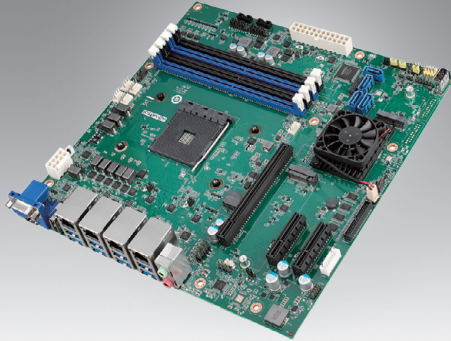


AIMB-522

**AMD AM4 Ryzen™ 5000 Series
MicroATX with 1 DP/HDMI/VGA, 6 COM,
2 x 2.5GbE, 2 x 1GbE LANs, 8 USB 3.2,
3 USB2.0**

Preliminary



WISE-DeviceOn

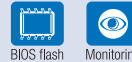
Features

- Supports AMD AM4 Ryzen™ 5000 series processor with X570 chipset
- Supports triple displays. (DP, VGA, HDMI display)
- Supports PCIe Gen4, max up to 8 x USB 3.2 Gen2, 3 x USB 2.0, 4 x SATAIII, 2 x 2.5GbE, 2 x 1GbE LANs, M.2 (M Key& E Key)
- Supports DeviceOn and Embedded Software APIs

Software APIs:



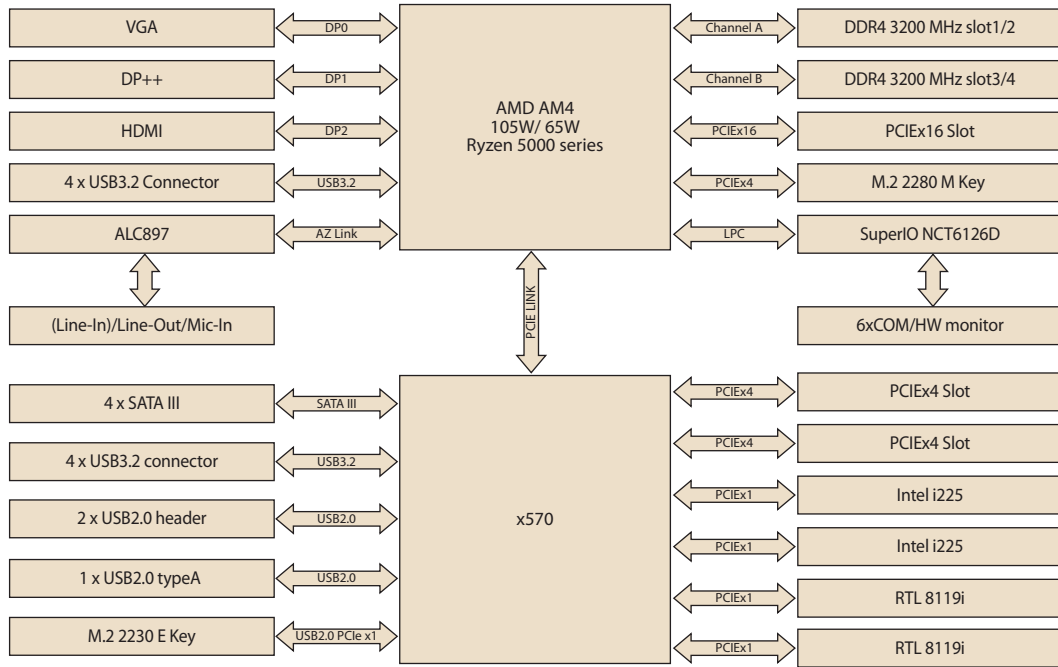
Utilities:



Specifications

| | CPU | 5950E | 5900E | 5800E | 5600E | 5950X | 5900X | 5800X | 5600G | 5700G | |
|--------------------------|------------------------|---|--------------|---------|-------------|----------------------------|--------|--------|--------|--------|--|
| Processor System | Core Number | 12 | 10 | 8 | 6 | 16 | 12 | 8 | 6 | 8 | |
| | Max. Speed | 3.4 GHz | 3.7 GHz | 3.7 GHz | 3.6 GHz | 3.4GHz | 3.7GHz | 3.8GHz | 3.9GHz | 3.8GHz | |
| | L3 Cache | 64 MB | 64 MB | 32 MB | 32 MB | 64MB | 64MB | 32MB | 16MB | 16MB | |
| | TDP (W) | 105W | 105W | 100W | 65W | 105W | 105W | 105W | 65W | 65W | |
| | CPU/APU | CPU | CPU | CPU | CPU | CPU | CPU | CPU | APU | APU | |
| | Chipset | X570 | | | | | | | | | |
| | BIOS | AMI EFI 256 Mbit SPI | | | | | | | | | |
| Expansion Slot | PCIe x16 | 1 (x16 Gen4 signal from CPU; Gen3 signal from APU) | | | | | | | | | |
| | PCIe x4 slot 1 | 1 (x4 signal from X570), only support half-length card and up-to PCIe x8 card | | | | | | | | | |
| | PCIe x4 slot 2 | 1 (x4 signal from X570), only support half-length card and up-to PCIe x8 card | | | | | | | | | |
| | M.2 | 1 (2280 M key, PCIe Gen4 x4 from CPU, Gen3 x4 from APU) 1 (2230 E key, USB 2.0 and PCIe Gen4 x1 from X570) | | | | | | | | | |
| Memory | Technology | Supports Dual Channel DDR4 3200MHz | | | | | | | | | |
| | Max. Capacity | 128GB (32GB per DIMM) | | | | | | | | | |
| | Socket | 4 x 288 pin U DIMM | | | | | | | | | |
| Graphics | Controller | APU : Radeon™ Graphics CPU: N/A (Discrete Graphics Card Required) | | | | | | | | | |
| | VGA | 1, up to 1920x1200@60Hz, 2048x1152@60Hz | | | | | | | | | |
| | HDMI | 1, up to 4096x2304@30Hz | | | | | | | | | |
| | Display Port | 1, up to 4096x2304@30Hz | | | | | | | | | |
| | Triple Display | VGA+DP+HDMI (5600G/5700G only) | | | | | | | | | |
| Ethernet | Controller | 2 x INTEL LAN i225LM, 2 x Realtek 8119i | | | | | | | | | |
| | Connector | 4 x RJ 45 | | | | | | | | | |
| SATA | Max Data Transfer Rate | 600 MB/s Max. (SATA 3.0) | | | | | | | | | |
| | Q'ty | 4 | | | | | | | | | |
| Rear I/O | Display Port | 1 | | | | | | | | | |
| | VGA | 1 | | | | | | | | | |
| | HDMI | 1 | | | | | | | | | |
| | Ethernet | 4 | | | | | | | | | |
| | USB | 8 USB 3.2 ports (4 ports from CPU/APU, 4 ports from X570) | | | | | | | | | |
| | Audio | 2 Jacks (colay 3 Jacks) | | | | | | | | | |
| | USB 2.0 | 2 for pin header and 1 for type A connector | | | | | | | | | |
| Internal Connector | Serial | COM1, COM2 with 10pin box header (RS-232/422/485) COM3456 with 40pin box header (RS-232 only) | | | | | | | | | |
| | SATA 3.0 | 4 | | | | | | | | | |
| | PS/2 (KBMS1) | 1 (6-pin header) | | | | | | | | | |
| | M.2 (M key) | 1 (2280 NVMe PCIe4) | | | | | | | | | |
| | GPIO | 1, 8bit pin header | | | | | | | | | |
| | Watchdog Timer | Output | System reset | | | | | | | | |
| | Interval | Programmable 1 ~ 255 sec/min | | | | | | | | | |
| Power Requirements | Power On | +5 V | 3.3 V | 12 V | 12 V(8-pin) | -12V | +5VSB | GND | | | |
| | | 23A | 17.73A | 25.3A | 16.1A | 0.12A | 2.5A | 0A | | | |
| Environment | Temperature | Operating | | | | Non-Operating | | | | | |
| | | 0 ~ 45 °C (TBD) 0 ~ 60 °C (TBD) | | | | -40 ~ 85 °C (-40 ~ 185 °F) | | | | | |
| Physical Characteristics | Dimensions | 244 x 244 mm | | | | | | | | | |
| Power | Input Mode | ATX input | | | | | | | | | |

