

# KT40

## Video Processor

### Specification V4.0



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## 1 Update Records

| Document Version | Hardware Version | Release Time      | Update Record |
|------------------|------------------|-------------------|---------------|
| V4.0             | KT40 (V1.0.1)    | July 25(th), 2025 | First release |

## 2 Product Introduction

KT40 is the video processor that produced by Mooncell, it supports 4 Network Output Ports. The maximum loading capacity could reach up to 2.5 million pixels,with powerful processing ability,super reliability and high cost performance.

## 3 Product Characteristics

### 3.1 Improve the display effect

- Multiple input interfaces
  - 2 × HDMI1.3 video signal input
  - 1 x USB 2.0 input
- EDID
  - Support custom EDID management
- Output interface
  - 4 gigabit network ports, support up, down, left and right arbitrary splicing
- Audio interface: Support audio input and output

### 3.2 Diversified Display Function

- Support U disk playback, plug and play
- Support network port loop backup, dual master backup
- Support for configuration parameter readback
- Support Gigabit network error bit rate detection
- Support image scaling

## 4 Product Appearance

Front Panel



\*Product images are for reference only. The actual product shall prevail upon purchase.

### 4.1 Data Interface Illustration

| # | Name        | Illustration    |
|---|-------------|-----------------|
| 1 | Switch,     | Power Switch    |
| 4 | INC         | INC KEY         |
| 3 | USB         | USB KEY         |
| 2 | HDMI1、HDMI2 | HDMI1、HDMI2 KEY |

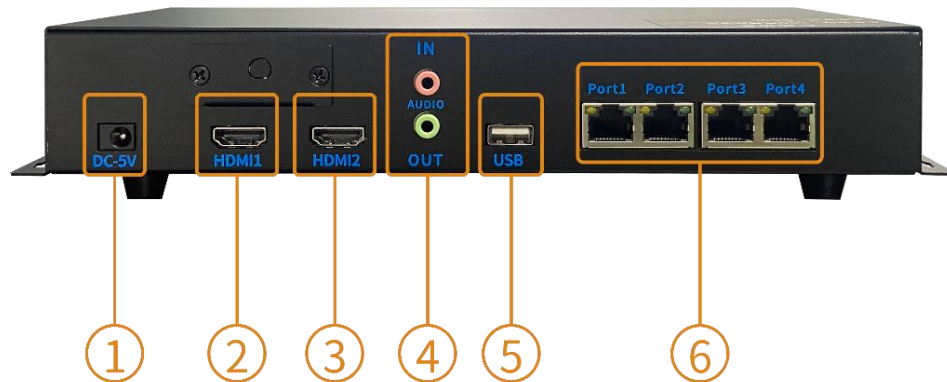
|   |           |                                    |
|---|-----------|------------------------------------|
| 5 | Control   | USB (B Type) for debugging         |
| # | Indicator | Illustration                       |
| 6 | PWR       | Power indicator (red)              |
|   | USB       | USB for debugging (green)          |
| 7 | USB       | U disk playback (red)              |
|   | INC       | Inspection indicator light (green) |
| 8 | HDMI 1    | HDMI 1 playback (Red)              |
|   | HDMI 2    | HDMI 2 playback (green)            |

**Key Illustration:**

| HDMI                                                                                           |             |                                                         |
|------------------------------------------------------------------------------------------------|-------------|---------------------------------------------------------|
| Key                                                                                            | Status      | Illustration                                            |
| HDMI                                                                                           | Everlasting | HDMI is not selected.                                   |
|                                                                                                | Always on   | HDMI selected, but no input                             |
|                                                                                                | Flash mob   | HDMI is selected, with input and frame synchronization. |
|                                                                                                | Slow flash  | HDMI selected, with input and no frame synchronization  |
| Short press cut to HDMI                                                                        |             |                                                         |
| Medium and long press the frame to switch synchronously (the light starts to flash and let go) |             |                                                         |
| USB                                                                                            |             |                                                         |
| Key                                                                                            | Status      | Illustration                                            |
| USB                                                                                            | Everlasting | USB is not selected.                                    |
|                                                                                                | Always on   | USB is selected, but there is no input                  |
|                                                                                                | Flash mob   | Output video mode                                       |
|                                                                                                | Slow flash  | Output image mode                                       |
| Press to switch to USB playback                                                                |             |                                                         |
| Medium and long press the input mode to switch (the light starts to flash and let go)          |             |                                                         |
| Long press (let go when the light is always on)                                                |             |                                                         |

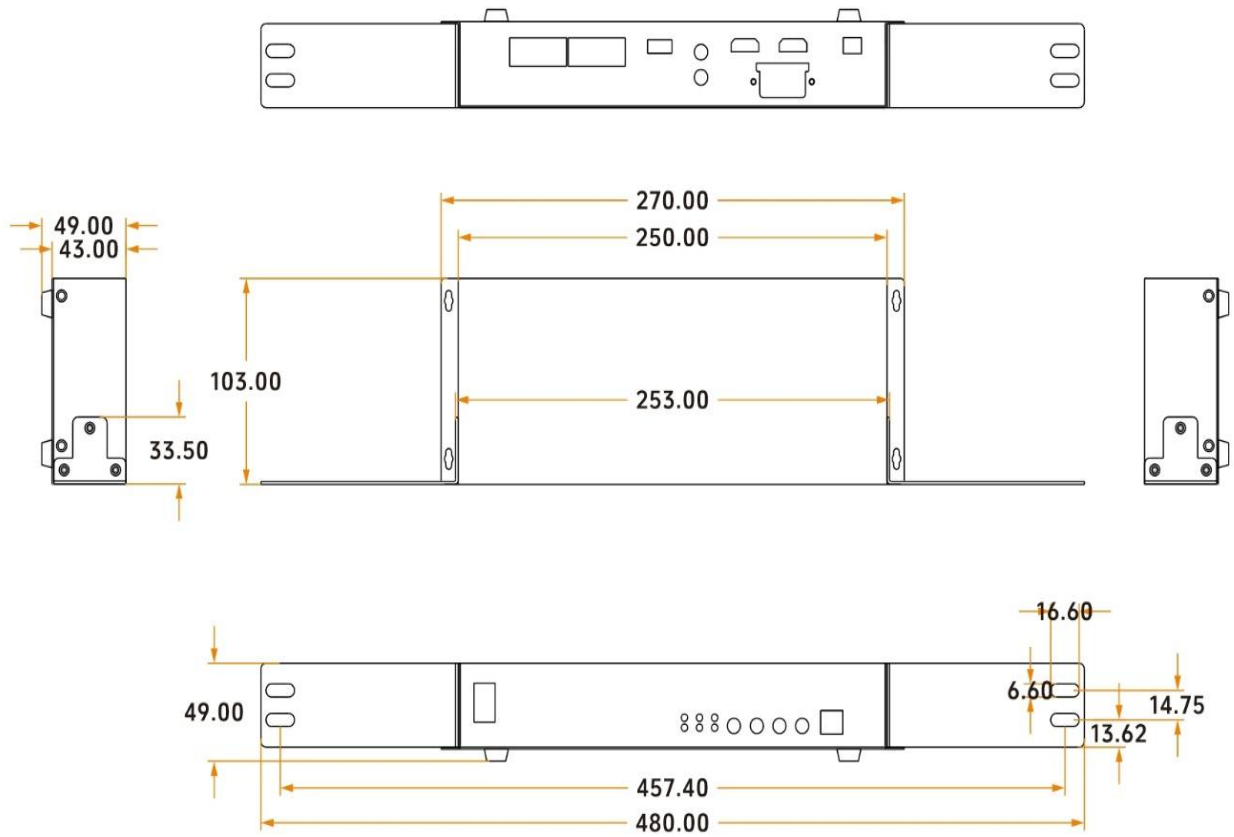
| U disk upgrade V53 (if the V53 light does not flash, it means the upgrade starts, and the V53 flashes again to complete the upgrade)              |                       |                             |
|---------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------------|
| INC (do not plug in the USB cable during inspection)                                                                                              |                       |                             |
| Key                                                                                                                                               | Status                | Illustration                |
| INC                                                                                                                                               | Indicator light state | Key locked                  |
|                                                                                                                                                   | everlasting           | No inspection               |
|                                                                                                                                                   | Slow flash            | Quick inspection            |
|                                                                                                                                                   | Always on             | Inspection and preservation |
| Short press: Quick inspection to open or close                                                                                                    |                       |                             |
| Medium and long press (the light starts to flash and let go): The inspection is not saved.                                                        |                       |                             |
| Long press (let go when the light is always on): patrol and save (longer time)                                                                    |                       |                             |
| Key Lock                                                                                                                                          |                       |                             |
| Key                                                                                                                                               | Status                | Illustration                |
| Key lock (with common indicator light for inspection)                                                                                             | Light on              | Key locked                  |
|                                                                                                                                                   | Light off             | Key to unlock               |
| Unlock the button lock: Press and hold the 4~ 5sINC button until the INC indicator light breathing flashes and goes out.                          |                       |                             |
| The device has no operation for 2 minutes, the automatic lock button, the INC indicator light breathing flashes, and the status button is locked. |                       |                             |
| Automatic lock button when the device is powered on.                                                                                              |                       |                             |
| Attention:                                                                                                                                        |                       |                             |
| 1. In order to prevent accidental triggering, the machine locks the button by default when powered on.                                            |                       |                             |
| 2. The button lock state The button operation is invalid. The button switching function will not take effect until it is unlocked.                |                       |                             |

## Rear Panel



| Illustration |              |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|--------------|--------------|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #            | Interface    | QTY | Illustration                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 1            | DC-5V        | 1   | External adapter power supply                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 2/3          | HDMI1/2      | 1   | 2 × HDMI1.3 standard video source input, supports up to 1920 × 1080@60Hz resolution                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 4            | AUDIO IN     | 1   | 3.5Mm audio interface input                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|              | AUDIO OUT    | 1   | 3.5Mm audio interface                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 4            | USB          | 1   | <p>U disk input;</p> <p>1 × USB 2.0 interface, connect U disk, support 1080p@30fps Video file.</p> <p>The U disk file system supports NTFS, FAT32 and FAT16, but not ExFAT (FAT64).</p> <p>Image file formats: jpg, jpeg, png, and bmp.</p> <p>Video encoding: MPEG1/2, MPEG4, Sorenson H.263, H.263, H.264 (AVC1), H.265 (HEVC), RV30/40, Divx, Xvid.</p> <p>Video bit rate: 4000 or less</p> <p>Audio Coding: MPEG1/2 Layer I, MPEG1/2 Layer II, MPEG1/2 Layer III, AAC-LC, VORBIS, PCM and FLAC.</p> |
| 6            | Network Port | 2   | 2 Gigabit network port output, connect the receiving card                                                                                                                                                                                                                                                                                                                                                                                                                                               |

## 4.2 Dimensions



Tolerance:  $\pm 0.3$  Unit: mm

## 5 Product Specification

### 5.1 Basic Parameters

#### 5.1.1 Conventional Version

|                   |                                                                                                                                                                                                                                                                                                                    |                                                                           |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|
| Loading capacity  | Single network port                                                                                                                                                                                                                                                                                                | Maximum load 655360 pixels, network port load (width × height) 1280 × 512 |
|                   | Whole Unit                                                                                                                                                                                                                                                                                                         | 2.50 million Pixels                                                       |
| Output resolution | Pixels are controlled within 2.50 million points<br>Widest: 3840 Highest: 1920<br>When the number of horizontal points exceeds 1920, the number of vertical points must be within 1080<br>When the number of vertical points exceeds 1080 points, the number of horizontal points is controlled within 1080 points |                                                                           |
| Input resolution  | Maximum support 1920 × 1080@60Hz resolution video source input, backward compatible                                                                                                                                                                                                                                |                                                                           |

#### 5.1.2FPGA Scaled Version

|                                       |                                                                                      |                                                                           |
|---------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------|
| Loading capacity                      | Single network port                                                                  | Maximum load 655360 pixels, network port load (width × height) 1280 × 512 |
|                                       | Whole Unit                                                                           | 2.50 million Pixels                                                       |
| Scale window size (output resolution) | Pixels are controlled within 2.50 million points<br>Widest: 7680 Highest: 7680       |                                                                           |
| input resolution                      | Maximum support: 1920 × 1080@60Hz resolution video source input, backward compatible |                                                                           |

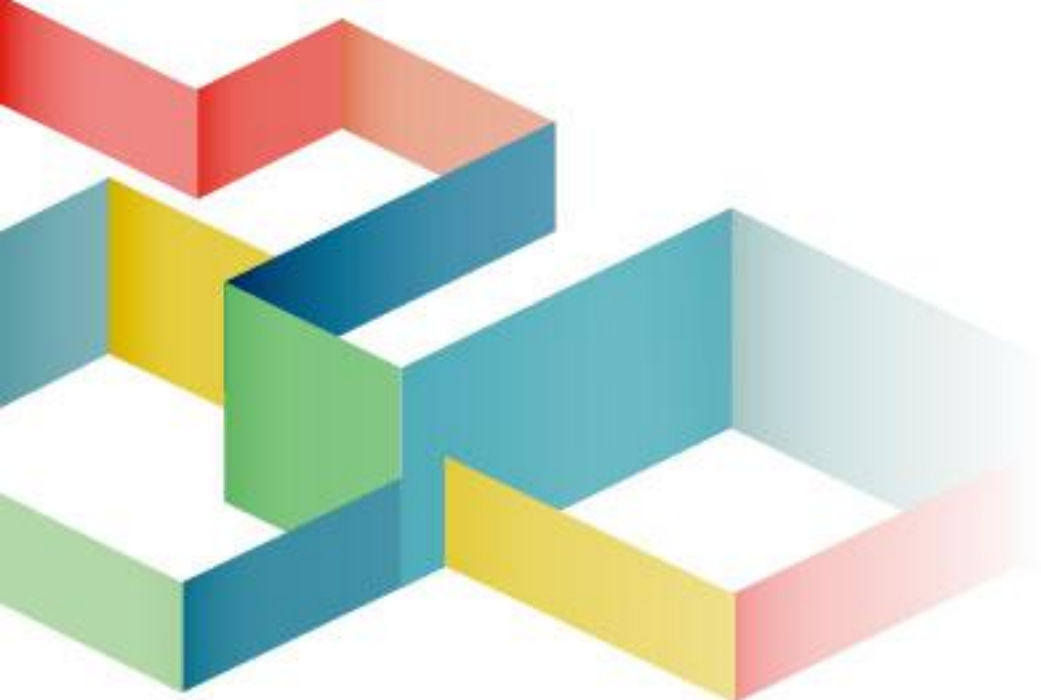
## 5.2 Specification

|                       |                                                                                   |                           |
|-----------------------|-----------------------------------------------------------------------------------|---------------------------|
| Electrical Parameters | Rated voltage                                                                     | DC 5V                     |
|                       | Rated power                                                                       | 3W                        |
| Working Environment   | Operating temperature                                                             | 0°C~50°C                  |
|                       | working humidity                                                                  | 5%RH~85%RH non-condensing |
| Storage Environment   | Storage temperature                                                               | -10°C~60°C                |
| Chassis size          | 480mm×103mm×49mm                                                                  |                           |
| Net weight            | 0.69Kg                                                                            |                           |
| Outer box size        | 280×170×95mm                                                                      |                           |
| Accessories           | 1 × 5V power adapter, 1 × USB cable, 1 × HDMI cable, 2 × hangers, 1 × certificate |                           |
| Gross weight          | 1.26Kg Description: Including accessories and packaging materials                 |                           |
| Packing method        | 13 PCS/Carton                                                                     |                           |

\*Current and power consumption may vary depending on factors such as product usage, environment, and settings.

## 6 Precautions

- High voltage hazard: This product operates at AC 100V~240V.
- Do not allow liquids or metal fragments and other conductive materials to enter the device, to prevent safety accidents.
- Please use the device in a dry and clean environment.



National after-sales services hotline: 400-881-3531

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