FieldAnalyst

Gender & Age Group Auto-Estimation System

FieldAnalyst for Signage Ver.4.0
Installation Guide

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1 Introduction

FieldAnalyst (Gender & Age Auto-Estimation System) is a system that automatically detects human faces from images captured by video cameras, and estimates the gender, age, distance between advertisement and the viewer, watching time, length of stay and exports the results digitally in real-time.

This product consists of the following software and manuals:

Software:
FA Estimation Software

Manual:
FieldAnalyst Installation Guide
FieldAnalyst Operations Guide

This guide (FieldAnalyst Installation Guide) provides an overview of the FieldAnalyst system and explains how to install and uninstall the software.
For details, refer to 3 Steps for Using FieldAnalyst.

Important notice:
- To install FieldAnalyst, the license key is required.
- To protect personal information, FieldAnalyst does not save the captured images on any computers.

Copyright notice:
Product names mentioned in this guide are trade marks or registered trademarks of respective company.
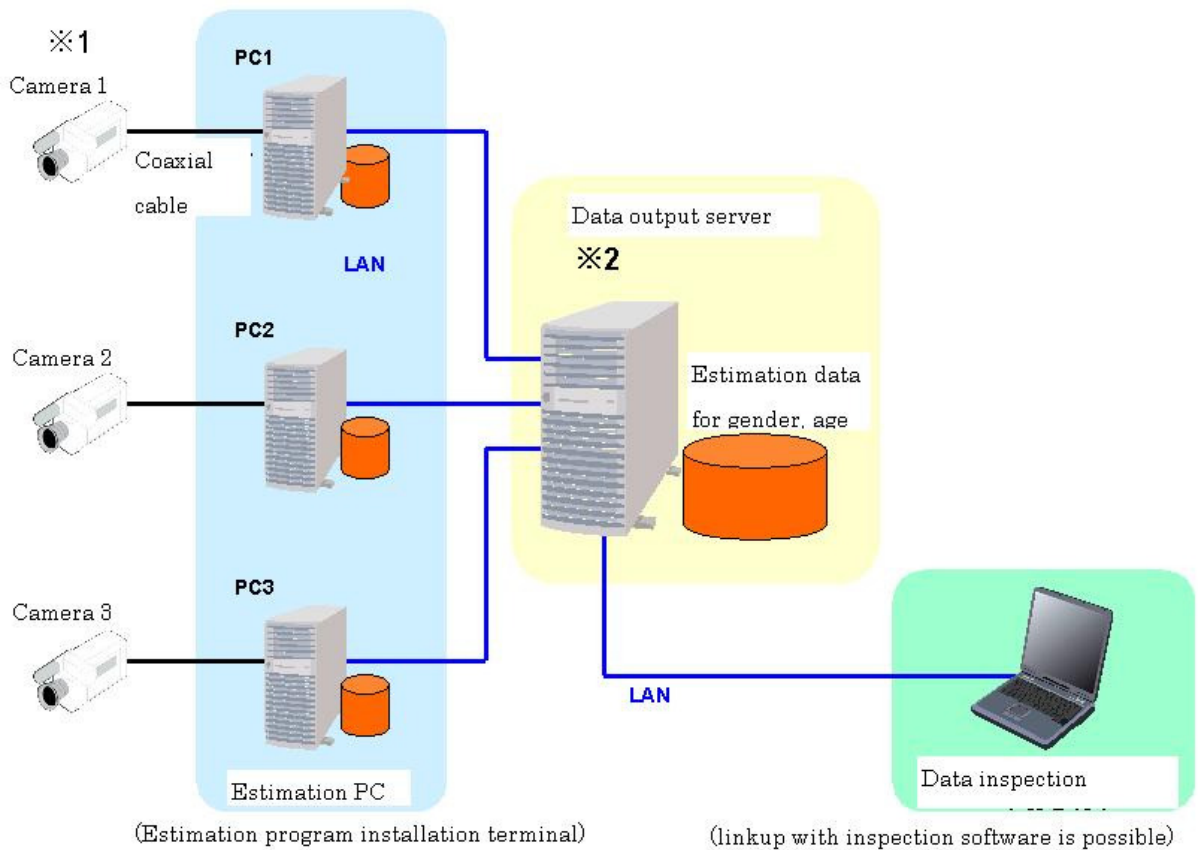
FieldAnalyst utilizes OpenCV developed by Intel Corporation. Regarding the terms of use and other conditions, refer to "IntelLicenseAgreement.txt" included in the installation media.

2 Overview

2.1 System Configuration

The FieldAnalyst system operates in the following configuration.

System Configuration Example

* 1. When installing multiple cameras, the same number of video capture cards, FieldAnalyst and estimation PCs as the number of installed cameras is required.

* 2. The data export server can be substituted by any of the estimation PCs. In such a case, however, the processing speed may be affected. Therefore, it is recommended to set up the data export server separately.

2.2 Specifications

Item		Specification
Export data	Gender	2 categories: male and female
	Age	1-year intervals(*1)
	Length of stay	Length of time a person stays in the viewing area/sub-viewing area(*2)
	Watching time	Length of time a person looks at the screen in the viewing area
	Face size	Face size of the person who sees the screen in the viewing area
	Distance	Distance between the person and screen
Measurement target	Scope of person detection	Persons who enter the viewing area/sub-viewing area
	Scope of gender/age estimation	Persons who see the screen in the viewing area(*3)
	Image-captured subject	- Person standing in front of the panel - Person who walks in front of the panel(*4)
	Assumed panel size	40 ~ 60 inches
Image format	Input format	RGB color
	Size	640×480 pixels
Illumination conditions	Upside illumination	500 ~ 2000 lux
	Lateral illumination	Within the range of the value of upside illumination $\times$ 0.2 ~ 1.0
	Other conditions	Face should be clearly visible. Basically the following conditions should be satisfied. - Intense light should not be reflected directly on the image - Intense light should not be reflected directly on the face - Illumination should be uniform on the entire image - The floor/wall should not cause intense reflection
Person	Congestion level	Approx. 20 persons at a time

detection conditions	Other conditions	- Movement of a person cannot be tracked when the person moves intentionally fast. - Movement of a person cannot be tracked when the person squats down or goes off the screen. - Movement of a person cannot be tracked when one person overlaps the other and when the target person is hidden behind the other person.

*1 In the operation check window, the age can be displayed in 1- or 10-year intervals.

*2 The viewing area and sub-viewing area are defined in the image below.
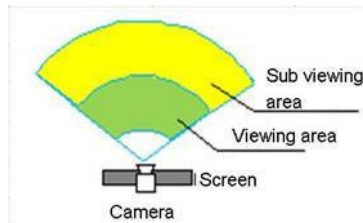
*3 The system may fail to estimate when faces are hidden by hats, caps, sunglasses, masks or other persons.

