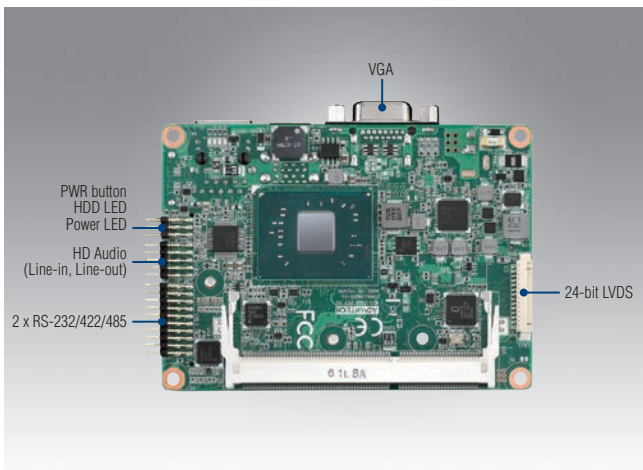


MIO-2360

Intel® Pentium N4200/Celeron N3350/Atom™ E3900 series Pico-ITX SBC



Features

- Intel® Pentium N4200/Celeron N3350/Atom™ E3900 series
- DDR3L 1866MHz support up to 8GB
- Dual display: 24-bit LVDS+VGA/HDMI
- mSATA & mPCIe for expansion and MIOe conn.
- USB3.0, SATA3.0, 2 x RS-232/422/485
- WISE-PaaS/RMM and Embedded Software APIs

Software APIs:



Utilities:

