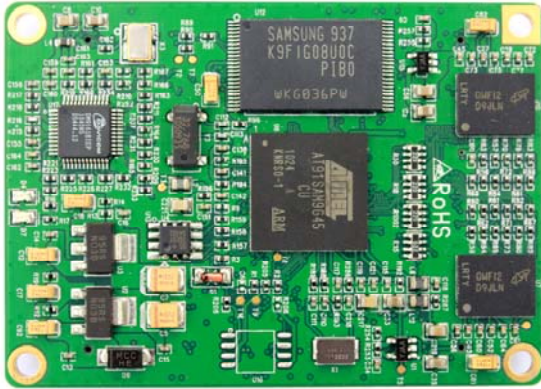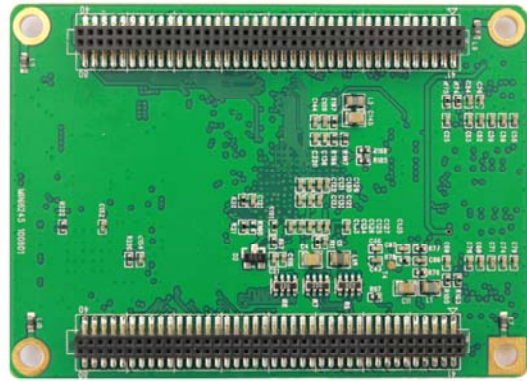# Embest Mini6245 Processor Card

Mini6245 Top-view

Mini6245 Bottom-view

Features

- Dimension: 70mm x 49.9mm
- Working temperature: -10℃~+70℃
- Atmel AT91SAM9G45 ARM926EJ-S Core Microprocessor (compatible with AT91SAM9M10)

- 32 KBytes Data Cache, 32 KBytes Instruction Cache, MMU
- One 64-kbyte internal SRAM and One 64-kbyte internal ROM
- Can work at up to 400MHz

- External Memory

- 128Mbyte DDR2 SDRAM
- 128Mbyte NAND Flash
- 1Kbit EEPROM

- 10/100M Ethernet
- One power indicator
- One system working status indicator
- Two 1.27mm pitch dual row 80-pin female headers (UART 0-3, Debug serial port, Ethernet, USB Host, 2 SPI, 2 TWI, SDIO, PWM, AC97, LCD, Touch Screen, JTAG and all IOs are led out via the two connectors.)
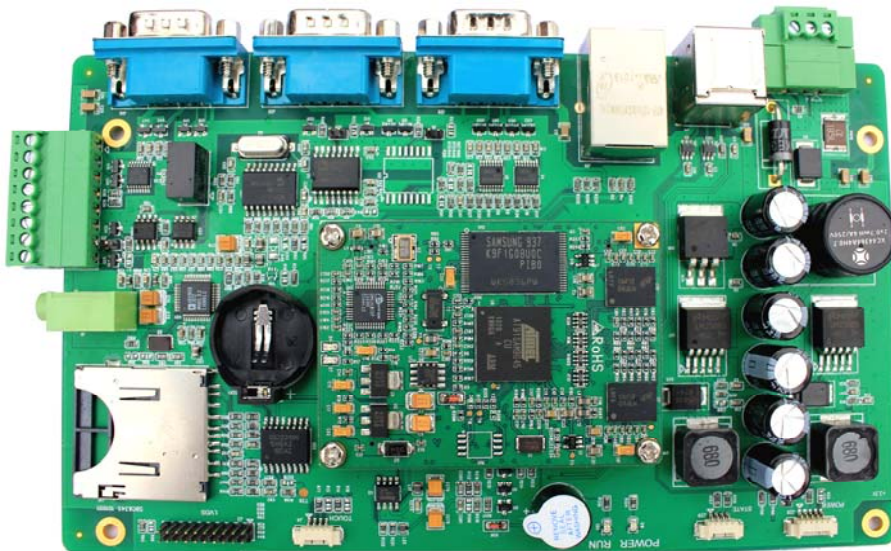
General Description