*4 The system may fail to estimate if the target person passes too fast.
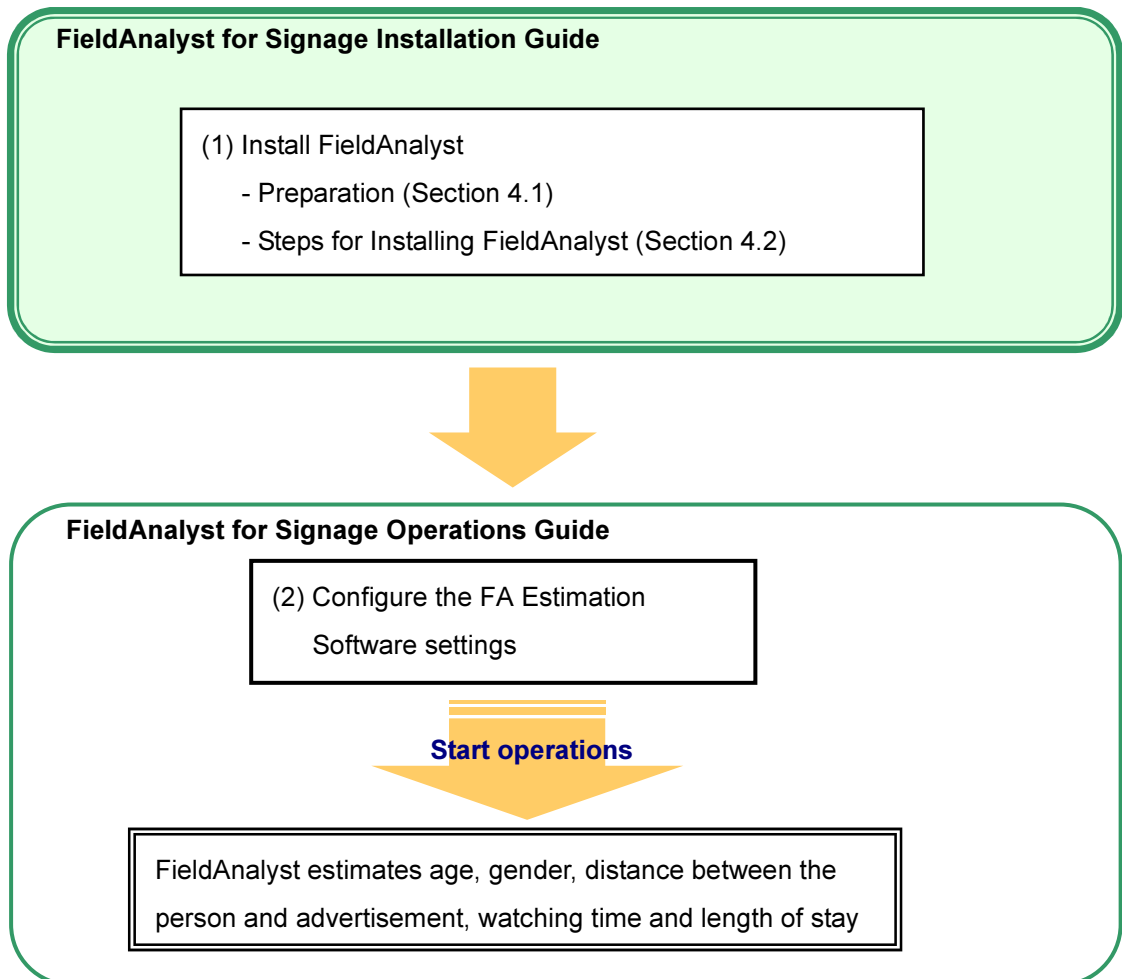
2.3 Operating Environment

To use FieldAnalyst, the following hardware and software are required.

Hardware	Required specification	Required OS/software
Camera	- IP camera (AXIS) - IP camera (Panasonic) - USB camera - Analog camera	-
Cable	Coaxial cable or LAN cable	-
Video capture card	It should support DirectX and should be a software encoder type (supporting AVI output)	-
Estimation PC	CPU: Core™ 2 Quad Q9550(2.83GHz) Memory: 2 GB	Windows 7 Professional SP1 32bit Windows 7 Professional SP1 64bit

* The data server can be substituted by any of the estimation PCs. In such a case, however, the processing speed may be affected. Therefore, it is recommended to set up the data server separately.

* Configure the settings so that the images captured from the video camera can be imported to the PC.

* Configure the settings by reference to the instruction manuals provided with your capture boards and video cameras.

* Install the cameras and adjust the quality of images according to 2.2 Specifications.

3 Steps for Using FieldAnalyst

In preparation for using FieldAnalyst, follow the steps below.
Refer to the relevant guides to set up the system properly.

FieldAnalyst for Signage Installation Guide

(1) Install FieldAnalyst

- Preparation (Section 4.1)

- Steps for Installing FieldAnalyst (Section 4.2)

FieldAnalyst for Signage Operations Guide

(2) Configure the FA Estimation

Software settings

Start operations

FieldAnalyst estimates age, gender, distance between the person and advertisement, watching time and length of stay

4 Installing FieldAnalyst

4.1 Preparation ~ Before Installing FieldAnalyst ~

■ Creating a user account

Create a user account with administrator privileges on all of the computers where you install FieldAnalyst. FieldAnalyst must be used under this account.

■ Changing the UAC settings

From [Control Panel], open [User Accounts] and click [Change User Account Control settings].

For the timing to receive the notification of changes to the computer, set [Never notify].

Restart your computer after changing the setting.
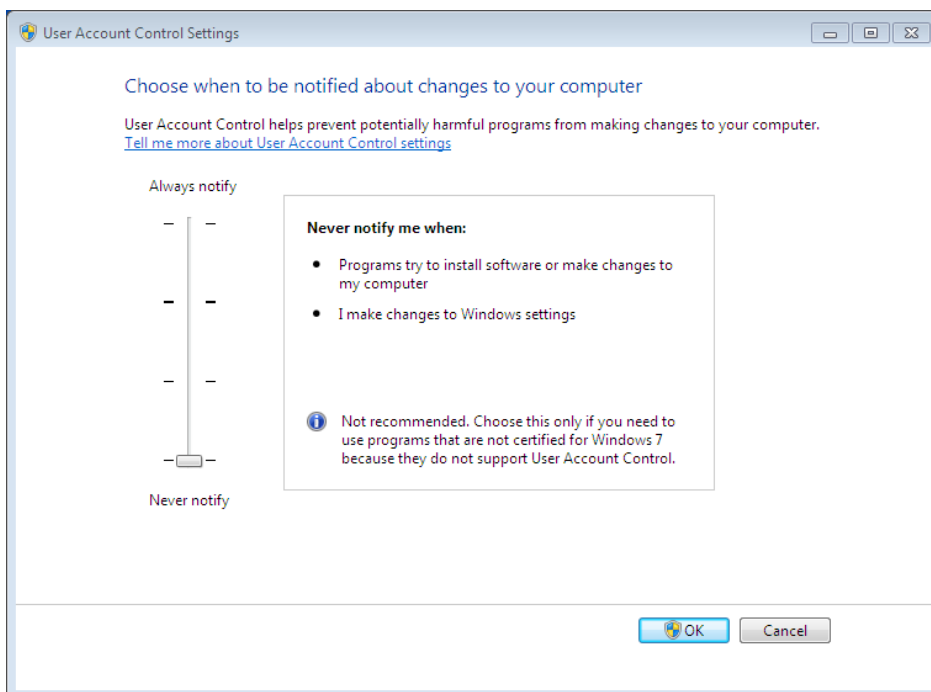
■ Installing Runtime

On the computer on which to install FieldAnalyst, run the following files located in the runtime folder to install Runtime.

· vcredist_x86_2008.exe

· vcredist_x86_2005.exe (must be version 8.0.59193)

(When using the IP camera manufactured by Panasonic)

· AXISMediaControlSDK_6_03.exe (When using the IP camera manufactured by AXIS Communications AB)

■ Configuring the settings for IP camera manufactured by AXIS Communications AB

When using the IP camera manufactured by AXIS Communications AB, set the resolution to VGA

(640 × 480).

4.2 Steps for Installing FieldAnalyst

Use the installer to install FieldAnalyst on a computer.

