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Human Machine Interface

XP-Manager

User's Manual

⚠ Safety Instructions

- Read this manual carefully before installing, wiring, operating, servicing or inspecting this equipment.

- Keep this manual within easy reach for quick reference.

LS Industrial Systems

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Before using the product…

To use the product safely and effectively, please read this instruction manual thoroughly before use.

► Please keep to the safety precaution, for it is to prevent accidents and potential danger from occurring.

► Safety precaution is classified into 'Warning' and 'Caution' and their meanings are as follows.

⚠ **Warning**   Violating the instruction may result in serious personal injury or death.

⚠ **Caution**   Violating the instruction may result in slight personal injury or product damage.

► The indicated illustrations on the product and in the manual have the following meanings.

⚠ Be cautious, for danger may be present.

⚡ Be cautious, for there is a possibility of an electric shock.

► After reading the instruction manual, keep it handy for quick reference.

Design Precautions

⚠ Warning

▸ **Install a safety circuit external to the HMI to protect the whole control system in case of external power supply trouble.**

Serious trouble may occur to the entire system due to erroneous output/operation of the HMI.

Design Precautions

⚠ Caution

▸ **In/output signal or communication cable should be at least 100mm apart from High-voltage/power wires.**

Otherwise, it may cause erroneous output/operation.

Installation Precautions

⚠ Caution

▸ **Use the HMI in an environment that meets the general specification contained in this manual or datasheet.**

Otherwise, it could result in electric shock, fire, erroneous operation or deterioration.

▸ **In case of much vibration in the installed environment, be sure to insulate the HMI from direct vibration.**

Otherwise, it could result in electric shock, fire or erroneous operation.

▸ **Be sure not to let foreign substances such as conductive debris inside the product.**

Otherwise, it could result in electric shock, fire or erroneous operation.

Wiring Precautions

⚠ Warning

▶ **Be sure to turn off the HMI and external power before wiring.**

Otherwise, it may result in an electric shock or damage to the product.

⚠ Caution

▶ **Wire correctly by checking each of the product's rated voltage and terminal layout.**

Otherwise, it may result in fire, electric shock or erroneous operation.

▶ **Tighten terminal screws with specified torque when wiring.**

If terminal screws are loose, it may result in short circuits, fire or erroneous operation.

▶ **Use the exclusive HMI 3-type grounding for the FG terminal.**

If not grounded, it may result in erroneous operation.

▶ **Be sure not to let any foreign substances such as wiring debris inside the module.**

Such debris may cause fire, damage or erroneous operation.

Startup and Maintenance Precautions

⚠ Warning

▶ **Do not touch the terminals while power is on.**

  Otherwise, it may cause electric shock or erroneous operation.

▶ **Turn off the PLC and external power when cleaning or tightening the terminal.**

  Otherwise, it may cause electric shock or erroneous operation.

▶ **Do not charge, disassemble, heat, short circuit, solder, etc. the battery.**

  Mishandling the battery may cause overheating, crack, fire and may result in injury or fire.

⚠ Caution

▶ **Do not disassemble PCB from the product case or modify the product.**

  Otherwise, it may result in fire, electric shock or erroneous operation.

▶ **Use cellular phone or walky-talky at least 30cm away from the PLC.**

  Otherwise, it may result in erroneous operation.

Disposal Precaution

⚠ Caution

▶ **When disposing of this product or battery, treat it as industrial waste.**

  Otherwise, it may cause poisonous pollution or explosion.

Revision History

Version	Date	Contents	Revised page
V 1.0	'10.6	First Edition	-
V 1.1	'10.12	Web server added	Ch13

Thank you for purchasing the HMI of LS Industrial Systems Co., LTD.

For right use of the product, read carefully the manual to understand the functions, performance, installation and programming of the product you have purchased before use it and make sure that this manual is delivered to the final user and person in charge of maintenance.

The following manual deals with use of the product.

When necessary, read the following manuals and place an order.

Otherwise you can download PDF files by signing in our company's home page http://eng.lsis.biz/.

Related Manuals

Title	Contents	Serial Number
XGT Panel Communication User's Manual	This manual describes the line diagrams and communication settings necessary for connecting the XGT Panel products to control devices such as the PLC or inverter.	10310000758
XP-Builder User's Manual	This is the XGT Panel software manual describing the functions such as the display data, communication and environment setting, logging/recipe data backup, simulator and printing to use the XGT Panel products.	10310000759
XGT Panel User's Manual	This manual explains the specifications, features and system composition of the XGT Panel series.	10310000757
XP-Manager User's Manual	XP-Manager is software supporting diverse functions of XGT Panel. And communication between XGT Panels is available through XP Link.	10310001111

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Chap. 1 Starting

1.1 The characteristics of XP-Manager

XP-Manager that supports various functions of XGT Panel realizes data communication between XGT Panels through XP Link. This software has the below characteristics and strong points.

(1) You can change freely the position and composition of a screen.
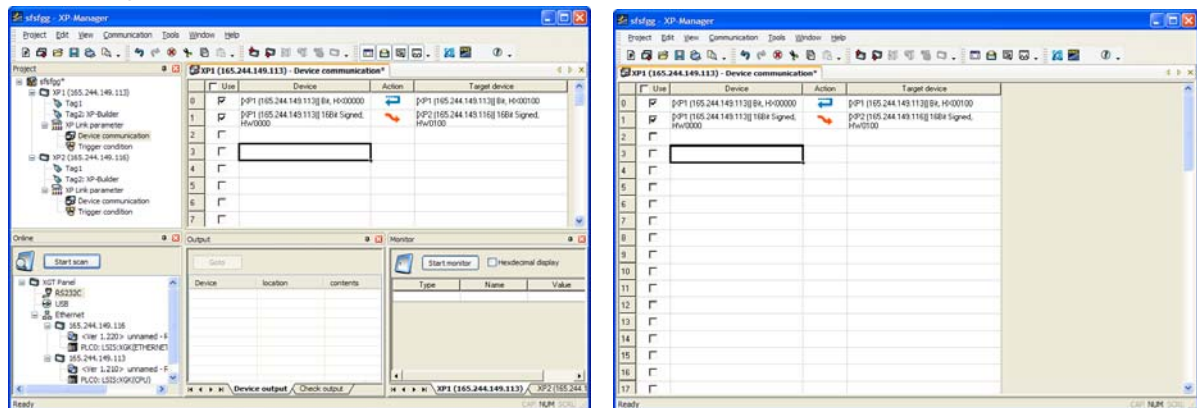
(2) It can be changed for the convenience of users through user defined hot key and tool bar.
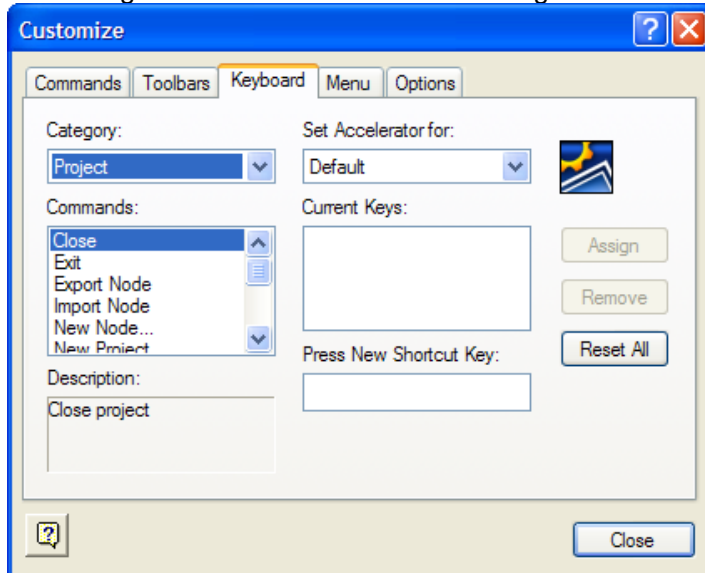
(3) It is composed of shortcut icon for a user to apply the functions more easily.
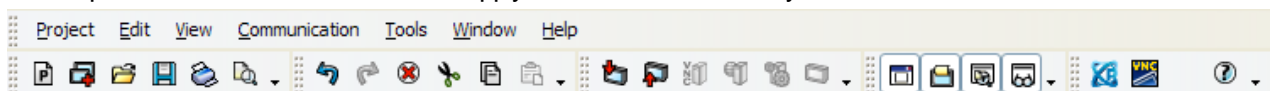
(4) It can be edited easily through Drag& Drop between screens.
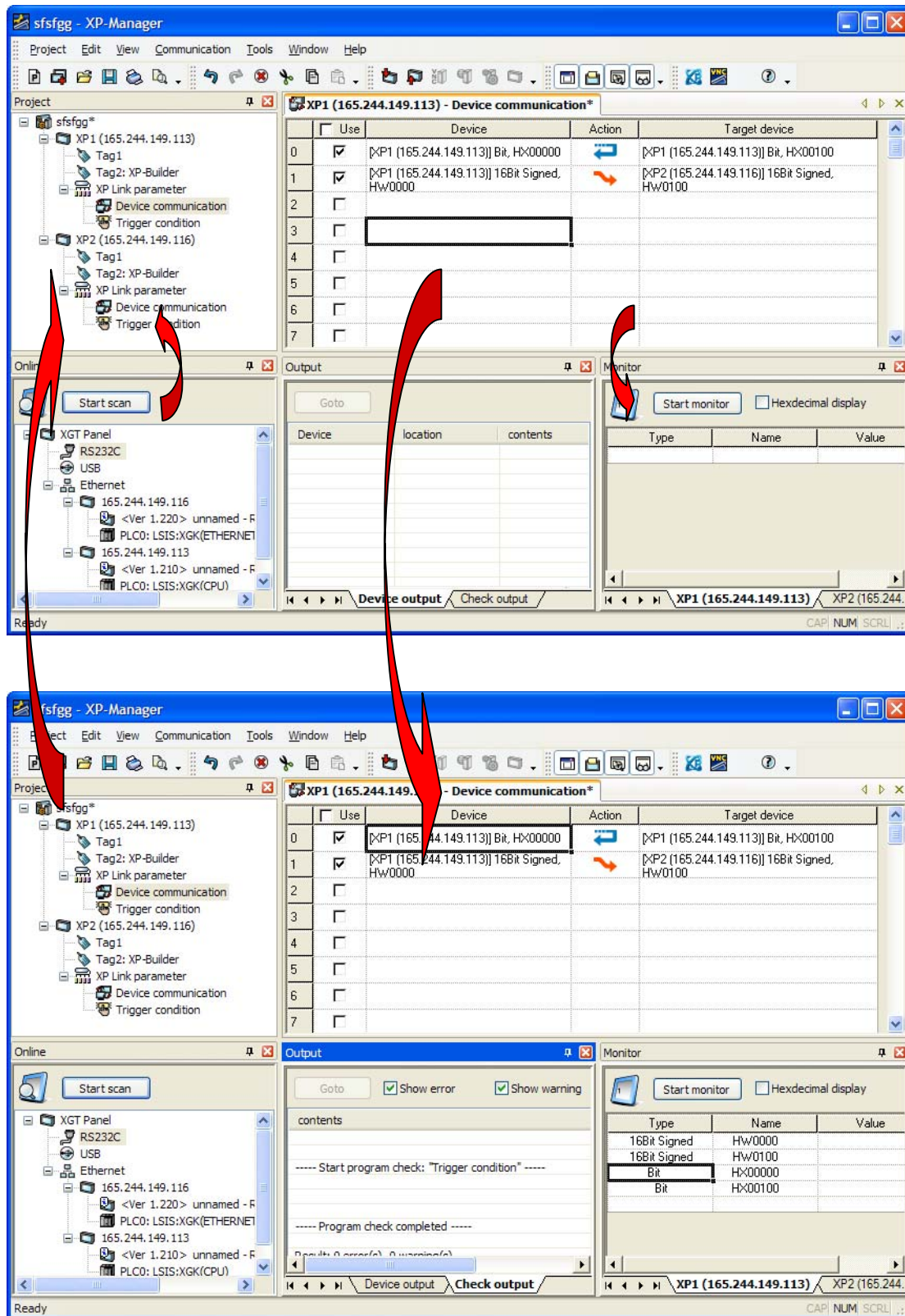
(5) You can freely perform Undo and Redo at edition screen.

(6) You can monitor the device of XGT Panel.
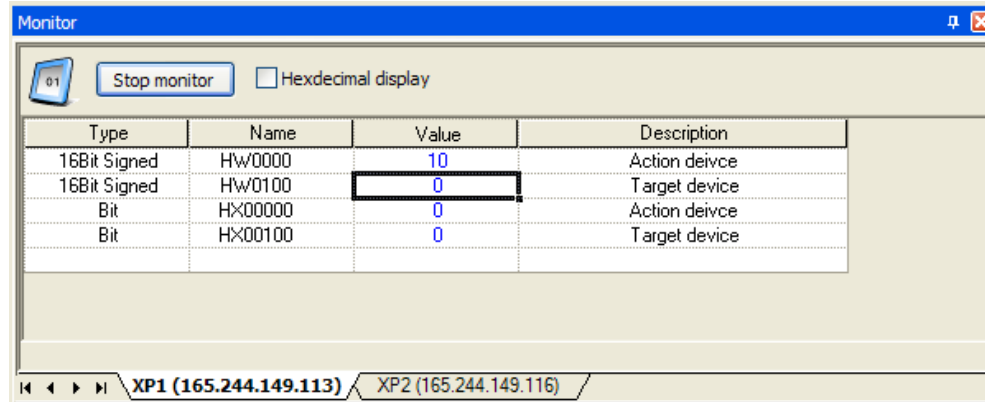
(7) You can monitor the screen of XGT Panel at PC through VNC function.
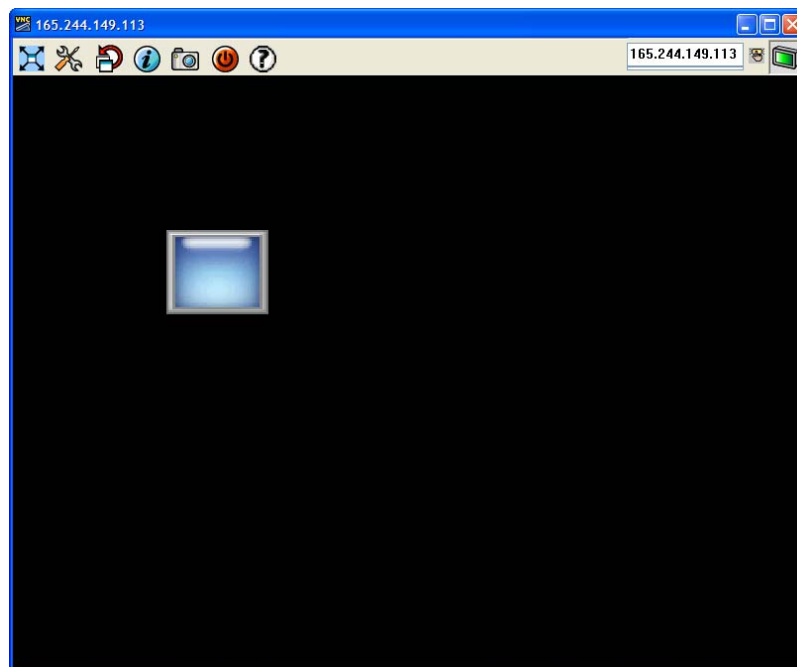
(8) You can download the backup file of XGT Panel through web server.
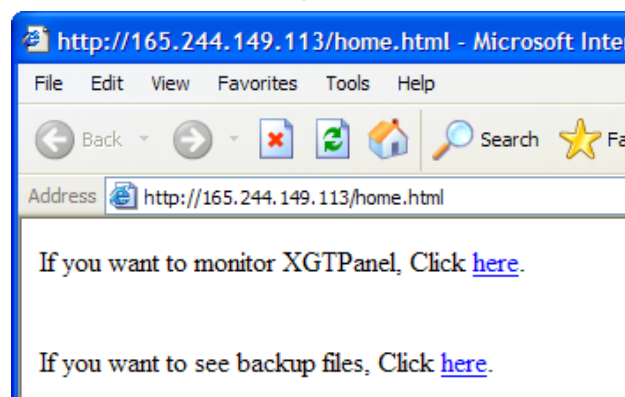
(9) You can monitor the screen of XGT Panel through web-server.
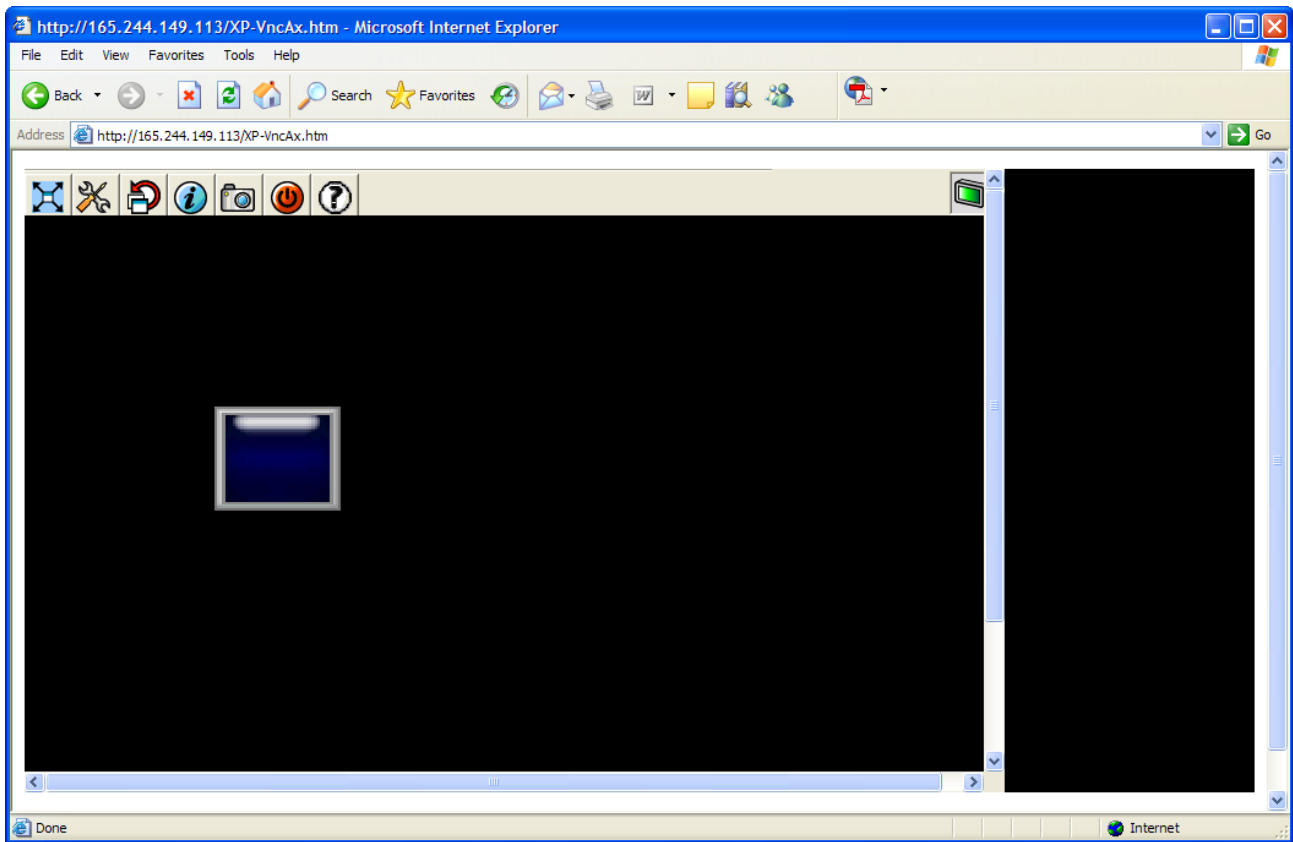
1.2 System Requirements to execute XP-Manager

(1) Personal computer and memory
   The computer with Pentium 4 CPU and 512MB memory or more is needed.
(2) Communication Port
   Ethernet Port is required.
(3) Hard Disk
   The available area of 100MB or more is required.
(4) Mouse
   A mouse to be connected to a computer is needed.
(5) Monitor
   The resolution should be more than 1024 X 768.
(6) Computer Operation System
   It can be executed at Windows 2000 version or more.

1.3 XP-Manager Installation

[Installation Procedures]
(1) Execute the installation file.

(2) Select the language to be installed.

(3) Installation Wizard prepare for installation as below.
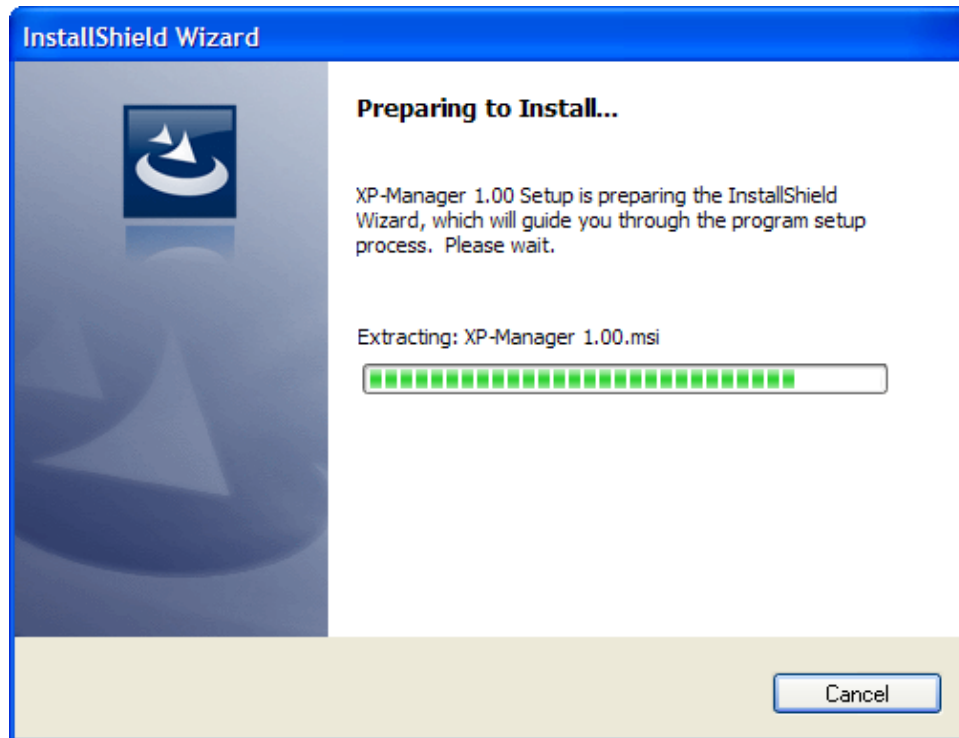
(4) Starting XP-Manager installation will be displayed as below. Press [Next] button to continue installation.
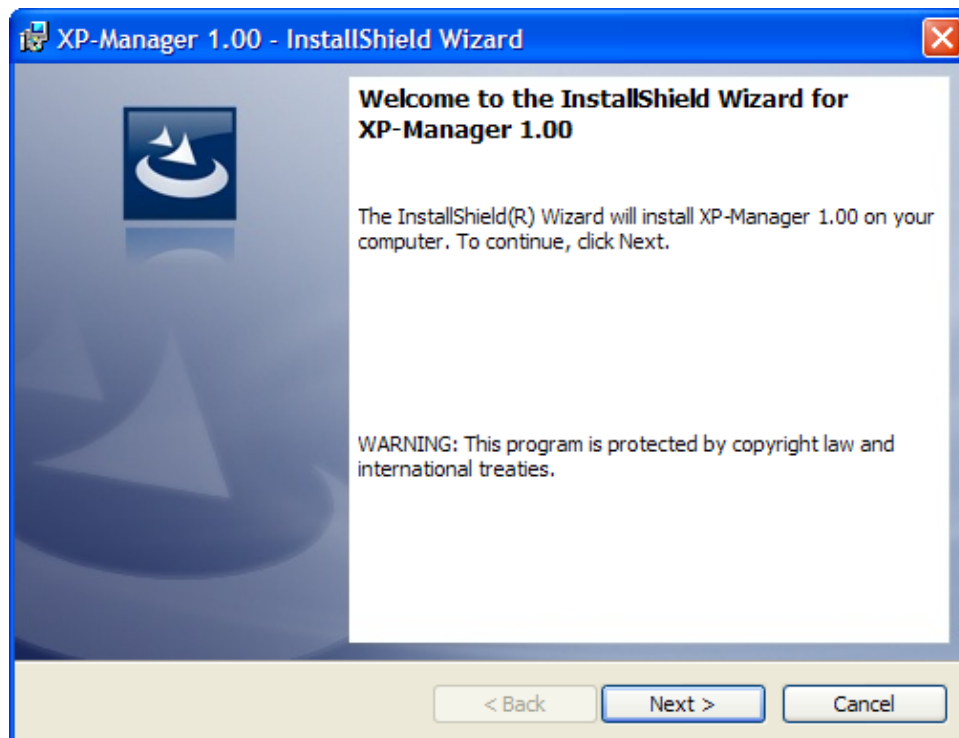
(5) After inputting user information, press Next button.
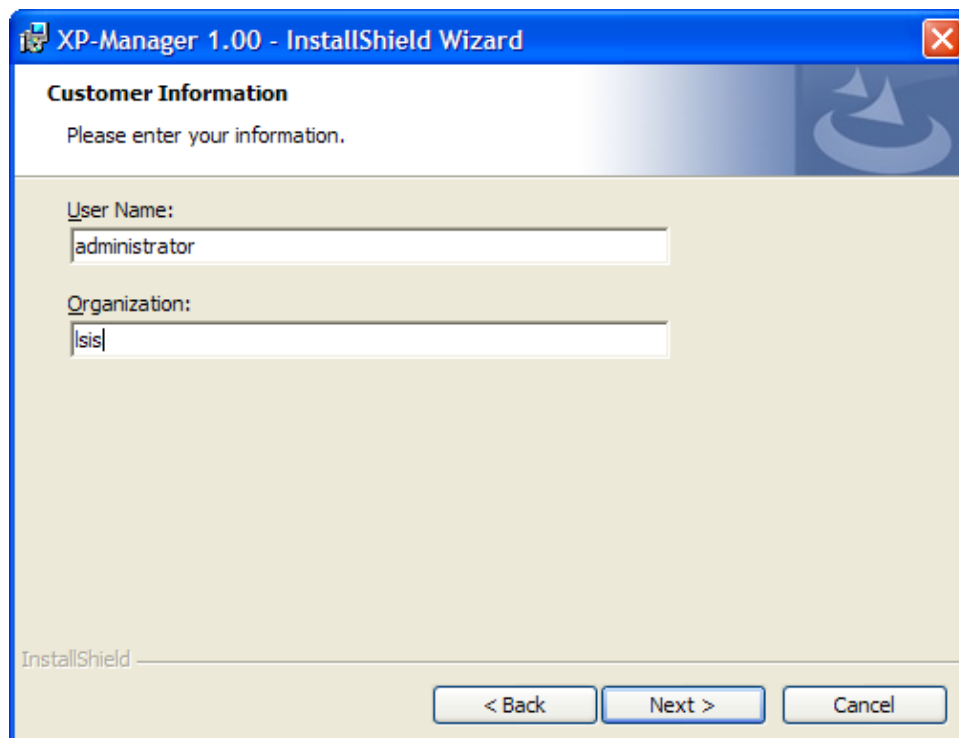
(6) Designate the position of folder where XP-Manager will be installed. XP-Manager requires the space of approximately 100MB for installation so check the installation folder has enough space. If installation space is not enough, next process will not proceed with a warning message. After selecting the folder, press [Next] button.
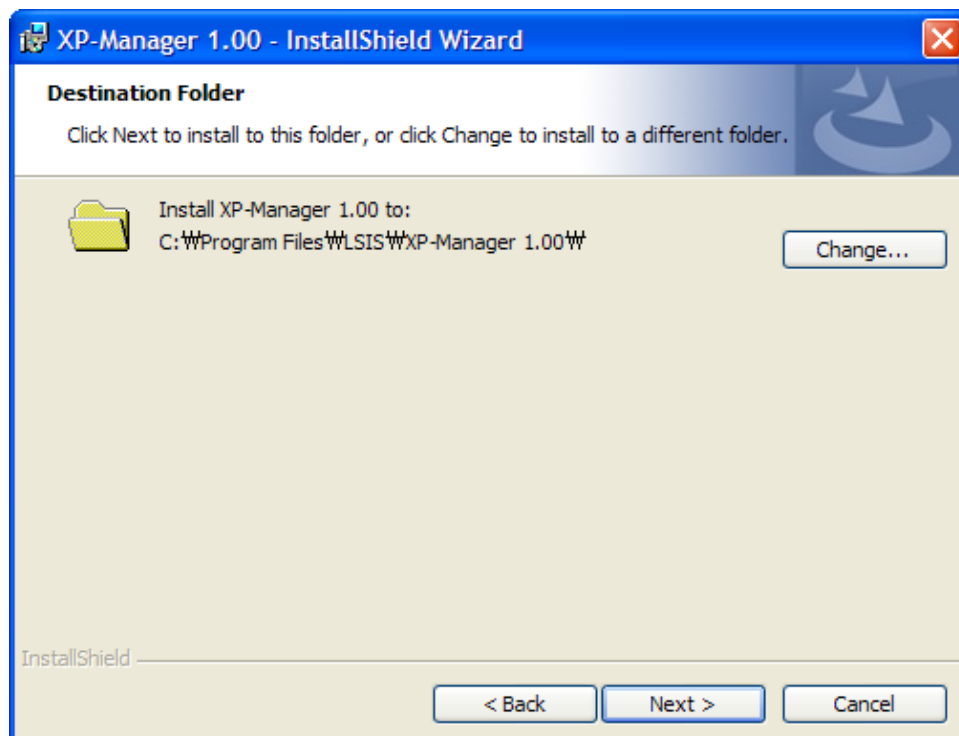
(7) It is ready to be installed. If you press Installation button, installation process will start.
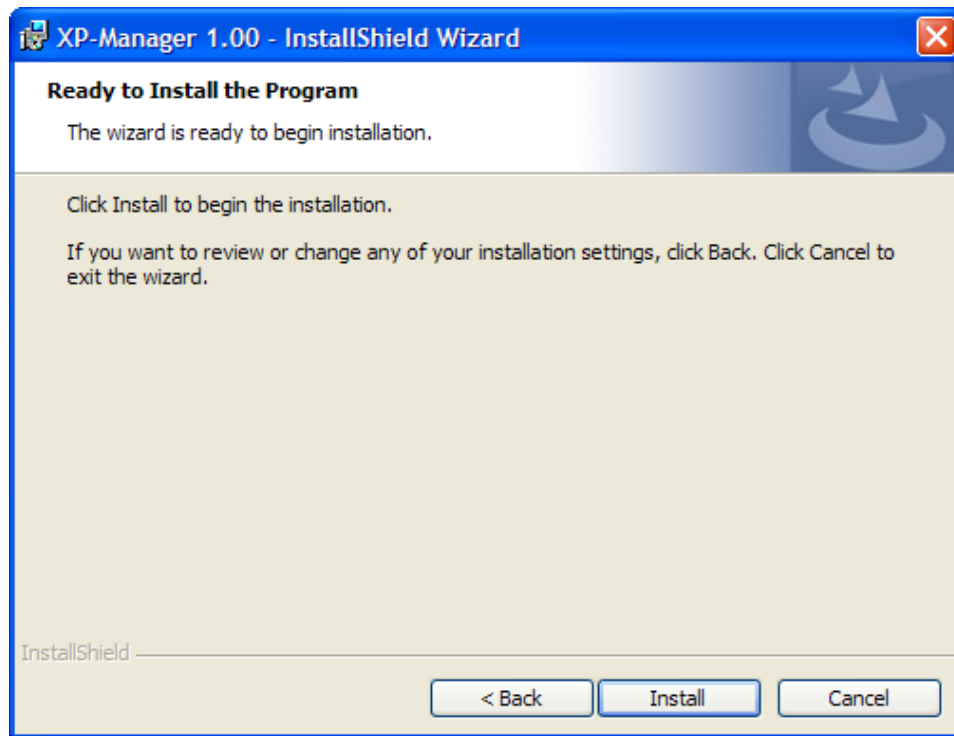
(8)It shows the progress status of installation.
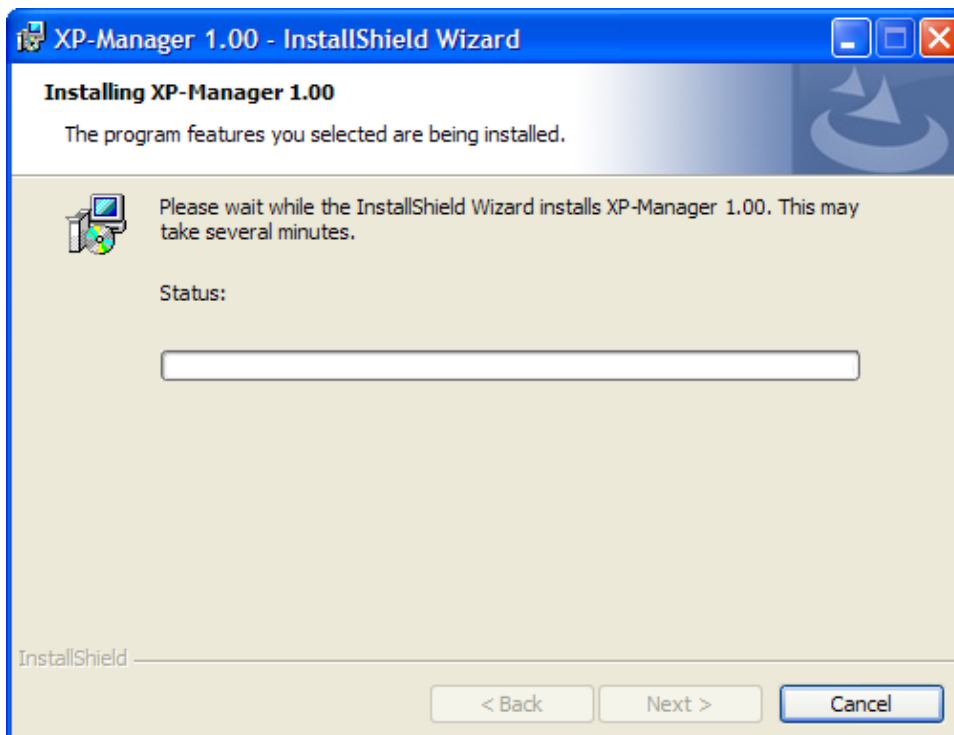
(9) If you press Finish, installation process will be terminated normally.
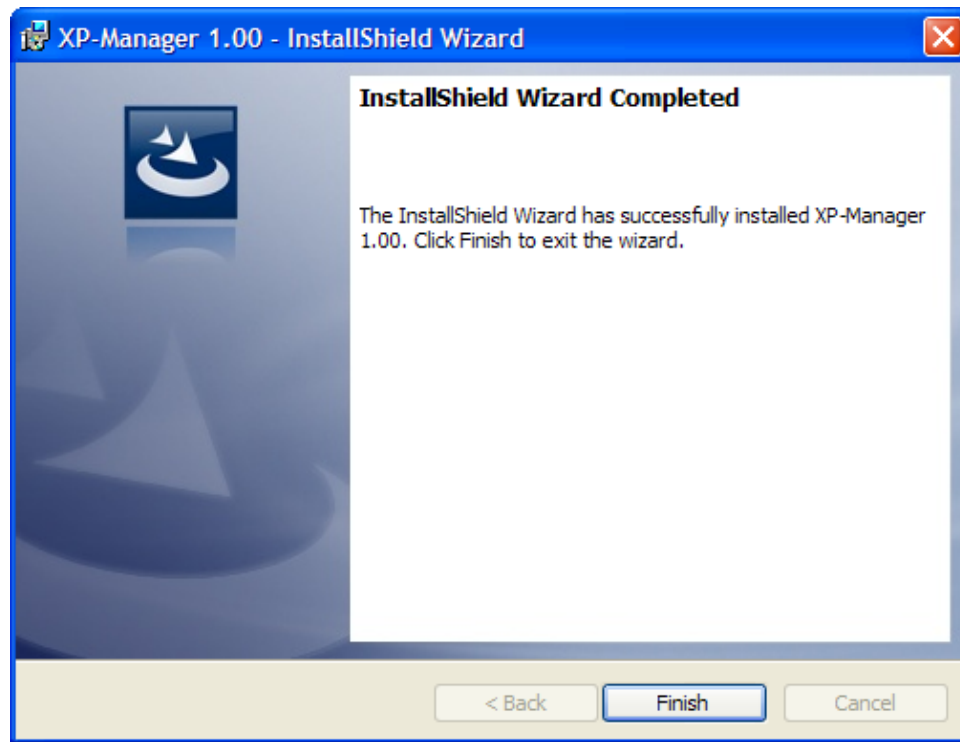
(10) You can work by executing XP-Manager at [Start] menu or executing Shortcut icon of home screen.
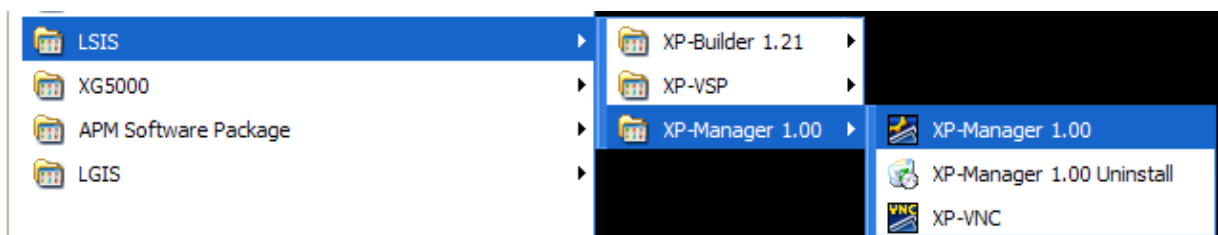
[Deletion Procedures]
  (1) To delete XP-Manager, select [XP-Manager Deletion] at [Start Menu] or apply [Add/Remove Programs] function of control board.

  (2) Select Yes.
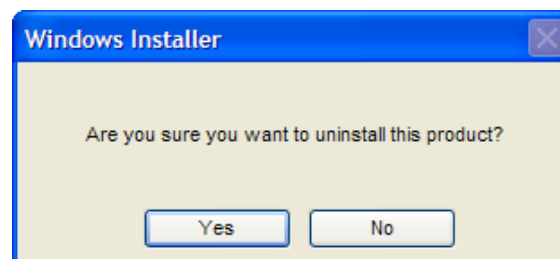
(3) The information of installed programs is collected and program deletion will be in progress.
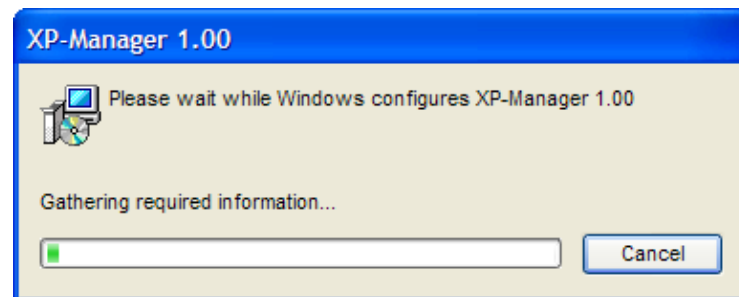
Notice

(1)   In case that XP-Manager is in progress, you can not delete it. Then, after terminating XP-Manager first, delete it.
(2)   For installation under Windows Vista and Windows 7, note the below.

  * You are required to log in as an Administrator to install XP-Builder.
  * After installation, set up the security procedures as below.

   1) Click Start->Settings and execute Control Panel.
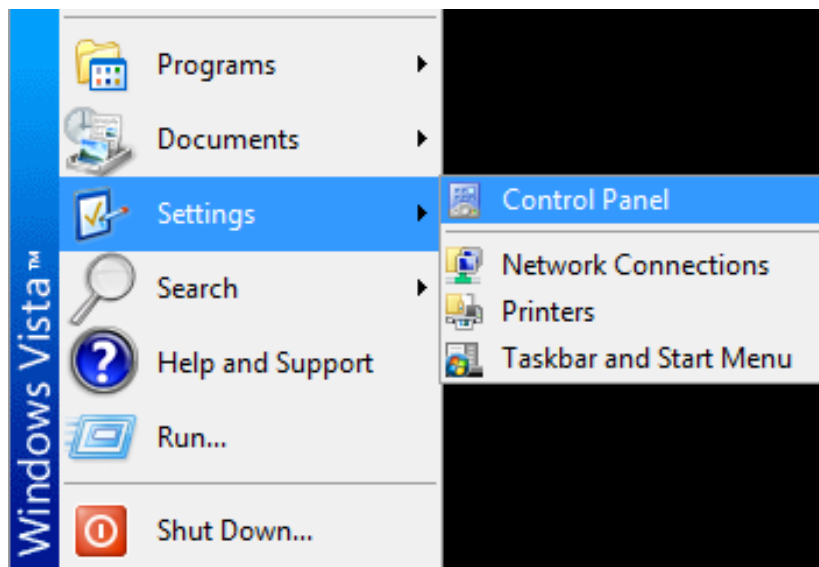
   2) Click Control Panel->User Accounts.
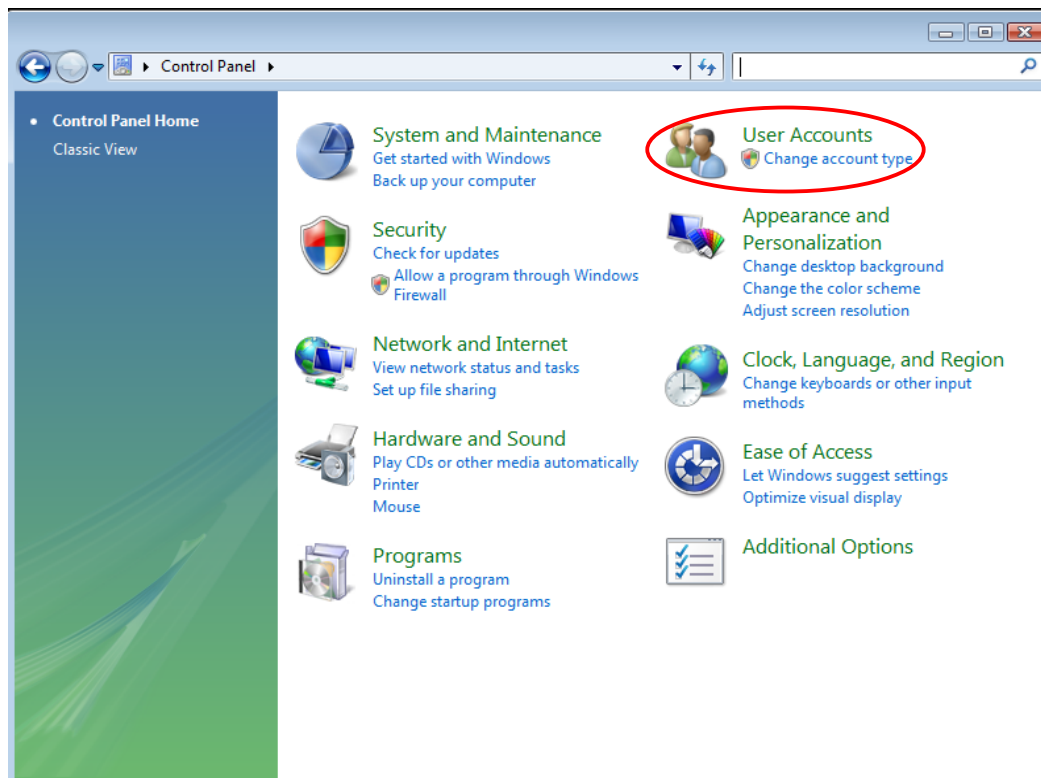
3) Click the related icon at a user accounts setting screen.
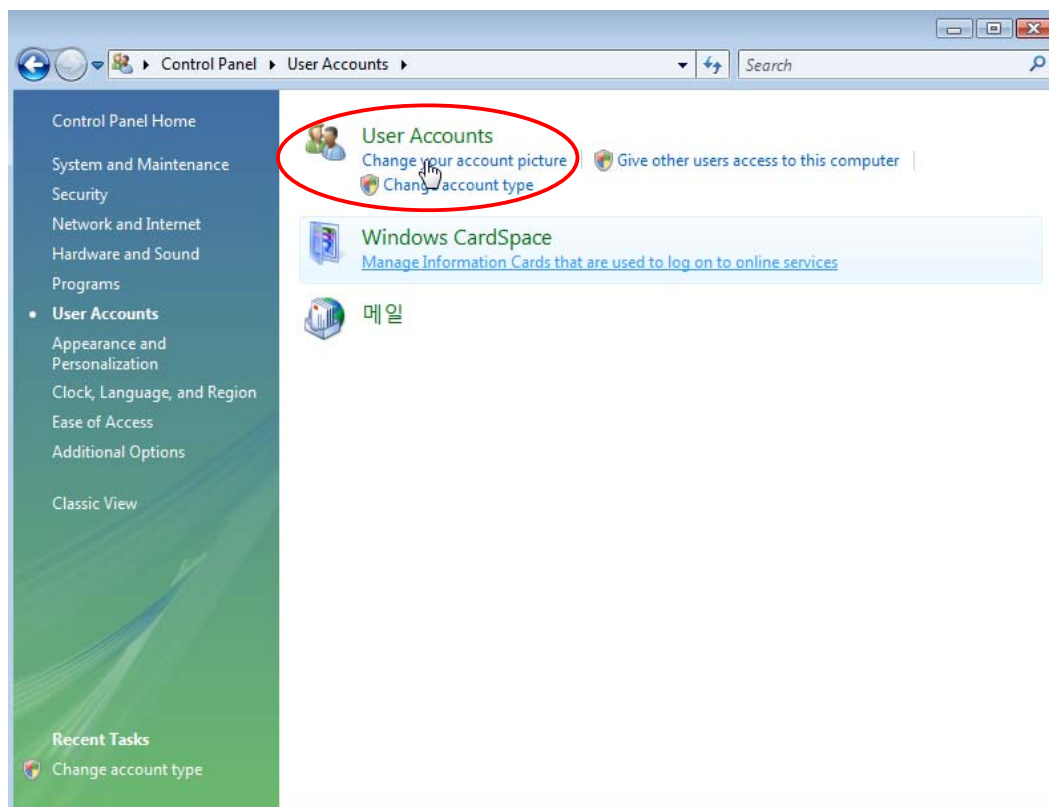
4) Click Turn User Account Control on or off at User Administrator at User Account Setup screen.
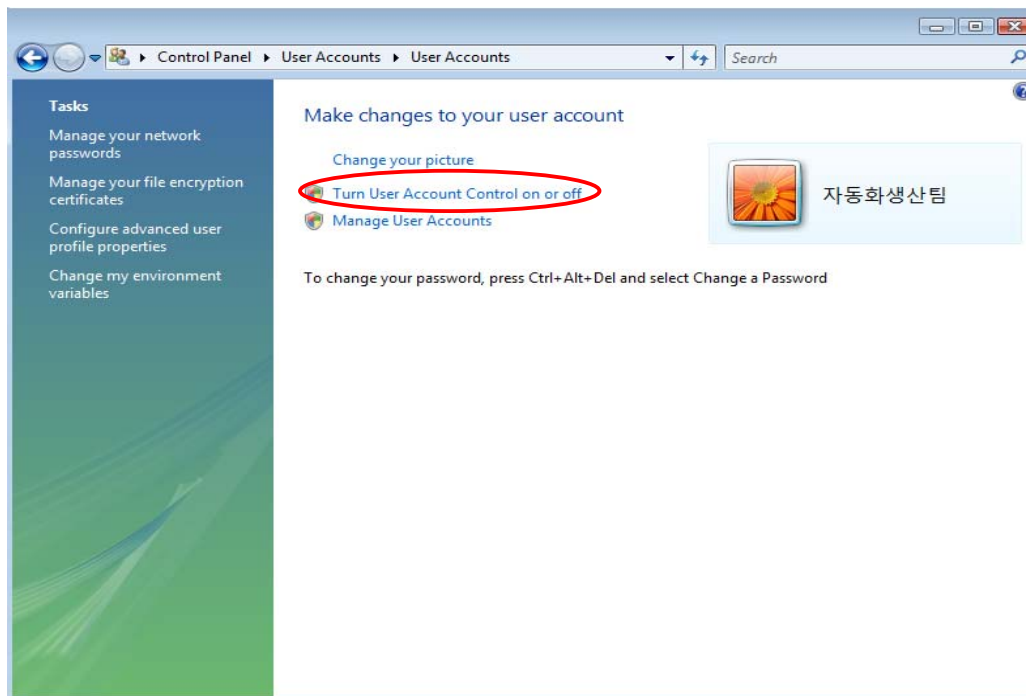
5) Disable [Use user Account Control to help protect your computer].
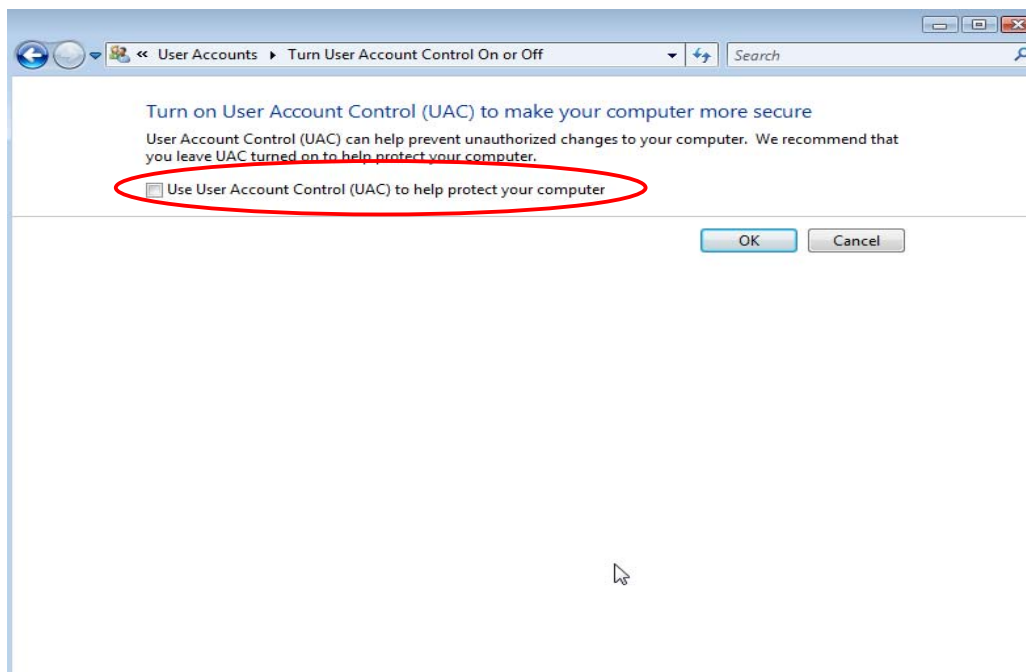
Chap.2 XP-Manager Outline and Practice

2.1 XP-Manager Outline

2.1.1 Definition of XP-Manager

It is the software for edition, download, monitoring to realize data communication between XGT Panels through XP Link with online control function.

