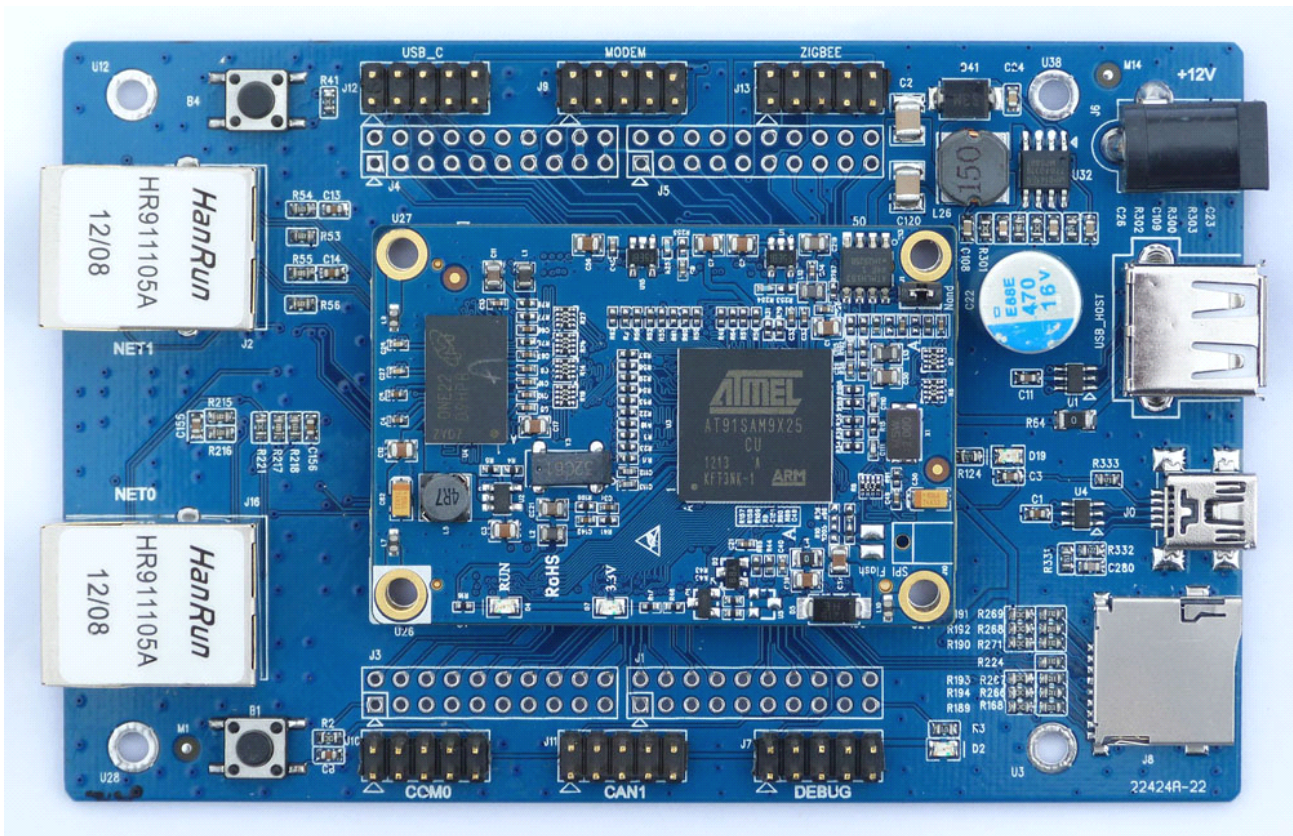




NET-SAM9X25 Overview

- Working Temperature: -40 to +85 Celsius
- Atmel AT91SAM9X25 ARM926EJ-S processor, up to 400Mhz
- 128MB DDR2 SDRAM + 256MB Nand Flash + 4Kbit EEPROM
- 1 USB Host, 1 USB Device, two Ethernet, CAN, TF card, SPI, IIC.
- Expand All the interface for CM-SAM9X25
- Support Linux 2.6.39 system



Overview

The NET-SAM9X25 Single Board Computer is a high-performance controller board introduced by CoreWind. It is designed based on the CM-SAM9X25 processor card which integrates an AT91SAM9X25 microcontroller, 128MByte DDR2 SDRAM, 256MByte Nand Flash, 4Kbit EEPROM, UART, Ethernet, USB HOST, on board. It is connected with NET-SAM9X25 expansion board through two 100pin B-T-B expansion interfaces.

