

# LCB2K

## LCD Multimedia Player



Specifications

## Change History

Document Version	Release Date	Description
V1.2.0	2024-07-24	<ul style="list-style-type: none"> <li>• Updated the feature descriptions.</li> <li>• Updated the packing information.</li> <li>• Updated media decoding specifications.</li> </ul>
V1.1.0	2024-05-30	<ul style="list-style-type: none"> <li>• Updated the feature descriptions.</li> <li>• Updated the connector descriptions.</li> <li>• Updated media decoding specifications.</li> </ul>
V1.0.2	2024-01-05	<ul style="list-style-type: none"> <li>• Updated the certification information.</li> <li>• Updated the descriptions of the HDMI OUT and USB 3.0 connectors.</li> <li>• Update the description of the default password of the Wi-Fi hotspot.</li> </ul>
V1.0.1	2023-07-28	Updated the certification information.
V1.0.0	2023-06-14	First release

## Introduction

The LCB2K is an LCD multimedia player created by NovaStar. This multimedia player applies to LCD screens in advertising media, digital signage, commercial display and other fields.

## Certifications

SRRC, CE, WPC

**If the product does not have the relevant certifications required by the countries or regions where it is to be sold, please contact NovaStar to confirm or address the problem. Otherwise, the customer shall be responsible for the legal risks caused or NovaStar has the right to claim compensation.**

## Features

### Output

- 1x HDMI connector

Adaptive mode: The LCB2K automatically adjusts the playback window resolution according to the EDID of the LCD display.

- 1x Stereo audio connector

The audio sample rate is fixed at 48 kHz.

## Control

- 1x USB 3.0 (Type A) port  
Allows for USB playback, firmware upgrade and storage expansion.
- 1x USB (Type C) port  
Connects to the control computer for content publishing and screen control.
- 1x Fast Ethernet port  
Connects the control computer to the device, or connects to a LAN or public network for content publishing and screen control.

## Performance

- Powerful processing capacity
  - Quad-core processor @1.3 GHz
  - Support for decoding of 4K videos
  - 1 GB of RAM
  - 16 GB of internal storage
- Flawless playback  
Support for Playback of 1x 4K video, 2x 1080p videos, 4x 720p, 4x 480p, or 6x 360p videos

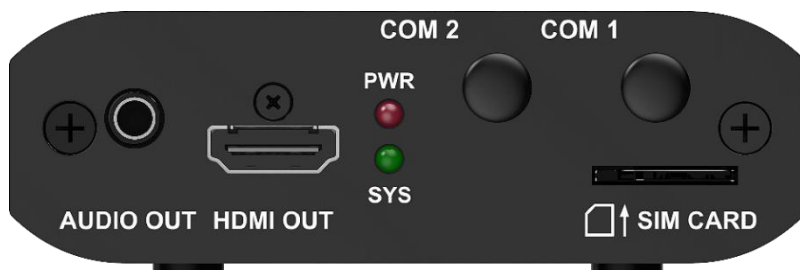
## Functionality

- All-round control plans
  - Enables users to publish content and control screens from a computer, mobile phone, or tablet.
  - Allows users to publish content and control screens from anywhere, anytime.
  - Allows users to monitor screens from anywhere, anytime.
- Synchronous playback across multiple screens (Playback limit: 1x 1080p video)  
Enabling synchronous playback halves the number of videos that can be played simultaneously within the decoding capability of the device.
  - NTP time synchronization
  - GPS time synchronization (The specified 4G module must be installed.)
  - RF time synchronization (The specified RF module must be installed.)
- Switching between Wi-Fi AP and Wi-Fi STA
  - In Wi-Fi AP mode, the user terminal is connected to the built-in Wi-Fi hotspot of the LCB2K. The default SSID is “*AP+Last 8 digits of SN*” and the default password is printed on the SSID label of the product.
  - In Wi-Fi STA mode, the user terminal and the LCB2K are connected to the Wi-Fi hotspot of a router.
- Support for 4G modules  
The LCB2K ships without a 4G module. Users have to purchase 4G modules separately if needed.

Network connection priority: Wired network > Wi-Fi network > 4G network (When multiple networks are available, the LCB2K will choose a network according to the priority order.)

