Express-CVC

COM Express® Compact Size Type 2 Module with Intel® Atom™ Processor

Features

- Dual-core Intel® Atom™ Processor with Intel® NM10 Express Chipset
- Up to 4 GB DDR3 SDRAM at 800/1066 MHz
- Three PCIe x1 lanes
- VGA and Single/Dual Channel 18/24-bit LVDS
- SATA 3 Gb/s, IDE (PATA), GbE, eight USB 2.0
- Supports Smart Embedded Management Agent (SEMA®) functions



Specifications

Core System

CPU

N2600: Dual-core Intel® Atom™ processor 1.66 GHz at 3.5 W
N2800: Dual-core Intel® Atom™ processor 1.86 GHz at 6.5 W
D2550: Dual-core Intel® Atom™ processor 1.86 GHz at 10 W

Memory

Single SODIMM socket supports up to 4 GB of non-ECC 800/1066 MHz DDR3 memory (N2600 supports max. 2 GB)

Chipset

Intel® NM10 Platform Controller Hub

L2 Cache

1 MB

Hardware Monitor

Supply voltages and CPU temperature

Debug Interface

XDP SFF-26 extension for ICE debug

Embedded Features

Board Info & Statistics, ACPI 3.0, Smart Battery Management support, Watchdog with programmable timer ranges

Expansion Busses

4 PCI Express x1: 0/1/2 are free, 3 is occupied by GbE
32-bit PCI: PCI rev. 2.3 at 33MHz, supporting 4 bus masters
LPC bus, SMBus (system), I2C (user)

Video

GPU Core

Integrated PowerVR SGX 545 graphics core and render core frequency at 640 MHz (D2550 & N2800) and 400 MHz (N2600)

Integrated Video

Intel® Dynamic Video Memory Technology 4.0 support

Feature Support

DirectX 9 compliant Pixel Shader v2.0
400 MHz render clock frequency
Intel® Clear Video Technology
MPEG2 Hardware Acceleration, ProcAmp

VGA Interface

Analog RGB display, resolution up to 2048x1536@ 60 Hz

LVDS Interface

Single/Dual channel 18/24-bit LVDS

Audio

Chipset

Integrated in Intel® NM10 Platform Controller Hub

Audio Codec

On carrier (ALC886)

Ethernet

Chipset: Intel® i210 Gigabit Ethernet Controller
Interface: 10/100/1000 Mbps Ethernet

Note: "build option" indicates an alternative BOM configuration to support additional or alternative functions that are not available on the standard product. Be aware that these "build option" part numbers will need to be newly created and this will result in production lead times.

Specifications

SEMA® BMC

Voltage and Current Monitoring, Flat Panel Control, I²C bus 100/200/400, Failsafe Dual BIOS, Module Logistics, Runtime information, User Flash Area, Power Control, and ECO mode support

I/O Interfaces

Chipset: Intel® NM10 Platform Controller Hub
USB: Supports up to eight ports USB 2.0
SATA: One ports SATA 3 Gb/s (build option, 2ports without PATA support)
IDE (PATA): SATA to PATA bridge on SATA channel 1, Master only

Super I/O

BIOS support for legacy free or legacy with two types of Super I/O (Winbond W83627HG and W83627DHG-PT)

TPM (build option)

Chipset: Atmel AT97SC3204T
Type: TPM 1.2

Power

Input Power: 5~20V only (AT mode)5~20V and 5 Vsb +/- 5% (ATX mode)
Power States: Supports S0, S1, S3, S4, S5
Power Consumption: 9W with N2600 and 4GB memory typical
Smart Battery Support: Yes

Mechanical and Environmental

Form Factor: Compact size: 95 mm x 95 mm

Operating Temperature

Standard: 0°C to +60°C
Storage Temperature: -20°C to +80°C

Humidity

90% at +60°C

Shock

15G peak-to-peak, 11ms duration, non-operating

Vibration

Non-operating: 1.88 Grms, 5-500 Hz, each axis
Operating: 0.5 Grms, 5-500 Hz, each axis
Compatibility: COM Express® Type 2, COM.0 R2.1
Compact form factor 95 mm x 95 mm
Certification: CE, FCC, HALT