Embest Mini6245 processor card is a compact ARM embedded controller based on 400MHz Atmel AT91SAM9G45 ARM 926EJ-S microcontroller which is designed to provide a high performance processor solution with a high flexibility for general and multimedia oriented applications.
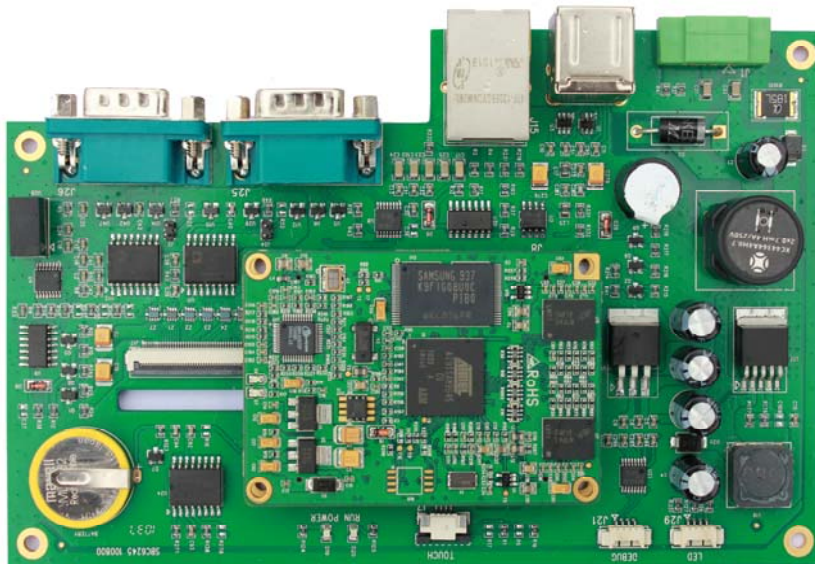
The Mini6245 processor card has external 128MByte DDR2 SDRAM, 128MByte Nand Flash and 1Kbit EEPROM on board and many peripherals like UART, Ethernet, USB, LCD, Touch screen, SPI, TWI, SDIO, PWM, AC97, JTAG and all IOs are brought out by two 1.27mm space dual row

80-pin female headers which is convenient and flexible for customer's secondary development work.

Embest also designed two different expansion boards to bring out connectors for implementing and extending the functions of Mini6245. The two boards are called SBC6245 and SBC6345 single board computers. Embest offers Linux 2.6.30 and WinCE 6.0 BSP for the two boards. They are high-performance single board computer for industrial needs and especially for HMI (human machine interaction) applications.
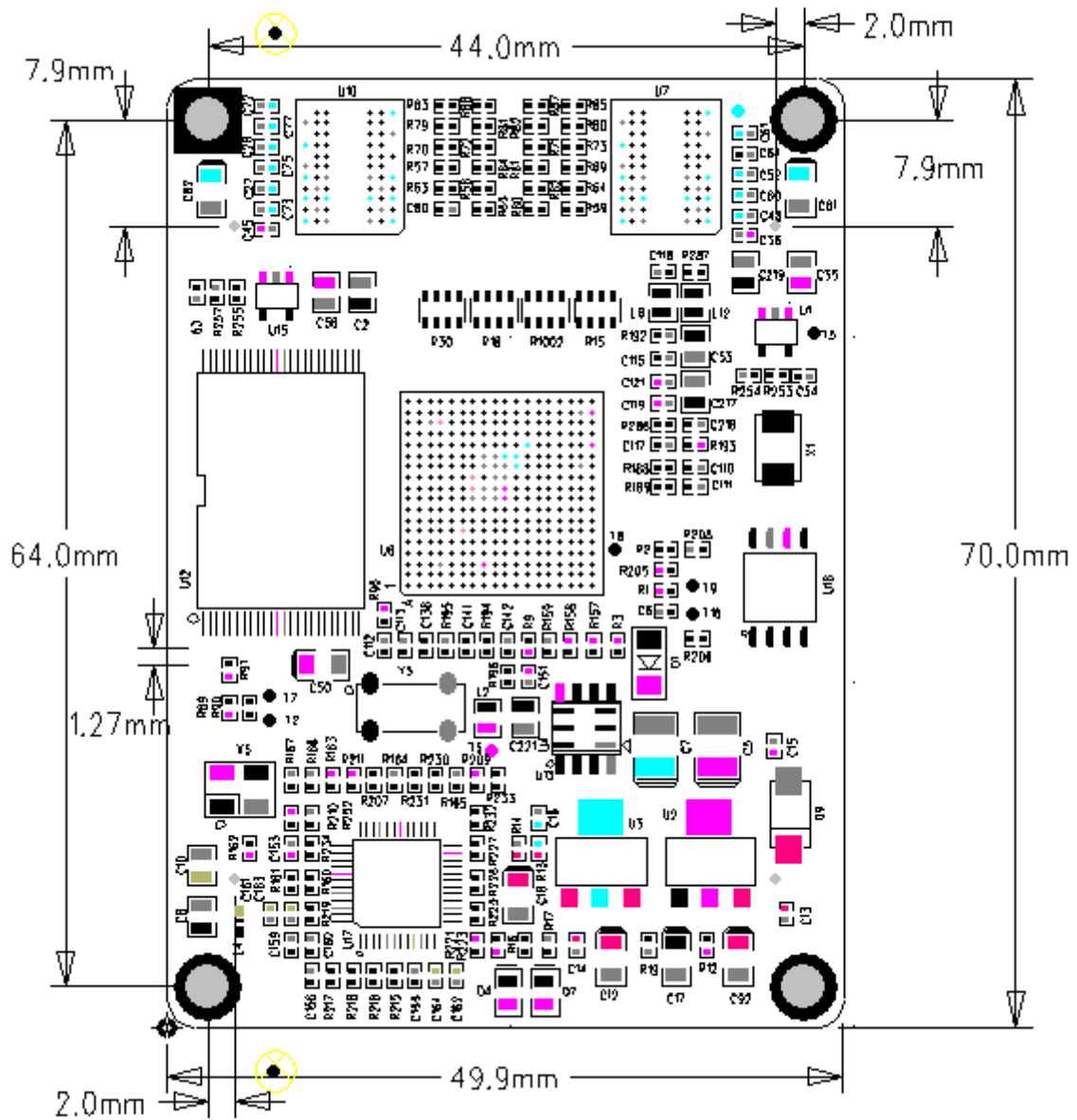

