

Manual

ViewStream 505

Version 2.4

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Revision History

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1 Introduction

The ViewStream 505 is a powerful yet easy to use commercial digital media player designed for retail point of purchase (POP) product promotions, product demonstration videos and similar applications such as museum information displays. It supports both normal video displays and PC monitors.

Things worth knowing:

- DV Studio is a utility software available for download from:

www.dvsignage.com/using-dv-studio

It is essential for creating playlists and interactivity. It also simplifies creation of schedules, USB update settings and other functionality.

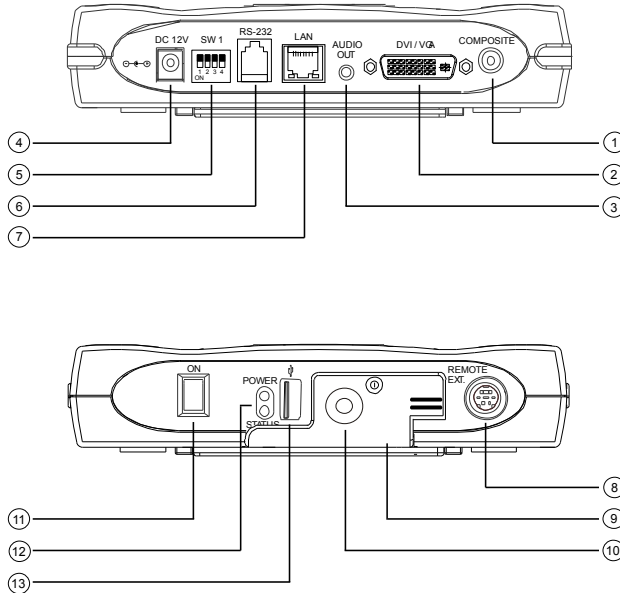
- The ViewStream family of media players all share a common structure so even though support for some specific features may differ, knowing one model is a good base for working with any of the models. In particular this applies to features such as:
 - Interactivity with buttons and lookup tables (barcode.ini)
 - USB content update
 - RS-232 support
 - Data-logs

The following are some of the key features that distinguish the ViewStream 505 from the ViewStream 300:

- DVI output.
- Widescreen media support, the ViewStream 505 will play video files of 720x400 (16:9) resolution, these are scaled up and played as 720p video through the DVI output.
- Network support: The ViewStream 505 content and command files can be updated through a standard Ethernet connection.
- SD card support.

1.1 Guide to the ViewStream 505

Diagram 1 – ViewStream 505



Item	Description	Type / Use
1	Composite video output	RCA jack (yellow)
2	DVI / VGA connector*	Standard DVI- I female connector
3	Audio output – Line out	Stereo phone jack (3.5mm)
4	12V DC Power input jack	DC power jack. Center pin positive, 2.5mm diam.
5	Functions switch	4-pos DIP switch
6	RS-232 port^	Standard RJ-11 connector (6 pins)
7	LAN port	Standard RJ-45 connector (8 pins)
8	Remote Ext.	8-pin mini DIN socket
9	SD card Cover	SD card cover with screw lock
10	IR sensor	For use with DV remote control
11	Power on/off switch	Rocker switch
12	Power and Status LED	On (green) / Off (clear)
13	USB connector	Standard USB type A

*An optional DVI to VGA adapter is required

^An optional RJ-11 to RS-232 cable (P/N:426894301-3) is required.

2 Setup

When powered on the ViewStream 505 will automatically start to play video or still images found in the media folder of an installed SD card. Files will be played in alphanumeric order unless a playlist has been prepared using DV Studio.

Basic setup involves 4 main steps:

1. Installing a SD card with suitable media
2. Setting ViewStream switches appropriately
3. Connecting to a display and power
4. Switching on

The ViewStream 505 also offers a range of **Features**. For details of these see the [Additional Functions](#) section below.