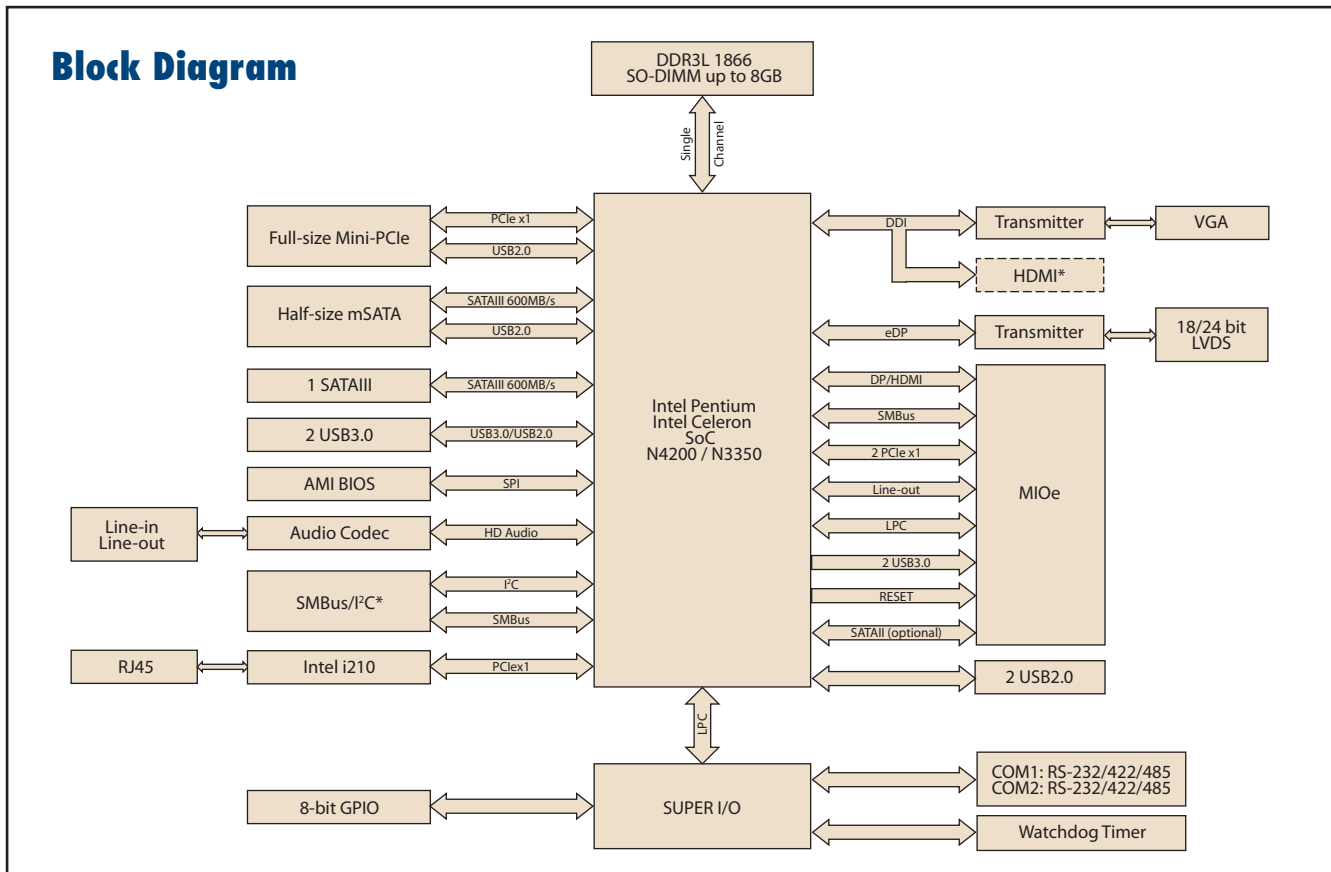


Specifications

| | CPU | Pentium N4200 | Intel Celeron N3350 | Intel Atom E3940 | Intel Atom E3930 | |
|--------------------------|---------------------------------------|--|----------------------|----------------------|----------------------|--|
| Processor System | CPU | Pentium N4200 | Intel Celeron N3350 | Intel Atom E3940 | Intel Atom E3930 | |
| | Frequency | 1.10 GHz (Quad-Core) | 1.10 GHz (Dual-Core) | 1.60 GHz (Quad-Core) | 1.30 GHz (Dual-Core) | |
| | L2 Cache | 2 MB | | | | |
| | Max Turbo Frequency | 2.50 GHz | 2.40 GHz | 1.80 GHz | 1.80 GHz | |
| | System Chipset | Intel Celeron / Atom SoC processor integrated | | | | |
| | BIOS | AMI EFI 64 Mbit | | | | |
| Memory | Technology | DDR3L 1866 MHz | | | | |
| | Max. Capacity | 8 GB | | | | |
| | Socket | 1 x 204-pin SODIMM (Support 1.35V DDR3L) | | | | |
| Display | Chipset | Intel® Celeron/Atom SoC integrated | | | | |
| | Graphic Engine | DirectX 12.0, OpenGL 4.3, OpenCL 2.0 HW Decode: MPEG2, H.264 (L5.2), VC-1, WMV9, VP8, JPEG/MJPEG, H.265 (HEVC), MVC | | | | |
| | LVDS | Supports single channel 24-bit LVDS Resolution: 1440 x 900 at 60Hz | | | | |
| | VGA | Up to 1920 x 1200 at 60Hz | | | | |
| | HDMI | Up to 3840 x 2160 at 30Hz (*support by request) | | | | |
| Dual Display | Yes (VGA+LVDS+MIOe or HDMI+LVDS+MIOe) | | | | | |
| Ethernet | Speed | 10/100/1000 Mbps | | | | |
| | Controller | Intel i210 | | | | |
| | Connector | RJ45 on rear I/O | | | | |
| Audio | Chipset | Realtek ALC888S, High Definition Audio (HD), Line-in, Line-out | | | | |
| Watchdog Timer | | Output system reset, programmable counter from 1~255 minutes/ seconds | | | | |
| Storage | mSATA | 1 x half size mini PCIe slot | | | | |
| | SATA | 1, up to 6Gb/s (600MB/s) | | | | |
| Rear I/O | Ethernet | 1 | | | | |
| | VGA | 1 | | | | |
| | HDMI | 1* (*support by request) | | | | |
| | USB | 2 x USB 3.0 | | | | |
| | DC Power Jack | 1 (*support by request) | | | | |
| Internal I/O | USB | 2 x USB 2.0 | | | | |
| | COM Port | 2 x RS-232/422/485 from COM1 & COM2 with auto-flow control (ESD protection for RS-232: Air gap ±15kV, Contact ±8kV) | | | | |
| | Serial Bus | SMBus (default), I2C* (optional) | | | | |
| | GPIO | 8-bit general purpose input/ output | | | | |
| | Mini PCI Express | 1 x Full-size (*optional: 1 x Half-size) | | | | |
| Expansion | MIOe | SMBus, 2 x USB3.0, LPC, 2 x PCIe x1, line out, DisplayPort/HDMI*, +5 Vsb/+12 Vsb power, Power On, Reset, SATA* | | | | |
| | Power Type | Single 12V DC power input (Supports DC power hot plug) | | | | |
| Power | Power supply voltage | Supports single 12V input, ±10% | | | | |
| | Total peripheral power supply output | 5V @ 3A for CPU board and MIOe module totally, 12V @ 2A for MIOe module | | | | |
| | Power Consumption (Idle) | 4.89 W (12V) | 4.61 W (12V) | 5.39W (12V) | 4.43W (12V) | |
| | Power Consumption (Max) | 12.90 W (12V) | 17.18 W (12V) | 13.55W (12V) | 11.59W (12V) | |
| | Power Management | ACPI | | | | |
| | Battery | Lithium 3V/ 210mAh | | | | |
| Environment | Operation | 0 - 60 °C with air flow 0.7m/s (32 - 140 °F) (Operational humidity: 40 °C @ 95% RH Non-Condensing) | | | | |
| | Non-Operation | -40 °C - 85 °C and 60 °C @ 95% RH non-condensing | | | | |
| Physical Characteristics | Dimensions (L x W) | 100 x 72 mm (3.9" x 2.8") | | | | |
| | Weight | 0.47 kg (1.04 lb), weight of total package | | | | |
| | Total Height | 34.10 mm | | | | |