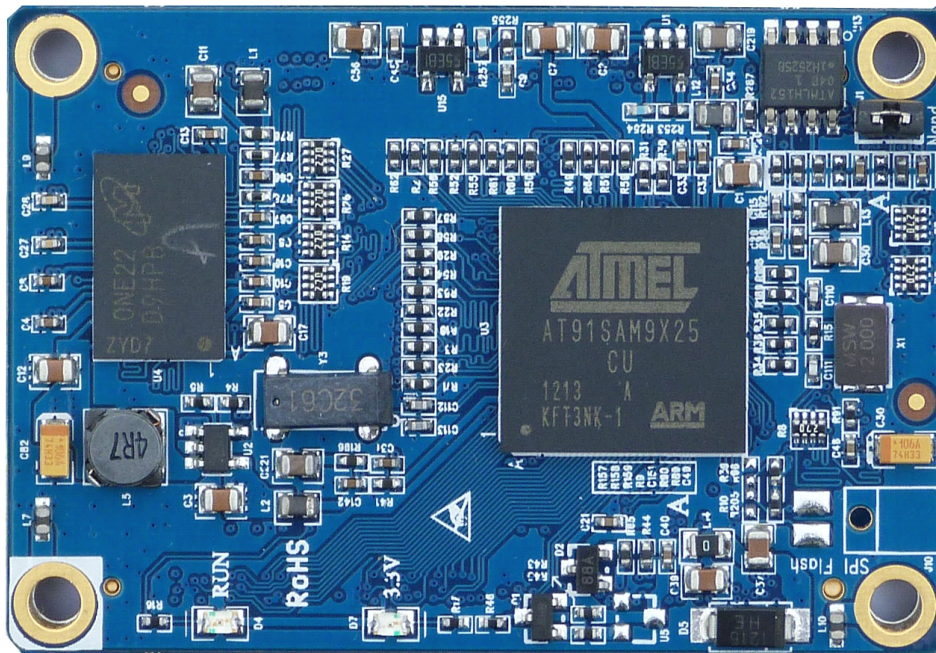
CoreWind also offers a complete software development package to customers. The board supports linux 2.6.39 operating system and is provided with complete basic drivers which enable a quick channel to evaluate the Atmel AT91SAM9X25 processor and customize application software. It would be an ideal development platform for multimedia and communication applications.



CPU Board Features>> CM-SAM9X25

CoreWind CM-SAM9X25 processor card is a compact ARM embedded controller based on 400MHz Atmel AT91SAM9X25 ARM 926EJ-S microcontroller which is designed to provide a high performance processor solution with a high flexibility for general and multimedia oriented applications.

