# **NOVA-8890**

#### LCD/CRT VGA.LAN.GbE.USB2.0.1394 & Serial ATA

I PT

IDF Serial-ATA (optional)

LAN

USB

10/100 Mbps

GbE LAN

Intel 82540 LAN Controller

Supports Hyper-Threading Technology

ICH4

COM PC/104 Plus

Intel<sup>®</sup>845GV



Equipped with two serial-ATA cables sets

for NOVA-8890S series

Ethernet



CF-513 Copper base high performane cooling fan (Ordered seperately)

Supports Celeron up to

533 MHz ESB

CF-512 High performance cooling fan (Ordered seperately)

### 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
Bandwidth	100/133 MB/Secs	150/300/ 600 MB/Secs
Volts	5V	250mV
Pins	40	7
Length Limitation	18 inch (45.72cm)	1 meter (100cm)
Cable	Wide	Thin
Ventilation	Bad	Good
Peer-to-Peer	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 Serial ATTA (IEEE-1394) USB 2.0

- CPU: Socket-478 base support Intel<sup>®</sup> Pentium<sup>®</sup> 4/ Celeron<sup>™</sup> 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 (DVMT 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

ATX 12V LVDS Interface

- 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