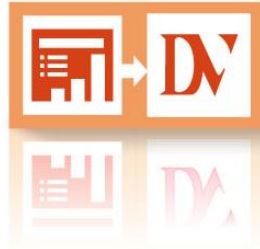


**FIREWIRE SCAN CONVERTER**



**PPT-100**

**USER MANUAL**

2005/05/10

[www.datavideo-tek.com](http://www.datavideo-tek.com)

**Warnings and Precautions**

1. If you have purchased PPT-100 software with an optional Blackmagic Design Video Card please observe the precautions supplied when installing it.
2. It is also advisable to read any precautionary notes supplied with your PC when installing new hardware and software.

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## **What's in the box?**

1. PPT-100 software CD
2. User Manual
3. BNC to BNC 2m cable x 1
4. IEEE1394 4pin to 6pin 1.8m cable x 1
5. IEEE 1394 6pin to 6pin 1.8m cable x 1
6. DeckLink card (Optional)

## **Introduction**

Thank you for using the PPT-100 software. This software is the world first software that can direct transfer a PC's screen to high quality DV or SDI signal. PPT-100 is ideal for shooting speeches, seminars or presentations; it allows video directors to do on-the-spot switching between live scenes and PC screens. You will be amazed by what you can do with this advanced piece of technology. In order to bring out the maximum performance of this software, we recommend that you spend some time reading this manual carefully.

## **Product Overview**

In many conferences and seminars, lecturers need to present videos and additional PC information to the audience. When they switch sources between PC and other media on the projector it causes the transient black picture and interrupts the flow of the meeting. The solution is a high-end VGA to video converter, which converts VGA to high resolution video, enabling the PC output to be selected via a video switcher.

Thanks to Blackmagic Design and Datavideo the solution is at hand. Blackmagic Design has introduced a low cost range of SDI solutions, which are called the "Decklink Series", and Datavideo have developed the first software for delivering ultra high quality video directly out thru these Decklink SDI cards. The Datavideo PPT-100 takes full advantage of the Decklink card and Intel 915 chipset technology. Users can easily convert PC images (VGA) to DV or SDI, change image position and size, and select different colors for the pointer; and then, display on projector or large TV wall. With a vision mixer/switcher such as the SE-800, you can also combine DVD player, DV camera, VCR, VHS and CD player for a perfect presentation.

## **Features**

- Real time VGA to DV IEEE1394 or SDI
- NTSC and PAL Standards
- More than 8 frames/sec capture rate (Performance is only achieved with Intel Graphics Media Accelerator 900 chip at resolution 1024 x 768 pixels)
- Direct transfer of VGA video to DV or SDI high quality video output for long distance transmission and loss-less video quality.
- Full Screen Capture and Application Window Screen Capture enabled
- For live presentation via a digital video switcher.
- Showing Cursors on TV
- Margins adjustable
- Flicker free function.
- Zoom 2X, 4X
- Best performance with Intel Graphics Media Accelerator 900 chip

## **System Requirement**

### **Minimum Requirement for DV solution:**

1. CPU: Pentium 4 2.4 GHz
2. M-Board: Intel 915G (GM) chipset
3. Graphic card: Intel Graphic Media Accelerator 900 (1024\*768, 32bits color)
4. System Memory: 256 MB
5. Network card: 10/100 Base T Ethernet card
6. Operating System: Windows XP (With Service Pack 2 and Direct X 9.0c)
7. IEEE 1394

### **Minimum Requirement for SDI or YUV solution:**

1. CPU: Pentium 4 2.4 GHz
2. Graphic card: 16MB (1024\*768, 32bits color)
3. System Memory: 512 MB
4. Network card: 10/100 Base T Ethernet card
5. Operating System: Windows XP (With Service Pack 2 and Direct X 9.0c)
6. Decklink card series (Decklink, Decklink Pro,...)

