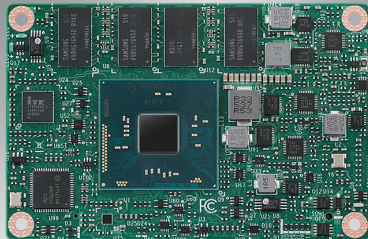


SOM-7568

Intel® Pentium®/Celeron® N3000 Series and Atom Series COM Express Mini Module Type 10

NEW



Windows Embedded

iManager WISE-PaaS/RMM CE FCC

Features

- Intel® Pentium®/Celeron® N3000 Series and Atom™ SoC
- Dual Channel DDR3L 1600 non-ECC onboard memory up to 8 GB
- Support HEVC/H.265, H.264 MPEG2 HW Decode
- Support rich display interface: LVDS/eDP, HDMI/DisplayPort/DVI
- iManager WISE-PaaS/RMM, and Embedded Software APIs

Software APIs:



Watchdog



I2C



SMBus



H/W Monitor



GPIO

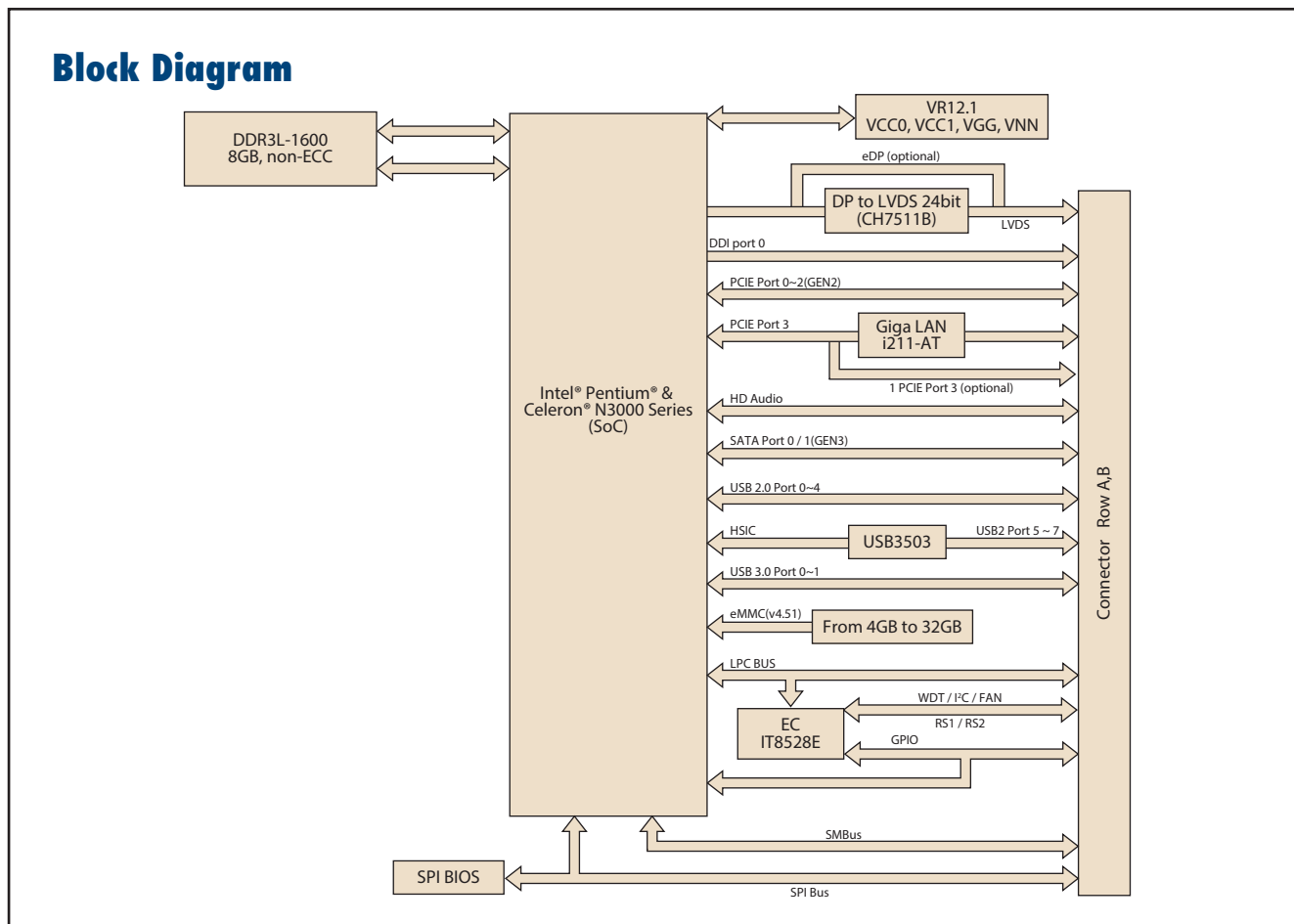


Brightness Control

Specifications

| | | | | | | |
|------------------|--------------------------|--|--------------------|--------------------|--------------------|--------------------|
| Form Factor | Form Factor | COM Express Mini Module Compatible | | | | |
| | Pin-out Type | COM Express R2.1 Type 10 Pin-out Compatible | | | | |
| Processor System | SoC | Pentium® N3710 | Celeron® N3160 | Celeron® 3060 | 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/Thread | 4/4 | 4/4 | 2/2 | 2/2 | 4/4 |
| | LLC | 2 MB | 2 MB | 2 MB | 2 MB | 2 MB |
| | CPU TDP | 6W | 6W | 6W | 4W | 5W |
| | BIOS | AMI UEFI BIOS @ 64Mb | | | | |
| Memory | Technology | Onboard DDR3L-1600 | | | | |
| | ECC Support | N/A | | | | |
| | Channel | Dual-Channel | | | | |
| | Max. Capacity | 8GB | | | | |
| Graphics | Controller | Intel® HD Graphics | Intel® HD Graphics | Intel® HD Graphics | Intel® HD Graphics | Intel® HD Graphics |
| | Base Freq. | 400 MHz | 320 MHz | 320 MHz | 320 MHz | 320 MHz |
| | Graphics Burst Frequency | 700 MHz | 640 MHz | 600 MHz | 600 MHz | 320 MHz |
| | 3D/HW Acceleration | DX 11.1, OpenGL 4.2, OpenGL ES 3.0, OpenCL 1.2, HW Decode: HEVC (H.265) @ L5, H.264 @ 5.2, MPEG2, MVC, VC-1, WMV9, JPEG/MJPEG, VP8 HW Encode: H.264 @ 5.1, MVC, JPEG/MJPEG | | | | |
