FieldAnalyst

Gender & Age Group Auto-Estimation System

FieldAnalyst for Gate Ver.4.0
Installation Guide

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1 Introduction

FieldAnalyst (Gender & Age Auto-Estimation System) is a system that automatically counts number of persons entered/exited, detects human faces from images captured by video cameras, estimates the gender and age group of persons entered, and exports the results digitally in real-time.

This product consists of the following software and manuals:

Software:

FieldAnalyst

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 system.
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 store captured images on any computers.

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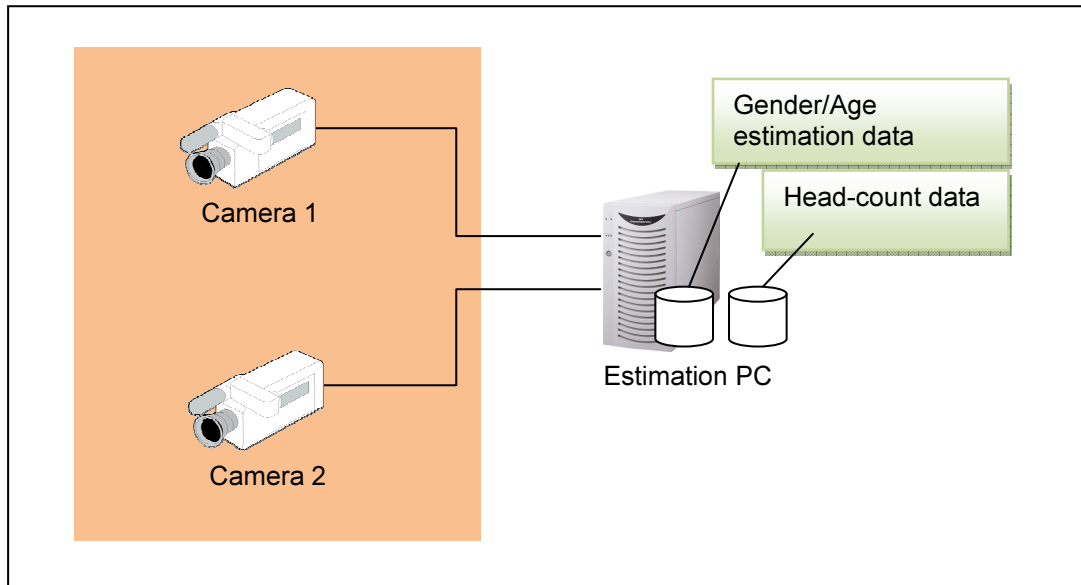
FieldAnalyst utilizes OpenCV developed by Intel Corporation. Regarding the terms of use and other conditions, refer to "IntelLicenseAgreement.txt" included in the installation media.

2 Overview

2.1 System Configuration

The FieldAnalyst system operates in the following configuration.

System Configuration Example

* The same number of video capture cards as the number of installed cameras is required.

* Up to 3 cameras can be connected per recommended PC.

* Estimation cannot be performed by connecting 1 IP camera to multiple estimation PCs.

2.2 Specifications

Item		Specification
Units for counting	Gender	2 categories: Male and female
	Age	1-year intervals(*1)
Image format	Format	RGB color/640 × 480 pixels
	Aspect ratio	1:1
Quality of face Image(*2)	Size (minimum)	28 × 28 pixels or more
	Direction (vertical)	At an angle (depression) of 10 ~ 15 degrees downward from the front side of cameras
	Direction (horizontal)	At an angle of within 22.5 degrees right and left from the front side of cameras
Camera installation conditions	Capturing range	1.8 m width at the subject point
	Distance to subject	5 m or more
	Height	2.4 m or more
	Vertical angle between cameras and faces	Cameras must be installed at an angle of 10 ~ 15 degrees to the horizontal
	Horizontal angle between cameras and faces	Cameras must be installed at an angle of ±10 degrees (0 degrees is recommended.)
Human movements	Walking pattern	Passing through entrance walkways without lingering or meandering(*3)
	Speed	Average walking speed(*4)
	Congestion	On average 3 persons per frame(*5)
Environmental Lighting Conditions(*6)	Upside illumination	500 ~ 2000 lux
	Lateral illumination	Within the range of the value of the upside illumination × 0.2 ~ 1.0

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

*2 System may fail to estimate when faces are hidden by hats, caps, sunglasses, and masks or other persons.

*3 System may fail to estimate when the target person does not walk out or two or more persons remain in the frame.

*4 System may fail to estimate if the target person passes too fast.

*5 The congestion is almost the same as where approximately 30 persons enter the gate per minute. If such congestion continues, the system may fail to estimate accurately although the system can process up to approximately 6 persons.

*6 System accuracy may be affected if the system is used in a place where sunlight condition is significantly influenced by time and weather (especially outdoors), and a place with strong backlight.

2.3 Operating Environment

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

	Estimation PC(1 camera)	Estimation PC(2 or 3 camera)
Specs	CPU: Core™ 2 Quad Q9550(2.83GHz) Memory: 2 GB	CPU: Core™ i 7 S860(2.53GHz) Memory: 2.5 GB
OS	Windows 7 Professional SP1 32bit Windows 7 Professional SP1 64bit	Windows 7 Professional SP1 32bit Windows 7 Professional SP1 64bit
Remarks	- IP camera (AXIS) - IP camera (Panasonic) - USB camera - Analog camera - Coaxial cable or LAN cable is required	- IP camera (AXIS) - IP camera (Panasonic) - USB camera - Analog camera - Coaxial cable or LAN cable is required

