

# **PS-API**

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## **Installation Guide for DLL**

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**Panasonic i-PRO Sensing Solutions Co., Ltd.**

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## Revision Record

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5.0 R01	Dec. 27, 2011	2.1 Added Microsoft® Windows Server® 2008 R2 to System Environment. 3.4/3.5 Added PS-ALARM Install/Uninstall 3.6/3.7 Added PS-LOOKUP Install/Uninstall
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7.0 R01	Dec. 13, 2012	Correction of Typographical Error
7.1 R01	Mar. 21, 2013	2.1 Added Microsoft® Windows® 8 Pro to System Environment. 3.2 Added Microsoft® Windows® 8 Pro to PS-API Install
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9.5 R01	Jun. 22, 2016	1.5 Added Open Source Software
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Version	Revised Date	Content of Revision
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## 1. Preface

### 1.1. What's PS-API

PS-API is the software library which is provided to help to develop the application to control Panasonic i-PRO Sensing Solutions Co., Ltd. made security products (Network cameras, Network Disk Recorders, Digital Disk Recorders, Network Interface Units) by the unified method and to get video image.

PS-API is provided as the dynamic link library (DLL).

### 1.2. Trademarks and Registered Trademarks

Microsoft and Windows are registered trademarks of Microsoft Corporation in U.S. and/or other countries. Other names of companies and product contained in these operating instructions may be trademarks or registered trademarks of their respective owners.

### 1.3. Limitation of liability

- PS-API provides interfaces for the application software that controls Panasonic i-PRO Sensing Solutions Co., Ltd. made security products (Network cameras, Network Disk Recorders, Digital Disk Recorders, Network Interface Units), and is not designed to protect against "theft" or "crime" independently.

- The provided sample programs are designed to instruct users how to use the SDK. They are not developed for the purpose of actual surveillance system.

- In not event shall Panasonic i-PRO Sensing Solutions Co., Ltd. be liable to any party or any person, except for replacement or reasonable maintenance of the product, for the cases, including but not limited to below;

[1] Any damage and loss, including without limitation, direct or indirect, special, sequential or exemplary, arising out of or relating to the product;

[2] Personal injury or any damage caused by inappropriate use or neglect operation of the user;

[3] Any problems, consequential inconvenience, or loss or damage, arising out of the reverse compiling or reverse engineering of the product;

[4] Any loss or damage, or claims arising out from loss or leak of PS data including video data in the PC;

[5] Any claim or action for damages, brought by any person or organization being a photogenic subject, due to violation of privacy with the result of that surveillance camera's picture, including saved data, for some reason, becomes public or is used for the purpose other than surveillance;

#### 1.4. Abbreviations

The following abbreviations are used in these operating instructions.

Microsoft® Visual C++ 2005 is described as Visual C++ 2005.

Microsoft® Visual C++ 2012 is described as Visual C++ 2012.

Hereafter Network Camera is referred as Camera.

Hereafter Network Interface Unit is referred as Encoder.

Hereafter Network Disk Recorder is referred as NWDR.

Hereafter Network Disk Recorder (NX series) is referred as NX series.

Hereafter Digital Disk Recorder (HD300 series) is referred as HD300.

Hereafter Digital Disk Recorder (HD600 series, HD700 series) is referred as HD600/700.

#### 1.5. Open Source Software

This software is based in part on the work of the Independent JPEG Group.

## 2. System requirements

### 2.1. System Environment

The following table shows the PC specification that is needed for installing PS-API.