* Support by request

Block Diagram



Ordering Information

| Part Number | CPU | Max. frequency | Core | Memory | VGA | Mini PCIe | Thermal solution | Operating Temp |
|-----------------|----------------|----------------|------|--------|-----|-----------|------------------|----------------|
| MIO-2360N-S2A2 | Pentium N4200E | 2.50 GHz | 4 | SODIMM | Yes | Yes | Passive | 0 ~ 60 °C |
| MIO-2360N-S1A2 | Celeron N3350E | 2.40 GHz | 2 | SODIMM | Yes | Yes | Passive | 0 ~ 60 °C |
| MIO-2360AX-S8A2 | Atom E3940 | 1.80 GHz | 4 | SODIMM | Yes | Yes | Passive | -40 ~ 85 °C |

Packing List

| Part No. | Description | Quantity |
|----------------|---|----------|
| | MIO-2360 SBC | 1 |
| | Startup Manual | 1 |
| 1700006291 | SATA cable 30cm | 1 |
| 1700027546-01 | A cable 1*5P-2.0/1*5P-2.0+SATA 15P 15cm MIO-2360 | 1 |
| 1701200220 | RS-232 x 2 ports 2.0mm pitch 22cm | 1 |
| 1700022444-01 | Audio cable 2.0 mm pitch 20 cm (line-in & line-out) | 1 |
| 1700002172 | USB cable 2.0 mm pitch USB-A(F) 17 cm | 1 |
| 1700019705 | AT power cable 12 cm | 1 |
| 9666226300E | Screw and stud pack (2 screw for Mini PCIe, 4 x M3 studs and screws for heatsink) | 1 |
| 1960078695T001 | MIO-2360 Heatsink for N series sku | 1 |
| 1970004885T001 | MIO-2360 Heatsink for E39XX sku | 1 |

