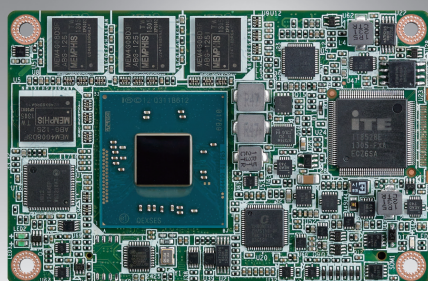


# SOM-7567

## Intel® Atom™/Celeron® Processor COM Express® Mini Module



### Features

- COM R.2.1 Type 10 Mini Module
- Intel® Atom™/Celeron® processor for Intelligent systems (Based on 22nm Silvermont microarchitecture)
- Onboard DDR3L and SSD
- 4.75 ~ 20 V wide-voltage input support
- Embedded Software APIs and Utilities supported

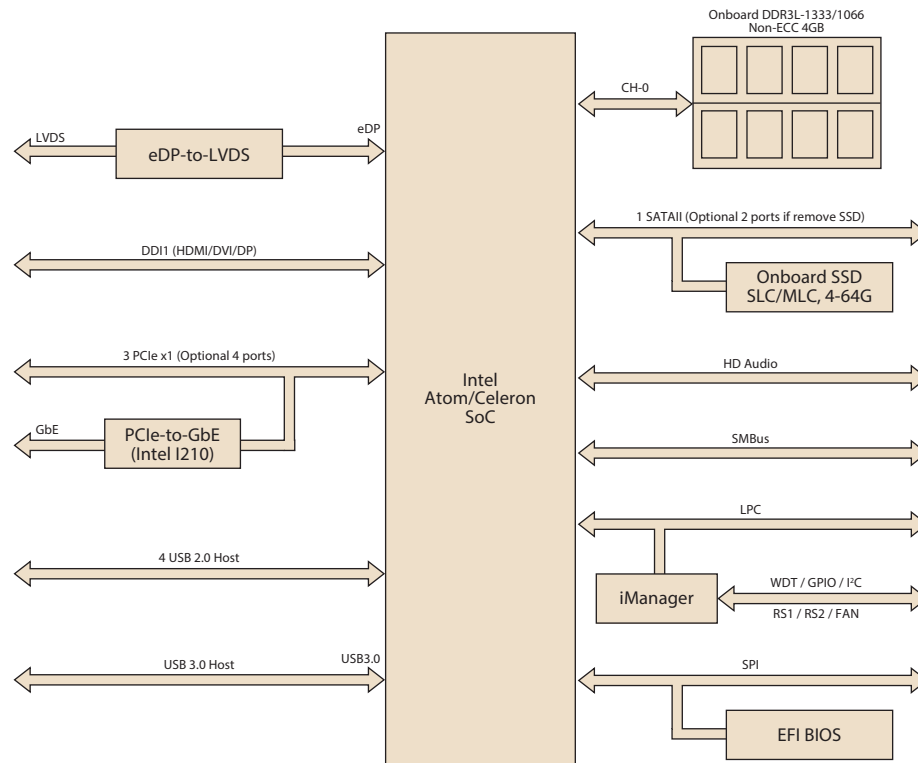
#### Software APIs:



### Specifications

|                  |                            |                                                                                                                                |                  |                  |                     |                     |
|------------------|----------------------------|--------------------------------------------------------------------------------------------------------------------------------|------------------|------------------|---------------------|---------------------|
| Form Factor      | Form Factor                | COM Express Mini Module                                                                                                        |                  |                  |                     |                     |
|                  | Pin-out Type               | COM Express R2.1 Type 10                                                                                                       |                  |                  |                     |                     |
| Processor System | CPU                        | Intel Atom E3845                                                                                                               | Intel Atom E3825 | Intel Atom E3815 | Intel Celeron J1900 | Intel Celeron N2930 |
|                  | Core                       | 4                                                                                                                              | 2                | 1                | 4                   | 4                   |
|                  | Base Frequency (Normal)    | 1.91GHz                                                                                                                        | 1.33GHz          | 1.46 GHz         | 2.00 GHz            | 1.83 GHz            |
|                  | Base Frequency (Burst)     | -                                                                                                                              | -                | -                | 2.42 GHz            | 2.16 GHz            |
|                  | LLC                        | 2MB                                                                                                                            | 1MB              | 512KB            | 2MB                 | 2MB                 |
|                  | CPU TDP                    | 10W                                                                                                                            | 6W               | 5W               | 10W                 | 7.5W                |
|                  | BIOS                       | AMI UEFI 64Mbit                                                                                                                |                  |                  |                     |                     |
| Memory           | Technology                 | DDR3L-1333                                                                                                                     | DDR3L-1066       | DDR3L-1066       | DDR3L-1333          | DDR3L-1333          |
|                  | ECC Support                | N/A                                                                                                                            |                  |                  |                     |                     |
|                  | Max. Capacity              | Up to 4G                                                                                                                       |                  |                  |                     |                     |
| SSD              | Technology & Capacity      | MLC up to 64GB, SLC up to 32GB                                                                                                 |                  |                  |                     |                     |
| Graphics         | Controller                 | Intel® HD graphics (Gen 7 gtx)                                                                                                 |                  |                  |                     |                     |
|                  | Frequency (Normal)         | 542 MHz                                                                                                                        | 533 MHz          | 400 MHz          | 688 MHz             | 313 MHz             |
|                  | Frequency (Turbo)          | 792 MHz                                                                                                                        | -                | -                | 854 MHz             | 854 MHz             |
|                  | 3D/HW Acceleration         | DX11, OGL3.2, OCL1.1, and H.264/AVC, VC-1, MPEG2 HW Decode/Encode                                                              |                  |                  |                     |                     |
| Display          | LCD                        | LVDS 1-ch 18/24-bit, up to 1366 x 768 resolution                                                                               |                  |                  |                     |                     |
|                  | DDI (HDMI/DVI/DisplayPort) | Up to 2560 x 1600 resolution                                                                                                   |                  |                  |                     |                     |
|                  | Dual Display               | LCD + DDI                                                                                                                      |                  |                  |                     |                     |
| Expansion        | PCI Express x1             | 3 Ports (optional 4 PCIe x1 or 1 PCIe x4 while removing Ethernet), compliant to PCIe Gen2 5.0 GT/s                             |                  |                  |                     |                     |
|                  | Audio Interface            | Intel HD Audio                                                                                                                 |                  |                  |                     |                     |
|                  | LPC                        | Yes                                                                                                                            |                  |                  |                     |                     |
| Serial Bus       | SMBus                      | Yes                                                                                                                            |                  |                  |                     |                     |
|                  | I²C Bus                    | Yes                                                                                                                            |                  |                  |                     |                     |
| Ethernet         | Controller                 | Intel i210E                                                                                                                    |                  |                  |                     |                     |
|                  | Speed                      | 10/100/1000MHz                                                                                                                 |                  |                  |                     |                     |
| I/O              | SATA                       | 1 Ports (optional 2 ports while remove onboard storage), compliant to SATA2.0 3.0 Gb/s                                         |                  |                  |                     |                     |
|                  | USB3.0                     | 1 port                                                                                                                         |                  |                  |                     |                     |
|                  | USB2.0                     | 4 ports                                                                                                                        |                  |                  |                     |                     |
|                  | SPI Bus                    | 1 channel, for SPI BIOS EEPROM                                                                                                 |                  |                  |                     |                     |
|                  | GPIO                       | 8-bit                                                                                                                          |                  |                  |                     |                     |
|                  | Watchdog                   | 0~65535 sec, multi-level, multi-option watchdog timer support by Advantech iManager                                            |                  |                  |                     |                     |
|                  | COM Port                   | 2 ports 2-wire COM port (TX/RX)                                                                                                |                  |                  |                     |                     |
|                  | Express Card               | 2 ports                                                                                                                        |                  |                  |                     |                     |
|                  | Smart Fan                  | 1 port                                                                                                                         |                  |                  |                     |                     |
| Power            | Type                       | ATX/AT, 12Vin, VSB: 5VSB                                                                                                       |                  |                  |                     |                     |
|                  | Supply Voltage             | Vin: 4.75V ~ 20V<br>VSB: 4.75V ~ 5.25V                                                                                         |                  |                  |                     |                     |
|                  | Power Consumption (Max.)   | +12V @ 1.38A (E3845)                                                                                                           |                  |                  |                     |                     |
|                  |                            | +12V @ 1.59A (J1900)                                                                                                           |                  |                  |                     |                     |
|                  |                            | +12V @ 0.74A (E3815)                                                                                                           |                  |                  |                     |                     |
|                  |                            | +12V @ 0.84A (E3825)                                                                                                           |                  |                  |                     |                     |
|                  |                            | +12V @ 1.44A (N2930)                                                                                                           |                  |                  |                     |                     |
|                  | Power Consumption (Idle)   | +12V @ 0.67A (E3845)                                                                                                           |                  |                  |                     |                     |
|                  |                            | +12V @ 0.25A (J1900)                                                                                                           |                  |                  |                     |                     |
|                  |                            | +12V @ 0.59A (E3815)                                                                                                           |                  |                  |                     |                     |
|                  |                            | +12V @ 0.64A (E3825)                                                                                                           |                  |                  |                     |                     |
|                  |                            | +12V @ 0.68A (N2930)                                                                                                           |                  |                  |                     |                     |
| Environment      | Temperature                | Operating Standard: 0 ~ 60 °C (32 ~ 140 °F)<br>Extend Temp.: -40 ~ 85 °C (-40 ~ 185 °F)<br>Storage: -40 ~ 85 °C (-40 ~ 185 °F) |                  |                  |                     |                     |
|                  | Humidity                   | Operating: 40 °C @ 95% relative humidity, non-condensing<br>Storage: 60 °C @ 95% relative humidity, non-condensing             |                  |                  |                     |                     |
| Mechanical       | Dimensions                 | 84 x 55 mm (3.3" x 2.17")                                                                                                      |                  |                  |                     |                     |

