



For Powerful Digital Marketing and Total Multimedia Solution

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**DV-66B**

**User's Guide**

(HW V1.4, FW V2.0C) Latest Version Aug. 2007

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# 1. INTRODUCTION

The DV-66B is the PC Board digital media player. The DV-66B series player is capable of play multi-format media files with High-speed CompactFlash® memory cards (CF), MicroDrive and 2.5" hard drive. DV-66B is specifically designed for the POP and Kiosk market. It can store and playback full-motion audio/video clips saved in a CF card with DVD quality audio/video output; MPEG-1, MPEG-2, MPEG-4 (DIVX), JPEG, and MP3 file formats. Users can create custom video scripts easily by simply using a computer with a standard CF card reader to drag and drop files to the CF memory card.

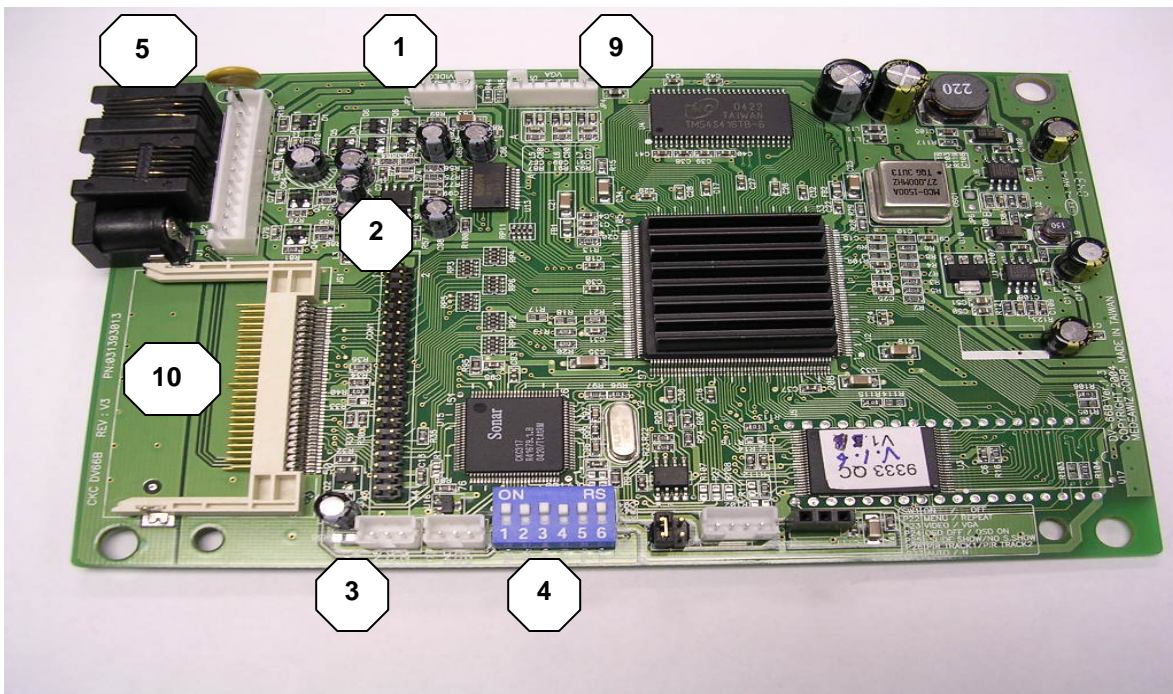
The DV-66B incorporates solid-state technology that provides high picture quality without degradation, regardless of the number of playbacks, and a reliable, long lasting solution. The DV-66B player is also designed for instantaneous response to user input when a specific track is selected. A potential customer or user will not walk away in boredom or frustration. It connects easily to any Composite (NTSC/PAL), S-Video, or VGA video monitor, amplified stereo audio system or multimedia POP displays. The DV-66B Digital Media Player is the perfect choice for any POP display, digital signage or interactive kiosk system due to its compact design, industrial design, and cost effective pricing.