NOTE: A license key is required to install FieldAnalyst. Obtain the key in advance from the sales contact.

NOTE: FieldAnalyst may not be installed or does not work properly with some computer specifications. Check your operating environment before installing FieldAnalyst.

NOTE: FieldAnalyst must be installed with an account with administrator privileges.

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(1) Open the FA installer
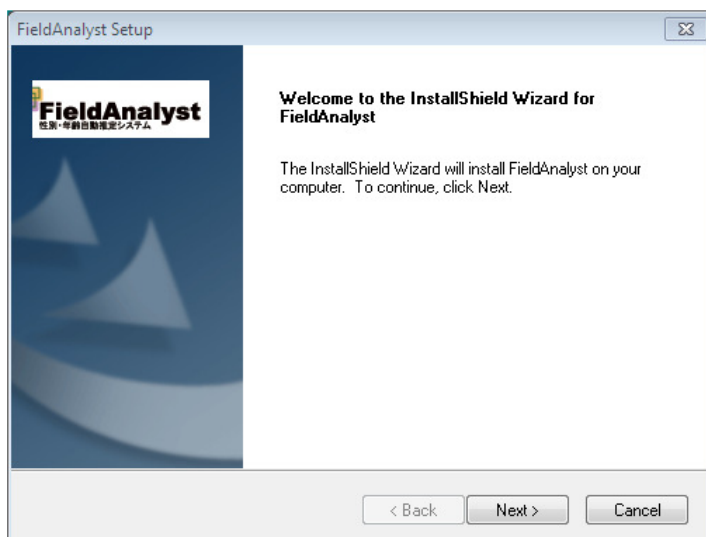
Run the installer (setup.exe).To start the installation, click [Next].
To cancel the installation, click [Cancel].

Click [Next]. The window for entering your license key appears.

(2) License agreement window

Read the license agreement thoroughly and if you agree, select the [I accept the terms of the license agreement] radio button, and then, click [Next].

To cancel the installation, click [Cancel].

(3) License key entry window

Enter your license key.
After entering your key, click [Next]. An widow to select the language version appears.

To go back to the previous page, click [Back].
To cancel the installation, click [Cancel].

* Obtain the license key from your sales contact in advance.

(4) Installation destination folder selection
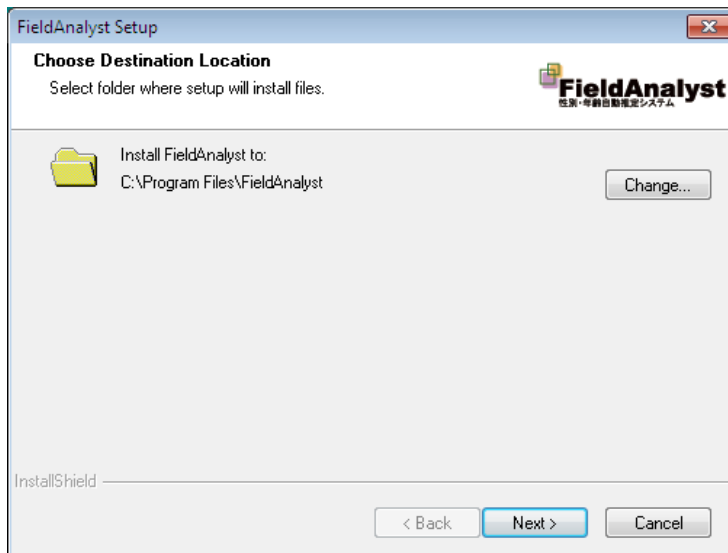
Specify the folder where you want to install FieldAnalyst. The default is <C (Drive where the OS is installed): \Program Files\FieldAnalyst\>.
To change the folder, click [Change].
After specifying the install destination, click [Next]. Confirmation of installation appears.
To go back to the previous page, click [Back].

To cancel the installation, click [Cancel].

(5) Confirmation of installation
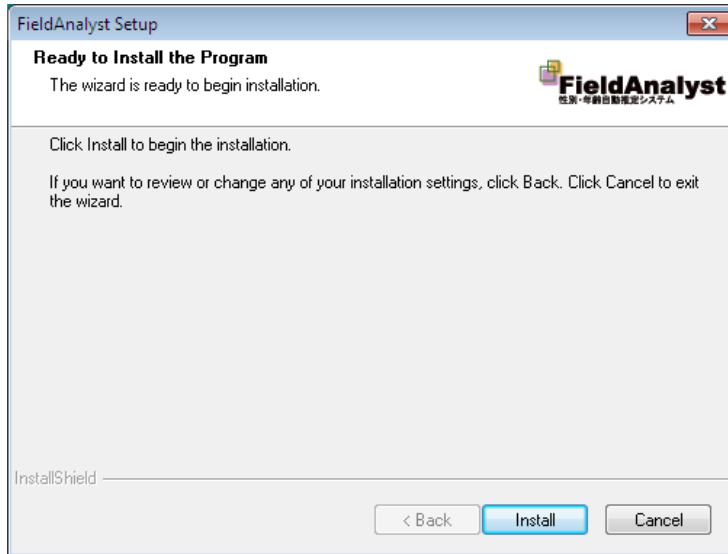
Click [Install] to start the installation.

To go back to the previous page, click [Back].

To cancel the installation, click [Cancel].

(6) Installation in progress window
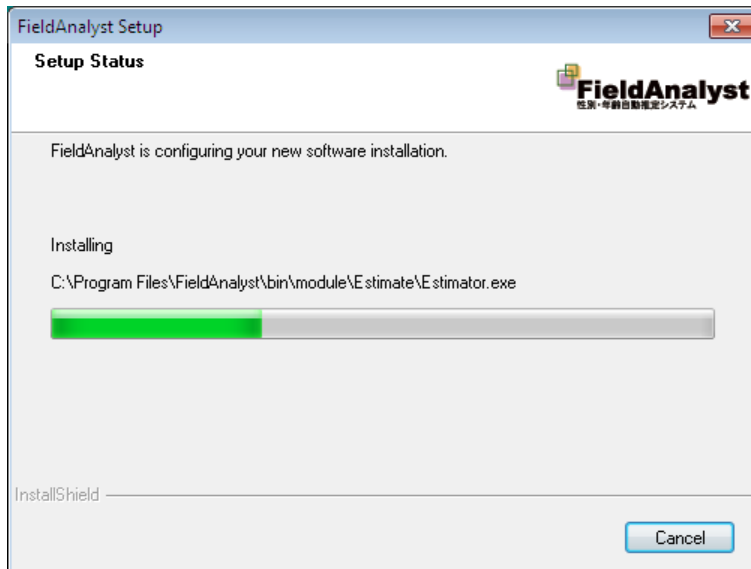
The installation of FieldAnalyst starts.

To cancel the installation, click [Cancel].

(7) Installation complete
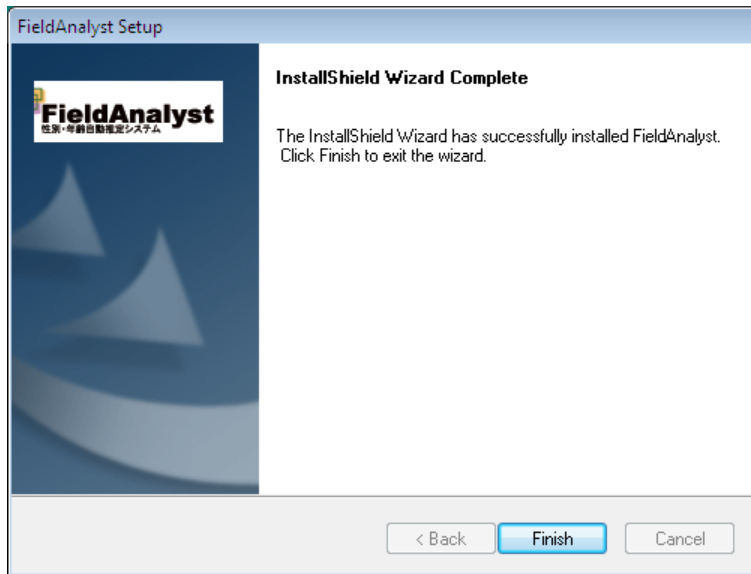
As the installation completes, the notification window appears. Click [Finish] to complete the installation process and close the installation wizard.