**Table 2-1 OS**

OS	Microsoft® Windows® 7 Professional SP1 32 bit Edition(*5)
	Microsoft® Windows® 7 Professional SP1 64 bit Edition(*5)
	Microsoft® Windows® 8 Pro 32 bit Edition(*2)
	Microsoft® Windows® 8 Pro 64 bit Edition(*2)
	Microsoft® Windows® 8.1 Pro 32 bit Edition(*2)
	Microsoft® Windows® 8.1 Pro 64 bit Edition(*2)
	Microsoft® Windows® 10 Pro 32 bit Edition
	Microsoft® Windows® 10 Pro 64 bit Edition
	Microsoft® Windows Server® 2008 R2 Standard SP1 (*1)(*5)
	Microsoft® Windows Server® 2008 R2 Enterprise SP1 (*1)(*5)
	Microsoft® Windows Server® 2012 Standard(*1)
	Microsoft® Windows Server® 2012 R2 Standard(*1)
	Microsoft® Windows Server® 2016 Standard(Desktop Experience)

**Table 2-2 Minimum System requirements**

Processor(*3)	Intel® Core™2 Quad 2.66GHz or more
Memory	2.0GB or more
Hard drive	10GB or more
LAN	100Mbps or more

**Table 2-3 Recommended system requirements**

Processor(*3)	Intel® Core™i7-4790
Memory	8.0GB or more(*4)
Hard drive	10GB or more
LAN	100Mbps or more

**(\*1) When using PS-API, it is necessary to install “Desktop Experience” to use Direct Show Filter functions.**

**(\*2) Modern UI is not supported.**

**(\*3) When displaying video on multiple screens, please use the recommended system requirements.**

**(\*4) Please use two same Memorys that dual-channel supported.**

**(\*5) Windows® Internet Explorer®9 or later is recommended.**



## 2.2. Development Environment

The following table shows the development environment list that is supported by PS-API DLL.

**Table 2-4 Development Environment**

Target	Development Tool
PS-API DLL	VisualC++ 2005 SP1
	VisualC++ 2012 (*1)

(\*1) If you use VisualC++ 2012 in application development,  
please install the runtime component of Visual C++ 2012 library.