SBC6345 Single Board Computer

SBC6245 Single Board Computer

Dimensions

160-pin connector

Embest Mini6245 processor card is connected to carrierboard via two 1.27mm pitch dual row 80-pin female headers. Detailed pin explanation for the expansion connectors are as following:

Function	Pin (J8)	Signal	Pin (J8)	Signal	Function	Pin (J6)	Signal	Pin (J6)	Signal
LCD	1	PE0	41	PE1	USB	1	HDPA	41	HDMA
	2	PE2	42	PE3		2	GND	42	GND
	3	PE4-	43	PE5		3	HDPB-	43	HDMB
	4	PE6	44	GND	COM1	4	PB4	44	PB5
	5	GND	45	PE7	COM2	5	PB6	45	PB7
	6	PE8	46	PE9	COM3	6	PB8	46	PB9
	7	PE10	47	PE11	TWI	7	PB10	47	PB11
	8	PE12	48	PE13	DEBUG	8	PB12	48	PB13
	9	PE14	49	GND	SPI	9	PB14	49	PB15
	10	GND	50	PE15		10	PB16	50	PD18
	11	PE16	51	PE17		11	GND	51	PD26
	12	PE18	52	PE19	COM0	12	PB17	52	PB18
	13	PE20	53	PE21		13	PB19	53	GND
	14	PE22	54	GND		14	PB20	54	PB21
	15	GND	55	PE23		15	PB22	55	PB24
	16	PE24	56	PE25		16	PB23	56	PB26
	17	PE26	57	PE27		17	PB25	57	PB31
	18	PE28	58	PE29		18	PB27	58	GND
	19	PE30	59	PE31		19	PC0	59	PD19
TOUCH	20	GND	60	PD20		20	PC7	60	PC9
	21	PD21	61	PD22		21	PC10	61	PC11
	22	PD23	62	GND		22	PC12	62	PC13
DIMMING	23	PD31	63	PB28		23	PC15	63	PC16
	24	GND	64	WKUP		24	PD12	64	PD13
SD CARD	25	PA0	65	PA1		25	PD14	65	PD15
	26	PA2	66	PA3	AC97	26	PD6	66	PD7
	27	PA4	67	PA5		27	PD8	67	PD9
TWI1	28	PD10	68	PD11		28	PD27	68	NRST
SDCARD	29	PA20	69	PA21	JTAG	29	NTRST	69	TDI
	30	PB29	70	PB30		30	RTCK	70	TDO
	31	PA22	71	PA23		31	TCK	71	TMS
	32	PA24	72	PA25		32	PD16	72	PD17
	33	PA26	73	PA27		33	GND	73	PD4
	34	PA28	74	PA29		34	PD3	74	PD2
	35	PA30	75	PA31		35	PD28	75	PD1
	36	GND	76	GND	SPI	36	PB0	76	PB1
NET	37	TX2-	77	TX2+		37	PB2	77	PD24
	38	RX2-	78	RX2+		38	GND	78	PD25
	39	VDD33	79	AVDDT	POWER	39	VDD5V	79	VSBAT
	40	LED3	80	LED5		40	VDD5V	80	VSBAT

Order Information

Order No.	T400246
Item	Embest Mini6245 Processor Card
Price	Please contact us.

Embest Info&Tech Co., LTD.

Room 509, Luohu Science&Technology Building,
#85 Taining Rd., Shenzhen, Guangdong, China 518020
Tel: +86-755-25635656/25635626
Fax: +86-755-25616057
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