* Set up your system so that images can be imported from the cameras to the PCs.
 Refer to the instruction manuals provided with your capture boards and video cameras to set up such configuration.
* Refer to the instruction manuals provided with your IP camera or video camera to set up the configuration.
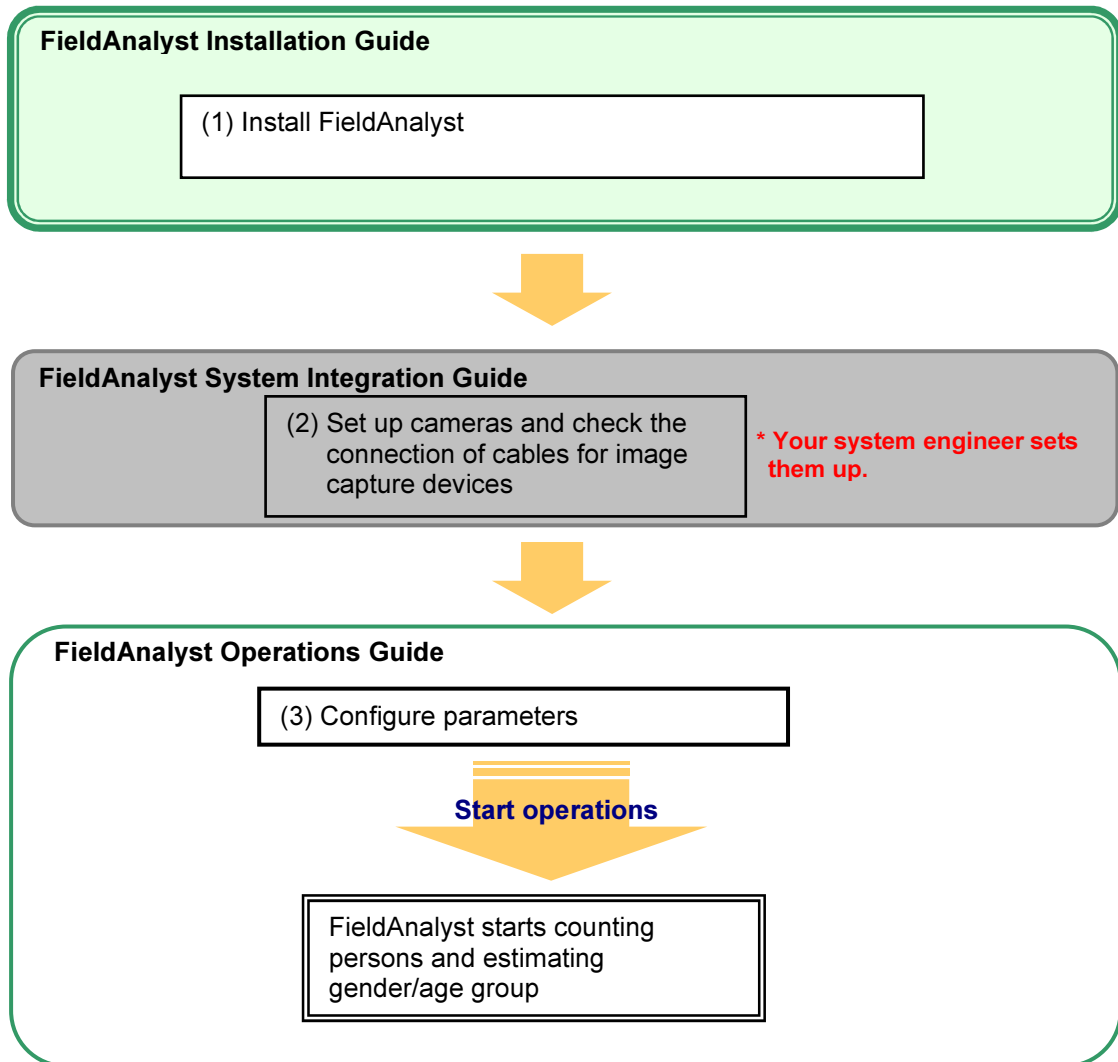* Install the cameras and adjust the quality of the images according to 2.2 Specifications.
* 3 sets of cameras at maximum can be connected .

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 Installation Guide
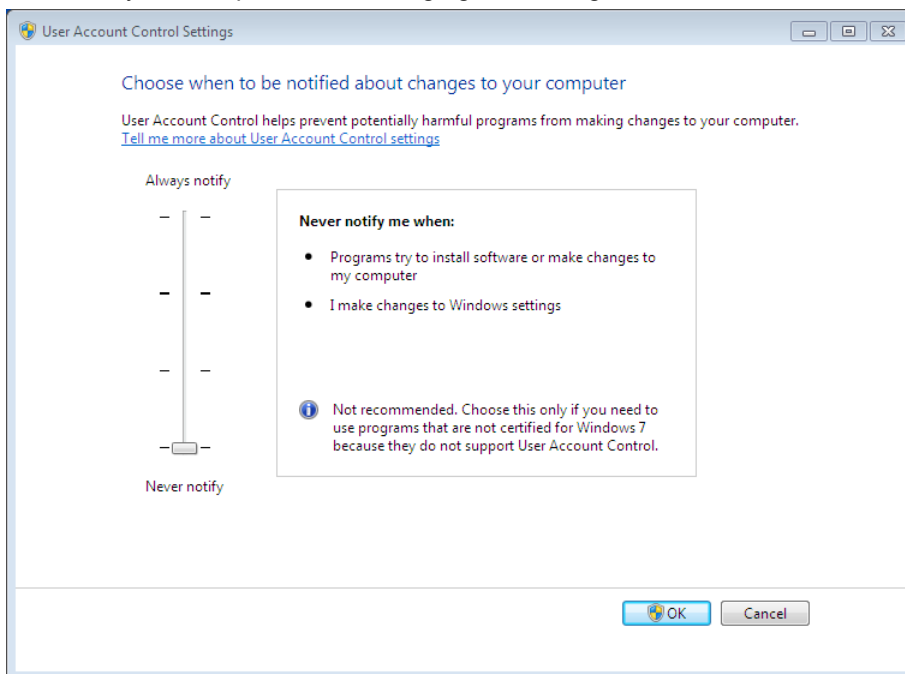
(1) Install FieldAnalyst

FieldAnalyst System Integration Guide

(2) Set up cameras and check the connection of cables for image capture devices

* Your system engineer sets them up.

FieldAnalyst Operations Guide

(3) Configure parameters

Start operations

FieldAnalyst starts counting persons and estimating gender/age group

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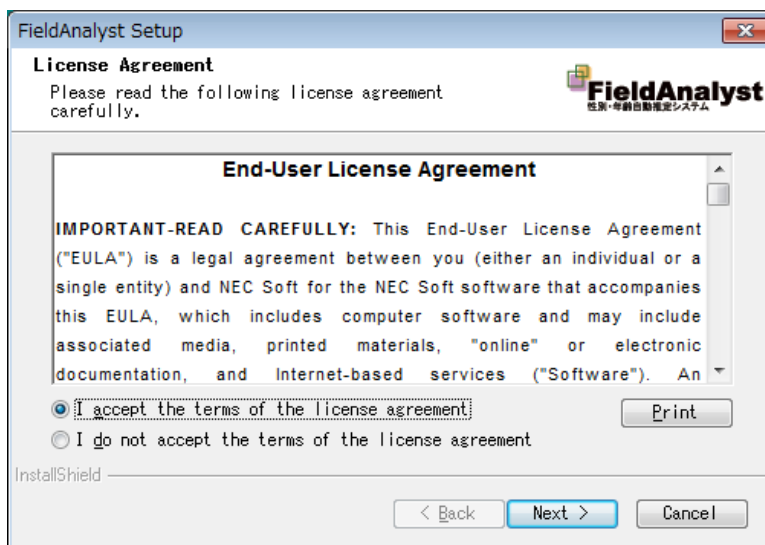> **NOTE**: FieldAnalyst must be installed with an account with administrator privileges.

