

Wireless-Tag ARM926-CB

ARM9 CORE BOARD

DATASHEET

Description

ARM926-CB is a cost-effective System-on-Module (SoM) thought of to drastically reduce the development time needed to design a low-power and low-EMI Linux Embedded device.

The more complex hardware like CPU, RAM, Flash, Ethernet, power and EMI components are integrated on a single SMD component in just 40x40 mm (1.57x1.57 inch) using an complex six layers PCB permitting hardware designers to create their simple and cheap carrier boards.



Features

- CPU: ARM9 @ 400Mhz on Atmel AT91SAM9G25-CU
- RAM: 128MByte DDR2
- Flash: 128MByte Nand Flash
- Data flash:4MByte
- LAN: 10/100 Mbit
- USB: up to 3 host ports:
 - one hi-speed host/device
 - one hi-speed host
 - one full-speed
- UART: up to 6 serial lines
- I2C: up to 2 I2C buses
- SPI: up to 2 SPI buses
- GPIO: up to 60 GPIO lines
- A/D: up to four channel @ 10 bit
- Software: Linux kenel version: Linux 3.6.9

Applications

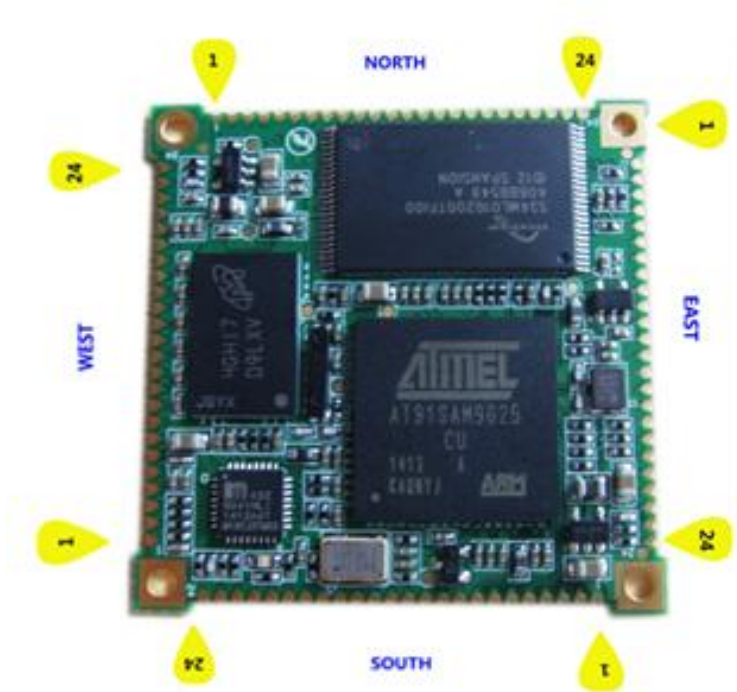
- Industrial Automation
- POS Terminals
- Smart Energy
- Data Concentrators
- Collection Device
- Electricity Meters
- Printer

1. Mechanical Parameters

- Power supply: single at 3.3 Volt DC
- Consumption: see consumption...
- Line level: TTL 3.3V
- Temperature range: -40 to +85 °C
- Size: 40 x 40 mm (1.57x1.57 inch)
- Weight: 5g
- Pads pitch: 1.27 mm (50 mill)
- PCB layers: 6
- User configurable led on board

2. Pin out Define for Linux system

The follow sheet is for the ARM926-CB board, the linux inode row is only for the linux.



Pin #	IC Pin	Default	Alt	GPIO	Note
N1		3V3			Power In Vcc
N2	PC0	SDA1	GPIO	64	I2C bus 1 Data or GPIO
N3	PC1	SCL1	GPIO	65	I2C bus 1 Clock or GPIO
N4	PC2	GPIO		66	
N5	PC3	GPIO		67	
N6	PC4	GPIO		68	
N7	PC5	GPIO		69	
N8	PC6	GPIO		70	

N9	PC7	GPIO		71	
N10	PC8	UTXD0	GPIO	72	UART0: /dev/ttyS5 TXD
N11	PC9	URXD0	GPIO	73	UART0: /dev/ttyS5 RXD
N12	PC10	GPIO		74	
N13	PC11	GPIO		75	
N14	PC12	GPIO		76	
N15	PC13	GPIO		77	
N16	PC14	GPIO		78	
N17	PC15	GPIO		79	
N18	PC16	UTXD1	GPIO	80	UART1: /dev/ttyS6 TXD
N19	PC17	URXD1	GPIO	81	UART1: /dev/ttyS6 RXD
N20	PC18	GPIO	PWM0	82	GPIO or Pulse Wave Modulation Out 0
N21	PC19	GPIO	PWM1	83	GPIO or Pulse Wave Modulation Out 1
N22	PC20	GPIO	PWM2	84	GPIO or Pulse Wave Modulation Out 2
N23	PC21	GPIO	PWM3	85	GPIO or Pulse Wave Modulation Out 3
N24		GND			Power In GND