2.1 Basic Setup Notes

The following provides a short introduction to the basic setup:

- SD cards:** The recommended brand is SanDisk, all capacities and speeds should be suitable. Other brands may also be acceptable.
- SD cards should be formatted using FAT32 before first use.
- All media files on the SD must be in a folder name “media”.
- All media filenames must be in 16.3 format (e.g. xxxxxxxx.xxx) though combinations with 8.3, 10.3 etc are fine.

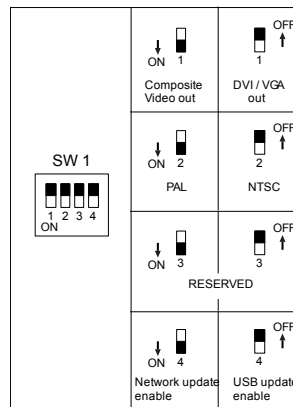
Where: “16” is the maximum of alpha-numeric character to be used.
“3” is the file extension like .mpg / .jpg / .avi etc.

- Do not use any “Non alpha-numeric” characters like ‘~’, ‘_’, ‘-’, ‘&’, ‘^’, etc.

NOTE: If ‘Non alpha-numeric characters’ are used or the max. ‘16.3’ filename format are not followed, the player will not recognize the playlist.

A Playlist is optional, for details of playlist preparation using DV Studio, see the [Additional Functions](#) section below. Without a playlist, media will play in alphanumeric order according to the filename.

- **Video:** The recommended codec is MPEG-2 (.mpg) with a data-rate not exceed 3Mbit/s.
- - Resolution: 720x400
 - Bit Rate: 3 Mbit/s
 - Audio Bit Rate: 224 Kbit/s, 48 kHz at 16 bits sample rate
 - Frame Rate: 25 Hz
 - Codec: MPEG-2 (PS)
 - Typical filename extension: .mpg
- **JPEG still images:** A compression setting of medium to good (50% ~ 80%) is recommended. Resolution settings – maximum.
 - For output to a widescreen display : 1280x720 is the best resolution on DVI output.
- **Functions switch (SW 1) settings** (see diagram 1 in Introduction):
 - SW1-1 (Output selection):
 - DVI/VGA: If it is selected, the output resolution is set to 1280x720p60Hz*
 - Composite: If it is selected, the video format (PAL/NTSC) is determined by SW1-2.
 - SW1-2 (PAL/NTSC selection): When using Composite output connectors this should be set according to the input requirements of the video display being used.
 - SW1-4 (Content update selection): You may only choose either one way (LAN or USB) to update content without removing SD card.

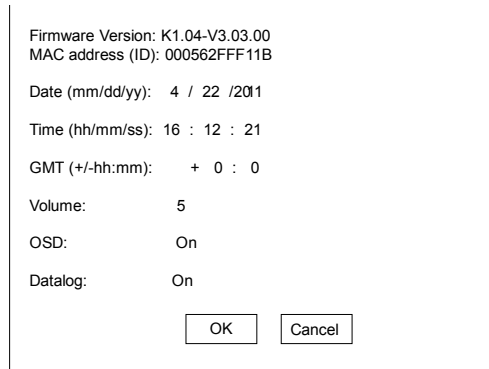


*An optional DVI to VGA adapter is required

- **Display:** There is a very wide selection of displays on the market that are suitable for use with the ViewStream 505. Users are however recommended to consider the following:
 - Monitor adjustment: DVI/VGA output is currently set to 1280x720 resolution which may not be supported by all monitors. If the display looks reasonable but not perfect please use the OSD settings of the monitor to adjust image position and tuning (sometimes called phase). It may also be necessary to adjust image size.

OSD Configuration menu: In OSD configuration mode, you may need external buttons, 8-segmented touch screen to operate.

- Use with external button or 8-segmented touch screen
 - To enter OSD configuration mode, holding button 8 and power on the ViewStream 505 unit. The OSD menu screen will be shown as follow:



- Press button 8 to select option.
- Press button 7 or button 6 for change value.
- Press button 7 or button 6 to confirm "OK" or "Cancel".

2.2 Network setup

Each ViewStream 505 is shipped with DHCP settings (IP=0.0.0.0). In some network environment, fixed IP could be used and you may need to change the ViewStream 505 with the fixed IP settings. All IP settings are set in a configuration file called "netcfg.ini". To change the IP settings on ViewStream 505 media player, copy the netcfg.ini file with your setting on to MEDIA folder on SD card and restart the player then you will see a boot up message with your IP information changed.

In addition to IP information, the NETCFG.INI file contains some system settings for ViewStream 505 media player. Below is a table to show all user settings in the NETCFG.INI

ITEM	DESCRIPTION
IO_OUTPUT_MESSAGE_THROUGH_232_ENABLE	Enable message output on RS-232 port 0 = Disable message output 1 = Enable message output [Default]
IP_OVERWRITE	Change IP settings on player 0 = Keep the old IP settings on player [Default] 1 = Overwrite with new IP settings on player
IP	IP address 0.0.0.0 = DHCP mode [Default: 0.0.0.0]
NETMASK	Subnet mask (Ignore if set to DHCP) [Default: 0.0.0.0]
GATEWAY	Gateway value (Ignore if set to DHCP) [Default: 0.0.0.0]
DNS1	DNS table
TIME_ZONE	GMT time zone setting Format: +/- hhmm [Default: +0000]
TIME_SERVER	Set time server OFF = Disable time server polling ON = Enable time server "pool.ntp.org" [Default]
DATALOG_DURATION_IN_DAY	Max. day(s) to keep data log [Default: 31]
CLEANUP_INTERVAL_IN_MINUTE	Interval to clean up data log [Default: 1440]
DAILY_END_TIME_ENABLE	Stop playing End of Day 0 = disable 1 = enable [Default]
VOLUME	Master volume set, Range (0-10) [Default: 5]

DATALOG_ENABLE	<p>Enable Data logging</p> <p>0 = disabe 1 = enable [Default]</p>
FTP_UPDATE_ENABLE	<p>Enable DV Connect mode</p> <p>0 = Content pull mode [Default] 1 = Content push mode</p>
JPG_TRANSITION_EFFECT	<p>JPEG to JPEG transition effect (OFF, 0-23)</p> <p>OFF = Disable transition effect [Default] 0 = Random 1-23 = 23 effects selection</p>

If you are using DHCP, *netcfg.ini* should look like this (i.e. IP set to 0.0.0.0)

```

IO_OUTPUT_MESSAGE_THROUGH_232_ENABLE=1
VOLUME=5
FTP_UPDATE_ENABLE=0
JPG_TRANSITION_EFFECT=OFF
TIME_ZONE=+0800
TIME_SERVER=ON
DATALOG_DURATION_IN_DAY=31
CLEANUP_INTERVAL_IN_MINUTE=1440
DAILY_END_TIME_ENABLE=1
IP_OVERWRITE=0
IP=0.0.0.0
NETMASK=0.0.0.0
GATEWAY=0.0.0.0
DNS1=0.0.0.0

```

If you are using a static IP then the file should instead have IP, NETMASK and GATEWAY value assigned from your LAN administrator. See this example:

```
IO_OUTPUT_MESSAGE_THROUGH_232_ENABLE=1
VOLUME=5
FTP_UPDATE_ENABLE=0
JPG_TRANSITION_EFFECT=OFF
TIME_ZONE=+0800
TIME_SERVER=ON
DATALOG_DURATION_IN_DAY=31
CLEANUP_INTERVAL_IN_MINUTE=1440
DAILY_END_TIME_ENABLE=1
IP_OVERWRITE=1
IP=10.1.0.123
NETMASK=255.0.0.0
GATEWAY=10.1.0.1
DNS1=10.1.0.1
```

Important note: If you intent to change the new IP address (whatever DHCP (0.0.0.0) or Static IP), make sure to add “**IP_OVERWRITE=1**” in netcfg.ini. Otherwise, your new value of IP address will not overwrite the old value.

If the VS-505 is used as Direct Player (Content push) deployed from DV Studio, please set “**FTP_UPDATE_ENABLE=1**” in netcfg.ini. See this example:

```
IO_OUTPUT_MESSAGE_THROUGH_232_ENABLE=1
VOLUME=5
FTP_UPDATE_ENABLE=1
JPG_TRANSITION_EFFECT=OFF
TIME_ZONE=+0800
TIME_SERVER=ON
DATALOG_DURATION_IN_DAY=31
CLEANUP_INTERVAL_IN_MINUTE=1440
DAILY_END_TIME_ENABLE=1
IP_OVERWRITE=0
IP=0.0.0.0
NETMASK=0.0.0.0
GATEWAY=0.0.0.0
DNS1=0.0.0.0
```

2.3 Additional Functions

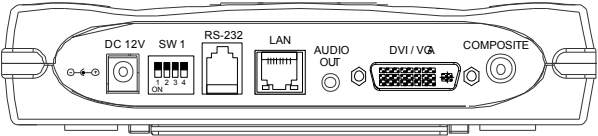
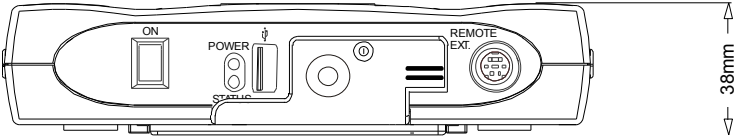
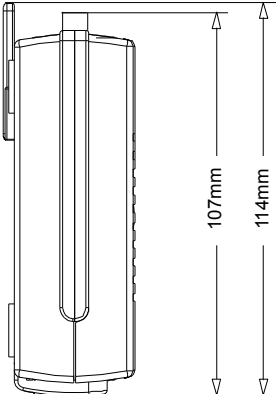
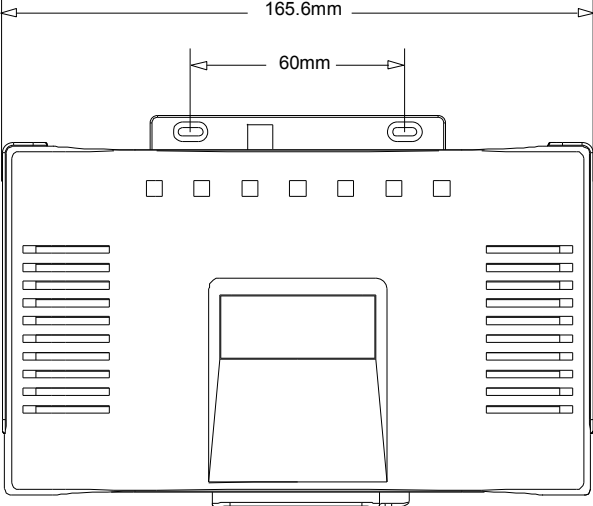
The ViewStream 505 offers a wide selection of options as briefly introduced below. For more information on each of these please refer to the detailed application notes at www.dvsignage.com/support-home

As many of these functions are enabled using DV Studio it is also recommended to review the manual for DV Studio.

- Playlist:** By default videos and still images play in alphanumeric order by filename. Using DV Studio files can be played in a specified order.
- USB update:** The SD card content can be updated from a USB memory stick. When using this function, SW 1-4 must set to “OFF” position.
- Scheduling:** Multiple playlists can be loaded and scheduled to play at specified times.
- Motion sensor:** Motion sensors can be used to trigger playback of particular files or as people counters (see data logging).
- Touch screen:** Up to 16 touch hotspots can be programmed using either a segment touch panel or analog touch panel.
- External buttons:** External buttons can be added for track selection.
- Barcode scanner:** A product barcode scanner can be supported with up to 1,000 referenced images or videos.
- Data capture:** Details of all interactions with the player such as via the motion sensor, touch screen, buttons or barcode scanner can be recorded and stored on the SD card for later retrieval and analysis.
- RS-232 protocol:** The ViewStream RS-232 port is complemented by a complete set of protocols allowing for both external device control and control by external devices. The default baud rate on RS-232 is 57600.
- OSD setup functions:** A number of other operating modes and functions are available through the OSD setup menu.
- Manual control:** For manual operation of playback functions a remote control handset is available as well as a selection of button options.
- Network:** The SD card content can be updated through network. A FTP content management software (e.g. FTP server) is supported.

