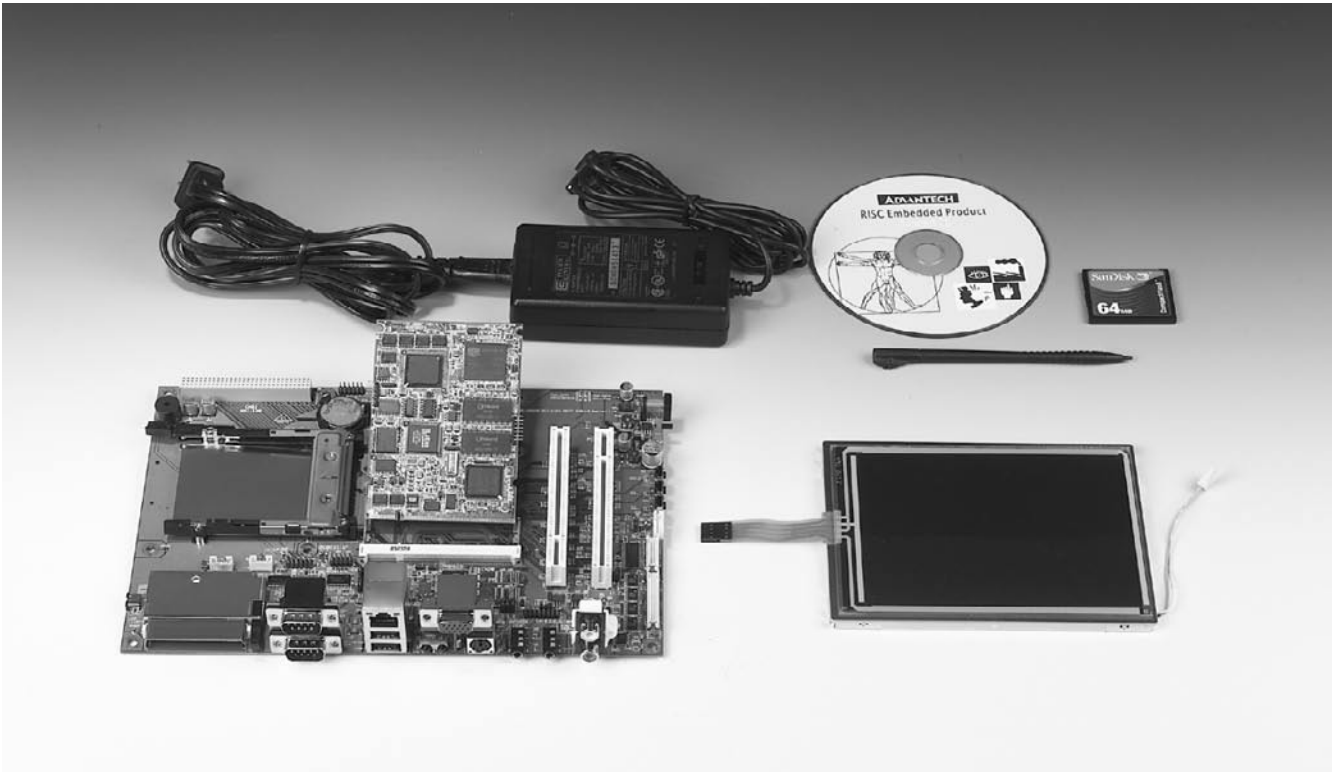# SOM-ADK255F Series Design-in Kit

Design-in Kit for SOM-A255F Intel XScale® PXA255 System On Module

CE FCC

Introduction

The Design-in Kit provides developers with a Customer Solution Board (CSB) and reference suite for application evaluation and development. It contains all the necessary information, documentation and tools for getting started, including the followings items:

- **Target SOM (SOM-A255F-440B1):** SOM-A255F standard version board.
- **SOM-A255F Series Reference Customer Solution Board:** Sample CSB for developer reference.
- **64 MB CompactFlash® Card**
- **Design-in Reference Documentation:**
  - Design-in zone login information card
  - Design-in kit user's manual
  - RISC SOM carrier board design guide
  - Schematics, bill of materials, CSB layout guide

- **Testing Set**

Designed for sample CSB or customers' own CSB/mass production testing. It includes:

  - H/W testing tools: RS-232 loop-back testing tool, null MODEM cable, JTAG cable, USB ActiveSync cable, Audio cable, RS-232 cable
  - S/W testing utility: Advantech-developed testing utility. Test process will be implemented by S/W testing utility and H/W testing tools
  - Documentation: "Advantech RISC SOM Platform Testing Method". Designer can learn how to implement the testing process

- **Software Development Tools**

Software development tools are a complete package for customers to develop their own image to work with their target CSB and applications

  - BSP: Binary Board Support Package for target SOM Design-in Kit. Users can integrate their target Windows CE platform with their own components, apps and drivers (BSP: by project request)
  - SDK: For customers target application development
  - Reference Image: For the selected model of SOM Design-in Kit
  - Upgrade Utility: Users can use this utility to upgrade logo, image & bootloader.
- **Design-in Zone Guide**

Advantech has established a dedicated website portal called SOM Design-in Zone to assist customers with CSB development by providing direct, professional support. The home page is located at http://risc-designin.advantech.com.tw

SOM-ADK255F-B01 does not include the LCD kit; please order your LCD kit of choice

LCD Kit: (OPTIONAL item)

Advantech supplies a full range of certified LCD kits in different sizes and types for customers to fit with their own target CSB and application.