(1) Open the FA installer
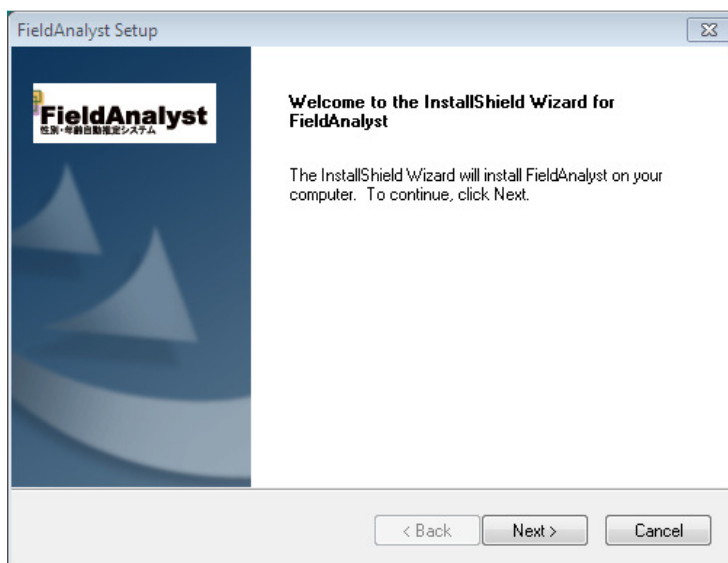
Insert the installation CD to the CD-ROM drive, and run the installer (setup.exe).
To start the installation, click [Next]. To cancel the installation, click [Cancel].

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
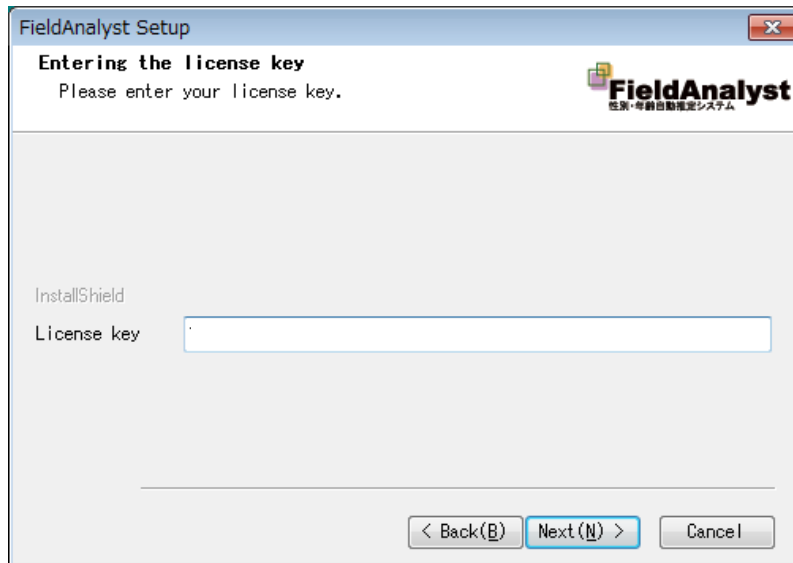
Enter your license key.
After entering your key, click [Next].
To go back to the previous page, click [Back].
To cancel the installation, click [Cancel].
* Obtain the license key from your sales contact in advance.

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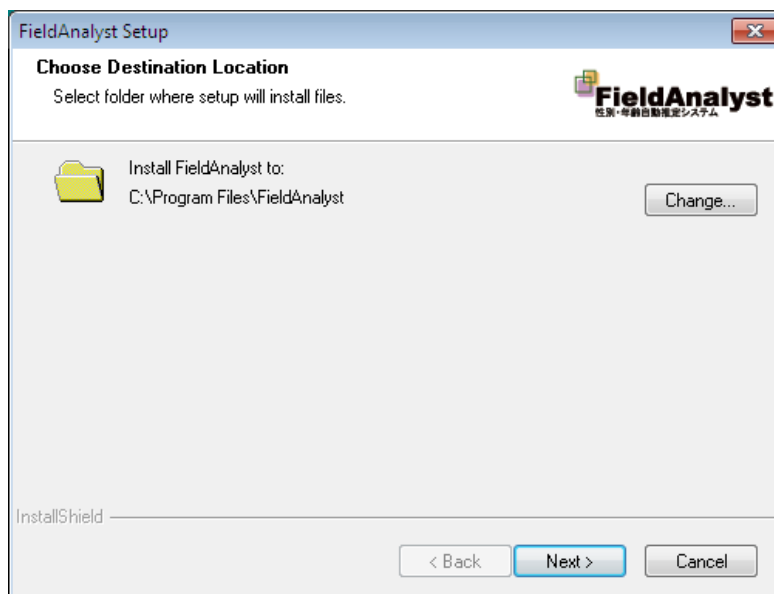
Specify the folder where you want to install FieldAnalyst. The default is <C (Drive where the OS is installed): \Program Files\FieldAnalyst\>.
To change the folder, click [Change].
After specifying the install destination, click [Next]. Confirmation of installation appears.
To go back to the previous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

(5) Confirmation of installation
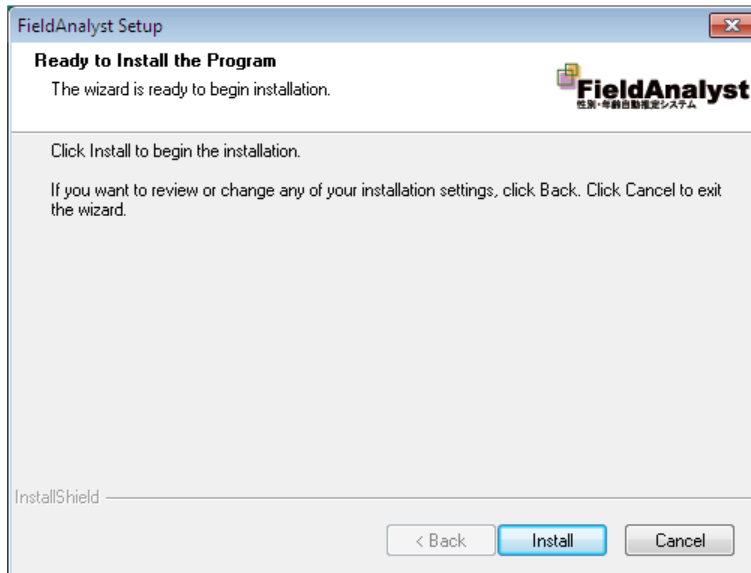
Click [Install] to start the installation.
To go back to the previous page, click [Back].
To cancel the installation, click [Cancel].