- **Firmware upgrade:** From time to time the operating system of the ViewStream may be upgraded providing bug fixes and new features. For compatible hardware it is possible to install these upgrades through a simple process.
- **Customization:** DV Signage provides customization services.

3 Dimensions



Unit in mm

4 Specifications

Playable formats	1. MPEG-2 (PS) .mpg @3Mbit/s - Recommended 2. JPEG (.jpg) up to 1280x720 pixels
Storage media	SD card Recommended max capacity: 16GB
Video output resolution	DVI / VGA – 1280x720@60Hz Composite - 720x576(PAL), 720x480(NTSC)
Audio volume	Controlled through OSD with switches attached
Line out	Stereo phone jack (3.5mm)
Playback functions	Play / Stop / Pause / Repeat / Previous track / Next track / Volume / Mute Loop playback / Sequence play / Startup mode / Sleep mode
External I/O ports	RS-232 (57600, N-8-1) USB (content upload) Infra-red (use with DV IR handset, P/N:559000104-3) Remote Ext. (for 8-button & touch)
LAN	RJ-45 LAN connector
LEDs	Power LED (Green) Status LED (Green)
Watchdog	System level auto-reset
Real time clock	Battery-backup RTC
Power requirement	Regulated DC 12V input. 2.5mm center positive.
Power consumption	500mA @ 12V
Environmental	Operating temperature : 0°C to 50°C Relative humidity : 5%-95% relative humidity (Non-condensing)
Dimensions	165.6mm (W) x 107mm (D) x 38mm (H)
Weight (net)	250g

The following are the recommended encoding specifications for video content on the M3-320 board and ViewStream 505 player.

MPEG-2 specifications	Screen size (recommended)	4:3 screen or 16:9 screen
	Resolution	720x576(PAL) [4:3] 720x480 (NTSC) [4:3] 720x400 [16:9]
	Encoding bit rate	3Mbit/s
	Audio bit rate	224Kbit/s, 48kHz at 16bits sample rate
	Frame rate	PAL(25Hz), NTSC(29.97Hz)
	Codec	MPEG-2
	Typical filename extension	.mpg

JPEG specifications	Optimal JPG resolution on selected output		
	16:9	Composite output	720x576(PAL) 720x480 (NTSC)
		DVI / VGA output	1280 x 720
	4:3	Composite output	720x576(PAL) 720x480 (NTSC)
		DVI / VGA output	800 x 600

5 FAQ(Frequently Asked Questions)

<p>Q: What SD cards are suitable ?</p> <p>A: SanDisk SD cards are recommended however many other brands are suitable.</p>
<p>Q: How do I format a SD card with FAT 32 ?</p> <p>A: This is a standard option in Windows XP and Vista disk format.</p>
<p>Q: How do I encode or prepare suitable video ?</p> <p>A: Settings equivalent to those used for making a DVD are recommended and many popular video editors have a DVD preset.</p>
<p>Q: How do I get video and still images to play in a particular order ?</p> <p>A: It is possible to create a playlist to specify the playback order by using DV Studio which can be downloaded from www.dvsignage.com/using-dv-studio</p> <p>What is DV Studio ? - An authoring tool from Digital View for the creation of playlists and other additional functions possible with the ViewStream 505.</p>
<p>Q: Is manual operation possible ?</p> <p>A: Yes. Users can access manual operations using a Digital View remote control or by connecting a set of external buttons. Refer to the Manual Control Application Note at www.dvsignage.com/support-home</p>
<p>Q: How do I get the most out the advanced features ?</p> <p>A: A good place to start is with the Application Notes on the website as these will explain how the various features work. In addition DV Signage's sales support team can provide ideas and assistance.</p>
<p>Q: What customization is possible ?</p> <p>A: DV Signage provides both software and hardware customization services for – please contact Digital View's sales support team for assistance.</p>
<p>Q: Why I noticed 'Vertical stripes' pattern on VGA output in some VGA monitors ?</p> <p>A: Since the timing of 1280x720 is not a standard timing fall in VESA specification (VGA specification). Therefore most of VGA monitors will handle this timing in its own way.</p> <p>When the vertical strips were found on the screen. That mean the VGA monitor connected to the ViewStream 505/M3-320 did not have the corresponding matched input timing mode. In this case, what we suggest to do is to adjust the phase frequency of the monitor until all</p>

