

# AIR-055

## AI Inference System Based on Qualcomm® Dragon Wing IQ9075M



Edge AI  
SDK



### Features

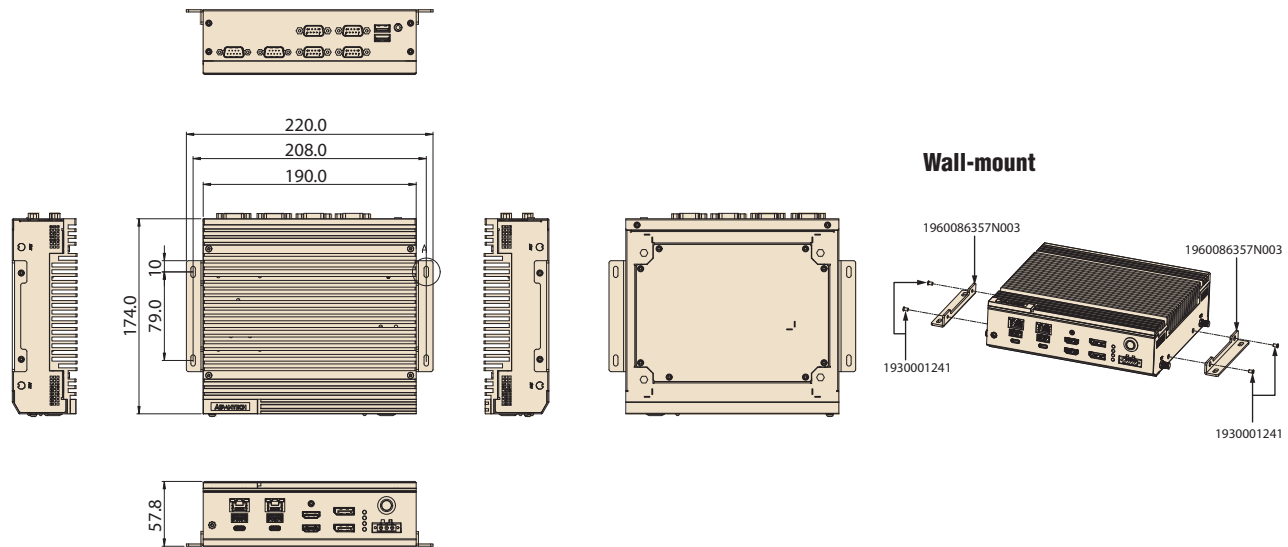
- Compact and high performance Edge AI box up to 100 TOPS AI computing
- Qualcomm® Dragon Wing IQ9075M built-in
- 12-24V wide power and -20-60 °C wide temp. supported
- Multiple IO ports: 2 x 2.5G LAN, DIO, 3x COM, 2x CAN, 2x USB 3.2 and 2x USB type C, 2x USB 2.0
- Support various expansions 1x M.2 2280(NVME), 1x M.2 2230(WIFI/BT) and 1x M.2 3052(LTE/5G)

### Specifications

Model		AIR-055
Processor Module	Qualcomm® Dragon Wing Series	IQ-9075M
	CPU	Qualcomm® Kryo Gen 6 CPU built on Arm v8.2 Cortex technology
	GPU	Adreno 663 GPU support safe GPGPU compute up to 840 MHz
	AI Performance Reference	Up to 100 dense / 200 sparse INT8 TOPS
	Memory	36GB 256-bit LPDDR5 DRAM
	Storage	128GB UFS3.1
Ethernet	Interface	2x RJ-45
	PHY	Realtek RTL8221D
	Speed	2.5 Gigabit Ethernet (10/100/1000/2500 Mbps, optional PoE support)
Display	HDMI	2x HDMI 1.4 (Max. resolution 3840 x 2160 @ 60Hz)
	DP	2x DP 1.4 (Max. resolution 3840 x 2160 @ 60Hz)
IO Ports	USB	1x USB 3.2 Gen2 Type A (Download Mode Support) 1x USB 3.2 Gen1 Type A 2x USB 3.2 Gen1 Type C 2x USB 2.0
	CANFD	2x DB9
	DIO	1x 8 bit
	COM	3 x RS-232/RS-422/RS-485
	Audio	3.5mm Headphone out/MIC Combo Jack
Expansion	M.2	1x M.2 3052 B Key(5G/LTE), 1x M.2 2230 E Key(WIFI/BT)
Others	TPM	TPM2.0
Storage	M.2 2280	1 x M.2 2280 M Key(NVME)
	Power Supply voltage	12-24V DC-IN, Power adaptor 150W
Power	Power Type	ATX/AT mode, ATX default
	Operational Temperature	-20 ~ 60°C with non-POE -20 ~ 50°C with POE
Environment	Operating Humidity	95% @ 40 °C (non-condensing)
	Vibration	3 Grms @ 5 ~ 500 Hz, random, 1 hr/axis
	Dimensions (W x D x H) Weight	190 x 174 x 57.8 mm
Mechanical	Weight	TBD
	Mounting Support	Wall mounting
	Operating System	Linux
Software Support	Software API	Edge AI SDK compatible
Certifications	EMC/Safety	CE/FCC Class B, CB, UL, CCC and BSMI (No RED Certificate)