(6) Installation in progress window
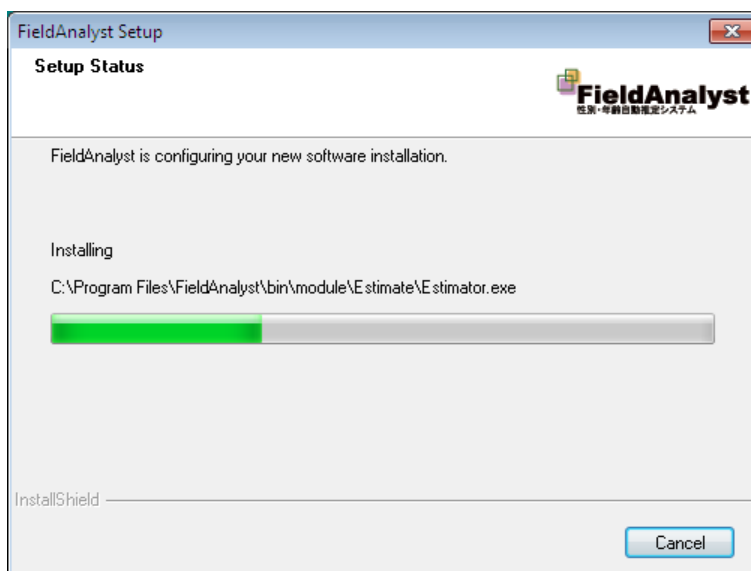
The installation of FieldAnalyst starts.
To cancel the installation, click [Cancel].

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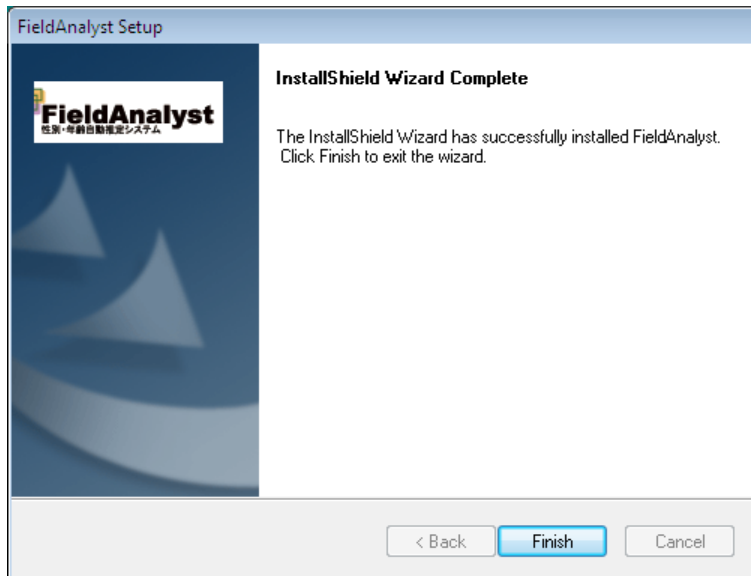
As the installation completes, the notification window appears.
Click [Finish] to complete the installation process and close the installation wizard.

(8) Confirmation after installation
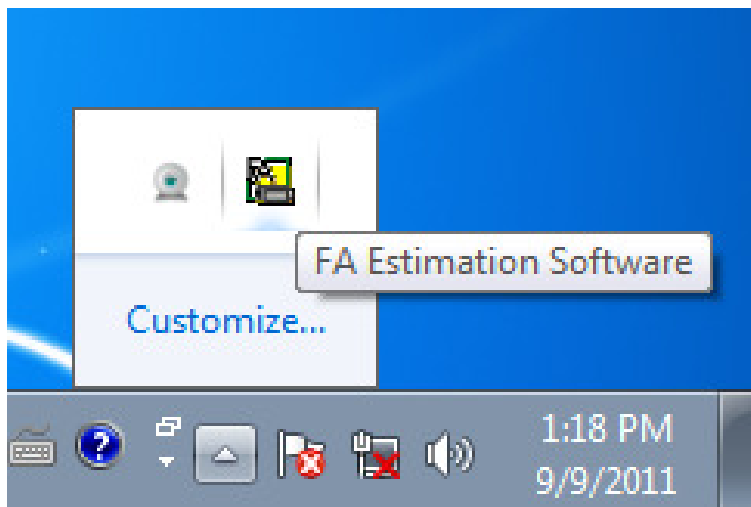
Select [All Programs] > [FieldAnalyst] > [FieldAnalyst], to verify that FieldAnalyst is operating properly.
When FieldAnalyst is operating properly, a FieldAnalyst icon ( ) appears in the notification area.

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

4.3 Common Steps for Installing IP cameras

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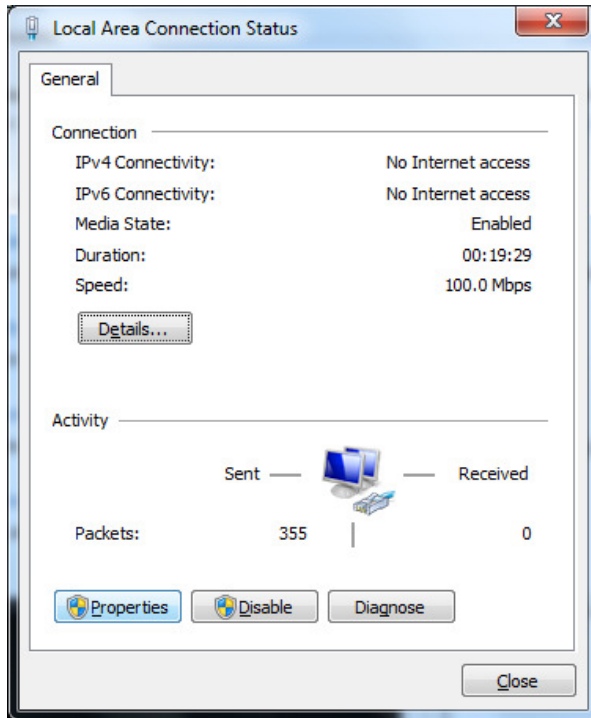
Open Local Area Connection Status dialog and Click [Properties].

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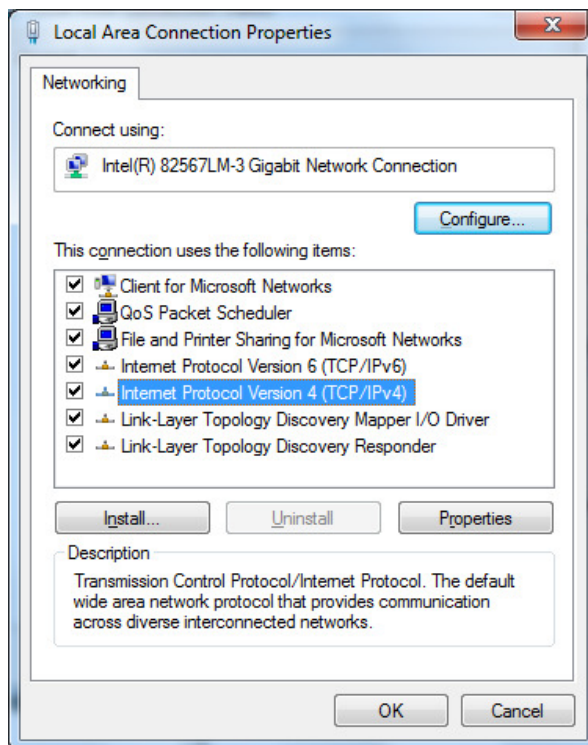
Click [Internet Protocol Version 4 (TCP/IPv4)], then click [Properties].

