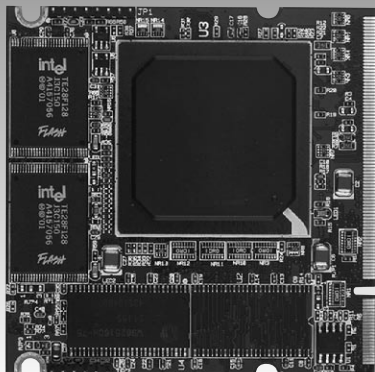


SOM-N4250 series System On Module

Network-efficient Intel® IXP425 SoC &
Microsoft® Windows® CE .NET

NEW



CE FCC

Features

- 68 mm x 68 mm x 6.8 mm compact size module with a variety of reconfiguration options
- Up to 533 MHz IXP-425 with additional high performance multimedia chip SM501 (reference design in carrier board) & ACARD ATP865 IDE-Bridge IC (reference design in carrier board) provides high-performance, efficient network ability, I/O advantage
- OS-ready package for Windows® CE .NET/ Linux support (Windows CE .NET 4.2 BSP ready)
- Reconfiguration option for SoC model (IXP-42x series), SDRAM size (up to 256 MB) and flash size (up to 64 MB)
- Design-in Kit package is available for complete design-in support

Introduction

Platform Enhanced Features

- Reconfiguration option for SoC model (IXP-420/1/2/5 with 266/400/533 MHz), SDRAM size (16/32/64/128/256 MB) and flash size (16/32/64 MB)
- Windows CE .NET4.2 BSP ready. Embedded Linux is supported by project based
- Supported by optional RISC CE-Builder for user own image development

Design-in Package Ensures Fast, Risk-Free 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.

- Design-in Kit:** Provides developers with a complete design-in suite reference for application evaluation/development and Customer Solution Board (CSB) development. Advantech carrier board reference design provides rich and well-verified display, storage & I/O Ips, such as COMs/ Touch Screen/ USB 2.0/ PCI/ LCD/ IDE
- 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 users 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

Spec.	Model Name	SOM-N4250-545E0	SOM-N4200-220N0	Reconfiguration Optional Item
CPU		IXP425 533 MHz	IXP420 266 MHz	IXP420 266/400/533 MHz IXP421 266 MHz IXP422 266 MHz IXP425 266/400/533 MHz
System Memory (SDRAM)		64 MB	16 MB	16/32/64/128/256 MB
Boot Flash (1)		1 MB	1 MB	-
Memory Flash (Image & Storage)		32 MB (boot from CFC)	0 MB (boot from CFC)	0/16/32/64 MB
Watch Dog		IXP425 Built-in	IXP425 Built-in	-
RTC		HT1381	HT1381	Yes
System Reset I/F		H/W Reset	H/W Reset	-
System Backup Battery		RTC	RTC	-
OS Support (1)		Window CE .NET 4.2 professional plus version (boot from on-board flash or CFC)	Window CE .NET 4.2 professional plus version (boot from CFC)	(1) Windows CE .NET 4.2 core/ professional/ professional plus version (2) Windows CE .NET 5.0 (project base) (3) Embedded Linux 2.4.x (project based)
AMI Bus Conn. (2)		IXP42x SoC system local bus I/F thru X3 conn.	N/A	Yes (UTOPIA & System bus are thru X3 conn. to carrier board)
Feature Extension Bus Conn.		Standard PCI V2.2 I/F. Support 4 external PCI devices.	Standard PCI V2.2 I/F. Support 4 external PCI devices.	-
I2C		Yes	Yes	-
Serial Port		2x 4-wires RS-232 (TTL)	2x 4-wires RS-232 (TTL)	-

Ethernet I/F	2 x 10/100 Base-T Ethernet MAC onboard.	2 x 10/100 Base-T Ethernet MAC onboard.	-
High Speed Serial I/F	2 x High Speed Serial I/F for VOIP. H/W circuit design-in	2 x High Speed Serial I/F for VOIP. H/W circuit design-in	-
UTOPIA I/F (2)	UTOPIA Interface For ADSL Modem thru X3 conn. (H/W Design reserve)	N.A.	Yes (UTOPIA & System bus are thru X3 conn. to carrier board)
Power Consumption	SOM standalone operation mode 2 W (3.3 V, 0.6 A)	SOM standalone operation mode 2 W (3.3 V, 0.6 A)	-
Power Input	3.3 V (+/-5%)	3.3 V (+/-5%)	-
Operating Temperature	0-60° C	0-60° C	Advantech Phoenix product (1) silver level : -10- 70° C (2) golden level : -20-80° C (3) platinum level : -40-85° C
Operating Humidity	0-90% relative humidity	0-90% relative humidity	Based on user request
Certification	FCC/CE	FCC/CE	Based on user request
PCB Form Factor	68mm x 68mm x 6.8mm	68mm x 68mm x 6.8mm	-

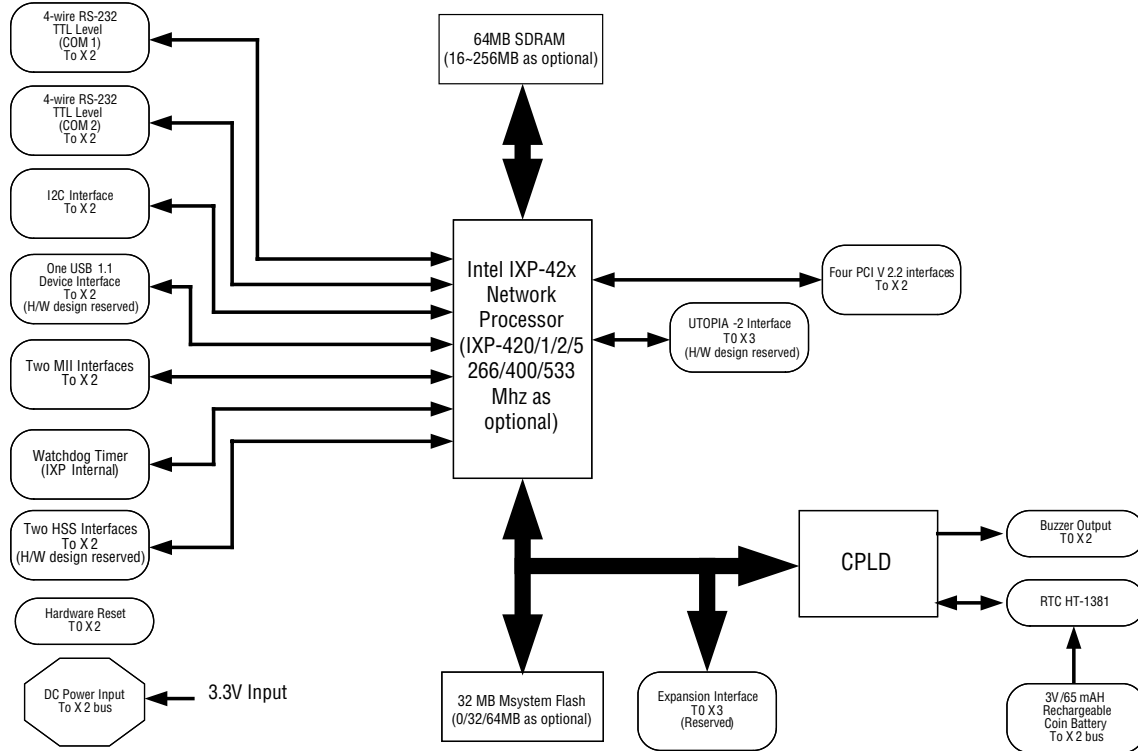
Ps. "Reconfiguration Option" column provides the user with many choices. "-" means no option. If standard product specification or cost do not fit user's requirement, user could contact with Advantech for SOM-N4250 reconfiguration.

(1) User could download the latest Advantech reference boot loader and image from Design-in Zone ([http:// design-in.advantech.com.tw](http://design-in.advantech.com.tw)).

(2) UTOPIA & high speed serial port I/Fs come directly from Intel IXP-42x series SoC. The two I/Fs are only H/W circuit design reserved.

SOM-N42x0 Series System On Module

Board Diagram



Ordering Information

Important: User is required to purchase SOM Design-in Package first for any Design-in Technical Support.

SOM-N42x0 Design-in Package

- **SOM-NDK4250-B00 (essential item for design in)**
SOM-N42x0 series design-in references kit. (**without panel bundle, user should order suitable LCD kits if needed)
- **LCD-A064-TTV1-0 (Optional item)**
6.4" TFT VGA LCD kit includes 4-wires resistive T/S, inverter and cables
- **LCD-A104-TTS1-0 (Optional item)**
10.4" TFT SVGA LCD kit includes 4-wires resistive T/S, inverter and cables
- **LCD-A150-TTX2-0 (Optional item)**
15" TFT XGA LCD kit includes 4-wires resistive T/S, inverter and cables

SOM-N42x0 series (Minimum order 10pcs/per order)

- **SOM-N4250-545E0 (rich version)**
IXP425-533MHz, 64MB SDRAM, 32MB image Flash, 1 MB boot Flash, X3 bus connectors on board. Supported by Advantech SOM-N42x0 design-in package.
- **SOM-N4200-220N0 (compact version)**
IXP420-266MHz, 16MB SDRAM, 0MB image Flash, 1 MB boot Flash, no extension bus connector on board. Supported by Advantech SOM-N42x0 design-in package.
- **Order your own reconfiguration SOM**
Users can check the reconfiguration options of the above specification table to order SOM-N42x0 series product. If the customer has a reconfiguration request, please contact your local Advantech sales or distributor