2.1.2 The interrelation of XP-Manager and XP-Builder

XP-Builder is the software to draw the screen of XGT Panel. It can be saved as a project file (XPD file) or you can also download the project to XGT Panel. XP-Manager opens the project file (XPD file) made by XP-Builder and collects PLC Driver, Tag information to apply them.

(a) Using the XPD file of a computer
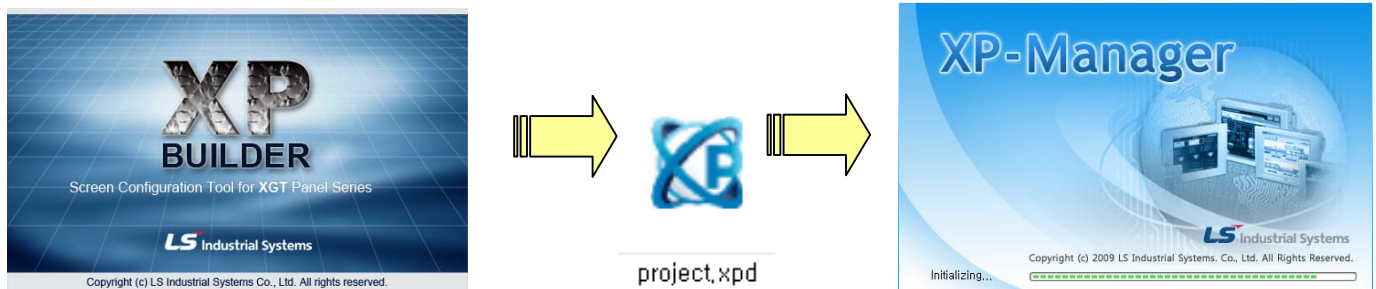
(b) Using the uploaded project of XGT Panel
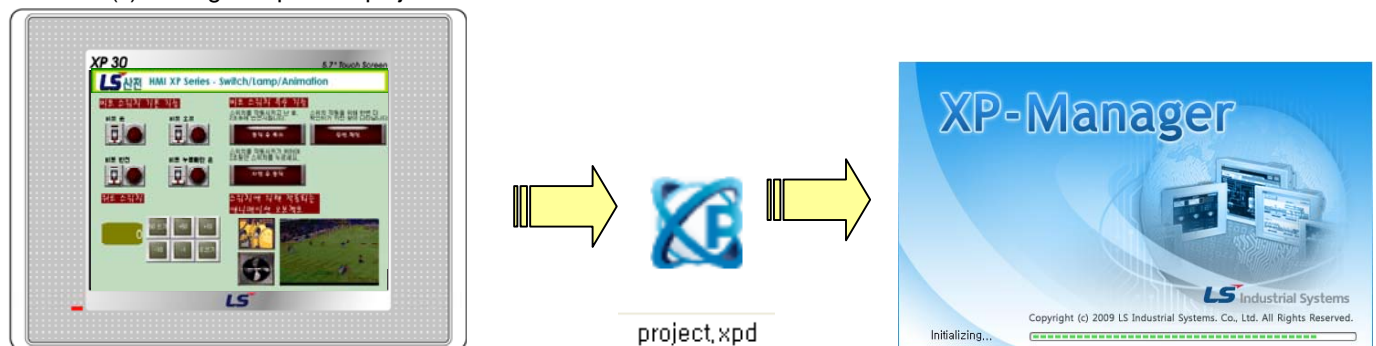
Notice

(1) The project file (XPD file) made by XP-Builder version 1.21 or more is available,

(2) It is available at XGT Panel version 1.21 or more.

(3) For details, refer to Chap. 4.1.

2.2 Practice

A user can briefly learn how to use XP-Manager through the below practice processes.

2.2.1 Adding Node

[Procedures]
(a) Select [Start Menu]-[Program]-[LSIS]-[XP-Manager] and execute XP-Manager.
(b) Turn on the power of XGT Panel.
(c) Download "LSIS:XGK(CPU)"project through XP-Builder and make sure to activate [Include upload project file option] to check the project information from XP-Manager.
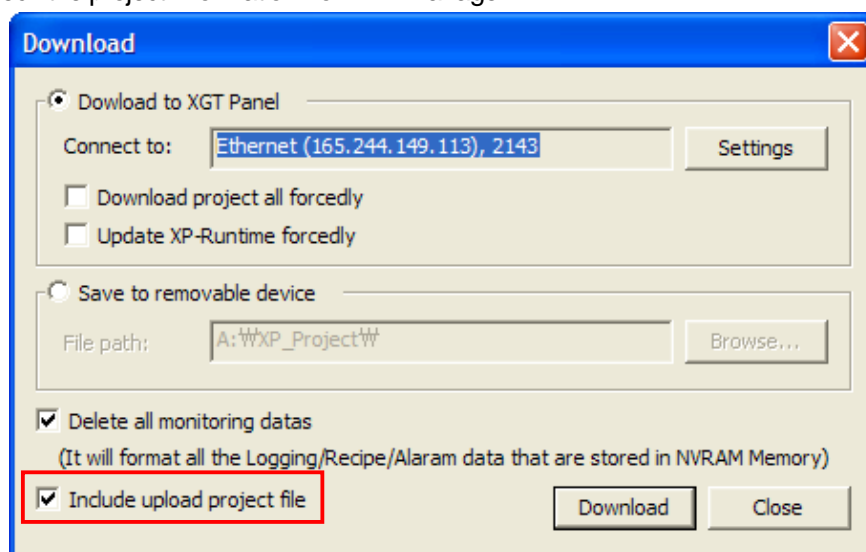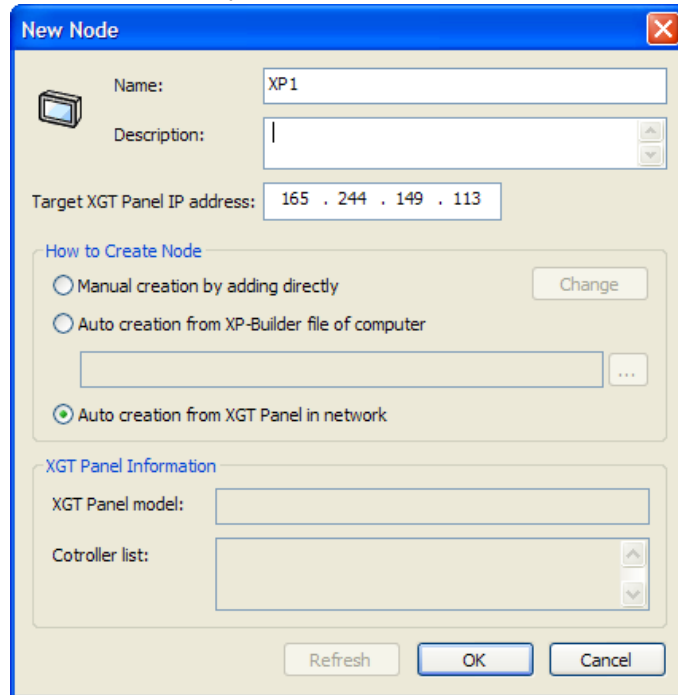
(c)   Check whether there is the target XGT Panel at online screen of XP-Manager.
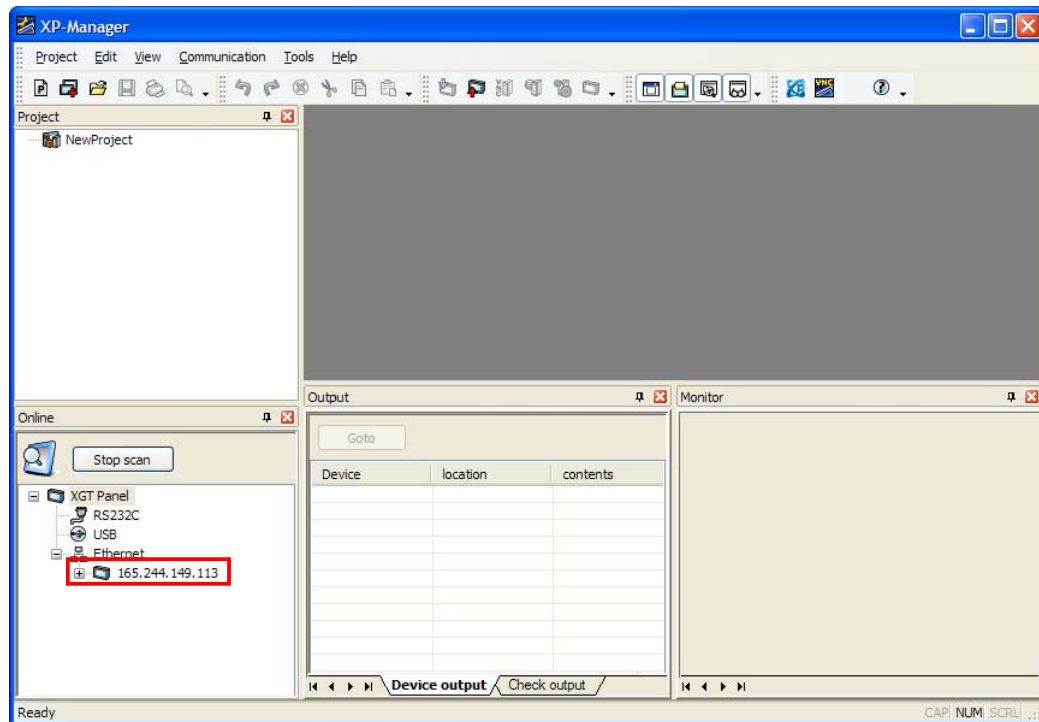
(d) Drag & Drop the target XGT Panel to a project screen.
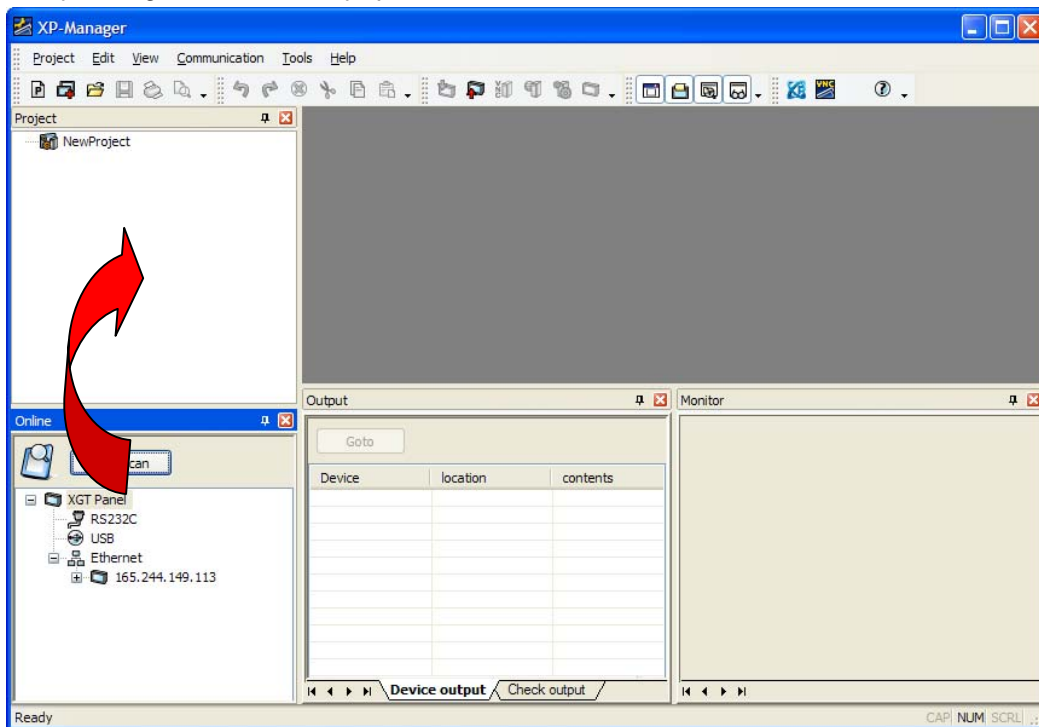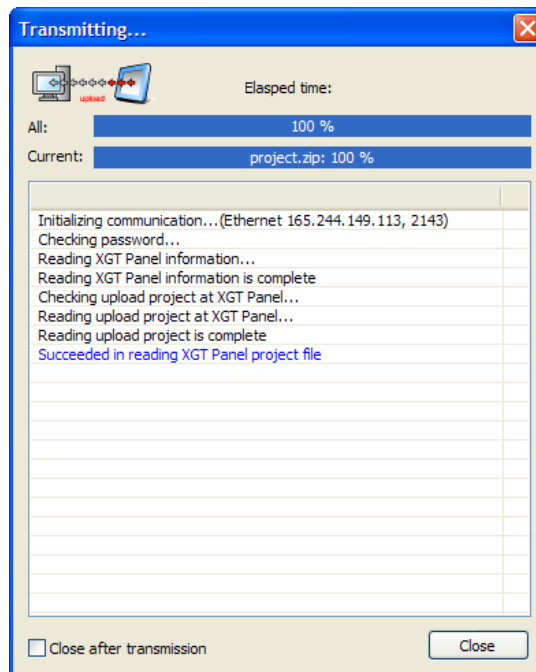
(e)   If the dialog box to add a new node is shown, press OK button.

(f)   Read the project file (XPD file) through communication.

Notice
(1)   In case that the target XGT Panel is less than version 1.21, you can not upload a project file.
(2)   If there is no uploaded project at the target XGT Panel, upload is not available.
(3)   For details, refer to the Chap. 4.1.
(4)   USB cable is scheduled to be provided afterward.

(g) If reading process is normally over, node will be added.
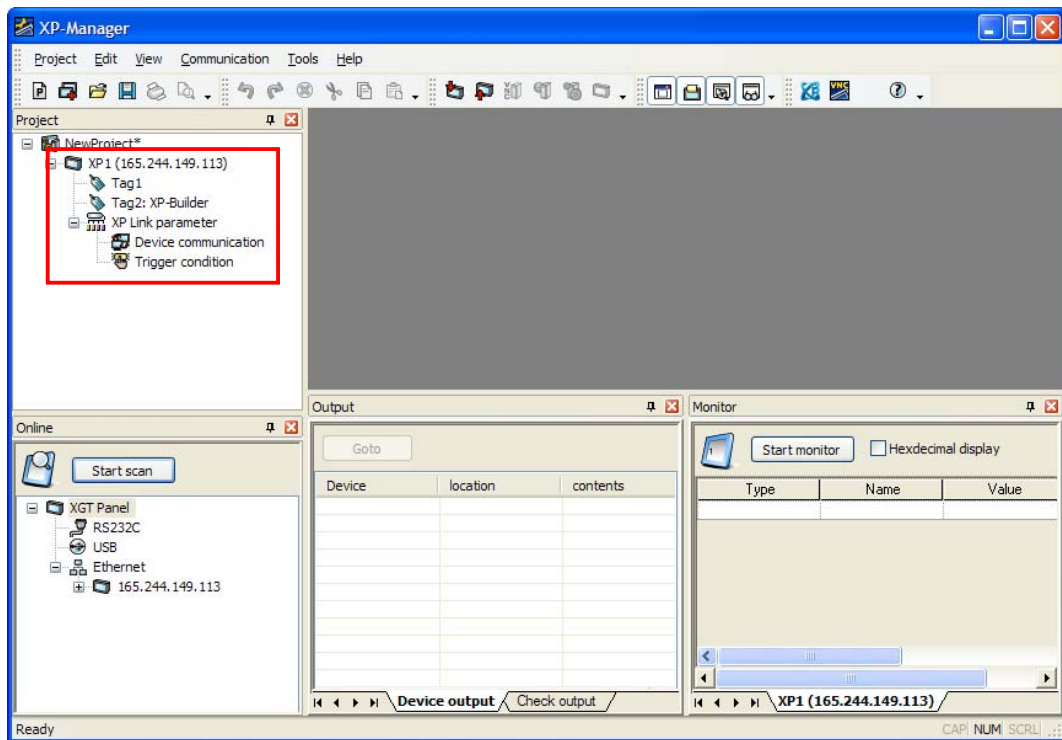
2.2.2 Editing Device Communication

You are required to make the below parameters for device communication between XGT Panels through XP Link .

[Procedures]

(a) Add two or more nodes to a project.
(b) Double-click Device Communication at a project screen to open it.
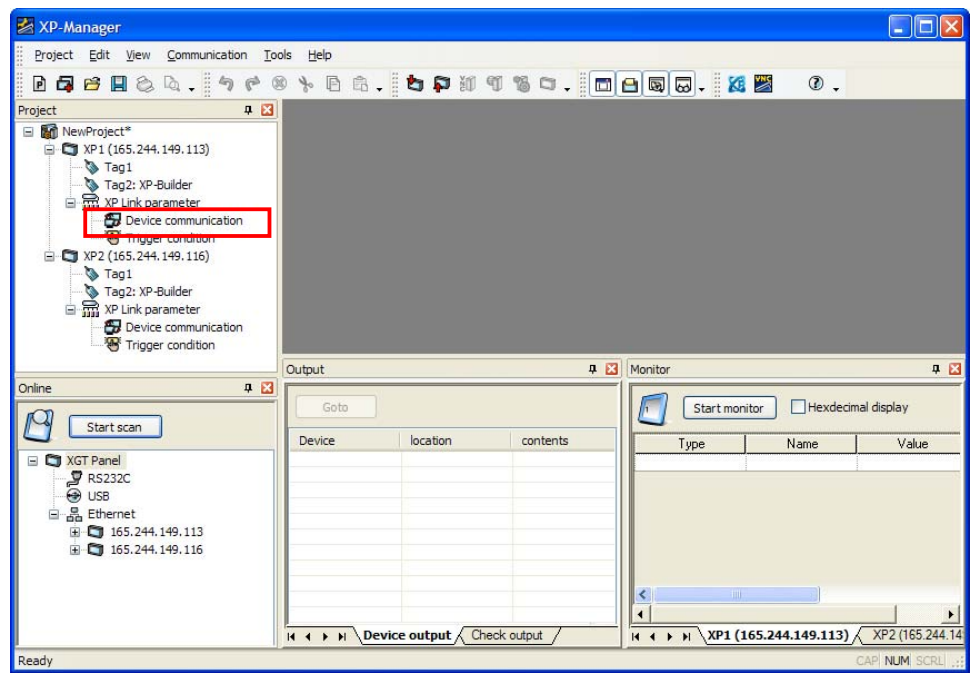
(c) Double-click the column to be edited.
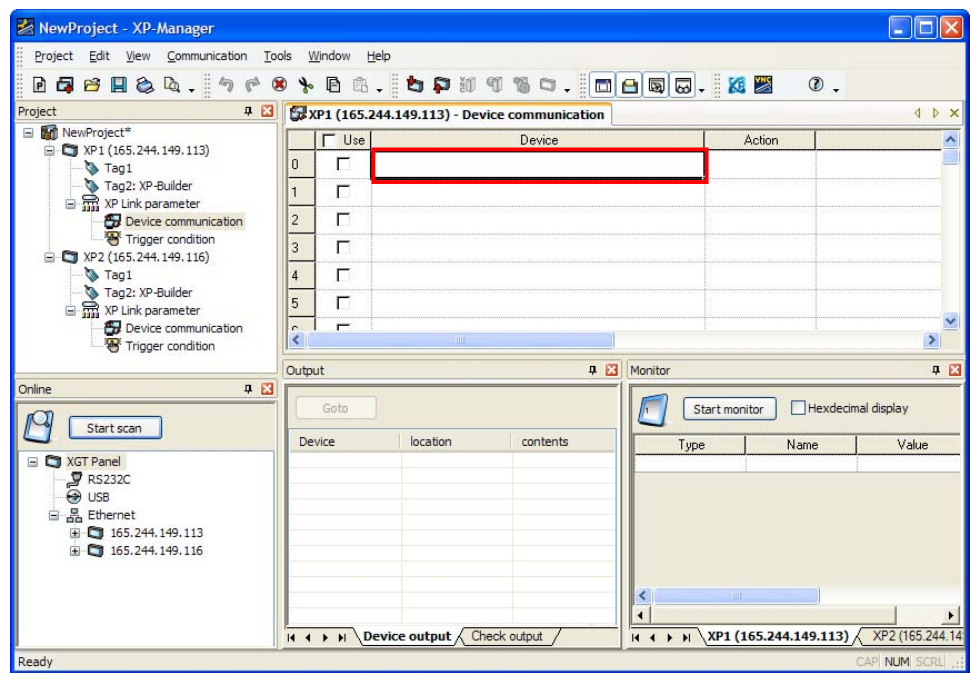
(d) After selecting reading or writing mode depending on required operation, you can edit operation device and object device.
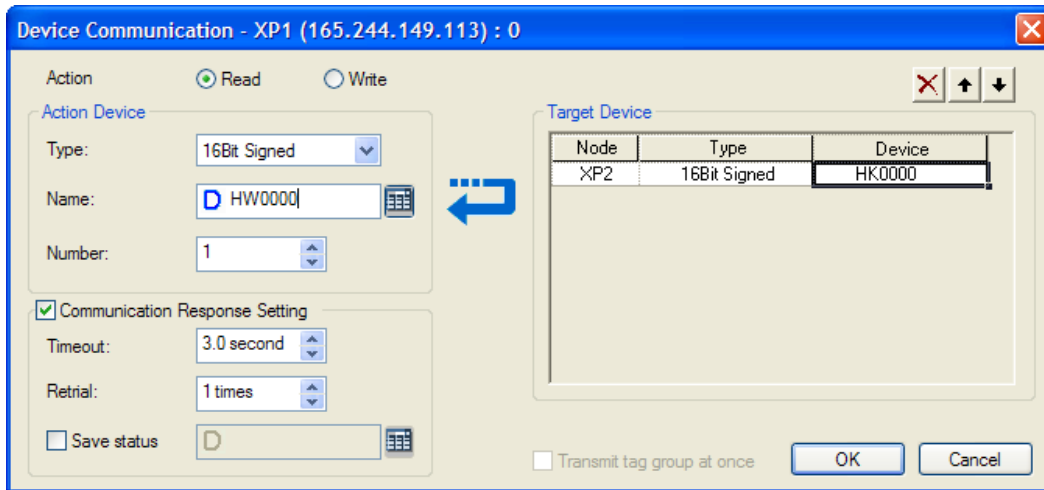
(e) Edit the device communication as you may need.
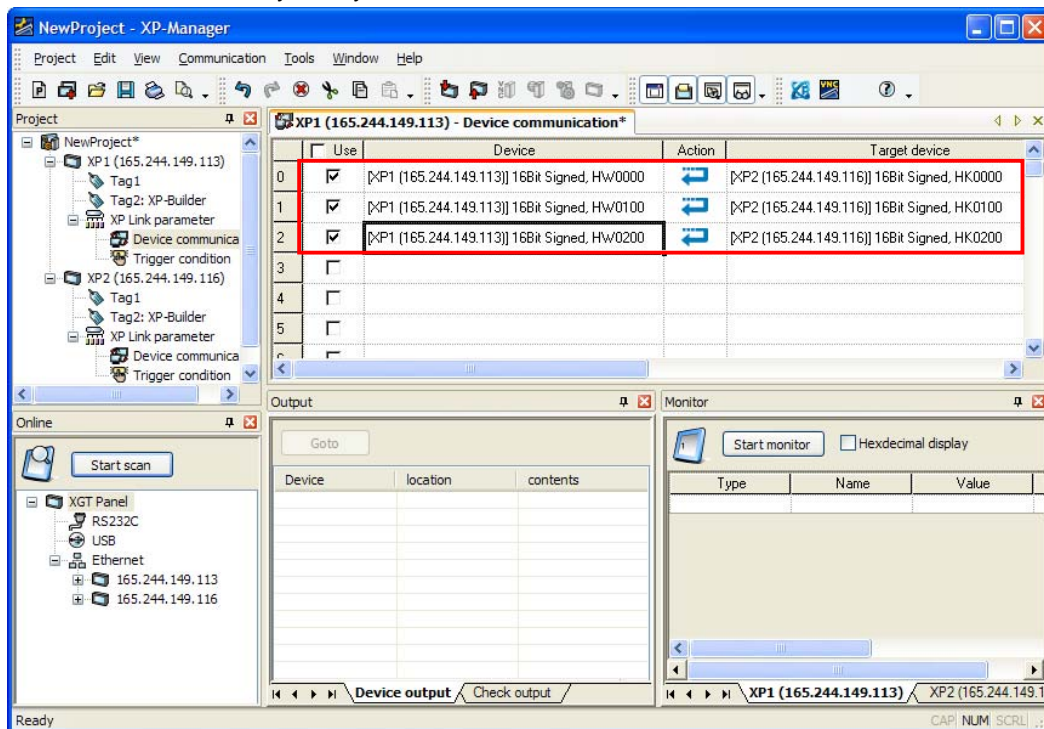
2.2.3 Editing Trigger Condition

You can edit trigger condition when specific condition is fulfilled or in order to start an event at the proper time.

[Procedures]
(a) Double-click trigger condition at a project screen.
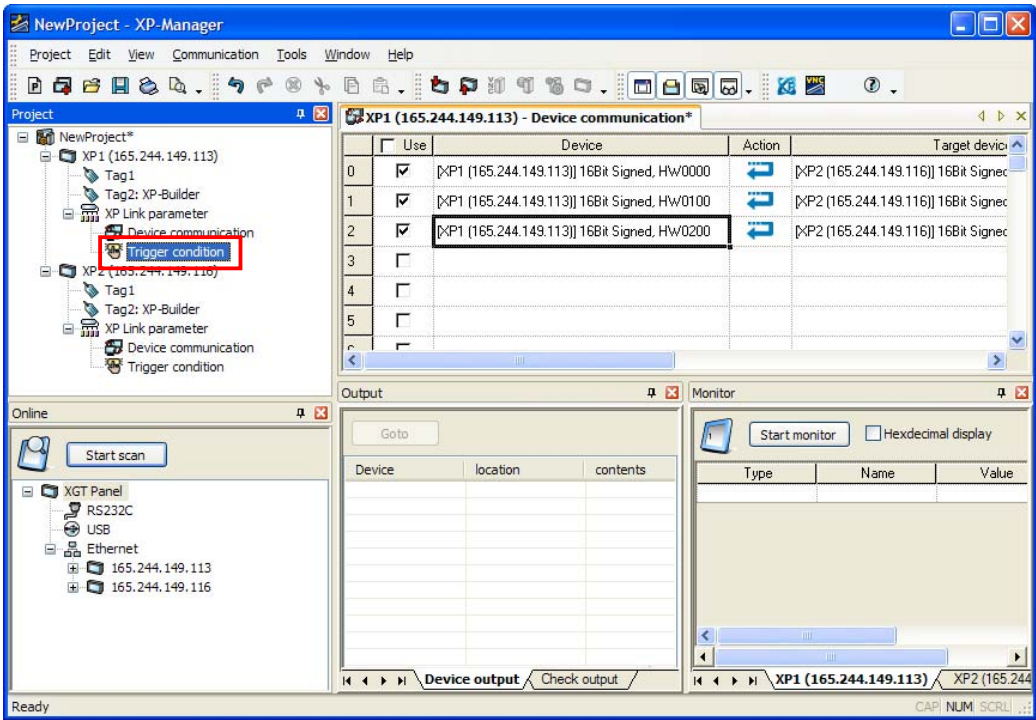
(b) Double-click the column to be edited.
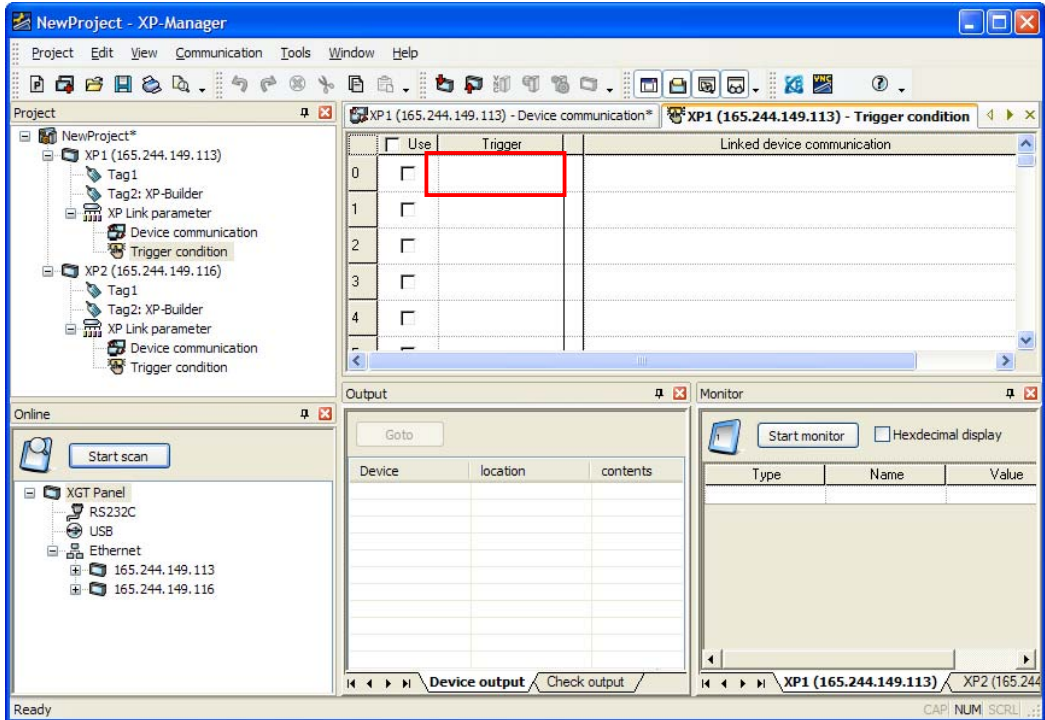
(c)After editing bit device, word device, time trigger, system trigger depending on the required conditions, edit them.
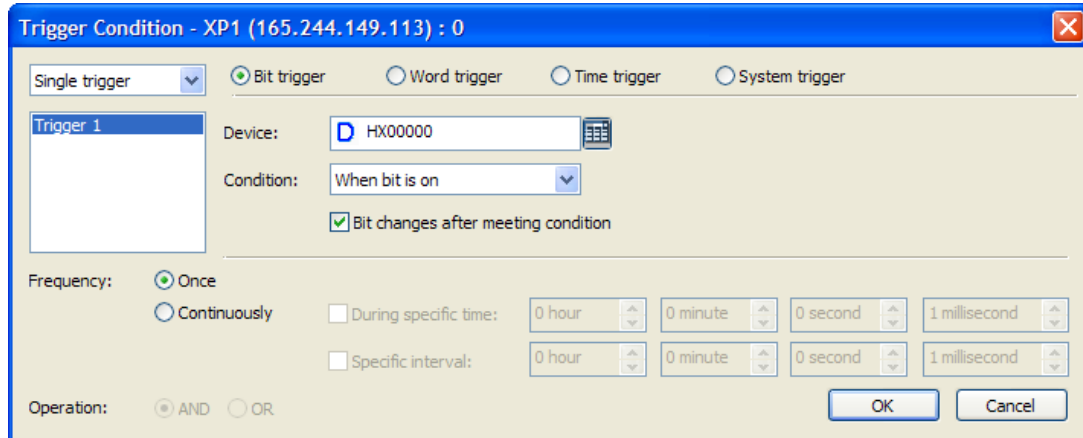
(d) To connect device communication to trigger, double-click the below position.
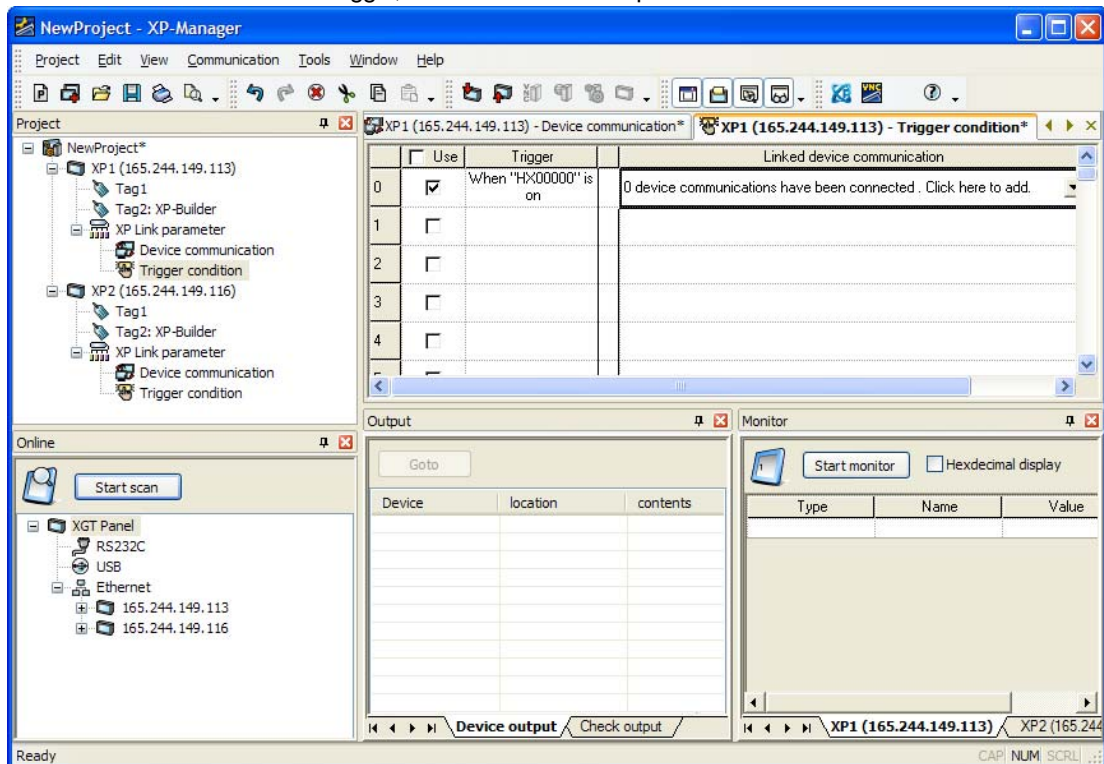
(e) Double-click the device communication to be connected from the list.
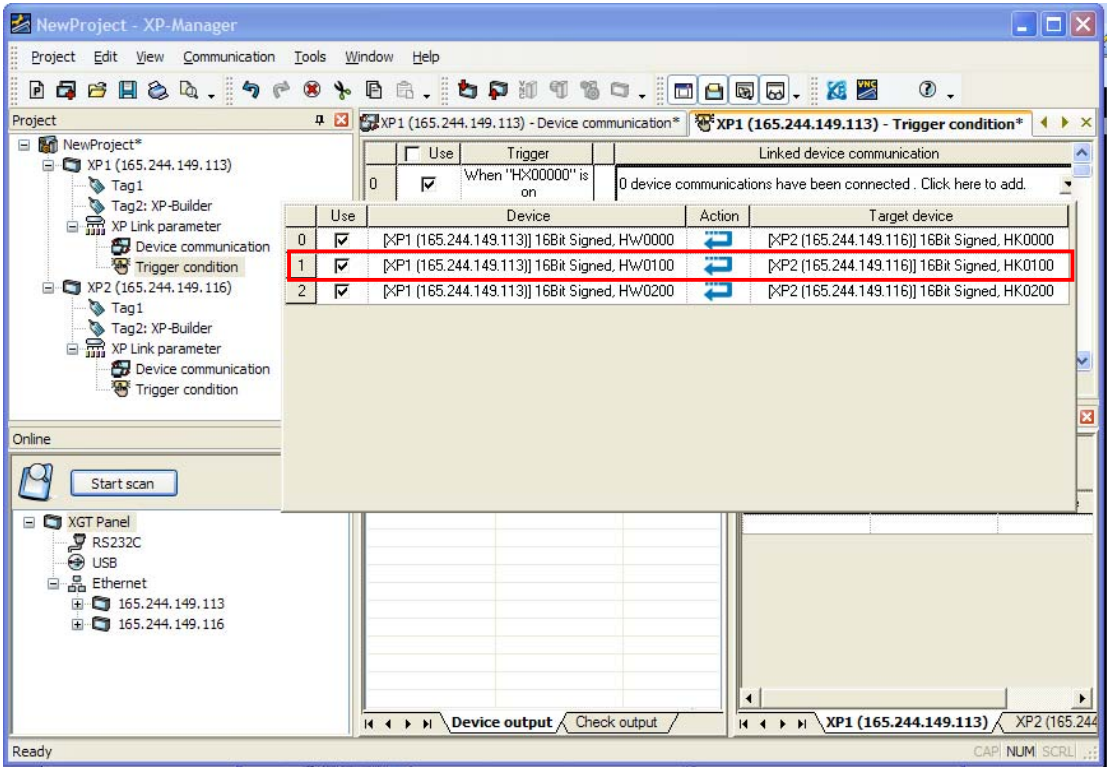
(f) Edit the trigger conditions as you may need and connect device communication.
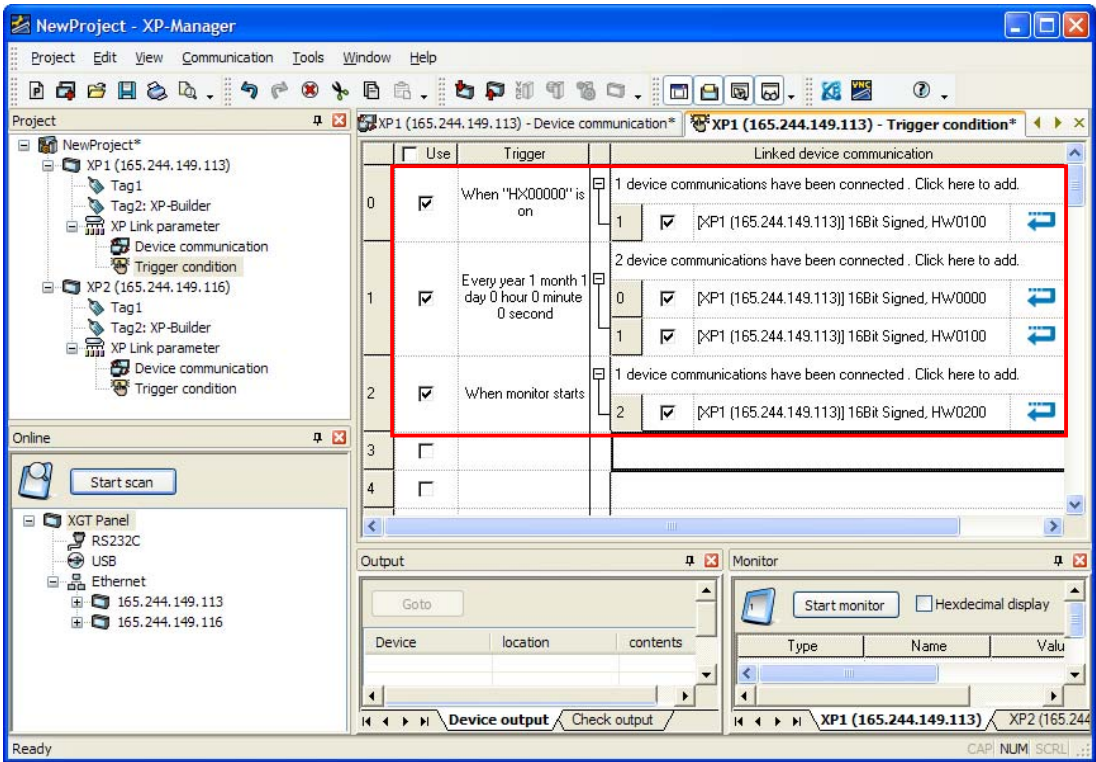
2.2.4 Downloading XP Link Parameter

You need to download parameters for data communication between XGT Panels.

[Procedures]
(a)   Save the project.
(b)   Select [Communication]-[Download XP-Link Parameter] menu.
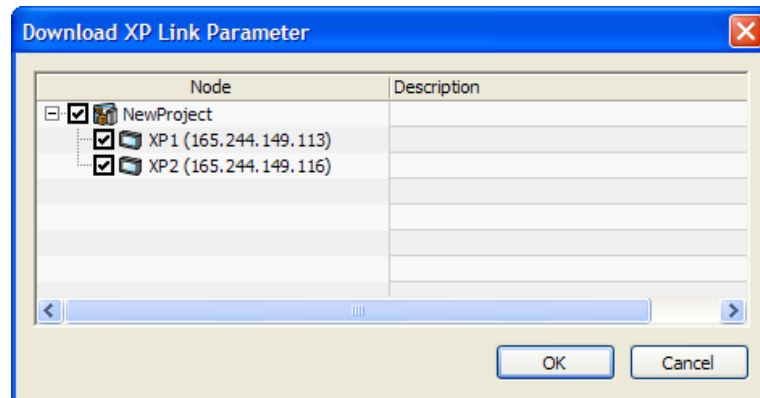
(c)   After checking the target object, download it.
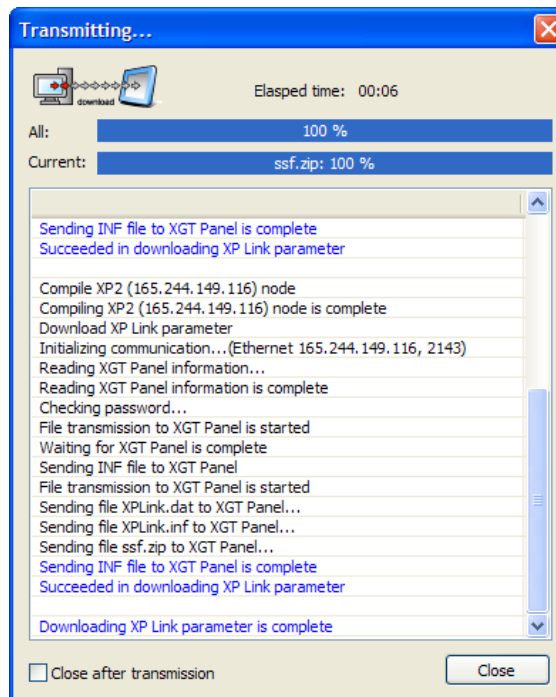
(d)　If download process is completed, press XGT Panel Start button for monitoring.
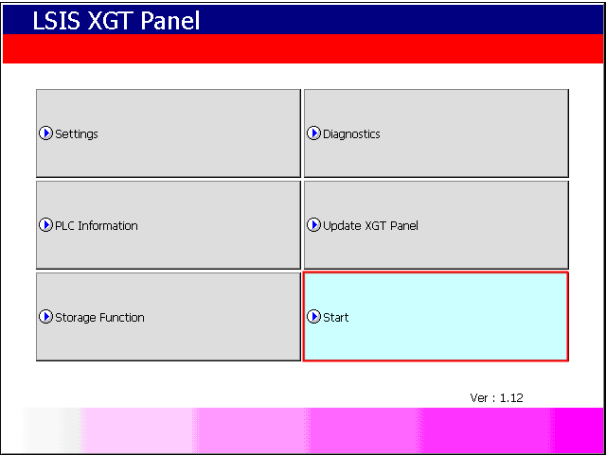
Check if device communication works smoothly and device values are properly displayed based on established trigger conditions.

2.2.5 Monitoring

To check if device communication and trigger condition work properly, you may need a remote computer. You can easily check the status through monitoring function.

[Procedures]

(a) Save the project.
(b) After selecting the items to be monitored at device communication screen or trigger condition screen, Drag & Drop them to a monitoring screen.
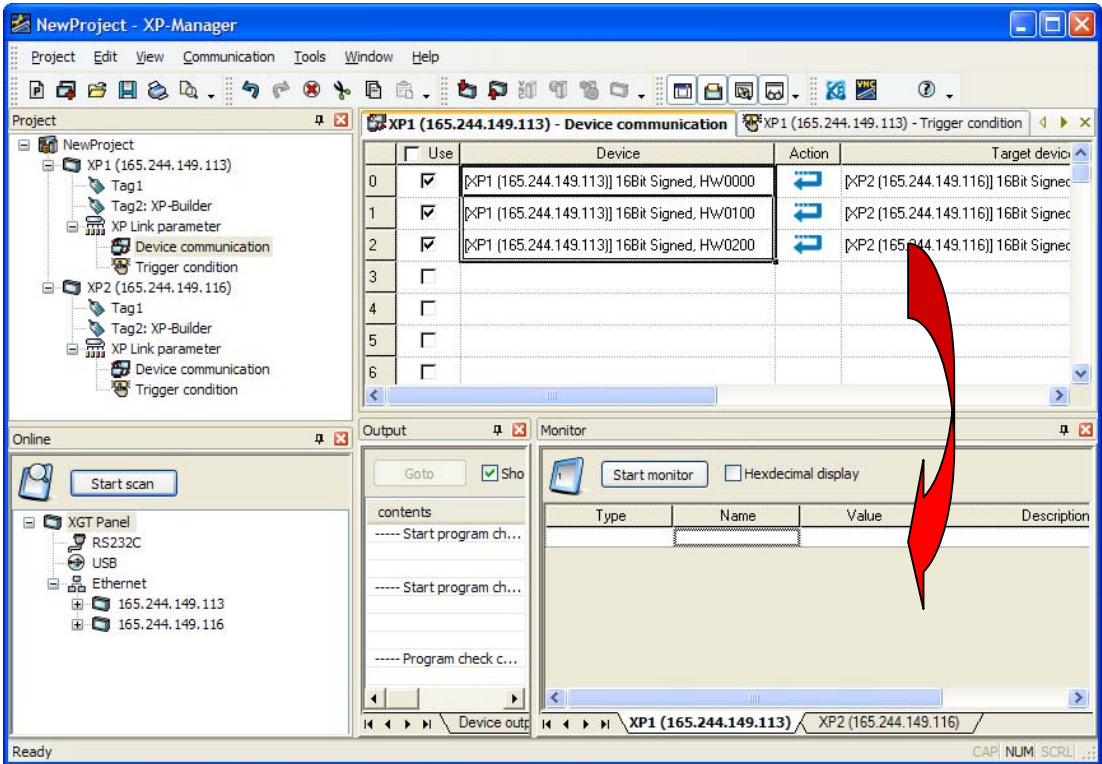
(c)   Press Start Monitoring button and monitor the status.
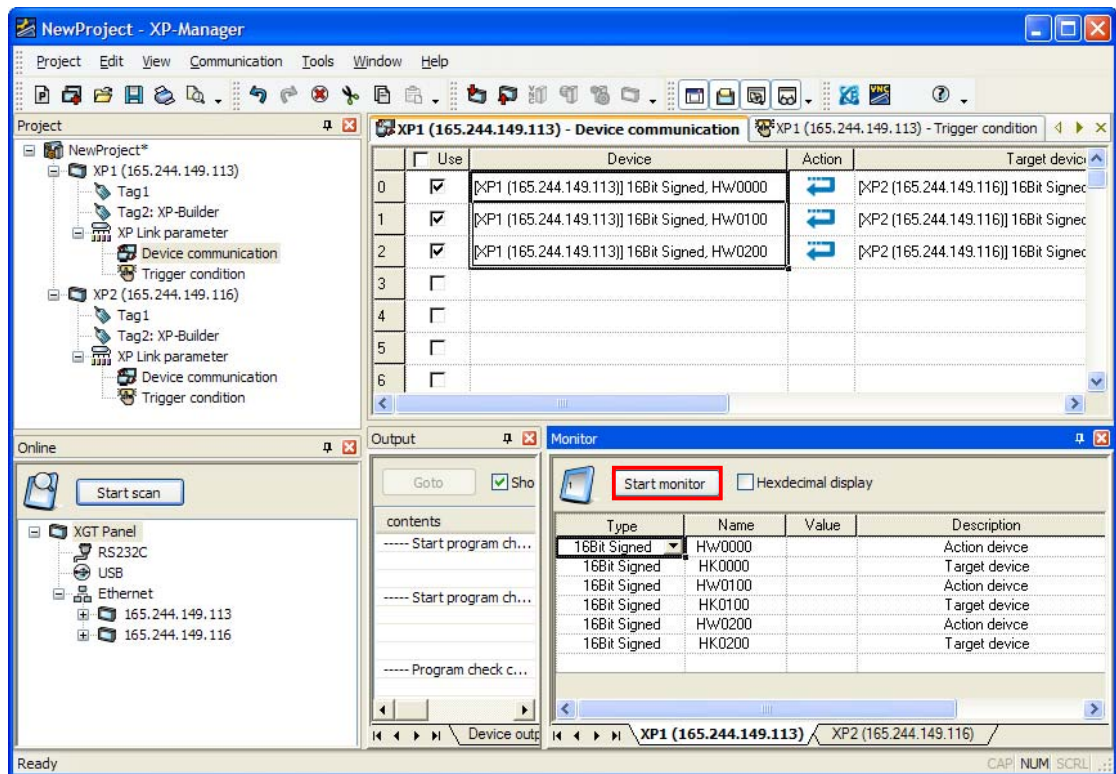
(d)   If communication works properly, the registered device value will be displayed.

Notice
(1)   Only when XGT Panel is under monitoring process, XP-Manager can realize the function.
(2)   For details, refer to the Chap. 11.