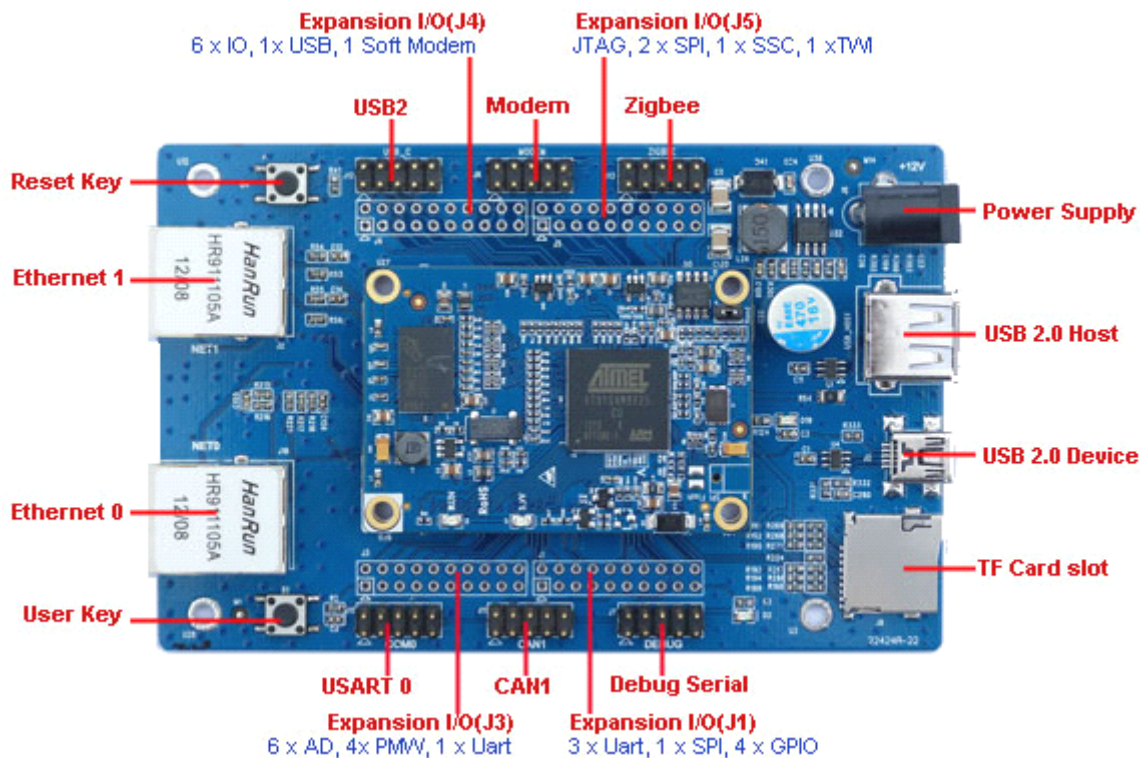
The CM-SAM9X25 processor card has external 128MB DDR2 SDRAM, 256MB Nand Flash and 4Kbit EEPROM on board and many peripherals like UART, Ethernet, USB, CAN, SDIO, JTAG and all IOs are brought out by two B-T-B 100Pins connector female headers which is convenient and flexible for customer's secondary development work.



- **CPU:** Atmel AT91SAM9G45 ARM926EJ-S Core Microprocessor
- **RAM:** 128MB DDR2 RAM
- **Flash:** 256MB Nand Flash
- **Dimensions:** 57.4*39.4mm, 8 layer
- **Working Temperature:** -40 to +85 Celsius
- Two 100Pin B-T-B connector extend more interface from CPU
 - UART, Two Ethernet, USB Host/Device, CAN
 - SPI, TWI, SDIO, PWM, JTAG and all IOs



NET-SAM9X25 Single Board Computer



Mechanical Parameters

- Dimensions: 115*74mm
- Power Input Voltage: 12V
- Temperature Range: -40 °C ~ 85 °C
- Humidity Range: 20% ~ 90%

Data Transfer Interface

- Serial port
 - DEBUG: One 3-wire RS232 Debug serial port
 - COM0: One 5-wire TTL serial port, Support extend **RS232/RS485/RS422** Module
- Ethernet: Two 10/100Mbps Ethernet port (RJ45)
- USB port:
 - Two High-speed USB 2.0 Host port, 480Mbps
 - One High-speed USB 2.0 Device port, 480Mbps
- TF card slot: One TF card interface(Hot plug-and-play)
- Zigbee Module
- Soft Modem Interface
- Expansion Interface
 - J1: 3 x Uart, 1 x SPI, 4 x GPIO
 - J3: 6 x AD, 4 x PWM, 1 x Uart
 - J4: 6 x IO, 1 x USB, 1 Soft Modem
 - J5: JTAG, 2 x SPI, 1 x SSC, 1 x TWI



Input Interface

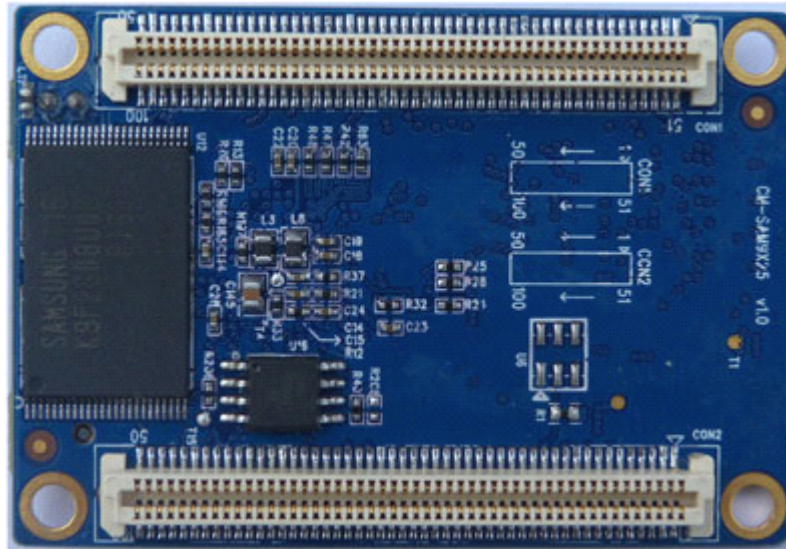
- 1 LED: 1 x Power LED
- 2 Button: 1 x Reset KEY, 1 User Key

