

Kommander T1

Multi-media Server

Version: v1.0

Release date: 2023/11



Specifications



Hunan Bowan Technology Co. LTD

Innovative technology only for a better vision

Web: www.kommander.com.cn/en

Revision History

Number	Description	Revision date
V1.0	First release	2023/11/14

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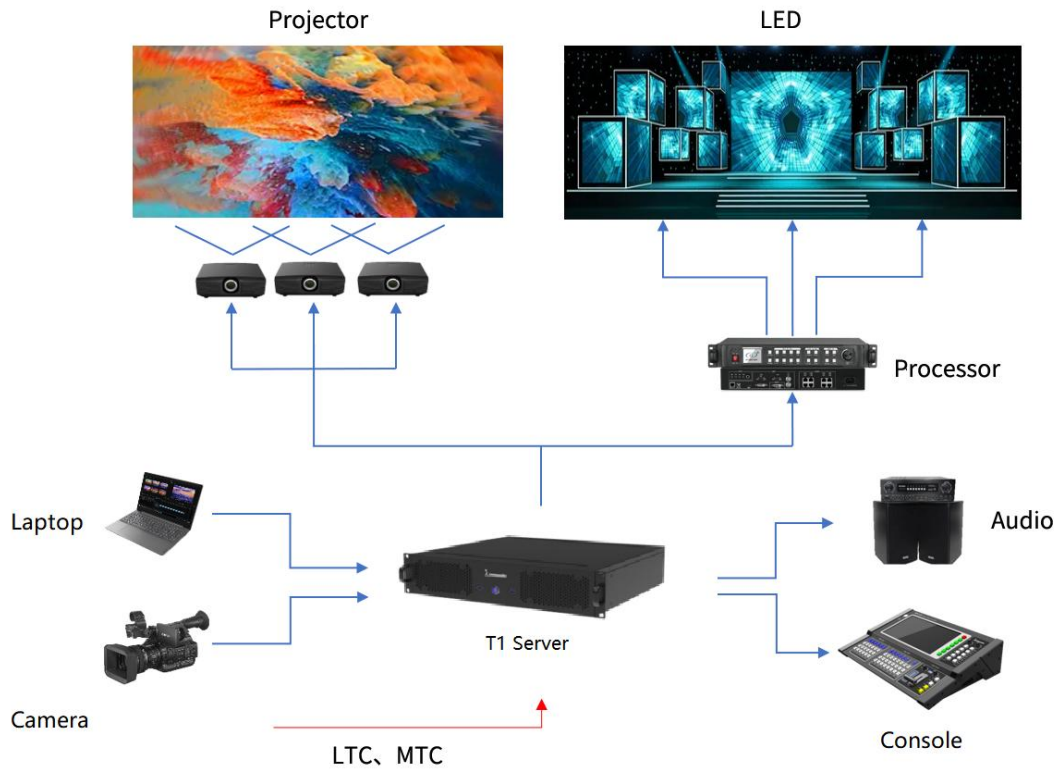
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1.Overview

Kommander T1 media server is a LED multimedia server developed and produced by Hunan Bowan Technology Co., Ltd. Kommander T1 media server, supports 4K hardware decoding, pre-compiled mode, pixel to pixel display and so on, designed for projects like stage performance, meeting, exhibition, etc.



