

## Key benefits

- Ultimate desktop-class pc processing power
- Low power consumption (10-40W)
- Extremely low noise
- Compact form factor (170x170mm) Mini-ITX
- Unlimited expandability
- Part extended lifetime guaranteed
- High reliability

## Key features

- Full compatibility with Intel Core™ Processor family
- Extended connectivity providing multiple USB 2.0 High Speed ports, dual gigabit class networking
- Wireless networking with Access Point capability
- Dual RS232 serial interfaces
- Industrial standard RS485 serial interface
- LVDS LCD digital interface
- Bootable Compact Flash support
- Full RoHS compliance
- Biomedical compliance

## Key applications

- Biomedical instruments
- Computational vision and image processing
- Realtime control of industrial processes
- Ethernet/Wireless bridging devices
- High speed telecommunication nodes



# Nihal • Mini-ITX Intel® Core™ Duo Platform

State of the art processing power for embedded and industrial applications requiring high computational load and a wide range of connectivity.



## Nihal

<b>Processor</b>	Intel® Core™ Duo/Core™ 2 Duo/Core™ Solo up to 2.33GHz mPGA478 and mBGA479
<b>Chipset</b>	Intel® 945GME and Intel® ICH7R Embedded Chipset Front Side Bus 533 / 667 MHz
<b>Bus</b>	1x PCI connector, 1x mini PCI, 1x PCI Express 1X, 1x PCI Express 16X
<b>DRAM</b>	2x DDR2 socket (200pins SODIMM) up to 3GByte
<b>Serial Ports</b>	2x RS232C serial ports with FIFO (internal) 1x RS485 half duplex (internal) 1x IRDA connector (internal)
<b>USB</b>	6x USB 2.0 (2x internal and 4x external)
<b>Ethernet</b>	2x 10/100/1000 Mbps Ethernet Controller
<b>Wireless</b>	1x 54 Mbps, 802.11 b/g, radio using Atheros chipset Access point functions and WPA supported
<b>Video</b>	1x VGA (external), 1x LVDS, 1x S-Video TV Out (internal)
<b>Mass Storage</b>	2x Serial ATA150/300, 1x ATA100 (2.54 mm connector) 1x Compact Flash (internal, bootable)
<b>Audio</b>	1x Amplified Stereo audio out (2W) Line-in, Line-out and Mic-in (external)
<b>Hardware Monitoring</b>	1x RTC, 1x WatchDog Timer, On board lithium battery
<b>GPIO</b>	8x channel GPIO, Linux driver
<b>Power Supply</b>	ATX Power Connector, Supports S0, S3, S4, S5 power states
<b>Mouse and Keyboard</b>	Standard PS/2 mouse and keyboard (internal)
<b>Physical Features</b>	Fanless heatsink 0 to +60°C operational temperature range -10 to +85°C storage temperature range RoHS and Lead-free production mini-ITX, 170 mm x 170 mm (6.7" x 6.7")
<b>OS Support</b>	Nihal supports all major x86 operating systems (DOS, Microsoft Windows including Vista, Linux and its major distributions such as Ubuntu, Fedora, Debian, OpenSUSE, Gentoo and derivatives)

<b>Configuration Table</b>	<b>Model</b>	<b>CPU</b>	<b>Clock (MHz)</b>	<b>RAM (GB)</b>	<b>Fanless</b>	<b>Power (Watt)</b>
	<b>Nihal-HP</b> High Performance	Core 2 Duo	2,16	2	no	40
	<b>Nihal-STD20</b> High Performance / Low Power	Core 2 Duo	1,5	1	yes	20
	<b>Nihal-STD40</b> Standard	Core Duo	2	1	no	40
	<b>Nihal-LP</b> Low Power	Celeron M	1,06	1	yes	10
	<b>Nihal-LC</b> Low Cost	Celeron M	1,86	1	no	40
	<b>Nihal-MB</b> Motherboard Only	n/a	n/a	n/a	n/a	n/a

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