## 1.1 Package Contents

- DV-66B MPEG-2 Digital Player
- AC Adapter
- Video/Audio cable, Connector to VGA cable, and Connector to S-Video cable

## 1.2 Features

### PC Board outlook



1. S-video connector
2. 44-pin pitch 2.0mm connector for using 2.5" hard drive
3. PIR sensor connector
4. 6 position DIP switches for hardware setup
5. RS232TTL control commands\*
6. Audio output level (volume) increased and improved
7. Support 16:9 file format
8. Support multiple formats: MPEG-2, MPEG-1, MP3, VOB, and JPEG
9. VGA output
10. Support CF card and IBM MicroDrive up to 2.2GB
11. Repeat or Menu modes available
12. Multiple track selection, up to 99 tracks
13. Instant track response
14. Stereo audio output and composite video output
15. Logo screen customization available upon request
16. JPEG file display animation
17. Auto-play when powered ON
18. Logo screen customization available upon request

## 1.3 Features' details and guidelines

### 1. JP7, S-video connector.

This connector will allow the unit output the video signal at S-video format.

S-Video cable is available now (4-pin Molex pitch 2.0mm to S-video female).

User can also connect it directly to the inner S-video connector in the display by its pin definition to get a better video quality.

### 2. J4, PIR sensor connector.

Reserved a 3-pin pitch 2.0 mm Molex connector (GND: Ground, Vcc: 5V, P20: signal input from PIR module) to connect to a PIR module. PIR use 5V power from the DV-66B, and send the signal into DV-66B via P20 pin. When PIR motion sensor module detect the movement, it will send a 5V signal into P20 of J4, the DV-66B player detect the signal and will activate video clip related to SW1 or SW2 (depending on the setting of the DIP SW5, "On" for SW1; "Off" for SW2". SW1 and SW2 is refers to DV-66K, which means SW1=track 2 or SW2=track 3).

### 3. 44-pin pitch 2.0mm connector for using 2.5" hard drive

New standard 44-pin 2.0 mm connector for the player to use a 2.5" Hard Drive as storage media, the pin# 41 is DC 5V, and Pin# 43 is the Ground as the power source to the hard drive. This will be a low cost solution for the end user who will need a long time playing video clip for repeatedly playing.

### 4. DIP SW for hardware setup.

	<u>ON</u>	<u>OFF</u>
1) <u>DIP SW 1</u>	Menu play mode	Repeat Play mode
2) <u>DIP SW 2</u>	Video/S-video output	VGA output @60Hz
3) <u>DIP SW 3</u>	OSD feature OFF	OSD feature ON
4) <u>DIP SW 4</u>	JPEG start from Top	JPEG display full screen
5) <u>DIP SW 5</u>	PIR activate SW1	PIR activate SW2
6) <u>DIP SW 6</u>	4:3 Letter Box	16:9

**All the DIP SW default setting at "ON" position.**

### **Details:**

- a) All DIP SW settings can be selected or changed only when the player is powered ON. Depending on which settings have been set, the DV-66B will remain with these settings even after the units has powered down.
- b) DIP SW 1 is used for menu mode/repeat mode setup. Please see section 2.1 for more details.
- c) DIP SW2 Video/S-video or VGA can only be changed when the unit is power on, the changes will be permanently stored in the flash memory until received any new command or next available DIP SW changes made. (Do not change DIP SW2 when the unit is power off, this will lead to mistake in the setting.)
- d) VGA output set as 60Hz, this will help to support the PAL video to transfer its output from 50Hz (PAL) to 60Hz (NTSC) in VGA output. Per this change, it will help to support most of the update LCD/CRT monitors, which support vertical frequency only from 56Hz to 78 Hz only when playing 50Hz PAL video. Originally NTSC video will not be impact here.
- e) DIP SW3: OSD feature default as OFF. OSD will only display the “select track” when a button switch selected. It will not display the track# if it is automatically repeating all media files in repeat mode.
- f) DIP SW4 is the setting for JPEG file display method. When it set as “On”, JPEG file will display from the top screen down to bottom screen in 2 seconds, then display in full screen for a length of 5 seconds. When it set as “Off”, JPEG file will display the full screen out and last for about 5 seconds.
- g) DIP SW5 is the setting for PIR activated track (Just like SW1 or SW2 in the DV-66K). This will need a PIR sensor motion module connected at J4 as pin definition in above section 2.
- h) DIP SW6 is the setting to support 16:9 file format.

### **5. Audio output level (volume) increase.**

This is to improve/increase the default volume level for the performance in the DV-6664 and DV-66104/T series.

### **6. Support CF and Microdrive up to 2.2GB.**

The old DV-66B HW V1.1 FW. V1.2 can only support both the CF card and Microdrive up to 1GB. The new version DV-66B HW V1.3 FW V2.0C can support up the 2.2GB and more.

### **7. Support 16:9 file format.**

If the video clip is at 16:9 format and using a 16:9 display, it will need to change the DIP SW6 setup to meet the requirement. Below is the drawing to show the display method in the modes of 16:9, 4:3 Letter Box and 4:3 Pan & Scan

*Select the correct aspect ratio on your DV-66B player*

### 4: 3 Aspect Ratio

**Note:**

1. DV-66B only support 16:9 (DIP SW6 off) and 4:3 letter box setting (DIP SW6 on) on SW6 setting.
2. DV-66B can support 16:9, 4:3 Letter Box, and 4:3 Pan& Scan on command control per command list.

#### 16:9 Wide TV

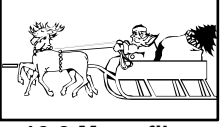
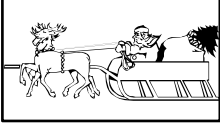

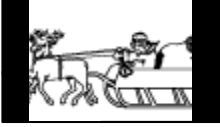

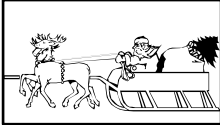


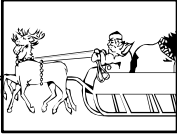

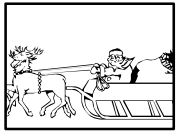
Image format	DV-66 Settings	View options
 <p>16:9 Mpeg files</p>	16:9 (Wide)	 <p>The image is properly displayed on the screen. There may be bands at the top and bottom depending upon the file format.</p>
 <p>4:3 Mpeg files</p>	16:9 (Wide)	 <p>Bands appear on the right and left side of the screen, but the image can be seen properly.</p>
		 <p>Image seems to be stretched horizontally. <i>The TV or viewing device must be adjusted rather than changing settings on the player. Refer to the device's manual.</i></p>

Image format	DV-66 Settings	View options
 <p>16:9 Mpeg files</p>	4:3 (Letter Box)	 <p>There are black bars at the top and bottom of the screen but the full image is displayed</p>
	4:3(Pan & Scan)	 <p>The left and right sides of the screen are cut off but the image can still be seen properly.  <i>Switch the player to 4:3 Letter box for a full screen view</i></p>
	16:9 (Wide)	 <p>The image appears to be stretched vertically.  <i>Switch the player to 4:3 Letter Box or 4:3 Pan &amp; Scan</i></p>
 <p>4:3 Mpeg files</p>	4:3 (Letter Box) 4:3 (Pan & Scan) 16:9 (Wide)	 <p>The image is displayed properly</p>

**8. RS232 TTL control commands**

**DV-66B, RS232 Interface Definition ( Receive Only ) Version 1.6**

**Transmit from PC, com port, TTL level**

**Received by DV-66B MCU of CKC317**

RS232 TTL Level : 5V

Voltage Level : ( 0~5V )

**TTL Level**

Transmit Protocol :

**4800,S(=0),8,1**

Baud Rate :

**4800**

Priority Bit Check :

**S( =0 )**

Data Bit Length :

**8**

Stop Bit No.

**1**

<u>Initial Status:</u>	<u>Default setting</u>
1.	Video
2.	4:3
3.	Menu
4.	OSD Off

<b>RS232 Code( Decimal )</b>	<b>RS232 Code( Hex )</b>	<b>IR Key Code</b>	<b>Content</b>
<b>1~99</b>	<b>1~63</b>	<b>NA</b>	<b>Play track #1~#99</b>

Note: Complete command list available upon request.

Remark:

- 1) It is highly recommended that the CF card to be inserted while the player is OFF. Do not attempt to insert or pull out CF card while the player is ON; as this may severely damage the CF card. However, in the case that lack/hard to access the power connection, it is recommended that you use SanDisk Ultra II CF card, as this has been approved to be more robust than other CF cards.
- 2) Lead data Ultra Hi-speed or Transcend Ultra 45X CF card do not support above feature.
- 3) Other CF card may or may not support this feature—need to be further approved.

