	Pin	Description
1	VCC5V	2	VCC5V
3	GND	4	GND
5	VCC3V	6	VCC3V
7	NC	8	GND
9	FPD0	10	FPD1
11	FPD2	12	FPD3
13	FPD4	14	FPD5
15	FPD6	16	FPD7
17	FPD8	18	FPD9
19	FPD10	20	FPD11
21	FPD12	22	FPD13
23	FPD14	24	FPD15
25	FPD16	26	FPD17
27	FPD18	28	FPD19
29	FPD20	30	FPD21
31	FPD22	32	FPD23
33	GND	34	GND
35	SHFCLK	36	HSYNC
37	M(DE)	38	VSYNC
39	ENABLK	40	ENAVEE

Flat Panel Configuration

Flat Panel Type Switch (SW1)

The **3001320** provides a hardware switch to configure your onboard VGA controller for usage with a variety of flat panel types.



Switch : **SW1**

Type : onboard 4-port mini switch

Panel Type	SW-1	SW-2	SW-3	SW-4
640 x 480 TFT	ON	ON	ON	ON
640 x 480 DSTN	OFF	ON	ON	ON
800 x 600 TFT (Default)	ON	OFF	ON	ON
800 x 600 DSTN	OFF	OFF	ON	ON
1024 x 768 TFT	ON	ON	OFF	ON
1024 x 768 DSTN	OFF	ON	OFF	ON
1280 x 1024 TFT	ON	OFF	OFF	ON

ETX Connector

ETX1

ETX2

1	GND	GND	2	1	GND	GND	2
3	PCICLK3	PCICLK4	4	3	SD14	SD15	4
5	GND	GND	6	5	SD13	MASTER#	6
7	PCICLK1	PCICLK2	8	7	SD12	DREQ7	8
9	REQ#3	GNT#3	10	9	SD11	DACK#7	10
11	GNT#2	VCC3	12	11	SD10	DREQ6	12
13	REQ#2	GNT#1	14	13	SD9	DACK#6	14
15	REQ#1	VCC3	16	15	SD8	DREQ5	16
17	GNT#0	N.C	18	17	MEMW#	DACK#5	18
19	VCC	VCC	20	19	MEMR#	DREQ0	20
21	SERIRQ	REQ#0	22	21	LA17	DACK#0	22
23	AD0	VCC3	24	23	LA18	IRQ14	24
25	AD1	AD2	26	25	LA19	IRQ15	26
27	AD4	AD3	28	27	LA20	IRQ12	28
29	AD6	AD5	30	29	LA21	IRQ11	30
31	CBE#0	AD7	32	31	LA22	IRQ10	32
33	AD8	AD9	34	33	LA23	IO16#	34
35	GND	GND	36	35	GND	GND	36
37	AD10	AUXAL	38	37	SBHE#	M16#	38
39	AD11	MIC	40	39	SA0	OSC	40
41	AD12	AUXAR	42	41	SA1	BALE	42
43	AD13	ASVCC	44	43	SA2	TC	44
45	AD14	SNDL	46	45	SA3	DACK#2	46
47	AD15	ASGND	48	47	SA4	IRQ3	48
49	CBE#1	SNDR	50	49	SA5	IRQ4	50
51	VCC	VCC	52	51	VCC	VCC	52
53	PAR	SERR#	54	53	SA6	IRQ5	54
55	PERR#	N.C	56	55	SA7	IRQ6	56
57	PME#	USB2-	58	57	SA8	IRQ7	58
59	LOCK#	DEVSEL#	60	59	SA9	SYSCLK	60
61	TRDY#	USB3-	62	61	SA10	REFCH#	62
63	IRDY#	STOP#	64	63	SA11	DREQ1	64
65	FRAME#	USB2+	66	65	SA12	DACK#1	66
67	GND	GND	68	67	GND	GND	68
69	AD16	CBE#2	70	69	SA13	DREQ3	70
71	AD17	USB3+	72	71	SA14	DACK#3	72
73	AD19	AD18	74	73	SA15	IOR#	74
75	AD20	USB0-	76	75	SA16	IOW#	76
77	AD22	AD21	78	77	SA18	SA17	78
79	AD23	USB1-	80	79	SA19	SMEMR#	80
81	AD24	CBE#3	82	81	IOCHRDY	AEN	82
83	VCC	VCC	84	83	VCC	VCC	84
85	AD25	AD26	86	85	SD0	SMEMW#	86
87	AD28	USB0+	88	87	SD2	SD1	88
89	AD27	AD29	90	89	SD3	NOWS#	90
91	AD30	USB1+	92	91	DREQ2	SD4	92
93	PCIRST#	AD31	94	93	SD5	IRQ9	94
95	INTR#C	INTR#D	96	95	SD6	SD7	96
97	INTR#A	INTR#B	98	97	IOCHK#	RSTDRV	98
99	GND	GND	100	99	GND	GND	100