## **Installation**

### **Blackmagic DeckLink Card Installation (For SDI or YUV solution only)**

1. Remove the power plug from the back of your PC. This is a safety precaution before opening your computer. Ensure that you are statically discharged by using a static strap.
2. Remove the side cover of your PC to gain access to the PCI slots.
3. Remove your DeckLink card from the protective static bag making sure you do not touch the gold connectors on the base of the card. These precautions should be taken when handling any PCI card.
4. Find a spare PCI or PCI-X slot (DeckLink HD series cards require a PCI-X slot). Remove the metal port access cover and screw, from the back of your PC.
5. Insert your DeckLink card and ensure that it clicks firmly into place.
6. Secure the card by the screw or clamping device.
7. The procedure for installing a RAID controller card is similar to the above (The RAID controller card should be installed into a 100MHz PCI-X slot.)
8. Now replace the side cover of your PC. Reconnect the power and start up the computer.

#### **Note:**

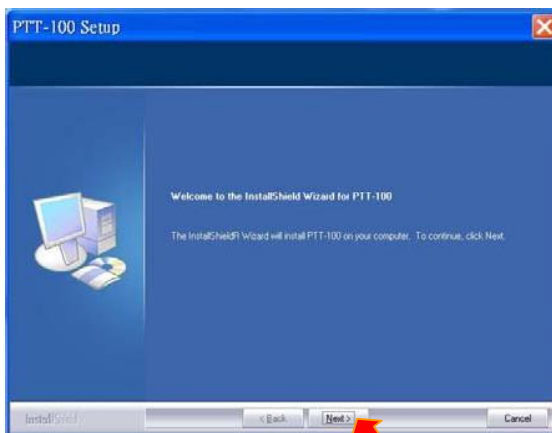
1. You must install the Decklink card driver and software before install PPT-100 software. Please refer to <http://www.blackmagic-design.com/> for detail information.

### **PPT-100 software Installation**

1. Double click on PPT-100 software. (In Windows XP)



2. Click on "Next"

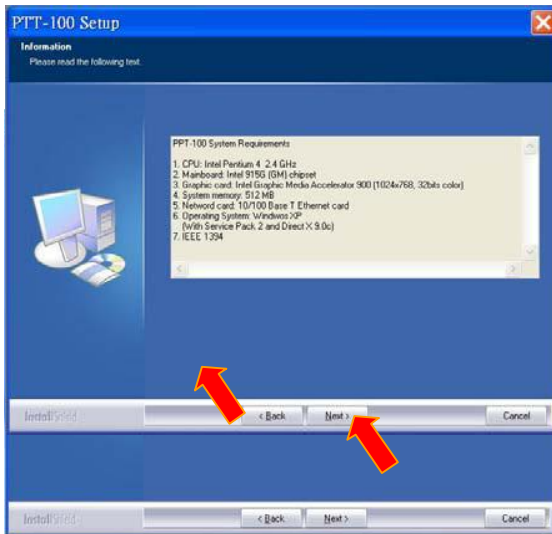


3. Read thru the License Agreement, and then click on “Yes”

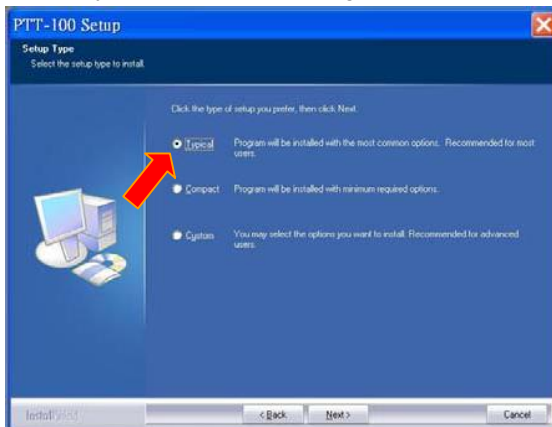


4. The program will list recommend system configuration. Please confirm if your system has fulfilled the requirement. Then, click on “Next”.