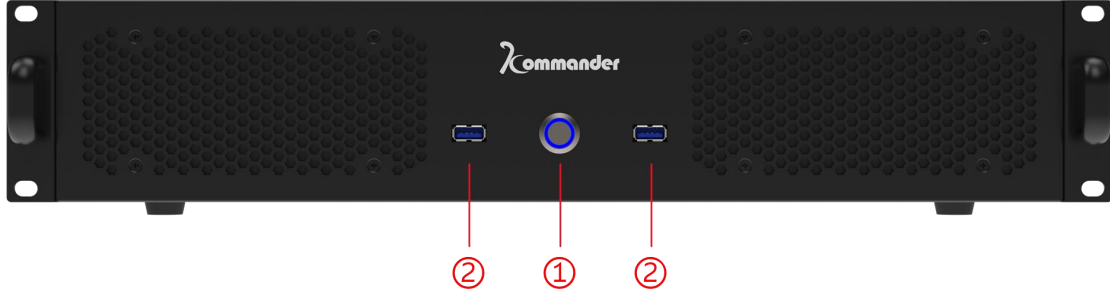
2. System Topology



3. Features

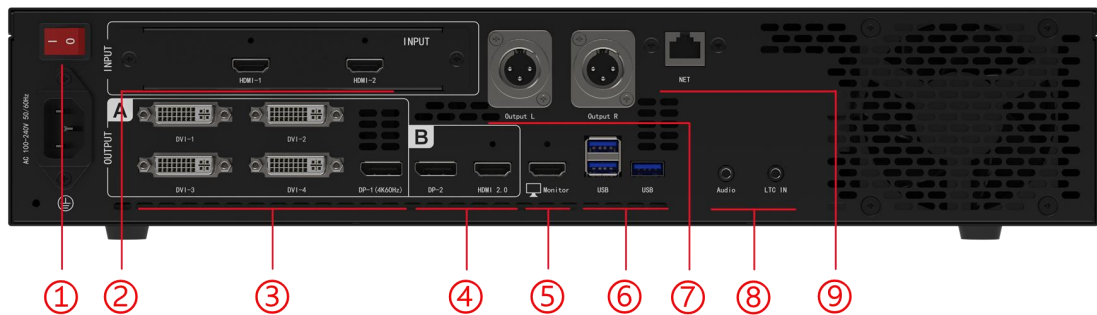
- Supports 8 video layers.
- Hardware decoding, excellent display performance.
- 2 programming methods: timeline and plan, provide convenient functions such as plan jump, time cut, and shortcut.
- Master & Backup, when the master is abnormal, switch to backup, ensure the project goes smoothly.
- Support NDI, Spout virtual output (support NDI 5, Spout 1).
- Projector calibration and blending, support saving the blending template.
- Support adding website and streaming media.
- Support MIDI, DMX, OSC, Stream Deck, Companion.
- Convert various files into playable formats.
- Automatically backup project files during the editing.
- Supports display PowerPoint and PDF directly , support PowerPoint animation.
- Customize layout of GUI.
- Generate plans in batches with one click.
- Supports UDP protocol and sending instructions to other devices.

4. Specifications



Front Panel

S/N	Item	Function
1	Power	Power on and off
2	USB 3.0	Connect mouse, keyboard, U disk



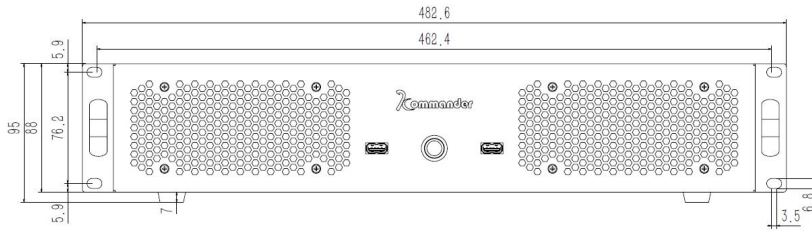
Back Panel

Interface Information			
No.	Item	Qty	Description
1	Power	1	Power on and off
2	Capture card	1	2*HDMI input, Max. support 1920×1080@60Hz
3	Output	5	4*DVI output, Max. support 1920*1200@60Hz 1*DP1.2 output, Max. support 3840*2400@60Hz
4	Output	2	1*DP1.2 output, Max. support 3840*2400@60Hz 1*HDMI2.0 output, Max. support 3840*2400@60Hz
5	Monitor	1	1*HDMI1.3 output, Max. support 1920*1080@60Hz
6	USB 3.0	3	3*USB 3.0
7	Audio	2	XLR
8	3.5mm audio	2	Headphone output; Microphone input; LTC timecode input
9	RJ-45	1	1000M

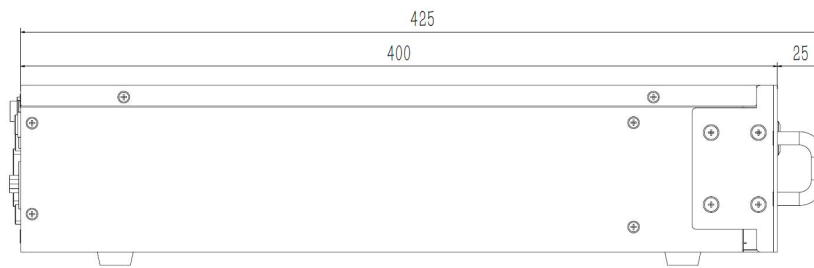
Hardware Information	
CPU	AMD Ryzen7 7735HS
Motherboard	AMD High Performance Motherboard
RAM	DDR5 16G
SSD	512G
Graphics Card	AMD Radeon 680M 2200MHZ
Power Supply	Server power supply
Audio	XLR
Output	DP, HDMI, DVI
Flight case	Kommander standard

Machine Specification	
Power supply	100-240V AC~50/60Hz
Operating temperature	0-45°C
Size	482.6×425×95mm (L*W*H)
Net Weight	10KG
Consumption	120W

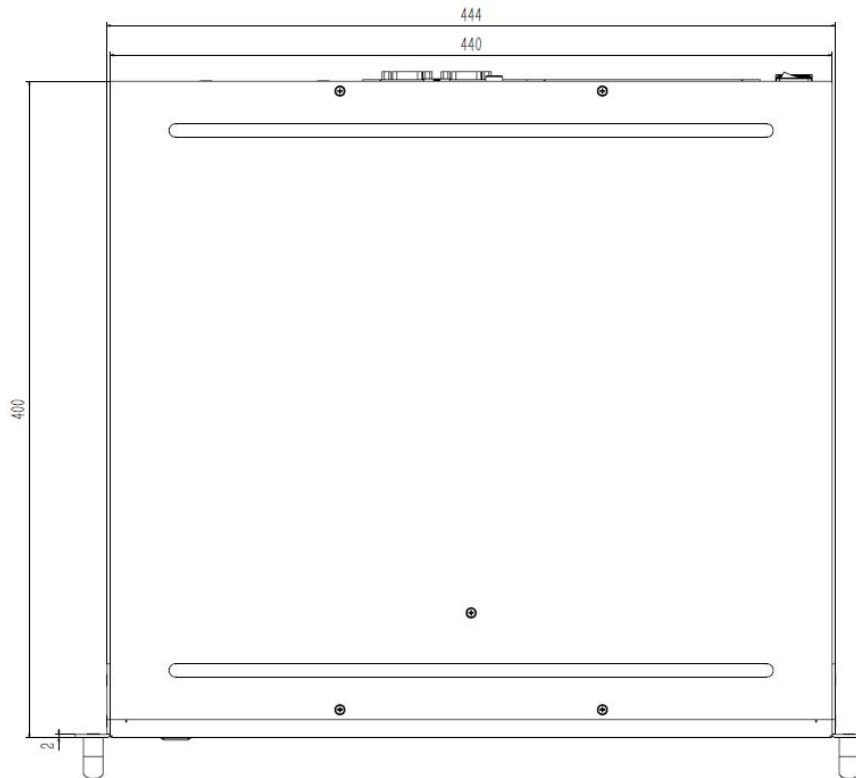
5. Dimensional View



Front view



Top view



Side View

6.Encoding Methods for Resolution

Hardware Decoding Parameters	
4k	Format: H264, H265; Resolution upper limit: maximum width 4096, and maximum height 4096
8k	Format: H265、Vp9; Resolution upper limit: maximum width 8192 and maximum height 8192

File Formats	
Encoding Format	AVC, HEVC, VP8, VP9, mpeg-1, mpeg-2
Package Format	mp4、 mov
Color Space	yuv420p,*Hardware decoding does not apply to yuv444、 yuv422、 rgb
Color Depth	8bit

7. Media Formats

Media	Format
Video	MP4, AVI, MKV, WMV, FLV, MOV, ASF, MPEG, MPG, TP, TS, MTS, M2TS, VOB, RMVB, RM, RAM, DIVX, EVO, OGM, M1V, M4V, MPE, 3GP, WEBM, KRAWF, KTESTF
Picture	JPG, JPEG, GIF, BMP, PNG, TIF, TIFF, ICO
Audio	MP3, MP2, MPA, AAC, OGG, WAV, WMA, APE, AC3, FLAC, M1A, M2A, M4A, RA, DTS, DTSHD

8. Reference for Material Production

Reference for video production

Resolution	Frame Rate	Type	Coding Methods	Pixel Format	Graphics Card	Remark
		JPG		YUV420/YU V444		The width and height of picture are supposed to be within 16K, otherwise it should be reorganized.
		JPG		YUV420/YU V444		Video will be better when the resolution exceeds 4K.
1080P	30FPS	MP4	H264	YUV420	P2000	Code rate: 10M
	60FPS	MP4	H264	YUV420	P2000	Code rate: 20M
4K	30FPS	MP4	H264	YUV420	P2000	Code rate: 40M
	60FPS	MP4	H264	YUV420	P2000	Code rate: 80M
		MOV	HAP		P2000	The HAP code rate is immutable. The width and height should be aligned to an integer multiple of 16.
8K	30FPS	MP4	H265	YUV420	RTX4000	Code rate: 80M
	60FPS	MP4	H265	YUV420	RTX5000	Code rate: 160M, Frame rate will be decreased for the high reproduction.
	30FPS	MOV	HAP		RTX5000	The HAP code rate is immutable. The width and height should be aligned to an integer multiple of 16.

*For materials exceeding 8K, it is recommended to split them into multiple files.


Reference for audio production

Coding Format	Format	Rate	Remark
ACC	S16	44100/48000	If there are more than 8 channels, it is recommended to divide them into multiple files.

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