(8) Confirmation after installation
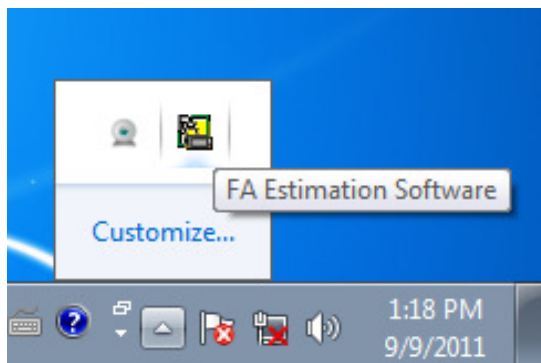
When FieldAnalyst is operating properly, a FieldAnalyst icon () appears in the notification area.

* For information on how to start FieldAnalyst and how to configure the parameters, refer to the "Field Analyst Operations Guide."

4.3 Common Steps for Installing IP cameras

■ **Configuring network settings**
(1) Open Local Area Connection Status dialog
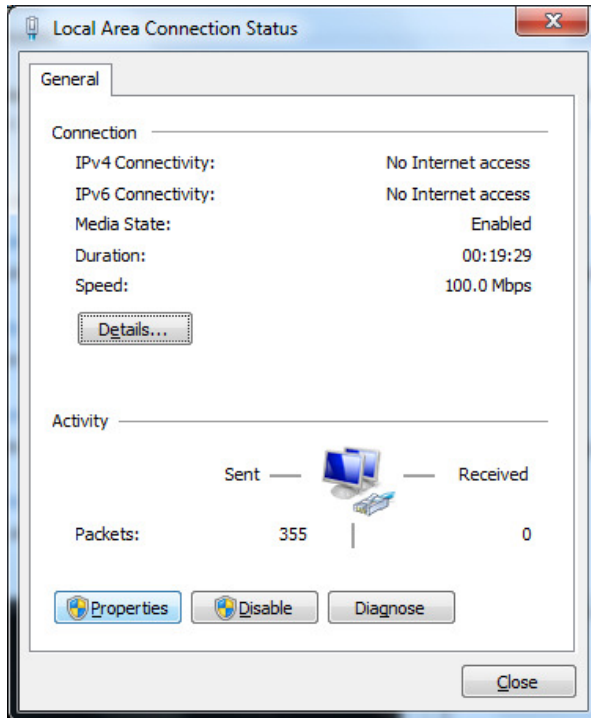
Open Local Area Connection Status dialog and Click [Properties].

(2) Click [Properties]
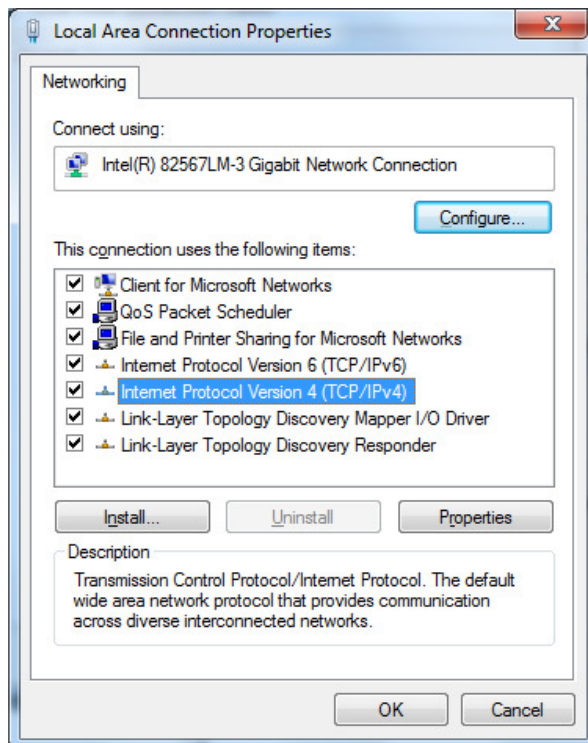
Click [Internet Protocol Version 4 (TCP/IPv4)], then click [Properties].

(3) Set IP address
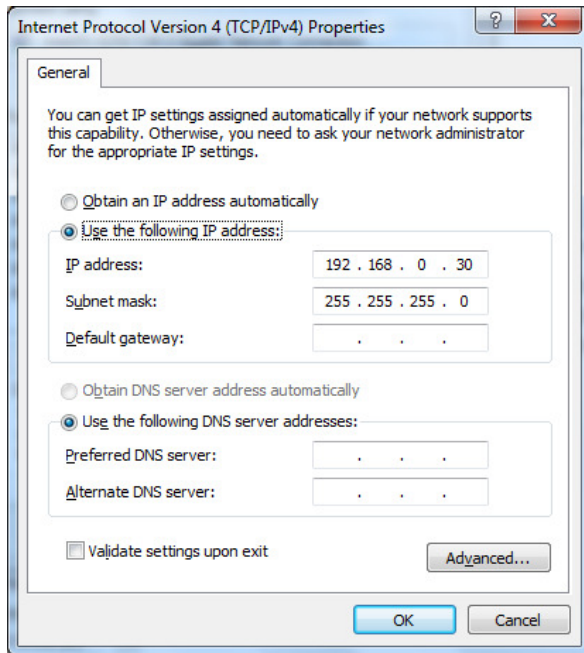
Select [Use the following IP address:] radio button, if it is set to [Obtain an IP address automatically].
Then enter IP address and to a unique id in the network.
Finally set Subnet mask and click [OK].

4.4 Steps for Installing AXIS IP cameras

Please follow these steps when using the IP camera manufactured by AXIS.

■ **Install driver**
(1) Click [Install]

Enter "http://xxx.xxx.xxx.xxx" ("xxx.xxx.xxx.xxx" is network camera's IP address) in the browser's URL field for connecting to network camera.

This dialog will appear when the IP camera is connected for the first time. Click [Install]

(2) Finish
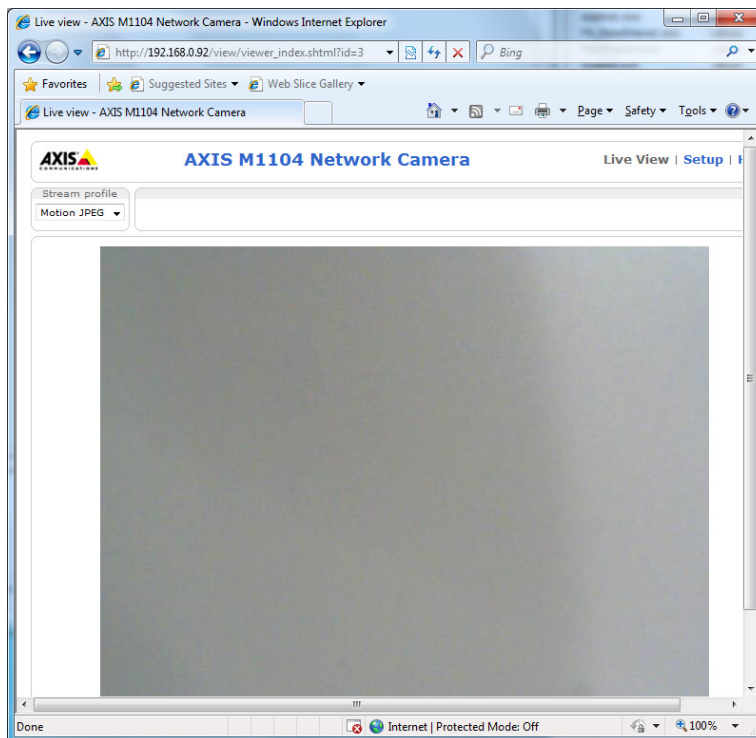
When driver is installed browser will show the image taken by the camera.

