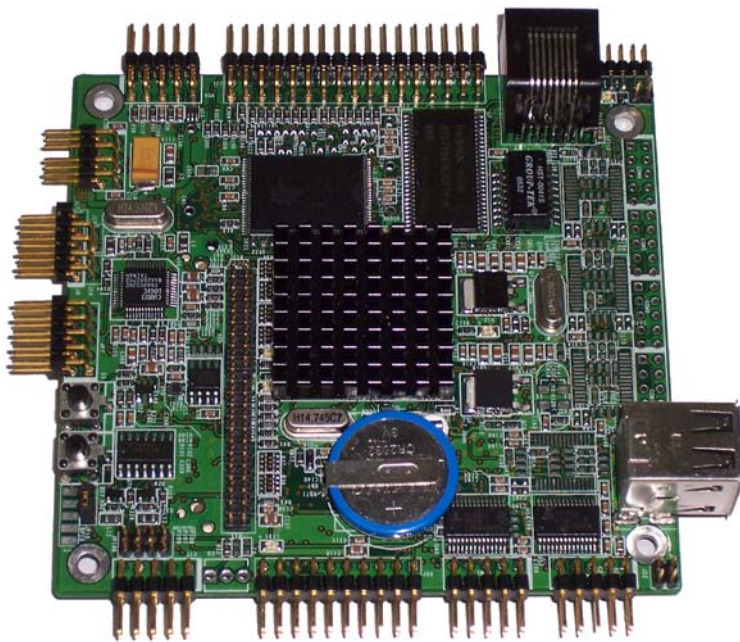


SAM9315V1 Single Board Computer

- ARM920T Single-board Computer based upon Cirrus Logic EP9315
- RS232/TTL/RS485/RS422, Ethernet, USB, LCD/TSP, VGA, Keypad, CF, IDE...
- Full Bus and Peripheral Signal Expansion
- Provided with WinCE5.0 BSP

The SAM9315V1 is a compact single board computer (SBC) with PC/104-compliant form factor and built around a Cirrus Logic EP9315 microcontroller which features an advanced 200 MHz ARM920T processor designed with a memory management unit (MMU), 16KB data cache and 16KB instruction cache, a 100 MHz bus speed and the integration of an Ethernet MAC, PCMCIA support, two-channel IDE and three USB 2.0 hosts. It also supports an 18-bit display, touch screen and keypad, and adds a separate graphics accelerator to speed up basic graphic functions such as block copies. The device also supports multiple audio solutions, up to six channels I2S 24-bit audio, and can encode and decode industry-standard audio algorithms such as AAC, MP3 and Windows Media Audio.



The board has been designed to provide the majority of the EP9315 functions. Its on-board I/O is as comprehensive as many functions can be realized including serial ports, Ethernet, USB, LCD/Touchscreen, VGA, Watchdog, Keyboard, Audio, IDE and PCMCIA CF socket. The board is also extended four additional serial ports and different signals RS232/TTL/RS485/RS422 are available from the four ports.

The SAM9315V1 board is able to support Linux and WinCE and other high-level operation systems.

Embest provides some drivers for WinCE 5.0 OS of this board to help customer better with their design.

The board is designed especially for system designers across a wide range of market applications such as digital media servers, audio/video jukeboxes, telematic control systems, intelligent house controllers, multizoned stereo audio systems, Internet radios, industrial controls, KVM controllers, biometric security systems and GPS devices.

Hardware Description

The Cirrus Logic EP9315 is a highly integrated system-on-chip processor that paves the way for next-generation consumer and industrial electronic products. The EP9315 features an advanced 200 MHz ARM920T processor with separate 16KB data cache and 16KB instruction cache and includes 1/10/100 ethernet, IDE storage peripherals, keypad, a three-port USB 2.0 full-speed host (OHCI), running at 12 Mbps, and three UARTs. Additionally the EP9315 includes a 2D graphics accelerator, integrated LCD controller, touchscreen and high quality audio to enable easy to use products with vibrant multimedia capabilities. A highly flexible memory interface provides compatibility with SDRAM, SRAM, Flash, and ROM.