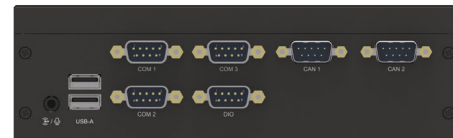
## Dimensions

Unit: mm [inch]



## Front Panel I/O Mechanical Layout

## Back Panel I/O Mechanical Layout



## Ordering Information

Part No.	Thermal solution	Processor Module	Qualcomm Module Memory	Storage	DP	HDMI	GbE	USB	CANFD	RS-232/422/485	GPIO	Power input	Operating Temperature
AIR-055D-U2A1U	Fanless	IQ-9075M	32GB LPDDR5	128GB UFS3.1	2	2	2	8	2	3	1	12-24V <sub>DC</sub>	-20~60 °C

\*The system OS will be pre-installed in a 128GB UFS3.1 (on board).

## Packing List

Part Number	Description	Quantity
AIR-055	Qualcomm AI Inference System	1
1652004519	Phoenix connector counterpart	1
-	Simplified Chinese User Manual	1
1960086357N041	Wall Mount Kit for AIR-055	1
-	Thermal-Pad kit (M.2 2242 storage & 3052 5G module & 2280 storage module)	1

## Optional

Part Number	Description
96PSA-A150W24T2-4	Power Adapter 24V 150W
1702002600	Power Cord UL 3P 10A 125V 183cm (US)
1702002605	Power Cord EU 3P 10A 250V 183cm (EU)
1702031801-11	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)
MIOE-PSE-DPA1	POE thermal kit for AIR-055
AIW-170BQ-001	Qualcomm Wifi6E M.2 2230 E-Key
1751000622-01	1x Cable Ant. L150mm for WIFI
1751000651-01	1x Antenna for WIFI
AIW-356DQ-E01	Qualcomm 5G M.2 3052 B-Key
1751000625-01	1x Cable Ant. L150mm for 5G
1750009372-01	1x Antenna for 5G

Note: If Wi-Fi/5G module is required, the package must include the module, antenna, and antenna cable

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>

## 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.



The banner features the ADANTECH logo in the top left. The main title 'EdgeAI SDK Inference Kit' is prominently displayed in the center. Below the title, a blue bar contains the text 'Streamlined Edge Inference'. To the right of this bar is a list of four key features. On the left side of the banner, there is a screenshot of the EdgeAI SDK monitoring interface, which shows various performance metrics and graphs. Below the screenshot is a stylized graphic of a brain composed of blue cubes. At the bottom of the banner, there are three small images: a factory floor with machinery, a road with cars, and a warehouse interior.

### 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



#### Unified Inference Runtime

- Consistent inference across CPUs, GPUs, and accelerators
- Vendor-optimized runtime integration
- Built-in UniInfra acceleration framework
- Optimized inference pipelines and runtime efficiency



#### Hardware Validation

- Benchmarking on target devices
- OS and accelerator compatibility validation
- Performance and stability verification



#### Production-Ready Deployment

- Stable, long-running inference operation
- System monitoring and observability support
- Designed for scalable edge deployment



#### Global Customer Support

- System reliability certification
- Inference computing enablement
- Edge-to-cloud scalability collaboration

