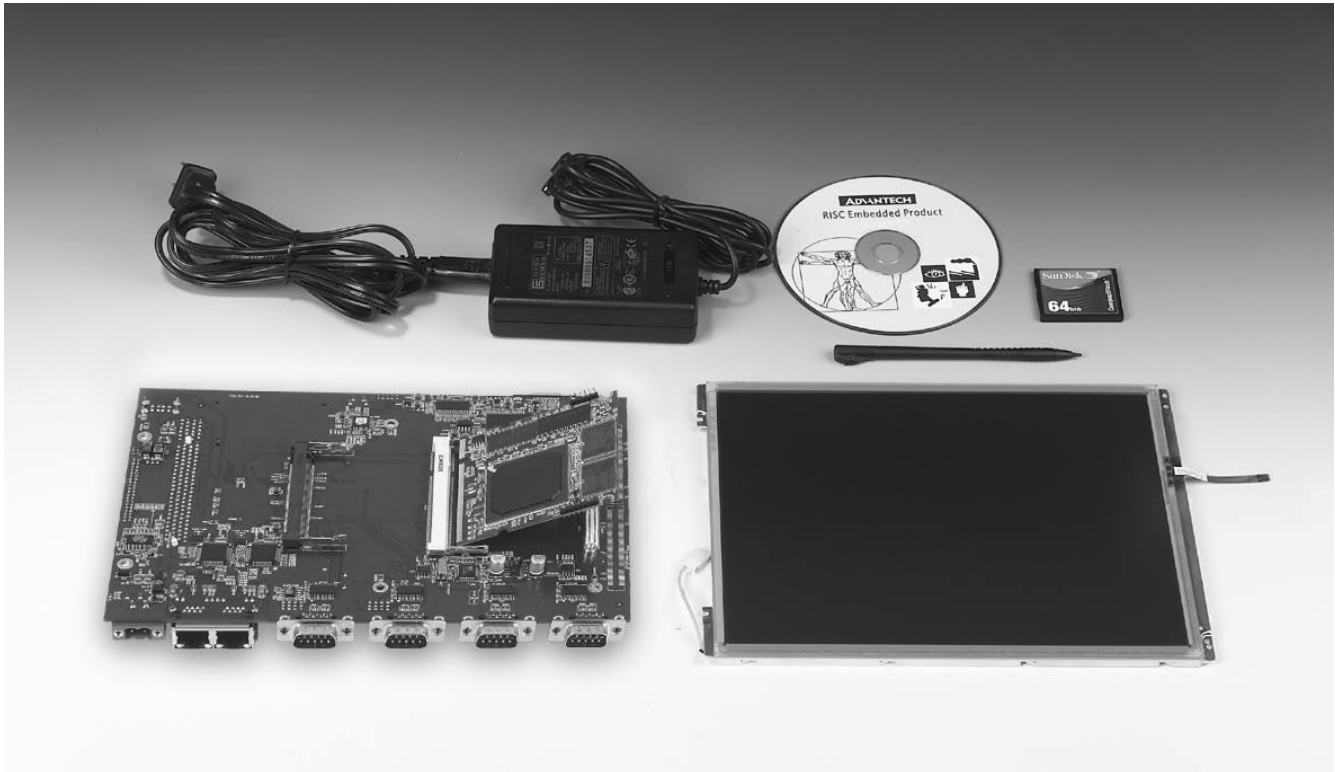


SOM-NDK4250 Series Design-in Kit

Design-in Kit for SOM-N4250 Intel
XScale® IXP-425 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 following items:

- **Target SOM (SOM- 545B0):** SOM-N4250 standard version board.
- **SOM-N4250 Series Reference Customer Solution Board:** Sample CSB for developer reference
- **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 tools are a complete package for customers to develop their target 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-NDK4250 Series Design-in Kit

SOM-NDK4250-B00 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 difference 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:

- 6.4" TFT VGA LCD kit (PRIMEVIEW/PD064VT2)
- 10.4" TFT SVGA LCD kit (AU)

Specifications

- **PCB Form Factor** 210 mm x 145 mm
- **SOM Module P/N** SOM-N4250-545B0
- **Boot Loader Storage** Pre-installed on SOM module
- **OS Image Storage** (boot from on board flash/CFC)
- **PCI** 1 PCI slot (PCI Rev. 2.2 compliant)
- **Mini PCI** 1 Mini PCI slot Watch Dog IXP425 Built-in
- **RTC** HT 1381
- **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)
2 x RS-232/485 DB-9 connectors (COM3, COM4)
- **Ethernet** 2 x 10/100 Base-T LAN port w/ LEDs
- **CompactFlash** 1 x Type II CFC slot
- **IDE** IDE I/F
- **USB Host** 2 x USB 2.0 host connector
- **LCD Interface** 40-pin Advantech standard LCD connector supports 18-bit LCD (TTL) 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
- **T/S** 5-wire resistive touch screen housing
- **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
- **System Reset Button** H/W reset button
- **OS Support** Windows CE .NET 4.2
- **Power Input** 19V_{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-N4250 Design-in Package

- **Design-in Kit SOM-NDK4250-B00 (Must order)** SOM-N4250 Series Design-in Kit. (** without Panel)
- **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 VGA 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-N4250-545B0** SOM-N4250 standard SOM
- **SOM-A200 Series Carrier Board** Carrier board for SOM-N4250-545B0
- **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-N4250 Series Support CD** Included Software Development tools, SOM-N4250 spec, SOM-NDK4250 spec, SOM-N4250 manual, SOM-NDK4250 manual, Testing Kit application note & SOM-N4250 carrier board design guide