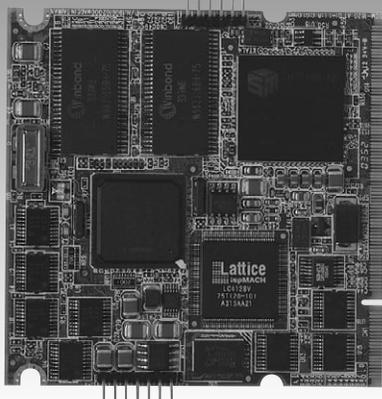


# SOM-A2552 Series System On Module

Intel XScale® PXA255, SMI SM501  
Graphic Chip with 8 MB Embedded SDRAM  
& Microsoft® Windows® CE .NET 4.2



CE FCC

## Features

- 68 mm x 68 mm x 6.8 mm compact size module with a variety of reconfiguration options for selection
- Ultra low power PXA255 CPU with additional high performance multimedia chip SM501 (with 8 MB embedded SDRAM) for increased mobility and connectivity demands
- OS-ready package for Windows CE .NET/Linux support (Windows CE .NET 4.2 BSP ready)
- Pre-defined I/O-ready bus via SOM-A200 pin interface offers easy integration and upgrade possibilities
- Boot option by onboard Flash or CFC, makes for easy maintenance and cost savings
- Design-in Kit Package available for complete design-in support

## Introduction

### Ultra Low Power, High Quality with Full Motion Video and Dual Monitor Display

Using a dual-chip design principle, SOM-A2552 Series system on module integrates both an Intel PXA255 Ultra low power CPU & SMI Multimedia graphic chip for highly mobile, battery operated devices. SM501's video engine enhanced platform offers high quality video scaling, color space conversion, 8-bit/16-bit ZV Port for video input and video capture. Flexible dual monitor display function is provided along with a wide video format.

### Design-in Package Ensures Fast, Low Risk Project Implementation

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 project request and a set of testing tools for custom target platform image building.

Four supporting mechanisms are included in design-in package:

- **Design-in Kit:** Provides developers with a complete design-in suite reference for application evaluation/development and Customer Solution Board (CSB) development
- **LCD Kit:** A full range of certified LCD kits in different sizes and types for custom fit target CSB and applications
- **Design-in Zone:** Assists Customers with their own CSB development by providing direct, professional support
- **Design-in Forum:** A series of worldwide SOM Design-in Forums/Seminars/Conferences through various types of activities/formats, giving developers an opportunity and channels to receive and share the most updated information

## Specifications

Func.	Model Name	SOM-A2552-440B0	Reconfiguration Option
CPU		Intel XScale PXA255 400 MHz	200/300/400 MHz
Graphic Chip		SMI SM501 with 8 MB embedded SDRAM	SM501 with /without 8MB embedded SDRAM
System Memory (SDRAM)		64 MB	32/64/128 MB
Booting Flash		1 MB NOR Flash	-
Onboard Flash (Image & Storage)		0 MB	0/16/32/64 MB
OS Image Storage		Windows CE .NET 4.2	Linux (By customer request)
AMI Bus (X1 Bus)		100-pin B2B connector with driving buffers	Yes
Feature Extension Bus (X3 Bus)		100-pin B2B connector (Provide ZV & SD/MMC I/F)	Yes
Watch Dog		PXA255 internal	-
RTC		External RTC w/backup power pin	Yes
System Backup Battery		RTC/SDRAM	-
Serial Port		3x Full RS-232 (TTL), 1 x 2-wire RS-232 (TTL), 1 x 3-wire RS-232 (TTL)	-
PCMCIA/Compact Flash I/F		2 PCMCIA/CF or 1 x PCMCIA, 1 x CF	-
USB Host		1 x USB 1.1 Host	-
USB Client		1 x USB Client	-
SD/MMC		1 x Ch (Support 1-bit Memory mode)	-
CRT-out		Up to 1024 x 768	-
ZV Port		Yes	-
LCD TTL Interface		SM501 24-bit LCD interface, resolution up to 1024 x 768	-
Touch Screen Interface		4-wire resistive	Yes
Audio Codec		AC'97 codec on board, support Microphone-in, Line-in, Line-out, Speaker-out	Yes

Buzzer control	Yes	-
SM Bus Interface	Yes	-
System Reset	H/W Reset, S/W Reset, Suspend/Wake Up I/F	-
Power Input	3.3 V/5 V	-
Operating Temperature	0-60° C	Optional -10 ~ 70° C & -20 ~ 80° C certification
Operating Humidity	0% ~ 90% relative humidity	-
Certification	FCC/CE	-
Form Factor	68 mm x 68 mm x 6.8 mm	-

Note: "Reconfiguration Option" column provides the user with many choices. "-" means no option. If standard product SOM-A2552-440B0's spec. do not fit user's requirements, user could contact with Advantech for SOM-A2552 reconfiguration.

