

SOM-5871







AMD Zen CPU Core COM Express Basic Module Type 6

Preliminary




Features

- COM R3.0 Type 6 Compact Module
- AMD Zen CPU Core
- Dual channel DDR4, Max 32GB (ECC optional)
- Supports Quad independent symmetrical displays
- Supports up to 4 4K displays (2nd DisplayPort supports up to 8K)
- Rich IO Interfaces-2 SATA, 3 USB3.0, 8 USB 2.0, 2 COM, TPM, CAN Bus (Optional)
- Supports iManager, WISE-PaaS/RMM and Embedded Software APIs

Software APIs:

 Watchdog
  I2C
  SMBus
  H/W Monitor
  GPIO
  Brightness Control

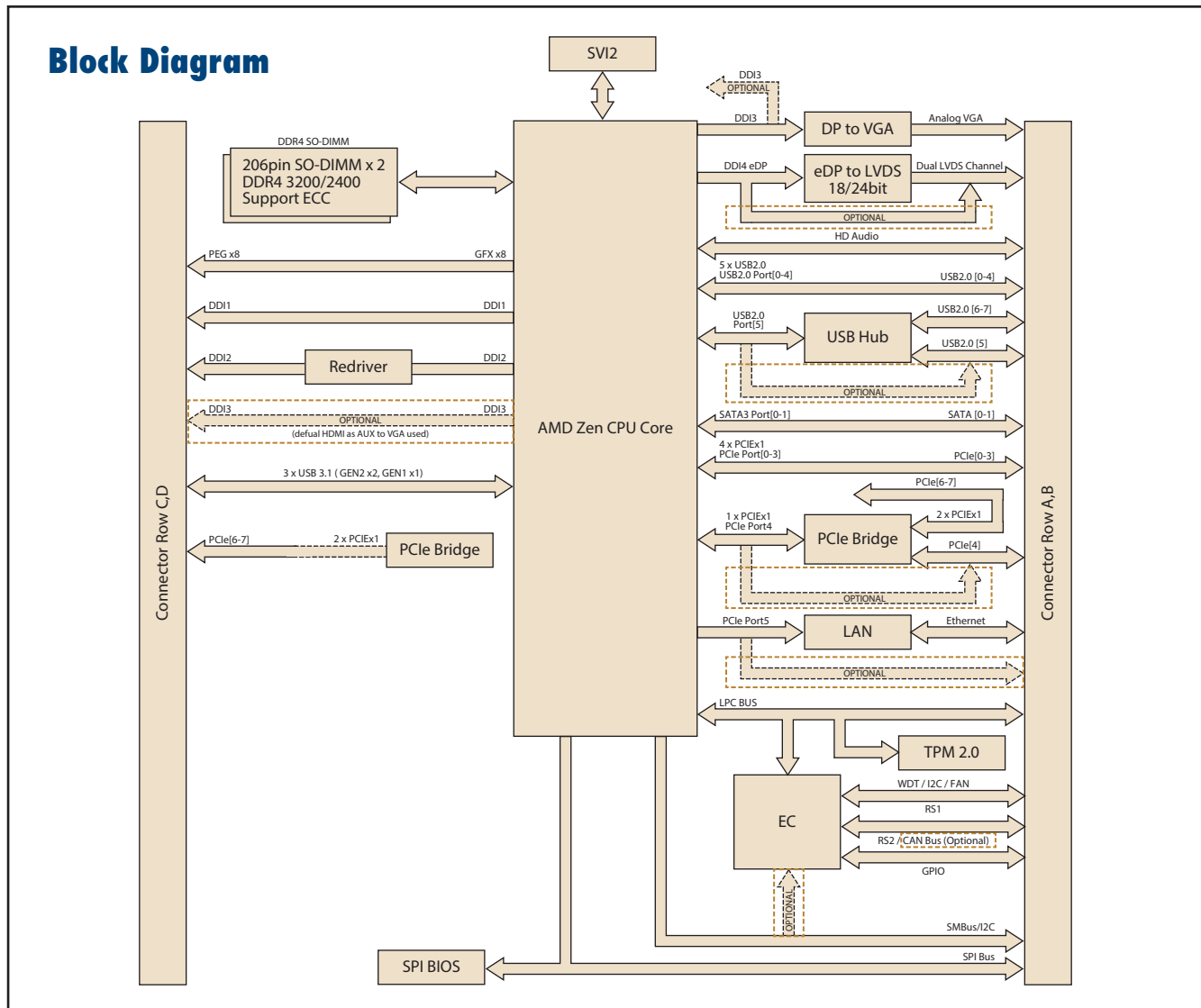
Utilities:

 BIOS flash
  Monitoring
  Embedded Security ID

Specifications

| | | |
|------------------|-----------------------------|--|
| Form Factor | Form Factor | COM Express Basic Module |
| | Pin-out Type | COM Express R3.0 Type 6 pin out |
| Processor System | CPU | AMD Zen CPU Core |
| | Base Frequency | TBD |
| | Turbo Boost Frequency | TBD |
| | Core/Thread | 2/4/8 |
| | LLC | 1M/2M |
| | CPU TDP | 12-54W |
| | Chipset | integrated in CPU |
| | BIOS | AMI 64MB, SPI |
| Memory | Technology | 2400/3200 MT/s |
| | ECC Support | Yes |
| | Max. Capacity | 32GB |
| | Socket | 2 SO-DIMM(dual channel) |
| Graphics | Controller | Vega Core Architecture |
| | Max. Frequency | 1.5GHz |
| | Graphic Memory | TBD |
| Display | 3D/HW Acceleration | H.265 Decode & Encode, VP9 Decode DirectX® 12/EGL 1.4/OpenCL™ 2.1/OpenGL® ES 1.1, 2.x, and 3.x OpenGL® Next/OpenGL® 4.6 |
| | VGA | 1 port up to 1920 x 1200 @ 60 Hz |
| | LCD | LVDS dual channel 18/24-bit LVDS, up to 1920 x 1200 @ 60 Hz option support eDP1.4, up to 4096 x 2304 @ 60Hz, 24bpp |
| | DDI | 2 Port configurable to HDMI1.4/DVI/DisplayPort1.4 HDMI up to 4096 x 2160 @ 30Hz, DVI up to 1920 x 1200 @ 60Hz, DisplayPort up to 3840 x 2160 @ 120Hz 2nd DisplayPort supports up to 8K resolution Quad display with each display combinations |
| Expansion | Multiple Display | |
| | PCI Express x1 | 1 PCIe4, 3PCIex1 or 7PCIex1 (optional) via PCIe Bridge |
| | Audio Interface (*For COMe) | HD Audio Interface |
| Serial Bus | LPC | Yes |
| | SMBus | Yes |
| | I2C Bus | Yes |
| Ethernet | CAN Bus | Yes (Optional, co-layout with COM2) |
| | Controller | Intel I210 AT/Intel I210 IT |
| I/O | Speed | 10/100/1000 Mbps |
| | SATA | 2 SATAIII 6.0Gb/s |
| | USB3.0 | 3 Ports |
| | USB2.0 | 8 Ports (optional 6 ports w/o hub) |
| | SPI Bus | Yes |
| | GPIO | 8-bit |
| | Watchdog | 65536 level, 0-65535 sec |
| | COM Port | 2 Ports (2-wire) |
| Power | TPM | TPM2.0 |
| | Smart Fan | 2 Ports; 1 port on COM module. Support 12V Fan, 1 port on carrier board |
| | Type | ATX: Vin, VSB; AT: Vin |
| Environment | Supply Voltage | Vin: 8.5V (9V-5%) ~ 20V (19+5%); VSB: 5 +/-5%, RTC Battery: 2.0-3.3V |
| | Power Consumption | TBD |
| | Temperature | Operating Standard: 0 ~ 60 °C (32 ~ 140 °F), Extend: -40 ~ 85 °C (-40 ~ 185 °F) Storage: -40 ~ 85 °C (-40 ~ 185 °F) |
| Mechanical | Humidity | Operating: 40 °C @ 95% relative humidity, non-condensing Storage: 60 °C @ 95%relative humidity, non-condensing |
| | Vibration Resistance | 3.5 Grms |
| | Dimensions | 125 x 95 mm (4.92" x 3.74") |

Block Diagram



Ordering Information

| Part No. | CPU | Freq. | Cores | CPU TDP | PCH | DDR4 Memory | Thermal Solution | Operating Temperature |
|----------|-----|-------|-------|---------|-----|-------------|------------------|-----------------------|
| TBD | | | | | | | TBD | 0 ~ 60 °C |
| TBD | | | | | | | TBD | 0 ~ 60 °C |
| TBD | | | | | | | TBD | 0 ~ 60 °C |

Packing List

| Part No. | Description | Quantity |
|----------|---------------------|----------|
| - | SOM-5871 CPU Module | 1 |
| TBD | Heatspreader | 1 |

Optional Accessories

| Part No. | Description |
|----------|-------------|
| TBD | |
| TBD | |

Development Board

| Part No. | Description |
|----------|---|
| TBD | COMe Devel. Board COMe R3.0 Type6 pint-out (SOM-DB5830) |