Optional Accessories

| Part No. | Description |
|--------------------|--|
| 1960085302N001 | MIO-2360 heatspreader for N series sku |
| IDK-1110WP-50XGA1E | 10.1" LED PANEL 500N |
| IDK-1115P-50XGA1E | 15" LED PANEL 500N |
| 1960085302N021 | MIO-2360 heatspreader for E39XX sku |

Embedded OS/API

| Embedded OS/API | Part No. | Description |
|------------------|------------------|---|
| Windows 10 | 20706WX6ES0015 | 64-bit (UEFI Mode Only) |
| VxWorks | TBD | |
| Software API | Website Download | SUSI v4.0 |
| Ubuntu 20.04 LTS | 20706U20DS0036 | Ubuntu Desktop 20.04 LTS 64-bit Image & License Sticker for MIO-2360 |

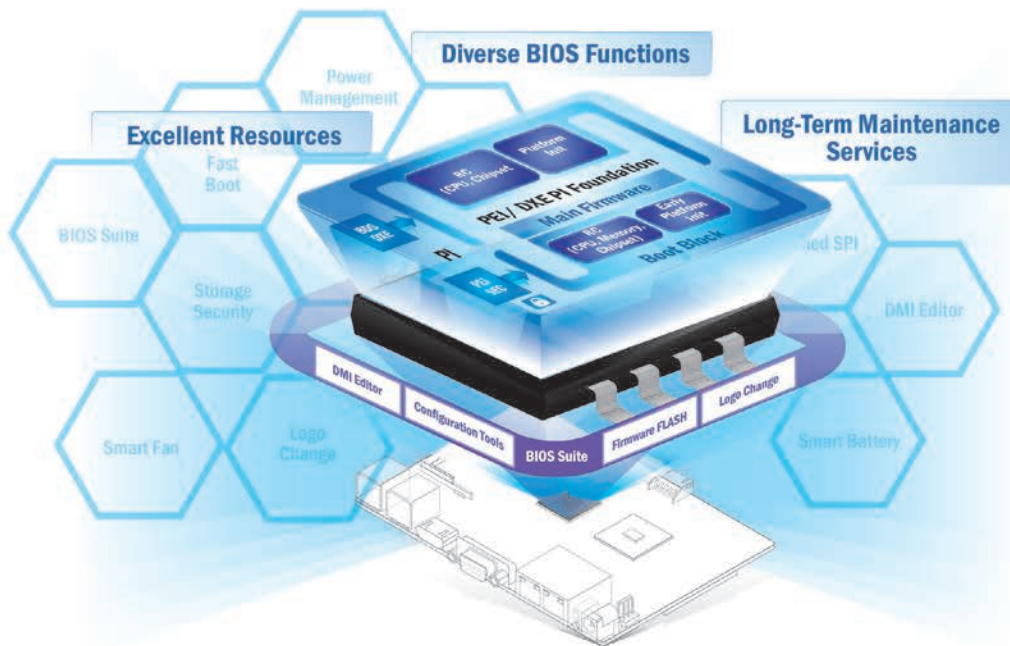
Rear I/O View



Reliable Embedded BIOS Solutions

Custom BIOS services with long-term support

Advantech's high-quality embedded BIOS solutions deliver rapid execution and feature expert BIOS team support. These solutions feature multi-functional designs that ensure security and enable power/boot management. Advantech further provides 10+ years of BIOS version management, internal management, and longevity support for both hardware and BIOS — enhancing application efficiency, diversifying functionality, and optimizing performance.