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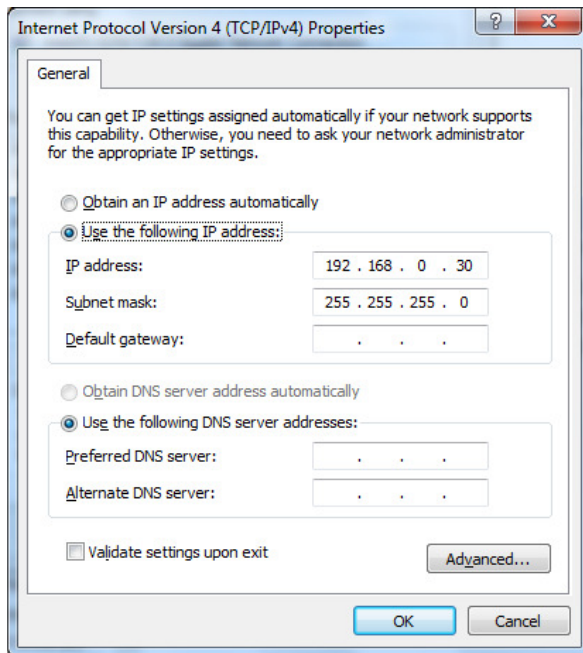
Select [Use the following IP address:] radio button, if it is set to [Obtain an IP address automatically].
Then enter IP address and to a unique id in the network.
Finally set Subnet mask and click [OK].

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
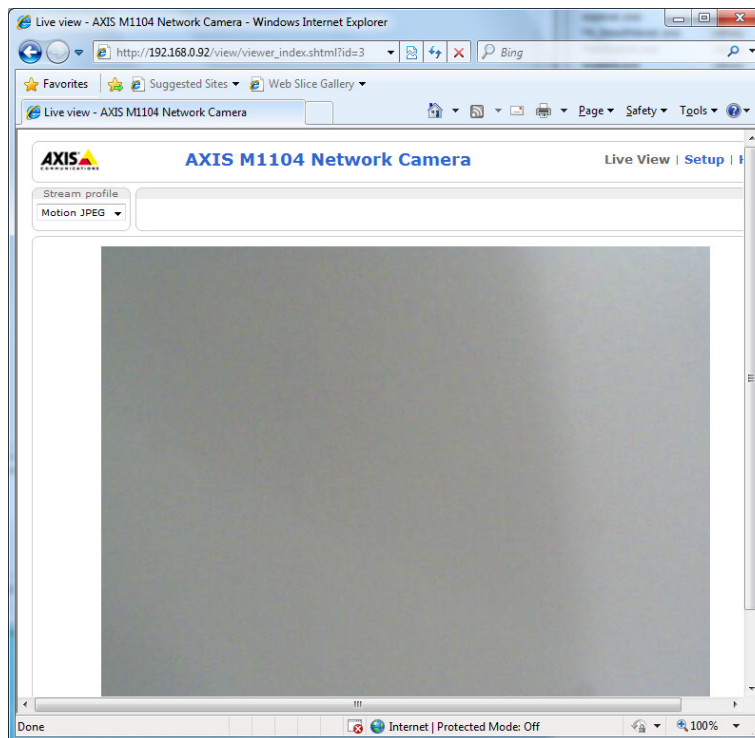
When driver is installed browser will show the image taken by the camera.

■ 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]
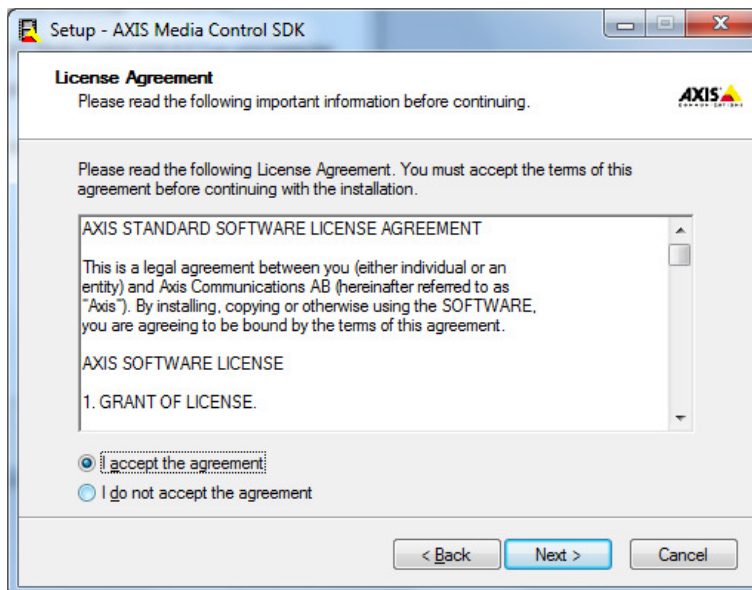
Read the License Agreement then
Click [I accept the ......]
to continue. Then Click [Next].

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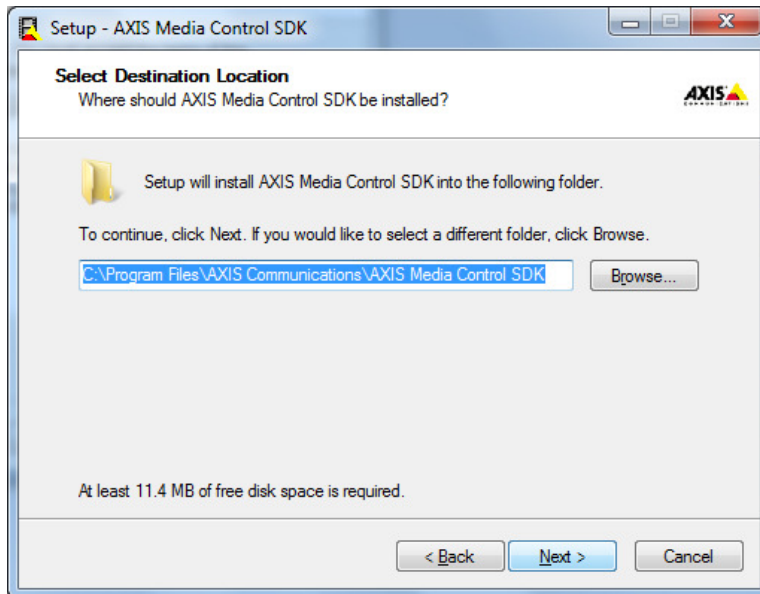
Select destination directory
for the files to be installed,
and click [Next].

