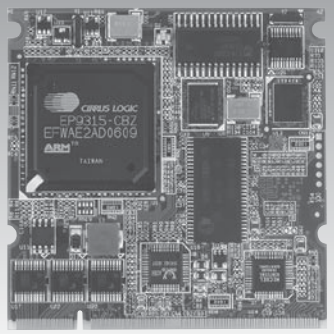
SOM-A9315

OS-ready Cirrus® EP9315 + Windows® CE 5.0 System On Module (SOM)

Project Based



Features

- Cirrus® ARM9 based EP9315 + Microsoft Windows® CE 5.0
- Compatible w/ Advantech RISC SOM (RTX) architecture
- Graphic 2D accelerator and H/W floating point accelerator
- Rich I/O I/F ex : CAN2.0B, LAN, USB, COM, hotkey, DIO, audio, PCMCIA
- Multi-storage solution: IDE, USB, PCMCIA
- Complete SW support package with SDK for easy application development
- Supports Adobe® Flash® Player 7.0 & Java virtual machine per project based

Introduction

ARM9 base, IO intensive, best Performance/Cost ratio, OS-Ready System On Module

Follow Advantech RISC SOM RTX form factor, SOM-A9315 Series integrates Cirrus EP9315 ARM9 based low power SoC, NXP CAN solution & Oxford multi-COMs solution chips that offer customers excellent fanless performance & rich I/O expansion on a System On Module.

Design-in Package Ensures Efficient, Low-Risk Project Evaluation

The comprehensive design-in package provides developers with a complete design-in kit, detailed design guide documentation, as well as the Windows CE Board Support Package (BSP) by request, and a set of testing tools for custom target platform image building.

Three support mechanisms are included in the design-in package:

- **Design-in Kit:** Provides developers with a complete design-in suite kit for application evaluation/development and Customer Solution Board (CSB) development
- **LCD Kit:** Certified LCD kit for customers to test LCD performance.
- **Design-in Zone:** Assists customers with their own CSB development by providing front-to-end technical support (http://risc-designin.advantech.com.tw/)

Specification

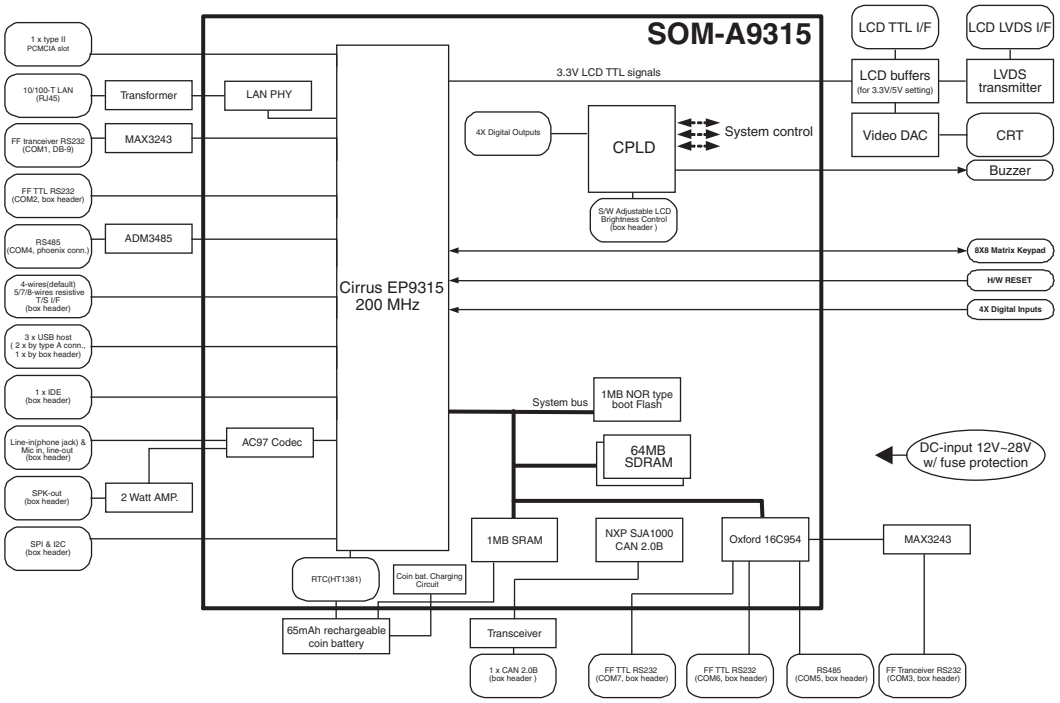
Item	SOM-A9315-240B0E	Reconfiguration Options
S/W		
OS	Windows CE 5.0 English professional ver.	different language support. WinCE core or professional plus version support.
GUI Firmware	-	Adobe Flash player 7.0 or Java virtual machine
Kernel		
CPU	Cirrus ARM9 based EP9315 200 MHz	-
Math Engine	H/W floating point accelerator from EP9315	-
SDRAM	64 MB	32MB
Boot Flash	1 MB NOR flash (for bootloader only)	-
Storage Flash	N.A. (system can boot from Hard disk thru IDE or CF memory card thru CF/PCMCIA slot)	-
SRAM	1 MB	removable for cost down
RTC	HT1381	-
Watchdog	EP9315 internal	-
Power Management	Normal & Idle mode. When in idle mode, system turns off the LCD back light only. Wakeup by event trigger (T/S, USB...)	-
Reset	H/W reset (No SW reset)	-
I/O		
ARM Bus (CPU system bus)	N.A.	-
CAN	1 x CAN 2.0b by NXP SJA1000	removable for cost down
COM	7 x	could be configurated as 3 x for cost down
LAN	1 x 10/100-T	-
USB	2 x USB host ports (No USB client)	-
PS/2	N.A.	-
PCI	N.A.	-
GPIO	3 x 3.3 V TTL level (One could be interrupt source)	-
DI/DO	4 x 3.3 V TTL level DI & 4 x 3.3 V TTL level DO	4 x DI could be configurated by SW as GPIO. 4 pins all could be interrupt source.
Hotkey/Matrix keypad	8 x 8 (64 pins max.) 3.3 V TTL level	16 pins all could be configurated as GPIO. All 16 pins can not be interrupt source.
CF/PCMCIA	1 x (system default boot port)	-
IDE	1 x (ATA/ATAPI compliant. bootable I/F)	-
I2C	1 x	-
SPI	1 x	-
Touch Screen I/F	4-wire resistive type I/F	5/7/8 wires resistive type I/F as option
Multimedia		
Graphic Controller	EP9315 internal 18-bits graphic controller	-
Graphic Accelerator	Supports 2D graphic accelerator by EP9315	-
CRT out	N.A. (could be implemented on CSB)	-
LVDS out	N.A. (could be implemented on CSB)	-
LCD out	3.3 V TTL level 18 bits	-
Resolution Support	320 x 240 ~ 800 x 600 (default)	-
Inverter Control	SW configurable LCD back light on/ff and brightness control I/F	-
Audio	AC97 Codec	removable for cost down
Buzzer Control	Yes	-
Others		
DC-input	3.3 V + -3 %, 5.0 V + -3 %	-
Form Factor	Advantech RISC SOM RTX form factor	-
Board Size	68 mm x 68 mm x 6.8 mm (W x L x H)	-
Power Comsuption	~ 2.5 watt (not including the CSB and any peripherals, SOM only. And no speical AP running.)	-
Temperature	Operation : 0° C ~ 60° C (-40° C/-20° C ~ 80/85° C as option)	-
Certification	CE/FCC	-

