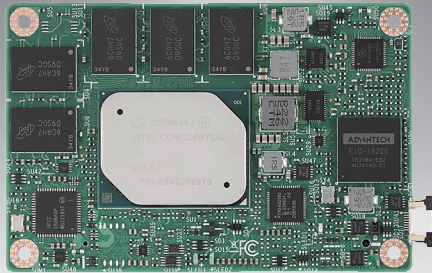


# SOM-7569

## Intel® Atom™ E3900 & Pentium™ and Celeron™ N Series Processors COM-Express Mini Module

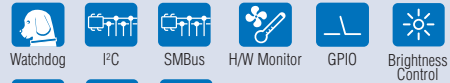
NEW



### Features

- COM R.2.1 Type 10 Mini Module
- Intel® Atom™ E3900 & Pentium™ and Celeron™ N Series Processors
- One Channel DDR3L 1866 ECC / non-ECC onboard memory up to 8 GB
- Dual Display: LVDS, HDMI/DisplayPort
- Up to 32GB eMMC 5.0 onboard storage
- Supports H.264/AVC, H.265/HEVC, VP9, VP8 HW DECODE
- Supports Wide-range operating temp.
- iManager and Embedded Software APIs

#### Software APIs:



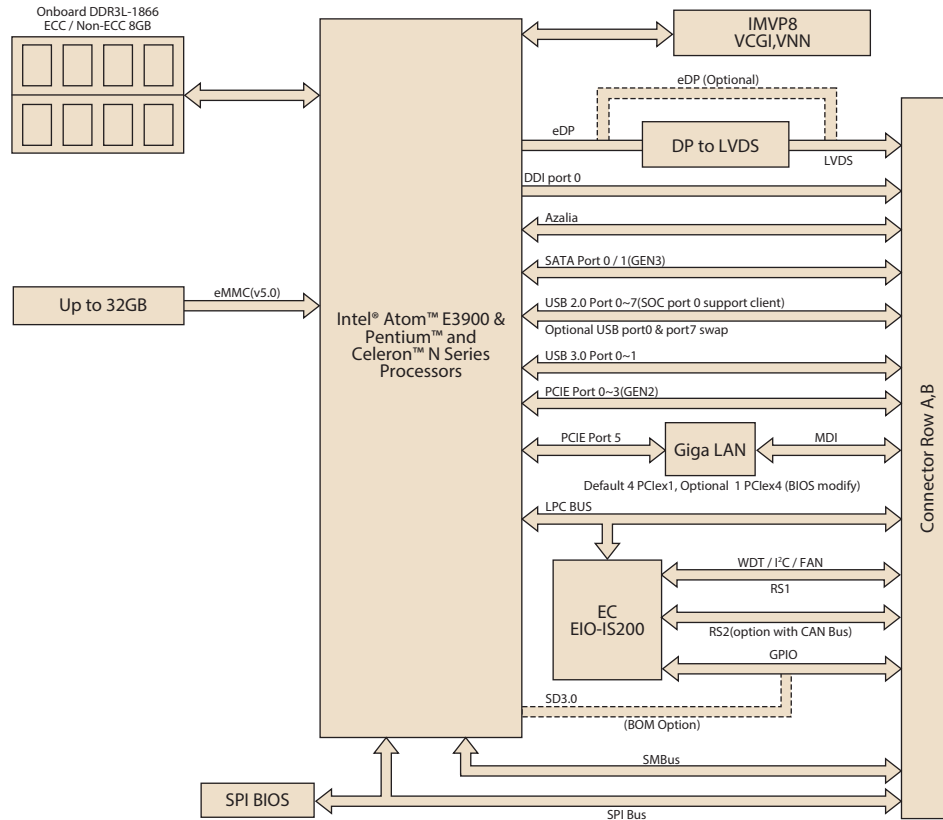
#### Utilities:



### Specifications

|                          |                          |   |   |                        |                        |                        |  |
|--------------------------|--------------------------|---|---|------------------------|------------------------|------------------------|--|
| Form Factor              | Form Factor              | COM-Express 2.1   |   |                        |                        |                        |  |
|                          | Pin-out Type             | Mini Module, Type 10 Pin-out  |   |                        |                        |                        |  |
| Processor System         | SoC                      | Atom X7-E3950   | Atom X5-E3940   | Atom X5-E3930          | Pentium N4200          | Celeron N3350          |  |
|                          | Base Frequency           | 1.6GHz  | 1.6GHz  | 1.3GHz                 | 1.1GHz                 | 1.1GHz                 |  |
|                          | Burst Frequency          | 2GHz  | 1.8GHz  | 1.8GHz                 | 2.5GHz                 | 2.4GHz                 |  |
|                          | Core/Thread              | 4 / 4   | 4 / 4   | 2 / 2                  | 4 / 4                  | 2 / 2                  |  |
|                          | LLC                      | 2MB   | 2MB   | 2MB                    | 2MB                    | 2MB                    |  |
|                          | CPU TDP                  | 12W   | 9.5W  | 6.5W                   | 6W                     | 6W                     |  |
|                          | Chipset                  | integrated in CPU   |   |                        |                        |                        |  |
|                          | BIOS                     | AMI UEFI BIOS @ 64Mb  |   |                        |                        |                        |  |
| Memory                   | Technology               | One channel DDR3L 1866  |   |                        |                        |                        |  |
|                          | ECC Support              | Yes   |   |                        |                        |                        |  |
|                          | Max. Capacity            | 8GB   |   |                        |                        |                        |  |
|                          | Socket                   | Onboard DDR   |   |                        |                        |                        |  |
| Graphics                 | Controller               | Intel® HD Graphics 505  | Intel® HD Graphics 500                                  | Intel® HD Graphics 500 | Intel® HD Graphics 505 | Intel® HD Graphics 500 |  |
|                          | Graphics Burst Frequency | 650MHz  | 600MHz  | 550MHz                 | 750MHz                 | 650MHz                 |  |
|                          | Graphic Memory           | TBD   |   |                        |                        |                        |  |
|                          | 3D/HW Acceleration       | DX (9.3, 10, 11.3, 12), OpenGL 4.3, OGL ES 3.0, OpenCL 2.0<br>HEVC (H.265) @L5, H.264 @ 5.2, MVC, MPEG2, VP8, VP9, VC-1, WMV9, JPEG/MJPEG HW Decode,<br>HEVC (H.265) @L4, H.264@ 5.2, MVC, VP8, VP9, JPEG/MJPEG HW Encode |   |                        |                        |                        |  |
| Display                  | LCD (LVDS/eDP)           | LVDS: Single-channel 18/24-bit, up to 1366 x 768<br>eDP: Up to 4096 x 2160 @ 60 Hz  |   |                        |                        |                        |  |
|                          | DDO (HDMI/DisplayPort)   | HDMI 1.4b: Upto 3840 x 2160 @ 30 Hz<br>DP 1.2: Upto 4096 x 2160 @ 60 Hz   |   |                        |                        |                        |  |
|                          | Dual Display             | LVDS, HDMI/DisplayPort<br>eDP, HDMI/DisplayPort (optional)  |   |                        |                        |                        |  |
| Expansion                | PCI Express x1           | 4 PCIe x1, 1 PCIe x4 (optional)   |   |                        |                        |                        |  |
|                          | Audio Interface          | HD Audio  |   |                        |                        |                        |  |
|                          | LPC                      | Yes   |   |                        |                        |                        |  |
| Serial Bus               | SMBus                    | Yes   |   |                        |                        |                        |  |
|                          | I2C Bus                  | Yes   |   |                        |                        |                        |  |
| Ethernet                 | Controller               | Intel® i210IT/i210AT  |   |                        |                        |                        |  |
|                          | Speed                    | 10/100/1000 Mbps  |   |                        |                        |                        |  |
| I/O                      | SATA                     | 2 Ports, Support Gen 1(1.5 Gb/s) or Gen2 (3 Gb/s) and Gen3.1 (6Gb/s)  |   |                        |                        |                        |  |
|                          | Onboard Storage          | Up to 32GB eMMC 5.0 interface   |   |                        |                        |                        |  |