| Display | LCD | LVDS: Single channel 18/24-bit, up to 1366 x 768 Optional eDP: Up to 3840 x 2160 @ 30Hz or 2560 x 1600 @ 60Hz; eDP Version 1.4 | | | | |
| | DDI | HDMI & DisplayPort: Up to 3840 x 2160 @ 30Hz or 2560 x 1600 @ 60Hz, 24 bpp; HDMI Version 1.4b; DisplayPort Version 1.1a | | | | |
| | Multiple Display | LVDS, HDMI/DisplayPort Optional: eDP, HDMI/DisplayPort | | | | |
| Expansion | PCI Express x1 | 3 PCIe x1; (Optional 1 PCIe x4 without LAN) | | | | |
| | Audio Interface | HD Audio | | | | |
| | LPC | Yes | | | | |
| Serial Bus | SMBus | Yes | | | | |
| | I2C Bus | Yes | | | | |
| Ethernet | Controller | Intel® i211AT | | | | |
| | Speed | 10/100/1000 Mbps | | | | |
| Onboard Storage | eMMC/SATA SSD | eMMC4.51, 4GB to 32GB | | | | |
| I/O | SATA | 2 Ports, Support Gen3 (6Gb/s) and Gen2 (3 Gb/s) or Gen 1(1.5 Gb/s) | | | | |
| | USB3.0 | 2 Ports | | | | |
| | USB2.0 | 8 Ports | | | | |
| | SPI Bus | Yes | | | | |
| | SDIO/SDXC | Support 4 GPI and 4 GPO | | | | |
| | GPIO | 8-bit GPIO | | | | |
| | Watchdog | 65536 level, 0 ~ 65535 sec | | | | |
| | COM Port | 2 Ports (2-Wire) | | | | |
| | Express Card | 2 Ports | | | | |
| | 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 (5-5%) ~ 20V (19+5%), VSB: 5V±5%, RTC Battery: 2.0-3.3V | | | | |
| | Power Consumption (Max.) | Max. 6.99Watt. (N3700) | | | | |
| | Power Consumption (Idle) | Idle 2.64Watt. (N3700) | | | | |
| Environment | Temperature | Operating: 0 ~ 60° C (32 ~ 140° F), with 0.7m/s air flow Storage: -40 ~ 85° C (-40 ~ 185° F) | | | | |
| | Humidity | Operating: 40° C @ 95% relative humidity, non-condensing Storage: 60° C @ 95% relative humidity, non-condensing | | | | |
| | Vibration Resistance | 3.5 Grms | | | | |
| Mechanical | Dimensions | 84 x 55 mm (3.3" x 2.17") | | | | |

