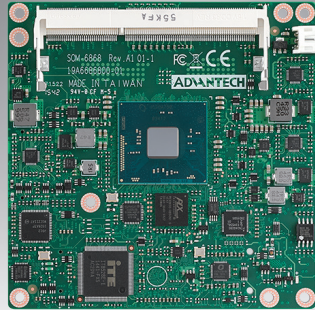


SOM-6868

Intel® Pentium® and Celeron® N3000 Series COM Express Compact Module Type 6



Windows Embedded

WISE-PaaS/RMM iManager CE FCC

Features

- Intel® Pentium®/Celeron® N3000 Series and Atom™ SoC
- PICMG COM Express R2.1 Compact Module Type 6 pin out
- Supports 5 PCIe x1, 4 USB 3.0, 8 USB 2.0
- Rich display interface: LVDS/eDP, HDMI/DP
- Up to 3 independent display
- Supports Wide Range Power input support from 4.75 ~ 20 V
- iManager, WISE-PaaS/RMM, and Embedded Software APIs

Software APIs:



Watchdog



I2C



SMBus



H/W Monitor



GPIO

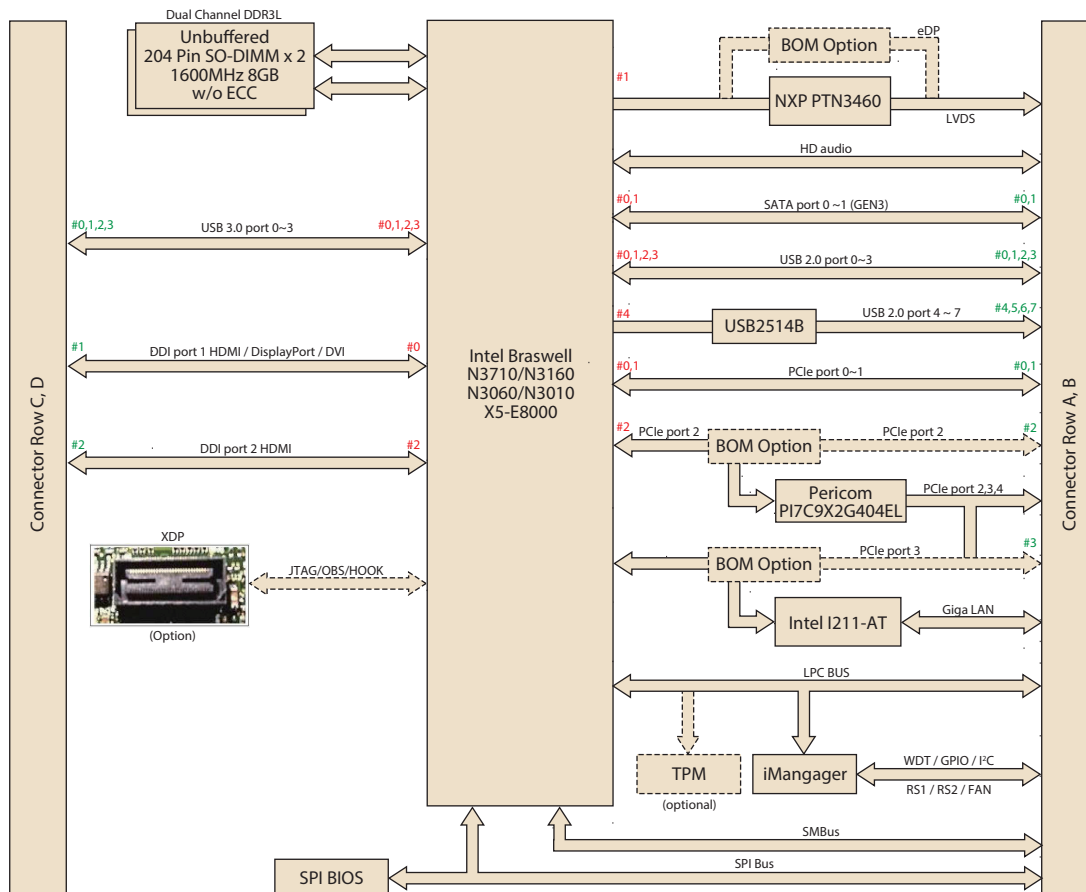


Brightness Control

Specifications

| | | | | | | |
|-------------|----------------------|--|----------------|----------------|----------------|----------------|
| Compliance | Form-Factor | COM Express Compact Module | | | | |
| | Pin-out Type | COM Express R2.1 Type 6 pin out | | | | |
| Platform | Processor | Pentium® N3710 | Celeron® N3160 | Celeron® N3060 | Celeron® N3010 | Atom™ X5-E8000 |
| | Base Frequency | 1.6 GHz | 1.6 GHz | 1.6 GHz | 1.04 GHz | 1.04 GHz |
| | Burst Frequency | 2.56 GHz | 2.24 GHz | 2.48 GHz | 2.24 GHz | 2 GHz |
| | Core/Tread | 4/4 | 4/4 | 2/2 | 2/2 | 4/4 |
| | LLC | 2 MB | 2 MB | 2 MB | 2 MB | 2 MB |
| | CPU TDP | 6 W | 6 W | 6 W | 4 W | 5 W |
| | BIOS | AMI UEFI BIOS @ 64 Mb | | | | |
| Memory | Technology | dual channel DDR3L-1600 MHz | | | | |
| | ECC Support | not supported | | | | |
| | Channel/Socket | dual channels / 2 sockets | | | | |
| | Max. Capacity | Up to 8 GB | | | | |
| Graphics | Controller | Intel® HD Graphics | | | | |
| | Base/Turbo Freq. | 400/700 MHz | 320/640 MHz | 320/600 MHz | 320/600 MHz | 320/320 MHz |
| | Graphics Memory | TBD | | | | |
| | 3D/HW Acceleration | DX 11.1, OpenGL 4.2, OpenGL ES 3.0, OpenCL 1.2, HW Decode: H.265, H.264, MPEG2.MVC, CV-1, WMV9, VP8, JPEG/MJPEG HW Encode: H.264, MVC, JPEG/MJPEG | | | | |