## 2. SETTING UP YOUR DV-66B

### 2.1 How to program the contents to your CompactFlash® card

In order to setup your content to work with the DV-66B you must have a **high speed CompactFlash®** media card. To integrate your media content (MPEG-1, MPEG-2 MPEG-4(DIVX), MP3, or JPEGs) you will need to use a CompactFlash® reader with your computer to load the appropriate files and setup; see programming below for more details.



Connect your card reader to your PC (note: be sure that the card reader driver is installed) and insert the Compact FLASH card (we recommend 512 MB minimum or up) into the reader. Format the CompactFlash card to FAT, FAT16 or FAT32 (Please note that formatting on a MAC Operating System causes the DV-66B to not work properly). To program your multimedia content on to the media card, open the file manager and copy the files to the card reader drive.

The DV-66B utilizes a three-digit numeric ID system for programming your content tracks, so you will need to number your tracks using this system; please note that you can keep your track descriptions as well. There are two types of play modes, **MENU** and **REPEAT**, which determine what number is the first track.

For instance, in the **MENU mode the first track is 000**, which is the looping track. For the **REPEAT mode the first track is 001**.

**Menu mode:** This is the factory default mode. Track 000 is the looping track for your menu file and it will continue to play until another track is selected from either a push button or touch screen input device.

**Repeat mode:** To change to repeat mode dipswitch # 1 must be in the “OFF” position. Please note that when making any dipswitch changes the power must be “ON” in order for the changes to take affect. Repeat mode will play in sequence, one track at a time in numeric order, and after the last track the DV-66B will play track 001 again and continue looping in numeric order.

#### **NOTE:**

*Setup changes will be saved on the flash memory, so the selection made will not change when the power is OFF. To have the MPEG-1 and MPEG-2 played properly through DV-66B player. You need to make sure both MPEG-1 and MPEG-2 have file extension “xxx.mpg” or else the video clips will not be recognized by DV-66B.*

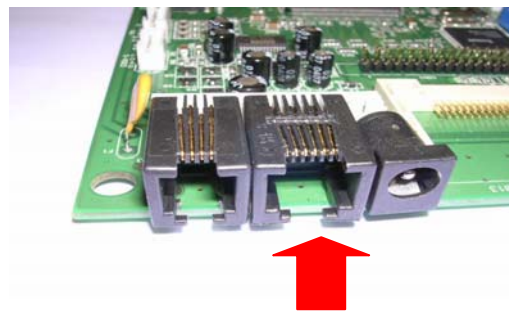
## 2.2 Connect DV-66B to Any Display with A/V Inputs

Simply connect DV-66B to any video display such as a PC monitor or TV with A/V inputs, and you can start watching the video clips stored on your Compact Flash Card. You can control the track selection with the optional DV-66K Keypad Controller, and it gives you the ability to control up to 99 tracks on the DV-66B player.

**Caution:** DO NOT plug in the power before CompactFlash® Card is inserted into DV-66B card slot. MedeaWiz recommends that CompactFlash® Card to be inserted into the slot first, and then the power can be applied to the unit as described later.

### Step 1

Plug in the modular end of A/V cable to the jack located at the side of DV-66B.

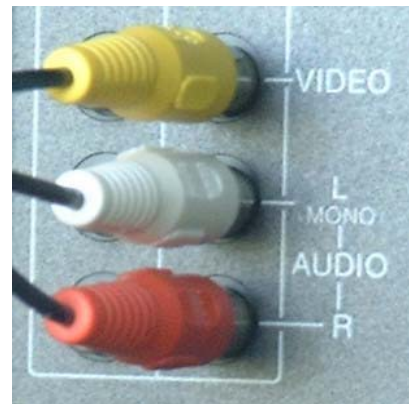


### Step 2

Plug in the yellow end of the A/V cable to "Video In," white end to "Audio L," and red end to "Audio R" of your display.

**Note:**

*Normally the A/V inputs are located in the back of a TV or monitor. For more instructions on how to use A/V input on your display, consult the manual for the device.*



### Step 3

Turn on the power of the display, and change the channel to the corresponding A/V input channel if necessary.