Operating Systems

Standard Support

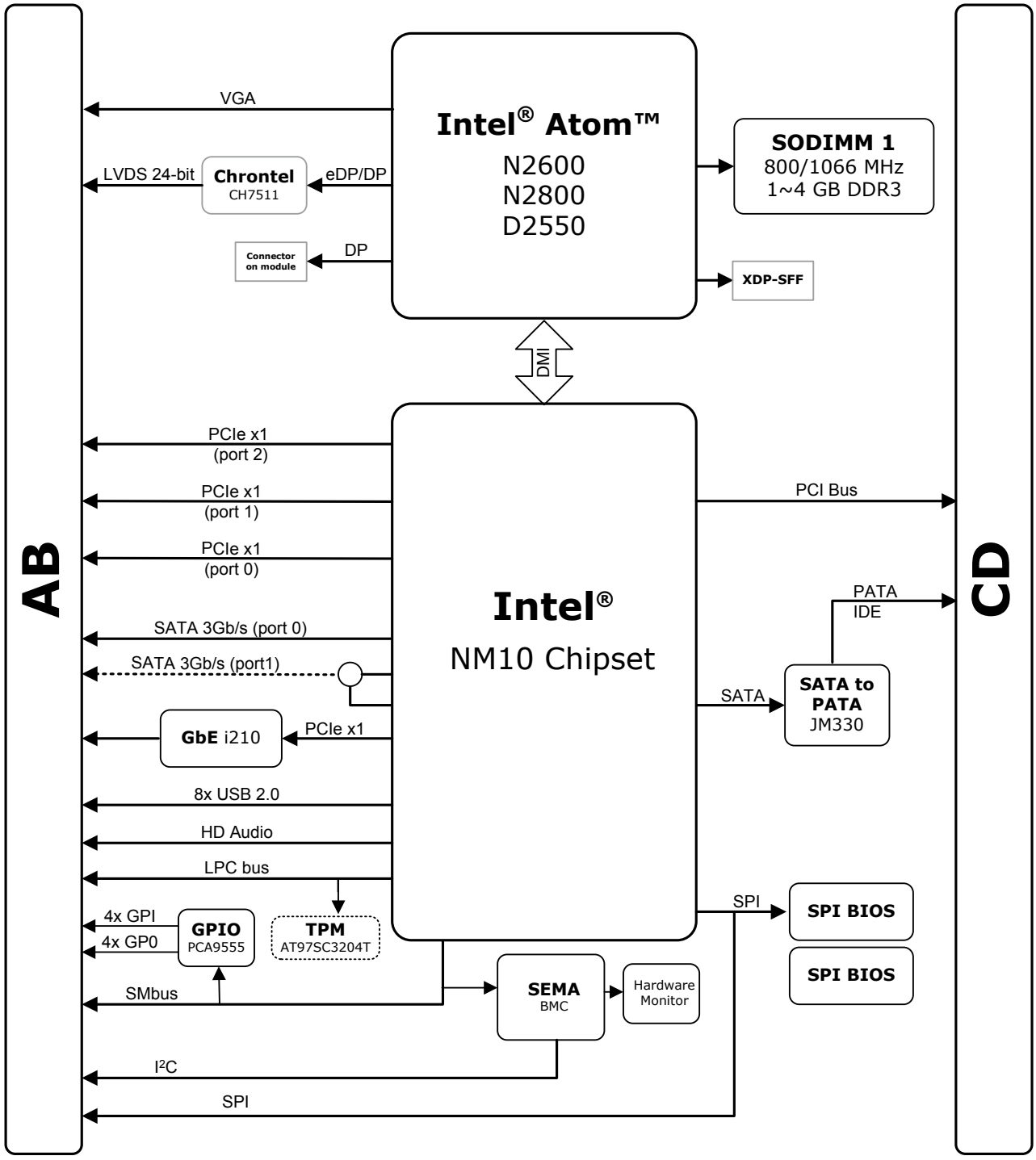
Windows XP(e), Windows 7, Linux

Extended Support (BSP)

Windows XPe, WES 7 support package, Linux 3.2.x BSP, VxWorks 6.x BSP, AIDI Library for Windows and Linux

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Functional Diagram



Ordering Information

- **Express-CVC-D2550**
  COM Express® Compact Size Type 2 Module, Express-CVC with Dual Core Intel® Atom™ Processor D2550 1.86Gz
- **Express-CVC-N2600**
  COM Express® Compact Size Type 2 Module, Express-CVC with Dual Core Intel® Atom™ Processor N2600 1.66Gz
- **Express-CVC-N2800**
  COM Express® Compact Size Type 2 Module, Express-CVC with Dual Core Intel® Atom™ Processor N2800 1.83Gz

Accessories

Heat Spreaders

- **HTS-CVC-B**
  Heatspreader for Express-CVC with threaded standoffs
- **HTS-CVC-BT**
  Heatspreader for Express-CVC with through hole for top mounting

Passive Heatsinks

- **THS-CVC-B**
  Low profile heatsink for Express-CVC with threaded standoffs
- **THS-CVC-BT**
  Low profile heatsink for Express-CVC with through hole for top mounting

Active Heatsink

- **THSF-CVC-B**
  Heatsink with Fan for Express-CVC with threaded standoffs

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