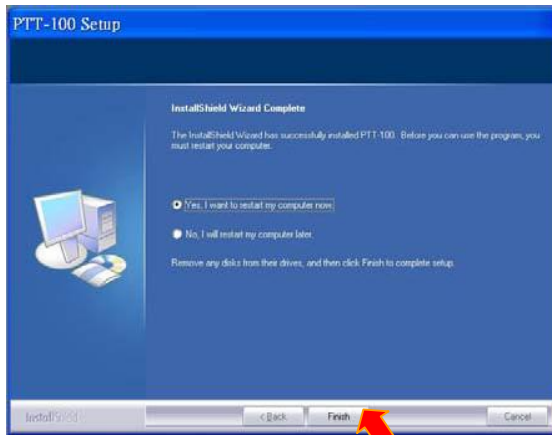
5. Please enter the serial number (found on the rear of the CD box). Then, click on “Next”. If you don't have the serial number, the default setting is “DEMO”. Then, it will install this software as a demo version. It will show “DATAVIDEO PPT-100” logo on screen.



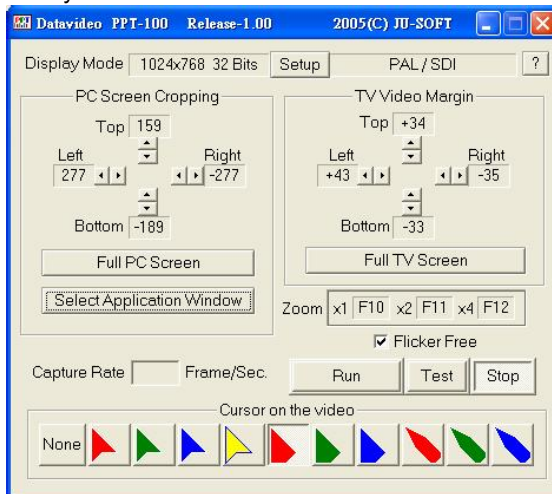
6. Select Typical (recommend for general users). Then, click on “Next”.



- PPT-100 should be successfully installed into the computer. The program will ask you to restart the computer now or restart it later, make your choice, and then click on “Finish”.



- Now you can use the PPT-100 software.



Note 1: There will be a semi-transparent “DataVideoCG and PPT-100” logo on the TV screen if you did not activate and register the software. This logo will always be on if a demo version is being used. The logo will not be present when you have activated the software.

## **The Performance of Screen Capture**

The performance issue is critical because PPT-100 consumes a lot of CPU resource while executing screen conversion. PPT-100 will not run well with other heavy loading software at the same time.

After testing different kinds of graphic cards, the Intel Graphics Media Accelerator 900 chip is outstanding at providing the best performance for PPT-100.

However, 3D animation games, video encoding/decoding software and any software that needs to process complicated animations or moving pictures will certainly drag down the performance of PPT-100.

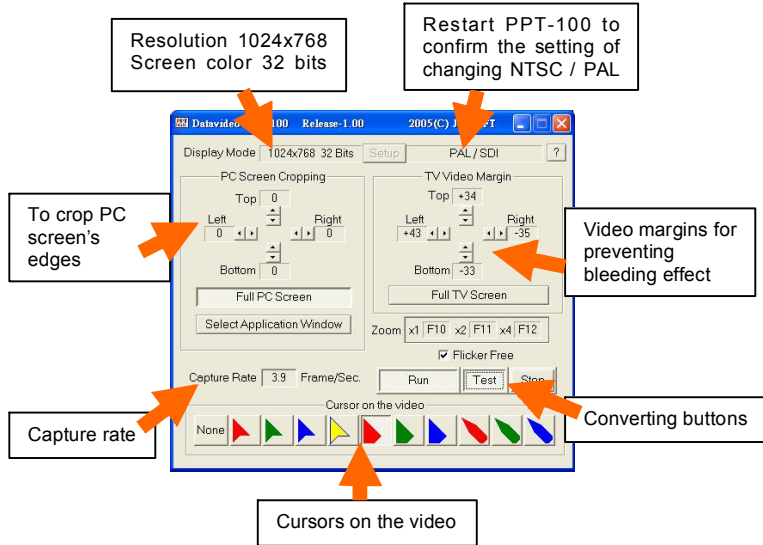
### **Capture Rate**

Users can inspect the capture rate on the dialog. Please see the average rate using Intel 915G chipset motherboard for your reference.