## Appearance

### Right View



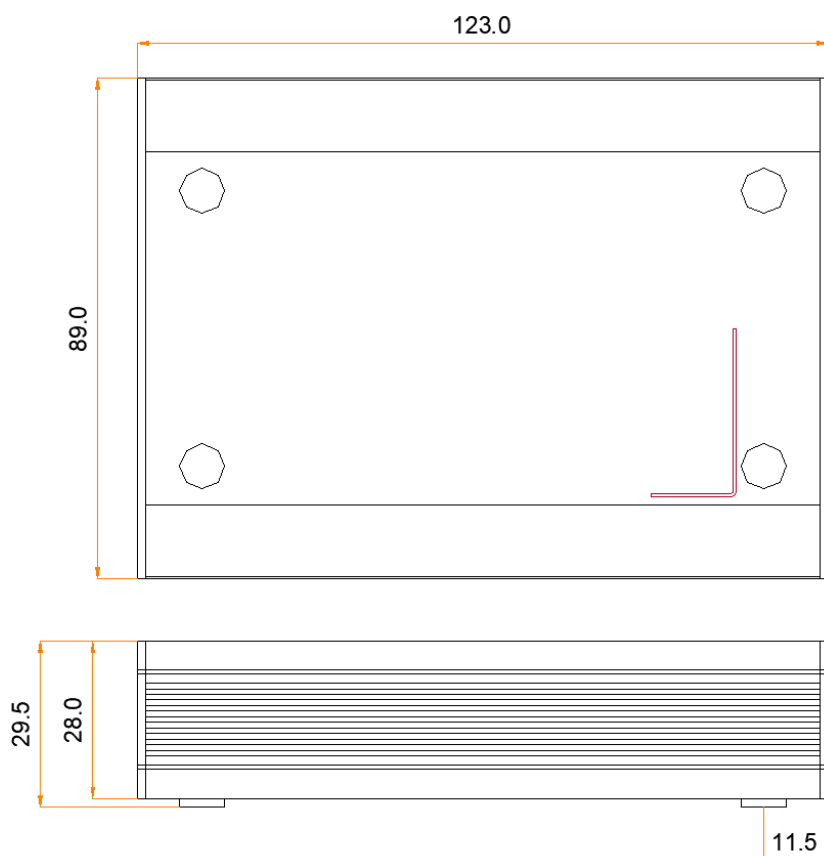
Name	Description
AUDIO OUT	Audio output connector OMTP headphones can be connected.
HDMI OUT	HDMI output Adaptive mode: The LCB2K automatically adjusts the playback window resolution according to the EDID of the LCD display. Supported maximum resolution: 1920×1080@60Hz
SIM CARD	SIM card slot Capable of preventing users from inserting a SIM card in the wrong orientation.
PWR (red)	Power indicator Staying on: The power supply is working properly.
SYS (green)	System operation and Internet connection indicator <ul style="list-style-type: none"> <li>Flashing once every 2s: The device is functioning normally.</li> <li>Flashing once every 0.5s: The Internet connection is normal.</li> </ul>
COM 2	GPS antenna connector
COM 1	4G antenna connector

## Left View



Name	Description
WiFi	Wi-Fi AP antenna connector (2.4 GHz Wi-Fi supported)
RESET	Reset button Press and hold this button for 5 seconds to reset the product to its factory settings.
USB	USB (Type C) port Connects to the control computer for content publishing and screen control.
USB 3.0	USB 3.0 (Type A) port Allows for USB playback, firmware upgrade and storage expansion. The Ext4 and FAT32 file systems are supported. The maximum size of a single file supported by FAT32 is 4 GB. The exFAT and FAT16 file systems are not supported.
ETHERNET	Fast Ethernet port Connects to the control computer, a LAN or public network for content publishing and screen control.
12V—2A	Power input connector

## Dimensions



Tolerance:  $\pm 0.3$  Unit: mm

## Specifications

Electrical Parameters	Input voltage	DC 12 V, 2 A
	Maximum power consumption	18 W
Storage Capacity	RAM	1 GB
	Internal storage	16 GB
Operating Environment	Temperature	-20°C to +60°C
	Humidity	0% RH to 80% RH, non-condensing
Storage Environment	Temperature	-40°C to +80°C
	Humidity	0% RH to 80% RH, non-condensing
Physical Specifications	Dimensions	123.0 mm × 89.0 mm × 29.5 mm
	Net weight	255.4 g

	Gross weight	620.8 g  Note: It is the total weight of the product, accessories and packing materials packed according to the packing specifications.
Packing Information	Dimensions	278.0 mm × 63.0 mm × 221.0 mm
	Accessories	<ul style="list-style-type: none"> <li>• 1x Omnidirectional Wi-Fi antenna</li> <li>• 1x Power adapter</li> <li>• 2x Racks</li> <li>• 4x Screws</li> <li>• 1x Certificate of Approval</li> </ul>

The amount of power consumption may vary depending on various factors such as product settings, usage, and environment.

## Media Decoding Specifications

### Image

Codec	Max Resolution	Format	Remarks
JFIF file format 1.02	4096×2160 pixels	JPG, JPEG	No support for non-interlaced scan Support for SRGB JPEG Support for Adobe RGB JPEG
BMP	4096×2160 pixels	BMP	N/A
GIF	4096×2160 pixels	GIF	N/A
PNG	4096×2160 pixels	PNG	N/A
WEBP	4096×2160 pixels	WEBP	N/A

### Video

Codec	Resolution	Max Frame Rate	Max Bit Rate (Ideal Case)	Format	Remarks
MPEG-1/2	48×48 pixels to 1920×1088 pixels	30fps	80Mbps	DAT, MPG, VOB, TS	Support for Field Coding
MPEG4	48×48 pixels to 1920×1088 pixels	30fps	38.4Mbps	AVI, MKV, MP4, MOV,	No support for MS MPEG4 v1/v2/v3, GMC

Codec	Resolution	Max Frame Rate	Max Bit Rate (Ideal Case)	Format	Remarks
				3GP	
H.264	48×48 pixels to 4096×2304 pixels	2304p@30fps	80Mbps	AVI, MKV, MP4, MOV, 3GP, TS, FLV	Support for Field Coding, MBAFF, High & High 10 Profile
H.264 MVC	48×48 pixels to 4096×2304 pixels	2304p@30fps	100Mbps	MKV, TS	Support for Stereo High Profile only
H.265/HEVC	64×64 pixels to 4096×2304 pixels	2304p@60fps	100Mbps	MKV, MP4, MOV, TS	Support for Main & Main 10 Profile and Tile & Slice
VP8	48×48 pixels to 1920×1088 pixels	30fps	38.4Mbps	WEBM, MKV	N/A
VP9	64×64 pixels to 4096×2304 pixels	30fps	80Mbps	WEBM, MKV	N/A
H.263	SQCIF(128×96) QCIF(176×144) CIF(352×288) 4CIF(704×576)	30fps	38.4Mbps	3GP, MOV, MP4	No support for H.263+
MJPEG	48×48 pixels to 1920×1088 pixels	30fps	60Mbps	AVI	N/A



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