Note: in "Reconfiguration Option" column, "-" means no option.

All product specifications are subject to change without notice

Last updated : 30-Nov-2007

Board Block Diagram



NOTE: The components in SOM-A9315 frame are implemented on SOM. The others out of frame are not on SOM.

Packing List

- **Bulk packing with 20 pcs in one box**
- **SOM only comes with the bootloader pre-installed and Win CE professional version license sticker**

** Sample image and related documentation included with Design-in kit only.

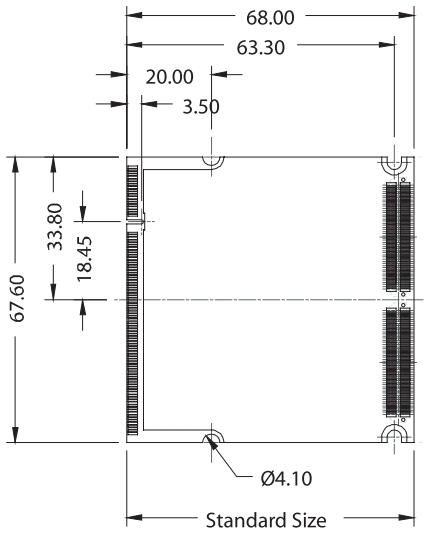
Ordering Information

SOM-A9315 Design-in Package

- **SOM-ADK9315-B00E (SOM & carrier board kit)** — SOM-A9315 Series design-in kit. (doesn't include LCD kit) (** without panel bundle, please order designated LCD kit)
- **LCD-A104-TTS1-0 (Optional item)** — 10.4" TFT SVGA LCD kit. The kit includes 4-wire resistive T/S, inverter & related cables. (Advantech reference image default supported)

SOM-A9315 Series SOM (Module only)

- **SOM-A9315-240B0E** — SOM Cirrus EP9315 200 MHz, 64 MB SDRAM, 1 MB SRAM, CAN 2.0b, 7 COMs & Win CE 5.0
- **Order your own reconfigured SOM** — After Developers have evaluated the kit and decided to order a reconfigured sample run SOM, they can check the reconfiguration options in the above specification table to order their customized SOM-A2709 product. Contact local Advantech sales or distributor for reconfiguration requests.

Mechanical dimensions

Unit: mm