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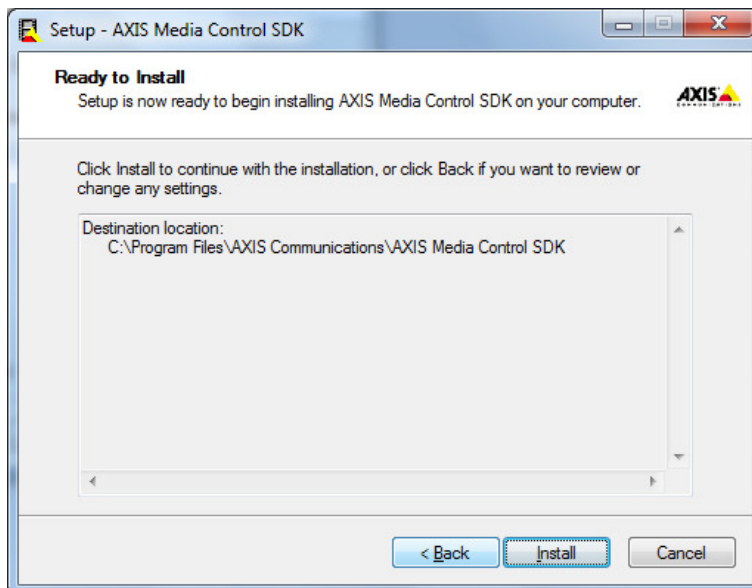
Read the information and click
[Install] to install files.

(5)Finished
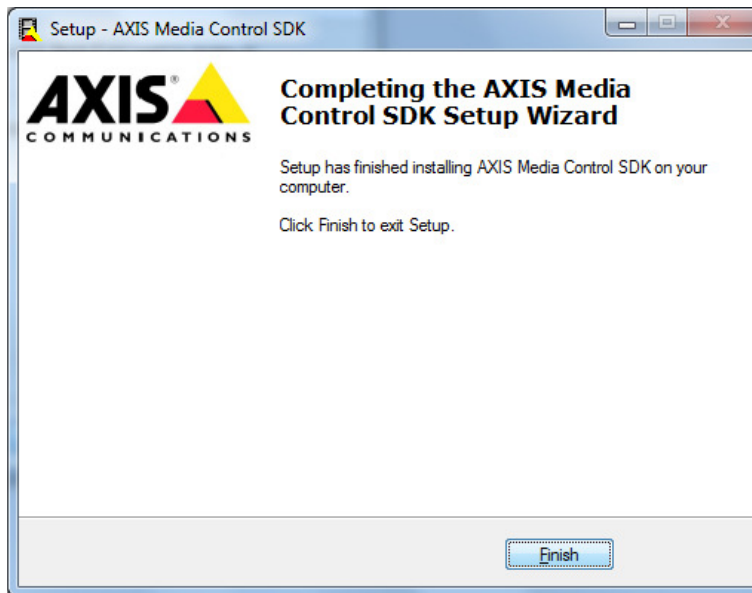
Installation has been done correctly.

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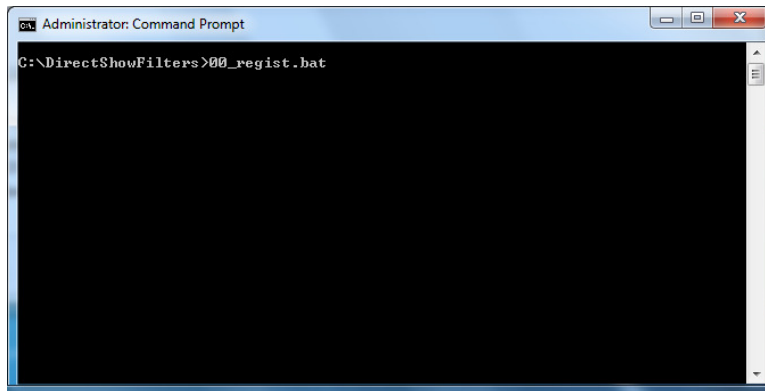
Open Command Prompt and change directory to where "DirectShowFilters" is located. Type "00_regist.bat" and press enter.
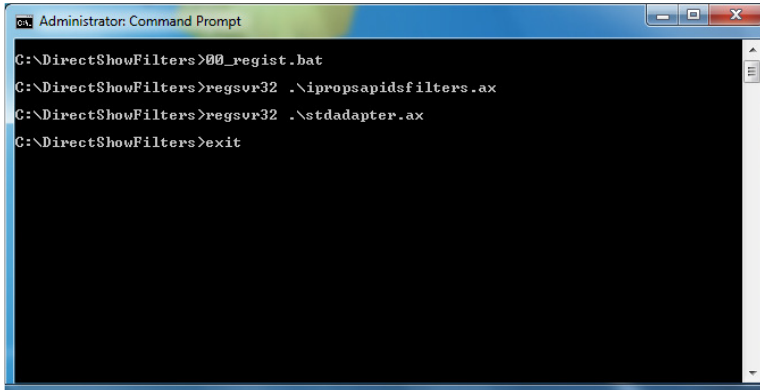
(2) Click [OK]
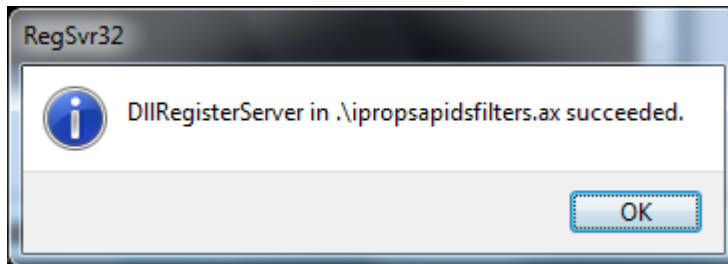
Message box will appear when "ipropsapidsfilters.ax" is correctly registered.
Click [OK] to proceed to next step.