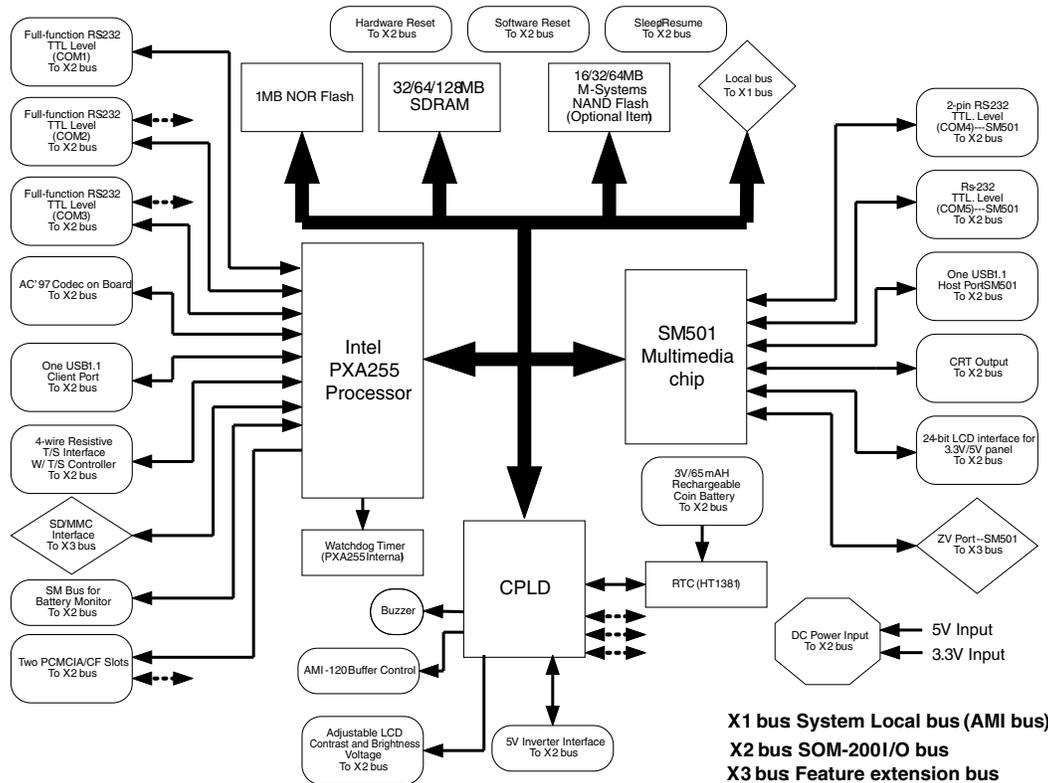
## Applications

SOM-A2552 platform offers high computing power, low power consumption and high graphic performance and is ideal for graphic-based smart platforms.

- Wireless broadband terminals: Wireless access to video/TV/DVD/PVR, wireless access to broadband connection, digital picture viewer, remote access to Internet/e-mail, remote control of AV functions
- Smart display devices: Kiosks, small DTV, thin client, high end mobile consumer devices, video conferencing
- Mobile, battery-powered device platforms with large display demand
- Vehicle computing/telemetric platforms for navigation/entertainment demands
- Multimedia terminal device platforms with large display
- Security surveillance platforms with digital or analog video input/output

# SOM-A2552 Series System On Module

## Board Diagram



## Ordering Information

### SOM-A2552 Design-in Package

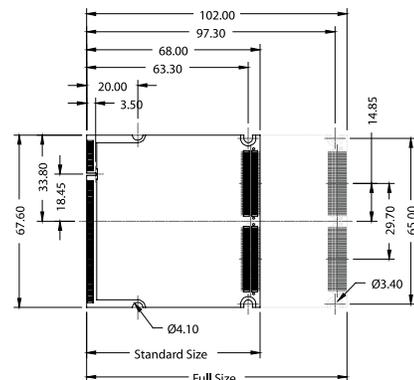
- **SOM-ADK2552-B00** SOM-A2552 Series Design-in kit. (\*\*without (Must order for design-in) panel bundle, please order suitable LCD kits)
- **LCD-A064-TTV1-0 (Optional item)** 6.4" TFT VGA LCD kit. The kit includes 4-wire resistive T/S, inverter, cables and installation guide
- **LCD-A104-TTS1-0 (Optional 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

### SOM-A2552 series SOM alone

- **SOM-A2552-440B0** PXA255-400 MHz, SMI SM501 (with embedded 8 MB SDRAM), 64 MB SDRAM, 1 MB Boot Flash, with X1 and X3 extension bus connectors on board (Minimum 20pcs/per order)
- **Order your own reconfigured SOM** Developers can check the reconfiguration option of the above specification table to order a customized SOM-A2552 Series product. If a customer has a reconfiguration request, please contact a local Advantech RBU or distributor

## Mechanical dimension

Unit: mm



## Packing List

- Bulk packing with 20 pcs in one box
- SOM only comes with the bootloader pre-install

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

\*\*SOM does not include Microsoft Windows CE .Net License.