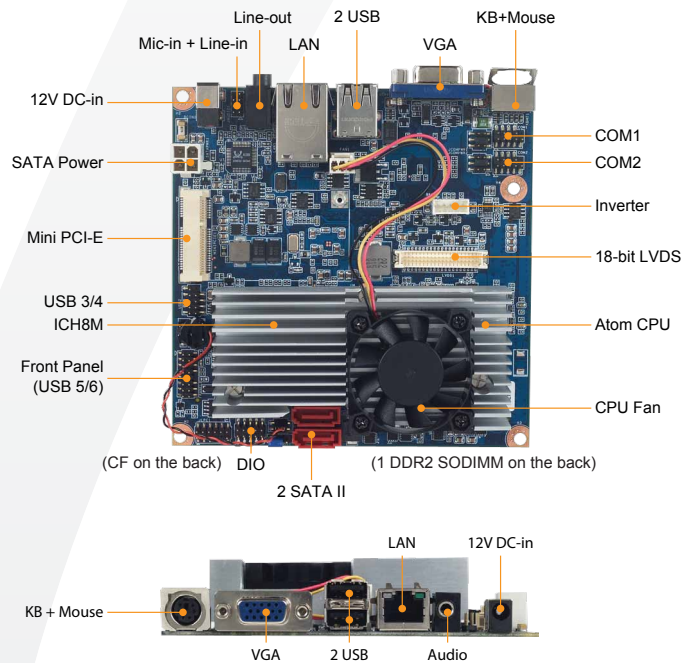


# NXLNP

## Intel® Atom™ N450/ D410/ D510 Nano-ITX Motherboard



### Features

- Two chipset architecture
- Supports N450 (SC), D410 (SC), D510 (DC)
- Low TDP N450 (7.9W), D410 (13W), D510 (17W)
- Integrated Graphics Controller
- L2 Cache 1024Kb (D510) / 512Kb (N450, D410)
- 45nm technology
- 12V DC-in Power Solution

Intel Atom

Dual Display

18-bit LVDS

Mini PCI-E

Powered COM

TPM (optional)

12V DC-in

GbE LAN

## Specifications

### System

<b>CPU</b>	Onboard Intel® Atom™ N450 SC/ D410 SC/ D510 DC 1.6GHz Processor
<b>FSB</b>	DMI (2.5Gbps) x 4 Lanes
<b>BIOS</b>	AMI/Legacy 16Mb SPI BIOS
<b>System Chipset</b>	Intel® ICH8M
<b>I/O Chip</b>	Winbond W83627DHG-A
<b>System Memory</b>	One 200-pin SODIMM socket supports up to 2GB DDR2 800MHz(D510)/ 667MHz(D410/N450) SDRAM
<b>Watchdog Timer</b>	Reset: 1 to 255 sec/min per step
<b>H/W Status Monitor</b>	Monitoring CPU temperature, voltage, and cooling fan status. Auto throttling control when CPU overheats
<b>Expansion</b>	1 Mini PCI-E, 1 CF
<b>Power State</b>	S1, S3, S4, S5
<b>TPM</b>	Onboard TPM 1.2 by Infineon SLB9635 (optional)
<b>Wake up on LAN or Ring</b>	LAN (PXE), Ring (COM 1/2)
<b>SmartFan Control</b>	Supports 3 modes (Silent/Optimal/Performance)

### I/O

<b>MIO</b>	2 SATA II, 2 COM RS-232, 1 PS/2 Keyboard, 1 PS/2 Mouse
<b>USB</b>	6 USB 2.0
<b>GPIO</b>	8-bit General Purpose I/O for 4-bit DI and 4-bit DO

### Display

<b>Chipset</b>	Integrated Intel® Gen3.5+GFX Render Core 200MHz (N450/D410)/400MHz (D510)
<b>Display Memory</b>	Shared Memory Max 224MB
<b>Max. Resolution</b>	LVDS : Max 1280 x 800 or 1366 x 768 VGA : Max 2048 x 1536 @ 60Hz
<b>Dual Display</b>	LVDS + VGA
<b>VGA</b>	On board
<b>LVDS</b>	18-bit Single Channel LVDS
<b>LVDS Backlight</b>	5V and 12V