| Display | LCD | LVDS dual channel 18/24-bit LVDS, up to 1920 x 1200 @ 60 Hz option support eDP1.4 a: 2560 x 1440 @ 60 Hz 24 bpp | | | | |
| | DDI | 2 DDI ports support DP, DVI, or HDMI DP1.1 a: 3840 x 2160 @ 30 Hz or 2560 x 1600 @ 60 Hz, 24 bpp HDMI1.4 b: 3840 x 2160 @ 30 Hz or 2560 x 1600 @ 60 Hz, 24 bpp DVI up to 1920 x 1080 @ 60 Hz | | | | |
| | Multiple Display | 3 independent display | | | | |
| Expansion | PCI Express | 5 PCIe x1 option support PCIe x4 only while remove PCIe & GbE Chips, Configurable to 4 x1, 1 x4, 2 x2, 1 x1 + 2 x1 | | | | |
| | Audio Interface | HD audio interface | | | | |
| | LPC | Yes | | | | |
| Serial Bus | SMBus | Yes | | | | |
| | I2C Bus | Yes | | | | |
| Ethernet | Controller | Intel® i211AT | | | | |
| | Speed | 10/100/1000 Mbps | | | | |
| I/O | SATA | 2 port support SATA Gen 3 (6 GB/s) | | | | |
| | USB | 4 port support USB 3.0 | | | | |
| | USB | 8 port support USB 2.0 | | | | |
| | SPI Bus | support SPI BIOS EEPROM | | | | |
| | GPIO | 8-bit GPIO | | | | |
| | Watchdog | 65536 level, 0 ~ 65535 sec | | | | |
| | COM Port | 2 ports | | | | |
| | Express Card | 2 ports | | | | |
| | TPM | option TPM1.2 | | | | |
| | Smart Fan | 2 ports; 1 port on COM module support 12V fan ; 1 Port on carrier board | | | | |
| Power | Type | ATX: Vin, VSB; AT: Vin | | | | |
| | Supply Voltage | Vin: 4.75 V (5-5%) ~ 20 V (19+5%), VSB: 5 V ±5%, RTC Battery: 2.0-3.3 V | | | | |
| | Power Consumption | TBD | | | | |
| | Temperature | operating standard: 0 ~ 60° C (32 ~ 140° F) storage: -40 ~ 85° C (-40 ~ 185° F) | | | | |
| Environment | Humidity | operating: 40° C @ 95% relative humidity, non-condensing storage: 60° C @ 95% relative humidity, non-condensing | | | | |
| | Vibration Resistance | 3.5 Grms | | | | |
| Mechanical | Dimensions | 95 x 95 mm (3.74" x 3.74") | | | | |