Pin #	IC Pin	Default	Alt	GPIO	Note
E1		GND			Power In Vcc
E2	PC22	TXD3	GPIO	86	USART3: /dev/ttyS4 TXD
E3	PC23	RXD3	GPIO	87	USART3: /dev/ttyS4 RXD
E4	PC24	RTS3	GPIO	88	USART3: /dev/ttyS4 RTS
E5	PC25	CTS3	GPIO	89	USART3: /dev/ttyS4 CTS
E6	PC26	GPIO		90	
E7	PC27	RTS1	GPIO	91	USART1: /dev/ttyS2 RTS
E8	PC28	CTS1	GPIO	92	USART1: /dev/ttyS2 CTS
E9	PC29	GPIO		93	
E10	PC30	GPIO		94	
E11	PC31	GPIO		95	
E12	USBCP	D+			USB 2.0 Host full-speed port C
E13	USBCN	D-			USB 2.0 Host full-speed port C
E14		GND			Power In GND
E15	USBBN	D-			USB 2.0 Host hi-speed port B
E16	USBBP	D+			USB 2.0 Host hi-speed port B
E17		GND			Power In GND
E18	USBAN	D-			USB 2.0 Host/Device hi-speed port A
E19	USBAP	D+			USB 2.0 Host/Device hi-speed port A
E20	VBAT				RTC battery backup +3 volt DC input
E21	NRST				Reset input signal (active low)
E22	SHDN				Shutdown output signal (active low)
E23	WKUP				Wake-up input signal (active low)

E24		3V3			Power In Vcc
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Pin #	IC Pin	Default	Alt	GPIO	Note
S1		3V3			Power In Vcc
S2	PA21	1W	GPIO	21	Bit banging 1-wire bus or GPIO
S3	PA20	DA3		20	microSD Card memory
S4	PA19	DA2		19	microSD Card memory
S5	PA18	DA1		18	microSD Card memory
S6	PA17	CK		17	microSD Card memory
S7	PA16	CDA		16	microSD Card memory
S8	PA15	DA0		15	microSD Card memory
S9	PA14	NPCS0	GPIO	14	SPI bus 0 chip select 0 or GPIO
S10	PA13	SPCK	GPIO	13	SPI bus 0 clock or GPIO
S11	PA12	MOSI	GPIO	12	SPI bus 0 Master Output or GPIO
S12	PA11	MISO	GPIO	11	SPI bus 0 Master Input or GPIO
S13	PA10	DTXD		10	Debug serial port
S14	PA9	DRXD		9	Debug serial port
S15	PA8	RXD2	GPIO	8	USART2: <code>/dev/ttyS3 RXD</code> or GPIO
S16	PA7	TXD2	GPIO	7	USART2: <code>/dev/ttyS3 TXD</code> or GPIO
S17	PA6	RXD1	GPIO	6	USART2: <code>/dev/ttyS2 RXD</code> or GPIO
S18	PA5	TXD1	GPIO	5	USART2: <code>/dev/ttyS2 TXD</code> or GPIO
S19	PA4	GPIO		4	
S20	PA3	CTS0	GPIO	3	USART1: <code>/dev/ttyS1 CTS</code> or GPIO
S21	PA2	RTS0	GPIO	2	USART1: <code>/dev/ttyS1 RTS</code> or GPIO
S22	PA1	RXD0	GPIO	1	USART1: <code>/dev/ttyS1 RXD</code> or GPIO
S23	PA0	TXD0	GPIO	0	USART1: <code>/dev/ttyS1 TXD</code> or GPIO
S24		GND			Power In GND

Pin #	IC Pin	Default	Alt	GPIO	Note
W1		GND			Power In GND
W2		ETHRXP			Eth RX+
W3		ETHRXN			Eth RX-
W4		ETHTXP			Eth TX+
W5		ETHTXN			Eth TX-
W6		ETH3V3			Eth 3V3
W7		ETHLED1			Eth Yellow led (traffic)
W8		ETHLED2			Eth Green led (link)
W9	PA22	GPIO		22	
W10	PA23	GPIO		23	
W11	PA24	GPIO		24	

W12	PA25	GPIO		25	
W13	PA26	GPIO		26	
W14	PA27	GPIO		27	
W15	PA28	GPIO		28	
W16	PA29	GPIO		29	
W17	PA30	SDA0	GPIO	30	I2C bus 0 Data or GPIO
W18	PA31	SCL0	GPIO	31	I2C bus 0 Clock or GPIO
W19	ADV REF				A/D converter voltage reference In (max 3.3 volt)
W20	PB11	AD0	GPIO	43	A/D converter Input 0 or GPIO
W21	PB12	AD1	GPIO	44	A/D converter Input 1 or GPIO
W22	PB13	AD2	GPIO	45	A/D converter Input 2 or GPIO
W23	PB14	AD3	GPIO	46	A/D converter Input 3 or GPIO
W24		3V3			Power In Vcc

3. Technical Support

For technical support, please send e-mail to: technical@wireless-tag.com

Disclaimer: We reserve the final interpretation and modification rights to update the product manuals without notice at any time!