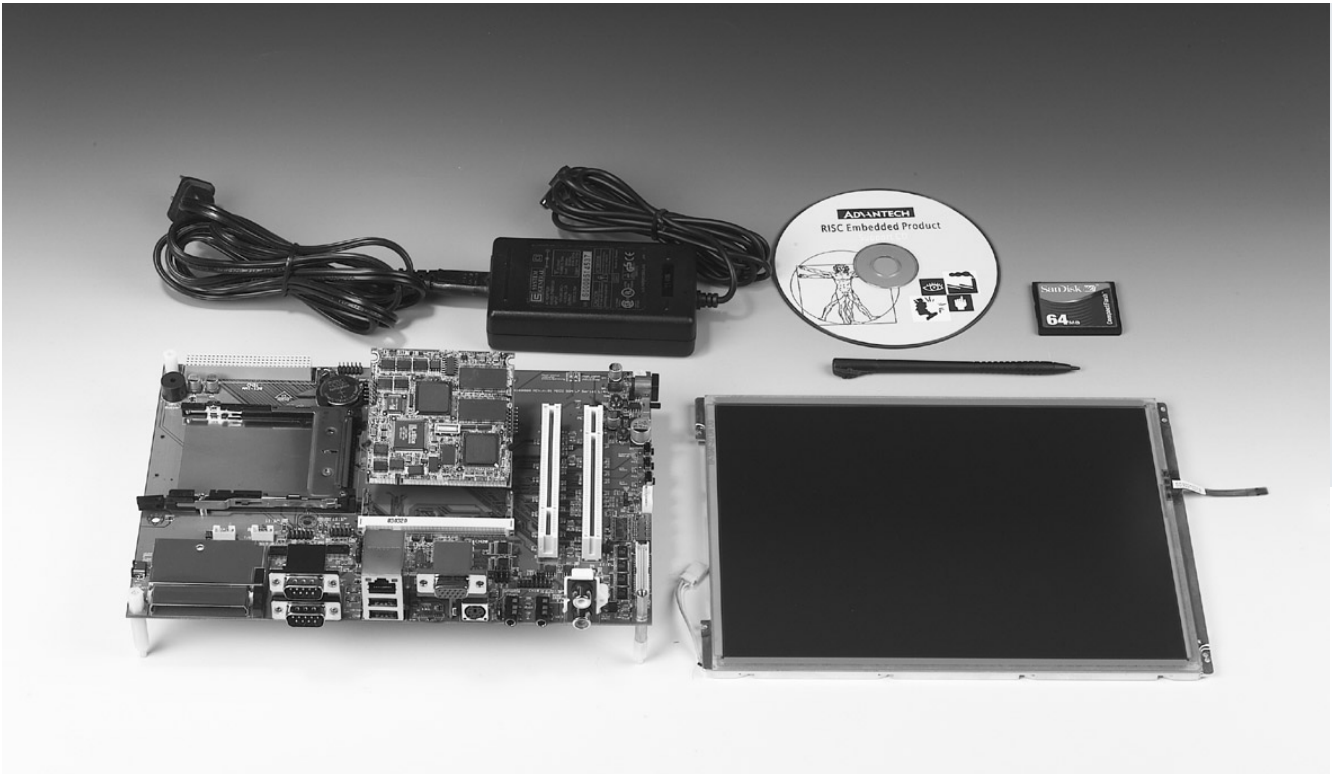


# SOM-ADK2558 Series Design-in Kit

Design-in Kit for SOM-A2558 Intel®  
XScale® PXA255 System On Module



## Introduction

The Design-in Kit package provides developers a complete reference design-in suit for application evaluation/ development and their own Customer Solution Board (CSB) development. It contains the needed information, documentation and tools for starting their hands-on work with the followings items:

- **Target SOM (SOM-A2558-440B0):** SOM-A2558 standard version board.
- **SOM-A2558 series Reference Customer Solution Board:** Sample CSB for developer reference.
- **64 MB CompactFlash card**
- **Design-in reference documentation:**
  - 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 customer CSB/mass production testing. It includes:

- H/W testing tools: RS232 loop-back testing tool, ADAM-4520 for RS485 testing, null MODEM cable, JTAG cable, USB ActiveSync cable, Audio cable, RS232 cable and RS485 cable.
- S/W testing utility: Advantech-developed testing utility. Testing process will be implemented by S/W testing utility and H/W testing tools.
- Support Document: "Advantech RISC SOM Platform Testing Method". Users can use these documents to know how to implement testing process.

- **Software Development Tools**

Software tools is the complete package for customer developed their target image to align with their target CSB and applications

- BSP: Binary Board Support Package of target SOM Design-in Kit. Users can integrate their target Windows CE platform in components & Apps & drivers
- SDK: For customer target application development
- Reference Image: Reference Image for the selected model of SOM design-in kit
- Upgrade Utility: Users can use this Upgrade utility to upgrade boot 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 and professional technique support in most efficient way. The home page is located at <http://risc-designin.advantech.com.tw>

\*\*SOM-ADK2558-B00 does not include the LCD kit; please order your LCD kit of your choice\*\*

# SOM-ADK2558 Series Design-in Kit

## LCD Kit: (OPTIONAL item)

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

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

The current available LCD kits include the following:

- 5.7" STN QVGA LCD kit(NAN-YA/ LCBFBTB61M23)
- 6.4" TFT VGA LCD kit(PRIMEVIEW/ PD064VT2)

## Specifications

- **PCB Form factor** 237 mm x 160 mm
- **SOM module P/N** SOM-A2558-440B0
- **Boot loader Storage** Pre-installed in SOM module
- **OS Image Storage** On CompactFlash Card(CFC)
- **PCI** 2 PCI slots (5 V, 3.3 V) which are compliant with PCI Spec. Rev. 2.2
- **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** 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 10/100Base-T LAN port w/ 2 LEDs
- **PCMCIA/CompactFlash** 1 Type II CFC slot and 1 Type II PCMCIA slot
- **USB Host** 2 x USB 1.1 host Connectors
- **USB Client** 1 x mini USB 1.1 Client Connectors
- **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 Connectors, 16-bit LCD interface, resolution up to 320 x 240
- **LCD LVDS** 20-pin Advantech standard LCD Connectors, supports 1-channel LVDS signals
- **T/S** 4-wire resistive touch screen housing
- **Audio interface** 8 x 2.00 mm Pin header: Line-in, Line-out, MIC-in and Speaker-out. mic-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** 12 V 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

## Packing List

- **SOM-A2558-440B0** SOM-A2558 standard version board.
- **SOM-A2558-440B0 carrier board** Carrier board for SOM-A2558-440B0
- **64 MB CompactFlash**
- **Testing Kit** Includes H/W testing tools, S/W testing utility and documentation.
- **AC power Adaptor** AC/DC power adaptor for Design-in Kit power supply.
- **SOM-A2558 series Support CD** Includes Software Development tools, SOM-A2558 specs, SOM-ADK2558 specs, SOM-A2558 manual, SOM-ADK2558 manual, Testing Kit application note & SOM-A2558 carrier board design guide.

## Ordering Information

### SOM-A2558 Design-in Package

- **Design-in Kit SOM-ADK2558-B00 (Must order item)** SOM-A2558 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** The kit includes 4-wire LCD-A064-TTV1-0 resistive T/S, inverter, cables and installation guide. Not recommended for systems under constant heavy loading
- **RISC Windows CE Builder RSW-ACEBW1-042 (Optional item)** RISC CE-Builder Windows CE .Net 4.2 version 1