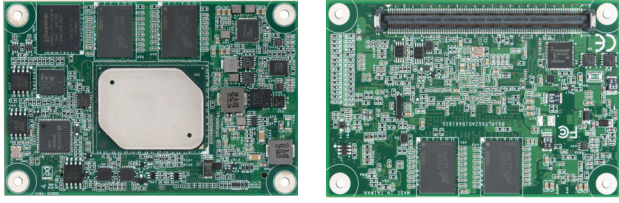


# PCOM-BA01

6<sup>th</sup> Generation Intel® ATOM™ Processor with LPDDR4 2400MT/s on board memory up to 8GB (SKU dependent), 4x PCIe 2.0 x1, eDP/LVDS, DP or HDMI display interface



## FEATURES

- 6<sup>th</sup> Generation Intel® ATOM™ Processor
- Support LPDDR4-2400 MT/s on board memory up to 8GB (SKU dependent)
- Support 8x USB 2.0 or 4x USB 2.0 + 3x USB 3.0, 2x SATA III and 4x PCIe 2.0 x1
- Wide voltage support, from 4.5V to 20V

PCOM-BA01, COM Express® Type 10 Mini Module designed with 6<sup>th</sup> Generation Intel® ATOM™ processors, supporting wide operation temperature -40° C ~ +85° C (on E series processors only).

| General                        |  |                        |                        |                        |                        |
|--------------------------------|--|------------------------|------------------------|------------------------|------------------------|
| Product                        | PCOM-BA01  |                        |                        |                        |                        |
| Form Factor                    | COM Express® Type 10 Compact Rev. 3.0  |                        |                        |                        |                        |
| Processor                      | Intel® Celeron®  | Intel® Pentium®        | Intel® ATOM™           | Intel® ATOM™           | Intel® ATOM™           |
|                                | N3350  | N4200                  | E3930                  | E3940                  | E3950                  |
| Core                           | 2  | 4                      | 2                      | 4                      | 4                      |
| Freq.                          | 1.10 GHz   | 1.10 GHz               | 1.30 GHz               | 1.60 GHz               | 1.60 GHz               |
| Turbo                          | 2.40 GHz   | 2.50 GHz               | 1.80 GHz               | 1.80 GHz               | 2.00 GHz               |
| Cache                          | 2 MB   | 2 MB                   | 2 MB                   | 2 MB                   | 2 MB                   |
| Processor Graphics             | Intel® HD Graphics 500   | Intel® HD Graphics 505 | Intel® HD Graphics 500 | Intel® HD Graphics 500 | Intel® HD Graphics 505 |
| Graphics Base Frequency        | 200.00 MHz   | 200.00 MHz             | 400.00 MHz             | 400.00 MHz             | 500.00 MHz             |
| Graphics Max Dynamic Frequency | 650.00 MHz   | 750.00 MHz             | 550.00 MHz             | 600.00 MHz             | 650.00 MHz             |
| HW Encoding                    | HEVC/H.265, H.264, MVC, VP8, VP9, JPEG/MJPEG   |                        |                        |                        |                        |
| HW Decoding                    | HEVC/H.265, H.264, MVC, VP8, VP9, MPEG2, VC-1, WMV9, JPEG/MJPEG                        |                        |                        |                        |                        |
| HW Acceleration                | Gen9 LP, DX 9.3/10/11.1/12, OpenGL 4.3, OGL ES 3.0, OpenCL 1.2, PAVP 2.0, HDCP 1.4/2.0 |                        |                        |                        |                        |
| Processor TDP                  | 6 W  | 6 W                    | 6.5W                   | 9.5W                   | 12W                    |
| BIOS                           | AMI Aptio5 UEFI BIOS   |                        |                        |                        |                        |
| ECC Memory Supported           | No   |                        |                        |                        |                        |
| Memory                         | LPDDR4 2400MT/s On board memory<br>Up to 8GB (SKU dependent)                           |                        |                        |                        |                        |

| I/O Interface |   |                           |                        |
|---------------|---|---------------------------|------------------------|
| SATA          | 2x SATA III   |                           |                        |
| USB           | 8x USB 2.0 / 1 OTG (optional) or<br>4x USB 2.0 + 3x USB 3.0 |                           |                        |
| Ethernet      | 1 GbE (I210-IT)   |                           |                        |
| Serial I/O    | GPIO  | 8 GPIO (4 GPI and 4 GPO)  |                        |
|               | I <sup>2</sup> C  | Baud Rate : 400KHz        |                        |
|               | SMBus   | Baud Rate : 100KHz        |                        |
|               | UART  | 2 Serial Port (TX and RX) |                        |
| PEG           | N/A   |                           |                        |
| PCI Express   | 1x PCIe 2.0 x4<br>( 1x4 / 2x2 / 4x1)                        |                           |                        |
| Display       | Default   | Options                   | Resolution             |
|               | LVDS  | LVDS                      | Up to 1920x1200 @ 60Hz |
|               |   | eDP 1.3                   | Up to 3840x2160 @ 60Hz |
|               | DDI1-DP   | DP 1.2                    | Up to 4096x2160 @ 60Hz |
| HDMI 1.4b     |   | Up to 3840x2160 @ 30Hz    |                        |
| Security      | N/A   |                           |                        |

## MECHANICAL & ENVIRONMENT

|                       |   |
|-----------------------|---|
| Dimension             | 84mm x 55mm (3.34" x 2.17")   |
| Power DC IN           | Nominal : +12V DC<br>Wide range : +4.5VDC ~ +20VDC<br>AT / ATX Mode |
| Storage Temperature   | -40°C ~ +85°C   |
| Operating Temperature | -40°C ~ +85°C   |
| Certification         | CE<br>FCC CLASS A   |
| MTBF                  | Over 100,000 hours at 40°C  |
| Vibration             | TBD   |
| OS                    | Windows 10<br>Linux CentOS 6  |

## ORDERING GUIDE

| Product   | Ordering P/N | Status    |
|-----------|--------------|-----------|
| PCOM-BA01 | AB1-3F36Z    | Available |

| Accessory                    | Ordering P/N     | Status    |
|------------------------------|------------------|-----------|
| PCOM-BA01 Heat Sink          | Contact Portwell | Available |
| Evaluation Carrier PCOM-CA00 | Contact Portwell | Available |

## BLOCK DIAGRAM

# PCOM-BA01

COM Express® Type 10 Mini Module 84x55mm    AT / ATX Mode    +4.5~+20VDC    -40°C ~ +85°C (E series only)