Chap.3 Composition of XP-Manager

3.1 The Composition of a Screen

The screen of XP-Manager is composed of the below.
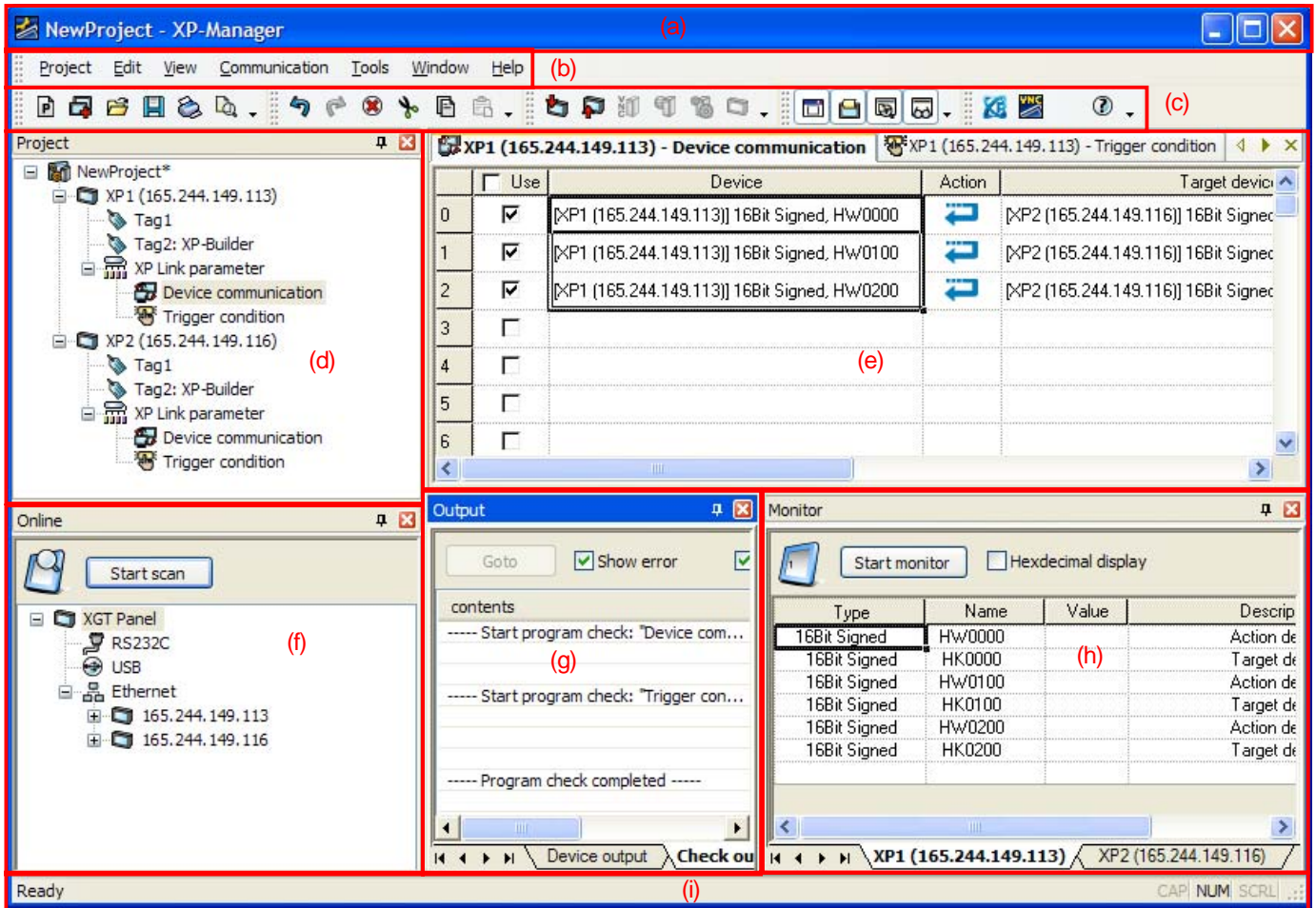
[Screen Description]

Item	Description
Title Bar(a)	The tile is displayed as project name+ XP-Manager at Windows screen.
Menu Bar(b)	It is the basic menu for the program.
Too Bar(c)	The button is to execute shortcut menu.
Project Screen(d)	It displays the components of a project. For edition, double-click the item.
Edition Screen(e)	There are the screens for tag, device communication, trigger condition.
Online Screen(f)	It detects the XGT Panel of network.
Output Screen(g)	It displays the result of program inspection or device search.
Monitor Screen(h)	It can monitor the device of XGT Panel.
Status Bar(i)	It displays the description of selected menu or operation.

3.2 The Composition of Menu

The description on XP-Manager menu will be provided. In the case of the menu where hot key is displayed, you can just press it to execute command.

(1) Project
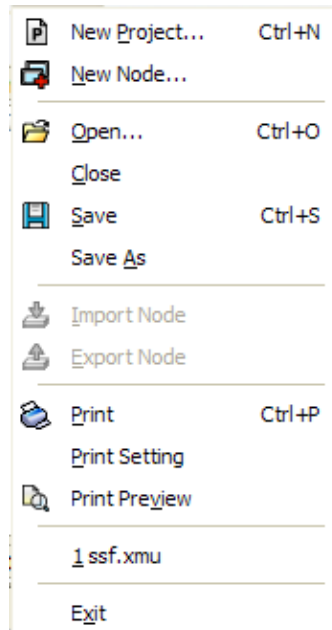
Command	Description
New Project	It closes opened project and creates a new project.
New Node	It adds node to a project.
Open	It closes opened project and open a new project.
Close	It closes opened project.
Save	It saves opened project.
Save as	Opened project is saved as another name.
Import Node	It imports the node exported previously.
Export Node	It exports selected node.
Print	It prints the current screen.
Print Settings	It changes the property of print
Print Preview	It previews the current screen before printing.
Latest Files	It shows the latest opened files.
Exit	It terminates XP-Manager.

(2) Edition

Command	Description
Undo Edition	It backs to the last edited contents. Edition data is operated individually for each screen.
Redo Edition	It performs Redo Edition. Edition data is operated individually for each screen.
Delete	It deletes the selected item of active screen
Cut	It copies the selected item of active screen to a clipboard and cut it.
Copy	It copies the selected item of active screen to a clipboard.
Paste	It pastes the last copied item to the selected area.
Delete All	It deletes all items of active screen.
Find	It searches for the device
Replace	It changes the device.
Go to	It moves to the specific column of a screen.
Select All	It selects all items of active screen.

(3) View
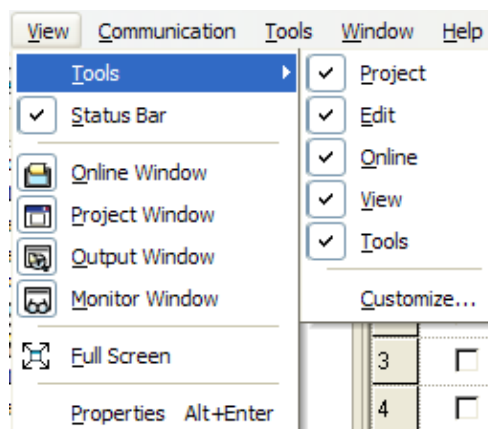
Command		Description
Tools	Project	It hides project tool bar.
	Edit	It shows or hides edition tool bar.
	Online	It shows or hides online tool bar.
	View	It shows or hides view tool bar
	Tools	It shows or hides tool bar.
	Customize	It can change menu, tool, hot key, etc.
Status Bar		It shows or hides status bar.
Online Window		It shows or hides online screen.
Project Window		It shows or hides project screen.
Output Window		It shows or hides output screen.
Monitor Window		It shows or hides monitor screen.
Full Screen		It hides all tool bars and menus to maximize the current screen.
Properties		It shows the registration information of selected item.

(4) Communication

Command	Description
Download XP Link Parameter	You can download XP Link parameter by selecting node.
Upload XP Link Parameter	You can upload XP Link parameter.
Manage XP-VNC Server	You can install, delete XP-VNC server of selected XGT Panel and change the operation mode.
Manage Web Server	You can install, delete web server of selected XGT Panel and change the operation mode.
Manage Driver	You can change RAPIEnet program monitor settings of selected XGT Panel.
Update XGT Panel	You can update XP-Runtime of XGT Panel.
XGT Panel Information	You can see the information of selected XGT Panel change the setting details.

(5) Tool

Command	Description
Check Program	You can check the error of opened project.
Start XP-Builder	You can execute XP-Builder.
Start XP-VNC	You can execute XP-VNC.
Start XP-Explorer	You can execute XP-Explorer.
Customize	You can change menu, tool, hot key, etc.
Option	You can change the options of XP-Manager.

(6) Screen

Command	Description
New Window	It opens another window that is the same with active one.
Close All	It closes all opened screens.

(7) Help
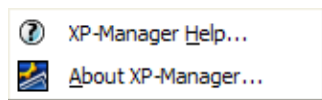
Command	Description
XP-Manager Help	It executes Help File for XP-Manager
About XP-Manager	It displays the version information and license details of XP-Manager.

3.3 The Composition of Tool Bar

(1) Project
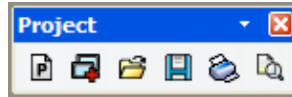
Command	Image	Description
New Project		It closes opened project and creates a new project.
Add Node		It adds a node to a project.
Open		It closes opened project and open a new project.
Save		It saves opened project.
Print		It prints the current screen.
Print Preview		It previews the current screen before printing.

(2) Edition

Command	Image	Description
Undo Edition		It backs to the last edited contents. Edition data is operated individually for each screen.
Redo Edition		It performs Redo Edition. Edition data is operated individually for each screen.
Delete		It deletes the selected item of active screen
Cut		It copies the selected item of active screen to a clipboard and cut it.
Copy		It copies the selected item of active screen to a clipboard.
Paste		It pastes the last copied item to the selected area.

(3) Online

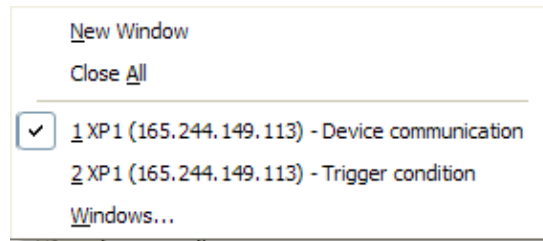| Command	Image	Description
Download XP Link Parameter		You can download XP Link parameter by selecting node.
Upload XP Link Parameter		You can upload XP Link parameter.
Manage XP-VNC Server		You can install, delete XP-VNC server of selected XGT Panel and change the operation mode.
Manage Web Server		You can install, delete web server of selected XGT Panel and change the operation mode.
Manage Driver		You can change RAPIEnet program monitor settings of selected XGT Panel.
Update XGT Panel		You can update XP-Runtime of XGT Panel.
XGT Panel Information		You can see the information of selected XGT Panel change the setting details.

(4) Window

Command	Image	Description
Project Window		It shows or hides project Window.
Online Window		It shows or hides online Window.
Output Window		It shows or hides output Window.
Monitor Window		It shows or hides monitor Window.

(5) Tool

Command	Image	Description
Start XP-Builder		It executes installed XP-Builder.
Start XP-VNC		It executes XP-VNC.
Help		It executes Help File.

3.4 Docking Window

The windows (project screen, online screen, output screen, monitor screen) that you can see from View Menu can be docked. You can adjust the position and size of windows and they can be docked to any position. Furthermore, you can keep docking screen being floated or use Auto-Hide function.

(1) Moving the position of docking screen
The below is docking position guile line that is shown when moving tool screen. If you drag and move the title of the screen, docking guide will be shown at the screen. If you put the screen to the center of docking guide, it will be docked to your intended position easily.

If you put a mouse to the center of docking guide, tab type of shadowy Windows will guide the position to be docked.

Windows hidden by Auto-Hide Mode
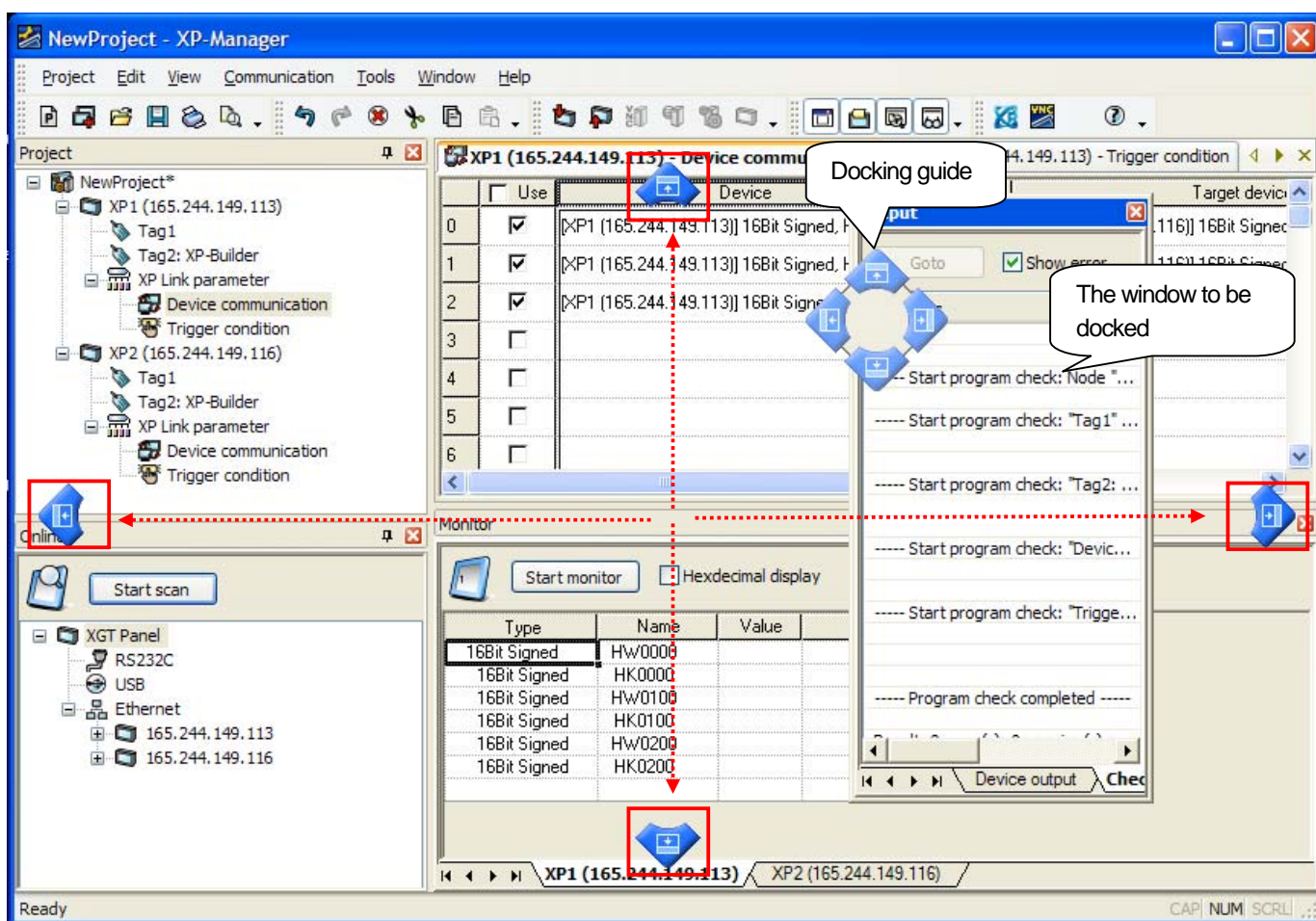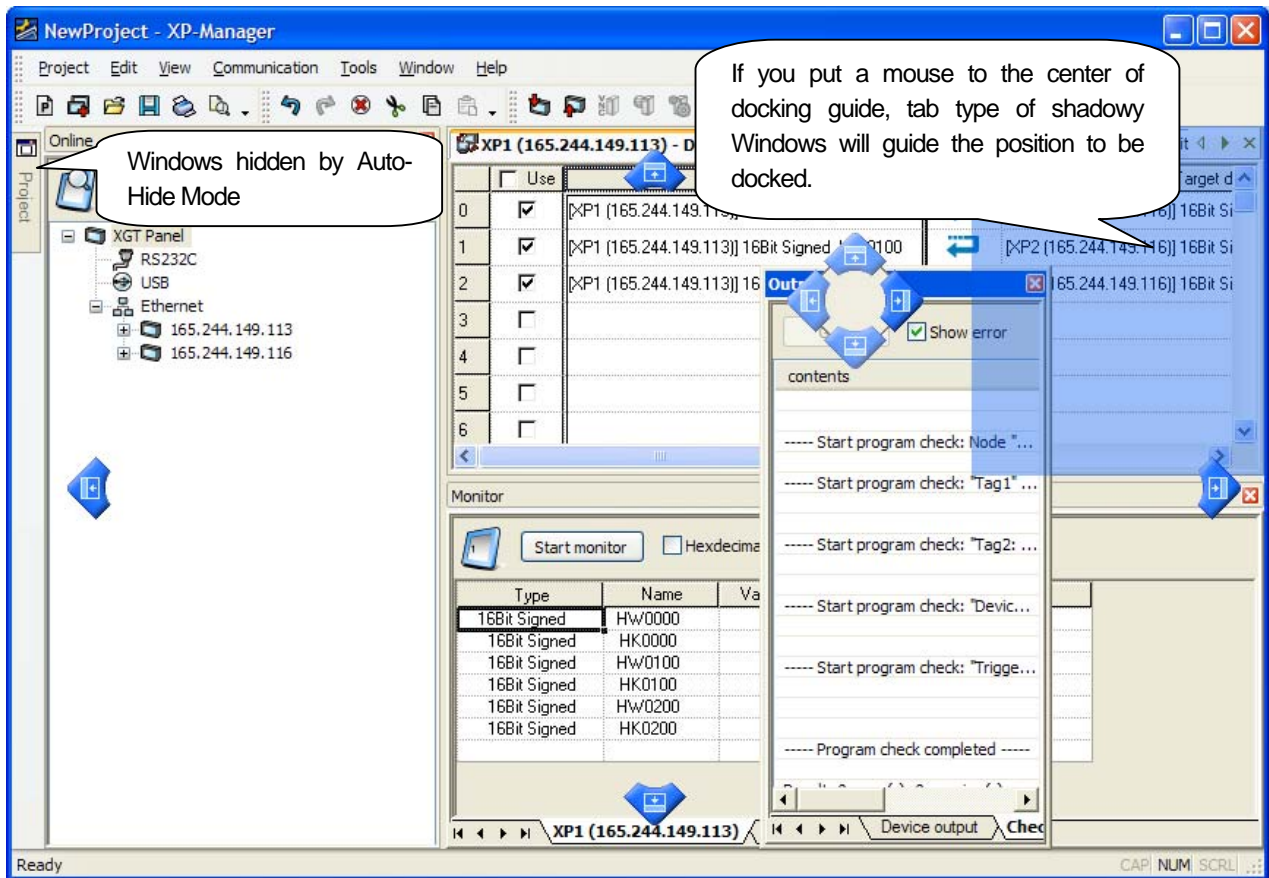
(2) Changing into floating Windows

Select [Floating] menu by clicking docking window title to be floated with a right mouse button.
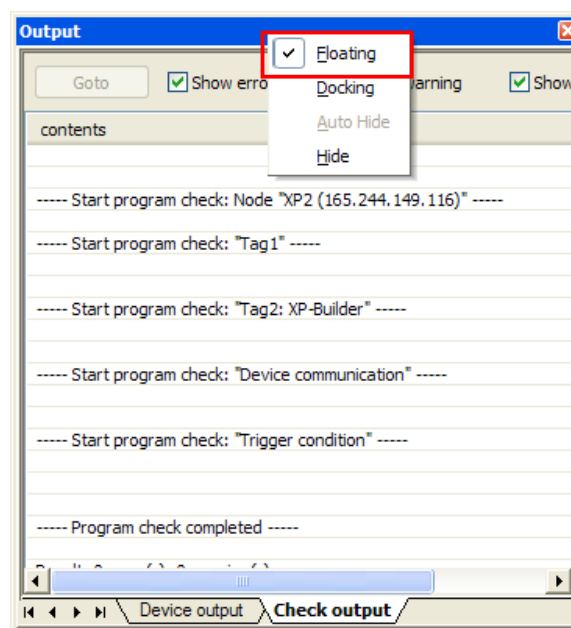
(3) Auto-Hide Mode

If you select [Auto-Hide] menu on the title of docking window or press a tack button of below docking window, windows will disappear automatically.
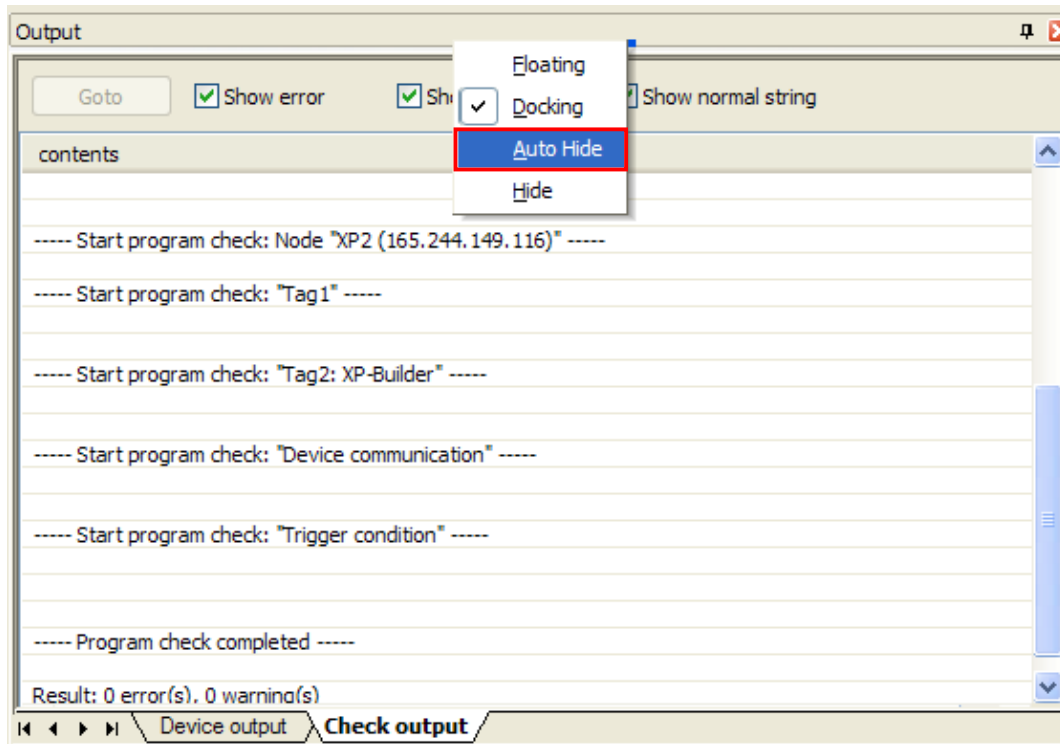
Chap.4 Project

4.1 Add Nodes

XP-Manager creates automatically blank project at the moment it is executed. Then, you can directly add nodes.

4.1.1   The Definition of Node

A node means one termination XGT Panel between XP Link communications. The IP of nodes can not be overlapped. Nodes have the information on XGT Panel type, PLC Driver, Device communication, trigger condition, tag of the project.

[Nodes of XP-Manager]
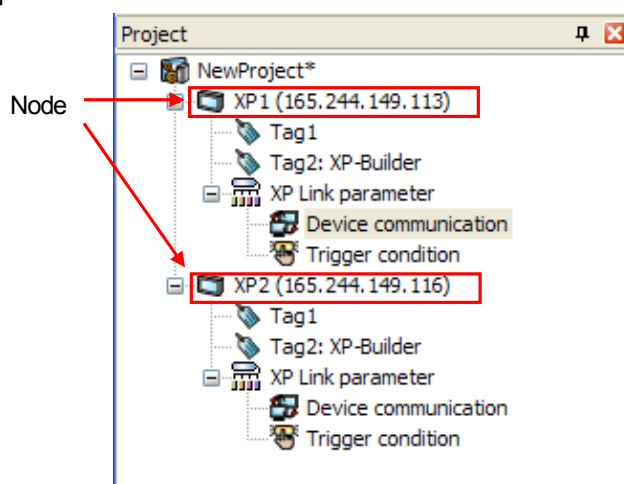
[Nodes of Network]

| Node 1 | Node 2 | Node 3 | Node 4 |
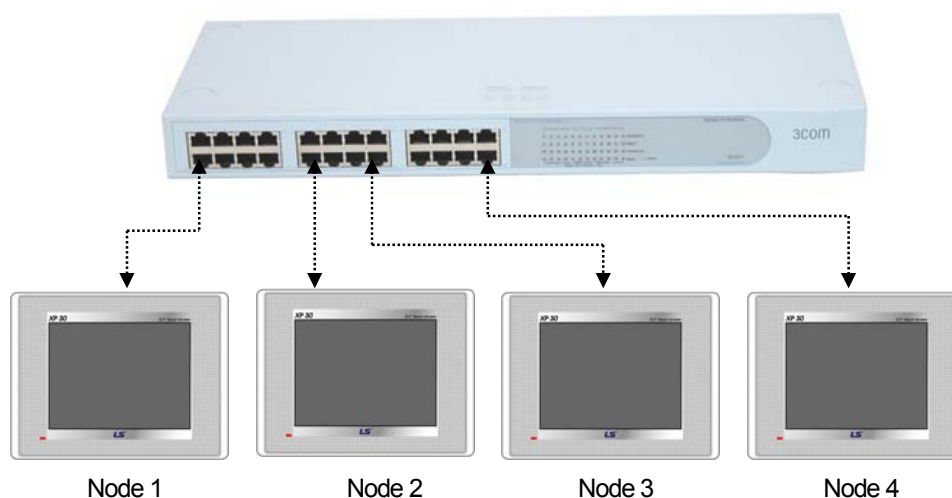
Notice
(1) The IP of node can not be overlapped within XP-Manager.
(2) The IP of XGT Panel can not be overlapped in network. In case that the IP is overlapped, unexpected error can occur due to IP conflict. In this case, contact the network administrator to solve the problem.

4.1.2 Manual Configuration by adding nodes directly

[Procedures]
(1) Select [Project]-[New Node] menu.

(a) Name: XP3
(b) Description: new node
(c) Target XGT Panel IP address: 192 . 168 . 1 . 1

How to Create Node
(d) ⦿ Manual creation by adding directly   Change ← (f)
○ Auto creation from XP-Builder file of computer

○ Auto creation from XGT Panel in network

XGT Panel Information
XGT Panel model:
Cotroller list:

Refresh   OK   Cancel
(e)
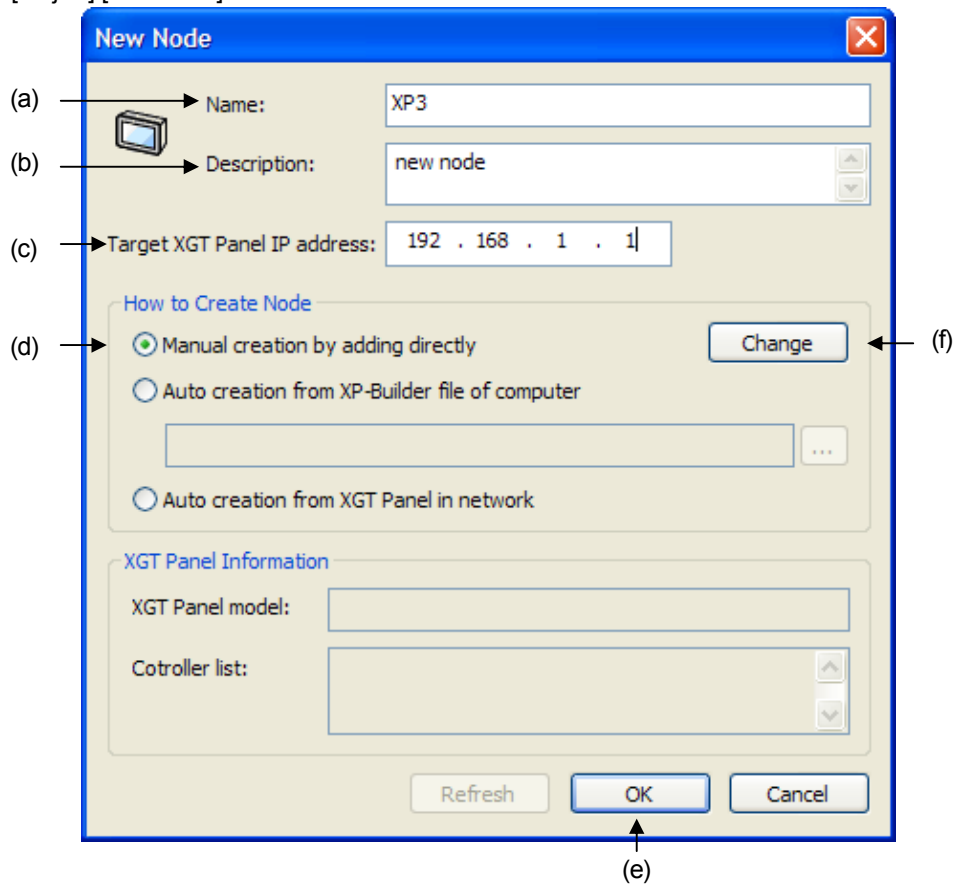
(2) Input the name of node (a) and the target XGT Panel's IP address(c).
(3) Select [Manual creation by adding directly](d) button.
(4) Press Change (f) button and add XGT Panel and PLC Driver.
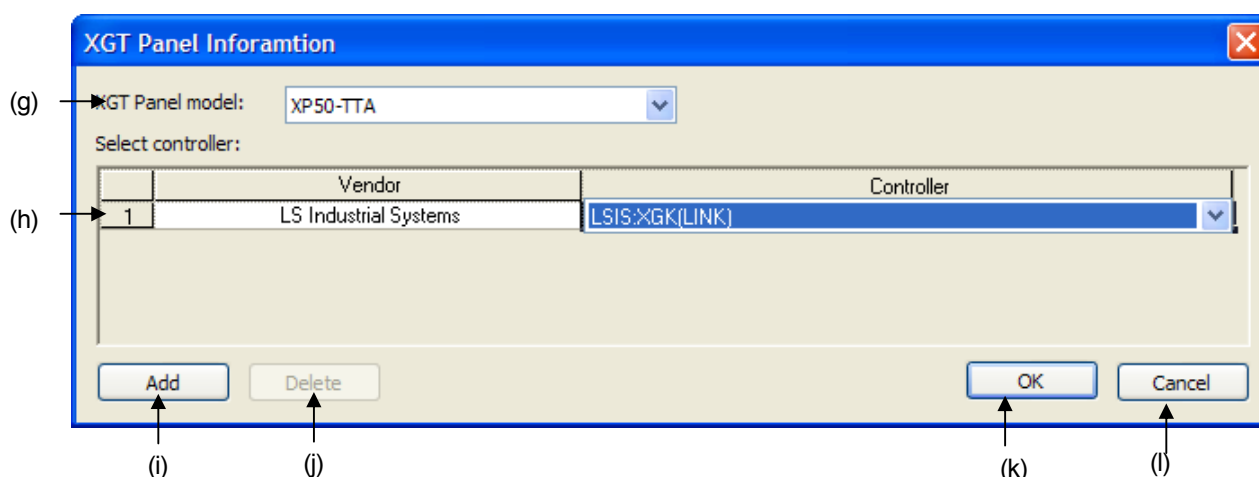
(5) Change the type of XGT Panel and select the type.

(6) Select the vendor and controller (h). If necessary, press Add (i) button, add a controller.

(7) Press OK (l) button to save the contents.

(8) Press OK(e) button to add a node.

(9) Add a node to project screen.

[Description on a dialog box]

Item	Description
Name (a)	The name of node can be input up to 255 characters and special characters are also available. However it can not be overlapped with other node name.
Description(b)	You can input comment without length limit.
Target XGT Panel's IP address (c)	It inputs the IP address of the only XGT Panel in network and it can not be overlapped within project.
Manual creation by adding directly (d)	You can input manually the information of XGT Panel and PLC Driver for your convenience.
OK(e)	It saves the contents of a dialog box and closes it and adds a node.
Change(f)	It can change the model of XGT Panel or add·change·delete PLC Driver.
XGT Panel Model(g)	You can select the model of XGT Panel.
Select Controller (h)	It shows the manufacturer and PLC driver list.
Add(i)	You can add PLC Driver up to 4EA.
Delete (j)	It deletes the selected PLC Driver from the list. In case that there is only one driver, you can not delete it.
OK(k)	It saves the changed contents and closes a dialog box.
Undo(l)	It closes a dialog box without saving the changed contents.

[Screen]

[Description on screen]

Item	Description
Project(a)	The name of project is displayed.
Node (b)	The name of node and target XGT Panel's IP address are displayed.
Tag 1(c)	The tag can be declared at XP-Manager.
Tag 2: XP-Builder(d)	In case of node uploaded from XGT Panel or added from XP-Builder file, it is the tag declared by XP-Builder,
Device Communication(e)	It can define the communication contents between nodes.
Trigger Condition (f)	It can designate the operation condition of device communication.

Notice

(1) The name of node can be designated up to 255 characters.
(2) If there is no name of node, it can not be set as node.
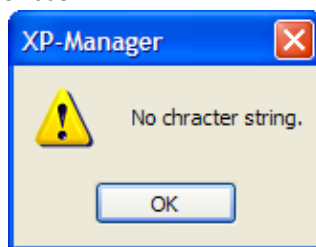
(3) The name of node can not be overlapped within project.
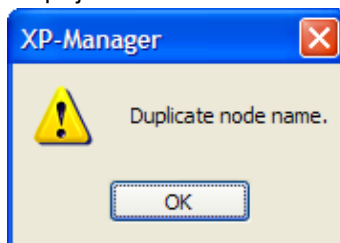
(4) The IP address of target XGT Panel of node can not be overlapped within project.
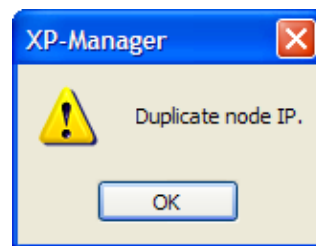
4.1.3 Automatic Configuration form XP-Builder file of a computer

You can add nodes through the project file (XPD file) made by XP-Builder.

[Procedures]
    (1) Select [Project]-[New Node] menu.
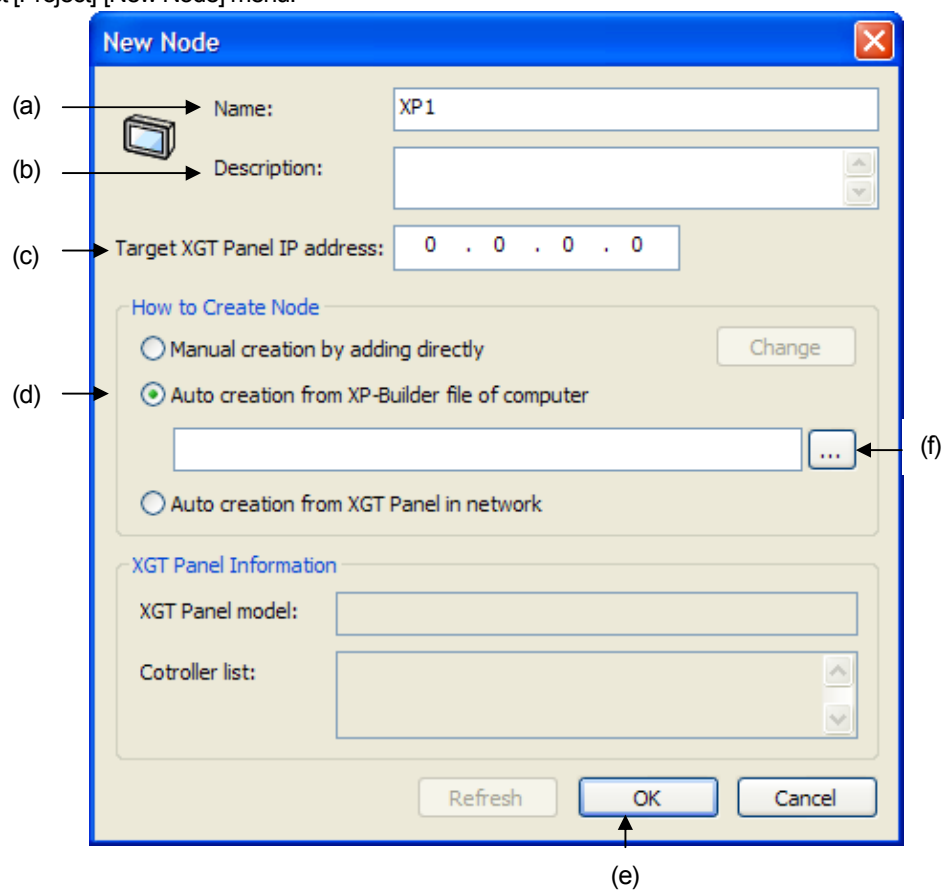
    (2) Input the name of node (a) and IP address(c) of XGT Panel.
    (3) Select (d) button [Auto creation from XP-Builder file of a computer.
    (4) Search for XP-Builder project file (XPD file) with Explorer (f) button.
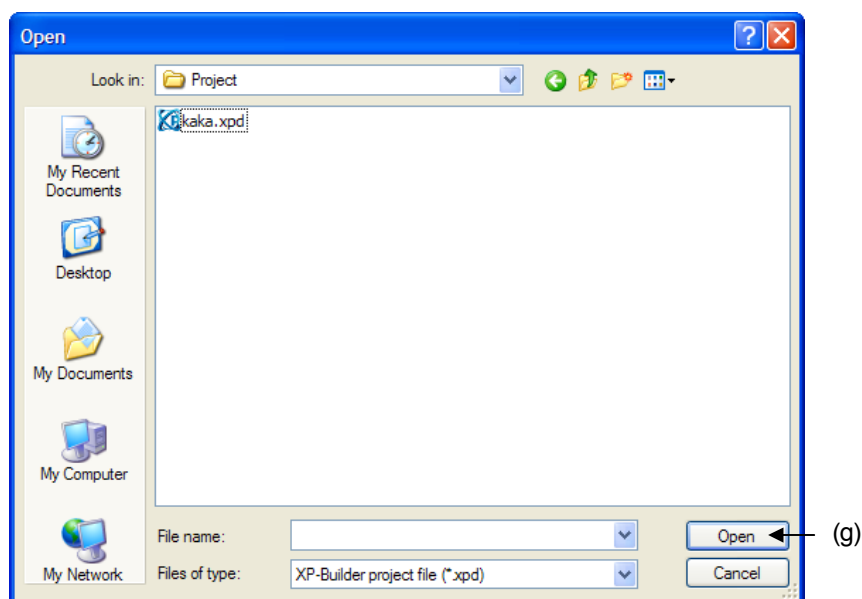
(5) Press Open(g) button after finding XP-Builder project file.

(6) Press OK(e) button to add node.

(7) Node will be added to the project screen.

[Description on a dialog box]

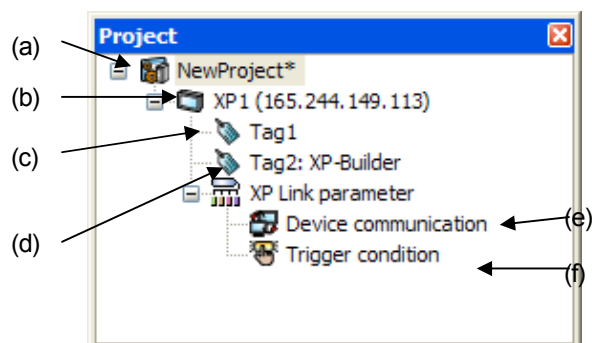| Item	Description
Name (a)	The name of node can be input up to 255 characters and special characters are also available. However it can not be overlapped with other node name.
Description (b)	You can input comment without length limit.
Target XGT Panel's IP address (c)	It inputs the IP address of the only XGT Panel in network and it can not be overlapped within project.
Auto creation from XP-Builder file of a computer (d)	You can open XP-Builder file(XPD file) and import the information of XGT Panel type and PLC Driver, tag to configure node.
OK(e)	It saves the contents of a dialog box and closes it and adds a node.
Change(f)	It can change the type of XGT Panel or add·change·delete PLC Driver.
Open(g)	It opens selected file.

Notice
(1) You can not open the XP-Builder file made by under XP-Builder 1.21. (2) You can re-use the tag made by XP-Builder but edition is not available.
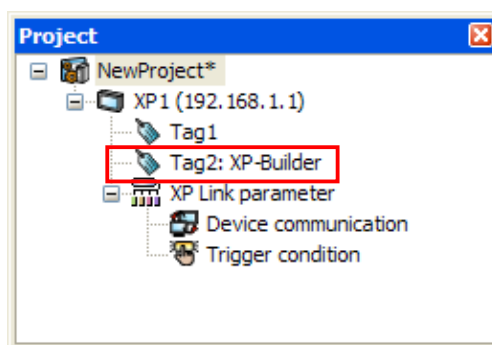
4.1.4 Auto Creation from XGT Panel in Network

You can upload XP-Builder project from XGT Panel in network and add a new node. XP-Builder project file is uploaded from the target XGT Panel.

[Procedures]

(1) Select [Project]-[New Node] menu.
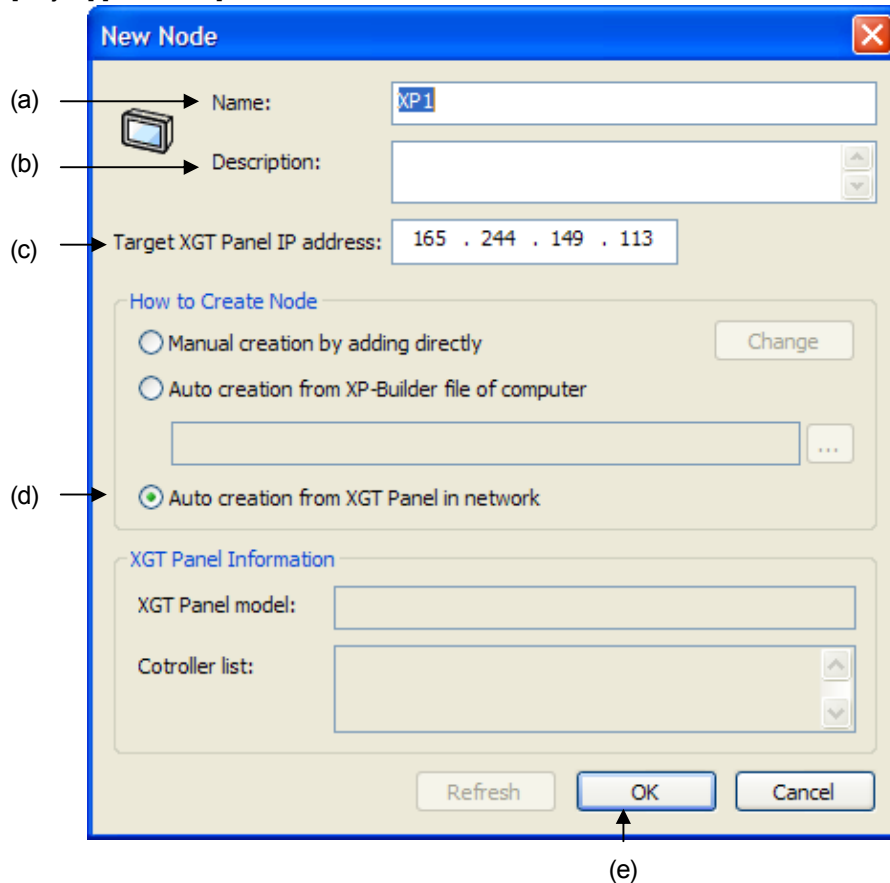
(2) Input the name of node(a) and IP address(c) of target XGT Panel.
(3) Select Automatic Configuration (d) button from XGT Panel of network.
(4) Press OK(e) to add a node.
(5) Communication dialog box will be shown and the project is uploaded from XGT Panel.
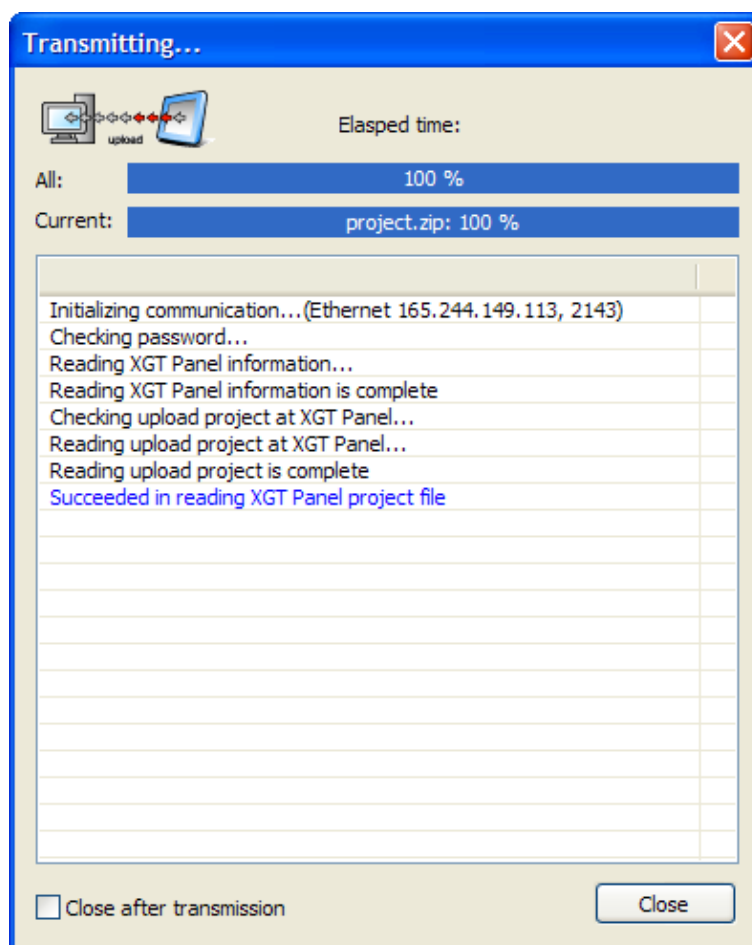
(6) The node is added to a project screen.

[Description on a dialog Box]

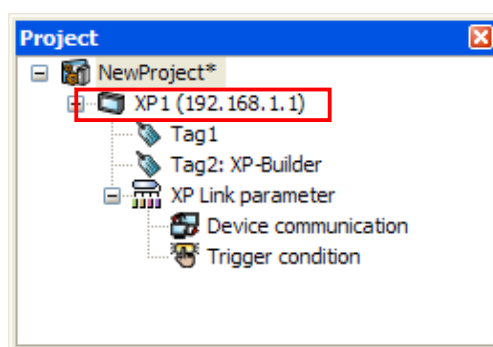| Item	Description
Name (a)	The name of node can be input up to 255 characters and special characters are also available. However it can not be overlapped with other node name.
Description(b)	You can input comment without length limit.
Target XGT Panel's IP address (c)	It inputs the IP address of the only XGT Panel to be uploaded in network and it can not be overlapped within project.
Auto creation from XGT Panel in network (d)	It reads the uploaded project from XGT Panel of IP address in target XGT Panel and adds a node.
OK(e)	It saves the contents of a dialog box and closes it and adds a node.
Change(f)	It can change the type of XGT Panel or add·change·delete PLC Driver.
Open(g)	It opens selected file.

Notice
(1) In case that password is set for XGT Panel, you need to check the password for upload.
(2) You can not open the XP-Builder file made by under XP-Builder 1.21.
(3) You can re-use the tag made by XP-Builder but edition is not available.
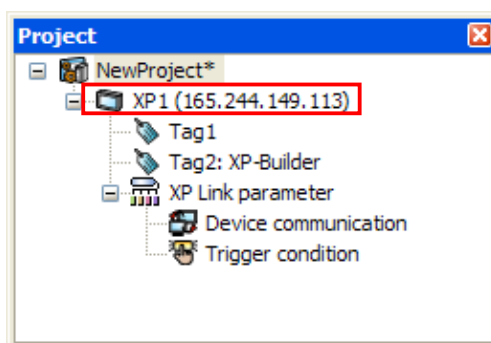
4.2 Node Deletion

You can delete the added node.

[Procedures]
(1) Select the node to be deleted from a project screen.
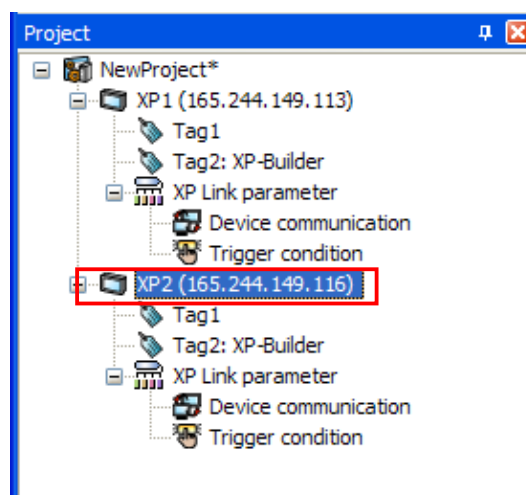
(2) Select [Edit]-[Delete] menu or select [Delete] context menu.
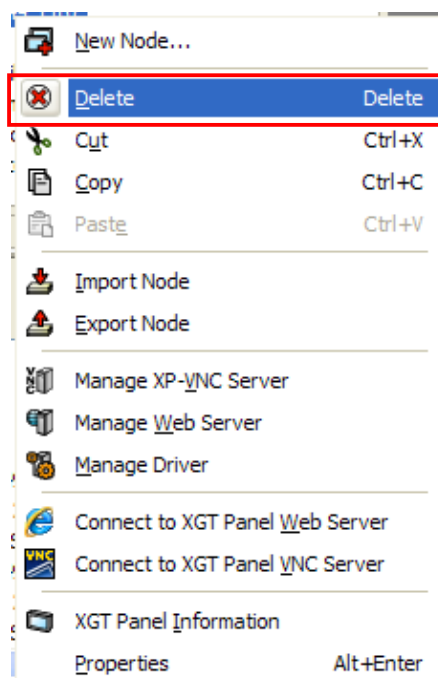
(3)   Then, the node is deleted.
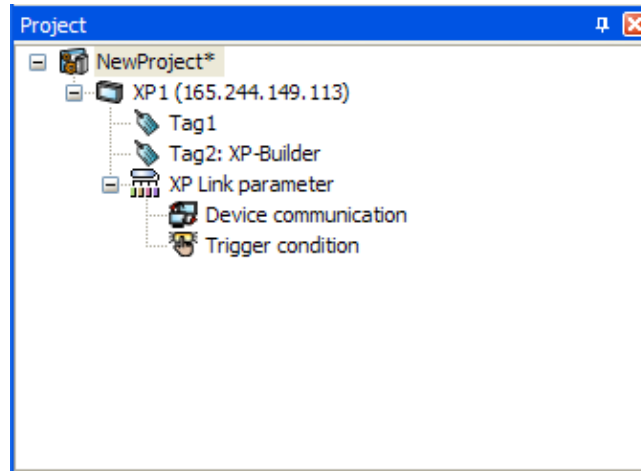
Notice

(1) You can not restore the deleted node with Undo Edition.

(2) It is possible there is no node in project.

4.3 Changing the Properties of Node

You can change the properties of added node.