Block Diagram



Ordering Information

| P/N | Chipset | Rear IO USB3.2 | Internal USB2.0 header | Internal USB2.0 typeA | DP++/VGA | HDMI | GbE LAN | 2.5 Gbe LAN | SATA III | COM | M.2 E-key | M.2 M-key | TPM | AMP (6W) |
|-----------------|---------|----------------|------------------------|-----------------------|----------|------|------------------------|-------------|----------|-----|-----------|-----------|-----|----------|
| AIMB-522G4-00A1 | X570 | 8 | 2 | 1 | 1/1 | 1 | 2 | 2 | 4 | 6 | 1 | 1 | 1 | (1) |
| AIMB-522G2-00A1 | X570 | 8 | 2 | 1 | 1/1 | 1 | 2 (Realtek 8119i only) | 0 | 4 | 6 | 1 | 1 | 1 | (1) |

* () means BOM option

Packing List

| Part Number | Description | Quantity |
|----------------|------------------|----------|
| 1700003194 | SATA HDD cable | 2 |
| 1960107927T001 | I/O port bracket | 1 |
| 1930001071 | M.2 screws | 2 |

Optional Accessories

| Part Number | Description |
|----------------|---|
| 1700033177-01 | 1-to-1 serial port cable kit, 60cm with bracket |
| 1700022363-01 | 1-to-1 serial port cable kit, 17cm |
| 1700030647-01 | 1-to-1 serial port cable kit, 30cm |
| 1700000447 | 1-to-4 serial ports cable kit, 45cm |
| 1700002204 | Dual port USB 2.0 cable, 27cm with bracket |
| 1700032182-01 | Dual port USB 2.0 cable, 60cm |
| 1970005287T001 | AMD AM4 CPU cooler for 2U chassis, for CPU TDP 65W, 96x92x79.55mm |

I/O View



AIMB-522G4-00A1

AIMB-522G2-00A1

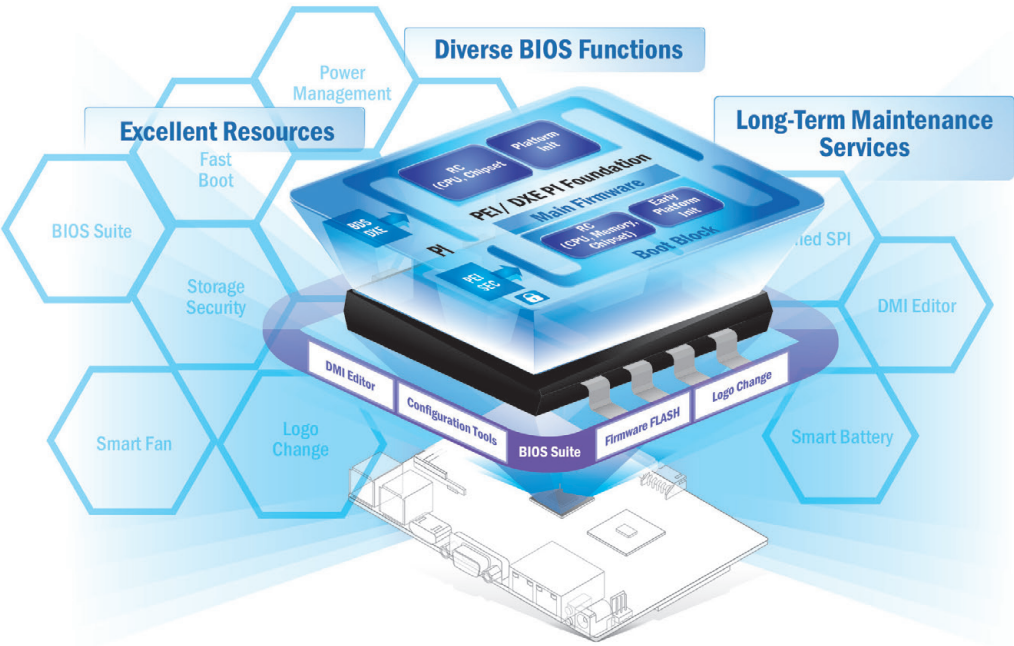
Embedded OS/API

| OS/API | Part No. | Description |
|---------------|----------------|--------------------------------------|
| win10 IoT Ent | 20706WX9ES0172 | IMG W10 19EL |
| | 20706WX9HS0157 | IMG W10 19HL |
| | 20706WX9VS0161 | IMG W10 19VL |
| Ubuntu20.04 | 20706U20DS0054 | Ubuntu Desktop 20.04 LTS 64bit Image |

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

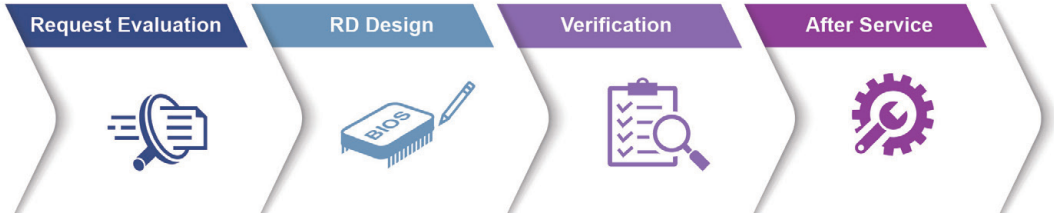
Diverse BIOS Functions

- 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



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 |

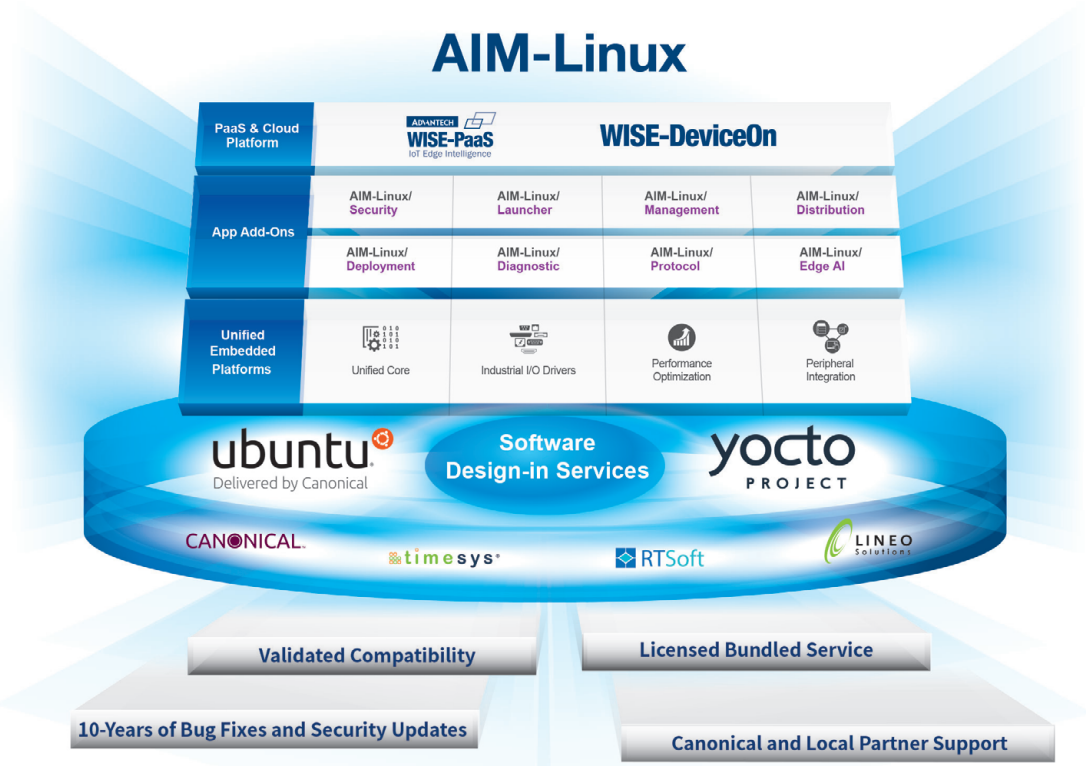
Product Highlights

| | | | |
|---|--|--|---|
|  SOM-6883 High-performance 11 th Gen Intel® COMe Type 6 Module |  MIO-5375 Compact 11 th Gen Intel® Outdoor Focused 3.5" SBC |  EPC-B5587 10 th Gen Intel® Xeon® based Edge server |  EPC-R3220 Arm based IoT Edge Gateway |
|---|--|--|---|

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) |

Tento produkt můžete zakoupit u společnosti AutoCont IPC a.s.



AutoCont IPC a.s.

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ODMĚNA ZA VĚRNOST

Pravidelní zákazníci u nás nakupují za nižší ceny. Výše slevy se odvíjí od realizovaného obrátu.



SERVIS ON-SITE A IN-TIME

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