Software Support:

- Support Linux 2.6.39 System
- UBI Filesystem
- CAN bus driver
- Ethernet Driver, Telnet, TCP/IP
- USB Host, Soft Modem

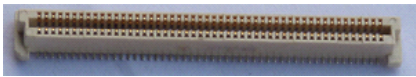
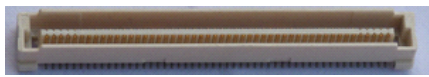


The B-T-B connector



The CM-SAM9X25 cpu board use the female connector(name: **AMP 5-5179009-4 SOCKET VERTICAL**).
So for the Expansion board NET-SAM9X25, it need to use the male connector(name: **AMP 5179030-4 HEADER VERTICAL**).

More details about the connector

Item	Connector for CPU board	Connector for Expansion board
On Board	CM-SAM9X25	NET-SAM9X25
Connector Type	AMP 5-5179009-4 SOCKET VERTICAL 0.8MM 5MM 100WAY	AMP 5179030-4 HEADER VERTICAL 0.8MM 5MM 100WAY
Description	Pitch Spacing:0.8mm Height: 5mm Pin No.: 100Pin	Pitch Spacing:0.8mm Height: 5mm Pin No.: 100Pin
Picture		
Datasheet	Download Positon-> CD:/Datasheet/	Download Position-> CD:/Datasheet/