■ **Install AXIS Media Control SDK**
 (1) Click [Next]
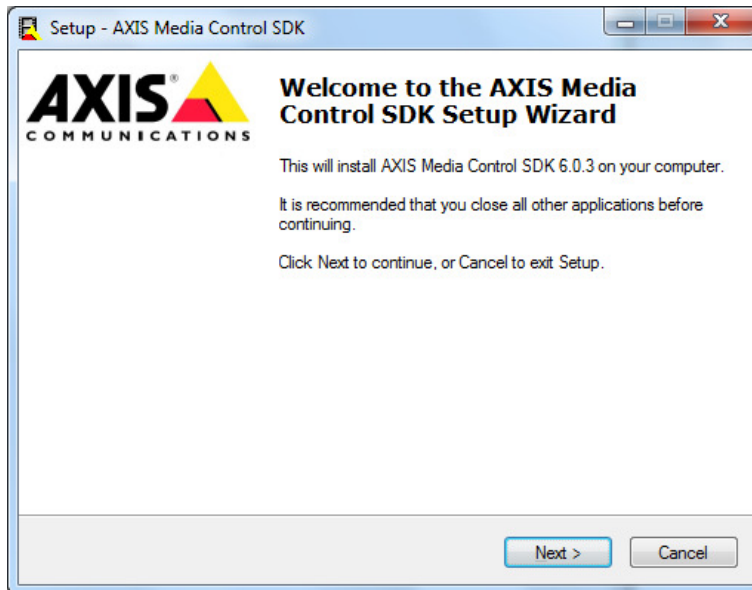
When launching "AXISMediaControlSDK_6_03. exe" this dialog will appear. Click [Next] to continue.

(2) Click [Next]
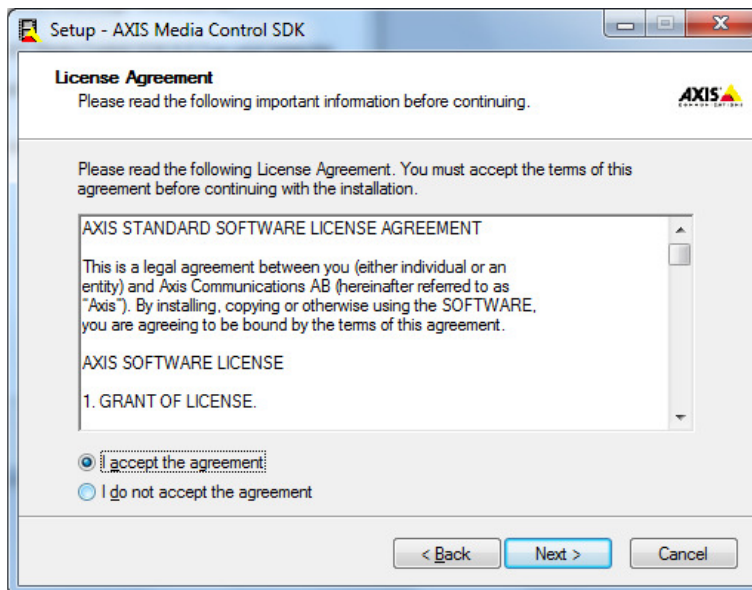
Read the License Agreement then Click [I accept the ……] to continue. Then Click [Next].

(3)Select destination directory and click [Next]
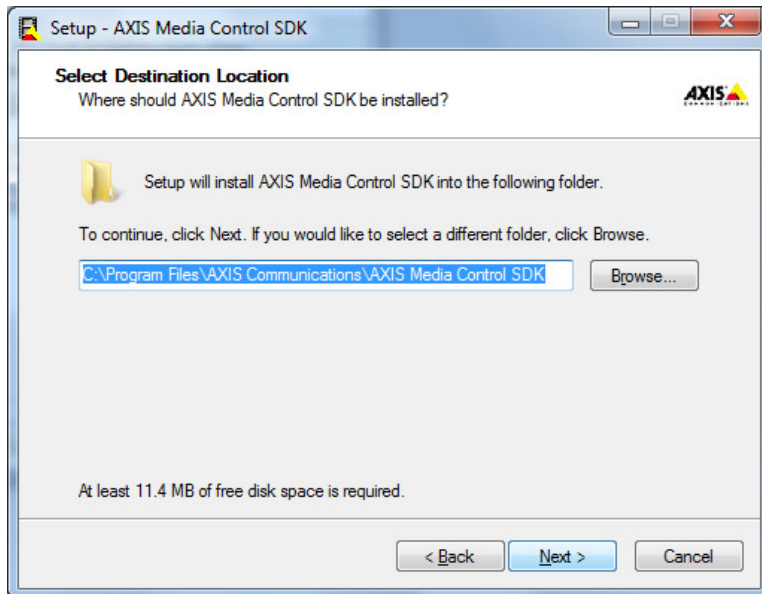
Select destination directory for the files to be installed, and click [Next].

(4) Click [Install] to install files
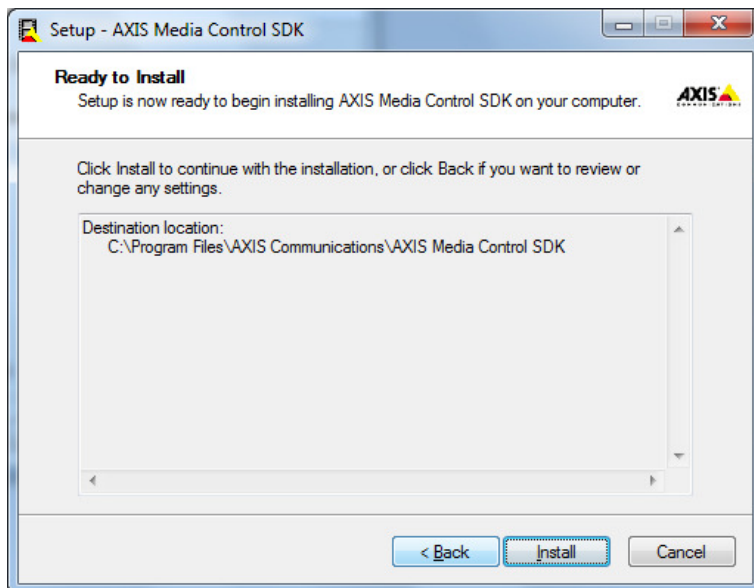
Read the information and click [Install] to install files.