[Procedures]

(1) Select the node whose properties should be changed from a project screen.
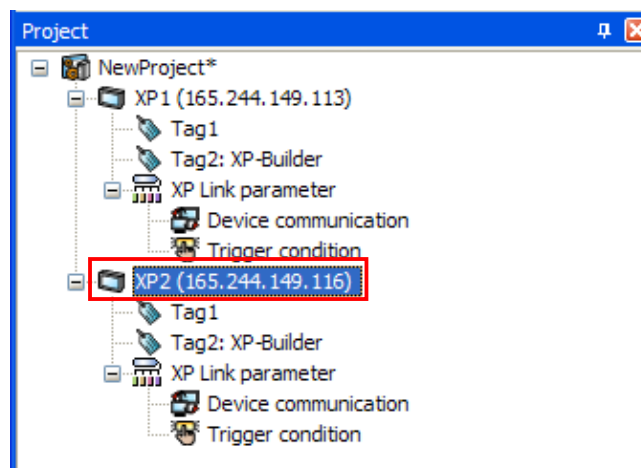
(2) Select or double-click [View]-[Properties].
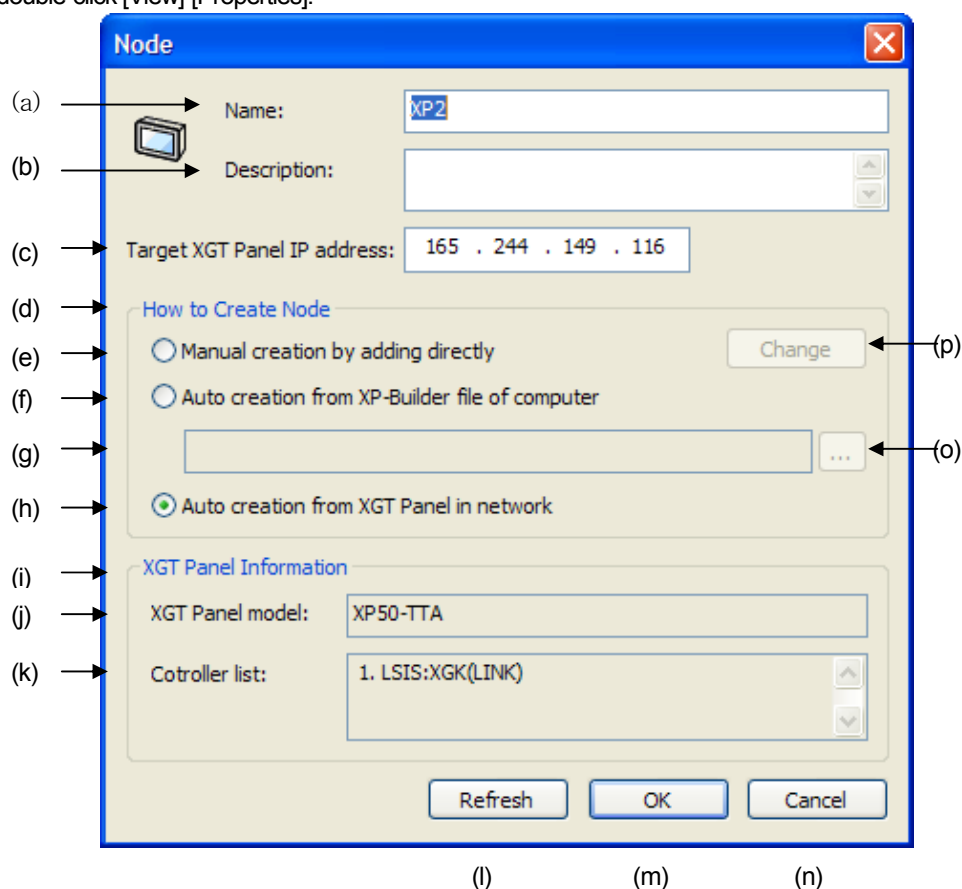
(3) After changing the properties of node, save it with OK button.

[Description on a dialog Box]

| Item	Description
Name (a)	The name of node can be input up to 255 characters and special characters are also available. However it can not be overlapped with other node name.
Description(b)	You can input comment without length limit.
Target XGT Panel's IP address (c)	It inputs the IP address of the only XGT Panel in network and it can not be overlapped within project.
How to create node (d)	In case that the method to configure node is changed, it is renewed from the file and the file and XGT Panel.
Manual creation by adding directly(e)	You can manually input the information of XGT Panel and PLC Driver for your convenience.
Auto creation from XP-Builder file of a computer(f)	It opens XP-Builder project file(XPD file) and imports the information on XGT Panel type and PLC Driver, tag to configure a node.
Position of XP-Builder project file(g)	It shows the selection route of XP-Builder file(XPD file).
Auto creation from XGT Panel in network (h)	It reads the uploaded project from the IP address of target XGT Panel and adds a node.
XGT Panel Information (i)	It shows the information of XGT Panel and PLC Driver saved at a node.
XGT Panel model (j)	It shows the information of XGT Panel saved at a node.

Item	Description
Controller List (k)	It shows the information of PLC Driver saved at a node.
Refresh(l)	In case that a node is XP-Builder configured automatically from XP-Builder file of a computer or it is configured automatically from XGT Panel of network, it is active. For refresh, XPD file is read again or it is re-uploaded from XGT Panel.
OK (m)	It saves the contents of a dialog box and closes it.
Undo(n)	It closes a dialog box without saving the contents.
Explorer Button (o)	In case the node is automatically configured from XP-Builder of a computer, you can select XP-Builder project file.
Change(p)	If the node is added and manually configured, you can change the XGT Panel type and PLC Driver.

Notice

(1) If you try to change the IP address of target XGT Panel, press the renewal button.

(2) If the properties of node configuration mode are changed, it is renewed automatically.

(3) Only when node is added directly and configured manually, you can change the XGT Panel type and PLC Driver.

4.4 Exporting Node

To reuse the node of a project, you can export it.

[Procedures]

(1) Select the node to be exported from a project screen.
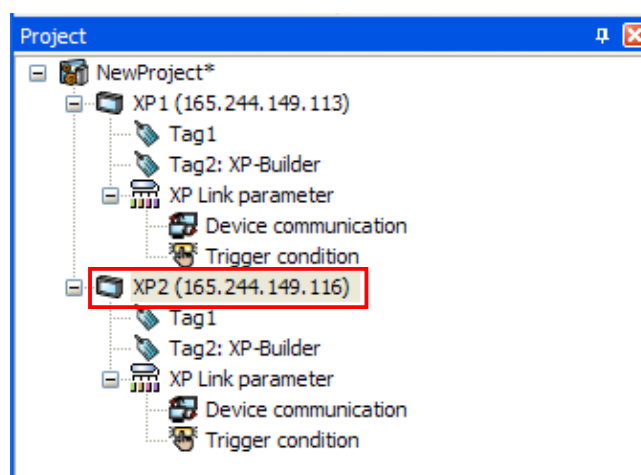
(2)   Select [Project]-[Export Node] menu or select [Export Node] of context menu.
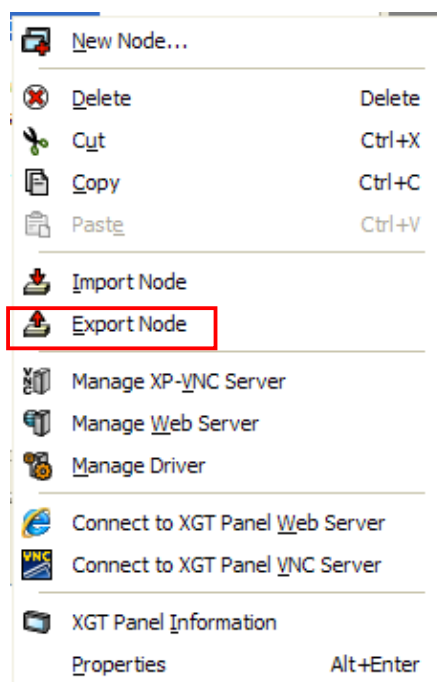
(3) Select the position for exporting a node and input the name of file.
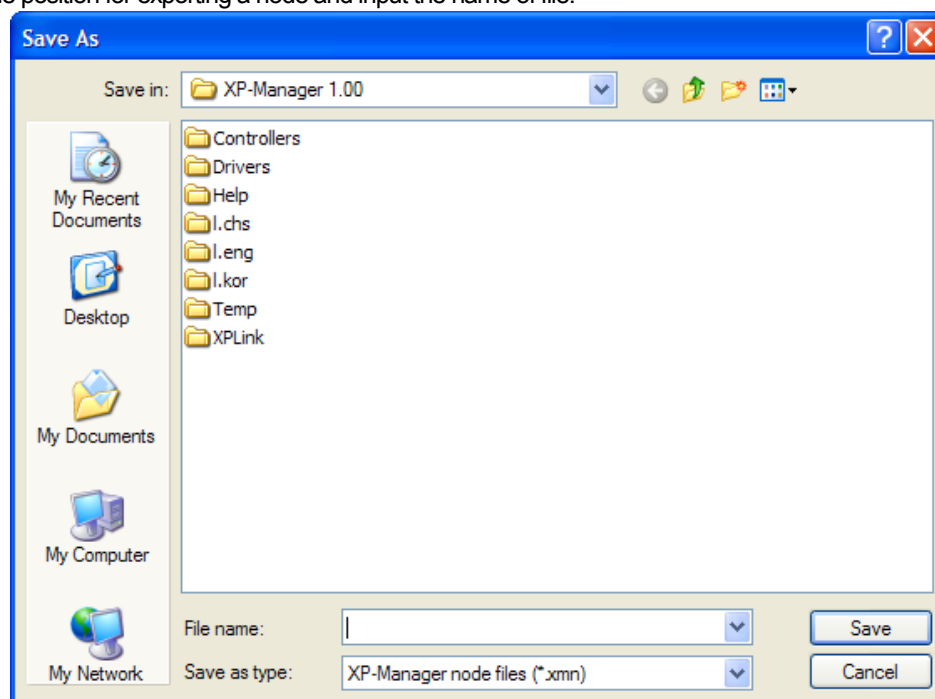
(4) Press Save button to save the file.

Notice
(1)   The file extension of exporting a node is XMN.
(2)   You can not input special characters to a file name.
(3) You can not open the exported file directly at XP-Manager. Use Importing Node menu.

4.5 Importing Node
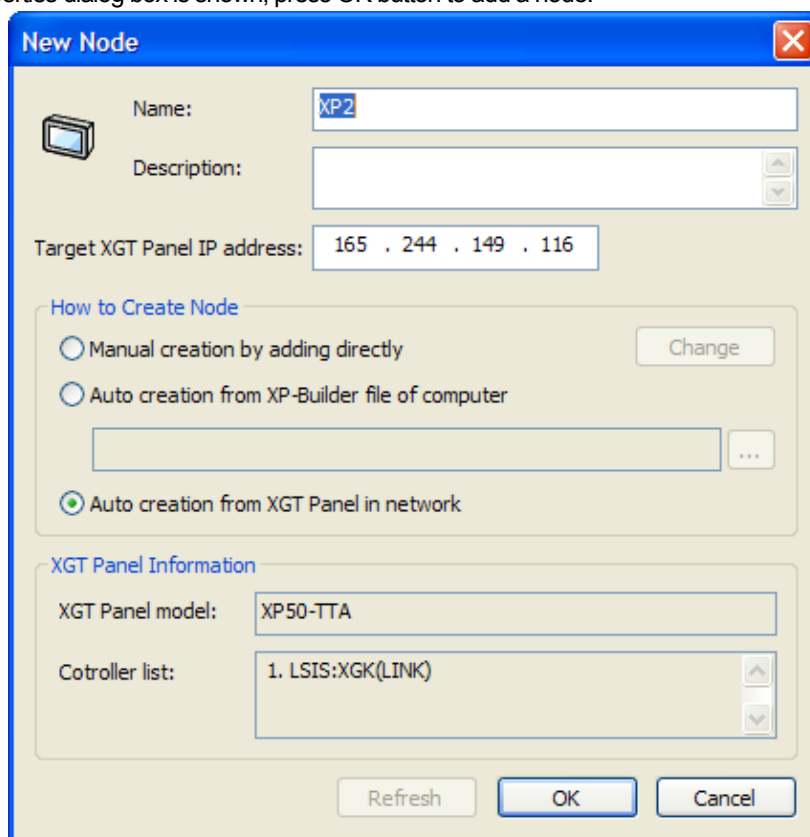
You can import the file (XMN file) made by Exporting Node as a project with Importing Node function.

[Procedures]
  (1) Select [Project]-[Import Node] menu or select [Import Node] of context menu.
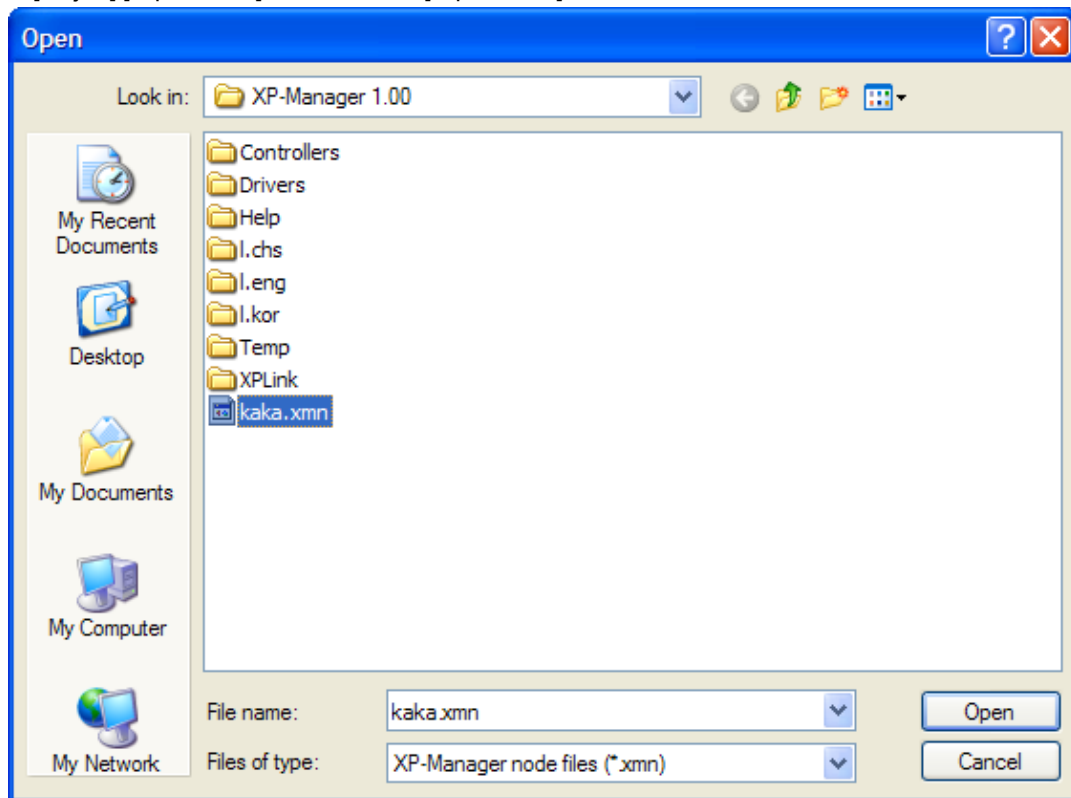
(2) Select the file to be imported and press Open button.

(3) If the Node Properties dialog box is shown, press OK button to add a node.

Notice

(1)   The name of imported node can not be overlapped so change the name.

(2)   In the case of imported node, the IP address of target XGT Panel can not be overlapped so change the IP address.

4.6 Copy/Paste Node

You can copy the node to a clipboard and paste it to other XP-Manager.

[Procedures]

(1) Select the node to be copied from a project screen.
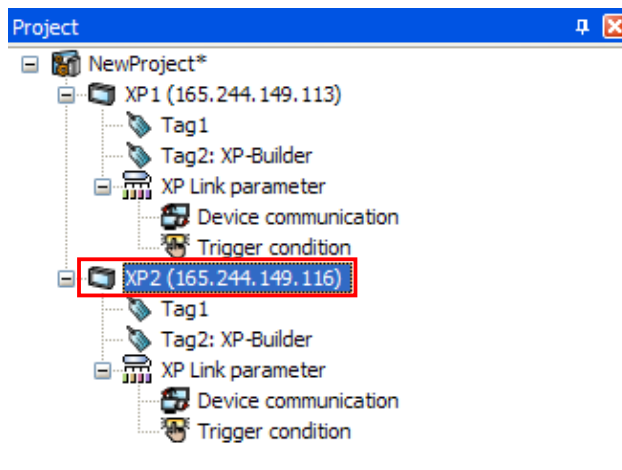
(2) Select [Edition]-[Copy] menu or select [Copy] of context menu. No changes occur.
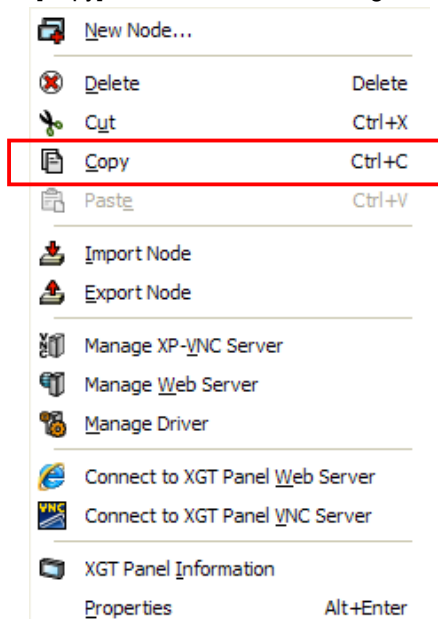
(3) Select [Edition]-[Paste] menu or select [Paste] of context menu.

(4) The Node Properties dialog box will be shown and press OK button to press OK button.

Notice
(1) The node copied to a clipboard can be pasted to other XP-Manager.   (2) The copied contents remain at a clipboard before other copy process proceeds.

4.7 Cut/Paste Node

Copy the node to a clipboard and delete it from a project. You can paste the copied node to other XP-Manager.

[Procedures]

(1) Select the node to be cut from a project screen.
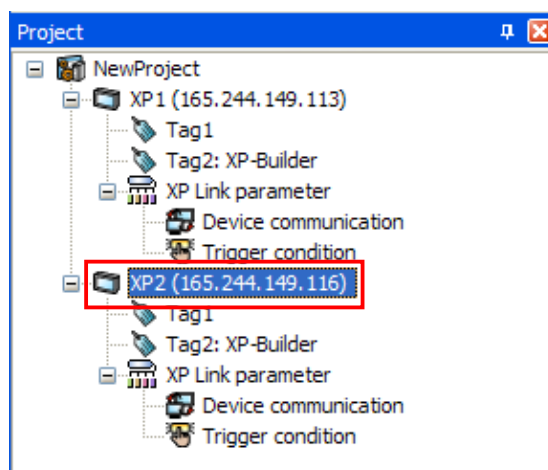
(2) Select [Edition]-[Cut] menu of select [Cut] of context menu.
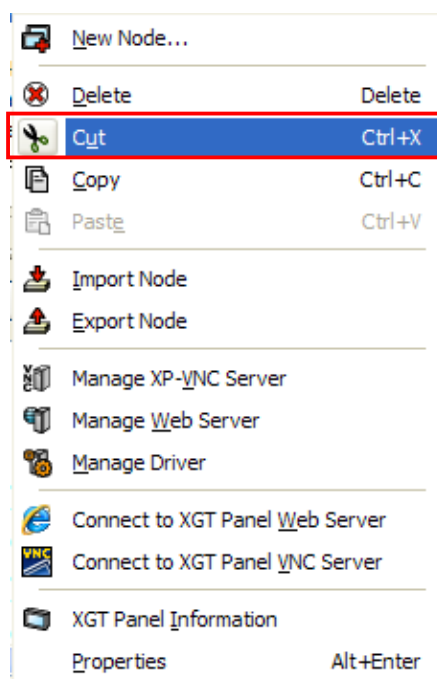
(3) Then, selected node is deleted and it is copied to a clipboard.

(4) Select [Edition]-[Paste] menu or select [Paste] of context menu.

(5) The Node Properties dialog box will be shown. Press OK button to add a node.

Notice
(1) Undo Edition for a cut node is not available.
(2) The node be copied to a clipboard can be pasted to other XP-Manager.
(3) The copied contents remain at a clipboard before other copy process proceeds.

4.8 Configuring a Project

You can close the opened project and configure a blank project.

[Procedures]
      (1) Select [Project]-[New Project] menu.
      (2) If there is opened project, the project is closed.
      (3) Configure a blank project again.
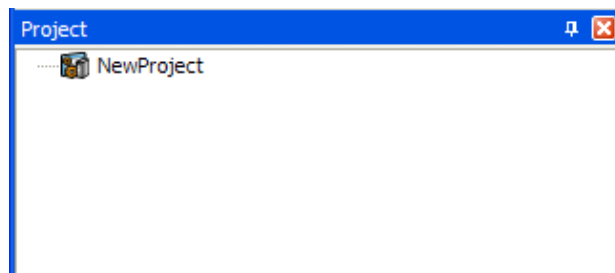
Notice
(1) If the opened project is edited, check if it is saved when the project is closed.

4.9 Changing the properties of project

You can change the name and comment of a project.

[Procedures
    (1) Select the name of project from a project screen.
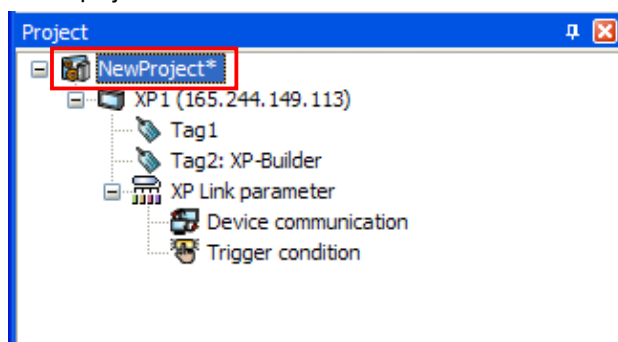
    (2) Select or double-click [View]-[Properties] menu.
    (3) Then, the dialog box on project properties information will be shown.
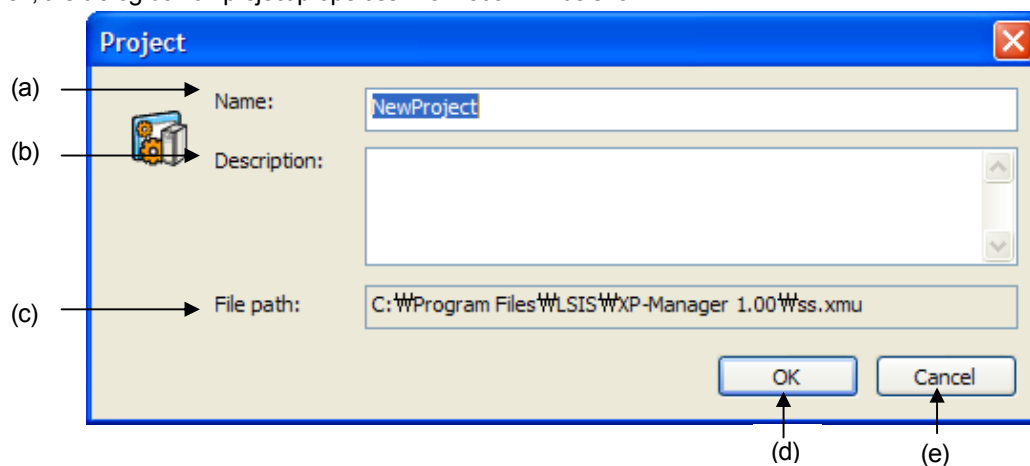
    (4) Change the properties and press OK button.

[Description on a dialog box]

Item	Description
Name(a)	You can input the name of a project without limitation on length, special characters.
Description (b)	You can input comment without limitation on length.
File path (c)	When the project is saved, it shows the route of saved file.
OK(d)	It saves the contents of a dialog box and closes the box.
Cancel (e)	It closes a dialog box without saving the contents.

4.10 Saving Project

You can save the project as a file.

[Procedures]
(1) Select [Project]-[Save] menu.
(2) If you open the saved file, the project is continuously saved at the previous file.
(3) If the file is saved for the first time, Save As dialog box will be shown.
(4) Input the file name and press [Save] button.
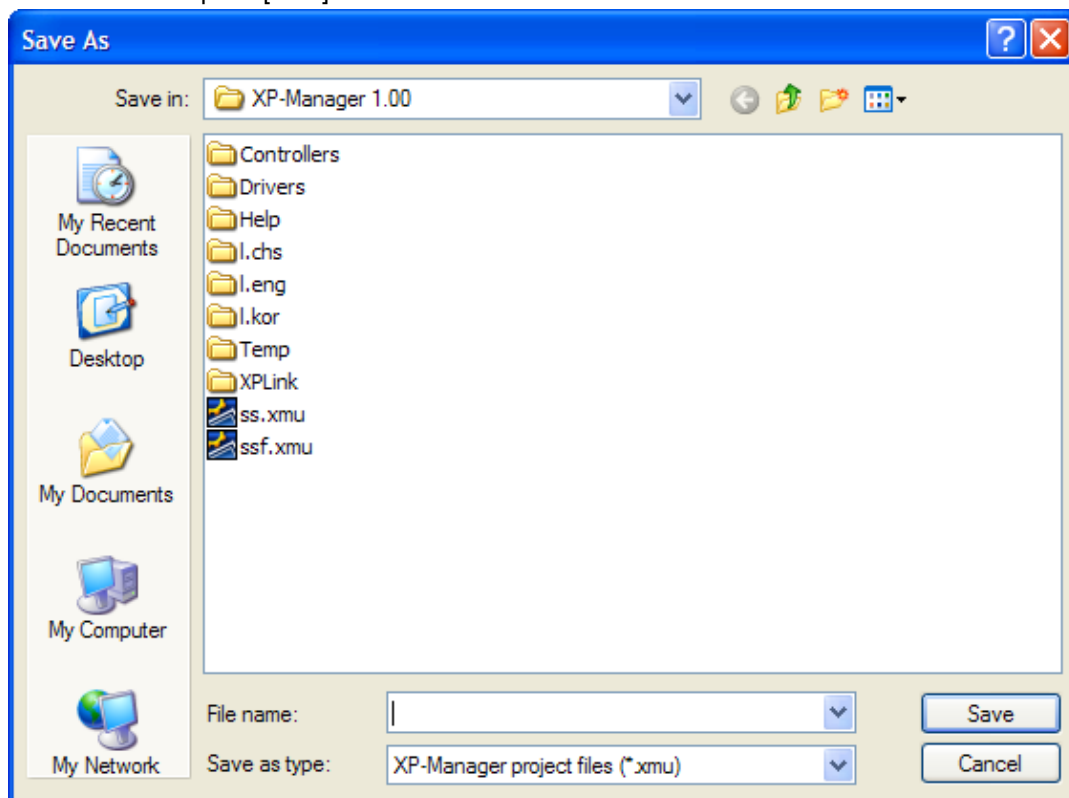
Notice

(1) The file extension of the project used for XP-Manager is XMU file.
(2) If the file opened at other project is saved, Sharing Violation error will occur.
(3) If "Display the message in case that a file name is different form project name when saving" is set at [Option]-[Project], the below message will be shown for saving.
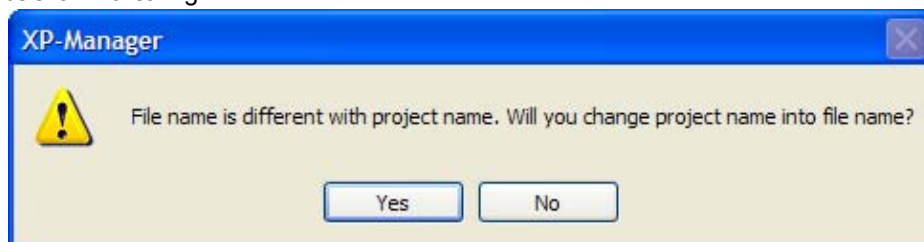
If "Yes" is selected, it changes the project name into file name and saves it. If [No] is selected, it is saved as before.
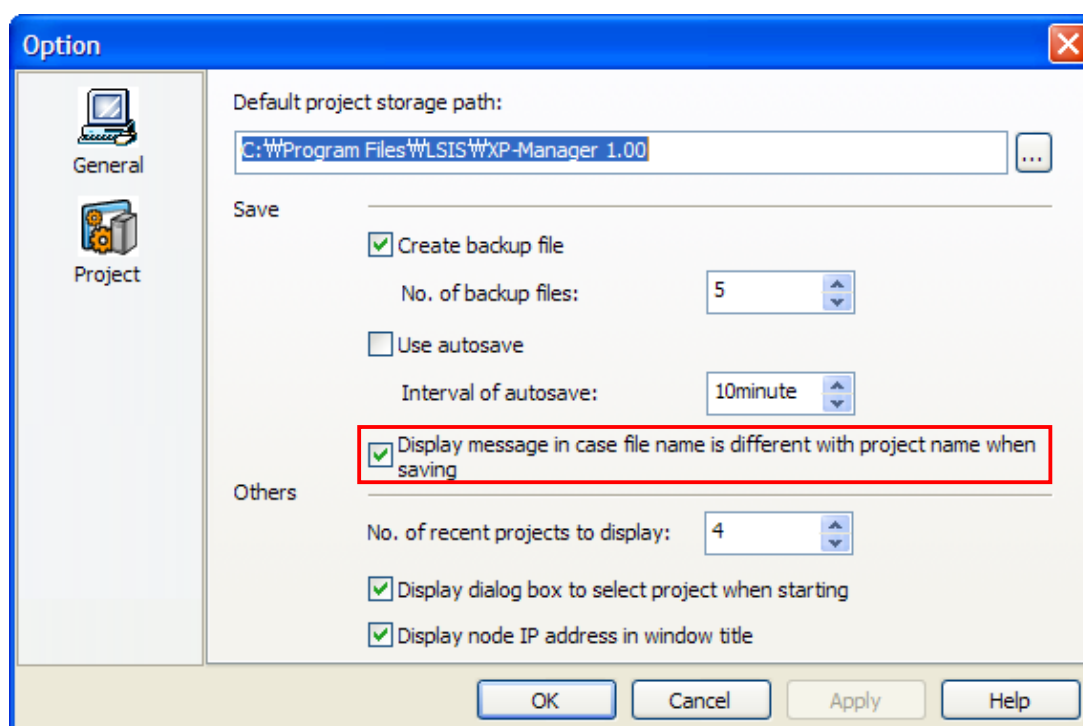
(4) If the project is edited, an asterisk is marked with the rear of project name. If it is saved as a file, an asterisk will disappear.
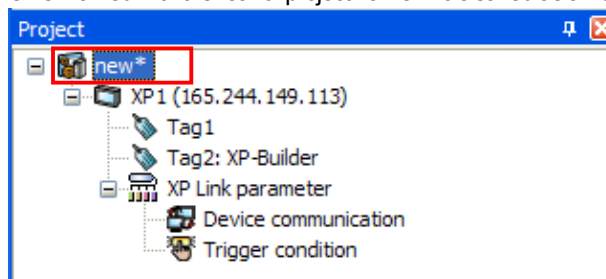
4.11 Project Save As

You can open the saved file and save it as another name.
[Procedures]
      (1) Select [Project]-[Save As] menu.
      (2) Input the file name and press [Save] button.
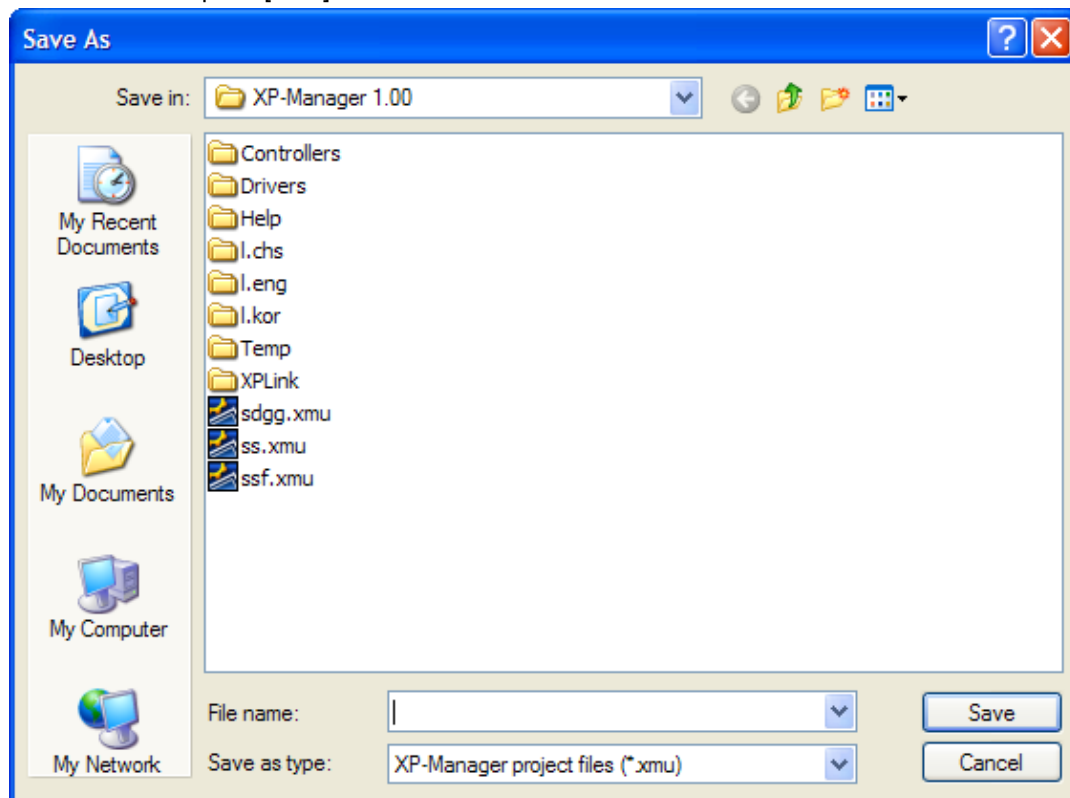
4.12 Close Project

It closes the opened project.

[Procedures]
      (1) Select [Project]-[Exit] menu.
      (2) If project edition is completed, the message to confirm Save.
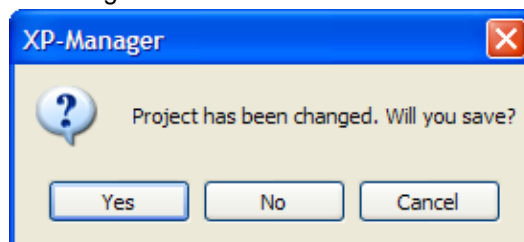
      (3) If [Yes] is selected, it saves the changed details and closes the project.
      (4) If [No] is selected, it closes the project without saving the changed details
      (5) If "Cancel" is selected, it discontinue closing the project.

4.13 Open Project

You can open the XP-Manager project file(XMU file) saved previously to open project.

Notice

(1) If you try to open the file is used by other XP-Manager or Read Only file, the below message will be shown.
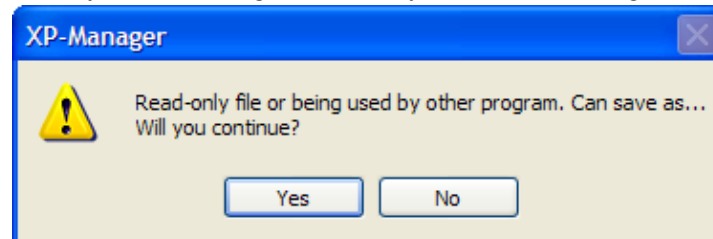
If "Yes" is selected, you can open the project as Read Only mode to save it as another name. If [No] is selected, Open Project process is suspended.

4.13.1 Open Project Dialog Box

When XP-Manager is executed, you can promptly open the previous project through the Open Project Dialog Box.

[Procedures]
(1) Execute XP-Manager.
(2) When starting [Tool]-[Option]-[Project] menu, if the option displaying the Open Project Dialog Box is active, the dialog box will be shown.
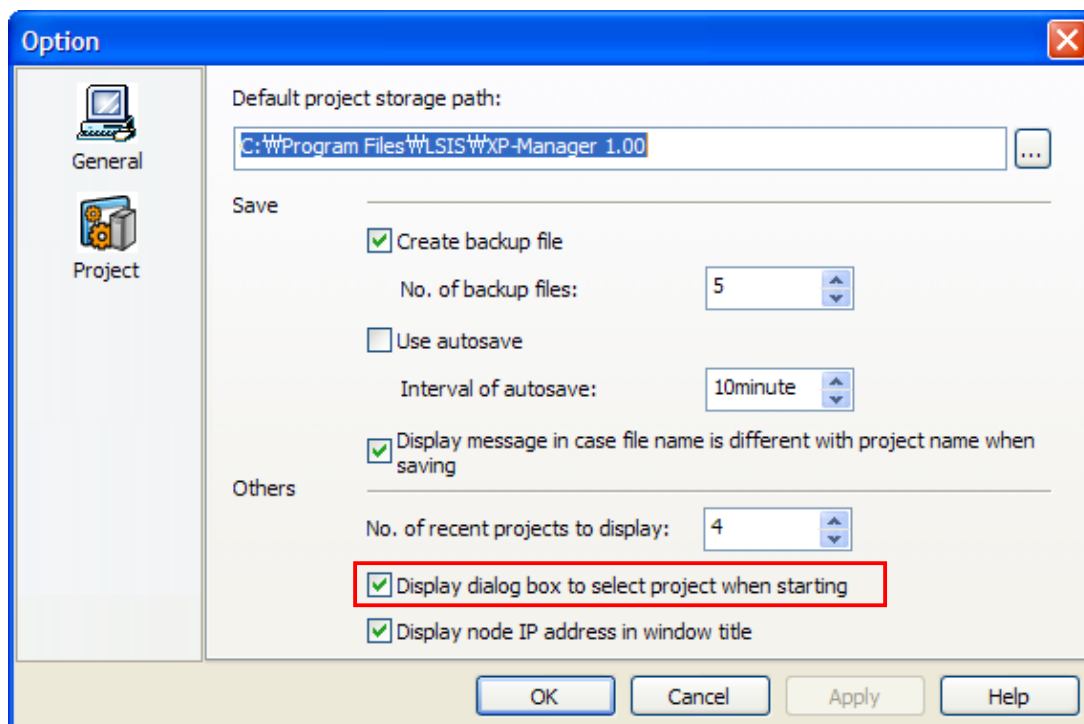
(3) Select the project from the dialog box to open project and press OK button.
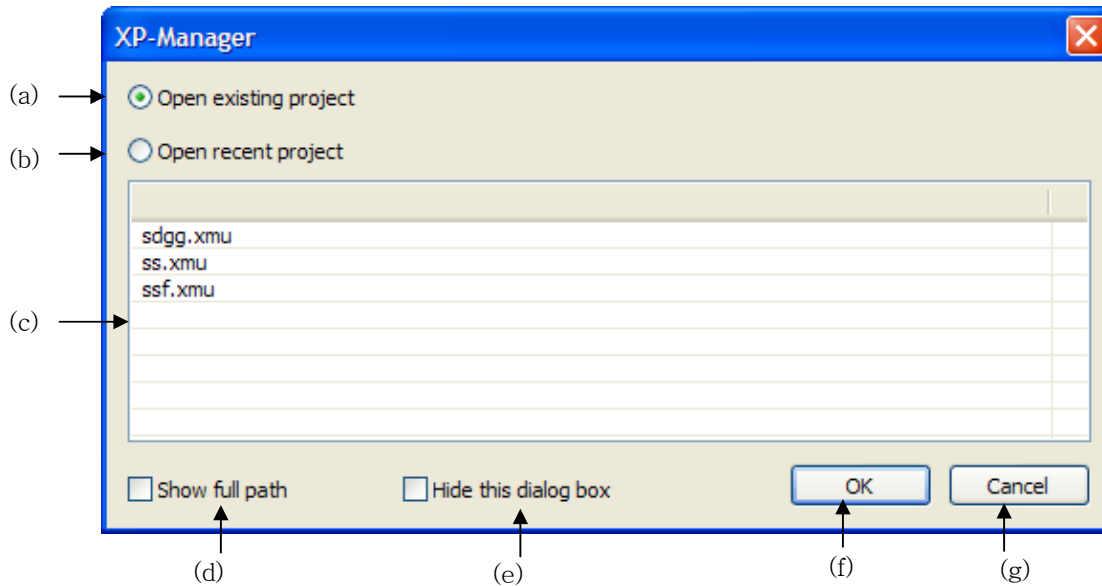
[Description on a dialog box]

Item	Description
Open existing project(a)	It opens file explorer and searches for the project file to open it.
Open recent project (b)	It opens the selected project from the latest project list(c).
Recent Project List(c)	It shows the list of previous projects
Show full path (d)	It shows the whole route of file from the latest project list.
Hide this dialog box (e)	Project Open dialog box will not be shown when the next XP-Manager is executed.
OK(f)	It opens the project based on selected options.
Cancel(g)	It configures a blank project without opening project.

4.13.2 Opening from the latest project

You can promptly select and open the project from the latest list

[Procedures]
    (1) Select the project to be opened from the latest list of [Project] menu.
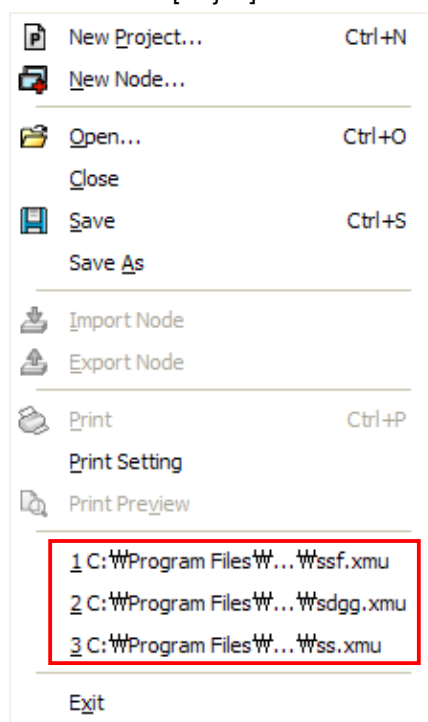
    (2) The opened project is closed and selected project is opened.

4.13.3 Opening file by explorer

[Procedures]
(1) Select [Project]-[Open] menu.
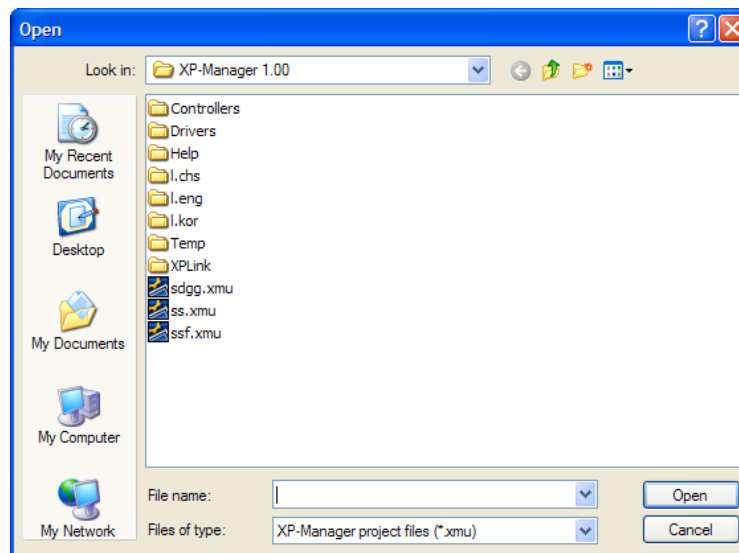
(2) After selecting the target file, press [Open] button to open the project.

4.13.4 Opening file by double-click at Windows Explorer

[Procedures]
(1) Execute Windows Explorer.
(2) Double-click the XP-Manager project file to be opened.
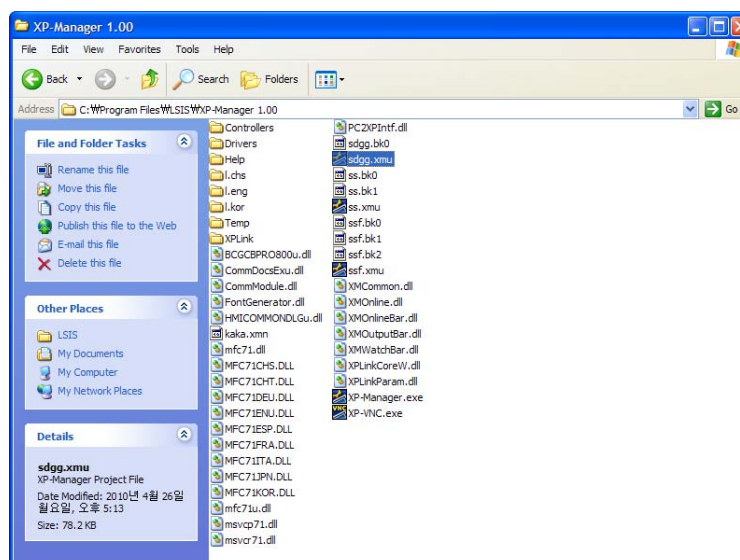
(3) XP-Manager is executed newly and the project is opened.

4.13.5 Opening file by Drag & Drop at Windows Explorer

[Procedures]

    (1) Execute Windows Explorer.

    (2) Execute XP-Manager.

    (3) Drag & Drop the XP-Manager project file (XMU file) to be opened at Windows Explorer.
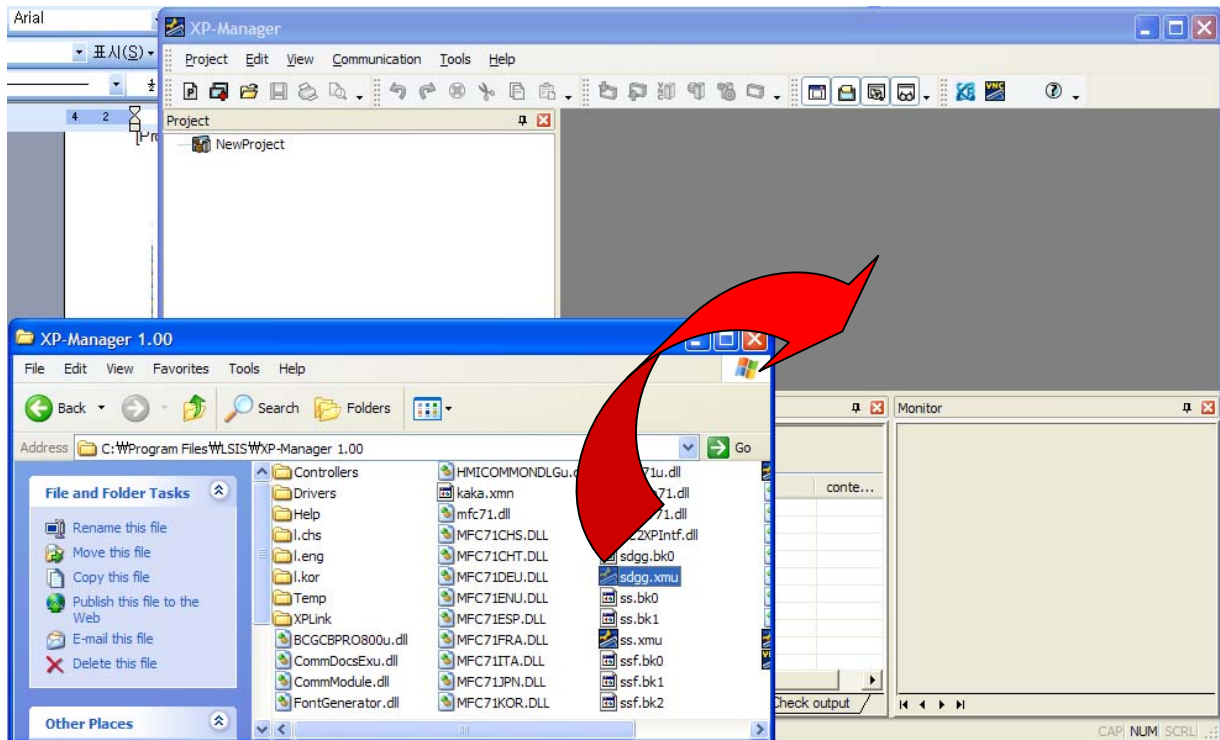
Chap. 5 Tag

5.1 Definition of Tag

Tag is the function to pre-register the device address and type (Bit, Word) frequently used with the name in advance to manage the device easily and conveniently. Device address can be expressed as the name that a user can recognize.
The tag of XP-Manager is the same as that used for XP-Builder but two tags are allowable depending on node configuration type. There are two tags configured by XP-Manger and XP-Builder.

[Regulations for Tag Name]

Number	A number can not be used for the first character of a name. (Ex. 3ABCD)
Special Characters	Special characters are not available except '_'
Space	The space added to the front and rear of a name is not recognized as a name.
Device Name	The address of connected PLC can not be used for the name.(Ex. D0012, %MW123)
Hexadecimal	Hexadecimal such as H234 can not be used for the name

5.1.1   The node added directly and configured manually

There is only the tag screen for XP-Manager.

[Description]

Item	Description
Tag 1(a)	It is the tag configured from XP-Manager. The tag for XP-Manager can be edited.
Tag Screen (b)	It is the tag screen for XP-Manager that can be edited.

5.1.2   The Node configured automatically from XP-Builder file of a computer

There are the tags for XP-Manager and the tag screen created by XP-Builder.

[Description]

Item	Description
Tag 1(a)	It is the tag configured from XP-Manager. The tag for XP-Manager can be edited.
Tag 2: XP-Builder(b)	It is the tag created by XP-Builder and read from the file. XP-Builder tag can not be edited.
Tag Screen (c)	It is the tag screen for XP-Builder that can not be edited. In case that edition is not available, the background color is gray.

5.1.3 Node configured automatically from the file of network

There is the tag for XP-Manager and tag screen configured from XP-Builder.

[Description]

Item	Description
Tag 1(a)	It is the tag created from XP-Manager. The tag for XP-Manager can be edited.
Tag 2: XP-Builder(b)	It is the tag created from XP-Builder and read from the file. XP-Builder can not be edited.
Tag Screen (c)	It is the tag screen for XP-Builder that can not be edited. In case that edition is not available, the background color is gray.

5.2 Tag Declaration

You need to declare tag at tag screen in advance before using tag.

[Procedures]
  (1)   Select [Tag 1] from a project screen and select or double-click [View]-[Properties] menu.
  (2)   Select [Default] tag group.
  (3)   Input the tag name to [Name] column at tag screen.

