



# LU720

## LUCY Edge AI Box Powered by MTK Genio 720

Powered by **MEDIATEK**



### Features

- Wide-Temp Fanless Design for cold-Chain Reliability
- Low-Power, Always-On Operation
- Wireless-Ready (Wi-Fi 6 / Bluetooth 5.3)
- AI Vision Optimized for Retail etc & Access Control
- Android SDK Integration for Rapid Deployment

### System

|                  |                                             |
|------------------|---------------------------------------------|
| Processor        | MT8391 (2 x CA78(2.6GHz)+ 6 x CA55(2.0GHz)) |
| Memory           | 16GB/8GB, LPDDR5                            |
| Storage          | 128GB/64GB                                  |
| Optional Storage | microSD card slot                           |

### I/O

|                   |                                                                      |
|-------------------|----------------------------------------------------------------------|
| Indicator         | LED x 2 (Power x 1, Reset x 1)                                       |
| Wireless          | Wi-Fi 6 / Bluetooth 5.3                                              |
| Antenna Connector | SMA connector x 2                                                    |
| Display           | DP 1.4a x 1                                                          |
| Ethernet          | Ethernet (RGMII) LAN x 1<br>EtherCat (Optional) x 1                  |
| USB               | USB 3.1 Type-C x 1<br>USB 2.0 Type-A x 2<br>USB 2.0 Type-C (ADB) x 1 |
| CAN               | CAN x 1                                                              |
| RS485             | RS485 x 1                                                            |
| GMSL              | GMSL x 2                                                             |
| DIO               | DIO x 6, GND x 2                                                     |
| Audio In/Out      | 3.5 mm earphone jack                                                 |

### Environmental

|                    |                         |
|--------------------|-------------------------|
| Operating Temp.    | -10 ~ 60°C (14 ~ 140°F) |
| Operating Humidity | 0 ~ 95% (at 60°C)       |
| IP Rating          | IP40 (TBD)              |

### Qualification

|               |                     |
|---------------|---------------------|
| Certification | BSMI, CE, FCC (TBD) |
|---------------|---------------------|

### Power Requirement

|             |              |
|-------------|--------------|
| Power Input | DC in 12V/5A |
|-------------|--------------|

### Mechanical

|            |                                       |
|------------|---------------------------------------|
| Button     | Power Key x1, Reset Key x1 (Hidden)   |
| Weight     | TBD                                   |
| Dimensions | Approx. 192 (L) x 128 (W) x 36 (H) mm |

### Others

|             |         |
|-------------|---------|
| Accessories | Adapter |
|-------------|---------|

### OS Support

|                                       |
|---------------------------------------|
| Android 15, Yocto, Ubuntu 24.04 (TBD) |
|---------------------------------------|

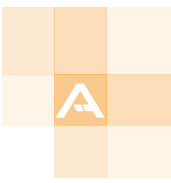
### Highlights

|                                                |                                                                                                                                                                                            |
|------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| AI performance & Low power/Fanless design      | 10 TOPs AI computing and low power consumption. High memory bandwidth and read/write speeds, Supports high-resolution video streams, pre-loaded AI models, edge LLM, and CNN computations. |
| Industrial communication interfaces            | Supports industrial/automotive communication (CAN/RS485/GMSL/EtherCat/USB...etc.), suitable for cross industry AI solutions.                                                               |
| Complete system and communication capabilities | Complete system (Android) and features Ethernet, Wi-Fi, and BT connectivity.                                                                                                               |
| Software highly integrated                     | Bundled with AI SDK and software tools to reduce customer development barriers.                                                                                                            |
| High cost performance                          | Offers cost-effective solutions that do not require extreme computing power.                                                                                                               |