Resolution	Frame per Second
800x600	→ 12 frames per sec.
1024x768	→ 6.5 frames per sec.
1280x1024	→ 5 frames per sec.

Note: “Full Screen Capturing” is faster than “Partial Screen Capturing”.

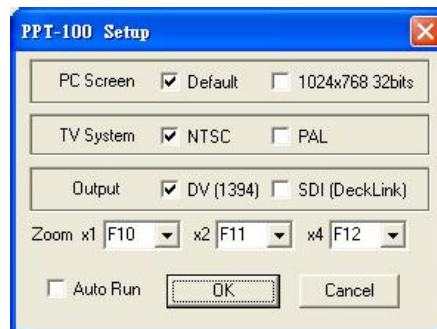
## PPT-100 Interface



These are all the basic function descriptions. For more detailed information and application, please read through the rest of this PPT-100 user manual.

## Set Up

Click [Setup] in the PPT-100 main dialog box, the following dialog box will be launched.



The parameters in [PPT-100 Setup] dialog box are as below:

**PC Screen** Select [Default] to adopt the PC screen resolution.  
Select [1024x768] to temporarily change the resolution to be 1024x768; the resolution will be changed back when PPT-100 is closed.



**TV System** Select either NTSC or PAL Standards

**Output** Before selecting [DV], please make sure the PC contains an IEEE-1394 interface, and a DV Output Device, such as a DAC or DV Deck has to be activated when executing the output function of PPT-100.

Before selecting [SDI(DeckLink)], a DeckLink card has to be installed in the PC.

**Zoom in /2X/4X**

PPT-100 can zoom in either 2X or 4X. Click [F11] key on the keyboard to zoom in 2X; click [F12] to zoom in 4X. Click [F10] to set back the default size. In case these [F10], [F11] or [F12] have different usage on the application you want to convert, you can select other hot keys to perform the zoom in function,

**Auto Run**

Select [Auto Run], the next time you run PPT-100, you don't have to click the [Run] button, PPT-100 will capture the PC screen and convert it to video SDI/ DV signal. Also the window of PPT-100 will be automatically hidden as an icon on the desk tool bar.

If you change the setting of the first 3 items like PC Screen / TV System / Output, when clicking the [OK] button, PPT-100 will be closed. You have to restart the program to see the result of your setting.

### PC Screen Cropping

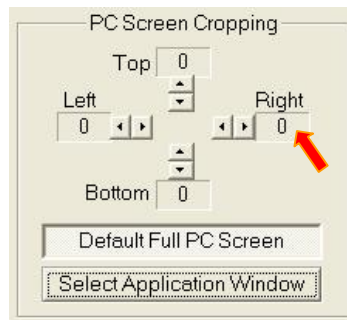
**Full PC Screen Capture**

Click [Default PC Full Screen] to do full screen capture.

You can see the values of "Top/Left/Right/Bottom" are all zeros which mean there won't be any cropping of the PC screen.

**Resizing Screen Capture Area**

You can also set your fields. The values represent values of "Top/Left" must be must be negative.

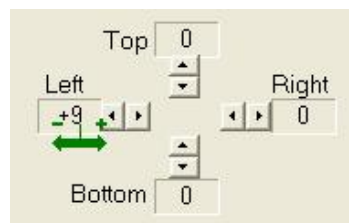


desired values of "Top/Left/Right/Bottom" the pixels to be cropped. Be careful the positive. And the values of "Right/Bottom"

You can use different ways

- 1. To use the spin buttons,
- 2. Place the cursor on any move the left button adjusted.

to set the values of cropping. click the buttons to +1 or -1 of the value. fields of Top/Left/Right/Bottom, hold and horizontally, and then the value can be

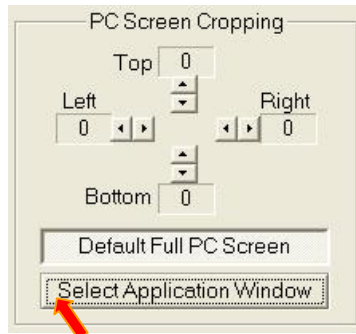


Before you set the values for screen cropping, click the [Test] button to preview the result of your setting on TV.