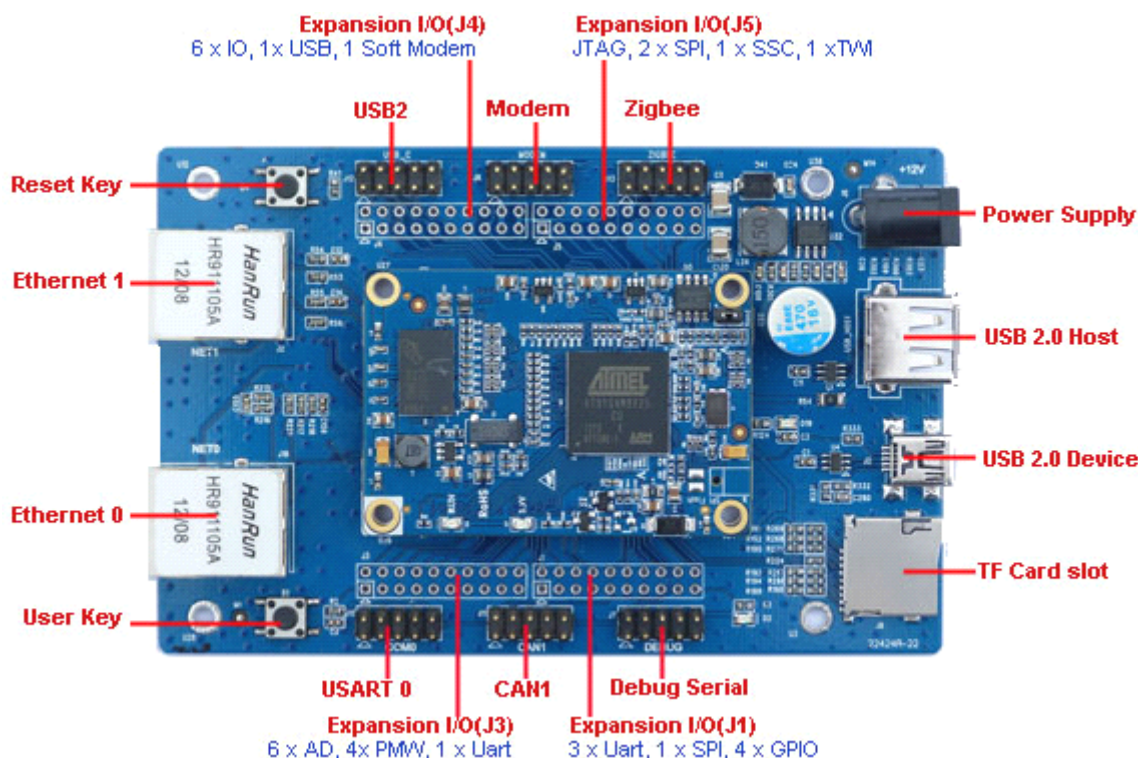


Design Expansion board for CM-SAM9X25

We also designed one expansion boards to bring out connectors for implementing and extending the functions of CM-SAM9X25. The boards are called **NET-SAM9X25** single board computers. CoreWind offers Linux 2.6.39 for the boards. They are high-performance single board computer for industrial needs.

Step 1. Evaluate the function with NET-SAM9X25

You can get the the expansion board(NET-SAM9X25) that we provide, and test the function you needs, for NET-SAM9X25, we have extend more function, the interface is as follow:



Interface on NET-SAM9X25	Expansion Function(option function)
2 x Serial port	RS232/RS485 serial port
2x Ethernet interface	100Mb/s NET interface
2 x USB Host	USB Disk, USB Mouse, USB keyboard, USB WiFi
1 x USB Device	Support Update system image with samba
1 x TF card	Support TF card
1 x CAN bus	CAN interface
Expansion I/O(J1)	3 x Uart, 1 x SPI, 4 x GPIO
Expansion I/O(J3)	6 x AD, 4 x PWM, 1 x Uart
Expansion I/O(J4)	6 x IO, 1 x USB Host, 1 Soft Modem
Expansion I/O(J5)	2 x SPI, 1 x SSC, 1 x TWI, JTAG

Notice: some interface were extended by option module, if you want use these function, you should buy the option module, more details, you can see the NET-SAM9X25 product,

Step 2. Design your expansion board

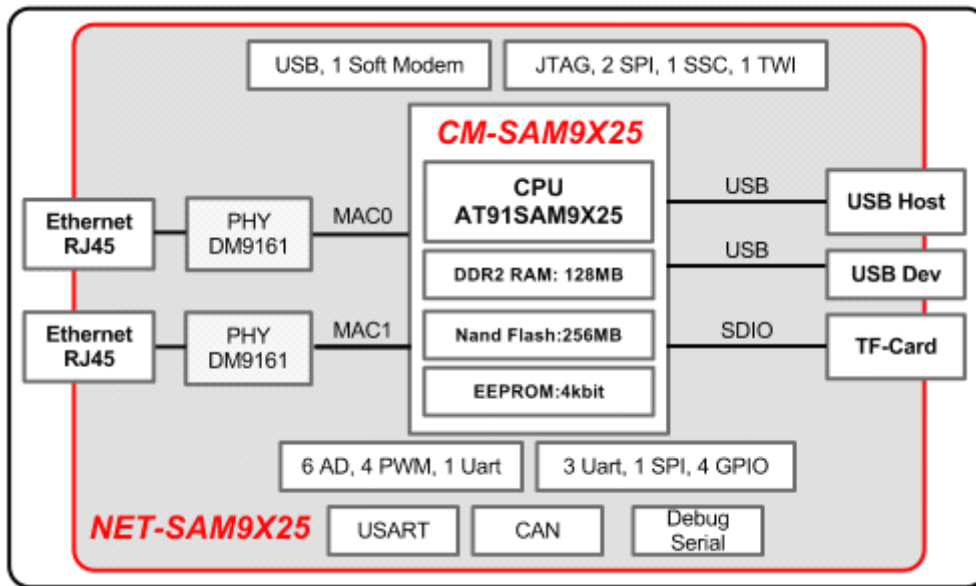
After you evaluate the CM-SAM9X25 board, then you can get the PCB package library from the CD, and then you can design you PCB file with it.



