

AURORA



PC/104 SBC with Atom Z530 CPU and flexible expansion



- ◆ Compact, low-power, high-performance, stackable SBC
- ◆ Intel Atom Z530 CPU at 1.6GHz
- ◆ Up to 2GB SO-DIMM DDR2 SDRAM
- ◆ Comprehensive set of I/O interfaces:
 - 4 USB 2.0 ports
 - 2 RS-232/422/485 and 2 RS-232 serial ports
 - Gigabit Ethernet
 - 1 SATA port
 - Socket for USB flashdisk up to 8GB
 - LVDS and SDVO display interfaces
 - PS/2 keyboard and mouse support
 - 8 digital I/O lines
 - Watchdog timer
- ◆ Optional on-board USB flashdisk
- ◆ PC/104-sized "SUMIT-ISM" form-factor
- ◆ PC/104 (ISA) and SUMIT-A (PCIe) stackable expansion
- ◆ -20°C to +71°C (-2°F to +150°F) operating temperature

Highly Integrated SBC

Aurora is a high performance, highly integrated single board computer in the PC/104 form-factor incorporating a wealth of standard PC-style I/O plus on-board digital I/O. It accepts both SUMIT and PC/104 add-on I/O modules.

High Performance, Low Power Advantage

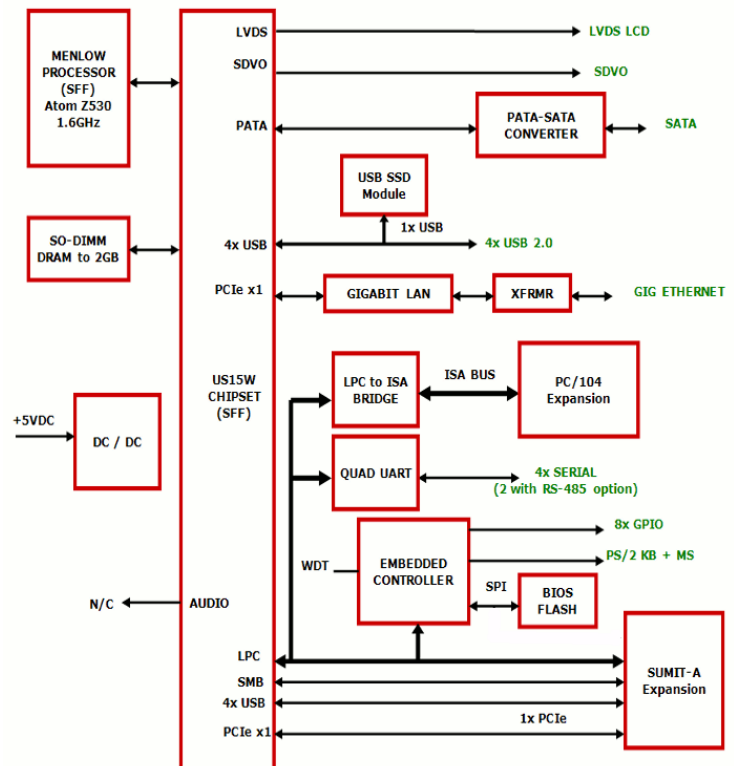
The SBC's Intel Atom Z530 CPU offers an excellent balance of performance, power consumption, and cost, making Aurora an ideal choice for a wide variety of high-performance embedded computing applications.

Optimized for Real World Applications

Aurora was designed to meet the needs of real-world applications. The SBC integrates an optimal selection of features for its size, power, and cost budgets, yielding maximum functionality and performance within a compact board. Latest generation connectivity such as SATA, Gigabit Ethernet, and PCI Express ensures long lifetime and top performance. PC/104 expansion maintains compatibility with legacy applications, while SUMIT expandability provides a migration path to current and future high-speed I/O.

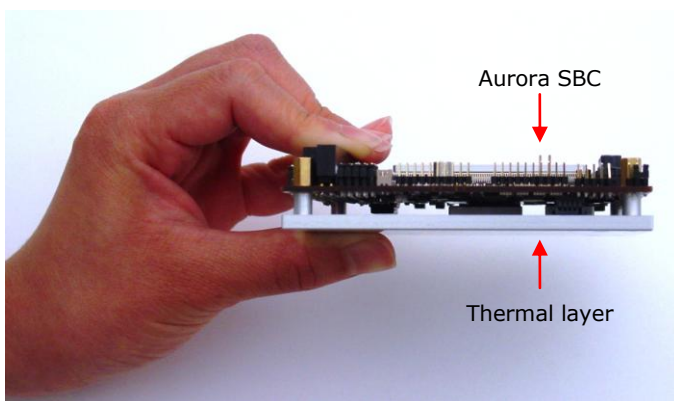
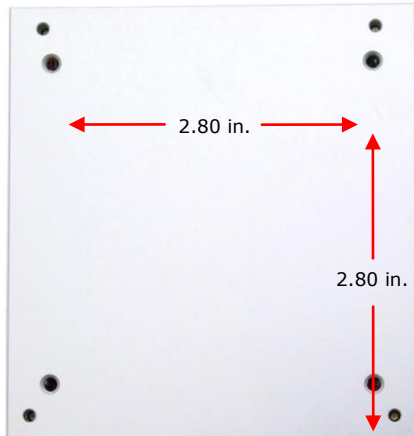
Intelligent Thermal Solution