XP1 (165.244.149.113) - Tag1:1*

	No	Group	Name	Device Type	Address	Description
Tag Group	1	Default	Valve	BIT		
Default	2	Default				
System	3	Default				
	4	Default				

  (4)   Select the device column and press device button.

XP1 (165.244.149.113) - Tag1:1*

	No	Group	Name	Device Type	Address	Description
Tag Group	1	Default	Valve	BIT		
Default	2	Default				
System	3	Default				
	4	Default				

  (5)   Select the device.

Bit Device

(a) → □ Tag

(b) → 0: LSIS:XGK(CPU)

Device Select

(c) → P

(d) → P0000

(k) → 0000

(j) →

7	8	9	Clr	Back
4	5	6	A	B	C
1	2	3	D	E	F
0	.	Enter

(e) → XGK PLC P I/O Register
Bit: P0123A (0~2047F)
Word: P0123 (0~2047)

Network

(f) → ⦿ Use default   ○ Custom setting

(g) → Network ID: 255   Station No.: 255
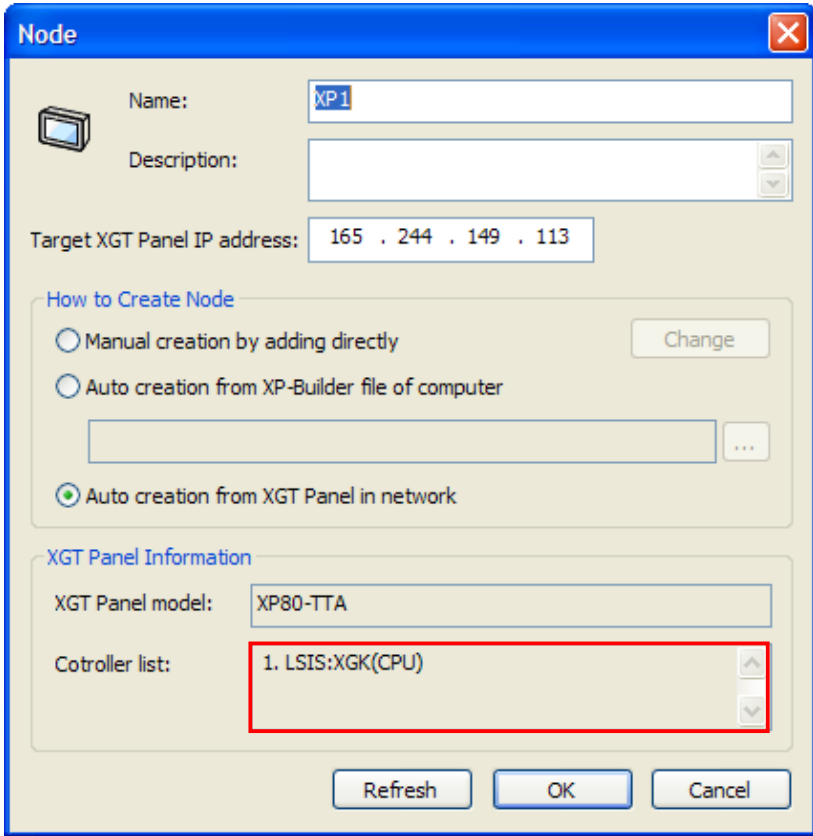
(h) → OK   (i) → Cancel

(6)   If necessary, input the comment.

[Description on a dialog box]

Item	Description
Tag(a)	The button converts the Device Selection Dialog Box into Tag Selection Dialog box.
PLC Driver Selection(b)	You can select other PLC Driver from the list displayed at Node Registration Information.
Device Selection(c)	You can change the kind of device.
Current Input Device (d)	It displays the whole name of the inputted device at the Device Setting Dialog Box.
Device Information(e)	It shows the information and maximum address of the selected device(c).
Designating network unit number (f)	You can change the unit number of target device.
Network Unit No.(g)	You can input the unit number.
OK(h)	It saves the contents of a dialog box and closes the box.
Cancel (i)	It closes a dialog box without saving the contents of a dialog box.
Number Pad(j)	It helps for you to input device.
Offset(k)	It changes the offset of device.

| Notice |

(1)   You can declare the tags up to 1000EA per tag group.

5.3 Tag Deletion

You can delete the declared tag. If tag is deleted, some error may occur at the place where the tag is applied before.

> [Procedures]
> (1)   After selecting [Tag 1] from a project screen, select or double-click [View]-[Properties] menu.
> (2)   Select [Default] tag group.
> (3)   Select the tag to be deleted from tag screen.

XP1 (165.244.149.113) - Tag1:1*

Tag Group	No	Group	Name	Device Type	Address	Description
Default	1	Default	Valve	BIT	P00000	
System	2	Default				
	3	Default				

> (4)   Select [Edit]-[Delete] menu or press Delete key.
> (5)   The tag will be deleted.

XP1 (165.244.149.113) - Tag1:1*

Tag Group	No	Group	Name	Device Type	Address	Description
Default	1	Default				
System	2	Default				
	3	Default				

Notice

(1)   If you select tag name cell and delete the tag, the tag will be deleted.
(2)   If you select tag type and delete the tag, the type will be deleted and it will become bit type. Tag must have the type all the time so it is changed into bit type or no changes.
(3)   If you select tag device and delete the tag, only device will be deleted.
(4)   If you select tag comment and delete the tag, only comment will be deleted.
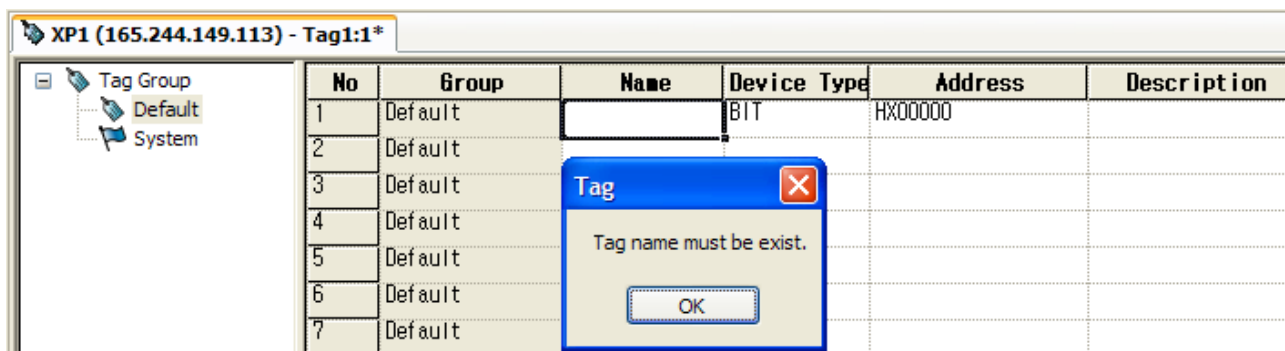
5.4 Tag Revision

You can change the name, device, comment, type of the declared tag.

[Procedures]
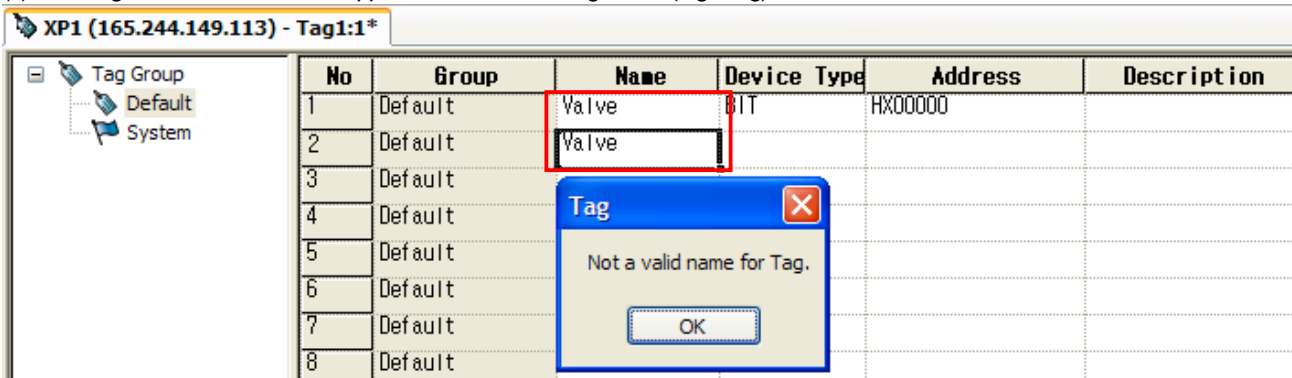- (1)   After selecting [Tag 1] from a project screen, select or double-click [View]-[Registration Information] menu.
- (2)   Select [Default] tag group.
- (3)   Select the tag to be changed from tag screen.
- (4)   Input the revised details.

Notice

(1)   The tag name must exist.

(2)   The tag name can not be overlapped within the same tag screen(tag 1 tag)

(3)   The overlapped tag name can be declared between tag 1 and tag 2 screen.

5.5 Tag Copy/Paste

[Procedures]
- (1) After selecting [Tag 1] from a project screen, select or double-click [View]-[Registration Information] menu.
- (2) Select the [Default] tag group.
- (3) Select the tag to be copied at tag screen.
- (4) After selecting [Edit]-[Copy] menu, copy the tag to a clipboard.
- (5) Move to the position to for Paste.

- (6) Select [Edition]-[Paste] menu and paste it.

Notice
- (1) When pasting tag name, the name of copy is displayed as "Original name_Number" to avoid overlapped name.
- (2) The Copy function of tag screen acts as copying sting. Namely, only selected cell is copied.

5.6 Tag Cut/Paste

[Procedures]
- (1) After selecting [Tag 1] from a project screen, select or double-click [View]-[Properties] menu.
- (2) Select the [Default] tag group.
- (3) Select the tag to be cut at tag screen.
- (4) After selecting [Edit]-[Cut] menu, copy the tag to a clipboard and delete it.
- (5) Move to the position to for Paste.
- (6) Select [Edit]-[Paste] menu and paste it.

Notice
(1) Tag Cut/Paste operation is the same as Tag Deletion-Tag Copy/Paste.

5.7 Tag Auto-Filling

Tag screen has the Auto-Filling function just as Excel. Through this function, you can promptly declare tag that has continuous device address with a similar name.

[Procedures]
(1)   After selecting [Tag 1] from a project screen, select or double-click [View]-[Registration Information] menu.
(2)   Select the [Basic] tag group.
(3)   Select the right below corner of the cell for Auto-Filling at tag screen and make the shape of mouse cursor as below.

(4)   After clicking the right lower part of selected cell, drag it down.

(5)   After moving to the position where Auto-Filling mode is terminated, put away the mouse.
(6)   Then, Auto-Filling process is completed.

Notice

(1)   For Name Auto-Filling column, it increases as "Selected Tag Name + Number to avoid overlapped tag name.

(2)   Type Auto-Filling column does not increase.

(3)   In the terms of Device Column Auto-Filling, the address increases automatically.

(4)   In the terms of Comment Column Auto-Filling, it increases as "Selected Comment +Number". However, when you execute Auto-Filling with pressing Ctrl key, it does not increase and filled with the same comment.

(5)   You can select several horizontal rows for Auto-Filling.

(6)   In the case of Auto-Filling to the upper direction, it decreases as "Selected tag - number".

4	Default				
5	Default				
6	Default				
7	Default				
8	Default	a100	BIT		

4	Default	a096	BIT		
5	Default	a097	BIT		
6	Default	a098	BIT		
7	Default	a099	BIT		
8	Default	a100	BIT		

5.8 Tag Group

For tag group, you can declare tag by collecting the related tag group. It is also required for device communication by tag group.

[The kinds of Tag Group]

| Tag Group	Description
Default Tag Group(a)	The tag group is added basically when node is added to XP-Manager. The group can not be deleted but tag declaration is allowable.
System Tag Group(b)	The tag group is added basically when node is added to XP-Manager. The group can not be deleted and it is the system tag declared basically at XGT Panel. In this case, Tag Declaration/Deletion is not available.
User's declared tag group (c)	The tag group is added by a user and a user can delete it or change its name. Tag Declaration/Deletion process is also available.

Notice

(1) Tag group declaration is not limited in the number.
(2) For basic tag group, system tag group, you can not delete them or not change their name.
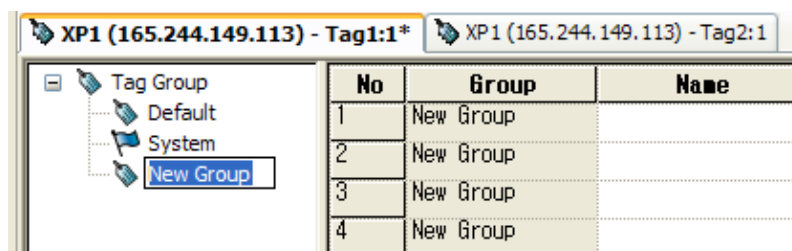
5.9 Tag Group Declaration

You can add tag group.

[Procedures]
- (1)   After selecting [Tag 1] from a project screen, select or double-click [View]-[Properties] menu.
- (2)   Select the light tag group screen.
- (3)   Click the right mouse button at tag screen and select [New Group] of context menu.
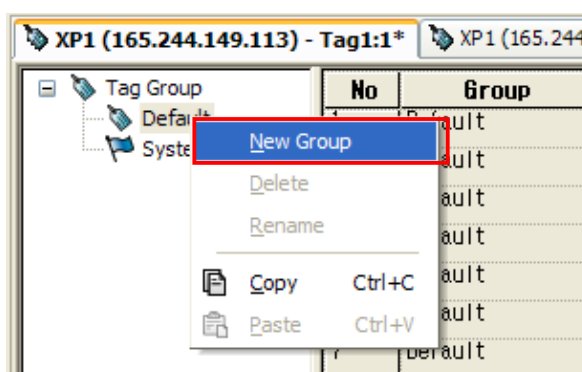
- (4)   Click the right mouse button at tag group screen and select [New Group] of context menu.

- (5)   It is added under the name of "New Group" and you can change the name.
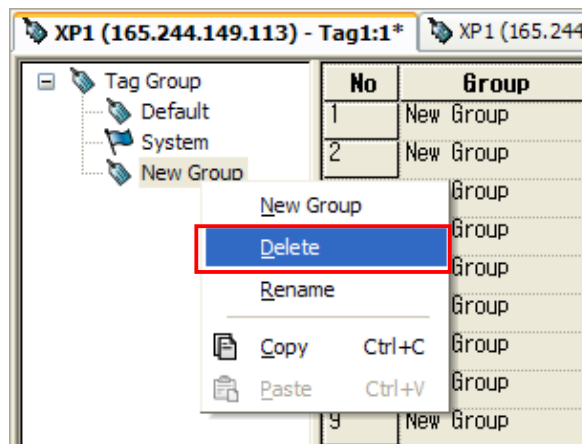

Notice

(1)   The overlapped name of tag group can not be declared.

(2)   You can apply special characters to tag group name.

(3) You can change the name by selecting the selected tag group at tag group screen or selecting [Change Name] of context menu.

5.10 Deleting Tag Group

You can delete the added tag group.

[Procedures]
(1) After selecting [Tag 1] from a project screen, select or double-click [View]-[Registration Information] menu.
(2) Select the light tag group screen.
(3) Select the tag group to be deleted and apply [Delete Group] of context menu.
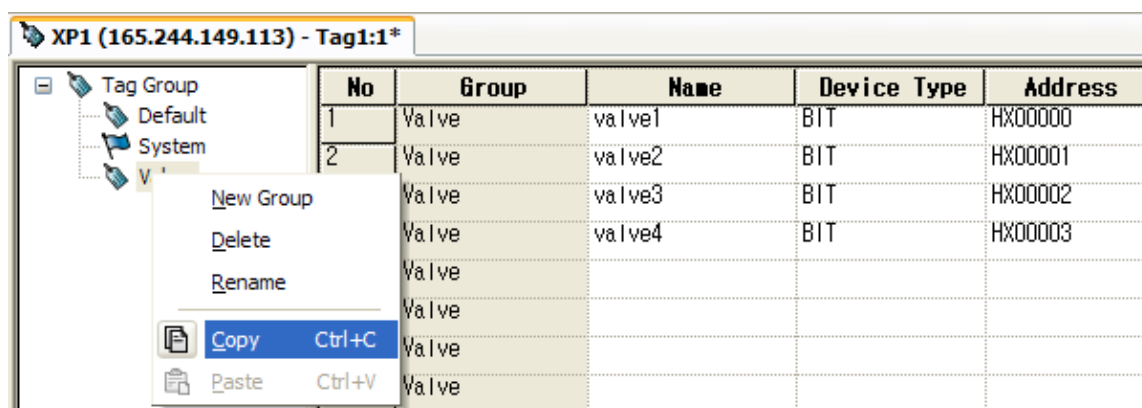

(4) Then, the tag group is deleted.

Notice
(1) When tag group is deleted, all tags of tag group are deleted.

5.11 Tag Group Copy/Paste

You can re-use the added tag through Copy/Paste.

[Procedures]

(1)   After selecting [Tag 1] from a project screen, select or double-click [View]-[Registration Information] menu.

(2)   Select the light tag group screen.

(3)   Select the tag group to be copied and apply [Copy] of context menu.

(4)   Select tag group screen and select [Paste] of context menu.

(5)   Then, the tag group is pasted with the tag of tag group.
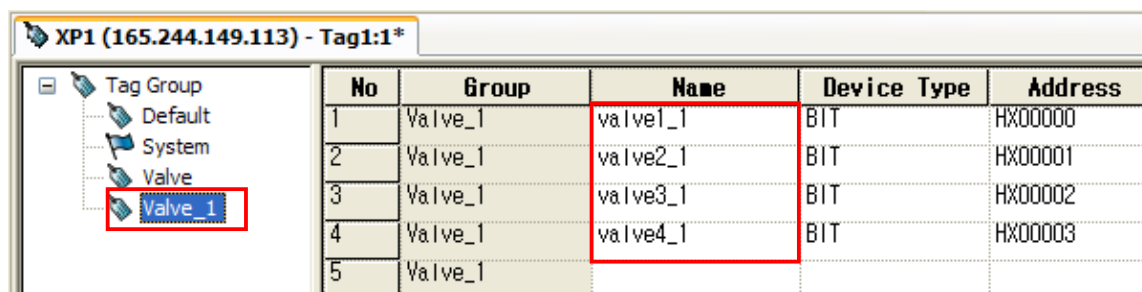
Notice
(1)   When tag group is copied, all tags of groups will be also copied.
(2)   When pasting tag group, it is displayed as "Name_Number" to avoid overlapped name.
(3)   When pasting tag, it is displayed as "Name_Number".

Chap. 6 Device Communication

6.1 Device Communication Screen

[Procedures]

(1) After selecting [Device Communication] from a project screen, select or double-click [View]-[Properties].

[Screen]

[Description on a screen]

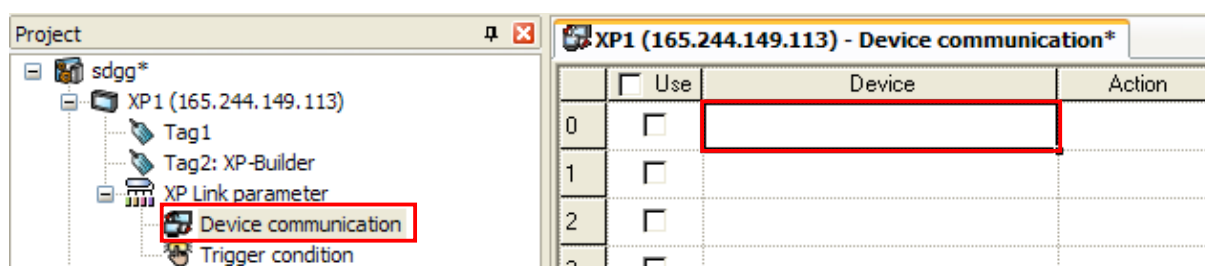| Item	Description
Using row(a)	If you activate using row, device communication will work. If you undo activation for non-used device communication and download it, device communication will not work.
Device Communication Screen Name (b)	It indicates the node name and device communication screen.
Device Row(c)	It indicates the name, type, quantity of operated device.
Action)	It indicates the operation mode.
Target Device Row(e)	It displays the target device list.
No.(f)	It indicates the No. of device communication from 1 to 64.

6.2 Editing Device Communication

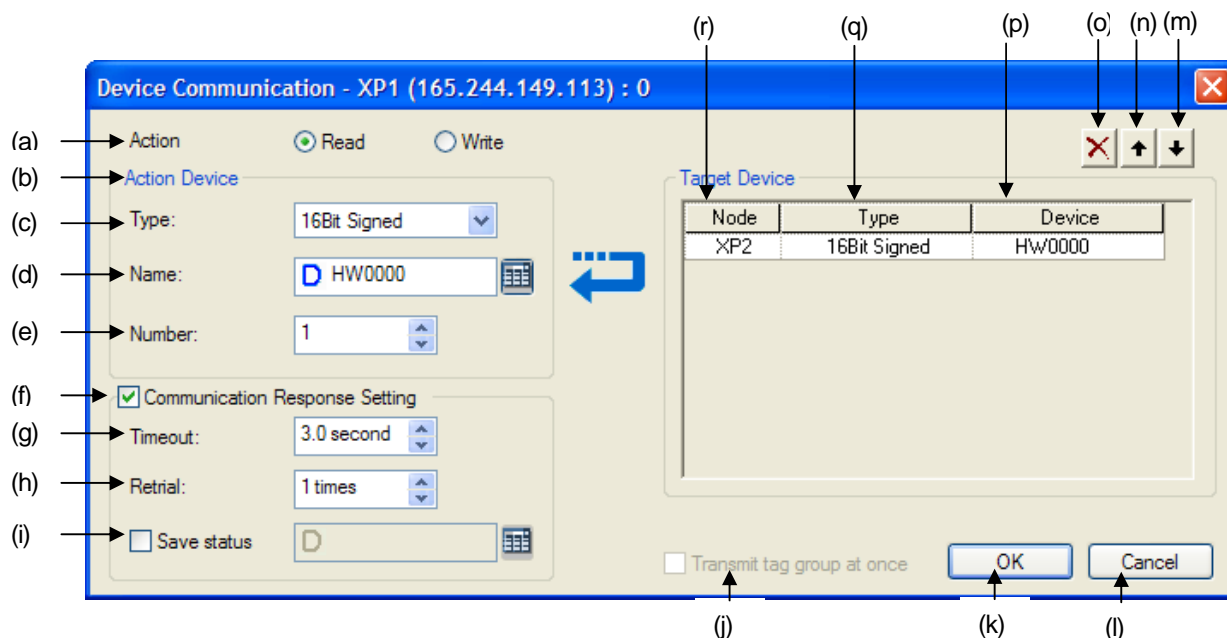### 6.2.1　Reading Device

You can perform Reading Device.

　　[Procedures]
　　　　(1)　　After selecting [Device Communication] from a project screen, select or double-click [View]-[Properties]
　　　　(2)　　After selecting the row to be edited, select or double-click [View]-[Properties]

　　　　(3)　　Select Reading mode for operation.
　　　　(4)　　Select operating device type and input the device.
　　　　(5)　　Select the target node with the same type as operating device and input the device.
　　　　(6)　　Press OK button and close the dialog box.

[Dialog Box]

[Description on a dialog box]

| Item	Description
Action (a)	It selects operation of device communication. Reading from other node, Writing to other node is available.
Action Device(b)	Under Reading mode, the device saves the data read from other node. Under Writing mode, the data of this device can be written to other node.
Type(c)	It is operating device type. In case that operating device type is bit, the target device should be all bit. In case that operating device is 16bit, the target device should be 16bit and if the operating device is 32bit, the target device should be 32 bit.
Name((d)	You can input device name by using device selection button.
The number of devices(e)	You can input the number of continuous devices
Communication response setting (f)	It checks whether device communication works successfully or not. Under Reading mode, Checking Communication Response option is active all the time.
Timeout (g)	You can input timeout value for the case that device communication fails. The maximum limit is 10 seconds.
Retrial(h)	You can input the frequency of retrying communication when timeout occurs.
Save Status (i)	The device is to dace the operation status of device communication.
Transmit tag group at once (j)	When tag group is applied to operating device, the option is to transmit the device of tag group at once.
OK(k)	It saves the details of a dialog box and closes it.
Cancel(l)	It closes the dialog box without saving dialog box details.
Down(m)	It moves the selected target device to the lower direction.
Up(n)	It moves the selected target device to the upper direction.
Delete (o)	It deletes the selected device.
Target Device(p)	It can input the target device.
Type(q)	It selects the target device type.
Node(r)	It selects the target node.

Notice

(1) For Reading mode, you can designate only one target device.
(2) For Writing mode, you can designate the target device up to 1024EA.
(3) The type of operating device should be the same as the type of target device.
(4) In Reading mode, operating device is Read Only device, error may occur.
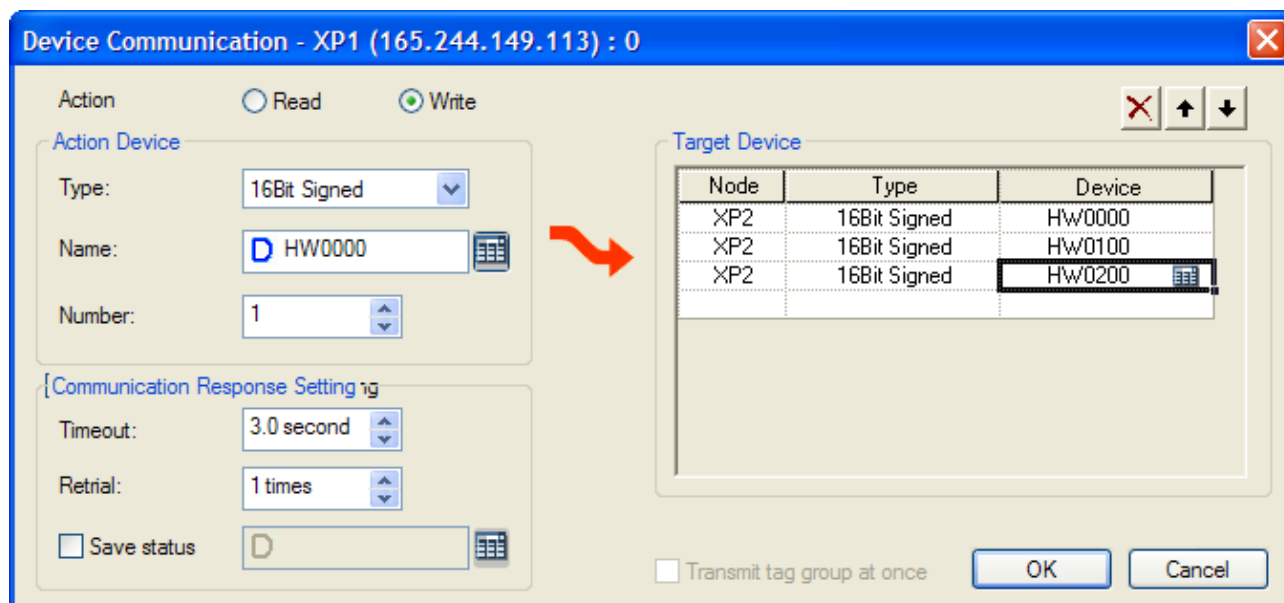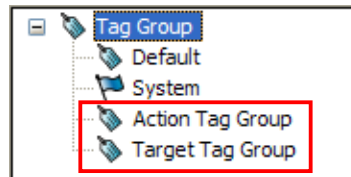
6.2.2 Writing Device

[Procedures]
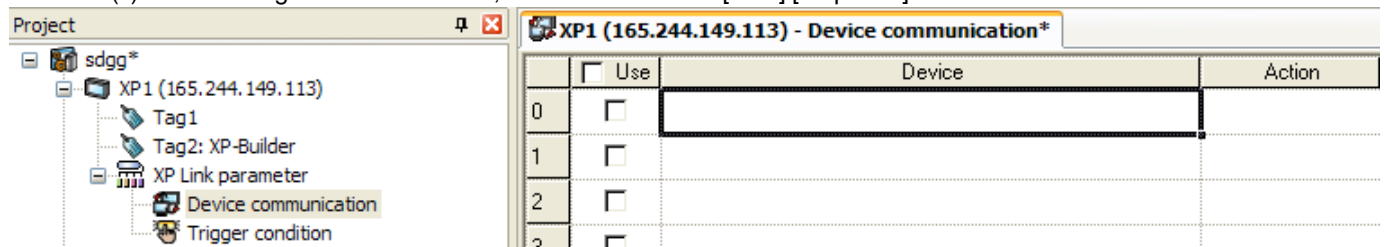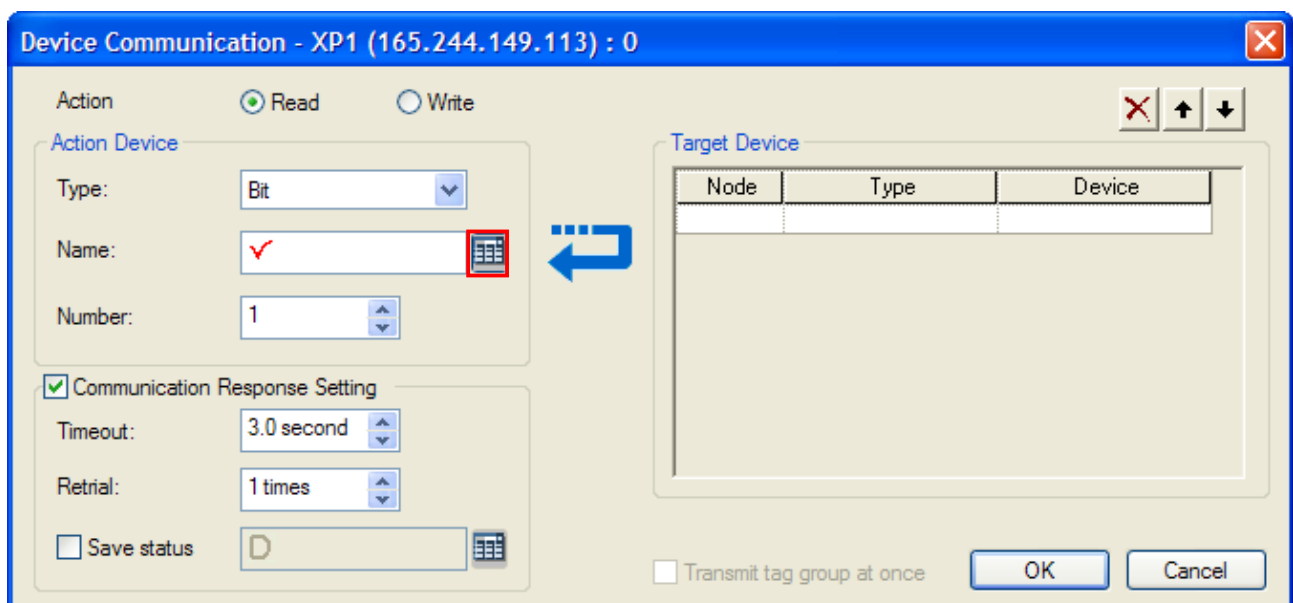   (1)   After selecting [Device Communication] from a project screen, select or double-click [View]-[Properties].
   (2)   After selecting the row to be edited, select or double-click [View]-[Properties].
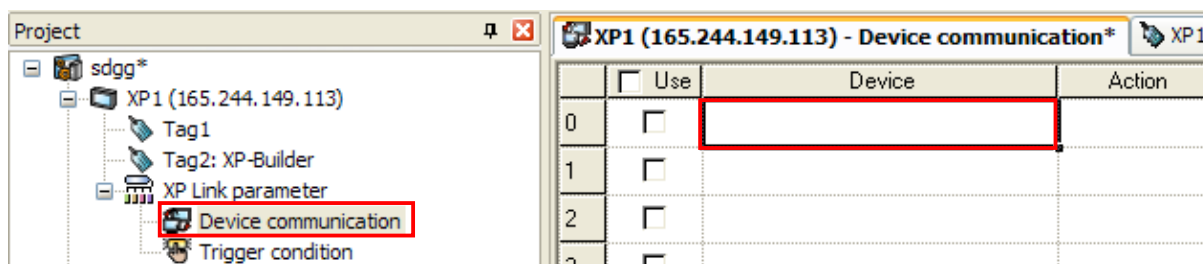
   (3)   Select Writing mode for operation.
   (4)   Select action device type and input the device.
   (5)   Select the target node with the same type as operating device and input the device.
   (6)   Press OK button and close the dialog box.

[Dialog Box]

Notice
(1) If too many device communications or target devices are designated, it may deteriorate the performance of XGT Panel.

6.2.3 Using Tag Group

You can designate tag group with action device of device communication and it is useful to send communication operations as structured data.

[Procedures]
- (1)   Open tag screen.
- (2)   Add the tag group.

(3)   Add the tag.
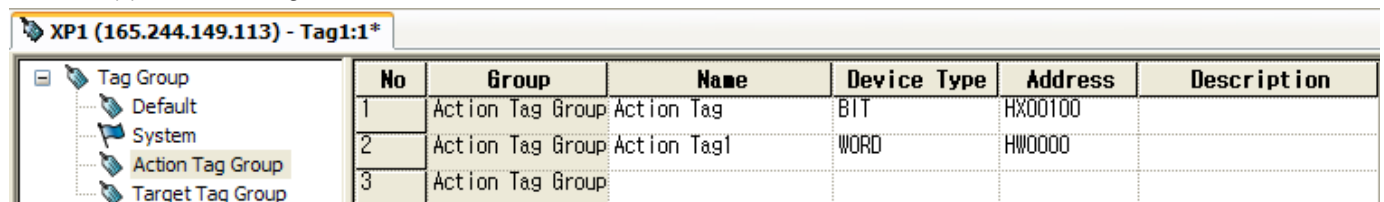
(4) After selecting [Device Communication] at a project screen, select or double-click [View]-[Properties].

(5) After selecting the row to be edited, select or double-click [View]-[Properties].

(6) Select device selection button.

(7) Activate the tag and Selecting Tag Group menu.
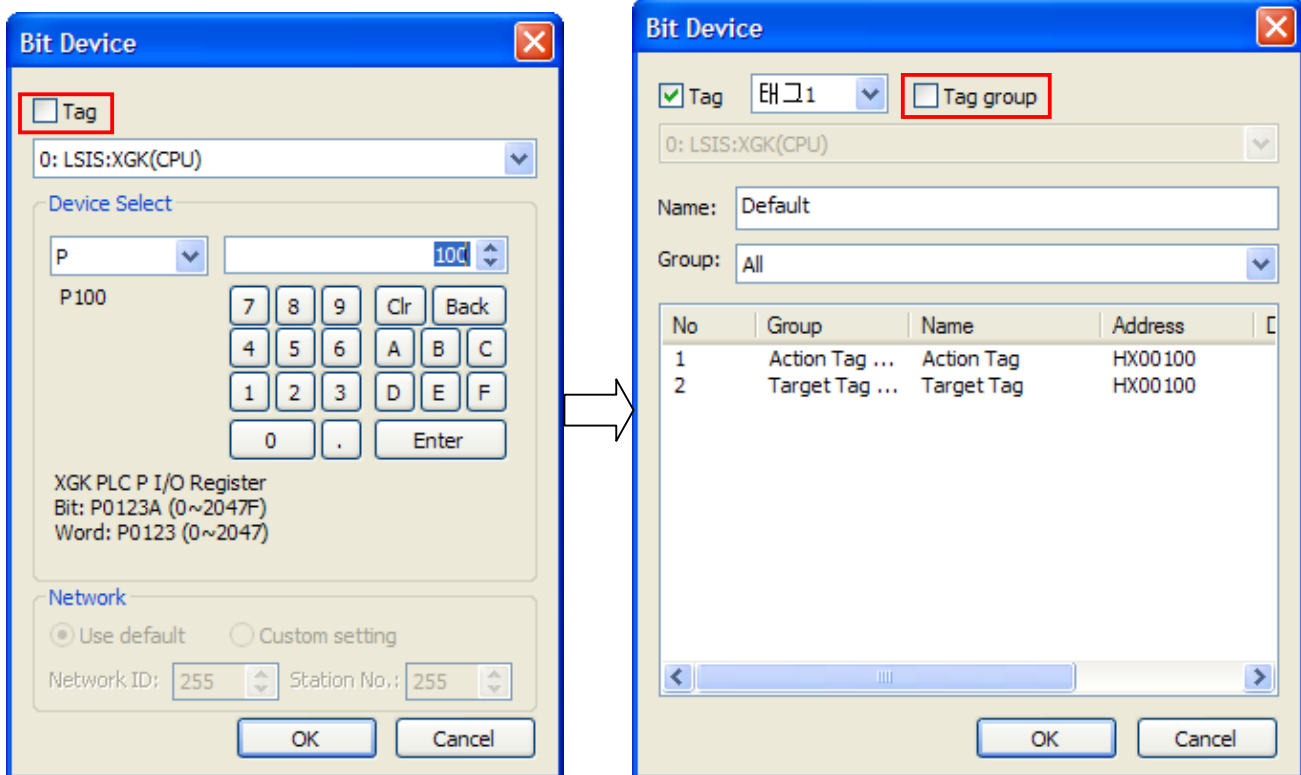
(8) After selecting tag group from tag group list and press OK button.
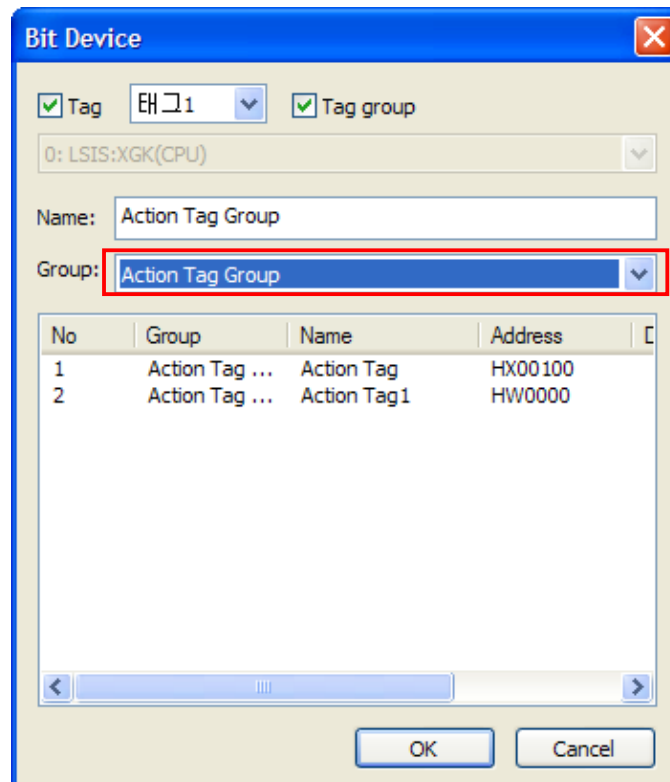
(9) After selecting operating device and target device as tag group, press OK button.

Notice

(1) If action device is tag group, the target device that has the same structure should be added.

(2) If action device is designated as tag group, you can not set the device type and quantity.

(3) If the tag group of action device has different structure from the target device's tag group, error may occur.

6.3 Deleting Device Communication

[Procedures]

(1)　After selecting [Device Communication] from a project screen, select or double-click [View]-[Properties].

(2)　Select the edge of row to be deleted.

(3)　Select [Edit]-[Delete] menu.

Notice

(1) If you select several rows and delete it, all selected items will be deleted.

6.4 Device Communication Copy/Paste

[Procedures]
- (1)   After selecting [Device Communication] from a project screen, select or double-click [View]-[Registration Information].
- (2)   Select the edge of row to be copied and select [Edition]-[Copy] menu.

	Use	Device	Action	Target device
0	☑	[XP1 (165.244.149.113)] Bit, HX00000	↵	[XP2 (165.244.149.116)] Bit, HX00100
1	☐			
2	☐			

- (3)   Move to the cell to be pasted and select [Edition]-[Paste] menu to paste it.

	Use	Device	Action	Target device
0	☑	[XP1 (165.244.149.113)] Bit, HX00000	↵	[XP2 (165.244.149.116)] Bit, HX00100
1	☑	[XP1 (165.244.149.113)] Bit, HX00000	↵	[XP2 (165.244.149.116)] Bit, HX00100

Notice

(1) You can paste the copied details to other XP-Manager.
(2) After Paste, the node name or device name may not be shown since the copied node name does not exist at the pasted project. In this case, re-edit the pasted row to delete error.

* After Paste, select the screen where error occurred, target node, delete error.

6.5 Device Communication Cut/Paste

[Procedures]
  (1)   After selecting [Device Communication] from a project screen, select or double-click [View]-[Properties].
  (2)   Select the edge of row to be cut and select [Edit]-[Cut] menu.

  (3)   The selected row is deleted.
  (4)   Move to the cell to be pasted and select [Edition]-[Paste] to paste it.

Notice

 (1)   Cut is the same as the Delete function after Copy.

6.6 Device Communication Drag & Drop

[Procedures]

(1)   After selecting [Device Communication] from a project screen, select or double-click [View]-[Properties].

(2)   Select the edge of row to be dragged and click the left mouse button.

(3) Put the mouse to the position to be dragged and out it away.

(4) You can see that the selected row is moved.

Notice
(1)   The Drag & Drop function at the identical screen is the same as Copy/Paste.
(2)   The Drag & Drop function to other screen is the same as Copy/Paste.
(3)   If you drop with pressing Ctrl button, Copy/Paste function at the same screen is available.

6.7 Delete Device Communication

[Procedures]
   (1) After selecting [Device Communication] from a project screen, select or double-click [View]-[Properties].
   (2) Select the row to be deleted.

   (3) Select [Edition]-[Delete] menu and delete it.

   (4) Select [Edition]-[Undo] menu.
   (5) It returns to the previous status before edition.

Notice
(1) You need the previous edition history to Undo Edition.
(2) Redo Edition is not limited in the quantity.
(3) You can Undo Edition for all functions.

6.8 Redo Device Communication

[Procedures]
  (1)   After selecting [Device Communication] from a project screen, select or double-click [View]-[Properties].
  (2)   Select the row to be deleted.

  (3)   Select [Edit]-[Delete] menu and delete it.

  (4)   Select [Edit]-[Undo] menu.
  (5)   Then, it returns to the previous status before edition.

  (6)   Select [Edit]-[Redo] menu.
  (7)   Then, selected row is deleted again.

Notice
(1) Redo Edition is not limited in the quantity.
(2) You need the previous edition history to Redo Edition.

6.9 Device Communication Print Preview

[Procedures]
- (1) After selecting [Device Communication] at a project screen, select or double-click [View]-[Registration Information].
- (2) Select Device Communication screen.
- (3) Select [Project]-[Print Preview] menu.
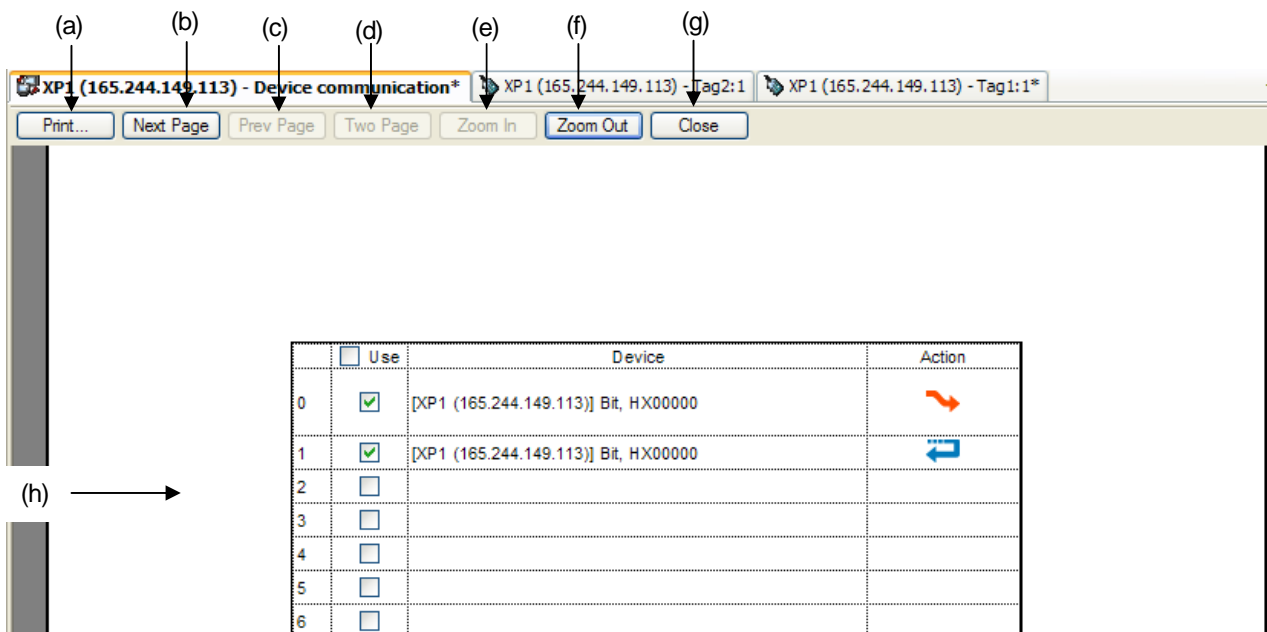
[Screen]

[Description on a screen]

Item	Description
Print(a)	It prints the current screen.
Next Page (b)	It previews the next screen.
Previous Page(c)	It previews the previous screen.
Two Pages(d)	It previews two pages per screen.
Zoom In(e)	It expands the current screen to full size.
Zoom Out(f)	It reduces the current Preview Screen.
Close(g)	It closes the Preview Screen and moves to the Edition Screen.
Screen(h)	It previews the current screen.

Notice
- (1) It is printed as Preview Screen.
- (2) Through Preview Screen, you can adjust the screen not to be cut with the width of row.
- (3) Edition is not available at Preview Screen.

6.10 Device Communication Print Preview

[Procedures]

(1)   After selecting [Device Communication] at a project screen, select or double-click [View]-[Properties].

(2)   Select Device Communication screen.

(3)   Select [Project]-[Print] menu.

(4)   The Print Dialog Box will be shown as below.

(5)   Then, press [OK] button to print it.
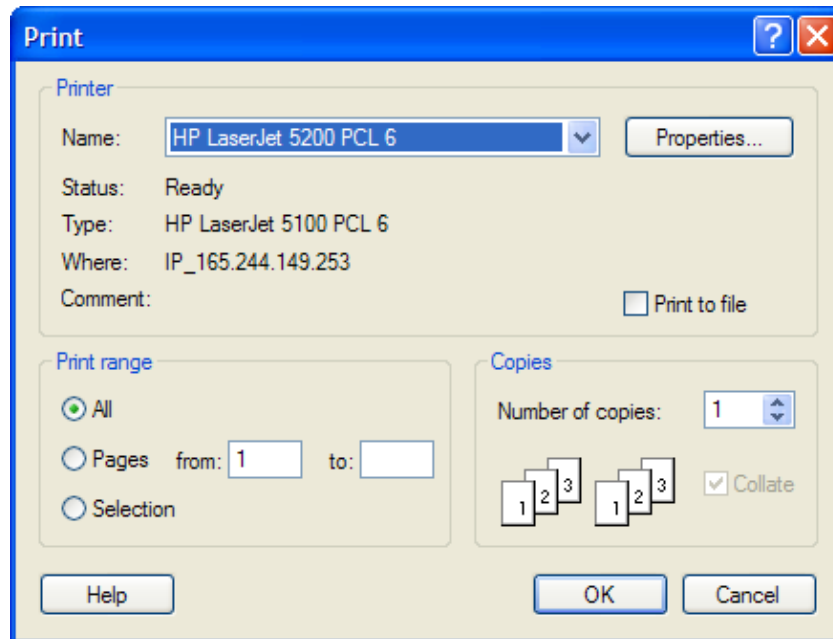
Notice
(1)   The above dialog box may be different depending on Windows version.

Chap. 7 Trigger Condition

7.1 Description on the screen of Trigger Condition

[Procedures]

(1)   After selecting [Trigger Condition] from a project screen, select or double-click [View]-[Registration Information] menu.
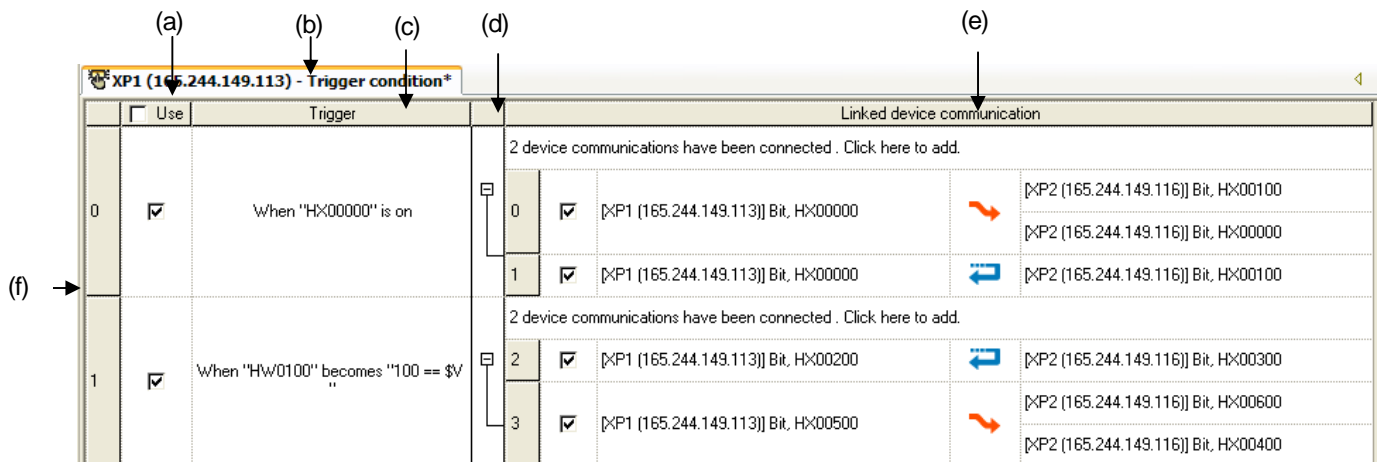
[Screen]

[Description on a screen]

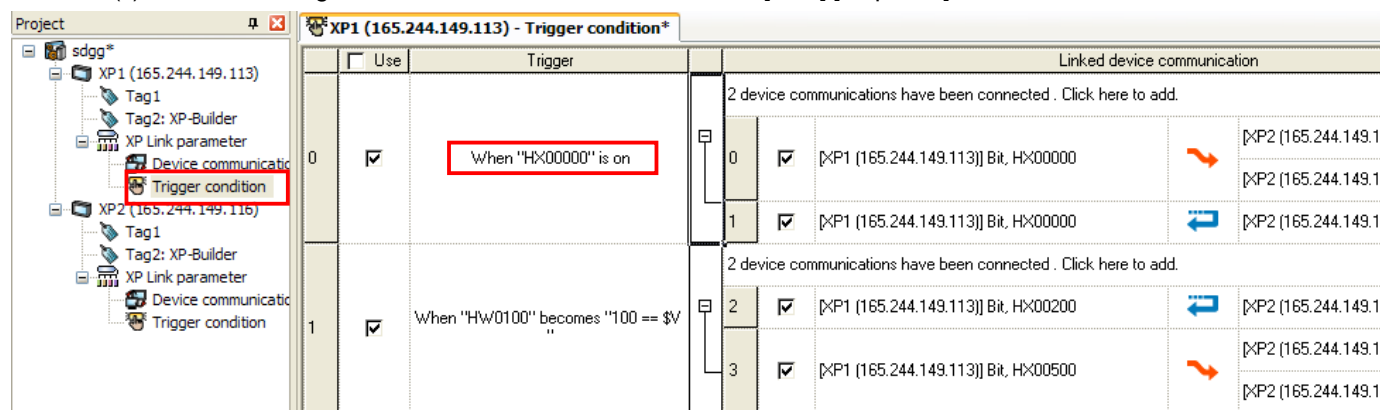| Item	Description
Using row (a)	Trigger condition does not work until using row is checked.
Trigger condition screen name (b)	It indicates the node name and trigger condition screen.
Trigger Condition row(c)	It describes trigger condition.
Full Screen Button (d)	It is displayed when there is the device communication connected to trigger condition. Every time that you press the button, connected device communication is expanded or reduced.
Connected device communication row (e)	It indicates the connected device communication list.
No.(f)	It indicates the number of trigger condition from 1 to 64.

