

# NOVA-8890

5.25" Embedded Socket-478 CPU Board with  
LCD/CRT VGA, LAN, GbE, USB 2.0, 1394 & Serial ATA

## Supports Hyper-Threading Technology

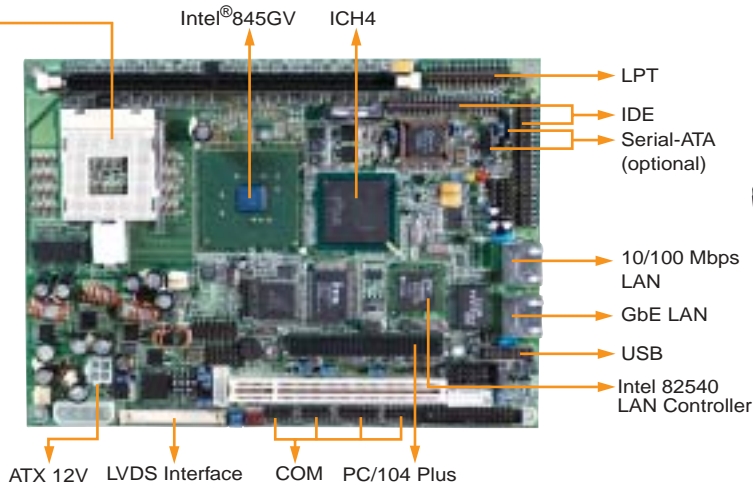
Supports Intel Pentium 4/ Celeron up to 533 MHz FSB



**CF-513**  
Copper base high performance cooling fan (Ordered separately)



**CF-512**  
High performance cooling fan (Ordered separately)



Equipped with two serial-ATA cables sets for NOVA-8890S series



## Serial- ATA

The Serial ATA specification is designed to overcome these design limitations while enabling the storage interface to scale with the growing media rate demands of PC platforms. Serial ATA is to replace parallel ATA with the compatibility with existing operating systems and drivers, adding performance headroom for years to come. It reduces voltage and pin count requirements and can be implemented with thin and easy to route cables. Moreover, Serial ATA provides you an even faster transfer rate of 150 Mbytes/second. The speed will be doubled in the next generation of Serial ATA interface.

	Parallel ATA	Serial ATA
<b>Bandwidth</b>	100/133 MB/Secs	150/300/600 MB/Secs
<b>Volts</b>	5V	250mV
<b>Pins</b>	40	7
<b>Length Limitation</b>	18 inch (45.72cm)	1 meter (100cm)
<b>Cable</b>	Wide	Thin
<b>Ventilation</b>	Bad	Good
<b>Peer-to-Peer</b>	No	Yes

### Benefits of Serial ATA

Serial ATA offers a number of benefits over Parallel ATA, including:

- Reductions in voltage and pin count
- Smaller, easier-to-route cables; elimination of the cable-length limitation
- Improved data robustness
- Backward compatible

## SPECIFICATIONS



- CPU:** Socket-478 base support Intel® Pentium® 4/ Celeron™ up to 533 MHz FSB
- System Chipset:** Intel 845G/ GV + ICH4 (support Hyper-Threading Technology)
- System Memory:** One PC1600/ PC 2100 (200/ 266MHz) DDR SDRAM maximum up to 1GB
- Display:**
  - VGA chip: Integrated in 845G/ GV chipset
  - LCD controller: NS DS90C2501 supports up to 1400x1050 resolution, 24/48-bit TFT LCD
  - V-RAM: shared with system memory (DVM technology)
  - CRT Resolution: Supports up to 2048x1536 36-bit color display
  - Connector: DF14-30F for 48-bit Dual channel LVDS, DB-15 for CRT display
- Ethernet:** 1x10/100 Mbps Ethernet onboard i82562ET (NOVA-8890, NOVA-8890SF) 1x10/100 Mbps Ethernet onboard i82562ET and 1 x Gigabit Ethernet onboard i82540 (NOVA-8890SFG)
- SSD:** One Compact Flash Type II socket
- IEEE-1394:** 2 x IEEE-1394a 400Mbps by pin-header (TI TSB43AB22)
- I/O:**
  - 3 x RS-232
  - 1 x RS-232/422/485 selectable port with Auto-Direction function
  - 4 x USB 2.0
  - 1 x LPT
  - 1 x FDD channel support 1.44/ 2.88MB and 3-mode
  - 2 x ATA-100 IDE channel (1 x 40-pin, 1 x 44-pin)
  - 2 x Serial-ATA parallel to serial (optional)
- Audio:** AC' 97 Codec
- Digital I/O:** TTL Level, 4 inputs and 4 outputs
- WDT:** Software programmable support 1~255 second system reset
- Expansion slot:** 1 x PCI slot, 1 x PC104+ (Only PCI)
- Hardware monitoring:** Provides CPU Vcore, Vcc, CPU/ System fan speed and temperature detecting function.
- Power Supply Input:** 4-pin power housing (5.25" Drive Connector)
- Power Consumption:** +5V@ 4.2A ; +12V@4.85A (P4 2.4 Ghz/512K cache)
- Operating Temperature:** 0~60°C
- Relative Humidity:** 5~95%, non-condensing

## ORDERING INFORMATION

- NOVA-8890**  
5.25" Embedded Socket-478 CPU Board with LCD/CRT VGA, LAN, USB2.0
- NOVA-8890SF**  
5.25" Embedded Socket-478 CPU Board with LCD/CRT VGA, LAN, USB2.0, 1394 and Serial ATA
- NOVA-8890SFG**  
5.25" Embedded Socket-478 CPU Board with LCD/CRT VGA, LAN, GbE, USB2.0, 1394 and Serial ATA
- CF-512**  
CPU cooling fan Supports P4 CPU up to 2.5GHz
- CF-513**  
CPU cooling fan Supports P4 CPU up to 3.06GHz