|                          | USB3.0                   | 2 Ports   |   |                        |                        |                        |  |
|                          | USB2.0                   | 8 Ports   |   |                        |                        |                        |  |
|                          | Audio                    | Intel® HD Audio   |   |                        |                        |                        |  |
|                          | GPIO                     | 8-bit GPIO  |   |                        |                        |                        |  |
|                          | SDIO                     | Optional  |   |                        |                        |                        |  |
|                          | Watchdog                 | 65536 level, 0 ~ 65535 sec  |   |                        |                        |                        |  |
|                          | COM Port                 | 2 Ports (2-Wire)  |   |                        |                        |                        |  |
|                          | Express Card             | Yes   |   |                        |                        |                        |  |
|                          | Smart Fan                | 2 Ports; 1 Port on COM Module. Support 12V Fan, 1 Port on Carrier Board   |   |                        |                        |                        |  |
|                          | Power                    | Type  | ATX, AT   |                        |                        |                        |  |
|                          |                          | Supply Voltage  | ATX (Vin 4.75-20V, Vsb 4.75-5.25V)<br>AT (Vin 4.75-20V) |                        |                        |                        |  |
| Power Consumption (Max.) |                          | Max. 12.886Watt. (N4200), 11.999Watt. (N3350)   |   |                        |                        |                        |  |
| Power Consumption (Idle) |                          | Idle 2.555Watt.(N4200), 2.783Watt.(N3350)   |   |                        |                        |                        |  |
| Environment              | Temperature              | Operating: 0 ~ 60 °C (32 ~ 140 °F), Storage: -40 ~ 85 °C (-40 ~ 185 °F)<br>Extend: -40 ~ 85 °C (-40 ~ 185 °F)   |   |                        |                        |                        |  |
|                          | Humidity                 | Operating: 40 °C @ 95% relative humidity, non-condensing<br>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           | Base/Burst Freq. | Core | LLC | CPU TDP | Onboard Memory | Onboard Flash | Thermal Solution | Operating Temperature |
|--------------------|---------------|------------------|------|-----|---------|----------------|---------------|------------------|-----------------------|
| SOM-7569CM0C-S2A1E | Pentium N4200 | 1.1GHz / 2.5GHz  | 4    | 2MB | 6W      | 4GB / Non-ECC  | N/A           | Passive          | 0 – 60° C             |
| SOM-7569CM0C-S1A1E | Celeron N3350 | 1.1GHz / 2.4GHz  | 2    | 2MB | 6W      | 4GB / Non-ECC  | N/A           | Passive          | 0 – 60° C             |
| SOM-7569CCBC-S6A1E | Atom X7-E3950 | 1.6GHz / 2GHz    | 4    | 2MB | 12W     | 4GB / ECC      | MLC 32GB      | Passive          | 0 – 60° C             |
| SOM-7569CM0C-S5A1E | Atom X5-E3940 | 1.6GHz / 1.8GHz  | 4    | 2MB | 9.5W    | 4GB / ECC      | N/A           | Passive          | 0 – 60° C             |
| SOM-7569CM0C-S3A1E | Atom X5-E3930 | 1.3GHz / 1.8GHz  | 2    | 2MB | 6.5W    | 4GB / ECC      | N/A           | Passive          | 0 – 60° C             |
| SOM-7569DCBX-S6A1E | Atom X7-E3950 | 1.6GHz / 2GHz    | 4    | 2MB | 12W     | 8GB / ECC      | MLC 32GB      | TBC              | -40 – 85° C           |
| SOM-7569CCBX-S6A1E | Atom X7-E3950 | 1.6GHz / 2GHz    | 4    | 2MB | 12W     | 4GB / ECC      | MLC 32GB      | TBC              | -40 – 85° C           |
| SOM-7569CM0X-S5A1E | Atom X5-E3940 | 1.6GHz / 1.8GHz  | 4    | 2MB | 9.5W    | 4GB / ECC      | N/A           | TBC              | -40 – 85° C           |
| SOM-7569CM0X-S3A1E | Atom X5-E3930 | 1.3GHz / 1.8GHz  | 2    | 2MB | 6.5W    | 4GB / ECC      | N/A           | TBC              | -40 – 85° C           |

Note: Any other sku or combination is project based support. Please contact sales for details.

## Packing List

| Part No.       | Description                                       | Quantity |
|----------------|---|----------|
| -              | SOM-7569 CPU Module (N4200, N3350 CPU SKU)        | 1        |
| 1960079608T000 | Heatspreader<br>* For N4200, N3350 CPU SKU        | 1        |
| -              | SOM-7569 CPU Module (E3950, E3940, E3930 CPU SKU) | 1        |
| 1960079610T000 | Heatspreader<br>* For E3950, E3940, E3930 CPU SKU | 1        |

## Development Board

| Part No.         | Description                               |
|------------------|---|
| SOM-DB5800-U0A2E | COMe Devel. Board Type10 pint-out Rev. A2 |

## 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     |

## Embedded OS

| OS    | Part Number | Description                        |
|-------|-------------|------------------------------------|
| Win10 | 2070015218  | img W10 16HL SOM-7569 64b 1701 ENU |
| Win10 | 2070015219  | img W10 16VL SOM-7569 64b 1701 ENU |
| Win10 | 2070015220  | img W10 16EL SOM-7569 64b 1701 ENU |