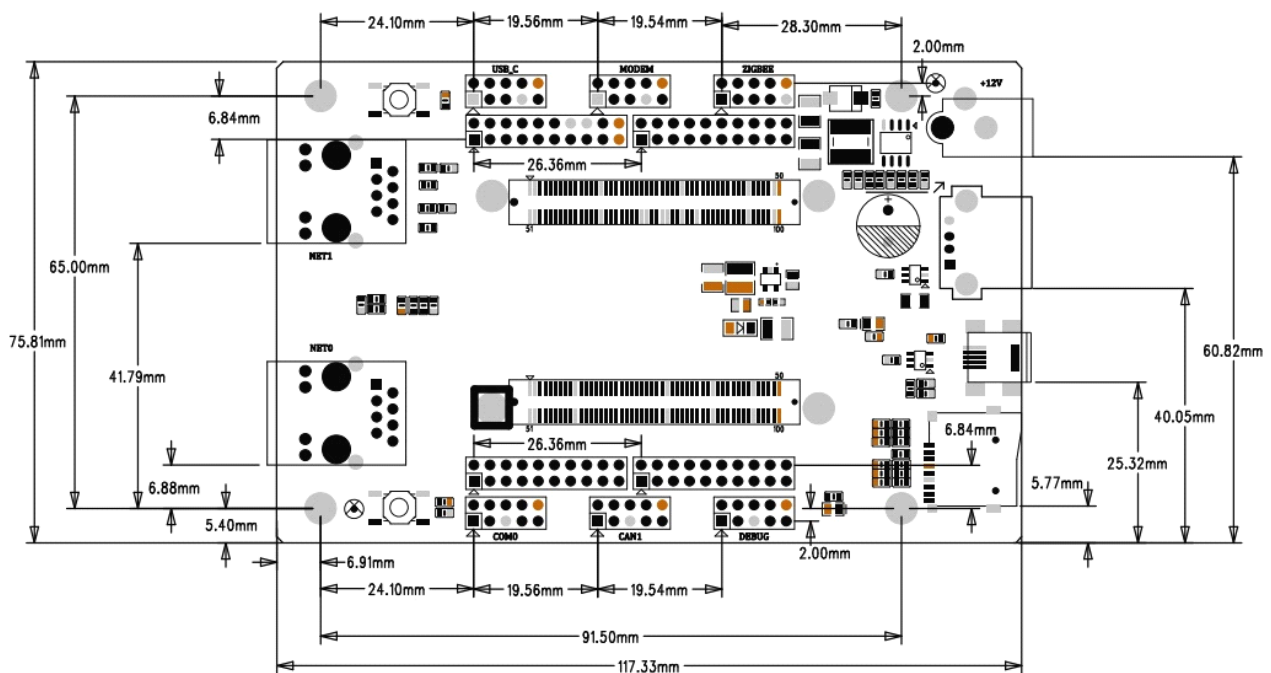
NET-SAM9X25 Overview

www.at91sam.org

NET-SAM9G45 Block Diagram



NET-SAM9G45 Size



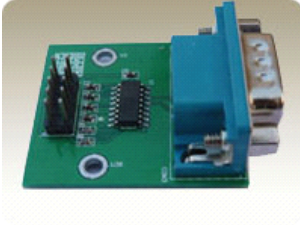


Expansion Module for NET-SAM9X25

Serial Port expansion Module (COM0: J10 interface support)

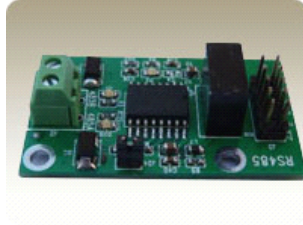
RS232 Module

Change the TTL to RS232



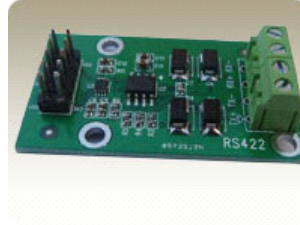
RS485 Module

Output RS485 with Isolation



RS422 Module

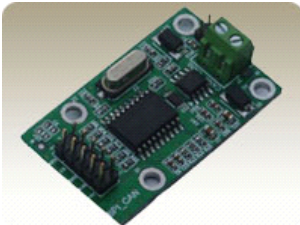
Change the TTL to RS422



SPI bus expansion Module (CAN bus: J11 support)

CAN Module

Output 1 CAN bus interface





Order Information

Order No.	SBC-A2
Item	NET-SAM9X25 Single board computer
Contents	One NET-SAM9X25 Single Board(contain cpu board) One RS232 Serial cable One USB Cable One net cable One 12V Power adapter One CD
Data in CD	Documents (user manual, Datasheet, Schematic, mother board package library) Linux 2.6.30 BSP, Image File Cross compile tool chain
Price	Please contact us (market@armdevs.com)



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