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ETX Connector

ETX3

ETX4

1	GND	GND	2	1	GND	GND	2
2	R	B	4	3	SV_SB	PWGIN	4
5	HSY	G	6	5	PS_ON	SPEAKER	6
7	VSY	DDCK	8	7	PWRBTN#	BATT	8
9	N.C/DE	DDDA	10	9	KBINH	LILED	10
11	LCD16/B0	LCD18/B2	12	11	WDTRIG	ACTLED	12
13	LCD17/B1	LCD19/B3	14	13	ROMKBCS#	SPEEDLED	14
15	GND	GND	16	15	EXT_PRG	12CLK	16
17	LCD13/G5	LCD15/VSYN	18	17	VCC	VCC	18
19	LCD12/G4	LCD14/HSYN	20	19	OVCR#	GPCS#	20
21	GND	GND	22	21	EXTSMI#	12DAT	22
23	LCD8/G0	LCD11/G3	24	23	SMBCLK	SMBDAT	24
25	LCD9/G1	LCD10/G2	26	25	SIDE_CS3#	CPU_FAN	26
27	GND	GND	28	27	SIDE_CS1#	DASP_S	28
29	LCD4/R4	LCD7/B5	30	29	SIDE_A2	PIDE_CS3#	30
31	LCD5/R5	LCD6/B4	32	31	SIDE_A0	PIDE_CS1#	32
33	GND	GND	34	33	GND	GND	34
35	LCD1/R1	LCD3/R3	36	35	PDIAG_S	PIDE_A2	36
37	LCD0/R0	LCD2/R2	38	37	SIDE_A1	PIDE_A0	38
39	VCC	VCC	40	39	SIDE_INTRQ	PIDE_A1	40
41	JILI_DAT	LTGIO0	42	41	N.C	N.C	42
43	JILI_CLK	BLON#	44	43	SIDE_ACK#	PIDE_INTRQ	44
45	BIASON	DIGON	46	45	SIDE_RDY	PIDE_ACK#	46
47	COMP	Y	48	47	SIDE_IOR#	PIDE_RDY	48
49	SYNC	C	50	49	VCC	VCC	50
51	LPT/FLPY#	N.C/SHFCLK	52	51	SIDE_IOW#	PIDE_IOR#	52
53	VCC	GND	54	53	SIDE_DRQ	PIDE_IOW#	54
55	STB#/I.C	AFD#/DENSEL	56	55	SIDE_D15	PIDE_DRQ	56
57	I.C	PD7/N_C	58	57	SIDE_D0	PIDE_D15	58
59	IRRX	ERR#/HDSSEL#	60	59	SIDE_D14	PIDE_D0	60
61	IRTX	PD6/MOT0	62	61	SIDE_D1	PIDE_D14	62
63	RXD2	INIT#/DIR#	64	63	SIDE_D13	PIDE_D1	64
65	GND	GND	66	65	GND	GND	66
67	RTS#2	PD5/N.C	68	67	SIDE_D2	PIDE_D13	68
69	DTR#2	SLIN#/STEP#	70	69	SIDE_12	PIDE_D2	70
71	DCD#2	PD4/DSKCHG#	72	71	SIDE_D3	PIDE_D12	72
73	DSR#2	PD3/RDATA#	74	73	SIDE_D11	PIDE_D3	74
75	CTS#2	PD2/WP#	76	75	SIDE_D4	PIDE_D11	76
77	TXD#2	PD1/TRK0#	78	77	SIDE_D10	PIDE_D4	78
79	RI#2	PD0/INDEX#	80	79	SIDE_D5	PIDE_D10	80
81	VCC	VCC	82	81	VCC	VCC	82
83	RXD1	ACK#I.C	84	83	SIDE_D9	PIDE_D5	84
85	RTS#1	BUSY#I.C	86	85	SIDE_D6	PIDE_D9	86
87	DTR#1	PE/WDATA#	88	87	SIDE_D8	PIDE_D6	88
89	DCD#1	SLCT#/WGATE#	90	89	-RI	LAN_WAKE	90
91	DSR#1	MSCLK	92	91	RXD-	PIDE_D8	92
93	CTS#1	MSDAT	94	93	RXD+	SIDE_D7	94
95	TXD#1	KBCLK	96	95	TXD-	PIDE_D7	96
97	RI#1	KBDAT	98	97	TXD+	HDRST#	98
99	GND	GND	100	99	GND	GND	100