7.2 Editing Trigger Condition

Trigger is to provide the condition for device communication under XP Link communication of XGT Panel. Every time trigger is configured, device communication connected to trigger is available. There are bit, word, time, system triggers.

7.2.1 Editing Bit Trigger

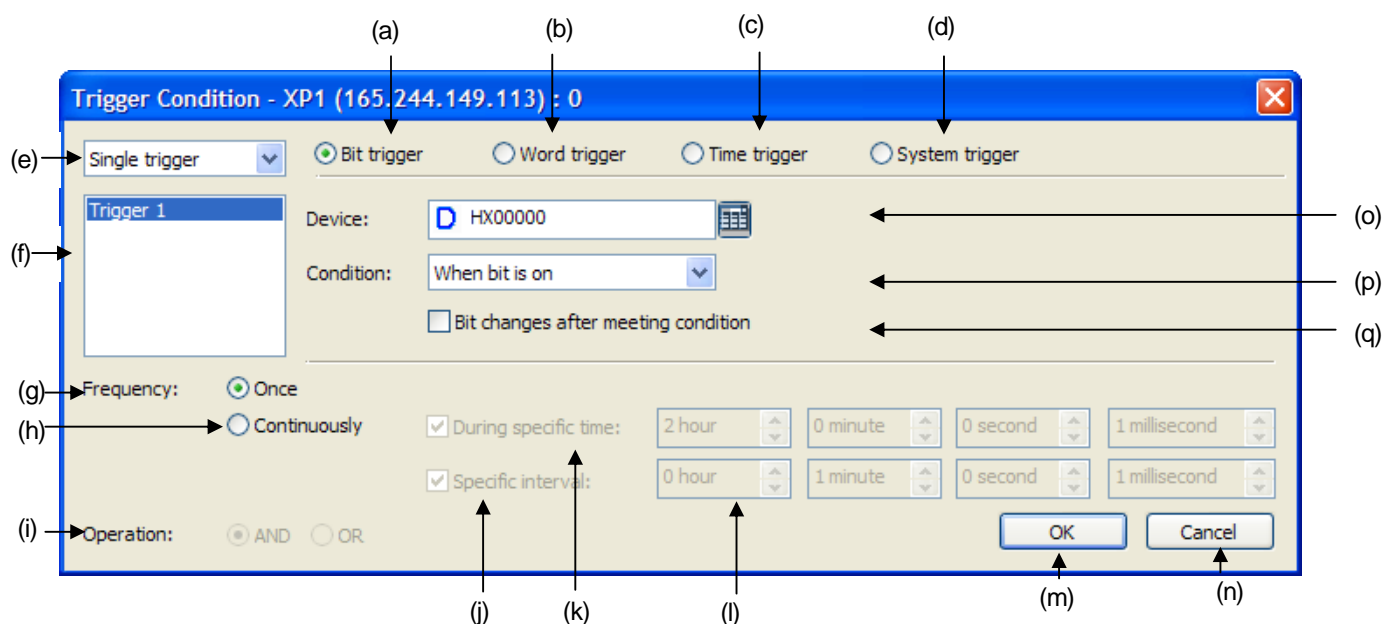You can configure trigger with bit device condition.

[Procedures]
(1) After selecting [Trigger Condition] from a project screen, select or double-click [View]-[Properties]

(2) After selecting the row to be edited, select or double-click [View]-[Properties].

(3) Select the bit trigger.
(4) Input the bit device.
(5) Input bit condition.
(6) Press OK button to close a dialog box.

[Dialog Box]

[Description on a dialog box]

Item	Description
Bit Trigger(a)	It configures the trigger on condition of bit device condition.
Word Trigger(b)	It configures the trigger on condition of word device condition
Time Trigger(c)	It configures the trigger at a specific time.
System Trigger (d)	It configures the trigger depending on operation status of XGT Panel.
The number of Triggers(e)	You can set the number of triggers up to 4 EA.
Current Trigger(f)	You can select the trigger for current edition among 4 triggers.
Frequency, Once(g)	It configures trigger once when trigger condition is fulfilled.
Frequency, Continuously (h)	It configures trigger even after trigger condition is fulfilled.
Operation Condition(i)	For complex trigger that has two or more, it can configure trigger with operation condition between triggers.
Specific Interval(j)	It configures trigger at certain interval after trigger is configured. However, trigger condition is not fulfilled, trigger is not configured.
During specific time (k)	It configures continuously trigger at a certain time.
Time Setting (l)	You can input time value.
OK(m)	It saves the details of a dialog box and closes it.
Cancel(n)	It closes the dialog box without saving the details of a dialog box.
Device (o)	You can input bit device.
Bit Condition	You can select bit condition.
	Bit On HX0001:
	Bit Off HX0001:
	Bit Reversal HX0001:
	During Bit On HX0001:
	During Bit Off HX0001:
Bit changes after meeting condition (q)	When bit device condition is [Bit On] or [Bit Off], it reverses the bit device value after conditions are fulfilled.

Notice

(1) Read only device can not be designated as bit condition device.

(2) After the condition is fulfilled, bit reversal (q) is active only when bit condition is [Bit On] or [Bit Off].

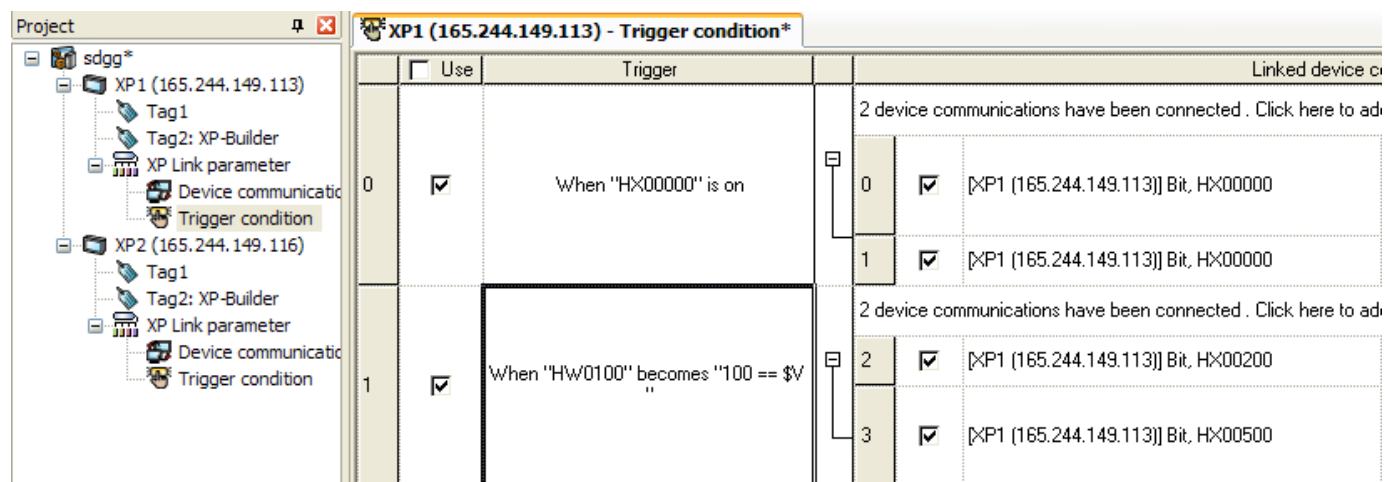(3) Time Setting(l) is active only when Frequency Continue(h) is applied.

7.2.2   Editing Word Trigger

You can configure trigger with bit device condition.

    [Procedures]
        (1) [After selecting [Trigger Condition] from a project screen, select or double-click [View]-[Properties]
        (2) After selecting the row to be edited, select or double-click [View]-[Properties].

        (3) Select the word trigger.
        (4) Input the word device.
        (5) Input word condition.
        (6) In case that word condition is [When meeting condition] or [During meeting condition], input the condition.
        (7) Press OK button to close a dialog box.
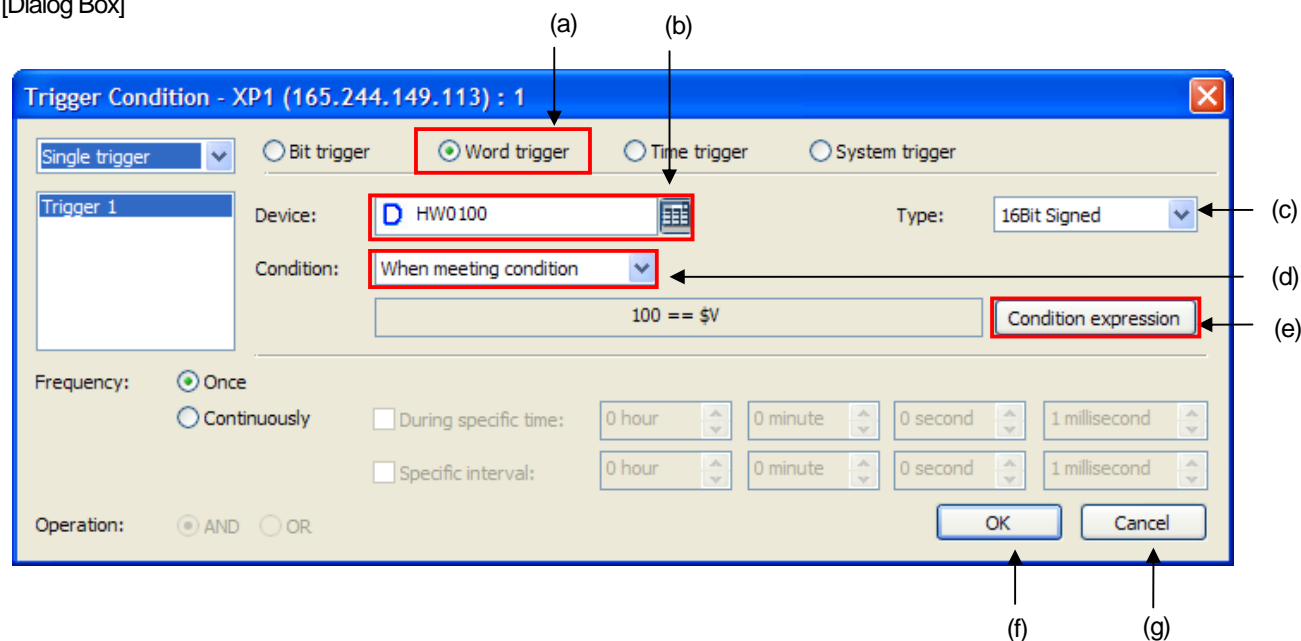
[Dialog Box]

[Description on a dialog box]

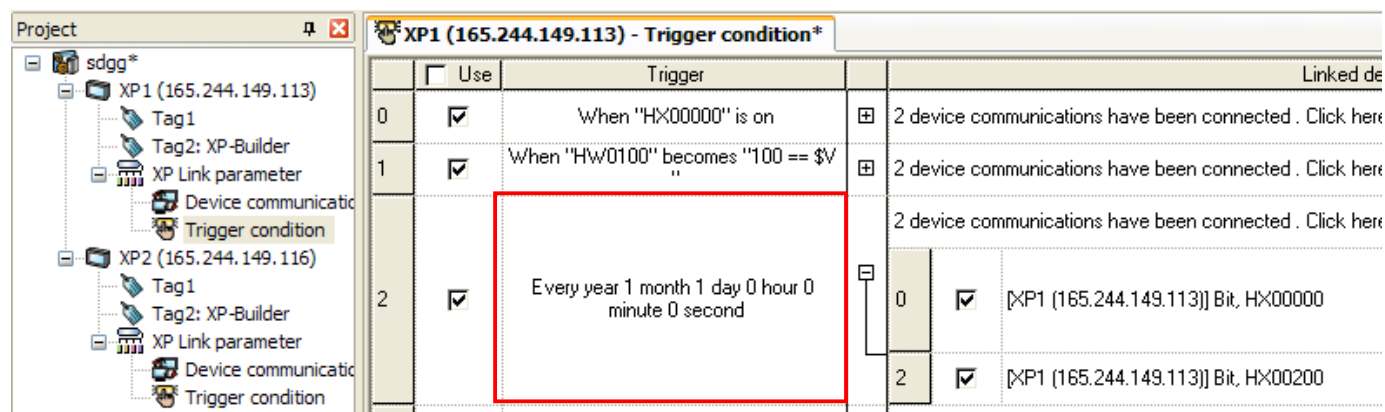| Item	Description	
Word Trigger (a)	It configures trigger on condition of word device.	
Device (b)	You can input word device.	
Type(c)	It selects device type.	
Word Condition(d)	You can select word condition.	
	When condition expression is fulfilled	Condition Expression: 0 < HW0000
	While condition expression is fulfilled	Condition Expression: 0 < HW0000 < 100
	When the value is changed	
Condition Expression (e)	You can input condition expression.	
OK(f)	It saves the details of a dialog box and closes it.	
Cancel (g)	It closes the dialog box without saving the details of a dialog box.	

Notice

(1) Read Only device can not be designated as word condition device.

(2) Condition expression(e) is active only when word condition is [When meeting condition] or [During meeting condition].

7.2.3   Editing Time Trigger
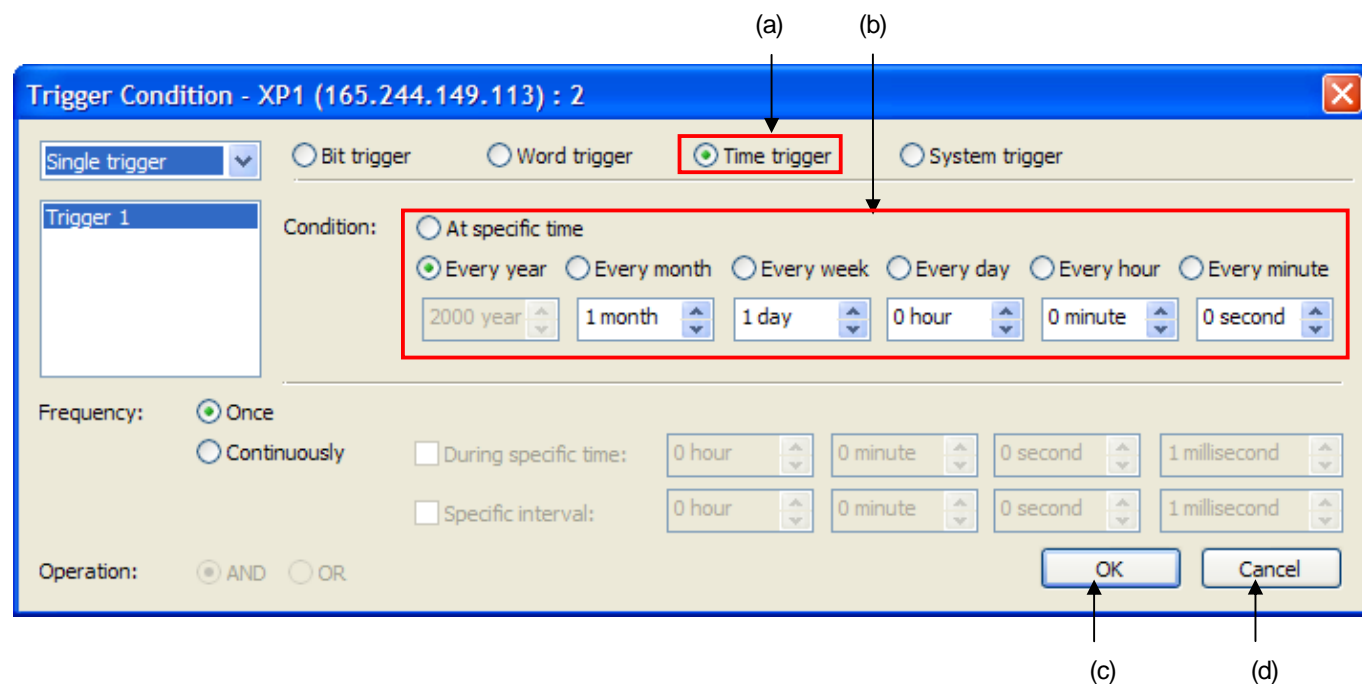
You can configure trigger at a specific time.

[Procedures]
   (1) After selecting [Trigger Condition] from a project screen, select or double-click [View]-[Properties]
   (2) After selecting the row to be edited, select or double-click [View]-[Properties].

   (3) Select time trigger.
   (4) Set the specific time or repeating time.
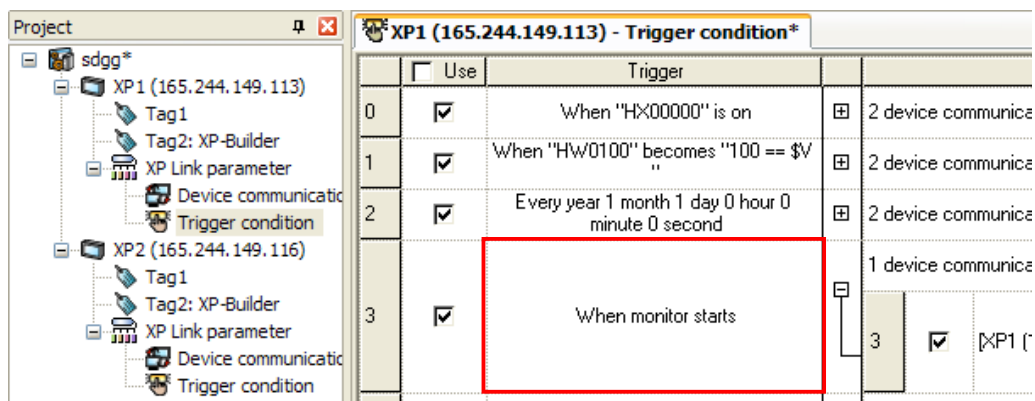   (5) Press OK button to close the dialog box.

[Dialog Box]

[Description on a dialog box]

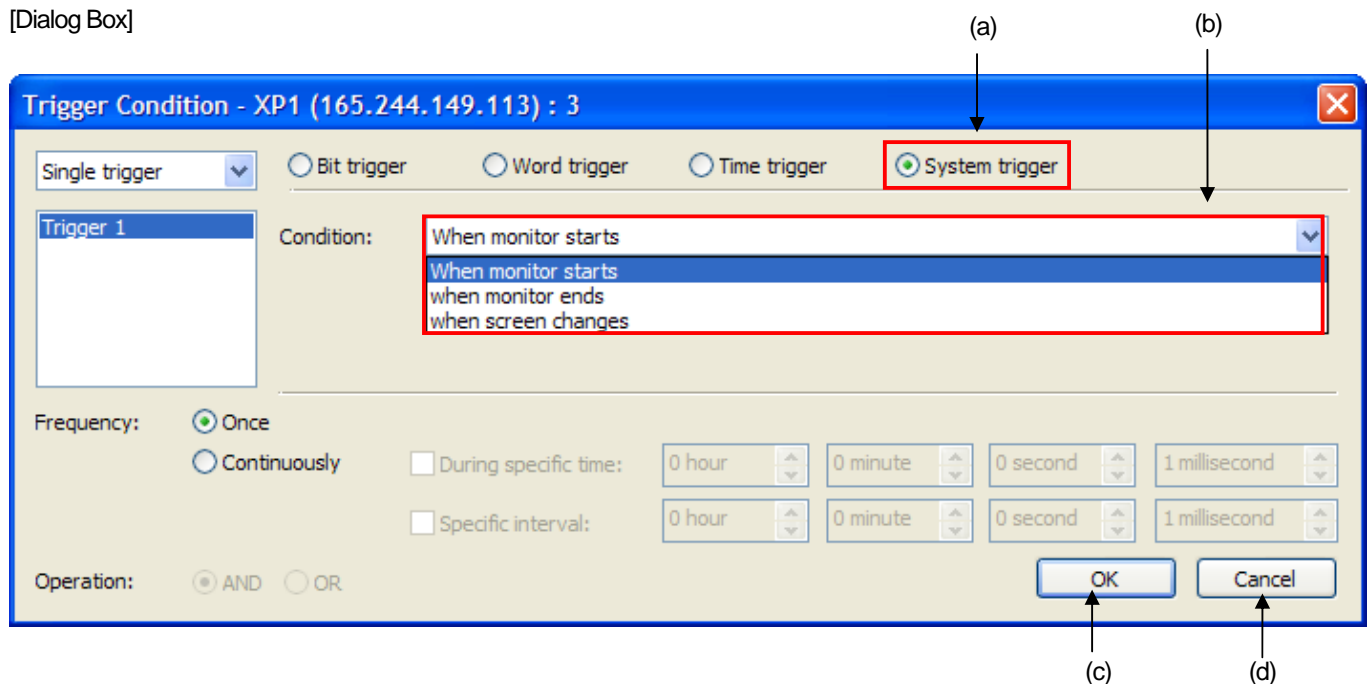| Item	Description
Time Trigger(a)	It configures the trigger at a specific or certain time.
Time Conditions(b)	You can input every year/every month/every week/every hour/every minute with time conditions.
OK (c)	It saves the details of a dialog box and closes it.
Cancel (d)	It closes the dialog box without saving the details of a dialog box.

7.2.4 Editing System Trigger

[Procedures]
(1) After selecting [Trigger Condition] from a project screen, select or double-click [View]-[Properties]
(2) After selecting the row to be edited, select or double-click [View]-[Properties].

(3) Select system trigger.
(4) Establish the conditions for system trigger.
(5) Press OK button to close a dialog box.

[Dialog Box]

[Description on a dialog box]

Item	Description
System Trigger (a)	It configures the trigger with the event that can occur at XGT Panel only.
Condition(b)	It selects the conditions for system event.
OK(c)	It saves the details of a dialog box and closes it.
Cancel (d)	It closes the dialog box without saving the details of a dialog box.

7.2.5   Complex Trigger

When two triggers or more are designated, it is called complex trigger.

[Procedures]
  (1) [After selecting [Trigger Condition] from a project screen, select or double-click [View]-[Properties]
  (2) After selecting the row to be edited, select or double-click [View]-[Properties].

  (3) Select two complex triggers.
  (4) Select [Trigger 1] and set the details.

(5) Select [Trigger 2] and set the details.

(6) Select operation conditions.
(7) Press OK button to close a dialog box.

Notice
(1) In the case of the given example, conditions are [When monitor stars] and bit [HX0000 is On].
(2) You can designate the complex triggers up to 4 EA.
(3) While operation condition AND configures trigger when all conditions are fulfilled, OR configures trigger when even one condition is fulfilled.

7.3 Connecting Device Communication

You can not operate anything with trigger only. Then, if you connect the established trigger to device communication, device communication is available.

[Procedures]
(1) [After selecting [Trigger Condition] from a project screen, select or double-click [View]-[Properties]
(2) After selecting the row to be connected to device communication, select the first one of the rows to be connected device communication.

(3) Press the button of the below arrow direction or double-click the cell to open device communication list.

(4) Select the one of device communication list and double-click it.
(5) Then, selected device communication is connected.

Notice
(1)   The maximum number of connected device communication is 255.
(2)   When trigger is configured, connected device communication works as procedures.
(3) In the case of the given example, when the value of bit device HX00000 is on, one bit data from the device HX500 is written to bit device HX600 and HX400 of XP2

7.4 Deleting Connected Device Communication

[Procedures]
   (1) [After selecting [Trigger Condition] from a project screen, select or double-click [View]-[Properties]
   (2) Select the device to be deleted.

   (3) Select [Edit]-[Delete] menu.

Notice
(1) The function to delete two devices at once is not available.

7.5 Editing Connected Device Communication

[Procedures]
   (1) After selecting [Trigger Condition] from a project screen, select or double-click [View]-[Properties]
   (2) Select the device to be edited.

(3) Double-click it or press Enter button.
(4) Edit the details of device communication.

(5) Press OK button to save changed details.

7.6 Deleting Trigger Condition

[Procedures]
(1) After selecting [Trigger Condition] from a project screen, select or double-click [View]-[Properties]
(2) Select the trigger list to be deleted.

(3) Select [Edit]-[Delete] menu.
(4) Then, selected item is deleted.

7.7 Trigger Copy/Paste

[Procedures]

    (1) After selecting [Trigger Condition] from a project screen, select or double-click [View]-[Properties]

    (2) Select the trigger to be copied.

    (3) Select [Edit]-[Copy] menu.

    (4) Select the row for Paste.

    (5) Select [Edit]-[Paste] menu.

    (6) Then, the trigger is pasted.

Notice
(1)   If the row for Paste is already declared trigger, overwrite is available.
(2)   You can not copy the connected device communication only.
(3)   You can perform Copy/Paste to other XP-Manager.
(4)   When the device of copied trigger is pasted, it may not be displayed. If the PLC Driver of copied node is different form the PLC Driver of pasted node, it is not displayed.

7.8 Trigger Cut/Paste

[Procedures]
    (1) After selecting [Trigger Condition] from a project screen, select or double-click [View]-[Properties].
    (2) Select the trigger to be copied.

    (3) Select [Edit]-[Cut] menu.
    (4) Then, selected row is deleted.

    (5) Select the row for Paste.
    (6) Select [Edit]-[Paste] menu.
    (7) Then, the trigger is pasted.

7.9 Trigger Condition Drag & Drop

[Procedures]
(1) After selecting [Trigger Condition] from a project screen, select or double-click [View]-[Properties].
(2) Select the edge of row to be dragged and click the left mouse button.

(3) Put the mouse to the position to be dragged and out it away.
(4) You can see that the selected row is moved.

Notice

(1) The Drag & Drop function at the identical screen is the same as Copy/Paste.
(2) The Drag & Drop function to other screen is the same as Copy/Paste.
(3) If you drop with pressing Ctrl button, Copy/Paste function at the same screen.

7.10 Undo Edition for Trigger Condition

[Procedures]
  (1) After selecting [Trigger Condition] from a project screen, select or double-click [View]-[Properties].
  (2) Select the row to be deleted.

  (3) Select [Edit]-[Delete] menu and delete it.

  (4) Select [Edit]-[Undo] menu.
  (5) It returns to the previous status before edition.

Notice
(1) You need the previous edition history to Undo Edition.
(2) Redo Edition is not limited in the quantity.
(3) You can Undo Edition for all functions.

7.11 Redo Trigger Condition

[Procedures]
    (1) After selecting [Device Communication] from a project screen, select or double-click [View]-[Properties].
    (2) Select the row to be deleted.

    (3) Select [Edition]-[Delete] menu and delete it.

    (4) Select [Edit]-[Undo] menu.
    (5) Then, it returns to the previous status before edition.

    (6) Select [Edit]-[Redo] menu.
    (7) Then, selected row is deleted again.

Notice
(1) Redo Edition is not limited in the quantity.
(2) You need the previous edition history to Redo Edition.

7.12 Trigger Condition Print Preview

[Procedures]
    (1)   After selecting [Trigger Condition] at a project screen, select or double-click [View]-[Properties].
    (2)   Select Trigger Condition screen.
    (3)   Select [Project]-[Print Preview] menu.
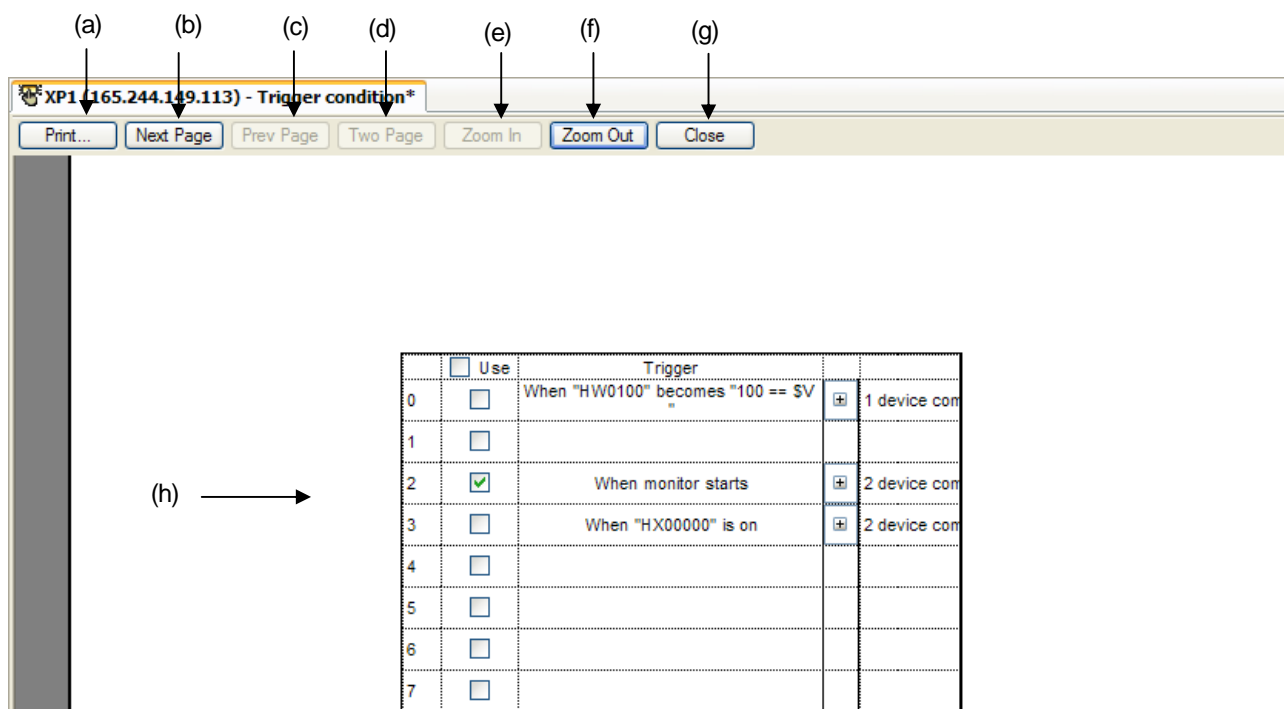
[Screen]

[Description on a screen]

Item	Description
Print(a)	It prints the current screen.
Next(b)	It previews the next screen.
Previous (c)	It previews the previous screen.
Two Pages(d)	It previews two pages per screen.
Zoom In (e)	It expands the current screen to full size.
Zoom Out(f)	It reduces the current Preview Screen.
Close(g)	It closes the Preview Screen and moves to the Edition Screen.
Screen(h)	It previews the current screen.

Notice

(1)   It is printed as Preview Screen.
(2)   Through Preview Screen, you can adjust the screen not to be cut with the width of row.
(3) Edition is not available at Preview Screen.

7.13 Printing Trigger Condition

[Procedures]
- (1)   After selecting [Trigger Condition] at a project screen, select or double-click [View]-[Properties].
- (2)   Select Trigger Condition screen.
- (3)   Select [Project]-[Print] menu.
- (4)   The Print Dialog Box will be shown as below.
- (5)   Then, press [OK] button to print it.
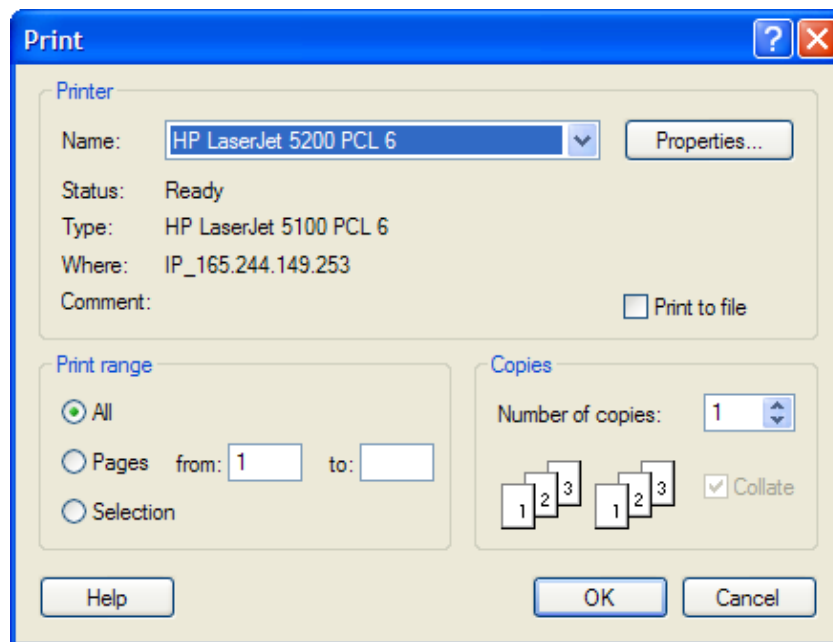
Notice

 (1)   The below Pint Dialog Box may be different from Windows version.

Chap.8 View

8.1 Tools

You can show or hide docking screen.

[[Procedures]
(1)   Select [View]- [Tools] menu.
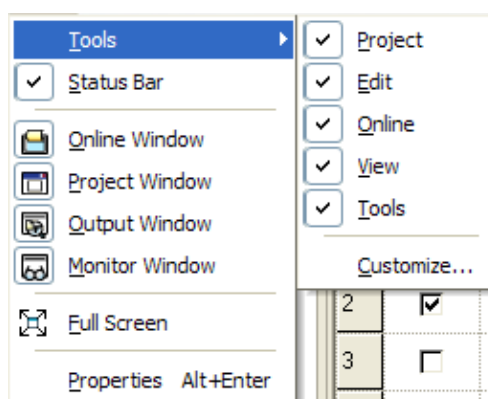
(2)   Select the name of a screen.
(3)   The selected screen will be shown or hidden.
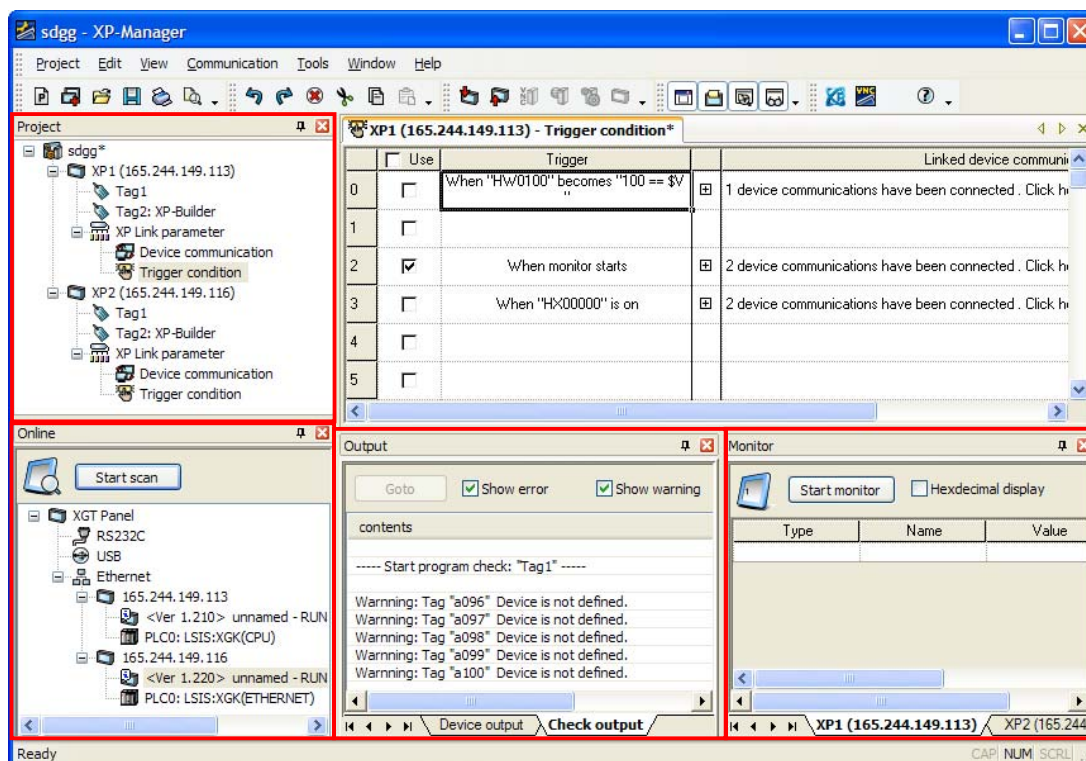
 (1)   You can show or hide project screen, online screen, output screen, monitor screen.

8.2 Full Screen

[Procedures]

(1)   Open device communication screen or trigger condition screen.

(2)   Select [View]-[Full Screen] menu.

(3)   All tool bars and docking screens will disappear and the current screen will be a full size.

(4)   If you press Close Full Screen or ESC button, it will back to the initial screen.

8.3 New Screen

[Procedures]
(1) Open device communication screen or trigger condition screen.
(2) Select [Window]-[New Window] menu.
(3) The screen that is the same as current selected screen is opened.

Notice
(1) The new screen is opened as the type of [Screen name:number].
(2) If edition proceeds at opened new screen, the same screens will be renewed all.

8.4 Close All

You can close the opened screens at once.

[Procedures]
(1) Open device communication screen or trigger condition screen.
(2) Select [Window]-[Close All] menu.
(3) Then, all opened screens are closed.

8.5 Other Screen

You can check the list of opened screen and close or open it.

[Procedures]
(1)   Open device communication screen or trigger condition screen.
(2)   Select [Window]-[Windows] menu.

[Dialog Box]
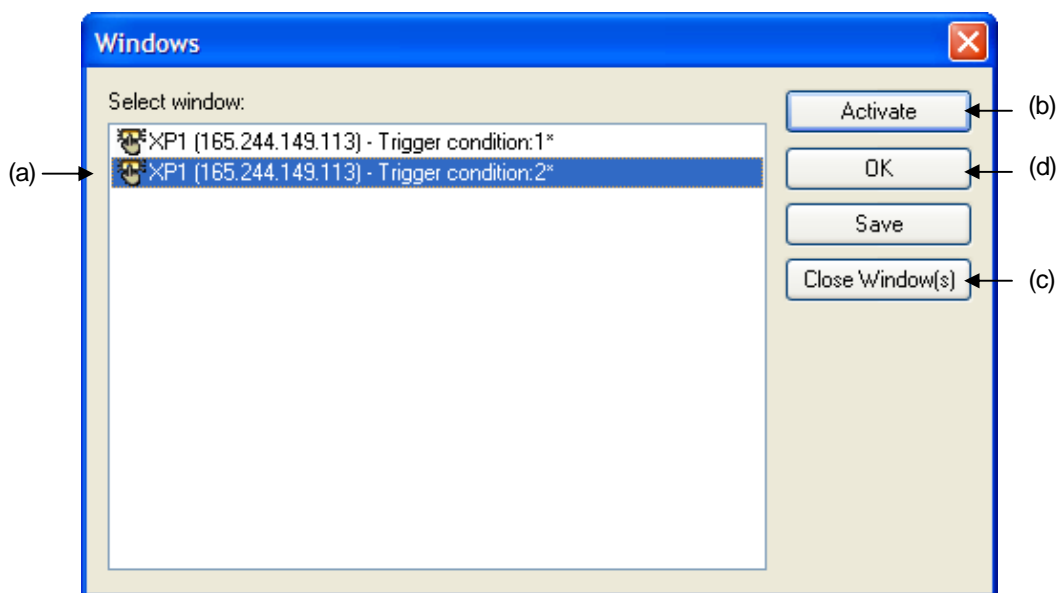
[Description on a dialog box]

Item	Description
Screen List (a)	It displays the list of open screen at XP-Manager
Activate(b)	It activates the screen selected from the list and closes a dialog box.
Close(c)	It closes the screen selected from the list.
OK(d)	It closes a dialog box.

Chap.9 Tool

9.1 Checking Error

It checks the project.

[Procedures]
  (1) Open the project.
  (2) Select [Tool]-[Check Program] menu.
  (3) Check the error of a project.
  (4) It displays the result at output screen.

[Screen]
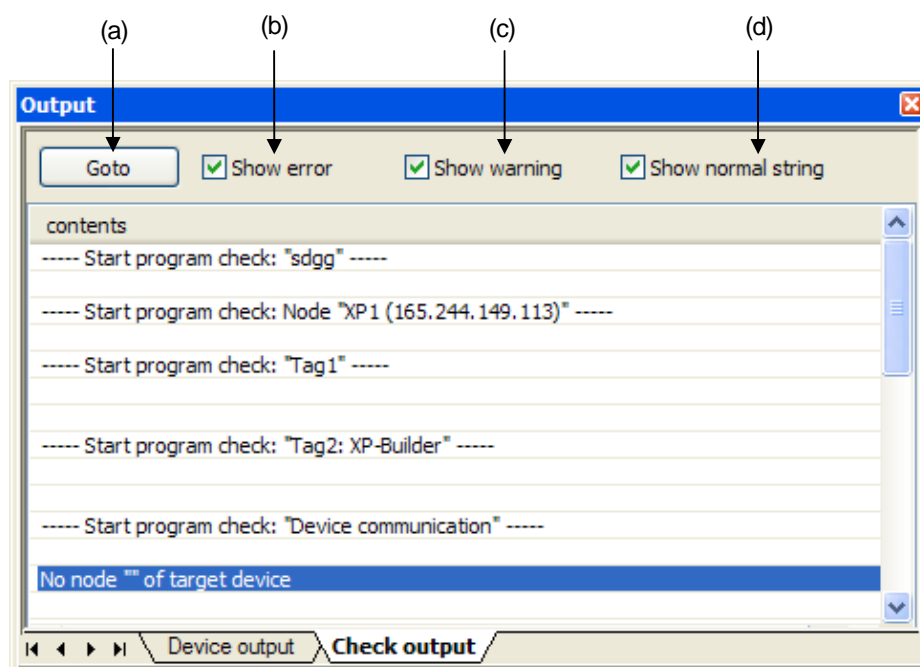
[Description on a screen]

Item	Description
Goto(a)	It moves to the selected screen where error or alarm occurs from the list.
Show Error (b)	It shows or hides error items at the list.
Show Warning (c)	It shows or hides alarm items at the list.
Show normal string (d)	It shows or hides normal string item at the list.

Notice

(1) XP Link parameter is downloaded, error is checked. After checking, if there is error, download is not available.

(2) After checking, error is displayed as red characters.

9.2 XP-Builder Execution

[Procedures]
  (1)　Select [Tool]-[Start XP-Builder] menu.
  (2)　If XP-Builder is installed, XP-Builder will be executed.

Notice
(1)　For execution, XP-Builder version of more than 1.20 should be installed.
(2)　Select the node name from a project screen. If the property of selected node is [Auto creation from XP-Builder file of computer], open connected XPD file.

9.3 Executing XP-VNC

[Procedures]
  (1)　Select [Tool]-[Start XP-VNC] menu.
  (2)　XP-VNC starts.
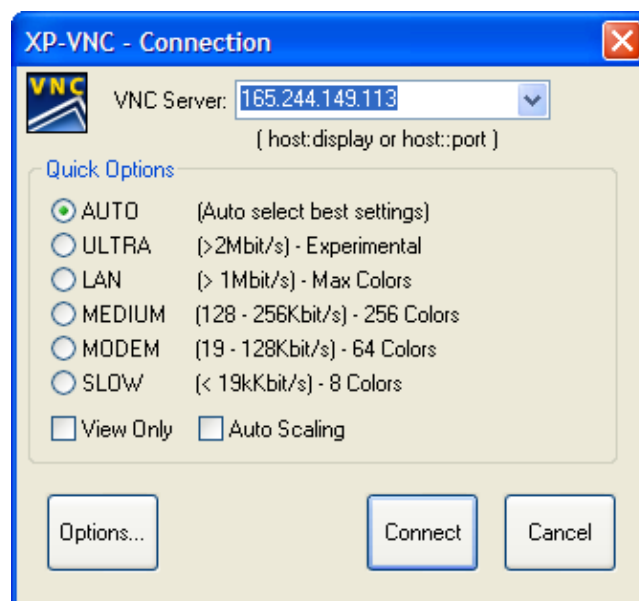
Notice

(1) For the details on XP-VNC, refer to the Chap.12 VNC Client and ActiveX.
(2) If you select the node from a project screen and apply [Connect to XGT Panel VNC Server] of context menu, it will be automatically connected with executing XP-VNC. In this case, XP-VNC should be downloaded and XP-VNC server should be under operation.
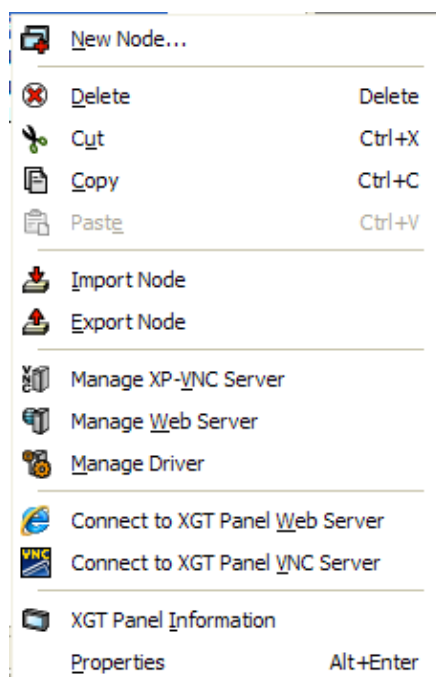
(3) If you select XGT Panel at online screen and apply [Connect to XGT Panel VNC Server] of context menu, it will be automatically connected with executing XP-VNC.

9.4 Customize

You can add the hotkey of menus and tool bar button.

9.4.1 Command

[Procedures]
 (1) Select [Tool]-[Customize] menu.
 (2) Select [Commands] tab.
 (3) Select the menu where shortcut button will be added from the menu list with a tool bar.
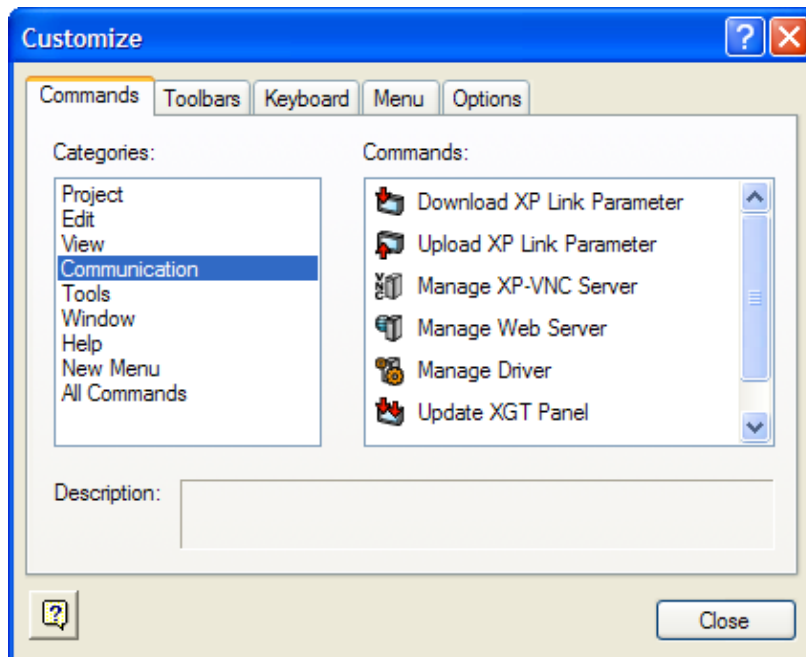
(4)　　Drag & Drop the selected menu above the tool bar.
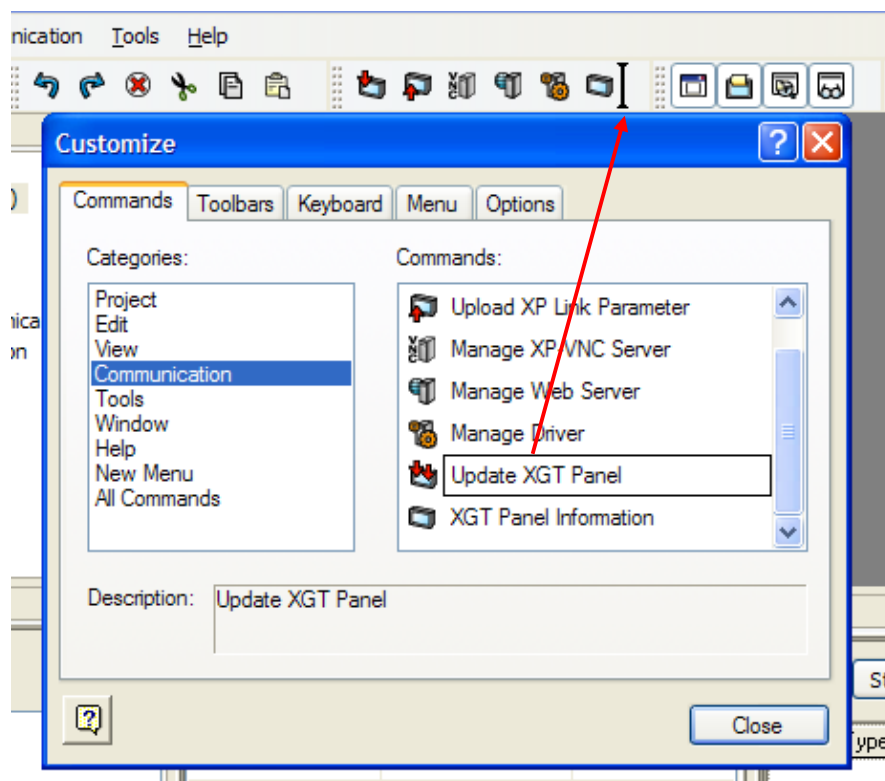
(5)　　Then, a new menu button will be added.