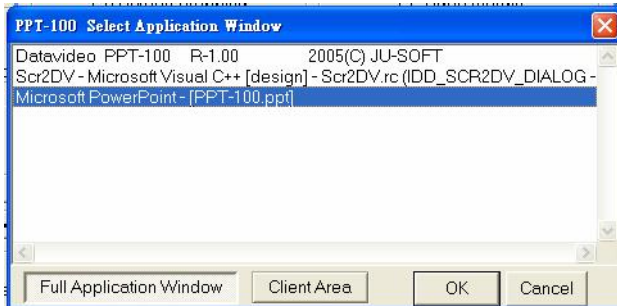


To capture an Application Window

You can select to capture only a specific application window.



Click [Select Application Window] button to popup the following window:



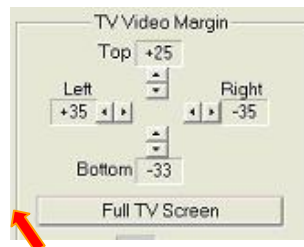
You can see the available applications listed on the above window. Click mouse left button to select a window. Click [OK] button to finish the setting.

The above picture shows "Microsoft PowerPoint – [PPT-100.ppt]" is highlighted and selected. The [Full Application Window] button on the bottom left side is depressed. This means the whole "Microsoft PowerPoint – [PPT-100.ppt]" is filling the cropping area. If you click [Client Area], the

frame window and the menu bars will be excluded from the cropping area.

## TV Video Margins

Typical televisions and many monitors lose nearly 20% of the picture by "cropping" the image. This lost portion feature is commonly referred to as *overscan*. The overscanning feature may cause a problem when converting from PC screen to TV. For example, menu bars, critical for operating the computer, may be lost above the visible area of the screen. To solve this problem, The PC screen must be shrunk both horizontally and vertically. PPT-100 allows you to set TV video margins. To set Margins is similar to setting PC Screen Cropping.



Click the [Full TV Screen] button to set Full TV screen output.

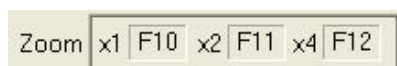
Click the spin buttons to +1 or -1 of the value.

Or place the cursor on any fields of Top/Left/Right/Bottom, hold and move the left button horizontally, and then the value can be adjusted. (Note: Top/Left values must be positive, Right/Bottom values must be negative.)

Before you set the margins for your PC screen, click the [Test] button to preview the result of your setting on TV.

## Select Zoom in Key

PPT-100 provides three hot keys to zoom the area around the cursor into 1X, 2X or 4X. By default the Function keys [F10] / [F11] / [F12] will be set as zoom 1X, 2X, and 4X. In case these [F10], [F11] or [F12] have a different usage on the application you want to convert, you can select other hot keys to perform the zoom in function, the result will be shown in the main dialog box:



## Flicker Free

Select [Flicker Free] to eliminate all flicker that is caused by television interlacing. However if the television equipment connected has a flicker-free function, for best results do not select [Flicker Free] as the resolution will be reduced.



## Cursor

## Displaying

PPT-100 can't capture the real cursor from the PC, but it can detect the position of the cursor. So users can select one of 10 provided cursors. If [None] is chosen, no cursor will be displayed.



## Conversion buttons

The following [Run] / [Test] / [Stop] buttons are to control the conversion.