the stripes have been removed.

Each VGA monitor should has the Phase frequency adjustment (or called 'H-size', 'H. Freq', etc) in OSD menu. Use this function to fine tune the phase until all the stripes are not seen. This adjustment only done once in the first time setup and the monitor should remember this phase settings.

Q: What is the best content (JPEG) resolution on DVI/VGA out ?

A: The recommend to use the JPEG with 1280x720 resolution.

6 Troubleshooting

<p>Q: Nothing is displayed on the screen:</p> <p>A:</p> <ul style="list-style-type: none"><input type="checkbox"/> First check that all parts of the system are connected and powered on.<input type="checkbox"/> Check that the display is getting a signal from the ViewStream. This can be done by ensuring the ViewStream indicator LED is on then powering the ViewStream on & off, the display should flicker.<input type="checkbox"/> Ensure the media is compatible, see specifications.<input type="checkbox"/> Ensure media on the SD is in a folder named "media".<input type="checkbox"/> Ensure that files are in a compatible format.
<p>Q: The display has vertical lines in it:</p> <p>A:</p> <ul style="list-style-type: none"><input type="checkbox"/> This may happen when a monitor is connected using the DVI/VGA connector. It can be corrected using the Tuning or Phase function accessed via the OSD (On Screen Display) menu on the monitor.
<p>Q: The display is shifted to the side:</p> <p>A:</p> <ul style="list-style-type: none"><input type="checkbox"/> This may happen when a monitor is connected using the DVI/VGA connector. It can be corrected using the position adjustment controls function accessed via the OSD (On Screen Display) menu on the monitor.
<p>Q: Video is jerky:</p> <p>A:</p> <ul style="list-style-type: none"><input type="checkbox"/> It is likely that the video is encoded at a data rate too high for the player.
<p>Q: Video is very blocky:</p> <p>A:</p> <ul style="list-style-type: none"><input type="checkbox"/> Original content was low resolution<input type="checkbox"/> The video encoding settings are for a lower resolution. DVD settings are recommended.
<p>Q: Text is not readable:</p> <p>A:</p> <ul style="list-style-type: none"><input type="checkbox"/> It is likely that the text is too small however it is worth checking the encoding settings. DVD settings are recommended.
<p>Q: Audio playback is intermittent:</p> <p>A:</p> <ul style="list-style-type: none"><input type="checkbox"/> It is likely that the video is encoded at a data rate too high for the player.

WARRANTY

The products are warranted against defects in workmanship and material for a period of three (3) year from the date of purchase provided no modifications are made to it and it is operated under normal conditions and in compliance with the instruction manual.

The warranty does not apply to:

- Product that has been installed incorrectly, this specifically includes but is not limited to cases where electrical short circuit is caused.
- Product that has been altered or repaired except by the manufacturer (or with the manufacturer's consent).
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Whilst care has been taken to provide as much detail as possible for use of this product it cannot be relied upon as an exhaustive source of information. This product is for use by suitably qualified persons who understand the nature of the work they are doing and are able to take suitable precautions and design and produce a product that is safe and meets regulatory requirements.

SAFETY INSTRUCTION

Do not use this product near water, for example, near a bathtub, wash bowl, kitchen sink, laundry tub, in a wet basement or near a swimming pool.

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