Notice
(1)　The information on added button is saved at registry.

9.4.2   Tool Bar

You can add or delete a new tool bar.

[Procedures]
(1)   Select [Tool]-[Customize] menu.
(2)   Select [Tool Bars] tab.

[Dialog Box]
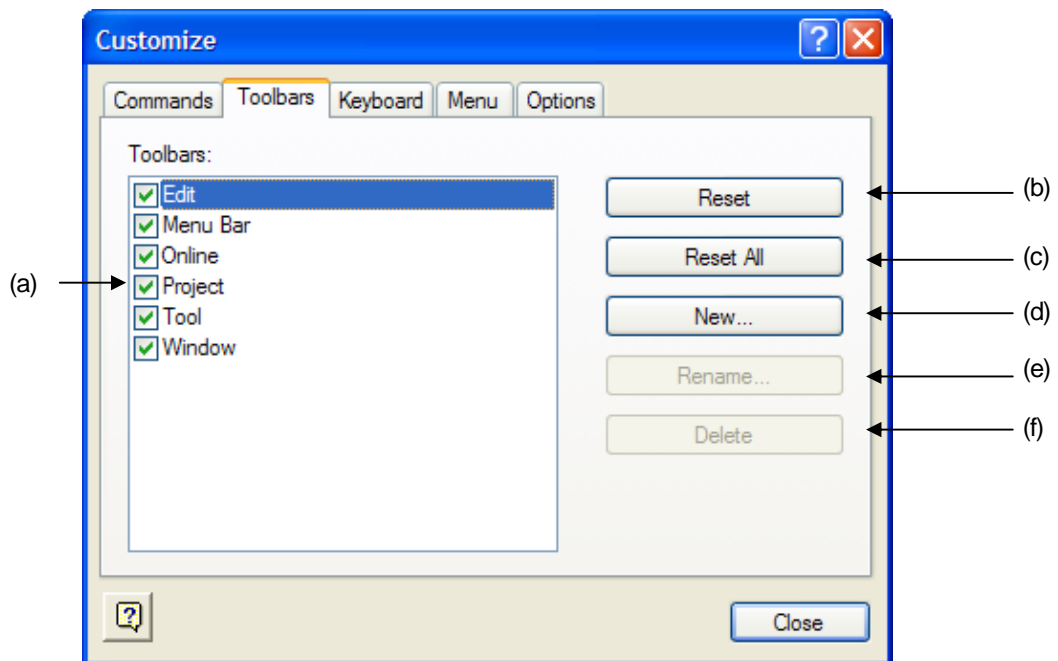
[Description on a dialog box]

Item	Description
List(a)	It shows tool bar list. It can show or hide tool bar by checking.
Reset (b)	It restores the details of selected tool bar to the initial installed status.
Reset All(c)	It restores the details of all tool bars to the initial installed status.
New(d)	You can make a new tool bar.
Rename (e)	You can change the name of new tool bar but this option is not available for the existing tool bar at initial installation.
Delete (f)	You can delete new tool bar but this option is not available for the existing tool bar at initial installation.

9.4.3 Keyboard

You can designate hotkey of menus.

[Procedures]
- (1)   Select [Tool]-[Customize] menu.
- (2)   Select [Keyboard] tab.
- (3)   Select the Command.
- (4)   Set new hotkeys.
- (5)   Press Allocation button.

[Dialog Box]
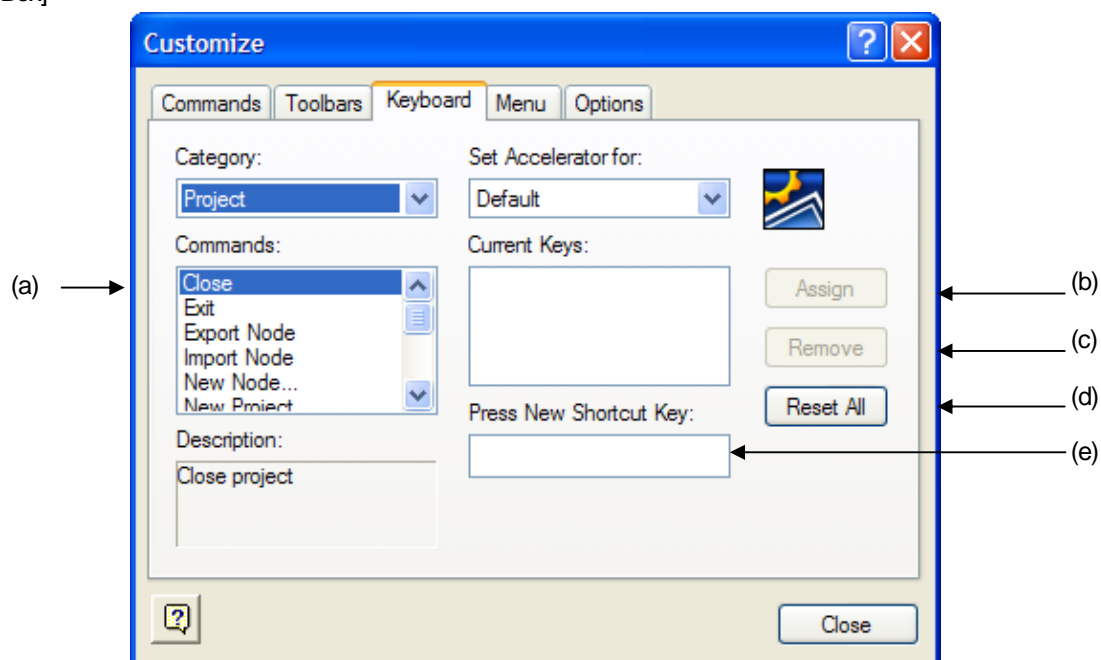
Item	Description
Commands (a)	Menu Command List
Assign (b)	It allocates new hotkey settings to the command.
Remove (c)	It deletes the designated hotkey.
Reset All (d)	It renews hotkey for all commands.
Press New Shortcut key (e)	It inputs a new hotkey.

9.4.4 Menu

You can designate the hotkey of menus.

[Procedures]
(1)   Select [Tool]-[Customize] menu.
(2)   Select [Menu] tab.

[Dialog Box]
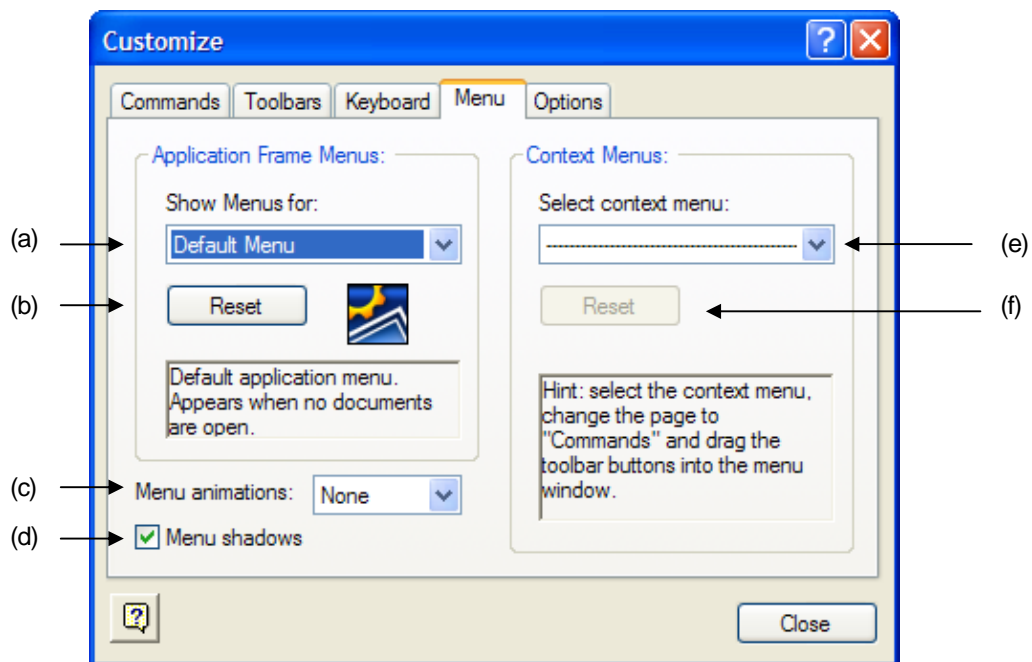
Item	Description
Show Menu for (a)	It selects menu.
Reset(b)	It renews menu.
Menu Animations (c)	When menu is open, you can apply animation effect.
Menu Shadows(d)	You can apply shadow effect to the menu.
Select Context Menu (e)	It selects context menu.
Reset (f)	It renews context menu.

9.4.5 Option
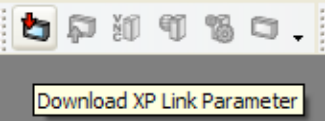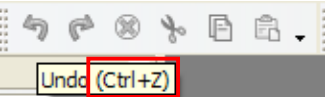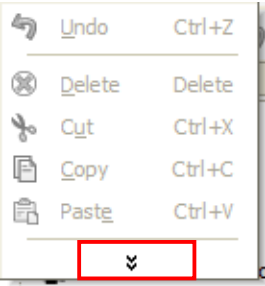
[Procedures]
(1)   Select [Tool]-[Customize] menu.
(2)   Select [Option] tab.

[Dialog Box]
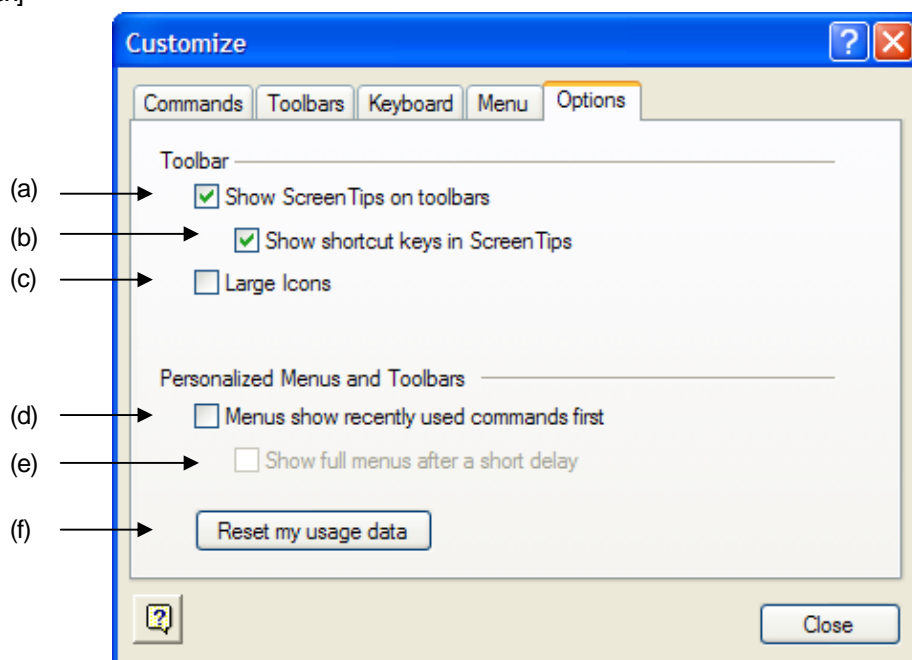
[Description on a dialog box]

Item	Description
Show Screen Tips on toolbars (a)	When putting a mouse above tool bar, the menu name will displayed.
Show Shortcut keys in Screen Tips (b)	In case that hotkey is designated for the menu, it is also displayed.
Large Icons (c)	Tool bar icon is displayed as big one.
Menus show recently used commands first (d)	When menu is spread, the latest used menu will mainly be displayed and the remainders will be hidden.
Show full menus after a short delay (e)	When menu is spread, the latest used menu will be displayed first and the whole menu will be shown after a certain interval.
Reset my usage data (f)	It initializes the option defined by a user.

9.5 Option

You can change the options of XP-Manager.

9.5.1   Common Option

[Procedures]
    (1)   Select [Tool]-[Option] menu.
    (2)   Select [General] tab.
    (3)   Change the details and press OK button or Apply button.
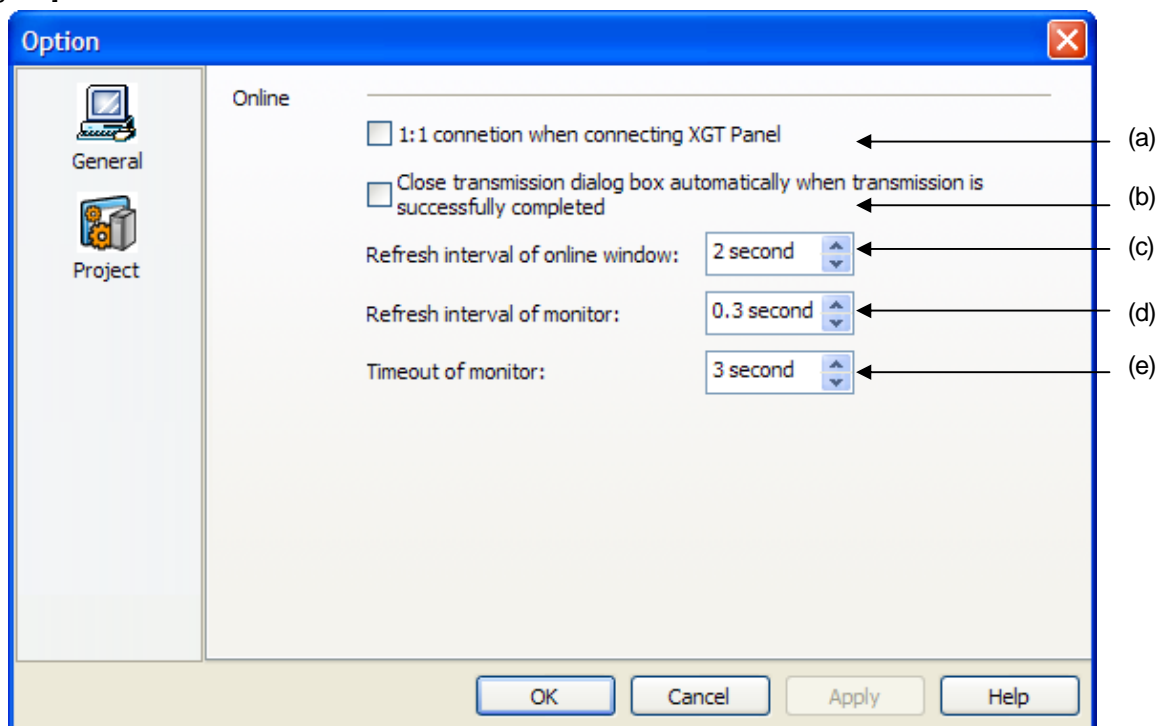
[Dialog Box]

[Description on a dialog box]

Item	Description
1:1 Connection when connecting XGT Panel (a)	When XGT Panel is connected to Ethernet with a cross cable, the option can be applied.
Close transmission dialog box automatically when transmission is successfully completed (b)	The option closes automatically the dialog box when transmission dialog box is successfully completed. In case that transmission dialog box fails, dialog box is not closed automatically.

Item	Description
Refresh interval of online window (c)	You can change the searching cycle of XGT Panel at online screen.
Refresh interval of monitor (d)	You can change the cycle to import the data from XGT Panel during monitoring.
Time Out of Monitor (e)	If you fail to import the data from XGT Panel, you can designate time out.

9.5.2 Project Options

[Procedures]
(1)   Select [Tool]-[Option] menu.
(2)   Select [Project] tab.
(3)   Change the details and press OK button or Apply button.
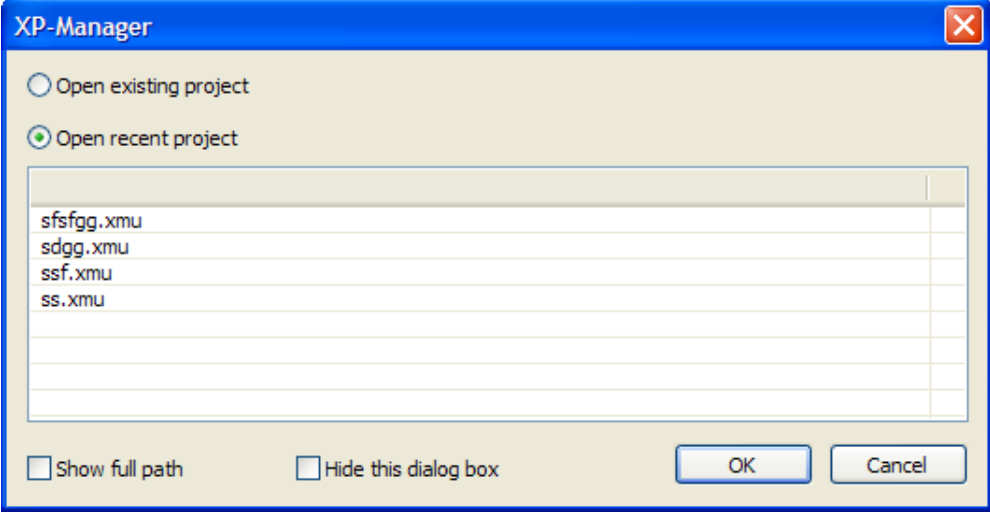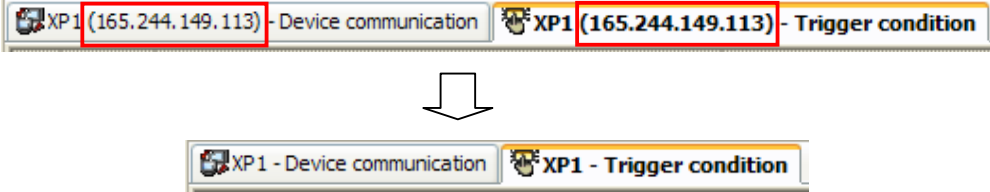
[Dialog Box]

[Description on a dialog box]

Item	Description
Default Project storage Path (a)	When saving the project first since its creation, you can designate the path.
Create Backup File (b)	When opening the previous saved project and save it, you can backup the previous file. The extension of backup file is between bk0 and bk9.
The number of Backup files (c)	You can designate the number of backup files up to 9EA. bk0 is the latest backup file.
Use AutoSave (d)	It can be automatically saved during using XP-Manager.
Interval of AutoSave (e)	You can set automatic save interval between 3 minutes and 60 minutes.
Display message in case file name is different with project name when saving (f)	In case the file name is different from the project name, the below message may be shown during save. If Yes is selected, the project name will be changed into the file name equally.

Item	Description
No. of recent projects to display(g)	For the latest row, you can change the maximum number of displayed projects.
Display dialog box to select project when starting (h)	. You can set whether project selection dialog box will be shown or not when starting XP-Manager. XP-Manager ○ Open existing project ⦿ Open recent project sfsfgg.xmu sdgg.xmu ssf.xmu ss.xmu ☐ Show full path ☐ Hide this dialog box OK Cancel
Display node IP address in window title (i)	You can select whether the IP address of node will be displayed at the screen name or monitor tab name. XP1 (165.244.149.113) - Device communication XP1 (165.244.149.113) - Trigger condition ⇩ XP1 - Device communication XP1 - Trigger condition

Chap.10 Communication

10.1 XP Link Parameter Download

You have to download XP Link parameter to operate device communication between XGT Panels.

[Procedures]
    (1)   Open the project.
    (2)   Select [Communication]-[Download XP Link Parameter] menu.
    (3)   Check the node for download and press OK button.
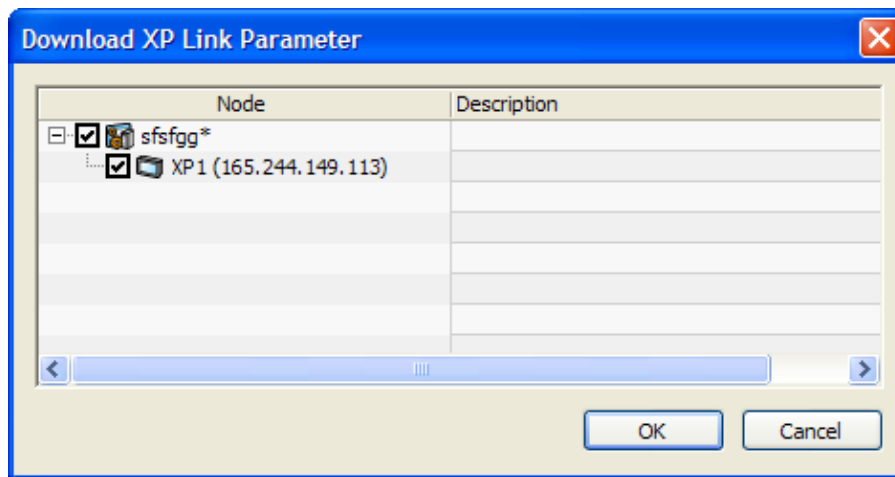
    (4)   Perform error inspection for the checked node.
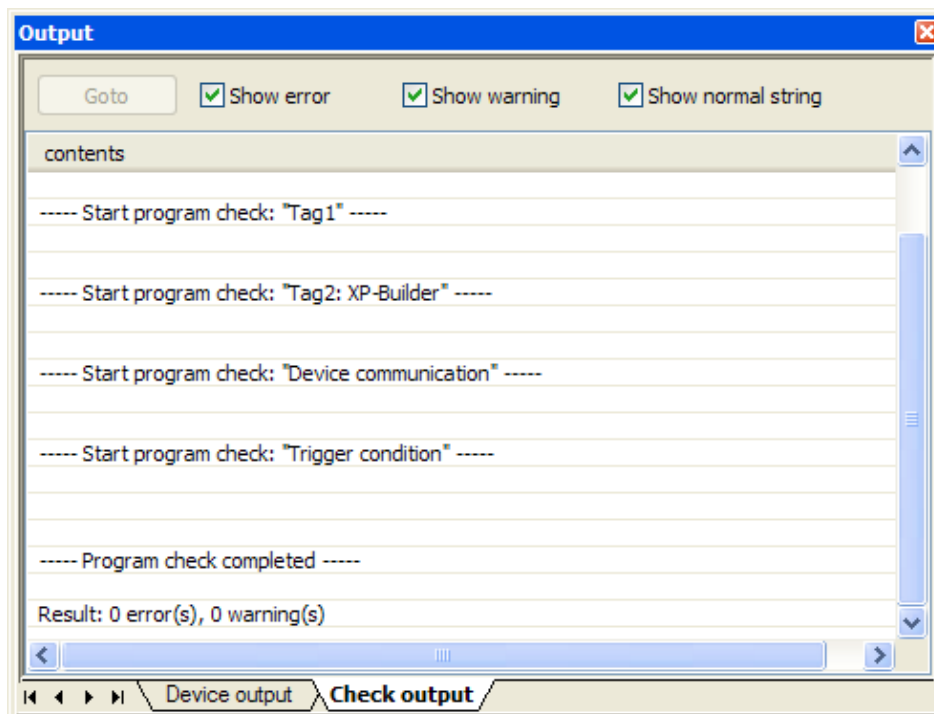
(5)　If it has been proved that there is no error, proceed to download.
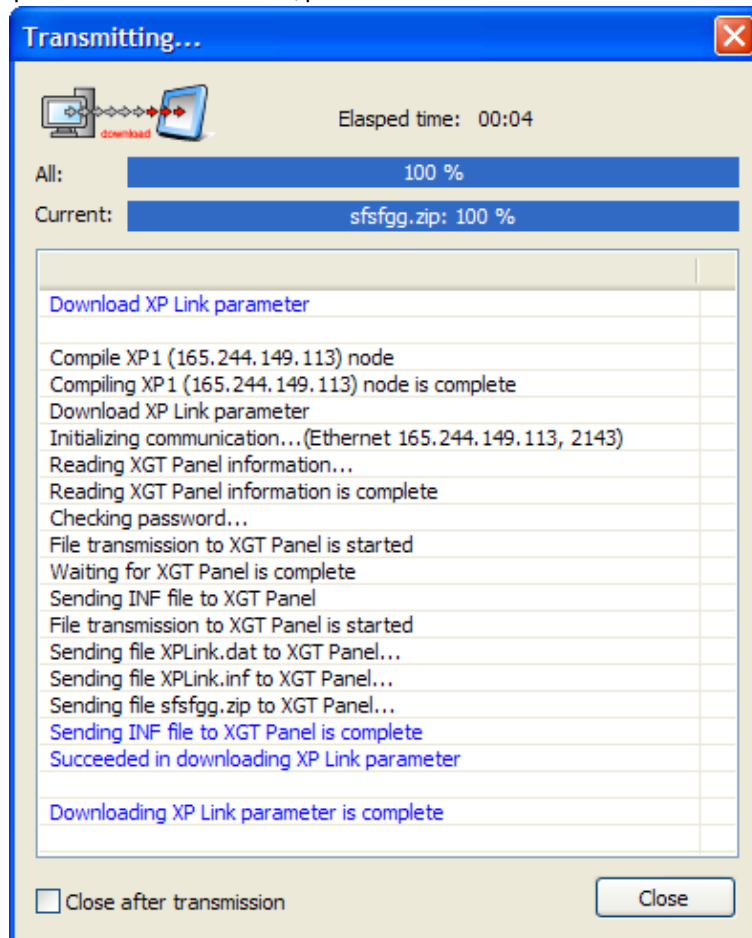
Notice
(1)　As the result of inspection, the error is displayed as red character

10.2 XP Link Parameter Upload

You can read uploaded project made by XP-Manager from XGT Panel and open the project.

　　[Procedures]

　　　　(1)　Select [Communication]-[Upload XP Link Parameter] menu.
　　　　(2)　Check the XGT Panel to be uploaded and press OK button.
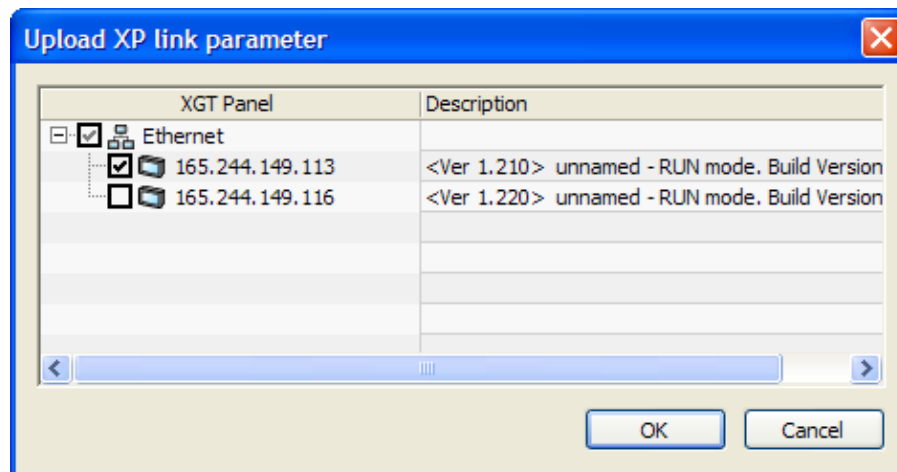
(3)   Then, the opened project is closed and upload will be performed.
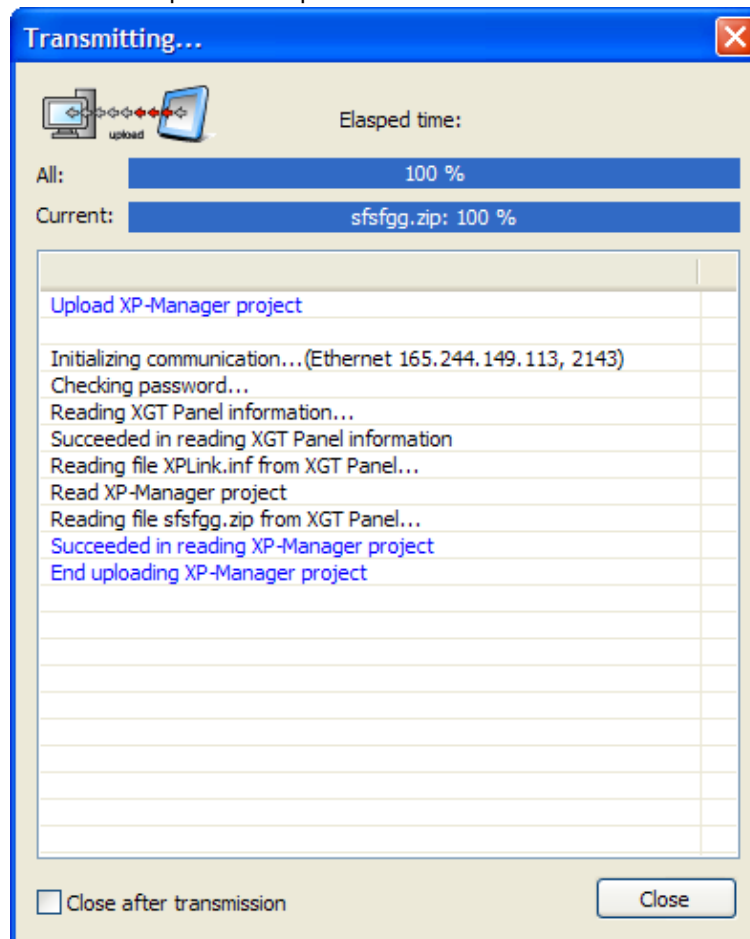
(4)   Uploaded project will be open.

Notice
(1)   If there is something to be revised at the current project, check whether it will be saved or not.

10.3 XP-VNC Server Management

You can download XP-VNC server to XGT Panel and set·download XP-VNC parameter. For more details on XP-VNC, refer to the [Chap.12 VNC Client and ActiveX].

⚠ **Caution**

► XGT Panel does not basically provide VNC function. To use VNC function, you need to download parameter and server.

[Procedures]

   (1)   Select the node from a project screen or select the XGT Panel searched from online screen.

OR
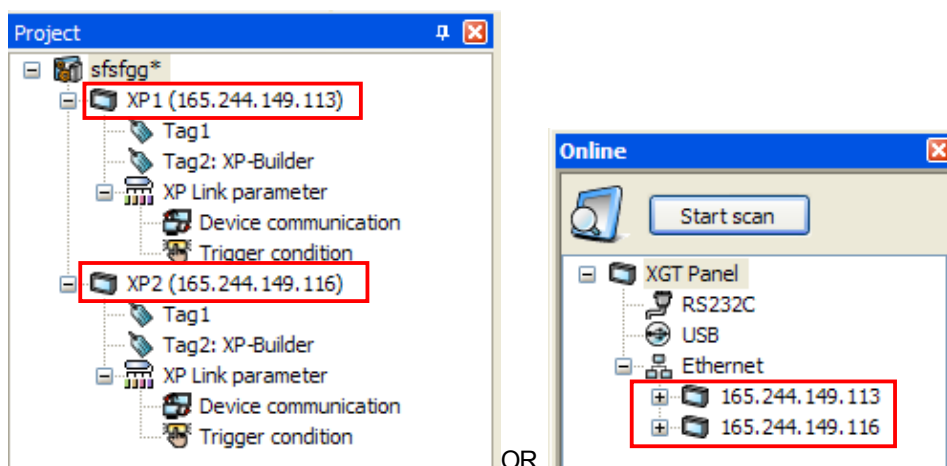
   (2)   Select [Communication]- [XP-VNC Server Management] menu.

10.3.1 XP-VNC Server Download

[Procedures]

   (1)   Select [Flash Memory (XGT Panel)] at the [download to (b)] item.
   (2)   Press Set (c) button.
   (3)   Then, XP-VNC server is downloaded.
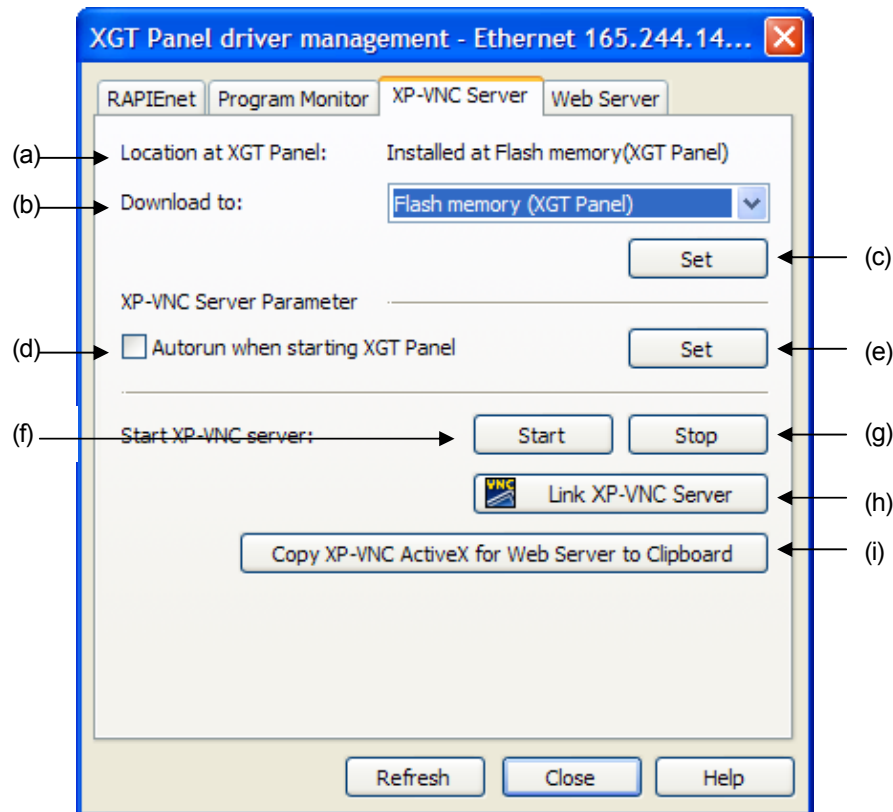
[Dialog Box]

[Description on a dialog box]

Item	Description
Location at XGT Panel (a)	The position of XP-VNC server file that is already installed at connected XGT Panel
Download to (b)	You can set the position of XGT Panel to be downloaded newly.
Set (c)	You can download or delete XP-VNC server.
Autorun when starting XGT Panel (d)	XP-VNC server is automatically executed when starting XGT Panel.
Set (e)	It downloads XP-VNC server parameter.
Start XP-VNC Server (f)	It starts to operate XP-VNC Server of target XGT Panel.
Stop XP-VNC Server (g)	It stops to operate XP-VNC server of target XGT Panel.
Link XP-VNC Server (h)	It executes XP-VNC client and connects XP-VNC of the target XGT Panel.
Copy XP-VNC ActiveX for web server to clipboard (i)	It copies ActiveX for XP-VNC and HTML file with usage example to a clipboard. After executing Windows Explorer, you can paste and use them.

Notice

(1) You can not operate XP-VNC only with downloading XP-VNC server. Press XP-VNC Server Start(f) button to start XP-VNC server.

10.3.2 Deleting XP-VNC Server

[Procedures]
    (1)   Select [Remove] at the [download to (b)] item.
    (2)   Press [Set(c)] button.

Notice
(1) If you press Refresh button and [Location at XGT Panel (a)] is displayed as "Not Installed", you can check whether XP-VNC Server is deleted properly.

10.4 Web Server Management

You can download web server to XGT Panel and set download parameters.

⚠ **Caution**
► XGT Panel does not basically provide web server function. To use web server, you need to download parameter and web server.

[Procedures]
    (1)   Select the node from a project screen or select the XGT Panel searched from online screen.
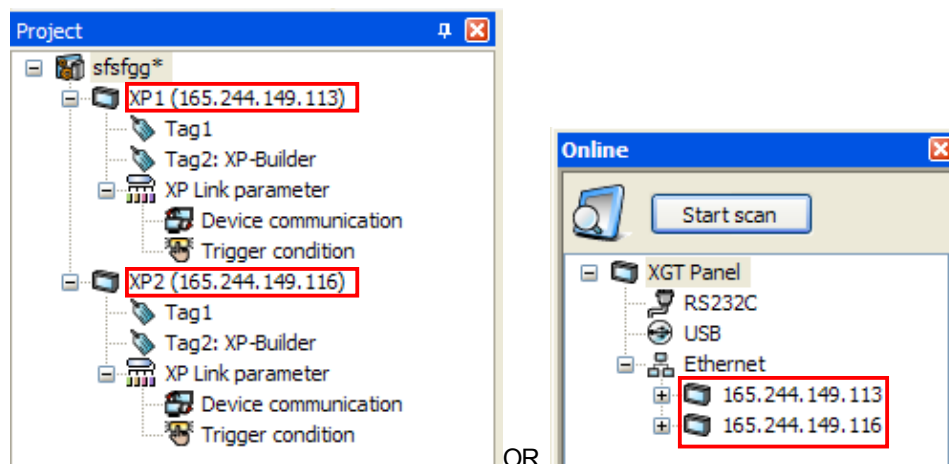
    (2)   Select [Communication]-[Manage Web Server] menu.

10.4.1 Web Server Download

[Procedures]
- (1)   Select [Flash Memory (XGT Panel)] at [Download to (b)] item.
- (2)   Press [Sett (c)] button.
- (3)   Then, web server is downloaded.
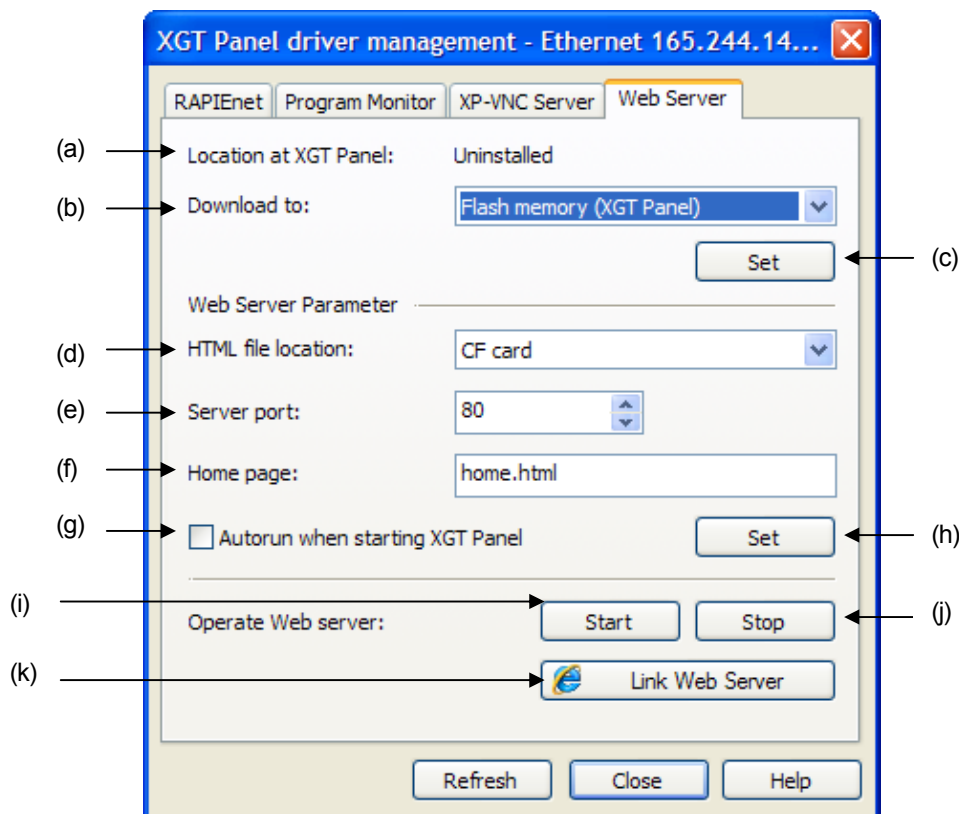
[Dialog Box]

[Description on a dialog box]

Item	Description
Location at XGT Panel (a)	The position of web server file that is already installed at connected XGT Panel
Download to (b)	You can set the position of XGT Panel to be downloaded newly.
Set (c)	You can download or delete web server.
HTML file location (d)	It sets the position of HTML file used for web server.
Server Port (e)	It inputs Ethernet Port No. that is opened at web server all the time.
Home page (f)	It inputs the name of the page to be shown first when web server is started.
Autorun when starting XGT Panel (g)	Web server is automatically executed when starting XGT Panel.
Set(h)	It downloads web server parameter.
Start web server operation (i)	It starts to operate web server of target XGT Panel.
Stop web server operation (j)	It stops to operate web server of target XGT Panel.
Link Web Server (k)	It executes internet and connects web server of the target XGT Panel.

Notice

(1) You can not operate web server only with downloading web server. Press Start(i) to start web server.

(2) The Web Server Port No. "80" is international standard port number to change the port number., you need to input and connect the port number when connecting web server. (Server IP Address: Port No.)
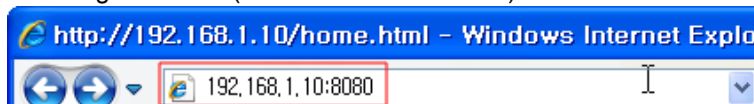
10.4.2 Deleting Web Server

[Procedures]
- (1) Select [Remove] at [Dwonload to (b)] item.
- (2) Press [Set(c)] button.

Notice

(1) If you press Refresh button and the [Location at XGT Panel] is displayed as "Not Installed", you can check whether XP-VNC Server is deleted properly.

10.5 RAPIEnet Driver Management

You can download and delete the device driver for RAPIEnet Aux Card.

[Procedures]
- (1) Select the node from a project screen or select the XGT Panel searched from online screen.

 OR
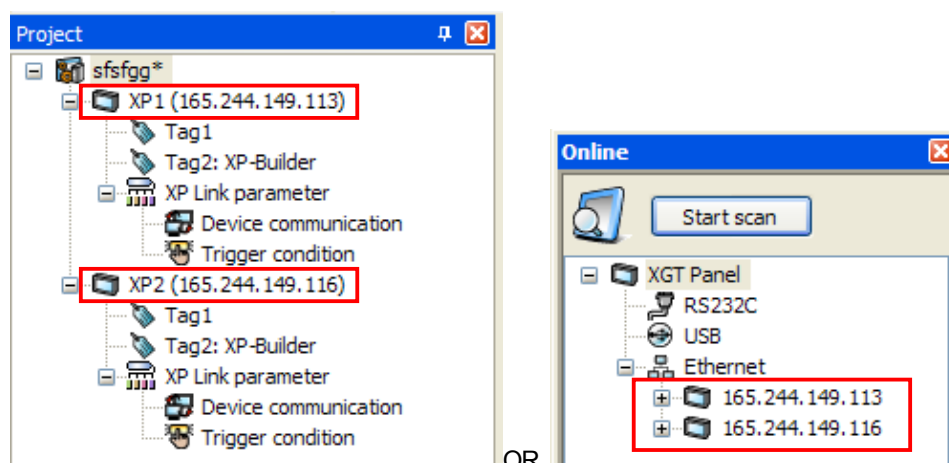
- (2) Select [Communication]-[Manage Driver] menu.
      Select [RAPIEnet] tab.

[Dialog Box]
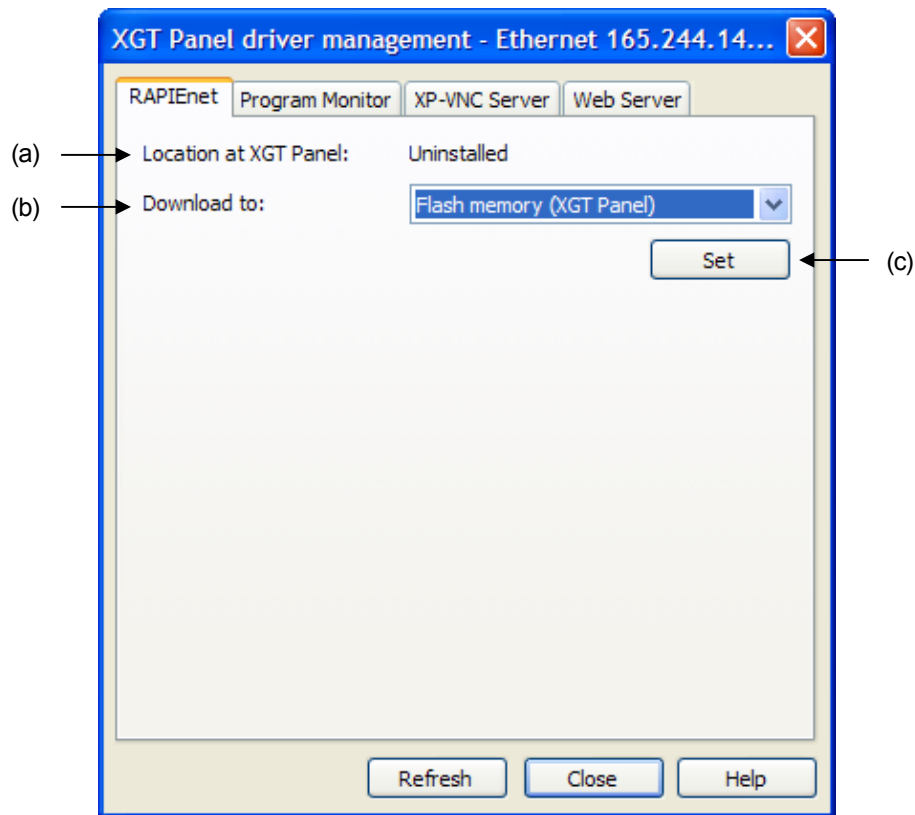
[Description on a dialog box]

Item	Description
Location at XGT Panel (a)	The position of RAPIEnet server file that is already installed at connected XGT Panel
Download to (b)	It sets the position of XGT Panel to be downloaded newly.
Set (c)	You can download or delete RAPIEnet Driver.

Notice
(1) You can set RAPIEnet parameter and communication through XP-PD.
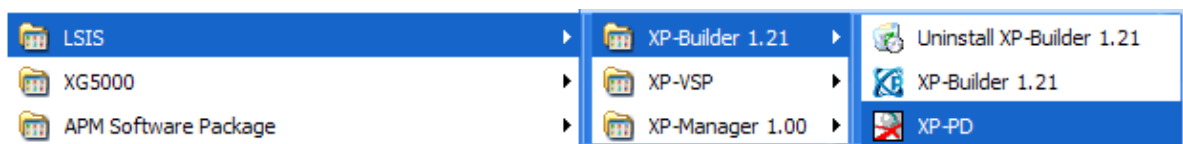
10.6 Program Monitor Driver Management

You can download or delete the program monitor driver of LS Industrial System PLC CPU Driver.

[Procedures]
(1)   Select the node from a project screen or select the XGT Panel searched from online screen.

OR
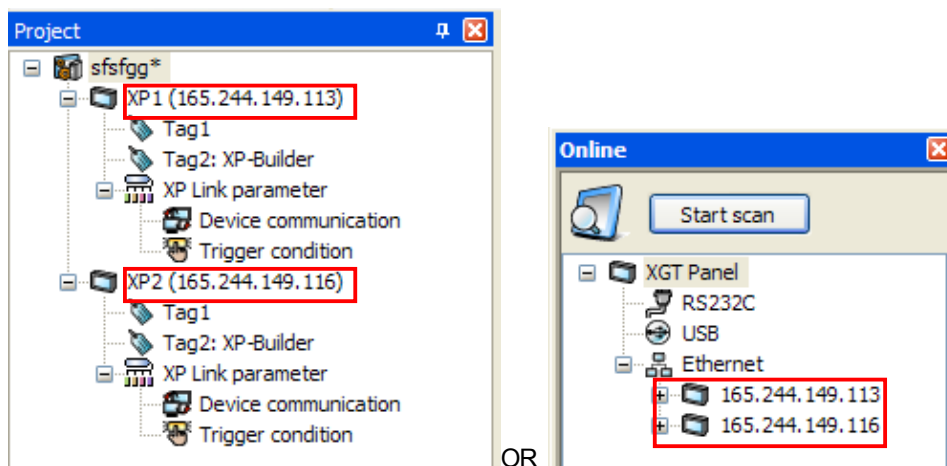
(2)   Select [Communication]-[Manage Driver] menu.
(3)   Select [Program Monitor] tab.

[Dialog Box]
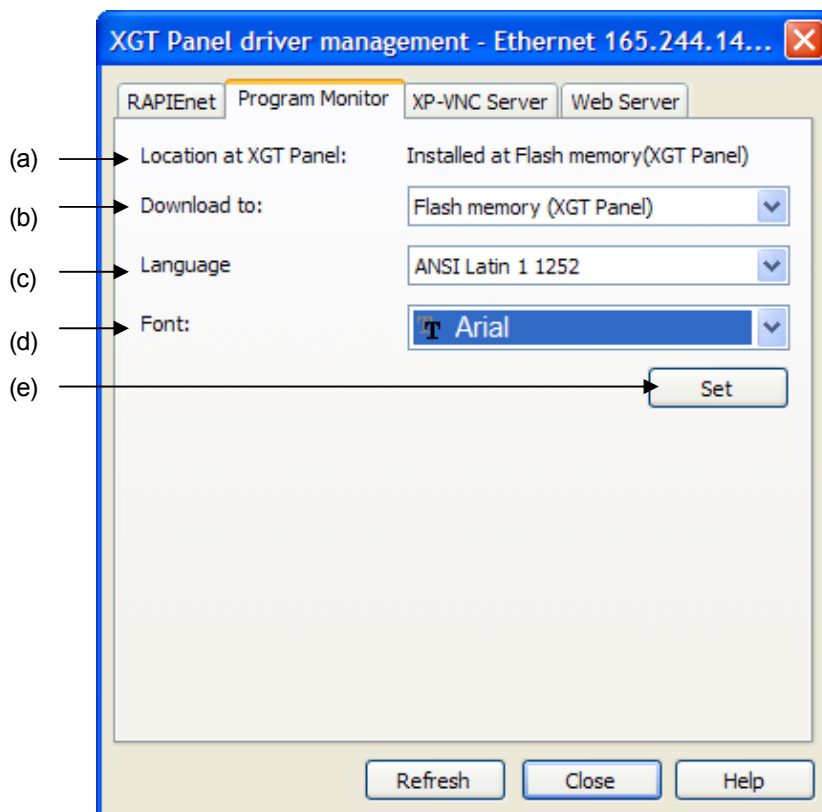
[Description on a dialog box]

Item	Description
Location at XGT Panel (a)	The position of Program Monitor Driver file that is already installed at connected XGT Panel
Download to (b)	It sets the position of XGT Panel to be downloaded newly.
Language (c)	It selects the language displayed at program monitor.
Font (d)	It sets the font used for program monitor. When the established font file is downloaded, the file size should be considered.
Set (e)	You can download or delete Program Monitor Driver.