Old-style, top-mounted heat sinks are being abandoned in favor of more effective new-generation techniques. The heat-generating CPU and chipset are located on the bottom side of the SBC, and an integrated bottom-mounted heatspreader dissipates heat efficiently to the system enclosure. This configuration leaves the SBC's top side free for easy access to memory, on-board I/O, and expansion sockets.



Specifications

| | |
|-----------------------------|--|
| Processor | Intel Atom Z530P at 1.6GHz |
| Cooling | Heatspreader, fanless |
| Memory | Up to 2GB SO-DIMM DDR2 DRAM |
| Display options | LVDS flat panel interface SDVO (optional VGA adapter) |
| LVDS backlight power | +5V or +12V jumper selectable |
| USB ports | 4 USB 2.0 |
| Serial ports | 2 RS-232/422/485, 2 RS-232 |
| Networking | 1 Gigabit Ethernet |
| Mass storage | 1 SATA port Support for USB flashdisk |
| Keyboard/Mouse | PS/2, with BIOS support for USB |
| Digital I/O | 8 digital I/O |
| Watchdog Timer | Yes |
| PCI Express | 1 PCIe x1 lane to SUMIT-A bus |
| Expansion buses | SUMIT-A stackable PC/104 (ISA) stackable |
| Input power | 5V ±5% |
| Power consumption | 5.4W |
| Operating temp. | -20°C to +71°C (-2°F to +150°F) |
| Dimensions | 3.55" x 3.775" x 0.9" (90mm x 96mm x 23mm) |
| Weight | 7.5oz / 212g |
| RoHS | Compliant |



Key Features

Aurora is a rugged, single board computer (SBC) based on the 1.6GHz Intel Atom Z530P CPU and conforming to the compact, PC/104-sized, SUMIT-ISM form-factor.

The SBC supports up to 2GB of DDR2 SO-DIMM SDRAM and provides high-resolution LVDS and SDVO graphics interfaces. Additional I/O ports include SATA, USB, serial, digital I/O, and Gigabit Ethernet. Flexible system expansion is based on industry-standard, stackable PC/104 (ISA) and SUMIT-A (PCIe) modules. A location is also provided for an optional on-board USB flashdisk.

Aurora's power-efficient design leverages Intel's ultra-low-power (Menlow) silicon platform, consisting of the Atom Z5xx (Silverthorne) processors and US15W chipset (Poulsbo). These ICs are positioned on the bottom of the board, resulting in easy and efficient heat removal via a heatspreader for wide-temperature, fanless operation.

Software Support

Aurora is compatible with Linux, Windows XP, Windows Embedded Standard, Windows Embedded CE, and QNX. All necessary drivers are provided with the product.

Development Kit

The Aurora Development Kit (DK-AUR-01) provides all the components you need for fast and efficient embedded development. The kit includes an Aurora SBC, USB flashdisk with Linux pre-loaded, cable kit, power adapter, software CD, and documentation.

Ordering Information

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|-----------------------|---|
| AUR-Z530-16-0G | Aurora SBC, 1.6GHz Atom Z530, 0GB SDRAM |
| AUR-Z530-16-1G | Aurora SBC, 1.6GHz Atom Z530, 1GB SDRAM |
| AUR-Z530-16-2G | Aurora SBC, 1.6GHz Atom Z530, 2GB SDRAM |
| FDU-1G-XT | 1GB USB flashdisk |
| FDU-2G-XT | 2GB USB flashdisk |
| FDU-4G-XT | 4GB USB flashdisk |
| FDU-8G-XT | 8GB USB flashdisk |
| DK-AUR-01 | Aurora Development Kit with AUR-Z530-16-1G SBC, power supply, USB flashdisk with Linux pre-loaded, cable kit, and documentation |
| SDK-AUR-LNX | Aurora Linux Software Development Kit |
| SDK-AUR-XPE | Aurora Windows XPe Software Development Kit |
| C-AUR-KIT | Aurora Cable Kit for all on-board I/O |
| PNL-AUR-01 | Aurora panel I/O board with mounting hardware |