Each LCD kit includes the selected LCD panel, inverter and cables which are designed to work with each Advantech Standard RISC-based SOM Design-in Kit platform.

The following LCD kits are currently available:

- 5.7" STN QVGA LCD kit (NAN-YA/LCBFBTB61M23)
- 6.4" TFT VGA LCD kit (PRIMEVIEW/PD064VT2)
- 10.4" TFT SVGA LCD kit (AU/UB104SXX)
- 15" TFT XVGA LCD kit (AUO/M150XN07)

Specifications

PCB Form Factor	237 mm x 160 mm
SOM Module P/N	SOM-A255F-440B1
Boot Loader Storage	Pre-installed on SOM module
OS Image Storage	On CompactFlash® Card (CFC)
PCI	2 PCI slots (PCI Rev. 2.2 compliant)
Mini PCI	1 Mini PCI slot
AMI Bus (X1 Bus)	Advantech RISC standard AMI-120 connector with driving buffers on SOM module
Watch Dog	PXA255 Built-in
RTC	EVA-C210 Built-in
System Backup Battery	65 mAh 2032 type rechargeable Li-ion coin battery for RTC/SDRAM
Serial Port Conn.	2 x RS-232 DB-9 connectors (COM1, COM2)
	1 x IrDA 1.1 Physical Layer (COM3)
	1 x 5 x 2 2.00 mm pin header (COM4)
	1 x 6 x 2 2.00 mm pin header (COM5)
Ethernet	1 x 10/100 Base-T LAN port w/2 LEDs
PCMCIA/CompactFlash	1 x Type II CFC slot and 1 x Type II PCMCIA slot
USB Host	2 x USB 1.1 host connector
USB Client	1 x mini USB 1.1 Client connector
PS/2	1 PS/2 connector for KB & MS. (Customers should use PS/2 Y cable to expand)
LCD Interface (TTL level)	40-pin advantech standard LCD connector supports 24-bit LCD interface, resolution up to 1024 x 768
LCD LVDS	20-pin advantech standard LCD connector supports 1-channel LVDS signals
CRT	DB-15 conn., resolution up to 1024 x 768
TV-In	1 RCA jack for TV-in function
TV-Out	1 RCA jack for TV-out function
T/S	4-wire resistive touch screen housing (SPI interface option)
Audio Interface	8 x 2 mm Pin header-Line-in, Line-out, MIC-in, Speaker-out, Line-in Jack and Line-out Jack
Buzzer	Yes
SM Bus	SM bus housing
System Reset Button	H/W reset button, S/W reset button, Wakeup/Suspend button
OS Support	Windows CE .NET 4.2
Power Input	12V DC in with power switch
Inverter	5-pin housing for LCD inverter control
Operating Temperature	0 ~ 60° C
Operating Humidity	0% ~ 90%
Certification	FCC/CE

Ordering Information

SOM-A255F Design-in Package

- **Design-in Kit SOM-ADK255F-B01 (Must order)** — SOM-A255F Series Design-in Kit. (** without Panel)
- **LCD Kit LCD-A057-STQ1-0 (Optional item)** — 5.7" STN QVGA LCD kit. The kit includes 4-wire resistive T/S, inverter, cables and installation guide.
- **LCD Kit LCD-A064-TTV1-0 (Optional item)** — 6.4" TFT VGA LCD kit. The kit includes 4-wire resistive T/S, inverter, cables and installation guide.
- **LCD Kit LCD-A104-TTS1-0 (Optional item)** — 10.4" TFT SVGA LCD kit. The kit includes 4-wire resistive T/S, inverter, cables and installation guide.
- **LCD-A150-TTX2-0 (Optional item)** — 15" TFT XGA kit. This kit includes 4-wire resistive T/S, inverter, cables and installation guide.

Packing List

- **SOM-A255F-440B1** — SOM-A255F standard SOM.
- **SOM-A255F-440B1 Carrier Board** — Carrier board for SOM-A255F-440B1
- **64 MB CompactFlash Card**
- **Testing Kit** — Includes H/W testing tools, S/W testing utility and documents.
- **AC power Adaptor** — AC/DC power adaptor for Design-in Kit power supply.
- **SOM-A255F Series Support CD** — Included Software Development tools, SOM-A255F spec, SOM-ADK255F spec, SOM-A255F manual, SOM-ADK255F manual, Testing Kit application note & SOM-A255F carrier board design guide.