(5)Finished
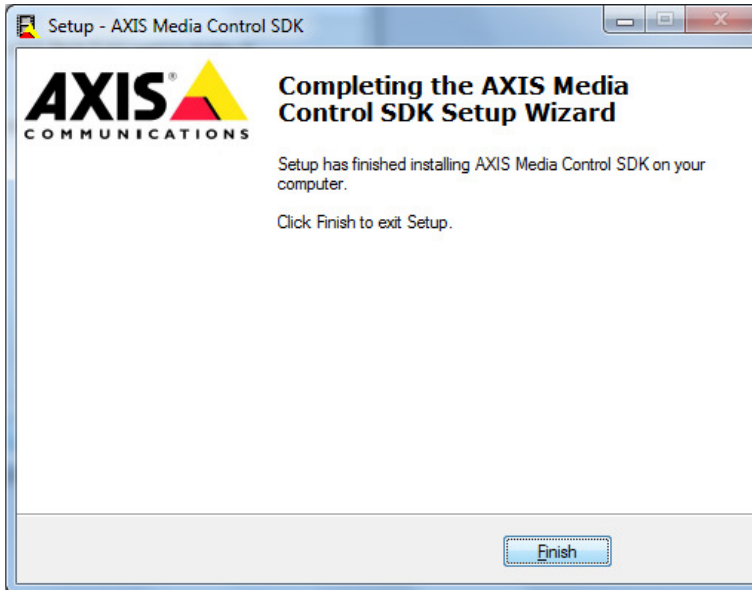
Installation has been done correctly.

Click [Finish] to complete the setup.

4.5 Steps for Installing Panasonic IP cameras

Please follow these steps when using the IP camera manufactured by Panasonic.

■ Install DLL's using 00_regist.bat
(1) Execute "00_regist.bat"
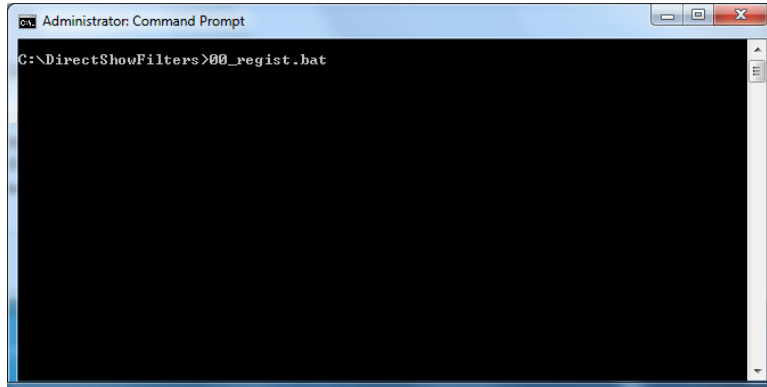
Open Command Prompt and change directory to where "DirectShowFilters" is located. Type "00_regist.bat" and press enter.
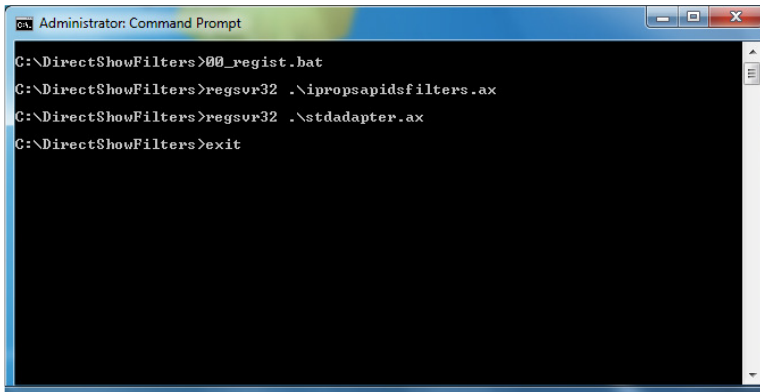
(2) Click [OK]
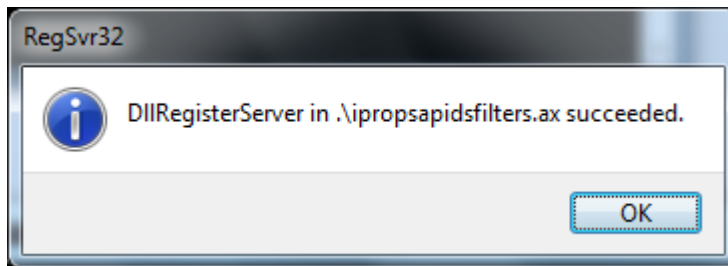
Message box will appear when "ipropsapidsfilters.ax" is correctly registered. Click [OK] to proceed to next step.

(3) Click [OK] to complete register
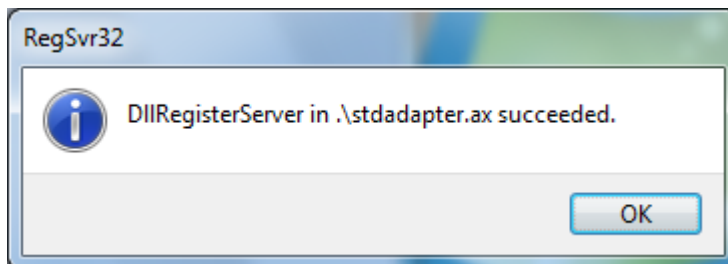
Message box will appear when "stdadapter.ax" is correctly registered. Click [OK] to complete register.
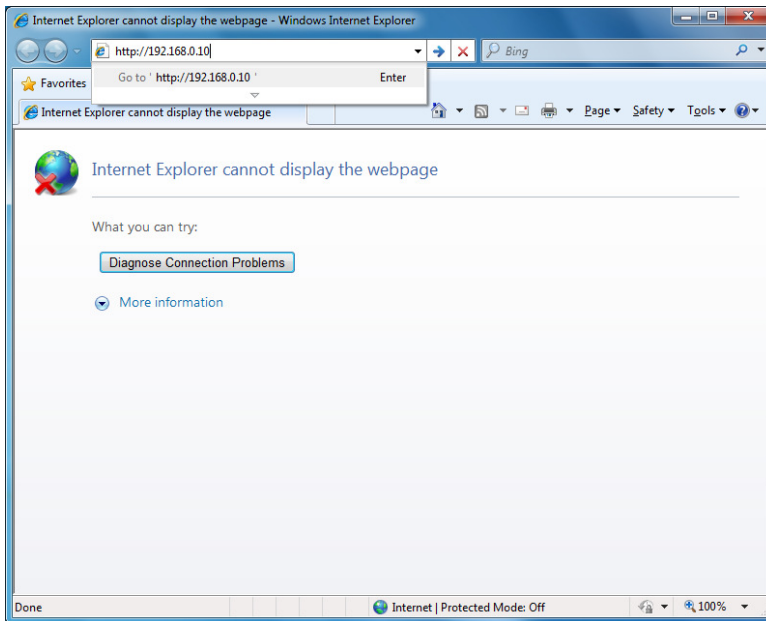
(4) Finish Command Prompt

Type "exit" to finish Command Prompt.

Restart OS.