The SAM9315 exposes many of these features to the user in support of developing specific solutions. This board is characterized as follows:

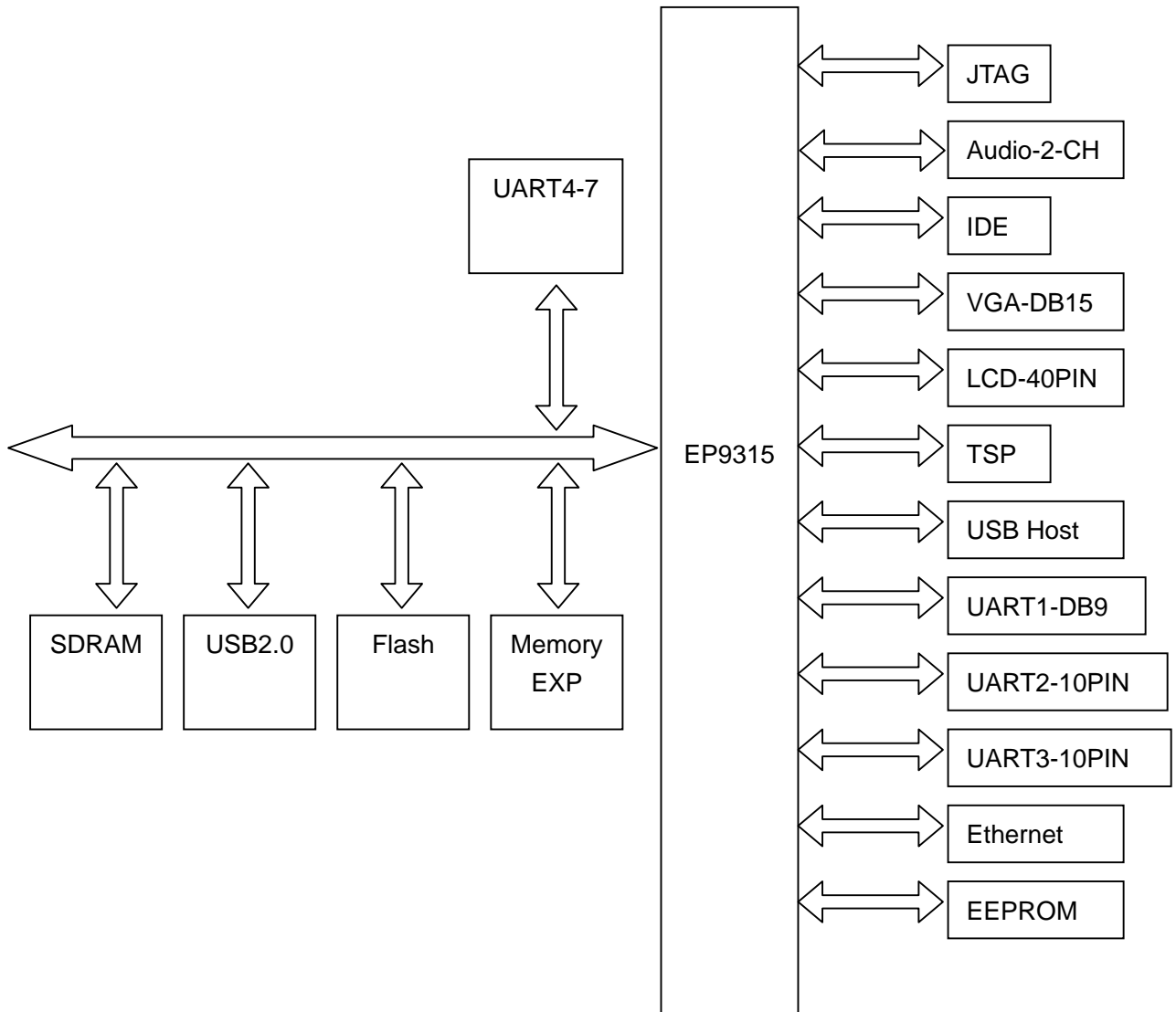
- Dimensions: 90mm x 96mm
 - Power supply: +5V
 - Cirrus Logic EP9315 (ARM920T core with MMU capable of 200 MHz operation)
 - 64Mbyte SDRAM
 - 32Mbyte Nor Flash
 - 3 Serial ports (RS232/TTL/TTL)
 - 4 extended Serial ports (RS232/TTL/RS485/RS422)
 - 1 10/100M Ethernet port
 - 3 USB (USB2.0) ports
 - Audio port
 - CF card socket
 - LCD/VGA interfaces (support resolution: 640x480, 800x600, 1024x768, etc.)
 - Touchscreen interface
 - IDE interface
 - Battery backed RTC
 - Watchdog
 - 20-pin 8*8 Keyboard interface
-

Software

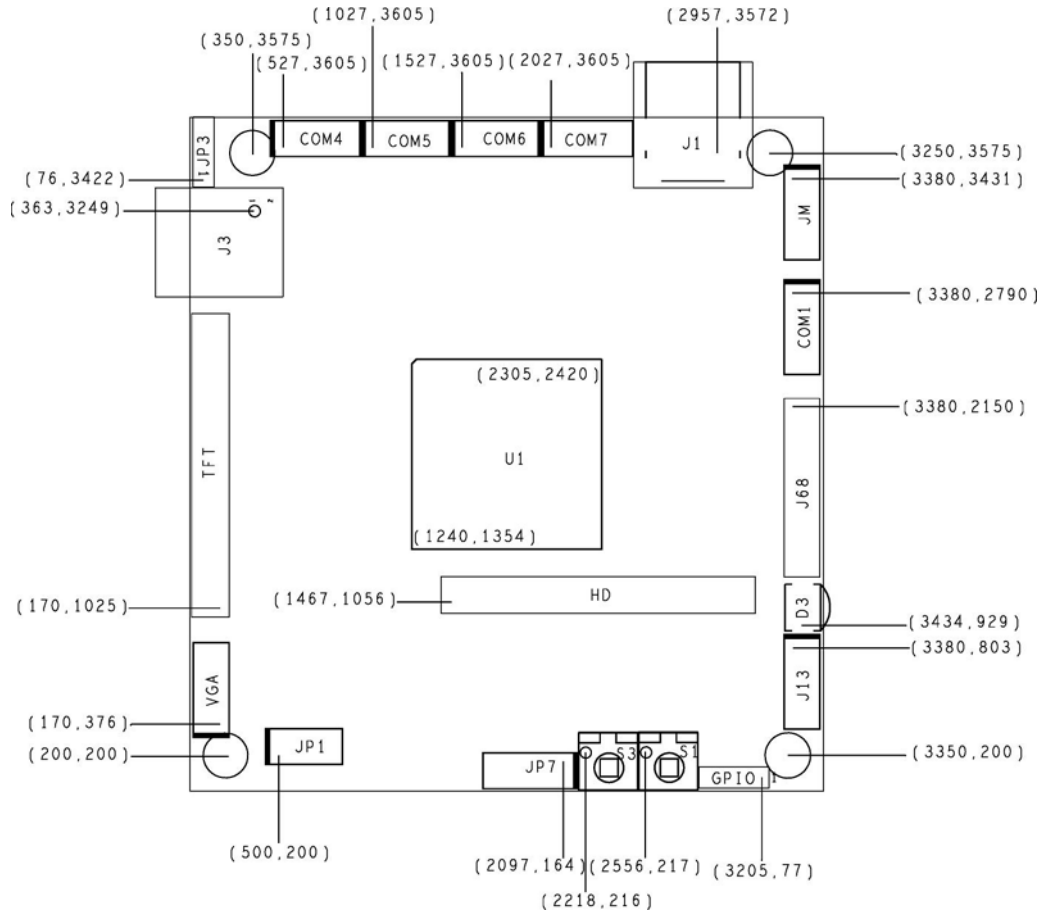
The board supports WinCE 5.0 OS and Embest offers below drivers and many are in source code:

- Seven Serial ports (Only provide library file to support driver using)
 - 1 x Serial port (9 lines)
 - 2 x Serial ports (3 lines)
 - 4 x extended Serial ports (9 lines)
- LCD/Touchscreen
- VGA
- IIS
- Ethernet
- USB Host
- CF card
- IDE/ATAPI
- Keyboard