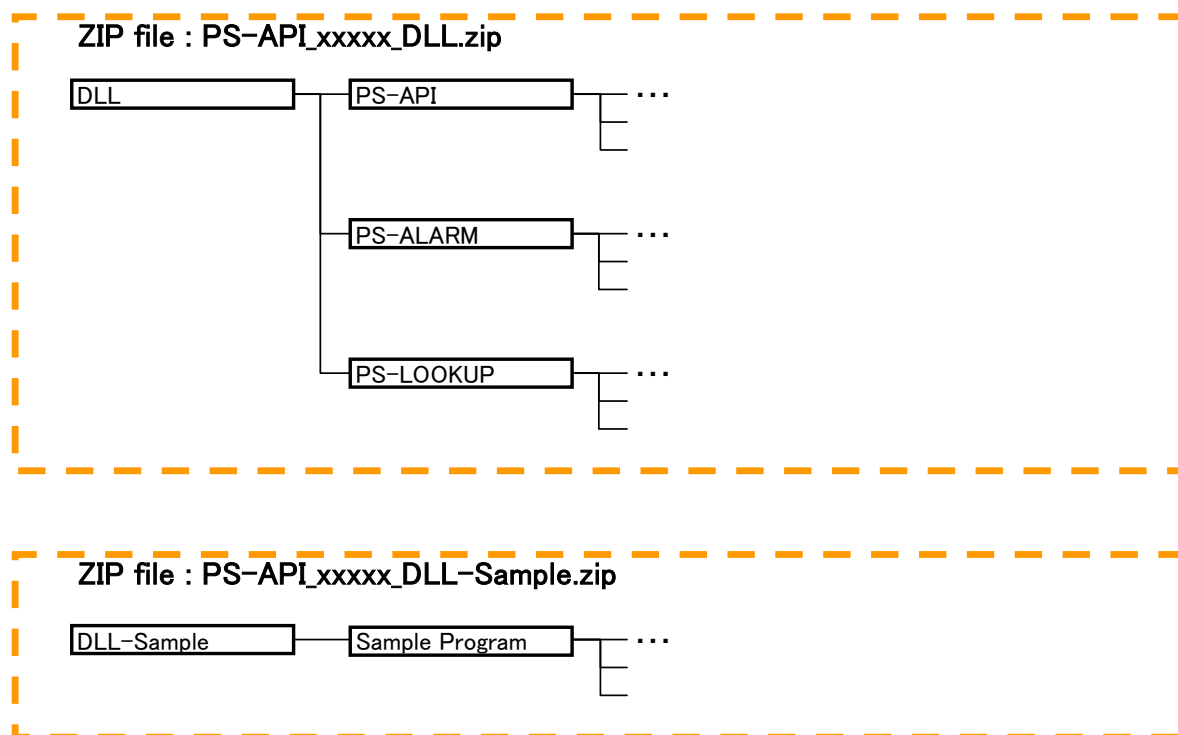
### 3. Setup

#### 3.1. Product

##### 3.1.1. Package Contents List

When unarchived PS-API\_XXXXX\_DLL.zip and PS-API\_XXXXX\_DLL-Sample.zip, there are the following expanding directories.

\* XXXXX : Version number



**Figure 3-1 The layout of DLL directory**

When using DLL type PS-API, please use the library files in PS-API directory.

When using DLL type PS-ALARM, please use the library files in PS-ALARM directory.

When using DLL type PS-LOOKUP, please use the library files in PS-LOOKUP directory.

- The layout of DLL directory

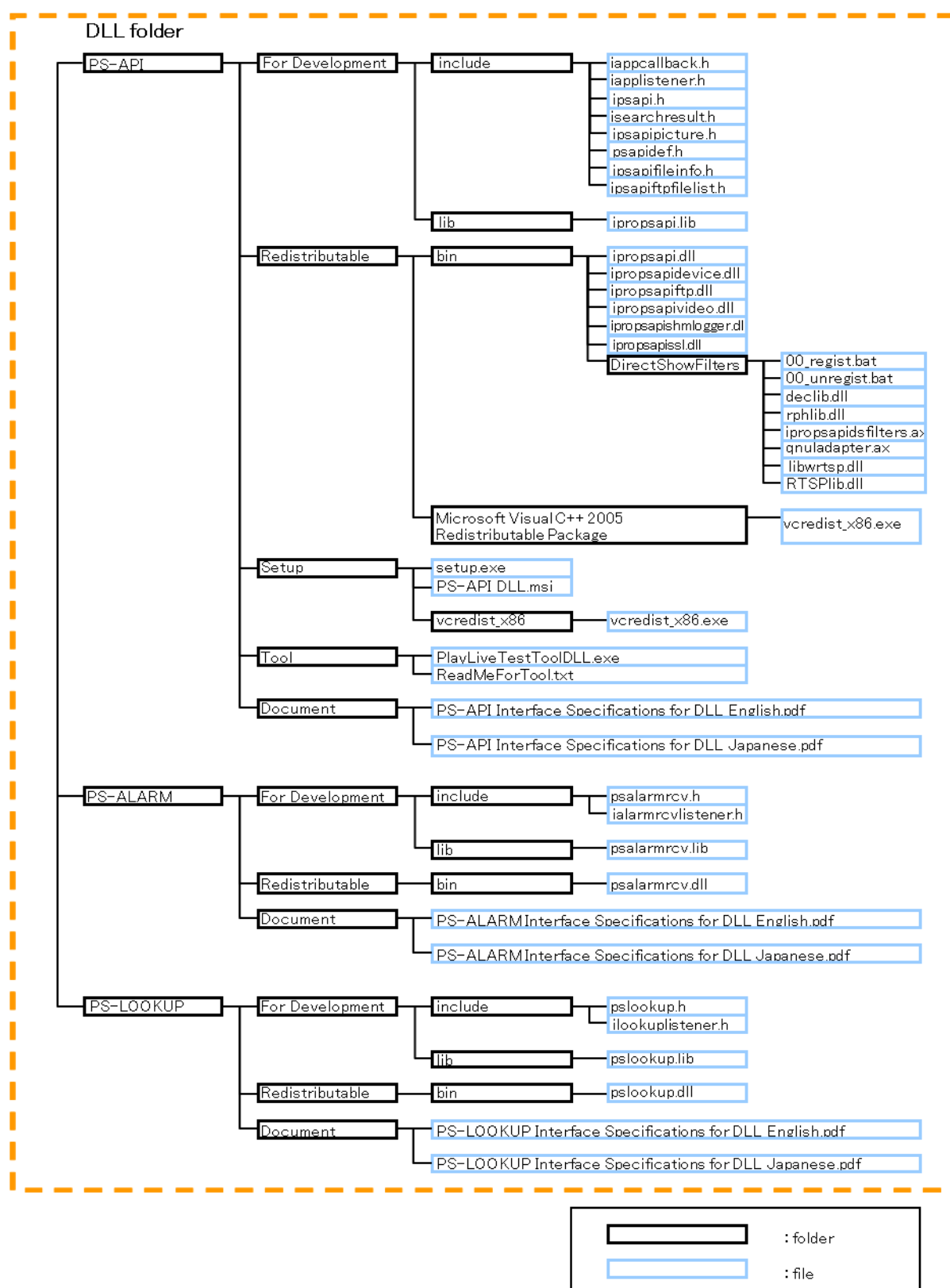


Figure 3-2 The layout of DLL directory

The overview of files included in each directory is as follows.

**Table 3-1 The Overview of Files**

Directory Name	Objective
PS-API¥ For Development	Header files / lib files For development. <b>NOT REDISTRIBUTABLE.</b>
PS-API¥ Redistributable	DLL files Redistributable.
PS-API¥ Setup	Installer for DirectShow filters. For development. <b>NOT REDISTRIBUTABLE.</b>
PS-API¥ Tool	Test tool. By using this tool, you can confirm connecting to a target device with PS-API. <b>NOT REDISTRIBUTABLE.</b>
PS-API¥ Document	The users manual. (This document) <b>NOT REDISTRIBUTABLE.</b>

Directory Name	Objective
PS-ALARM¥ For Development	Header files / lib files For development. <b>NOT REDISTRIBUTABLE.</b>
PS-ALARM¥ Redistributable	DLL files Redistributable.
PS-ALARM¥ Document	The users manual. <b>NOT REDISTRIBUTABLE.</b>

Directory Name	Objective
PS-LOOKUP¥ For Development	Header files / lib files For development. <b>NOT REDISTRIBUTABLE.</b>
PS-LOOKUP¥ Redistributable	DLL files Redistributable.
PS-LOOKUP¥ Document	The users manual. <b>NOT REDISTRIBUTABLE.</b>

- The layout of DLL-Sample directory

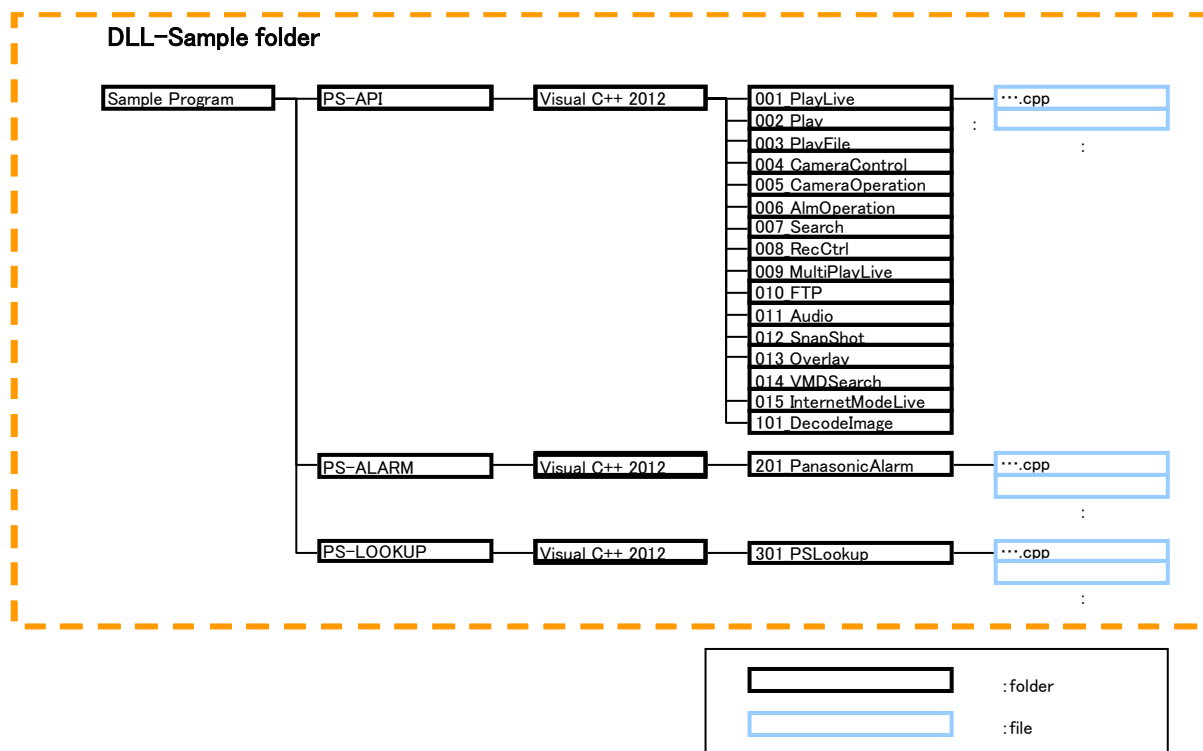


Figure 3-3 The layout of DLL-Sample directory

The overview of files included in each directory is as follows.

Table 3-2 The Overview of Files

Directory Name	Objective
Sample Program	Sample Programs. <b>NOT REDISTRIBUTABLE.</b>

### 3.1.2. Install Contents

When start to use this SDK, it is necessary to register ActiveX control and DirectShow filters. About the detailed description, refer to “3.2 Install Procedure”.

### 3.2. PS-API Install

The install procedure is different between the development phase or the operation phase.  
Please refer each procedure for your phase.

**\* When installing the package, it is necessary to login to Windows with Administrator Authority account.**

**\* If the different version PS-API has been already installed, please uninstall it (please refer to 3.3 PS-API UnInstall), then install the new one.**

#### [Development phase]

- (1) Install any ActiveX control from the following list to view the JPEG, H.264, H.265 or MPEG-4 video images.

(It is unnecessary to install all ActiveX controls.)

About install procedure of ActiveX control, please refer to the instruction manual for the device.

	JPEG	MPEG-4	H.264	H.265
ActiveX control for Network Camera (Model : Supporting H.265 and H264)	Yes	Yes	Yes	Yes
ActiveX control for Network Camera (Model : Supporting H.265)	Yes	-	-	Yes
ActiveX control for Network Camera (Model : Supporting H.264)	Yes	Yes	Yes	-
ActiveX control for Network Camera (Model : Not-supporting H.265 and H264)	Yes	Yes	-	-
ActiveX control for Network Interface Unit (GXE500/GXE100)	Yes	Yes	Yes	-
ActiveX control for Network Interface Unit (NT304/NT314)	Yes	Yes	-	-
ActiveX control for Network Disk Recorder (Firmware : Supporting H.265 and H264)	Yes	-	Yes	Yes
ActiveX control for Network Disk Recorder (Firmware : Supporting H.264)	Yes	Yes	Yes	-
ActiveX control for Network Disk Recorder (Firmware : Not-supporting H.264)	Yes	Yes	-	-
ActiveX control for Digital Disk Recorder (HD600/700)	Yes	-	Yes	-

#### **Important :**

**It is no problem that all ActiveX control are installed.**

**If PS-API is used for only Digital Disk Recorder(HD300), this step (1) can be skipped.**

**When viewing the JPEG video image without the audio functions, the ActiveX package doesn't need to be installed. At that time, the audio function errors occur, but it is no problem to use the other functions.**

- (2) Execute "DLL¥PS-API¥Setup¥setup.exe", and follow the instructions of the installer.

When installing it with default setting, the installer creates "C:¥Program Files¥Panasonic ¥PS-API DLL" folder, and then it copies and does registration the PS-API files.

#### **Note :**

**If Microsoft Visual C++ 2005 Redistributable(Visual C++ Runtime Libraries (x86)) installer runs, please follow the instructions of the installer.**

- (3) Import the header files in "DLL¥PS-API¥For Development¥include" to developing project.  
If necessity, add the lib file in "DLL¥PS-API¥For Development¥lib" to developing project.
- (4) Copy DLL files (ipropsapi.dll, ipropsapidevice.dll, ipropsapivideo.dll, ipropsapiftp.dll, ipropsapishmlogger.dll) in "DLL¥PS-API¥Redistributable¥bin" to the directory that is chosen from the following list.
  - Directory included exe file
  - Current directory
  - Windows system directory
  - Windows directory
  - Directory that is specified to the environment variable "PATH"
- (5) When completing steps (1) – (4), reboot the PC to complete the installation.



## [Operation phase]

- (1) Install any ActiveX control from the following list to view the JPEG, H.264 or MPEG-4 video images.

(It is unnecessary to install all ActiveX controls.)

About install procedure of ActiveX control, please refer to the instruction manual for the device.

	JPEG	MPEG-4	H.264	H.265
ActiveX control for Network Camera (Model : Supporting H.265 and H264)	Yes	Yes	Yes	Yes
ActiveX control for Network Camera (Model : Supporting H.265)	Yes	-	-	Yes
ActiveX control for Network Camera (Model : Supporting H.264)	Yes	Yes	Yes	-
ActiveX control for Network Camera (Model : Not-supporting H.265 and H.264)	Yes	Yes	-	-
ActiveX control for Network Interface Unit (GXE500/GXE100)	Yes	Yes	Yes	-
ActiveX control for Network Interface Unit (NT304/NT314)	Yes	Yes	-	-
ActiveX control for Network Disk Recorder (Firmware : Supporting H.265 and H264)	Yes	-	Yes	Yes
ActiveX control for Network Disk Recorder (Firmware : Supporting H.264)	Yes	Yes	Yes	-
ActiveX control for Network Disk Recorder (Firmware : Not-supporting H.264)	Yes	Yes	-	-
ActiveX control for Digital Disk Recorder (HD600/700)	Yes	-	Yes	-

### Important :

**It is no problem that all ActiveX control are installed.**

**If PS-API is used for only Digital Disk Recorder(HD300), this step (1) can be skipped.**

**When viewing the JPEG video image without the audio functions, the ActiveX package doesn't need to be installed. At that time, the audio function errors occur, but it is no problem to use the other functions.**

- (2) If Visual C++ 2005 SP1 doesn't be installed in the target environment, execute "vcredist\_x86.exe" that is in "DLL¥PS-API¥Redistributable¥Microsoft Visual C++ 2005 Redistributable Package" to install the runtime component of Visual C++ library.

- (3) Register DirectShow filters  
Copy all files in "DLL¥PS-API¥Redistributable¥bin¥DirectShowFilters" to the optional directory, and execute "00\_regist.bat" file at command prompt with Administrator Authority account .

**Important :**

**When a character except the ASCII code is included in a file path, the files may be unable to register correctly.**

- (4) Copy DLL files (ipropsapi.dll, ipropsapidevice.dll, ipropsapivideo.dll, ipropsapiftp.dll, ipropsapishmlogger.dll) in "DLL¥PS-API¥Redistributable¥bin" to the directory that is chosen from the following list.
- Directory included exe file
  - Current directory
  - Windows system directory
  - Windows directory
  - Directory that is specified to the environment variable "PATH"
- (5) When completing steps (1) – (4), reboot the PC to complete the installation.

### 3.3. PS-API UnInstall

Uninstall this SDK with the following uninstall procedure.