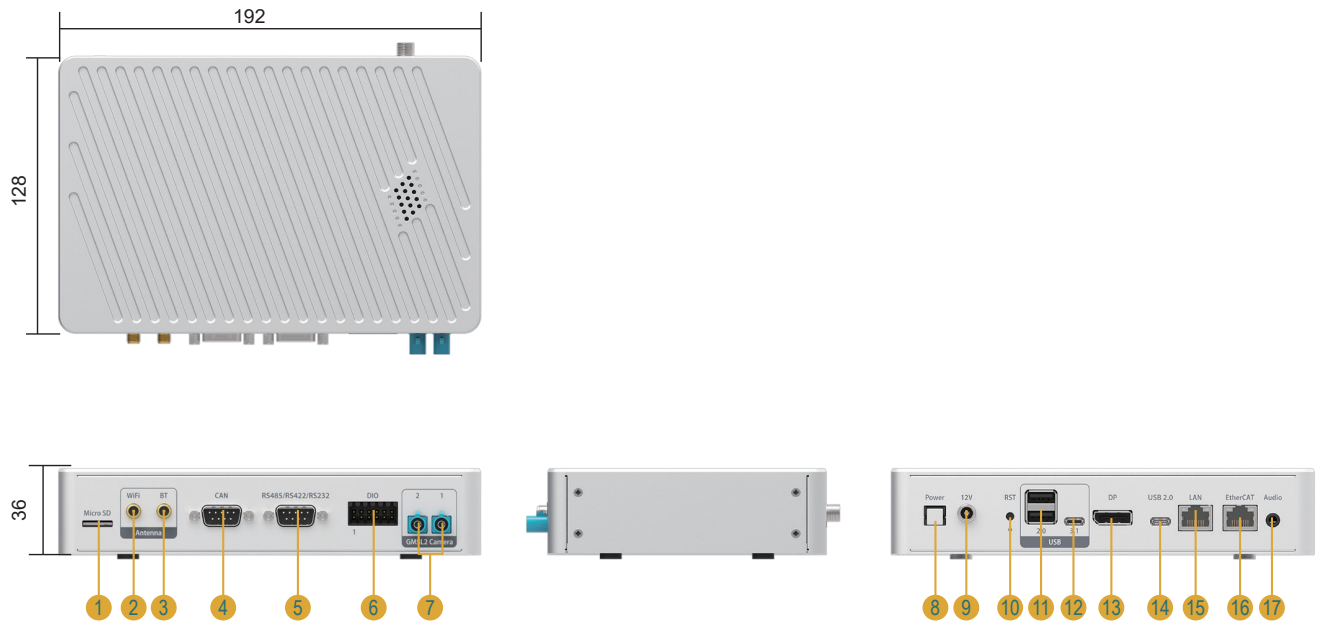
### Application

|                        |                                                                                                                                                                                                                                                                                                                                              |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Smart Guard Box        | Identifies intrusion, fire, and fall incidents. Automatically generates alarm descriptions. Notifies homeowners/security personnel via natural voice. Home users can directly ask questions via voice, such as "Is my home safe now?"                                                                                                        |
| Smart Retail Assistant | Automatically counts customer traffic and alerts customers to out-of-stock items. Automatically generates inventory lists and invoice records. Directly converts orders to "I want a bubble tea with less ice." Answers customers' questions like "What sizes are available for this dress?" Recommends products using a personalized voice. |
| AI Assistant           | Automatically generates meeting minutes when speaking in meetings. Recognizes business card information. The assistant reminds customers of schedules using a gentle voice.                                                                                                                                                                  |
| AI Robot (TBD)         | Supports EtherCat interface. Supports GMSL Camera.                                                                                                                                                                                                                                                                                           |
| UAV (Drone)            | Terrain Recognition, Path Planning, Obstacle Avoidance.                                                                                                                                                                                                                                                                                      |

All specifications are subject to change without notice.



## Dimension



Unit: mm

- |                     |                         |                           |
|---------------------|-------------------------|---------------------------|
| 1 MicroSD Slot      | 8 Power Switch          | 15 Gigabit LAN (Ethernet) |
| 2 Wi-Fi Antenna     | 9 12V DC Input          | 16 EtherCAT               |
| 3 Bluetooth Antenna | 10 Reset (RST)          | 17 Audio Jack             |
| 4 CAN Bus           | 11 USB 2.0 Type-A       |                           |
| 5 RS-485            | 12 USB 3.1 Type-C       |                           |
| 6 Digital I/O (DIO) | 13 DisplayPort (DP)     |                           |
| 7 GMSL              | 14 USB 2.0 Type-C (ADB) |                           |