Block Diagram



Ordering Information

| Part No. | SoC | CPU Stepping | Base / Burst Frequency | Core | LLC | CPU TDP | Onboard Memory | Onboard Flash | Thermal Solution | Operating Temperature |
|--------------------|-----------------------|--------------|------------------------|------|-----|---------|----------------|---------------|------------------|-----------------------|
| SOM-7568CMBC-S7A1E | Intel® Pentium® N3710 | D | 1.6GHz / 2.56GHz | 4 | 2MB | 6W | 4GB | MLC 32GB | Passive | 0 ~ 60° C |
| SOM-7568BM0C-S6A1E | Intel® Celeron® N3160 | D | 1.6GHz / 2.24GHz | 4 | 2MB | 6W | 2GB | N/A | Passive | 0 ~ 60° C |
| SOM-7568BM0C-S5A1E | Intel® Celeron® N3060 | D | 1.6GHz / 2.48GHz | 2 | 2MB | 6W | 2GB | N/A | Passive | 0 ~ 60° C |
| SOM-7568BM0C-S0A1E | Intel® Celeron® N3010 | D | 1.04GHz / 2.24GHz | 2 | 2MB | 4W | 2GB | N/A | Passive | 0 ~ 60° C |
| SOM-7568BM0C-S1A1E | Intel® Atom™ X5-E8000 | D | 1.04GHz / 2GHz | 4 | 2MB | 5W | 2GB | N/A | Passive | 0 ~ 60° C |

Note: Intel C stepping CPU might be EOL after Intel D stepping CPU ready.

Packing List

| Part No. | Description | Quantity |
|----------------|---------------------|----------|
| - | SOM-7568 CPU Module | 1 |
| 1960072329N001 | Heatspreader | 1 |

Development Board

| Part No. | Description |
|------------------|-----------------------------------|
| SOM-DB5800-U0A2E | COMe Devel. Board Type10 pint-out |

Optional Accessories

| Part No. | Description |
|--------------------|--|
| 1960056280N001 | Semi-Heatsink 84L x 55W x 13.2H mm (0 ~ 60° C) |
| 96LEDK-I057VG50NA1 | 5.7" LED PANEL 500N 640X480(G) |
| 96LEDK-A084SV45NB2 | 8.4" LED PANEL 450N 800X600(G) G084SN05 V9 |
| 96LEDK-C150XG40NG1 | 15" LED PANEL 400N 1024X768(G) G150XGE-L04 |
| 96LEDK-A170SX35NF1 | 17" LED 350N 1280X1024(G) G170EG01 V1 |

Embedded OS

| OS | Part No. | Description |
|-------------------|------------|--|
| WE8.1 IndustryPro | 2070014373 | img WE8.1 IndustryPro SOM-7568 X64 V1.0 EN |
| WES7P | 2070014003 | img WES7P SOM-7568 X64 V5.6.6 Eng |