■ Network camera settings
(1) Connect to network camera

Enter "http://xxx.xxx.xxx.xxx" ("xxx.xxx.xxx.xxx" is network camera 's IP address) to connect to network camera.
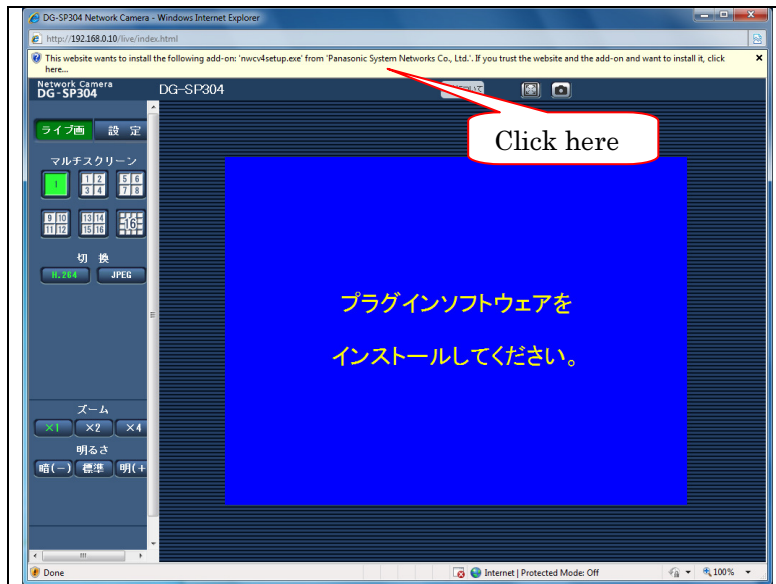
(2) Click [Pop-up blocked.To see ....]
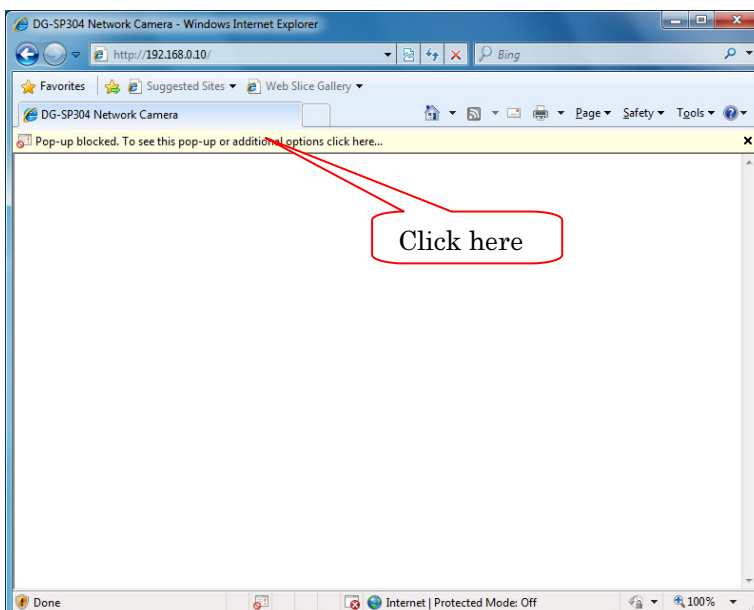
Click [Pop-up blocked.To see ....] to see pop-up.

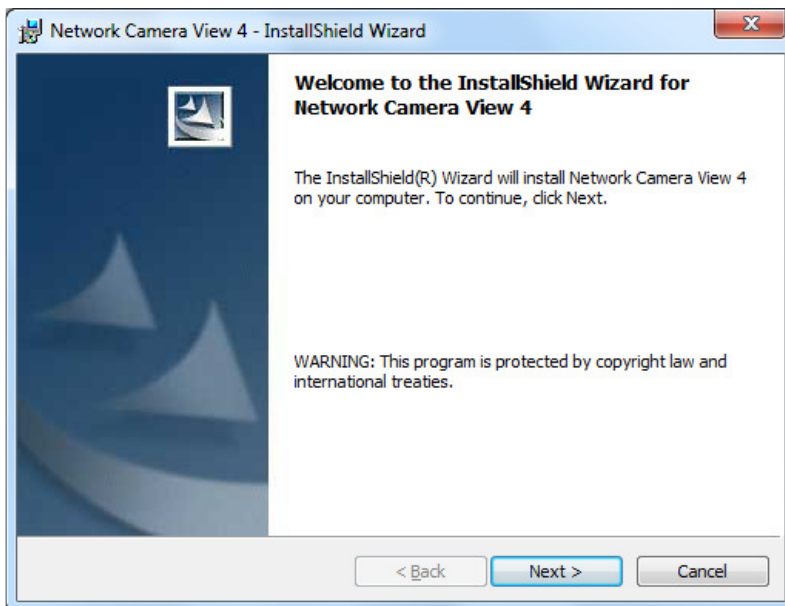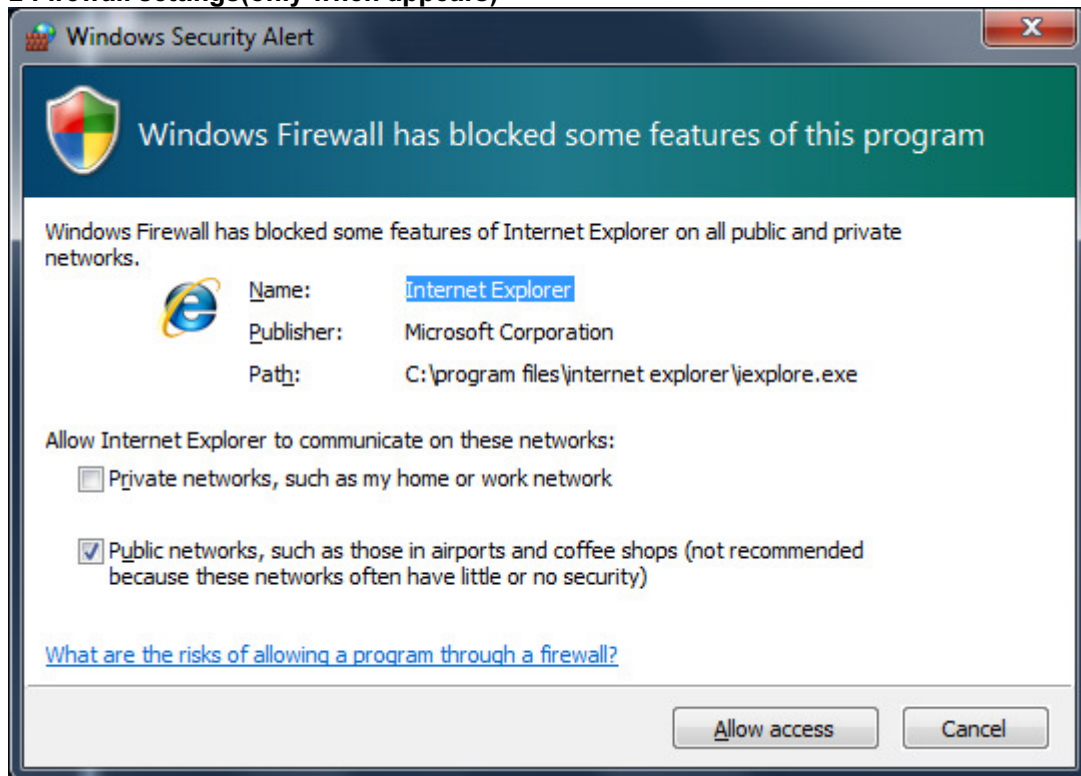## (3) Click [This website wants to install …..]