Function Block Diagram

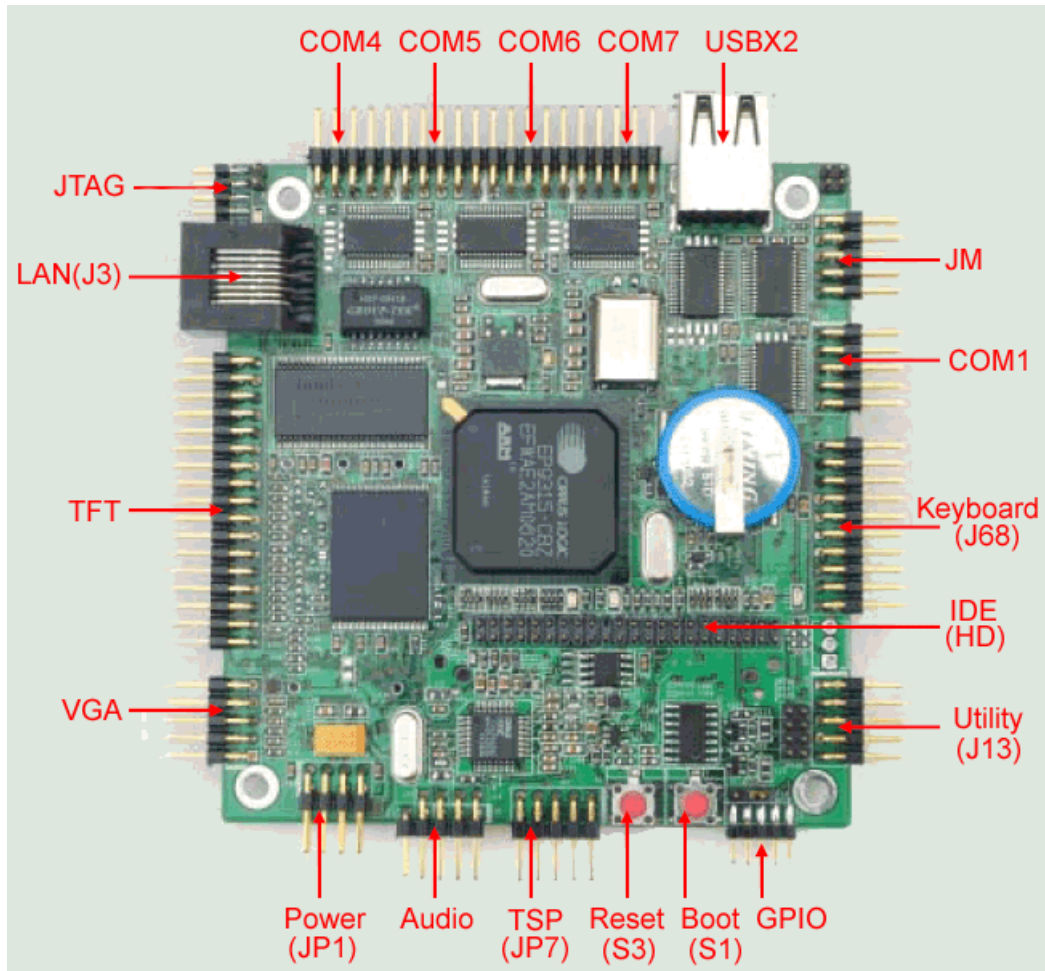


Dimensions



Header Interfaces

There are a number of header connectors that are provided to the designers allowing them to access important areas of the processor I/O. Each header and its associated functions are identified below.



Connector	Interface	Pins	Connector	Interface	Pins
JP1	Power Jack	8P	J13	Utility interface	10P
COM1	Serial port 1	10P	J1	USB1/USB2	8P
JM	Serial port 2/3/USB3	10P	J3	10/100M Ethernet interface	8P
COM4	Extend COM4	10P	J8	HeadPhone Out	3P
COM5	Extend COM5	10P	J17	MicroPhone In	2P
COM6	Extend COM6	10P	J16	Line Out	2P
COM7	Extend COM7	10P	J15	Line In	2P
HD	IDE interface	44P	JP7	Touch Screen interface	10P
VGA	CRT interface	10P	J68	Keyboard interface	20P
TFT	LCD interface	34P	S1/JP10/S3	S1/JP10: programmer control key S3: Reset key	
J70	PCMCIA CF socket	50P	GPIO	EGPIO	10P
JP3	Jtag interface	10P			

Order Information

Order No.	SAM9315T1
Item	Embest SAM9315V1 Single Board Computer
Price	Please contact us for detailed information.
CD-ROM	<ul style="list-style-type: none"> ✓ Software ✓ User manual ✓ BOM list ✓ Parts datasheet
Others	<ul style="list-style-type: none"> ✓ 1 Ethernet cable ✓ 1 USB cable (Host to Device) ✓ 1 DB9 Serial cables ✓ 1 extended cable (four serial ports connectors) ✓ 1 extended cable (two serial ports connectors and one usb connector) ✓ 1 VGA cable ✓ 1 IDE cable ✓ 5V power adapter with power cable



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