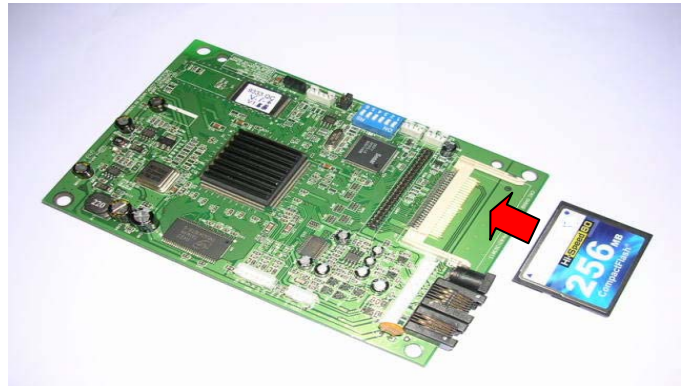
**Note:**

*For more detailed instructions on how to switch to the corresponding A/V input channel on the display, refer to the manual for that display device.*

## Step 4 - Insert CompactFlash® card

Insert the CompactFlash® Card into the card slot on the side of DV-66B.

The CompactFlash® Card must be a **High Speed CompactFlash® Card** which is available through your local dealer or MedeaWiz dealer.



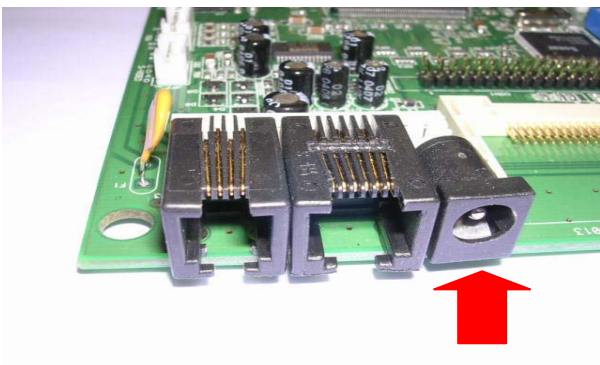
## Step 5 - Plug in the power

You are ready for the final step in setting up your DV-66B: plug in the included power adapter and the DV-66B will automatically start playing the first video clip on the CompactFlash® Card!

**Note:**

*Make sure that you have inserted the CompactFlash® correctly, and its content meets DV-66B's specifications.*

Plug the power adapter's cord into the "DC IN" on the side of DV-66B and Plug the other end of the power adapter into an electrical outlet.



## 2.3 Connect DV-66B to Any Display with VGA or S-Video Inputs

Please connect your VGA or S-Video cable to the connector(s) and switch to the corresponding VGA/S-Video input channel on the display. You are now ready to insert the CF card followed by plugging in the power supply to the DV-66B. For VGA output, insert the CF card, connect the power supply and switch the blue DIP SW2 to OFF position on the board with power ON.

# 3. PLAY A VIDEO CLIP!

If everything is setup correctly, you should be watching the video clips stored on the Compact Flash Card playing on the display. Depending on how the tracks on the Compact Flash Card are programmed, the DV-66B player will play accordingly

**Note:** *The unit is designed for "Auto-run" on power up, and it will start playing the contents on the Compact Flash Card when power is supplied.*

# 4. ADDITIONAL SETUP INFORMATION

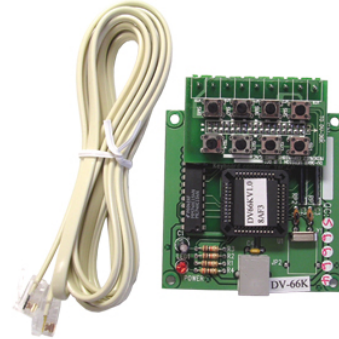
## If You Have Problems Playing:

1. Check that the CompactFlash® Card is inserted into the slot correctly; see previous pages for detailed instruction.
2. Make sure that the CompactFlash® Card has the content recorded in the correct format: MPEG-1(VCD), MPEG-2(DVD), MPEG-4(DIVX), JPEG, and MP3 are the accepted files.
3. The video clip may not meet DV-66B's video requirements. . Please refer to [DV-66B's](#) FAQ for more information regarding file audio/video parameters.
4. Make sure your CompactFlash® Card format meets DV-66B's specifications:
  - > High Speed CompactFlash® Card (min. 40x or up)
  - > Data transfer rate is 1 x 150 KB per second
  - > Format the CF card to be FAT16
  - > MPEG-2 maximum CBR=5MBPS and VBR=4.5MBPS/peak 5.1MBPS
5. Also check to see if the proper DC adapter supplies the power and that the plug is plugged into the power jack.