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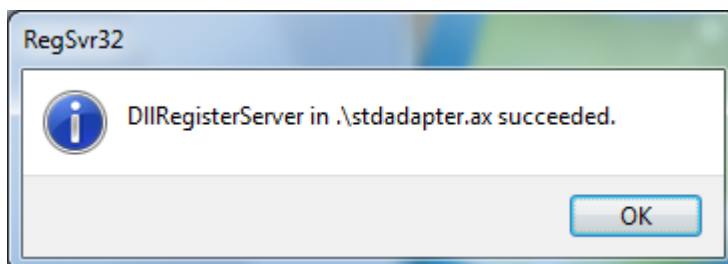
Message box will appear when "stdadapter.ax" is correctly registered.
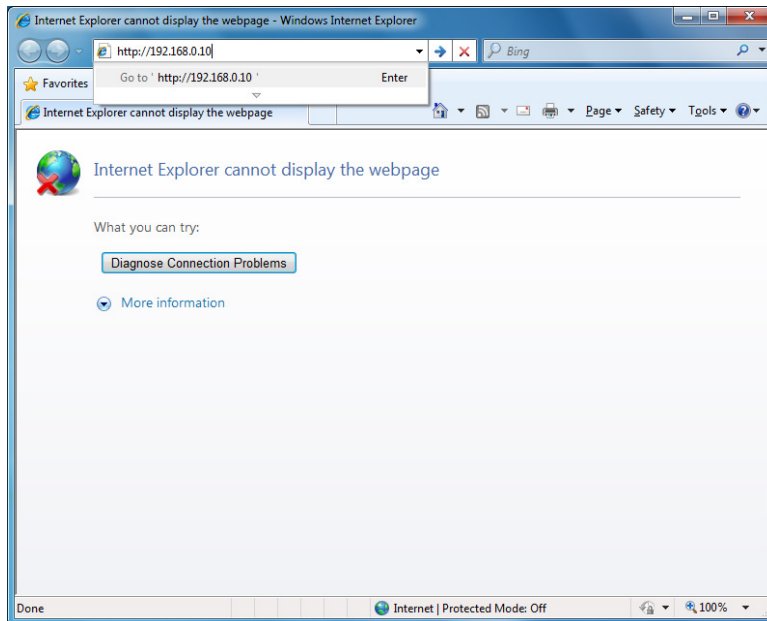Click [OK] to complete register.

(4) Finish Command Prompt

Type "exit" to finish Command Prompt.

Restart OS.

■ Network camera settings
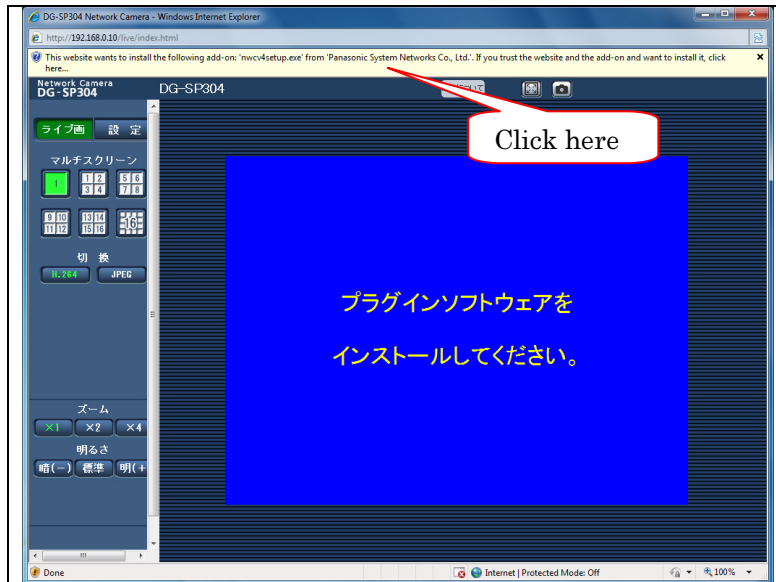### (1) Connect to network camera

Enter "http://xxx.xxx.xxx.xxx"
("xxx.xxx.xxx.xxx" is network
camera 's IP address) to
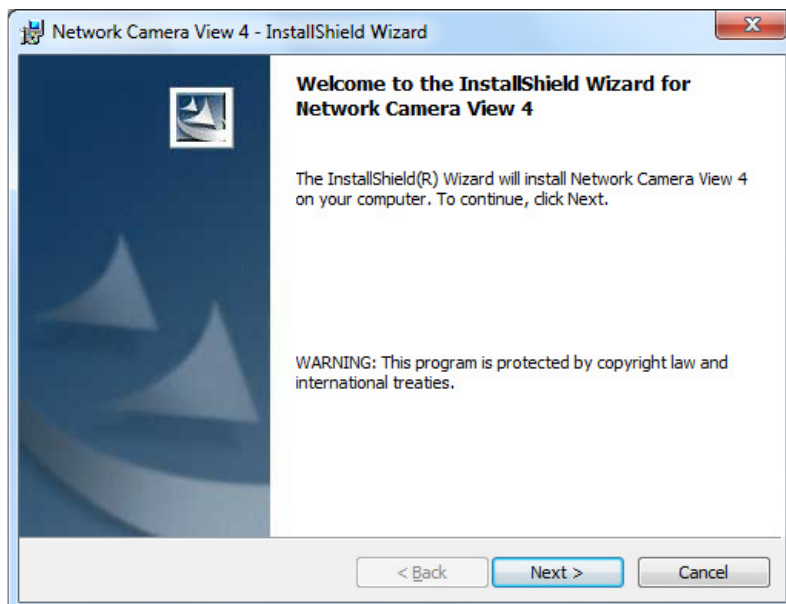connect to network camera.

(2) Click [Pop-up blocked.To see ……….]
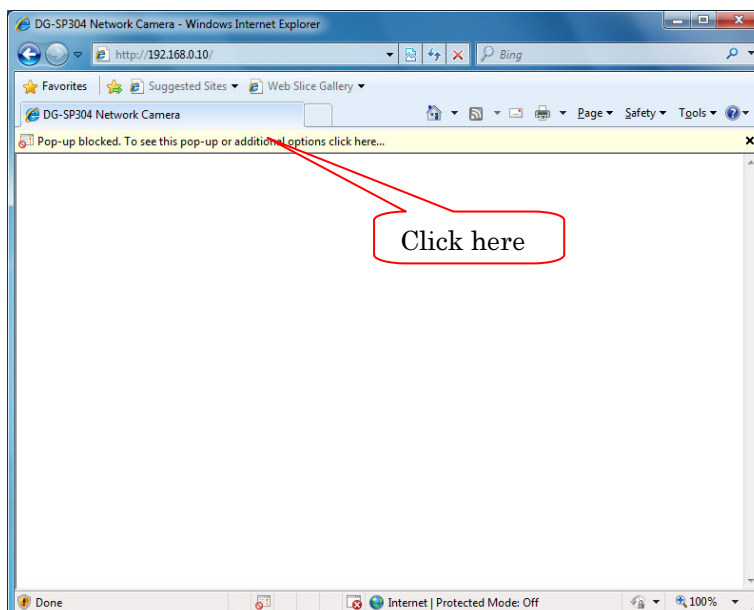
Click [Pop-up blocked.To see
……….] to see pop-up.