#### **[Development phase]**

- (1) Open "Uninstall a program" in "Control Panel".
- (2) Select " PS-API DLL " from the presently installed programs, and then click "Uninstall".  
Follow the uninstaller.
- (3) If necessity, uninstall "Microsoft Visual C++ 2005 Redistributable Package" from "Uninstall a program (Add or Remove Programs)" in "Control Panel".
- (4) Delete all files that copied in install.

### **[Operation phase]**

- (1) Unregister the DirectShow filters from registry.  
Execute "00\_unregist.bat" file in "DLL¥PS-API¥Redistributable¥bin¥DirectShowFilters" at command prompt with Administrator Authority account .

**Important :**

**When a character except the ASCII code is included in a file path, the files may be unable to register correctly.**

- (2) If necessity, uninstall "Microsoft Visual C++ 2005 Redistributable Package" from "Uninstall a program (Add or Remove Programs)" in "Control Panel".
- (3) Delete all files that copied in install.

### 3.4. PS-ALARM Install

The install procedure is different between the development phase or the operation phase.  
Please refer each procedure for your phase.

- \* **When installing the package, it is necessary to login to Windows with Administrator Authority account.**
- \* **If the different version PS-ALARM has been already installed, please uninstall it (please refer to 3.5 PS-ALARM UnInstall), then install the new one.**

#### [Development phase]

- (1) Import the header files (psalarmrcv.h, ialarmrcvlistener.h) in "DLL¥PS-ALARM¥For Development¥include" to developing project.  
If necessity, add the lib file (psalarmrcv.lib) in "DLL¥PS-ALARM¥For Development¥lib" to developing project.
- (2) Copy DLL file (psalarmrcv.dll) in "DLL¥PS-ALARM¥Redistributable¥bin" to the directory that is chosen from the following list.
  - Directory included exe file
  - Current directory
  - Windows system directory
  - Windows directory
  - Directory that is specified to the environment variable "PATH"

#### [Operation phase]

- (1) Copy DLL file (psalarmrcv.dll) in "DLL¥PS-ALARM¥Redistributable¥bin" to the directory that is chosen from the following list.
  - Directory included exe file
  - Current directory
  - Windows system directory
  - Windows directory
  - Directory that is specified to the environment variable "PATH"

### 3.5. PS-ALARM UnInstall

Uninstall this SDK with the following uninstall procedure.

#### **[Development phase]**

- (1) Delete all files that copied in install.

#### **[Operation phase]**

- (1) Delete all files that copied in install.

### 3.6. PS-LOOKUP Install

The install procedure is different between the development phase or the operation phase.  
Please refer each procedure for your phase.

- \* **When installing the package, it is necessary to login to Windows with Administrator Authority account.**
- \* **If the different version PS-LOOKUP has been already installed, please uninstall it (please refer to 3.7PS-LOOKUP UnInstall ), then install the new one.**

#### [Development phase]

- (1) Import the header file (pslookup.h, ilookuplistener.h) in " DLL¥PS-LOOKUP¥For Development¥include " to developing project.  
If necessity, add the lib file (pslookup.lib) in " DLL¥PS-LOOKUP¥For Development¥lib " to developing project.
- (2) Copy DLL file (pslookup.dll) in " DLL¥PS-LOOKUP¥Redistributable¥bin " to the directory that is chosen from the following list.
  - Directory included exe file
  - Current directory
  - Windows system directory
  - Windows directory
  - Directory that is specified to the environment variable "PATH"

#### [Operation phase]

- (1) Copy DLL file (pslookup.dll) in " DLL¥PS-LOOKUP¥Redistributable¥bin " to the directory that is chosen from the following list.
  - Directory included exe file
  - Current directory
  - Windows system directory
  - Windows directory
  - Directory that is specified to the environment variable "PATH"

### 3.7. PS-LOOKUP UnInstall

Uninstall this SDK with the following uninstall procedure.

#### **[Development phase]**

- (1) Delete all files that copied in install.

#### **[Operation phase]**

- (1) Delete all files that copied in install.