摩西尔 Mooncell

PRODUCT SPECIFICATION

V4.0 | ENGLISH

KT200

VIDEO PROCESSOR

4K video processing and 20 Gigabit Ethernet LED outputs.

13M	20	4K	650K
PIXEL CAPACITY	GIGABIT LED OUTPUTS	UHD VIDEO INPUT	PIXELS PER PORT

LED VIDEO PROCESSING AND DISPLAY CONTROL

AutoLED / Screen Manager | USB-B / LAN / RS232

HDMI / DisplayPort | Scaling / Pixel-to-pixel mapping

DOCUMENT RELEASE OCTOBER 15, 2026

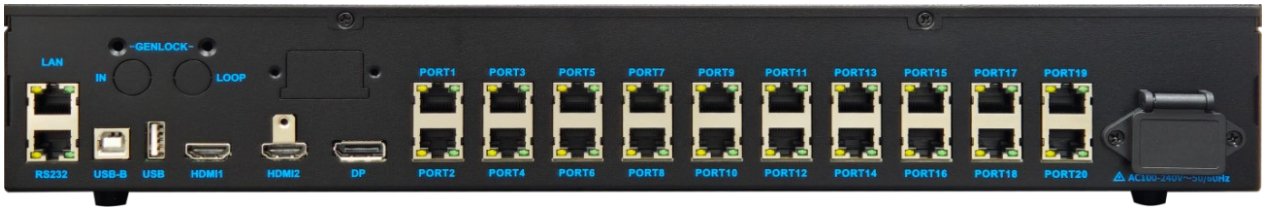


SECTION 01

PRODUCT OVERVIEW

4K video processing and 20-port LED display control for entertainment venues.

KT200 is a hardware-based Video Processor developed by Mooncell for entertainment applications. It provides 20 Gigabit Ethernet outputs with a total loading capacity of 13 million pixels, supports 4K UHD video and offers multiple control methods. It combines straightforward operation and a broad function set with stable performance and cost-effective deployment.



KT200 rear panel. Product images are for reference only; the delivered product prevails.

Input and output features

- 1 × HDMI 2.0 and 1 × DP 1.2, used alternatively, plus 1 × HDMI 1.4.
- 20 Gigabit Ethernet LED outputs; up to 13,000,000 pixels in total; custom output resolutions; maximum width 15,360 pixels and maximum height 7,680 pixels.
- Flexible per-port mapping without a rectangular loading-area restriction, within the maximum width and height supported by the device.
- Custom EDID settings.

Display functions

- One-touch full-screen scaling, pixel-to-pixel mapping and arbitrary input-source cropping.
- Display-brightness adjustment, including offline brightness control.

Applications

The combination of visual performance, convenient operation and cost effectiveness makes KT200 suitable for entertainment venues such as bars and karaoke venues.

SECTION 02

VIDEO INPUT SPECIFICATIONS

Interface-specific input limits, custom resolutions and signal capabilities.

Input	Specification
HDMI1	1 × HDMI 1.4 Maximum input: 3840 × 2160 at 60 Hz Custom resolutions supported Maximum width: 4096 (4096 × 1080 at 60 Hz) Maximum height: 3840 (1080 × 3840 at 60 Hz)
HDMI2	1 × HDMI 2.0, used alternatively with DP 1.2 Maximum input: 3840 × 2160 at 60 Hz Custom resolutions supported Maximum width: 8192 (8192 × 1080 at 60 Hz) Maximum height: 8188 (1080 × 8188 at 60 Hz)
DP	1 × DP 1.2, used alternatively with HDMI 2.0 Maximum input: 3840 × 2160 at 60 Hz Custom resolutions supported Maximum width: 8192 (8192 × 1080 at 60 Hz) Maximum height: 7680 (1080 × 7680 at 60 Hz)

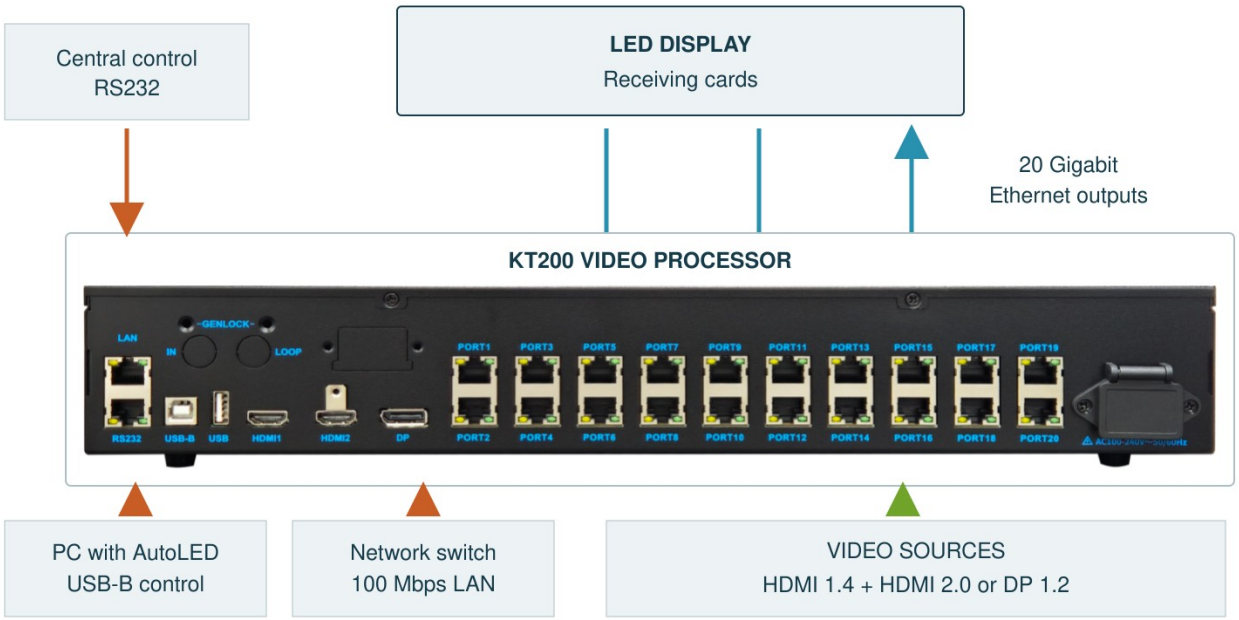
Capabilities common to the video inputs

- 8-bit video input.
- EDID adjustment and preset resolutions supported.
- Embedded audio is not supported.
- Interlaced input signals are not supported.

SECTION 03

SYSTEM CONNECTIONS AND CONTROL

Video sources, control connections and LED output paths.



Orange: control • Green: video input • Blue: LED output

KT200 video, control and LED data connections.

Control methods

KT200 supports AutoLED software and Screen Manager software. Connect a PC through USB-B or the 100 Mbps LAN port for communication with AutoLED. The RS232 interface supports serial protocols for integration with a central-control system.

Synchronization and protection

- Source synchronization: use a connected video input or an external Genlock source (optional) as the reference to keep output images synchronized.
- Hot standby: device backup and Ethernet-output backup testing are supported.
- Key lock helps prevent accidental button presses during live operation.

SECTION 04

FRONT PANEL CONTROLS

Power, brightness display, function keys and key-lock operation.



Product appearance is for reference only; the delivered product prevails.

No.	Control	Description
1	Power switch	Switches the unit on or off.
2	Numeric display	Displays screen brightness. Hexadecimal values 00–FF represent 0–100%.
3	+	Brightness increase; no indicator. Short press increases the value by 1. Hold to accumulate increases; the setting is applied when the key is released.
3	–	Brightness decrease; no indicator. Short press decreases the value by 1. Hold to accumulate decreases; the setting is applied when the key is released.
3	INC	Screen Inspection key with an indicator. Detailed procedures are provided on the following page.
3	SCALE	Switches between full-screen scaling and pixel-to-pixel mapping.
3	HDMI1 / HDMI2 / DP	Video-source selection keys with status indicators.
3	LOCK	Key lock with an indicator. A steady indicator means the keys are locked. Press and hold until the indicator turns off to unlock.

Key lock at power-on

To prevent accidental operation, the keys are locked by default when the device powers on. Button operations have no effect while locked. Unlock the keys before switching functions.

Source-key indicators

Indicator state	Meaning
Steady on	Signal present and input selected.
Off	No signal.
Flashing	Input selected, but no signal present.

SECTION 05

SCREEN INSPECTION OPERATION

INC key procedures for checking and saving display configuration data.

Short press

Short press INC. The indicator flashes rapidly and the sending controller continuously checks receiving-card offsets. While the indicator is flashing rapidly, press INC again and release immediately when the indicator turns off. Rapid flashing stops and this inspection function is disabled.

Hold for more than 3 seconds

Hold INC for more than 3 seconds, then release. The indicator flashes slowly and the sending controller starts inspecting all items configured by the host software: receiving-card Ethernet-port offsets, receiving-card parameters and sending-controller parameters. The indicator turns off when inspection is complete.

Hold for more than 10 seconds

Hold INC for more than 10 seconds, then release. The indicator remains on while inspection data are saved to nonvolatile memory. These data include receiving-card offsets, receiving-card parameters, receiving-card gamma and sending-controller parameters. Do not perform any other operation during saving. The indicator turns off when saving is complete.

Operating prerequisites

- Perform the above operations with AutoLED disconnected.
- These functions take effect only after complex screen-configuration data have been saved to nonvolatile memory in the sending controller and the inspection parameters have then been saved.

SECTION 06

REAR PANEL INTERFACES

Control, synchronization, LED data and AC power connections.



Product images are for reference only; the delivered product prevails.

Interface	Qty	Description
LAN	1	100 Mbps Ethernet port for network control.
RS232	1	Serial configuration interface for central-control integration.
USB-B	1	USB configuration port for connection to AutoLED software.
USB	1	Reads project-lock files from a USB flash drive.
Genlock optional	1	Genlock synchronization interface with one input and one loop output.
LED Ethernet outputs	20	20 Gigabit Ethernet outputs; 650,000 pixels per port; 13,000,000 pixels total. Maximum width 15,360 pixels; maximum height 7,860 pixels.
AC power	1	AC 100–240 V, 50/60 Hz supply connection.

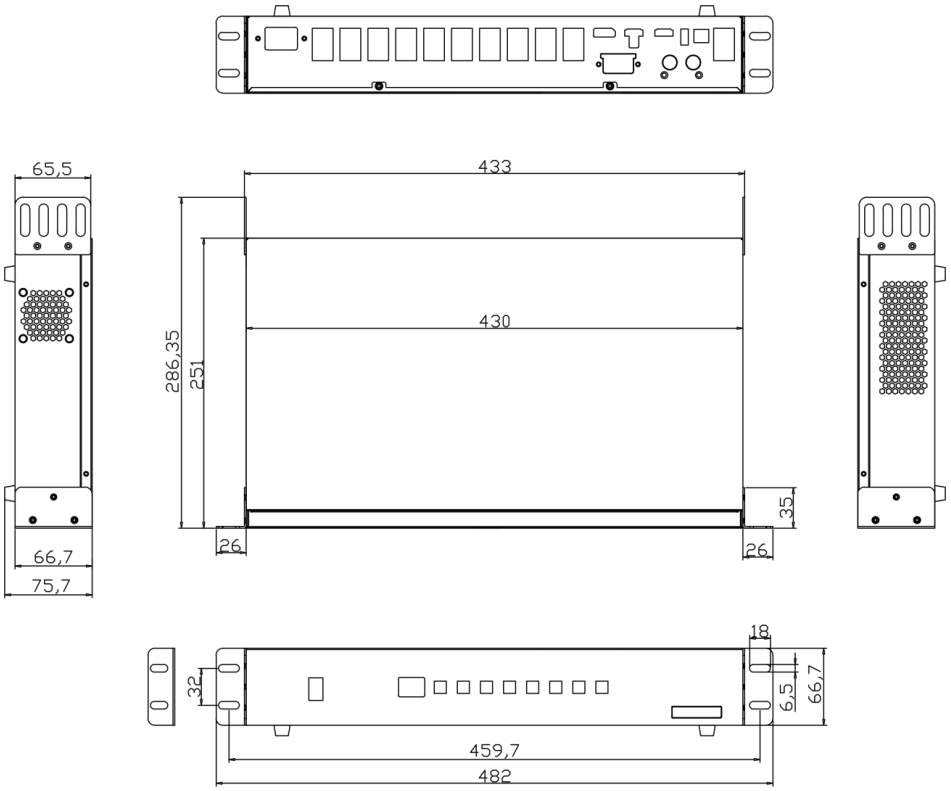
Ethernet-output status indicators

Indicator state	Connection status
Both indicators steady on	Power is connected, but no receiving card is detected.
Both indicators off	Power is not connected.
Green steady on and yellow flashing	Normal signal and communication.

SECTION 07

MECHANICAL DIMENSIONS AND CAPACITY

Chassis drawing, loading limits and basic resolution specifications.



Dimensions in mm. Tolerance: ±0.3 mm. Drawing is for reference; the delivered product prevails.

Parameter	Value
Per-port loading	Up to 650,000 pixels; loading raster (width × height): 1280 × 512.
Total loading	Up to 13,000,000 pixels.
Maximum canvas	Width: 15,360 pixels; height: 7,680 pixels.
Output resolution	VESA standard, up to 3840 × 2160 at 30 Hz.
Input resolution	Up to 3840 × 1080 at 60 Hz / 4096 × 2160 at 30 Hz.

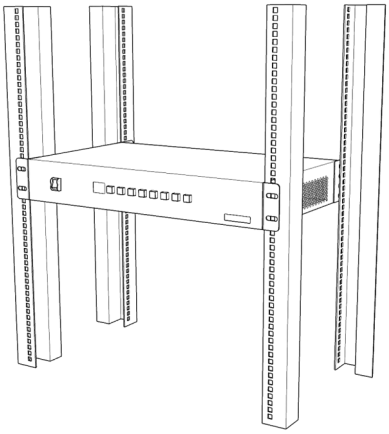
Per-port capacity depends on the loading arrangement: a wider loading raster provides higher usable capacity, and a narrower raster provides less. Wider per-port layouts are recommended; widths in multiples of 960 provide the highest port utilization.

Compatibility: this model does not support T6-series receiving cards.

SECTION 08

RACK INSTALLATION AND SAFETY

Mounting requirements, operating orientation and electrical precautions.



Rack-installation reference.

When mounting the product on rack supports, use eight M5 × 8 screws. The supporting structure must carry at least 28 kg.

Rack-mount precautions

Elevated ambient temperature: the temperature inside an enclosed or multi-unit rack may exceed room temperature. Install the equipment in an environment compatible with the manufacturer’s specified maximum ambient temperature (Tma).

Reduced airflow: rack installation must not restrict the airflow required for safe operation.

Mechanical loading: distribute the load evenly to avoid hazardous conditions.

Circuit overloading: consider the connection to the supply circuit and the effect of overloading on overcurrent protection and supply wiring. Observe the equipment nameplate ratings.

Reliable grounding: connect the power-cord plug to an outlet with a reliable protective-earth connection.

Warnings and handling

- Use the equipment horizontally. Do not invert it or place it vertically.
- Operation in a residential environment may cause radio interference.
- High voltage: the equipment operates from AC 100–240 V.
- Prevent liquids, metal fragments and other conductive objects from entering the equipment.
- Use the equipment in a dry, clean environment.

SECTION 09

GENERAL SPECIFICATIONS AND PACKAGING

Electrical ratings, environmental conditions, physical data and release information.

Category	Parameter	Value
Electrical	Input voltage	AC 100–240 V, 50/60 Hz
Electrical	Rated power	25 W
Operating	Temperature	0°C to 50°C
Operating	Humidity	5% RH to 85% RH, non-condensing
Storage	Temperature	−10°C to 60°C
Physical	Chassis dimensions	482 × 286.35 × 75.7 mm (L × W × H), including rack ears and feet
Physical	Net weight	3.14 kg
Packaging	Outer-box dimensions	515 × 130 × 355 mm
Packaging	Gross package weight	4.32 kg, including accessories and packaging materials
Packaging	Packing quantity	3 units per carton

Supplied accessories

1 × power cable; 1 × USB 2.0 cable; 1 × HDMI cable; 1 × DP cable; 1 × certificate of conformity and packing list.

Actual current and power consumption may vary with usage, environment, settings and other factors.

Revision history

Document	Hardware	Release date	Description
V4.0	KT200 V1.0.0	15 October 2026	First release of the updated document

SECTION 10

SUPPORTED INPUT FORMATS

Common progressive-scan formats, color spaces, chroma sampling and integer frame rates.

Input	Resolution	Color space	Chroma	Depth	Integer rates Hz
DP 1.2 / HDMI 2.0	3840 × 2160	RGB/YCbCr	4:4:4	8-bit	24 / 25 / 30 / 48 / 50 / 60
DP 1.2 / HDMI 2.0	3840 × 2160	YCbCr	4:2:2	8-bit	24 / 25 / 30 / 48 / 50 / 60
DP 1.2 / HDMI 2.0	3840 × 2160	YCbCr	4:2:0	8-bit	24 / 25 / 30 / 48 / 50 / 60
DP 1.2 / HDMI 2.0	3840 × 1080	RGB/YCbCr	4:4:4	8-bit	24 / 25 / 30 / 48 / 50 / 60 / 72 / 120
DP 1.2 / HDMI 2.0	3840 × 1080	YCbCr	4:2:2	8-bit	24 / 25 / 30 / 48 / 50 / 60 / 72 / 120
DP 1.2 / HDMI 2.0	3840 × 1080	YCbCr	4:2:0	8-bit	24 / 25 / 30 / 48 / 50 / 60 / 72 / 120
DP 1.2 / HDMI 2.0	1920 × 1080	RGB/YCbCr	4:4:4	8-bit	24 / 25 / 30 / 48 / 50 / 60 / 72 / 120
DP 1.2 / HDMI 2.0	1920 × 1080	YCbCr	4:2:2	8-bit	24 / 25 / 30 / 48 / 50 / 60 / 72 / 120
DP 1.2 / HDMI 2.0	1920 × 1080	YCbCr	4:2:0	8-bit	24 / 25 / 30 / 48 / 50 / 60 / 72 / 120
DP 1.2 / HDMI 2.0	1280 × 720	RGB	4:4:4	8-bit	24 / 25 / 30 / 48 / 50 / 60 / 72 / 120
HDMI 1.4	3840 × 1080	RGB/YCbCr	4:4:4	8-bit	24 / 25 / 30 / 48 / 50 / 60
HDMI 1.4	3840 × 1080	YCbCr	4:2:2	8-bit	24 / 25 / 30 / 48 / 50 / 60
HDMI 1.4	3840 × 1080	YCbCr	4:2:0	8-bit	24 / 25 / 30 / 48 / 50 / 60
HDMI 1.4	1920 × 1080	RGB/YCbCr	4:4:4	8-bit	24 / 25 / 30 / 48 / 50 / 60 / 72 / 120
HDMI 1.4	1920 × 1080	YCbCr	4:2:2	8-bit	24 / 25 / 30 / 48 / 50 / 60 / 72 / 120
HDMI 1.4	1920 × 1080	YCbCr	4:2:0	8-bit	24 / 25 / 30 / 48 / 50 / 60 / 72 / 120
HDMI 1.4	1280 × 720	RGB	4:4:4	8-bit	24 / 25 / 30 / 48 / 50 / 60 / 72 / 120

Resolution classes: 3840 × 2160 = 4K × 2K; 3840 × 1080 = 4K × 1K; 1920 × 1080 = 2K × 1K; 1280 × 720 = 720p.



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Professional LED Display Control Systems

Specifications and product appearance are subject to change without notice.