## Block Diagram



## Ordering Information

| Part No.           | CPU           | Onboard Memory | Onboard Flash | LVDS       | HDMI/DVI/DP | PCIe x1 | HD Audio | GbE | SATAII | USB 3.0 | USB 2.0 | Thermal Solution | Operating Temperature |
|--------------------|---------------|----------------|---------------|------------|-------------|---------|----------|-----|--------|---------|---------|------------------|-----------------------|
| SOM-7567CS0C-S9A1E | Atom E3845    | 4GB            | NA            | 18/24 bits | 1           | 3       | Yes      | 1   | 2      | 1       | 4       | Passive          | 0 ~ 60 °C             |
| SOM-7567BS0C-S3A1E | Atom E3825    | 2GB            | NA            | 18/24 bits | 1           | 3       | Yes      | 1   | 2      | 1       | 4       | Passive          | 0 ~ 60 °C             |
| SOM-7567BS0C-S5A1E | Atom E3815    | 2GB            | NA            | 18/24 bits | 1           | 3       | Yes      | 1   | 2      | 1       | 4       | Passive          | 0 ~ 60 °C             |
| SOM-7567CM8C-U0A1E | Celeron J1900 | 4GB            | MLC 8GB       | 18/24 bits | 1           | 3       | Yes      | 1   | 1      | 1       | 4       | Passive          | 0 ~ 60 °C             |
| SOM-7567BS0C-S8A1E | Celeron N2930 | 2GB            | NA            | 18/24 bits | 1           | 3       | Yes      | 1   | 2      | 1       | 4       | Passive          | 0 ~ 60 °C             |
| SOM-7567CS0X-S9A1E | Atom E3845    | 4GB            | NA            | 18/24 bits | 1           | 3       | Yes      | 1   | 2      | 1       | 4       | Passive          | -40 ~ 85 °C           |
| SOM-7567BS0X-S8A1E | Celeron N2930 | 2GB            | NA            | 18/24 bits | 1           | 3       | Yes      | 1   | 2      | 1       | 4       | Passive          | -40 ~ 85 °C           |
| SOM-7567BS0X-S3A1E | Atom E3825    | 2GB            | NA            | 18/24 bits | 1           | 3       | Yes      | 1   | 2      | 1       | 4       | Passive          | -40 ~ 85 °C           |
| SOM-7567BS0X-S5A1E | Atom E3815    | 2GB            | NA            | 18/24 bits | 1           | 3       | Yes      | 1   | 2      | 1       | 4       | Passive          | -40 ~ 85 °C           |

## Packing List

| Part No.       | Description                      | Quantity |
|----------------|----------------------------------|----------|
| -              | SOM-7567 COM Express Mini Module | 1        |
| 1960064246N001 | Heatspreader                     | 1        |

## Optional Accessories

| Part No.       | Description                                    |
|----------------|------------------------------------------------|
| 1960056280N001 | Semi-Heatsink 84L x 55W x 13.2H mm (0 ~ 60° C) |
| 1960050950N001 | Semi-Heatsink 84L x 55W x 34H mm (-40 ~ 85° C) |

## Development Board

| Part No.         | Description                                                   |
|------------------|---------------------------------------------------------------|
| SOM-DB5800-U0A2E | Development Board for COM Express Mini Module Type 10 Pin-out |

## Embedded OS

| OS   | Part No.   | Description                   |
|------|------------|-------------------------------|
| WES7 | 2070013084 | WES7E SOM-7567 x64 V5.6.8 ENG |