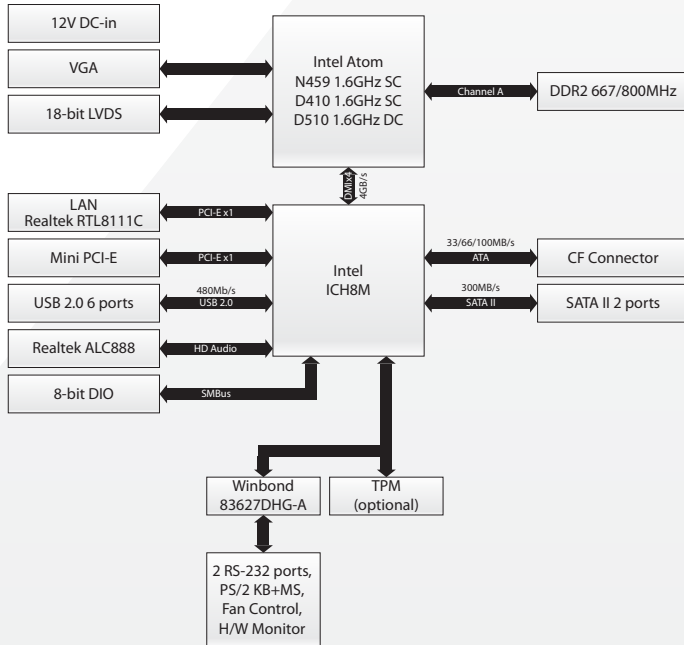
### Audio

<b>Audio Codec</b>	Realtek ALC888, 5.1 + 2 CH HD Audio
<b>Audio Interface</b>	Line-in, Line-out, Mic-in

### Ethernet

<b>LAN</b>	Realtek RTL8111C Gigabit LAN
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# Block Diagram



## Ordering Information

### NXLNLP

- 90N-LNP000-M1000B2
- NXLNLP-N450 Nano-ITX Motherboard
- 90N-LNP000-M1001B2
- NXLNLP-D410 Nano-ITX Motherboard
- 90N-LNP000-M1002B2
- NXLNLP-D510 Nano-ITX Motherboard

## Product Offering

until 2017

## Packing List

COM Cable w/o Bracket	x2
SATA Data Cable	x2
SATA Power Cable	x1
PS/2 KB+MS Y-Cable	x1
Driver CD	x1
Startup Manual	x1

## Optional Accessory

14GS1400020V04	8-pin to Two 3.5mm Phone Jack
14GS0000063V04	USB Cable w/o Bracket
14GS0100009V04	COM Cable w/ Bracket

## Back Panel I/O Port

- 1 PS/2 Keyboard+Mouse
- 1 VGA Port
- 1 LAN RJ45 Port
- 2 USB 2.0 Ports
- 1 Line-out
- 1 12V DC-in

## Internal I/O Connector

- 2 COM RS-232 Ports w/ Power
- 1 CPU Fan Connector
- 1 Front Panel Header supports 2 USB Ports
- 1 USB Connector supports 2 USB Ports
- 1 18-bit LVDS Connector
- 1 LVDS Invertor Connector
- 2 SATA II Connectors
- 1 CF Socket (on the back)
- 1 Digital I/O Header
- 1 Mic-in & Line-in Header
- 1 Mini PCI-E

## Mechanical & Environmental

<b>Power Requirement</b>	+12V 3A
<b>Power Type</b>	12V DC-in
<b>Power Connector</b>	12V CPU Fan Connector
<b>Operating Temperature</b>	0 to 60°C (32 to 140°F)
<b>Operating Humidity</b>	0% to 90% relative humidity, non-condensing
<b>Size (L x W)</b>	4.72" x 4.72" (120 mm x 120 mm)
<b>Weight</b>	0.31 lbs (0.13Kg)/ 0.5 lbs (0.24Kg) with Fan

\*\* The product information and specifications are subject to change without prior notice.  
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