Block Diagram



Ordering Information

| Part No. | CPU | Frequency Base/Burst | CPU TDP | Core | DDR3L Memory | LVDS | DDI | Giga Lan | HD Audio | PCIe x1 | USB 2.0 | USB 3.0 | SATA III | LPC | Power | Thermal Solution | Operating Temperature |
|------------------|----------------|----------------------|---------|------|-----------------|-----------|-----|----------|----------|---------|---------|---------|----------|-----|--------|------------------|-----------------------|
| SOM-6868PC-S6A1E | Pentium® N3710 | 1.6/2.56 GHz | 6 W | 4 | DDR3-L 1600 MHz | 18/24-bit | 2 | 1 | Yes | 5 | 8 | 4 | 2 | Yes | AT/ATX | Passive | 0 ~ 60° C |
| SOM-6868RC-S6A1E | Celeron® N3160 | 1.6/2.24 GHz | 6 W | 4 | DDR3-L 1600 MHz | 18/24-bit | 2 | 1 | Yes | 5 | 8 | 4 | 2 | Yes | AT/ATX | Passive | 0 ~ 60° C |
| SOM-6868RC-S5A1E | Celeron® N3060 | 1.6/2.48 GHz | 6 W | 2 | DDR3-L 1600 MHz | 18/24-bit | 2 | 1 | Yes | 5 | 8 | 4 | 2 | Yes | AT/ATX | Passive | 0 ~ 60° C |
| SOM-6868RC-S0A1E | Celeron® N3010 | 1.04/2.24 GHz | 4 W | 2 | DDR3-L 1600 MHz | 18/24-bit | 2 | 1 | Yes | 5 | 8 | 4 | 2 | Yes | AT/ATX | Passive | 0 ~ 60° C |
| SOM-6868AC-S0A1E | Atom™ X5-E8000 | 1.04/2 GHz | 5W | 4 | DDR3-L 1600 MHz | 18/24-bit | 2 | 1 | Yes | 5 | 8 | 4 | 2 | Yes | AT/ATX | Passive | 0 ~ 60° C |

Development Board

| Part No. | Description |
|------------------|---|
| SOM-DB5800-00A2E | COM Express Development Board A2 Type 6 Pin-out |

Packing List

| Part No. | Description | Quantity |
|----------------|---------------------|----------|
| - | SOM-6868 CPU Module | 1 |
| 1960075199N001 | HeatSpreader | 1 |

Optional Accessories

| Part No. | Description |
|----------------|----------------------------------|
| 1960048815N001 | Semi-Heatsink 95 x 95 x 16.25 mm |
| 1960048819N001 | Semi-Cooler 95 x 95 x 33 mm |

Embedded OS

| OS | Part No. | Description |
|--------|----------|-------------|
| WES8.1 | TBD | TBD |
| WES10 | TBD | TBD |

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