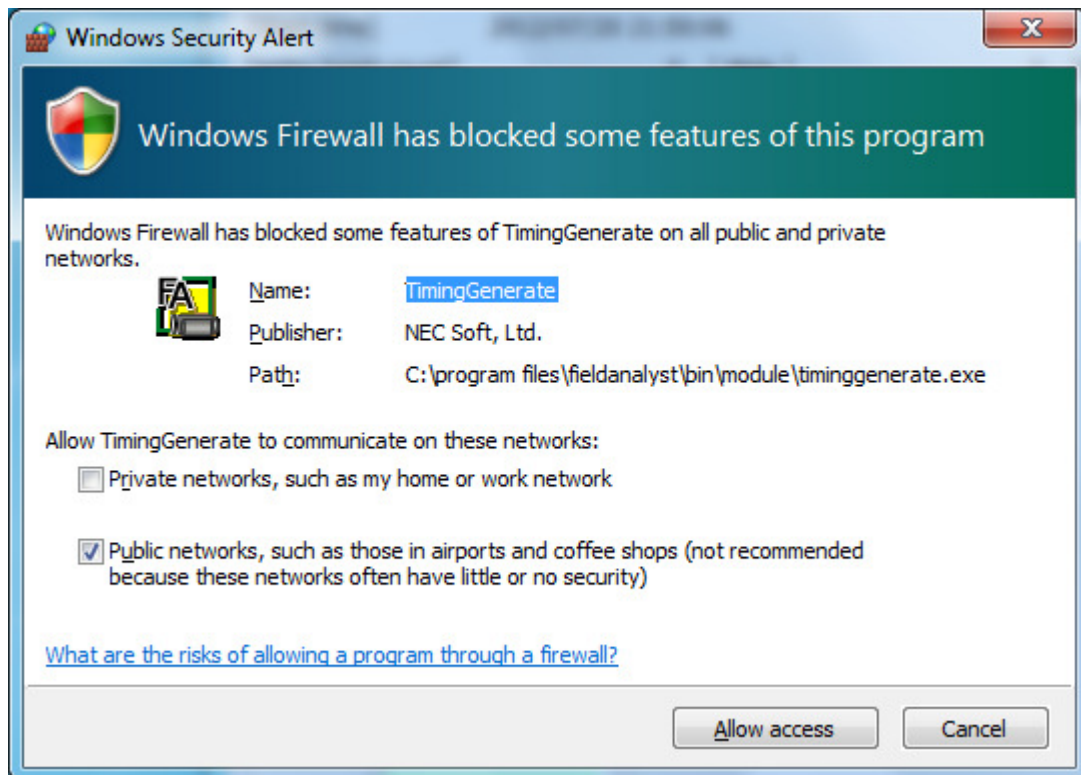Click [This website wants to install ……] to start installing network camera.

(4)Proceed setup

When setup dialog appears proceed as guided.

■ **Firewall settings(only when appears)**

If dialog above appears click [Allow access].
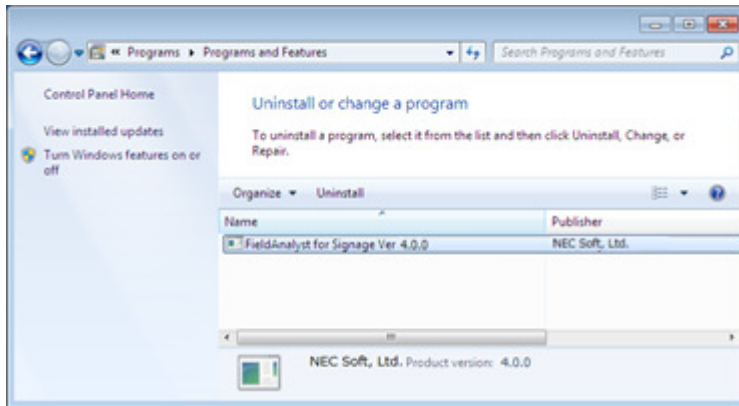

if dialog above appears click [Allow access].

5 Uninstalling FieldAnalyst

5.1 Steps for Uninstalling FieldAnalyst

Follow the steps below to remove (uninstall) FieldAnalyst from a computer.
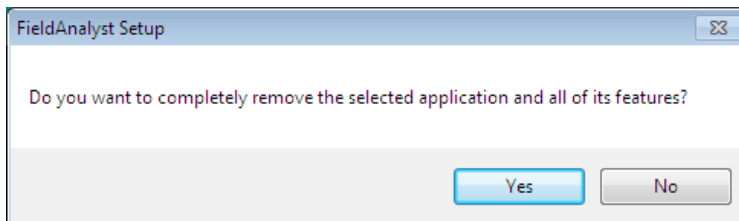
(1) Programs and Features window

Select [Start] > [Control Panel] and open the [Programs and Features] window.

The list of programs currently installed on the computer is displayed.

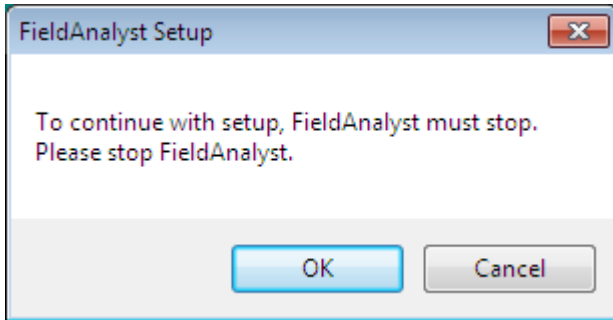Select [FieldAnalyst for Signage Ver 4.0.0] and click [Uninstall].

(2) Confirmation window

The window asking whether or not you want to remove FieldAnalyst appears. To uninstall FieldAnalyst, click [Yes].

To cancel the uninstallation, click [No].
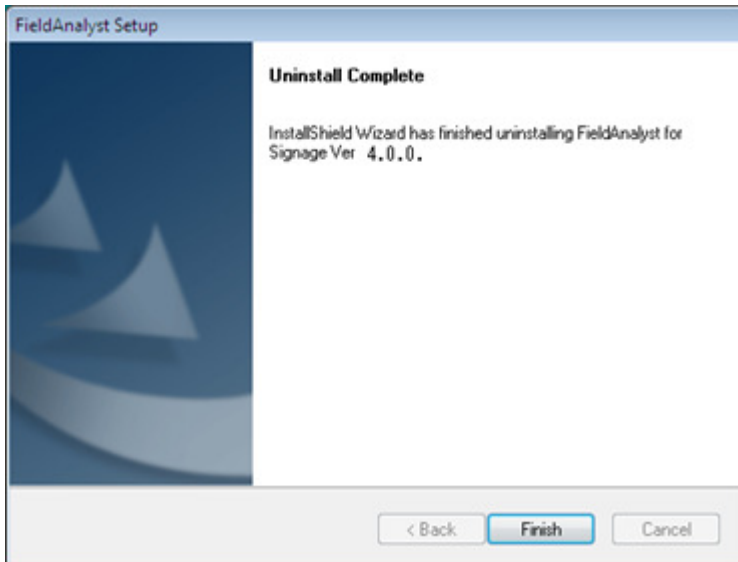
(3) Stop FieldAnalyst

The window confirming to stop FieldAnalyst appears.
To stop FieldAnalyst and continue removing it from the computer, click [OK].
To cancel the uninstallation, click [Cancel].

(4) Uninstallation complete window

When FieldAnalyst is uninstalled, the notification appears.
Click [Finish] to complete the uninstallation process.

6 Update FieldAnalyst

To update FieldAnalyst to Ver. 4.0 when you are using the earlier version, follow the steps below.

1. Record all the parameters information configured on the FieldAnalyst Parameter Tool.

2. Copy the entire folders specified for the destination below and save them.
     User's data file path

3. Uninstall the currently installed FieldAnalyst.

4. Install FieldAnalyst Ver. 4.0.

5. Reflect the parameters recorded in step 1 to FieldAnalyst Ver. 4.0. For how to configure the parameters, refer to the following manuals.
     FieldAnalyst_for_Signage Manual (Operation Guide).pdf

6. Overwrite the [User's data file path] setting configured in step 5 with the path of the data folders saved in step 2.

7 Contact

If you have any questions or comments please contact: