

# AIR-355

## Intel® Core™ Ultra Series 3 PTL MXM Type A GPU Edge AI System



### Features

- Powered by Intel® Core Ultra 5(325) or 7(366H) Panther Lake Processor
- Up to 180 TOPS AI Performance (CPU/10, NPU/50, GPU/120)
- 1x M.2 E Key (WiFi/BT) or B Key (5G)
- 2x M Key (storage)
- 12-24V wide range power input
- -10-50°C wide temp. supported
- Support MXM 3.1 Type A (Up to 60W) or extra 2x M.2 2280 M Key storage

### Specifications

|                   |                        |                                                                                         |                                  |
|-------------------|------------------------|-----------------------------------------------------------------------------------------|----------------------------------|
| Processor System  | CPU                    | Intel® Core™ Ultra 7 - 366H (12Xe)                                                      | Intel® Core™ Ultra 5 - 325 (4Xe) |
|                   | Frequency              | 1.9GHz up to 4.8GHz                                                                     | 2.1GHz up to 4.5GHz              |
|                   | AI Capacity            | Up to 180 TOPS                                                                          | Up to 95 TOPS                    |
| Memory            | Technology             | DDR5 6400/7200 MT/s CSODIMM                                                             | DDR5 6400 MT/s CSODIMM           |
|                   | Max Capacity           | Up to 128GB                                                                             |                                  |
|                   | Socket                 | 2x 262-pin CSODIMM (Non-ECC)                                                            |                                  |
| Ethernet          | Interface              | RJ-45                                                                                   |                                  |
|                   | Speed                  | 4x 2.5GbE Ethernet (10/100/1000/2500 Mbps)                                              |                                  |
| Display           | HDMI                   | 1x HDMI 2.1 (FRL), Max 3840 x 2170 (4K) at 60Hz                                         |                                  |
|                   | DP                     | 1x DP 1.4a, Max 3840 x 2170 (4K) at 60Hz                                                |                                  |
| IO Ports          | USB                    | 7x USB 3.2 Gen2 Type A<br>1x USB 2.0 Type A<br>1x USB Type C w/USB4, DP alt mode        |                                  |
|                   | CANBus                 | 1x CANBus (DB9 connector)                                                               |                                  |
|                   | DI/DO                  | 1x 8-bit (DB9 connector)                                                                |                                  |
|                   | COM                    | 2x RS-232/RS-422/RS-485 (default: RS-232) (DB9 connector)                               |                                  |
|                   | Audio                  | 1x Line-out, 1x Mic-in                                                                  |                                  |
|                   | Mini DP                | 1x Mini DP w/MIPI CSI2 D-PHY 2 lane<br>1x Mini DP w/MIPI CSI2 D-PHY 4 lane              |                                  |
| Expansion         | M.2                    | 1x M.2 2230 E Key for Wi-Fi/Bluetooth<br>1x M.2 3052 B Key for 5G w/ 1x nano SIM holder |                                  |
| Other             | WatchDog Timer         | 255 levels timer interval, setup by software                                            |                                  |
|                   | TPM                    | TPM 2.0                                                                                 |                                  |
| Storage           | M.2                    | 1x M.2 2280 M Key for NVMe (Default)<br>1x M.2 2242 M Key for NVMe                      |                                  |
| Power             | Power Input            | 12-24V DC input                                                                         |                                  |
|                   | Power Type             | ATX/AT, ATX default                                                                     |                                  |
| Power Consumption | Typical (OS idle mode) | TBD                                                                                     |                                  |
|                   | Max. (Full loading)    | TBD                                                                                     |                                  |
| Environment       | Op. Temp               | -10-50°C with 0.7m/s air flow                                                           |                                  |
|                   | Op. Humidity           | 95% @ 40 °C (non-condensing)                                                            |                                  |
| Mechanical        | Dimensions (W x D x H) | 215 x 190 x 60 mm                                                                       |                                  |
|                   | Weight                 | TBD                                                                                     |                                  |
| Operating System  | Microsoft Windows      | Windows 11 (LTSC)                                                                       |                                  |
|                   | Linux                  | Ubuntu 24.04                                                                            |                                  |
| Software Support  | Software API           | Edge AI SDK / SUSI / DeviceOn                                                           |                                  |
| Certifications    | EMC/Safety             | CE/FCC Class B, CB, UL, CCC and BSMI                                                    |                                  |

Advantech SUSI is a device management and system monitoring suite for hardware configuration, control, and status monitoring.

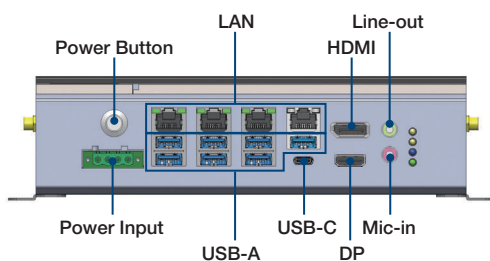
SUSI information: <https://github.com/ADVANTECH-Corp/SUSI>

## Dimensions

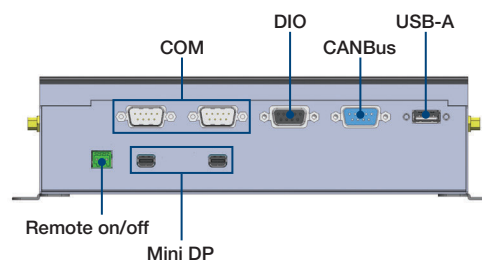
Unit: mm [inch]



## Front Panel I/O Placement



## Back Panel I/O Placement



## Ordering Information

| Part No.       | CPU          | RAM                   | MXM    | HDMI | DP | LAN | USB Type A             | USB Type C | CANBus | DIO | COM | Mini DP | M.2 B | M.2 E | M.2 M | SIM | Option Module |
|----------------|--------------|-----------------------|--------|------|----|-----|------------------------|------------|--------|-----|-----|---------|-------|-------|-------|-----|---------------|
| AIR-355-45A1U  | Ultra 5 325  | 2 socket (up to 128G) | NA     | 1    | 1  | 4   | 7x USB3.2<br>1x USB2.0 | 1          | 1      | 1   | 2   | 2       | 1     | 1     | 1     | 1   | 5G/WiFi       |
| AIR-355M-48A1U | Ultra 7 366H | 2 socket (up to 128G) | Type A | 1    | 1  | 4   | 7x USB3.2<br>1x USB2.0 | 1          | 1      | 1   | 2   | 2       | 1     | 1     | 1     | 1   | 5G/WiFi       |

## Packing List

| Part Number   | Description   | Quantity |
|---------------|---------------|----------|
| -             | AIR-355 Unit  | 1        |
| -             | User Manual   | 1        |
| -             | Mounting Kit  | 1        |
| 1652003234    | Power in plug | 1        |
| 1652008227-01 | Remote plug   | 1        |

\* In case of any changes, the actual packaging shall prevail

## Optional

| Part Number        | Description                                  |
|--------------------|----------------------------------------------|
| SKY-MXM-2000A-8SDA | Quadro 2000 Ada MXM 8GB Discrete mode Type A |
| 96PSA-A330W24P4-3  | A/D 100-240V 330W 24V C14 TERMINAL BLOCK 4P  |
| 1702002600         | Power Cord UL 3P 10A 125V 183cm (US)         |
| 1702002605         | Power Cord EU 3P 10A 250V 183cm (EU)         |
| 1702031801         | Power Cord BSI 3P 10A 250V 183cm (UK)        |
| 1700000237         | Power Cord PSE 3P 12A 125V 183cm (Japan)     |
| 1700013977         | Power Cord CCC 3P 10A 250V 200cm 90°(China)  |
| AIW-173BQ-GI1      | Qualcomm Wi-Fi 7 M.2 2230 E Key              |
| 1751000620-01      | 1x Cable Ant. L300mm for WIFI                |
| 1751000651-01      | 1x Antenna for WIFI                          |
| AIW-356DQ-E01      | Qualcomm 5G M.2 3052 B-Key                   |
| 1751000623-01      | 1x Cable Ant. L300mm for 5G                  |
| 1750009372-01      | 1x Antenna for 5G                            |

## Inference Kit | Production-Ready AI Inference on Edge Devices

**Provides a unified and hardware-aligned runtime for deploying and validating AI inference on edge devices**

It simplifies integration across CPUs, GPUs, and AI accelerators while enabling performance benchmarking and compatibility verification on target hardware. Designed for production use, Inference Kit helps hardware partners ensure stable, scalable, and repeatable AI deployment across product lines.



### EdgeAI SDK Inference Kit

Streamlined Edge Inference

- Ready-to-Run Inference Runtime
- Accelerator-Aware Optimization
- Stable Edge Production Stack
- Unified Inference Interfaces





## Benefits and Features

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
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| <div style="border: 1px solid black; width: 60px; height: 60px; margin: 0 auto; display: flex; align-items: center; justify-content: center; margin-bottom: 10px;">  </div> <p><b>Unified Inference Runtime</b></p> <ul style="list-style-type: none"> <li>▪ Consistent inference across CPUs, GPUs, and accelerators</li> <li>▪ Vendor-optimized runtime integration</li> <li>▪ Built-in UniIntra acceleration framework</li> <li>▪ Optimized inference pipelines and runtime efficiency</li> </ul> | <div style="border: 1px solid black; width: 60px; height: 60px; margin: 0 auto; display: flex; align-items: center; justify-content: center; margin-bottom: 10px;">  </div> <p><b>Hardware Validation</b></p> <ul style="list-style-type: none"> <li>▪ Benchmarking on target devices</li> <li>▪ OS and accelerator compatibility validation</li> <li>▪ Performance and stability verification</li> </ul> |
| <div style="border: 1px solid black; width: 60px; height: 60px; margin: 0 auto; display: flex; align-items: center; justify-content: center; margin-bottom: 10px;">  </div> <p><b>Production-Ready Deployment</b></p> <ul style="list-style-type: none"> <li>▪ Stable, long-running inference operation</li> <li>▪ System monitoring and observability support</li> <li>▪ Designed for scalable edge deployment</li> </ul>                                                                           | <div style="border: 1px solid black; width: 60px; height: 60px; margin: 0 auto; display: flex; align-items: center; justify-content: center; margin-bottom: 10px;">  </div> <p><b>Global Customer Support</b></p> <ul style="list-style-type: none"> <li>▪ System reliability certification</li> <li>▪ Inference computing enablement</li> <li>▪ Edge-to-cloud scalability collaboration</li> </ul>       |