- [Run] to start PC to SDI/DV conversion, the PPT-100 window will shrink to an icon on the desk tool bar.
- [Test] to start PC to SDI/DV conversion, the PPT-100 window remains the same size and position. Click this button to quickly preview the results of different settings.
- [Stop] Stop the conversion and a green mask will appear on the TV.

## Start Conversion

Click the [Run] button for SDI/DV conversion. PPT-100 window will shrink to an icon on the desk tool bar. If you select [Auto Run] in the [Setup] dialog box, whenever PPT-100 is executed, it starts SDI/DV conversion at the same time.

## Zoom In

If you want to zoom in to one certain area of the PC screen, first place the cursor in the middle of this area, click the function key you set for zoom in 2X or 4X. PPT-100 then will zoom in the area around your cursor.

## Audio Synchronization

There is 0.3 ~ 1.0 second of conversion delay depending on SDI or DV output. The timing of audio must be adjusted to match the conversion delay to video.

## How to use this program

1. Click the PPT-100 icon on the desktop to execute this program.
2. Set the screen area and other features in PPT-100.
3. Press [Test] to output the PC screen to video with a normal PPT-100 window. Press [Run] to output the PC screen to video and hide the PPT-100 window.
4. After [Run], the selected PC screen will transfer to DV or SDI video signal,
5. You can operate many applications\* such as Microsoft's Power Point, etc. (For the application software, please refer to "The Performance of Screen Capture" on page 13.)
6. Press [Stop] to stop the output.

## **Accessories**

For long distance transmission up to 200 meters, you could use Datavideo DV cables and DV Repeaters. With Datavideo DV converter DAC-6, you could convert DV25 digital video signal to analog video signal (Component, Y/C, and Composite) for monitoring DV25 video in your existing monitor.

### **DAC-6 DV to Analog one way converter**

#### **Power Requirements**

DC12V/10W

#### **Video I/O**

Output x 1 — Analog Y/C, Composite, Component

Input x 1 — 6 pin IEEE1394 interface, 25Mbps bit rate

Bypass x 1 — 6 pin IEEE1394 interface, 25Mbps bit rate

#### **Audio I/O**

1 x Stereo Out

DV Audio — 48K/32KHz two channels locked

#### **DIP Switch Functions**

NTSC/PAL Support

Video Setup 0 or 7.5 IRE

Auto/Manual Signal Detection

Locked & unlocked Audio

Monitor mode On/Off (Mainly for NLE use)



**10, 20, 40 meter DV cable (1066, 2066,**



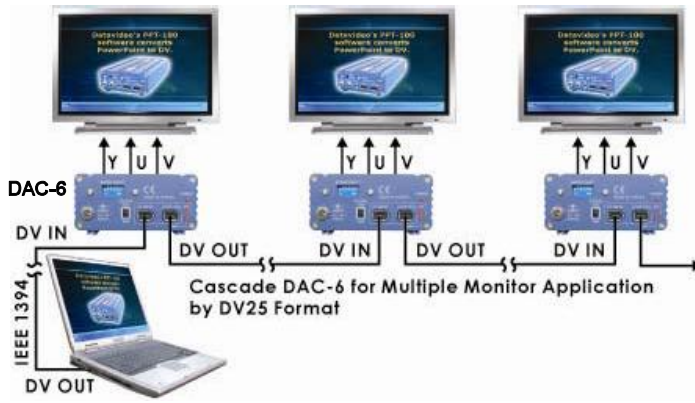
**and 4066)**

### **DV Repeater (VP-314)**



## Sample connection diagrams

### Example 1: Long distance transmission

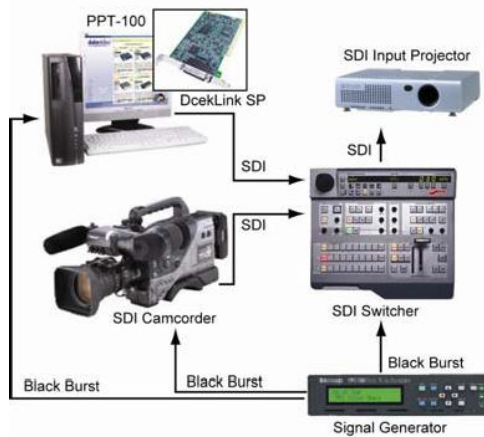


PPT-100 WITH DV SWITCHER (DATAVIDEO SE-800)