# 5. INTRODUCING DV-66B ACCESSORIES

## 5.1 DV-66K, Keypad Controller

The required interface for connecting and controlling the DV-66B player with an external input device, such as push buttons. There are eight buttons per controller. 4800 baud rate.



## 5.2 DV-66U, Universal Controller

The required interface for connecting the DV-66B player with an analog touch screen. There are eight switch buttons per controller. 4800 baud rate.

- Supports PIR sensor connection
- Control Board with 8 key switches
- Supports touch panel connection



**CAUTION:** Analog touch screen used with DV-66U is subject to any dimension of the standard 4-wire resistive type touch screen; it is different with the matrix type touch screen built in the DV-66104 unit

## 5.4 PIR Sensor Module

Motion sensors, used to detect moving objects

- An extremely compact passive infrared (PIR) movement detector which has a wide variety of applications.
- 3 leads for easy connection (default cable length is 30cm)
- The output is a logic signal that pulses high when movement is detected and is otherwise low.
- The PIR sensor module connected directly to DV-66B.
- Small size: 25 x 35 mm
- High Sensitivity-can sense distance up to 5 meters
- Power up delay to prevent false triggering
- Adjustable cable length to fit your need.



## 5.5 RS-232C Interface Cable

RS-232C interface cable is intended to provide electrical connection between a computer and the DV-66B series devices connected to its keypad port.

- Ease to setup for DV-66B series devices with RS-232C port and use.
- Send ASCII command to DV-66B series devices for controlling.
- Point-to-point connections make it much easier to plug and play.
- Easy to configure many different ready-to-use functions
- Commands list available upon request
- Test software available upon request



# 6. DV-66B SPECIFICATIONS

System Type	Digital Audio/Video playback
Format	MPEG-1 (VCD), MPEG-2(DVD), MPEG-4 (DIVX), JPEG, MP3
Dimension	6" x 4" (Board Level)
Power Consumption	3.6 W
Operating Current	Max 300mA @ 12V
Operating Voltage	12 VDC
Video Output	Composite (NTSC/PAL), VGA, and S-Video
Audio Output	Stereo (line level)
Storage Format	High Speed CompactFlash® Card (min. 40X or up) Transfer speed calculation: 1X=150KB/sec, 40X=6.0MB/sec
Storage Capacity	128MB up to 8 GB CompactFlash®
MP3 Est. Avg. Playback CBR @ 128kbit/sec	<b>MP3 bit rate vary from 8kbit/sec to 320kbit/sec</b> 256MB CF holds 273 minutes/ 4.55 hrs 512MB CF holds 546 minutes/ 9.1 hrs 1GB CF holds 1066 minutes/ 17.76 hrs. 2.2GB CF holds 2346 minutes/ 39.1 hrs.
MPEG-1 Est. Avg. Playback CBR @ 1.35Mbit/sec	<b>MPEG-1 bit rate vary from 1.15Mbit/sec to 3Mbit/sec</b> 256MB CF holds 25 minutes 512MB CF holds 50 minutes 1GB CF holds 98 minutes/ 1.63 hrs. 2.2GB CF holds 217 minutes/ 3.62 hrs
MPEG-2 Est. Avg. Playback CBR @ 4Mbit/sec	<b>MPEG-2 bit rate may vary and/or depend on the speed of the CF card. For maximum bit rate, please refer to our FAQ.</b> 256MB CF holds 8.5 minutes 512MB CF holds 17 minutes 1GB CF holds 33 minutes 2.2GB CF holds 73 minutes

**Note:** We recommend MPEG-2 maximum CBR=5MBPS and VBR=4.5MBPS/peak 5.1MBPS

(\* ) RS-232TTL command control is required to have a RS-232 cable, please check with our Sales Department for availability.

The information in this document is subject to change without notice.

For more information about DV-66B or its optional accessories, please visit our website at <http://www.medeawiz.com/> Or e-mail us at [support@medeawiz.com](mailto:support@medeawiz.com)

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