**Introduction**

Advantech’s new SOM-4450 is a new SOM-ETX form factor with an on-board, embedded 586-class NS GX1-300 processor. Other on-board features include VGA/LCD, Audio, a Compact Flash Card socket, and 10/100Base-T Ethernet. This board is a feature-packed, 586-level, hassle-free solution for space critical applications.

*Worry-free, fanless 586-level MMX SBC is Here*

With this board, system engineers will now be able to upgrade their 486-based systems to 586-level without as many additional worries, partially because a 586-level NS GX1-300 processor is mounted directly on board. Mounting CPUs directly on board eases the configuration and installation process because there is no need to set any jumpers for speed or voltage differences between various CPUs. In addition to this ease of configuration, this CPU has been specially designed to work well in environments with temperatures of up to 60° C without need of a fan. Eliminating the CPU fan from a system significantly reduces MTBF worries.

**Features**

- **Compact size**: SOM-ETX form factor, 95x114mm(3.7”x4.5”)
- On-board NS Geode GX1 CPU
- On-board 10/100 Base-T Ethernet
- On-board Audio interface
- On-board VGA/LCD display controller and 18-bit LVDS interface
- Compact Flash Card support
- Single +5 V power supply
Specifications

Standard SBC functions
- CPU: Embedded NS GX1-300 processor
- BIOS: AWARD 256 KB Flash memory
- Chipset: Cyrix CX5530(A)
- System Memory: One 144-pin SO-DIMM socket. Accepts up to 256 MB SDRAM
- Enhanced IDE HDD interface: Two channels supports up to four Enhanced IDE devices. Features BIOS auto-detect and Mode 3, 4 transfer, Ultra DMA 33 mode up to 33 MB/sec
- FDD interface: Supports up to 2 FDDs
- Parallel port: One parallel port supports SPP/EPP/ECP parallel modes
- Serial ports: Two serial RS-232 ports
- Watchdog timer: 62 level timer intervals
- USB interface: Two USB connectors, USB 1.0 compliant
- Infrared port: Transfer rates up to 115 Kbps
- Power management: APM 1.1 compliant power management

VGA/LCD Interface
- Chipset: NS CX5530(A)
- Display memory: 1 ~ 4 MB shared with system memory
- Display type: Simultaneously supports for CRT and 18-bit TFT LCD display
- Resolution:
  - Non-interlaced CRT monitor resolution up to 1024 x 768 @ 16 bpp, or 1280 x 1024 @ 8 bpp
  - Panel resolutions up to 1024 x 768 @ 18bpp TFT panel

Solid State Disk
- Supports one 50-pin socket for Compact Flash card

LVDS Interface
- Chipset: TI SN75LVDS84
- Transmitting distance: Over 5 meters
- Performance: 18 low-voltage TTL data channels plus clock-in and 3 low-voltage data channels plus clock-out

Ethernet Interface
- Chipset: Realtek RTL 8139, Intel 82559/ER (optional)
- Ethernet interface: IEEE 802.3µ 100BASE-T Fast Ethernet compatible

Audio Interface
- Chipset: NS 5530(A)
- Audio controller: AC97 ver. 2.0 compliant

Mechanical and environmental
- Dimensions: 145 mm x 102 mm
- Weight: 0.22 kg (0.48 lbs)
- Power supply voltage: +5 V (4.75 ~ 5.25 V)
- Power requirements:
  - Maximum: 4 A @ +5 V
  - Typical: 1.5 A @ +5 V
- Dimensions: (L x W): SOM-ETX form factor, 95X114mm(3.7"X4.5")
- Operating temperature: 0 ~ 60° C (32 ~ 140° F)
- Operating humidity: 0% ~ 90% Relative humidity noncondensing

Ordering Information
- SOM-4450F-G0A1
  Geode SOM-ETX CPU module w/GX1-300 CPU, VGA/LCD, Ethernet, Audio and TV-out
- SOM-4450FL-G0A1
  Geode SOM-ETX CPU module w/GX1-300 CPU, VGA/LVDS, Ethernet, Audio and TV-out
- SOM-DB4400
  Development Board for SOM-ETX
- SOM-DK4450F-C01
  Windows CE 3.0 Development Kit for SOM-4450F

Note: All features & specifications subject to change without notice.
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