### Example 3: With SDI Switcher

PPT-100 WITH SDI SWITCHER



## **Product registration**

Go on line [www.datavideo.info/product\\_reg.htm](http://www.datavideo.info/product_reg.htm) for product registration

See the warranty card for warranty period

### **Software Protection**

(A) While installing PPT-100 software, the default setting for serial number is set as "DEMO". If you press <Enter> directly at the time of installation, it will install this software as a demo version. Type in the correct serial number, it will complete the installation. Otherwise, it will exit the installation window.

(B) In "DEMO" version, video will be showing Datavideo and PPT-100 trademark all the time.

(C) Use and install the correct serial number, it will ask you to activate the software via the internet after the installation is completed.

If not, 7 days after the software is started, it will show Datavideo and PPT-100 trademark on the video.

(D) When "the software is started", it will read the information of the computer hardware with the serial number and send it to our web site. Our web site will reply with a "password" to your computer. This computer can use PPT-100 software normally after this. The password contains the information of the serial number and the computer hardware ID. It cannot be moved to other computers.

(E) The website will record the serial number with that computer hardware information. If this computer is infected by a virus, or has to be repaired due to malfunction, the user can reinstall and activate PPT-100 software again since the hardware information is the same.

(F) The web site does not accept the registered serial number to activate PPT-100 software in other computers. If there is a logical reason, you can appeal your case in e-mail. Datavideo will decide whether or not to give another "password" to you. However, you have to register your PPT-100 software first. Datavideo will check the registered information and hardware information to see if they are correct, or if they have been registered by another user.

(You can only apply for a new "password" twice.)

(G) When the software starts, it will remind you to register on line or e-mail the information to Datavideo. You can choose not to register, but you will not get any after sales service, or be able to apply for a new "password".

(H) You must provide name, telephone number, address, e-mail account...etc in register information.

## **Service & Support**

It is our goal to make your products ownership a satisfying experience. Our supporting staff is available to assist you in setting up and operating your system. Please refer to our web site [www.datavideo-tek.com](http://www.datavideo-tek.com) for answers to common questions, support requests or contact your local office below.

### **Datavideo Technologies Co., LTD.**

10F, No. 176, Jian-Yi Rd,  
Chung Ho City, Taipei Hsien 235, Taiwan R.O.C.  
Tel: 886-2-8227-2888  
Email: [info@datavideo.com.tw](mailto:info@datavideo.com.tw)

### **Datavideo Corporation USA**

12300-U East Washington Blvd.  
Whittier CA 90606 USA  
Tel: (562) 696-2324  
Email: [contactus@datavideo.us](mailto:contactus@datavideo.us)

### **Datavideo Technologies Europe BV**

Californiedreef 26  
3565 BL Utrecht, The Netherlands  
Tel: +31 30 261 9656  
Email: [info@datavideo.nl](mailto:info@datavideo.nl)

### **Datavideo Technologies China Co.**

2F-D, No 2, Lane 777, West Guang-zhong Rd  
Zhabei District, Shang-Hai, China  
Tel: 86 21 5603-6599  
Email: [service@datavideo.cn](mailto:service@datavideo.cn)

### **Datavideo UK Limited**

Unit 2 Waterside Business Park  
Hadfield, Glossop. Derbyshire SK13 1BE, UK  
Tel: +44- 1457 851000  
Email: [sales@datavideo.co.uk](mailto:sales@datavideo.co.uk)

### **Datavideo Technologies (S) PTE Ltd.**

100 Lorong 23 Geylang, #01-03 D'Centennial Bldg  
Singapore 388398  
Tel: +65-6749-6866  
Email: [info@datavideo.sg](mailto:info@datavideo.sg)