Embedded BIOS Solution Advantages

Sufficient Sources

- Strong partnership with BIOS vendors
- 50+ engineers with extensive industrial BIOS experience

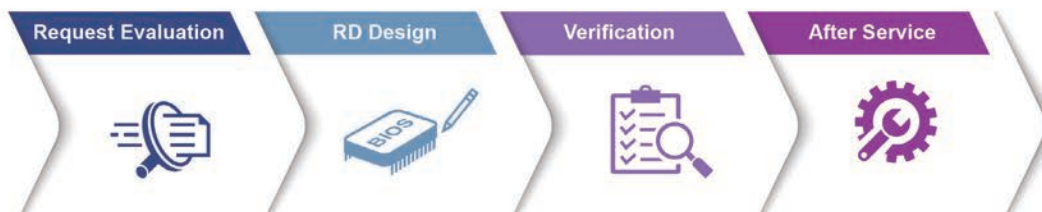
Diverse BIOS Functions

- Multi-layer security
- 3 second fast boot
- Power management
- BIOS suite utility

Long-Term Maintenance Services

- Platform longevity support
- 10-year BIOS version control
- BIOS remote backup

Value-Added Customization Process



Embedded Linux Support and Design-in Services

Hardware Certified Ubuntu and Yocto with Eco Partner Services

Linux is the most popular embedded OS for transportation, outdoor services, factory automation, and mission critical applications. Its open source and kernel reliability features ease security updates, and make it particularly adaptable to new AI and Edge computing technology. Advantech has cooperated with Canonical and other software partners to provide hardware certified Ubuntu image and Yocto BSP as Linux offerings. The Advantech, Embedded Linux, and Android Alliance (ELAA) delivers local software services and consultation.



Features

| Certified OS and BSP | Licensed Services | Numerous AI and Edge Resources | Local Partner Alliance |
|---|--|---|--|
| <ul style="list-style-type: none"> Platform compatibility tests Preloaded functional driver and software stacks | <ul style="list-style-type: none"> License authorized Canonical delivers 10-years of bug fixes and security updates In-house bundled service | <ul style="list-style-type: none"> Containerized technology for service provision and deployment AI resources from Caffe, TensorFlow, and mxnet | <ul style="list-style-type: none"> Embedded Linux and Android Alliance (ELAA) |

Edge AI Suite

AI development for diverse application at the Edge

Increasing demand for AI inference/analytic capabilities at the Edge make AI training models, software development environments, and hardware configuration key factors in successful solution deployment. Advantech's Edge AI Suite helps users build AI demo devices quickly and choose optimal hardware solutions easily.



| 5x Performance Boost | All-in-one Installation | One Click AI Experience | Plug-and-play Environment | Discover Cost-effective Hardware |
|---|---|---|---|---|
| <ul style="list-style-type: none"> Integrated Intel® OpenVINO™ technology Boost AI using Advantech hardware | <ul style="list-style-type: none"> Build AI environment in under 5 minutes Ready-to-use configuration | <ul style="list-style-type: none"> User friendly configuration guidance One-click Benchmark acquisition | <ul style="list-style-type: none"> Easy access to 100+ AI inference extensions Software development package available | <ul style="list-style-type: none"> Diverse CPU/RAM options Find hardware solutions for AI development |

WISE-DeviceOn

Massive IoT Device Management Utility

IoT deployment and management typically involves numerous disparate devices installed on multiple sites. These devices require effective monitoring, managing, and tracking. Advantech's easy-to-use WISE-DeviceOn interface enables users to remotely monitor device health, troubleshoot problems, and send software/firmware updates over-the-air (OTA). In sum, DeviceOn empowers quick real-time responsiveness to emerging problems.



Features

| Comprehensive Management | Remote Access | Efficient Operations |
|--|--|--|
| <ul style="list-style-type: none"> • Devices status • Peripherals/firmware • Open for extension | <ul style="list-style-type: none"> • Real-time monitoring • Remote controls • Troubleshooting | <ul style="list-style-type: none"> • Zero-touch on-boarding • OTA updates • Batch control |

Product Highlights



SOM-6883

High-performance 11th Gen Intel[®] COMe Type 6 Module



MIO-5375

Compact 11th Gen Intel[®] Outdoor Focused 3.5" SBC



EPC-B5587

10th Gen Intel[®] Xeon[®] based Edge server



EPC-R3220

Arm based IoT Edge Gateway