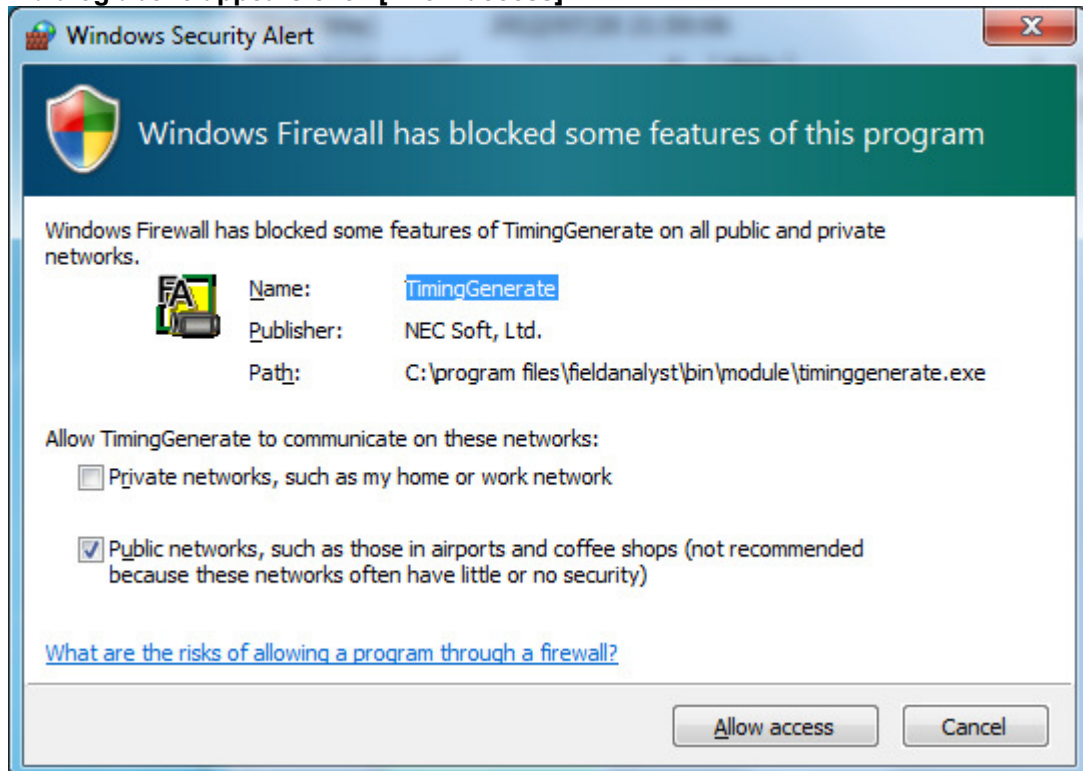**(3) Click [This website wants to install …..]**

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)

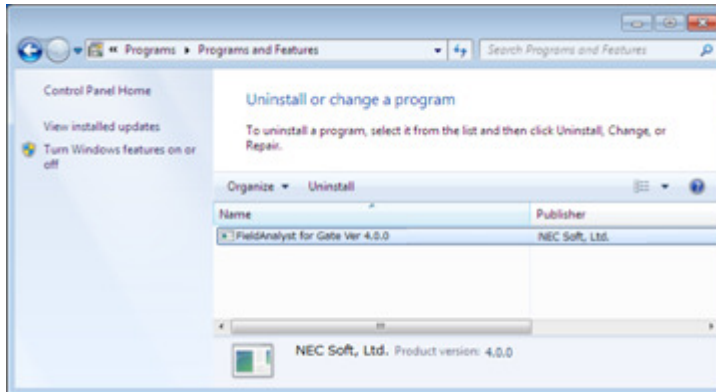**If dialog above appears click [Allow access].**

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.
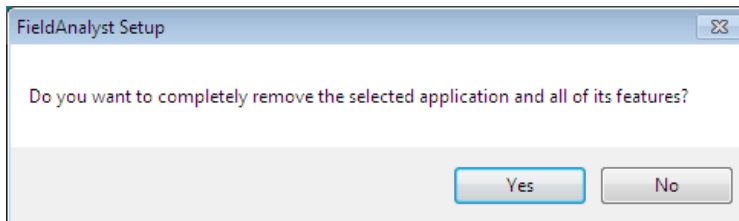
(1) Programs and Features window

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 Gate Ver. 4.0.0] and click [Uninstall].
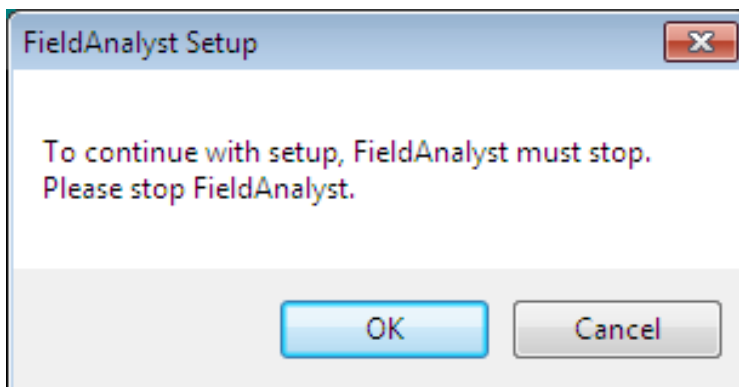
(2) Confirmation window

The window asking whether or not you want to remove FieldAnalyst appears.
To uninstall FieldAnalyst, click [Yes].
To cancel the uninstallation, click [No].
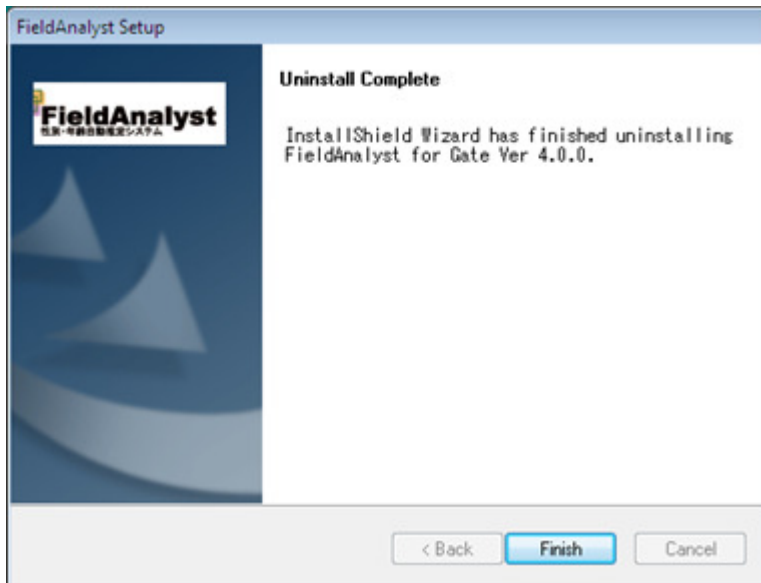
(3) Stop FieldAnalyst

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_Gate_Ver._4.0_Operations_Guide.doc

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: