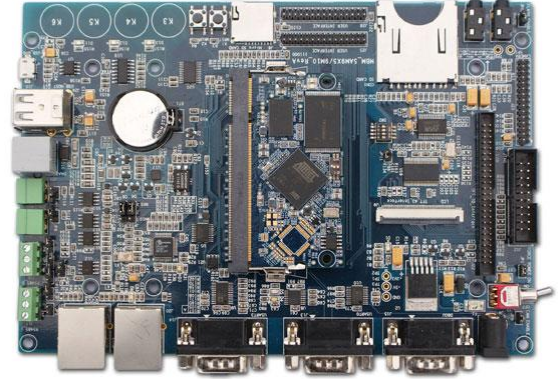# ATMEL MBS-SAM9X25 SBC Board

Order#: MBS-SAM9X25   Delivery Wt:1.5lb

ATMEL AT91SAM9X25 based MBS-SAM9X25 SBC board is the latest product produced by Embest. it is consisted of one base board (MBM-SAM-9G) and one processor card (MBC-SAM9X25),.this core board is the smallest 9X5 core on the market. It is so tiny that it can reduce much space of your products. You can use it easily to complete your project development and save much of your time to market . Using industrial connectors can realize seamless connection with base board, greatly improve the stability of the products.

MBS-SAM9X25 SBC board operates at up to 400MHz, with 256 Mbytes NandFash ,128MB DDR II,4MB serial DataFlash and 64KB serial EEPROM. It supports Linux 2.6.39 ,offer angstrom and android-2.3.5_r1 test .The board provides a wide range of peripherals, including a high-speed USB2.0 port(480MHz), an Ethernet 10/100M interface, audio interface, a JTAG debug port,Micro SD card interface,SD/MMC card interface, CMOS camera interface.It supports video data collection.

Core Board Features:

- o Processor AT91SAM9X25
- o Core Board Size:67mm*34mm
- o 12MHz crystal oscillator
- o 32.768MHz crystal oscillator
- o 128MB DDR2 memory
- o 256MB nandflash memory with chip selection control switch
- o 4MB SPI Serial dataflash with chip selection control switch
- o 64KB EEPROM
- o 256B 1-wire EEPROM
- o On-board power regulation
- o Two user LEDs
- o Optional PHY
- o SDIOIMM200 card edge interface

Base board features

- o The MBM-SAM-9G Base Board is a common main board to connect 9m10 core board & 9x5 core board.

- o Base Board Size:181mm*165mm
- o Supply Voltage:5V DC
- o Supply Current:2A
- o Temperature Range:0~70℃
- o ONE WIRE EPPROM(1024-bit)；
- o 1×JTAG Interface；
- o 1×Camera Interface(9M10 and 9G25)；
- o 2×24 bit LCD Interface（Resistive Touch Panel）；
- o 1×DBGU Interface（3-wire）；
- o 2×UART Serial Port（1×5-wire、1×3-wire）；
- o 2×10/100Mb Ethernet Interface（core board and base board each have a PHY chip）；
- o 2×RS485 Interface；
- o 2×CAN Bus Interface；
- o 1×Smart DAA interface；
- o 2×USB 2.0 Host Interface；
- o 1×USB High-Speed USB2.0 OTG Interface；
- o 4×touch buttons（QTOUCH）；
- o 2×physical buttons（reset,wakeup）；
- o 1×Micro SD Interface；
- o 1×SD card Interface；
- o 3×user LED；
- o 1×Analog Output (connected to speaker by default)
- o 1× Analog Output (connected to speaker by default)
- o 1×RTC Unit (without battery)；
- o 50 GPIO User Extension Interface

Software Features

NO.	Example Programs
1	adc_touchscreen
2	dma
3	can
4	getting-started
5	periph_protect
6	pmc_clock_switching
7	pwm
8	qtouch

9	smc_psram
10	spi_slave
11	ssc_dma_audio
12	sysc
13	tc_capture_waveform
14	twi_eeprom
15	twi_slave
16	usart_hw_handshaking
17	usart_serial
18	usart_spi
19	usart_synchronous
20	emac
21	hsmci_multimedia_card
22	hsmci_sdcard
23	hsmci_sdio
24	smc_nandflash
25	spi_serialflash
26	usb_audio_looprec
27	usb_cdc_serial
28	usb_core
29	usb_hid_keyboard
30	usb_hid_mouse
31	usb_hid_msd
32	usb_hid_tansfer
33	usb_iad_cdc_cdc
34	usb_iad_cdc_hid
35	usb_iad_cdc_msd
36	usb_masstorage

Linux software resources table

Type	function	Desciprion
Bootloader	AT91Bootstrap	Guide to Uboot
	Uboot	1.Support NandFlash to erase,read and write 2. Support net to download Image 3.Support to set and keep environment variables

		4.Support memory to appear , compare and modify 5. Support boot and bootargsto set	
Kernel	Ethernet driver	ETH0	
		ETH1	
	Serial driver	USART0	
		USART3	
		DBGU	
	CAN	CAN0	
		CAN1	
	USB	USB_HOST*2	
		USB_OTG	
	SD card driver	Micro SD	
		SD Card	
	SMD driver		
	Zigbee driver		
	SPI driver		
	TWI driver		
	Qtouch key driver		
	DMA driver		
	GPIO driver		
File system	Angstrom file system		