Notice

(1) When monitoring Ladder Program, you need to select "ANSI Latin 1 1252" to display the program in English. If "ANSI/OEM Korean Unified Hangul 949" is selected, the program is displayed in Korean

10.7 XGT Panel Update

You can continuously update XGT Panel of network.

[Procedures]
  (1)   Select [Communication]-[Update XGT Panel] menu.
  (2)   Set the position of update file(b).
  (3)   Check XGT Panel(a) to be updated.
  (4)   Press OK button to update XGT Panel.

[Dialog Box]

(a)

(b)
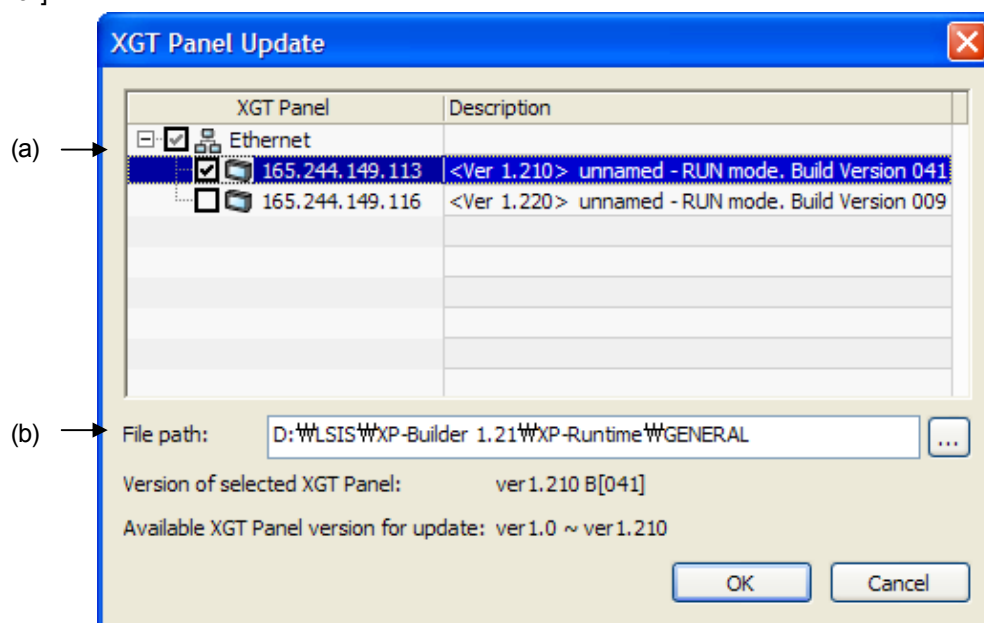
[Description on a dialog box]

Item	Description
XGT Panel List(a)	It is the XGT Panel list displayed at online screen. The checked item will be updated.
File Path (b)	It is the folder where XP-Runtime of XGT Panel is placed.

Notice
(1) XP-Runtime is the software for monitor operated at XGT Panel.

10.8 XGT Panel Information

You can check the information of XGT Panel with various settings.

10.8.1 General

[Procedures]
(1)   Select the node from a project screen or select the XGT Panel searched from online screen.

OR
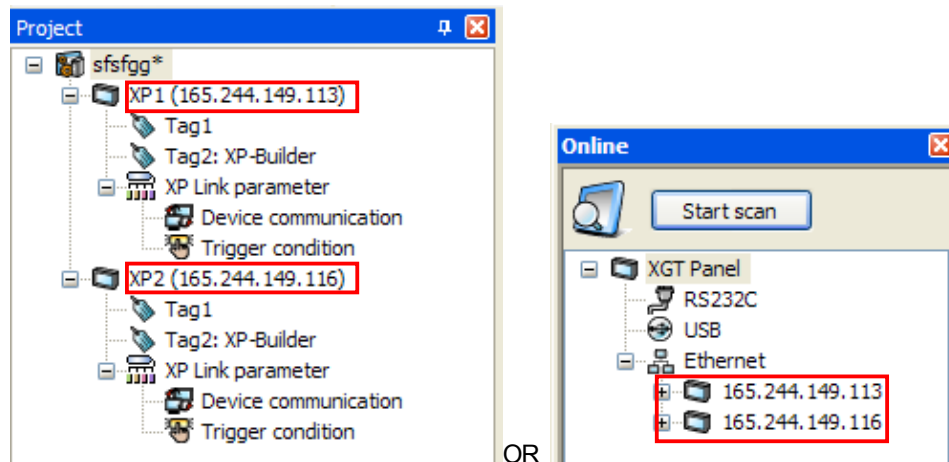
(2)   Select [Communication]-[XGT Panel information] menu.
(3)   Select [General] tab.
(4)   Check the information of XGT Panel.

[Dialog Box]
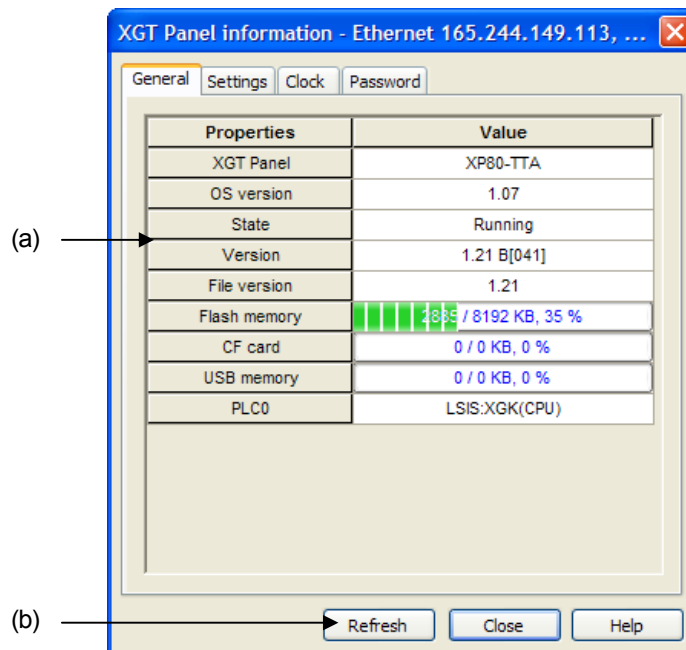
[Description on a dialog box]

Item		Description
Information(a)	XGT Panel	It displays the type of XGT Panel.
	OS Version	It displays the OS version of WinCE embedded with XGT Panel
	State	It displays the current operation status of XGT Panel.
	Version	It displays the version of XP-Runtime.
	File Version	It displays the version of drawing file downloaded from XP-Builder
	Flash Memory	It displays Flash Memory Occupation.
	CF Card	In case that CF Memory is embedded, it displays CF Memory occupation.
	USB Memory	In case that USB Memory is embedded, it displays USB Memory occupation.
	PLC0 ~ PLC3	It displays the PLC Driver name used for drawing. It is displayed up to 4EA.
Refresh (b)	It updates the details.	

10.8.2 Setting

[Procedures]
    (1)   Select the node from a project screen or select the XGT Panel from online screen.

OR
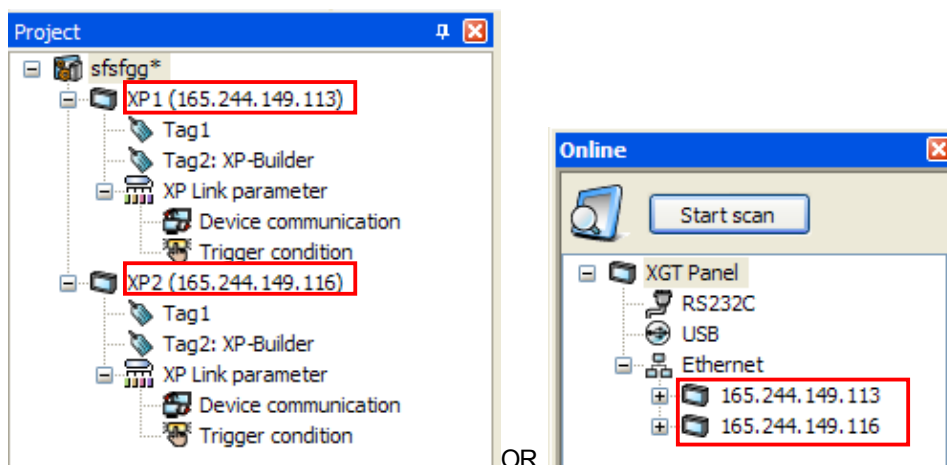
    (2)   Select [Communication]-[XGT Panel Information] menu.
    (3)   Select [Settings] tab.
    (4)   The details are changed.

[Dialog Box]
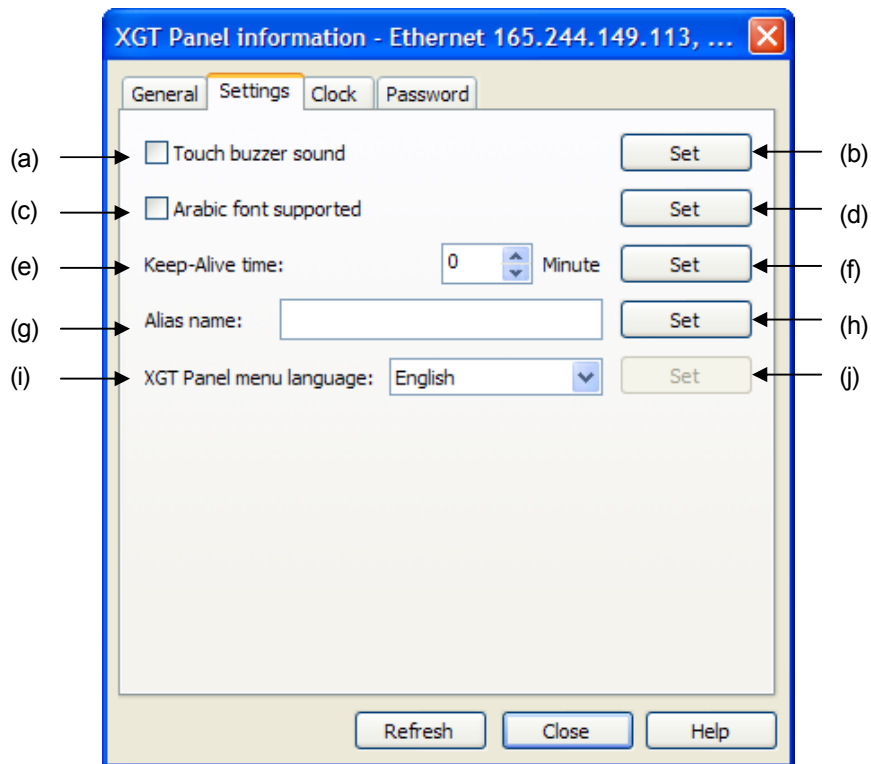
[Description on a dialog box]

Item	Description
Touch buzzer sound (a)	It sets whether buzzer or beep sounds when manipulating the touch screen of XGT Panel.
Set (b)	It applies the property of buzzer sound effect when touching the screen to XGT Panel.
Arabic Font supported (c)	It provides the display mode for Arab language font written from the right to the left.
Set (d)	It applies the property of Arab language font to XGT Panel.
Keep-Alive time (e)	If TCP/IP Slave PLC Driver is embedded, it sets the time for a client to check the connection status.
Set (f)	It applies the property of time to keep connection to XGT Panel.
Alias name (g)	It gives XGT Panel a byname.
Set (h)	It applies the property of machine name to XGT Panel.
XGT Panel menu language (i)	It selects the language displayed at the menu of XGT Panel. The basic language is English.
Set (j)	It applies the property of language for equipment menu to XGT Panel.

Notice

(1) English/Korean/ Chinese are available for XGT Panel menu language.

10.8.3 Clock

[Procedures]
  (1)   Select the node from a project screen or select the XGT Panel searched from online screen.

OR
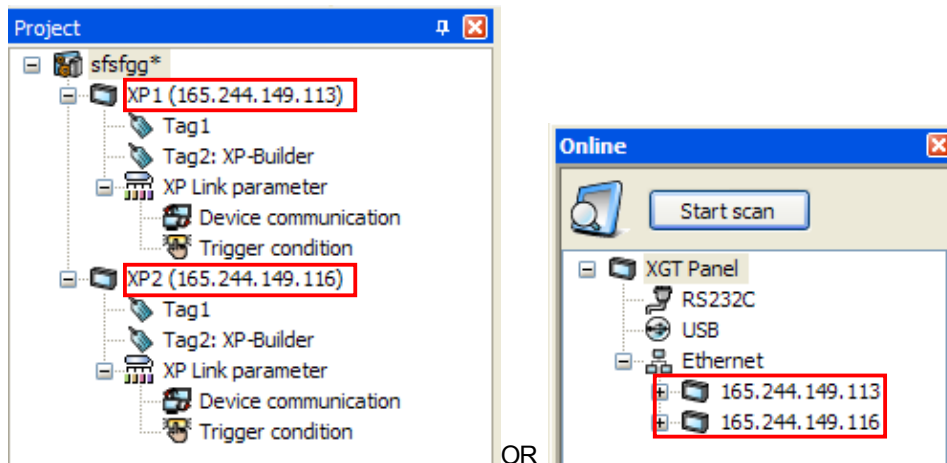
  (2)   Select [Communication]-[XGT Panel Information] menu.
  (3)   Select [Clock] tab.
  (4)   Change a clock

[Dialog Box]
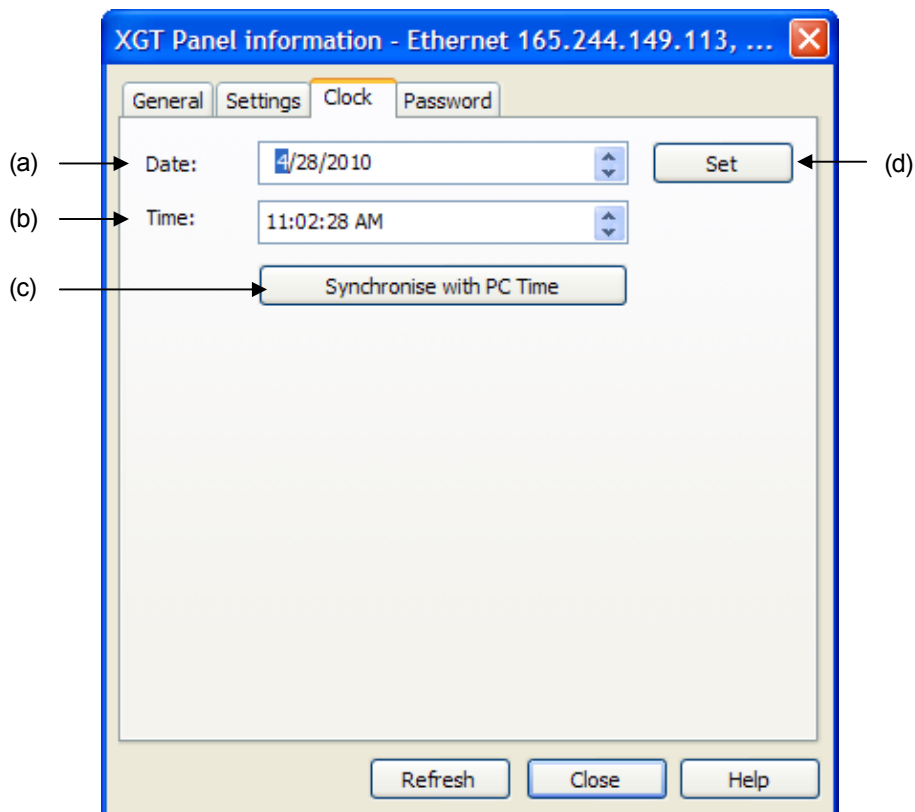
[Description on a dialog box]

Item	Description
Date (a)	It changes the date.
Time (b)	It changes the time.
Synchronize with PC time (c)	It changes the clock of XGT Panel with the date and time of a computer.
Set (d)	It changes the clock of XGT Panel with input date (a) and time (b).

10.8.4 Password

[Procedures]
    (1)   Select the node from a project screen or select the XGT Panel searched from online screen.

OR
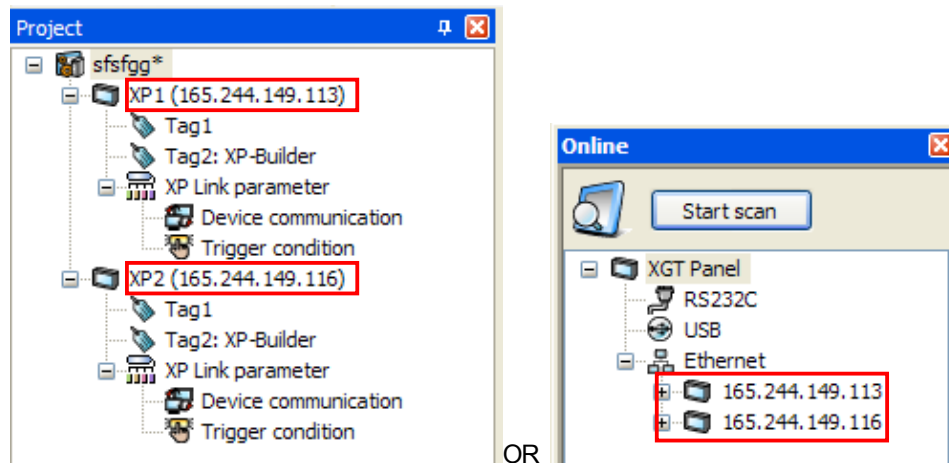
    (2)   Select [Communication]-[XGT Panel Information] menu.
    (3)   Select [Password] tab.
    (4)   Set or delete password.

[Dialog Box]
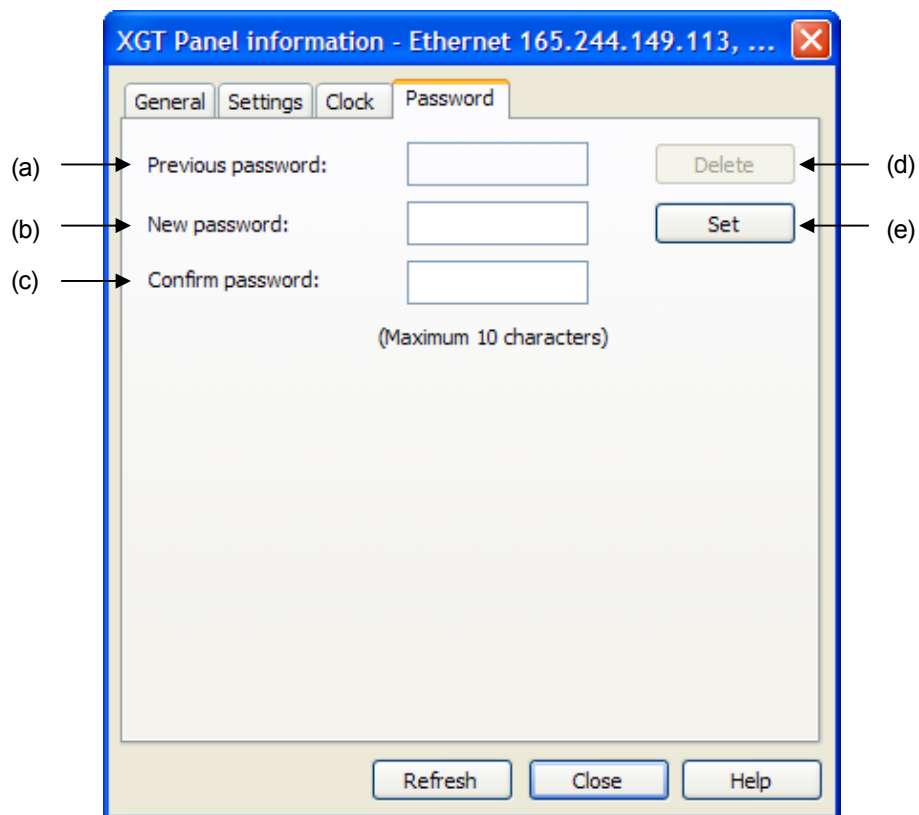
[Description on a dialog box]

Item	Description
Previous Password (a)	If you try to delete or change password, you are required to input the previous one.
New Password(b)	Input a new password.
Confirm Password(c)	Input the same password as that of New Password(b).
Delete (d)	It deletes the existing password set by XGT Panel.
Set (e)	It sets a new password.

Notice
(1) A Password is case-sensitive.
(2) Special characters can be applied to a password.
(3) The maximum digit of a password is 10.

Chap. 11 Monitor

11. 1 Monitor Registration

You can monitor the device data of XGT Panel and change the value.

11.1.1 Registration by editing directly

[Procedures]
- (1)   Open the project.
- (2)   Select the monitor screen.
- (3)   Select the node screen(g) to register monitor.
- (4)   Establish the type.
- (5)   Input the device name and register a monitor.

[Screen]
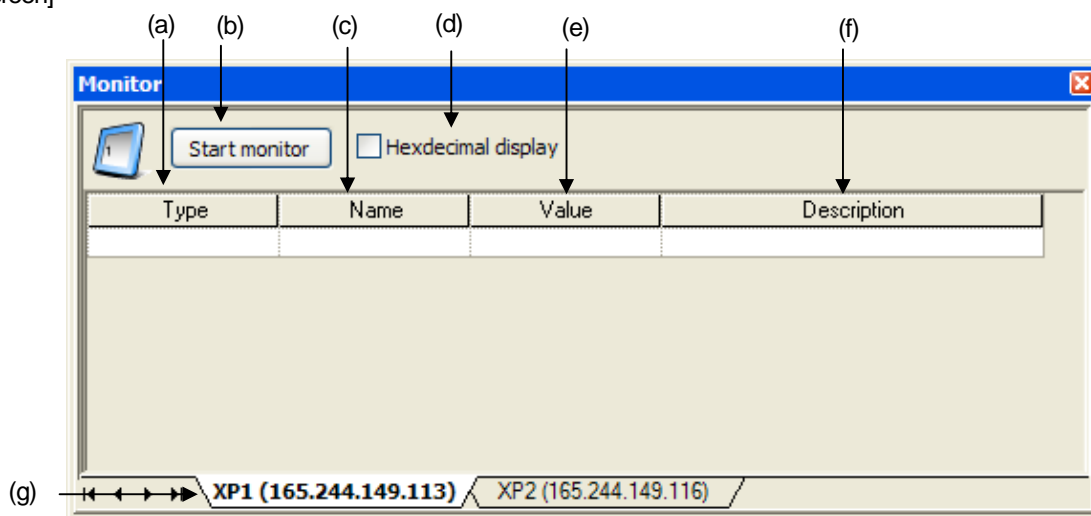
[Description on a screen]

Item	Description
Type (a)	It selects the type of device to be monitored.
Start Monitor (b)	It starts or terminates to monitor the devices to be registered.
Name(c)	It inputs the name of the device to be monitored.
Hexadecimal display (d)	It can display the value as hexadecimal.
Value (e)	It displays the device value read from XGT Panel.
Description(f)	It can input the comment for the device to be monitored.
Node Screen (g)	One monitor screen is allocated for each node of project and you can select node screen.

Notice	
(1)	You can register the monitor without limitation in the number.
(2)	You can register the monitor with tag.
(3)	If you input the name of proper device first without inputting the type, you can register a monitor.
(4)	The device whose monitor is registered is saved at project file(XPD file)
(5)	When the node is added to project, the monitor screen is added to node screen(g).
(6)	If the node is deleted from the project, the monitor screen will be deleted from the node screen(g).

11.1.2 Registration by Drag & Drop from tag screen

[Procedures]
(1)   Open the project.
(2)   Double-click the tag at project screen and open tag screen.
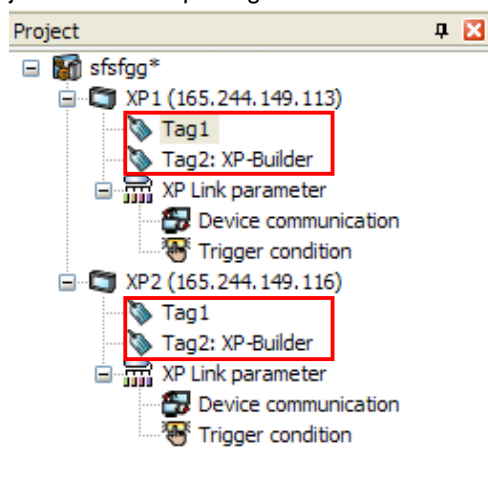
(3)   Select the edge of the tag for monitor registration and drag it to monitor screen.

(4)   Drop it to monitor screen.

No	Group	Name	Device Type	Address
1	Default	Valve	WORD	HW0000
2	Default	Valve1	WORD	HW0001
3	Default	Valve2	WORD	HW0002
4	Default	Valve	WORD	HW0003

Monitor

Start monitor   ☐ Hex... ...display

Type	Name	Value	Description

◄ ◄ ► ►⊦ \ **XP1 (165.244.149.113)** / XP2 (165.244.149.116) /

(5)   Then, it is registered to the monitor.

Monitor

Start monitor   ☐ Hexdecimal display

Type	Name	Value	Description
16Bit Unsigned	=Valve		

◄ ◄ ► ►⊦ \ **XP1 (165.244.149.113)** / XP2 (165.244.149.116) /
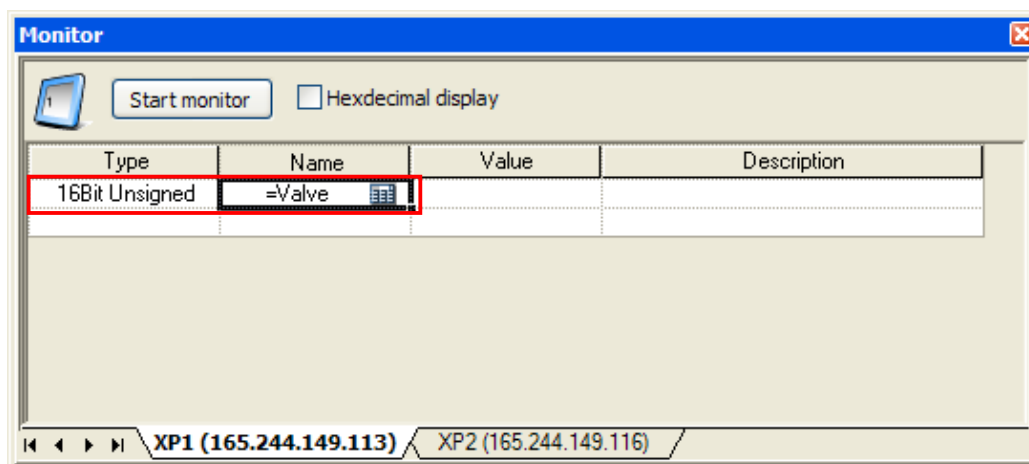
Notice

(1) You can select and register several tags.

(2) If tag is moved to the different node screen, it may not be registered properly.

(3) If the description (f) is changed, the description on tag is not changed. Namely, the description of monitor device is quite different from the tag description.

(4) If the name or type of tag is changed, error may occur from the tag registered at monitor screen.

11.1.3 Registration by Drag & Drop from device communication screen

[Procedures]
(1) Open the project.
(2) Double-click device communication from a project screen and open the tag screen.
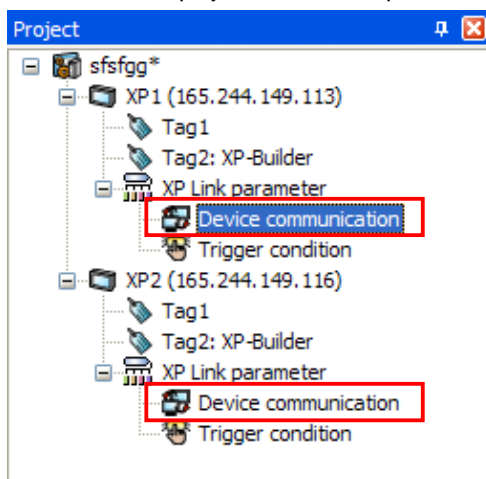
(3) Select the edge of device communication edge for monitor registration and drag it to the monitor screen.

(4) Drop it to the monitor screen.

(5)   It is registered to the monitor.

11.1.4 Registration by Drag & Drop from trigger condition

[Procedures]

(1)   Open the project.

(2)   Double-click the device communication from a project screen and open the tag screen.
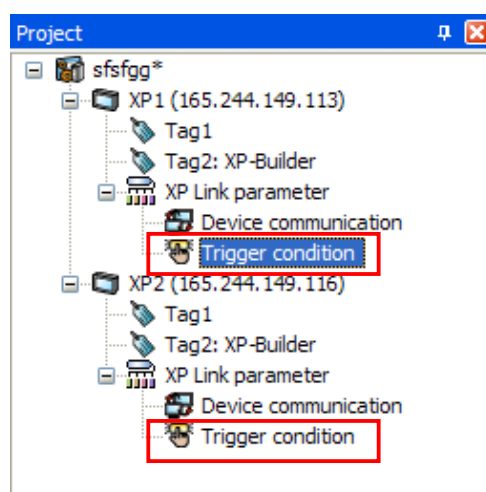
(3)   Select the edge of trigger condition for monitor registration and drag it to the monitor screen.

(4)   Drop it to the monitor screen.

(5)   It is registered to the monitor.

Notice

(1)   You can select and register several trigger conditions.

(2)   If tag is applied under trigger condition, it is registered as tag.

(3)   All devices used in Trigger are registered but devices used in Linked device communication are not registered.

11.2 Deleting Monitor

[Procedures]

(1) Open the project.
(2) Select the monitor screen.
(3) Select the node screen (g) for monitor registration.
(4) Select the monitor time to be deleted.
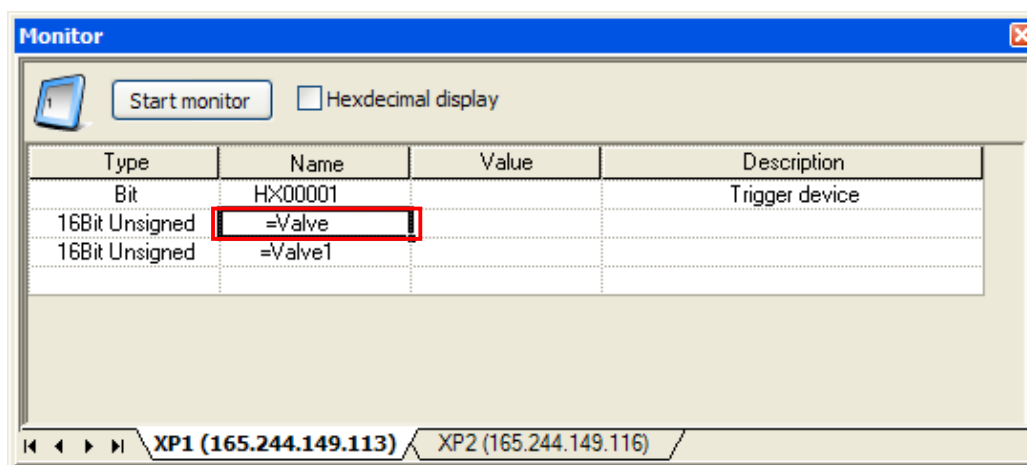
(5) Select [Edit]-[Delete] menu.
(6) Then, selected item will be deleted.
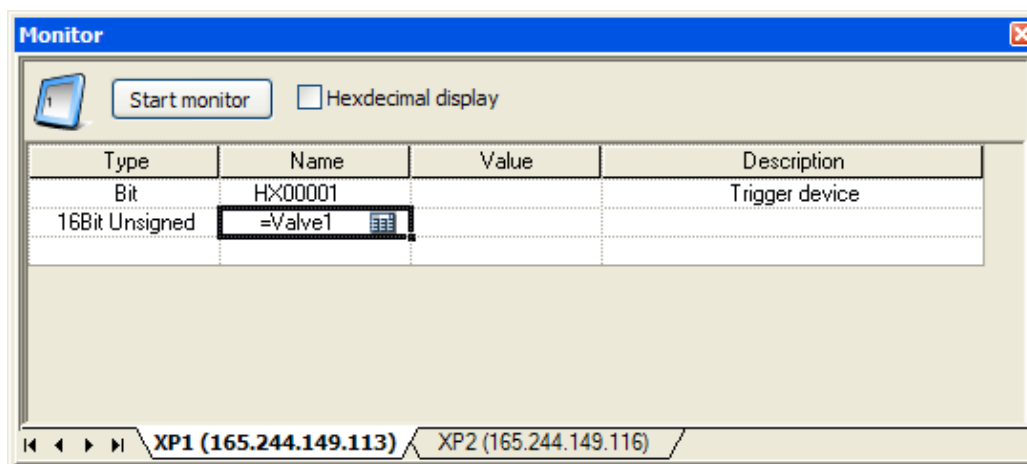
Notice

(1)   To delete the input details, double-click the comment and press Back space key at edition mode.
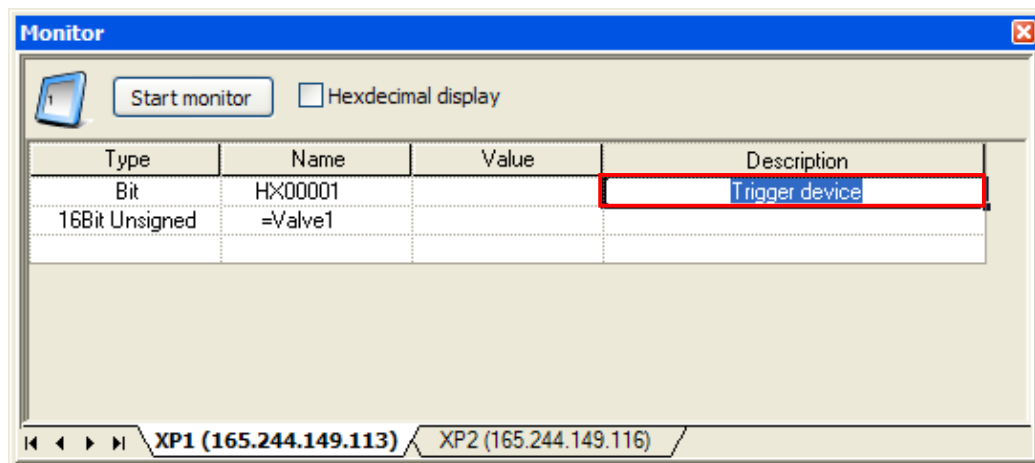
11.3 Monitor Copy/Paste

[Procedures]
- (1)   Open the project.
- (2)   Select the monitor screen.
- (3)   Select the node screen(g) for monitor registration.
- (4)   Select the monitor time to be copied
- (5)   Select [Edit]-[Copy] menu.
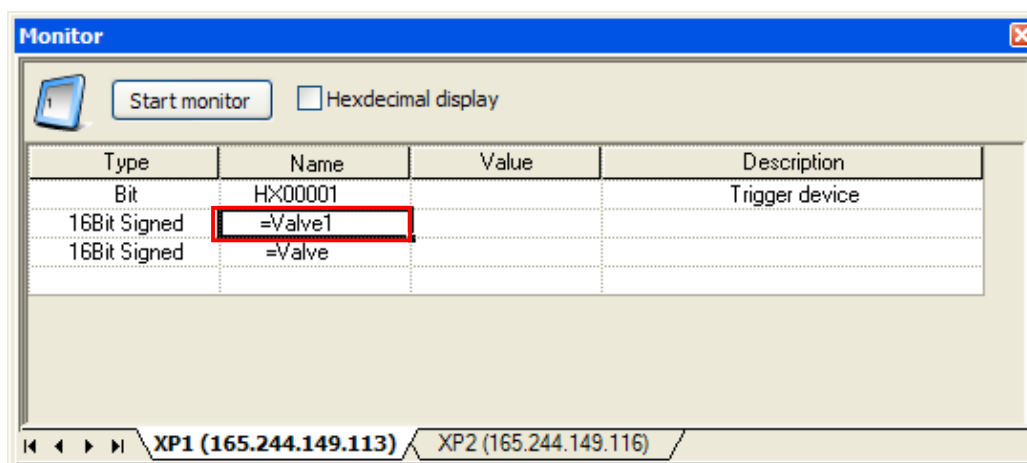
- (6)   Move to the cell for Paste.
- (7)   Select [Edit]-[Paste] menu.
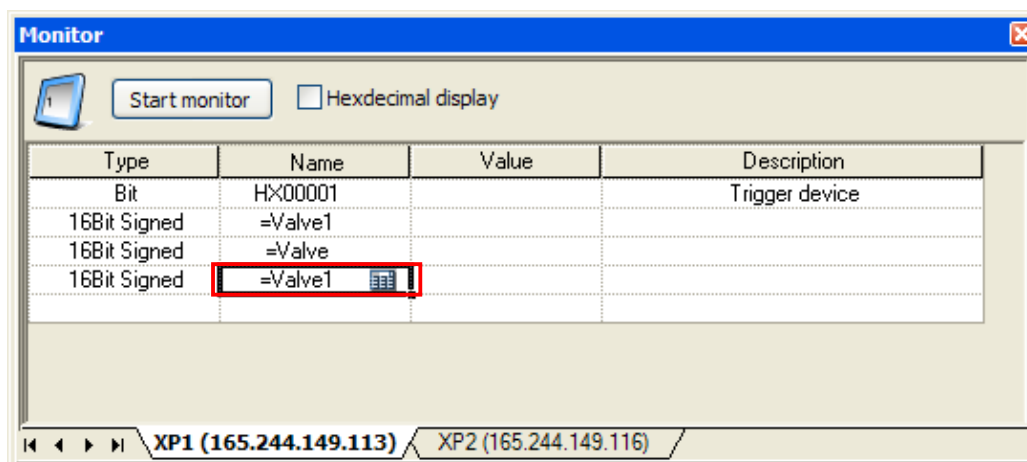
Notice
(1)   You can select several monitor items and perform Copy/Paste.

11.4 Monitor Cut/ Paste

[Procedures]
  (1) Open the project.
  (2) Select the monitor screen.
  (3) Select the node screen(g) for monitor registration.
  (4) Select the monitor time to be cut.
  (5) Select [Edit]-[Cut] menu.
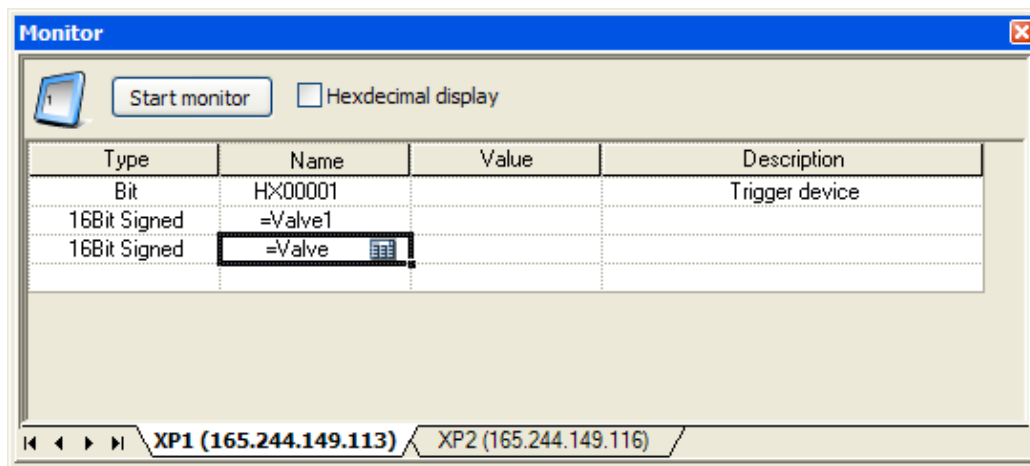
  (6) Move to the cell for Paste.
  (7) Select [Edit]-[Paste] menu.

Notice
(1) Cut mode is same as Delete after Copy.

11.5 Starting Monitor

[Procedures]

(1)   Open the project.
(2)   Select the monitor screen.
(3)   Select the node screen(g) for monitor registration.
(4)   Register the monitor.
(5)   Press Start Monitor button.
(6)   Then, monitor is started.
(7)   Press Stop Monitor button.
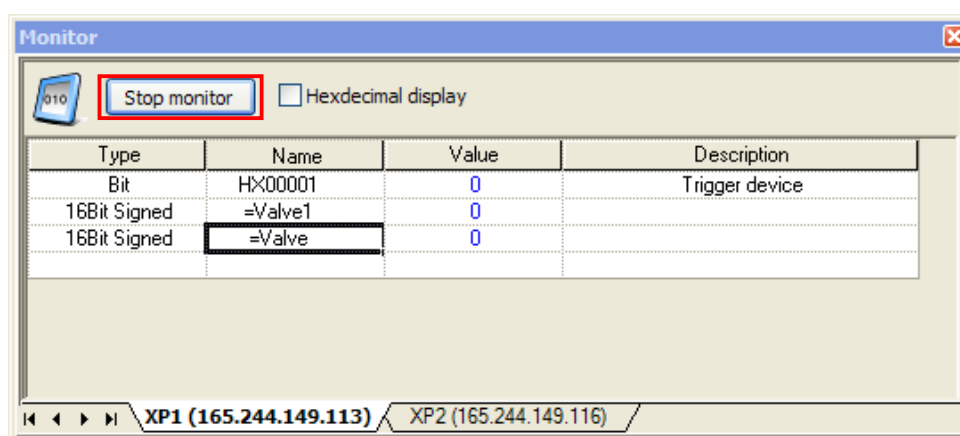
Notice

(1) In case that the XGT Panel is not under monitoring, you can start monitor with the below error message.
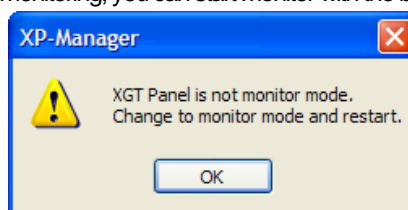
(2) If monitor is started, the value will be displayed as blue letters.
(3) After starting monitor, if communication is not connected, "Timeout" will be shown as red letters.
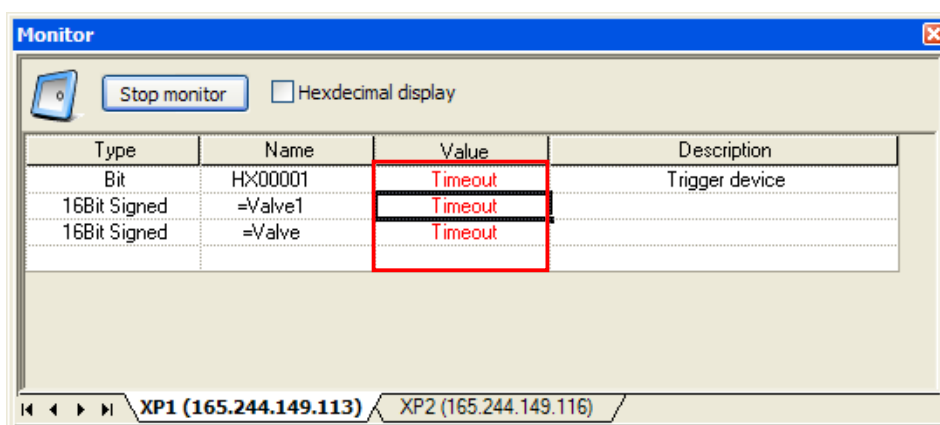
11.6 Changing the current value

[Procedures]
(1) Open the project.
(2) Select the monitor screen.
(3) Select the node screen(g) for monitor registration.
(4) Register the monitor.
(5) Press Start Monitor button.
(6) Then, monitor is started.
(7) Select the monitor item to be changed.
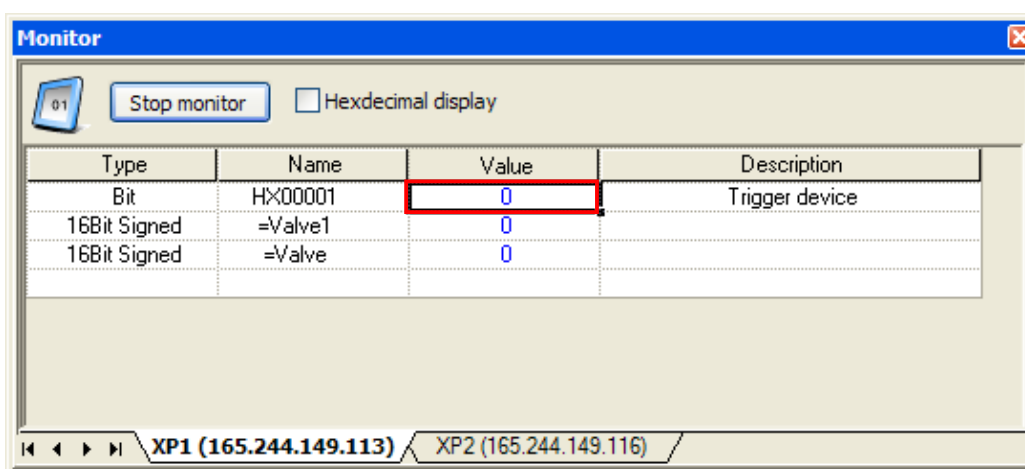
(8) Select [Change value] of context menu.
(9) After inputting a new value at 'Change value' dialog box, press OK button to change the value of XGT Panel.

[Dialog Box]
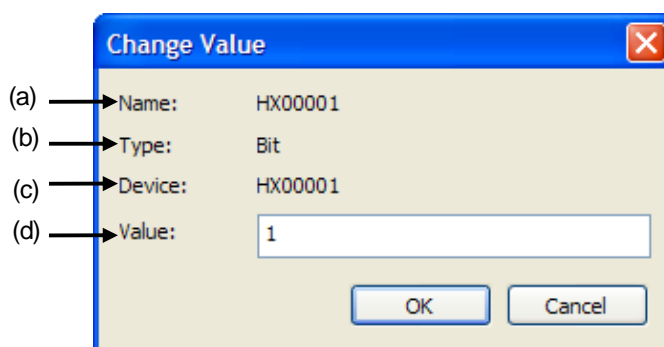
[Description on a dialog box]

Item	Description
Name(a)	The name of the item to be changed or tag name is displayed.
Type(b)	It is the type of the item to be changed.
Device(c)	It is the name of device to be changed.
Value(d)	Input the value to be changed.

Notice

(1) If wrong value is input or it exceeds the limited range, the below error message will be shown.
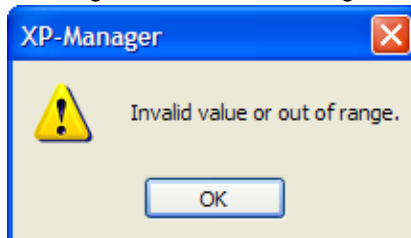
11.7 Monitor Stop

[Procedures]

(1)   Open the project.
(2)   Select the monitor screen.
(3)   Select node screen(g) for monitor registration.
(4)   Register the monitor.
(5)   Press Start Monitor button.
(6)   Then, monitor is started.
(7)   Press Stop Monitor button.
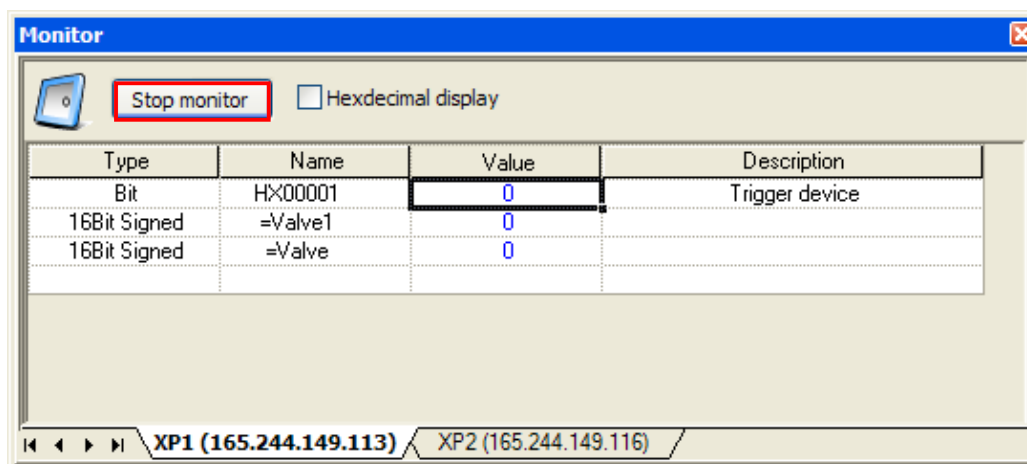
(8)   Monitor is stopped.

Chap.12 Monitoring XGT Panel screen at PC and web environment

12.1 Monitoring XGT Panel screen at PC Environment

XP-VNC Client is the tool to check·control the operation data and status of XGT Panel through single application. Namely, the controller such as PLC is not directly monitored, operated by XGT Panel but it is monitored by PC connected with XGT Panel.
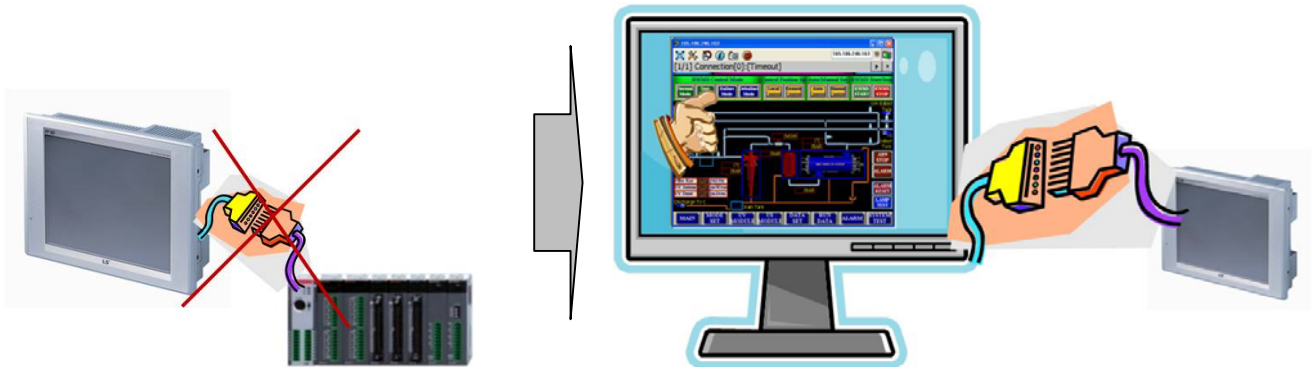
One XP-VNC Client can be connected to several XGT Panels and it can monitor and operate each XGT Panel.
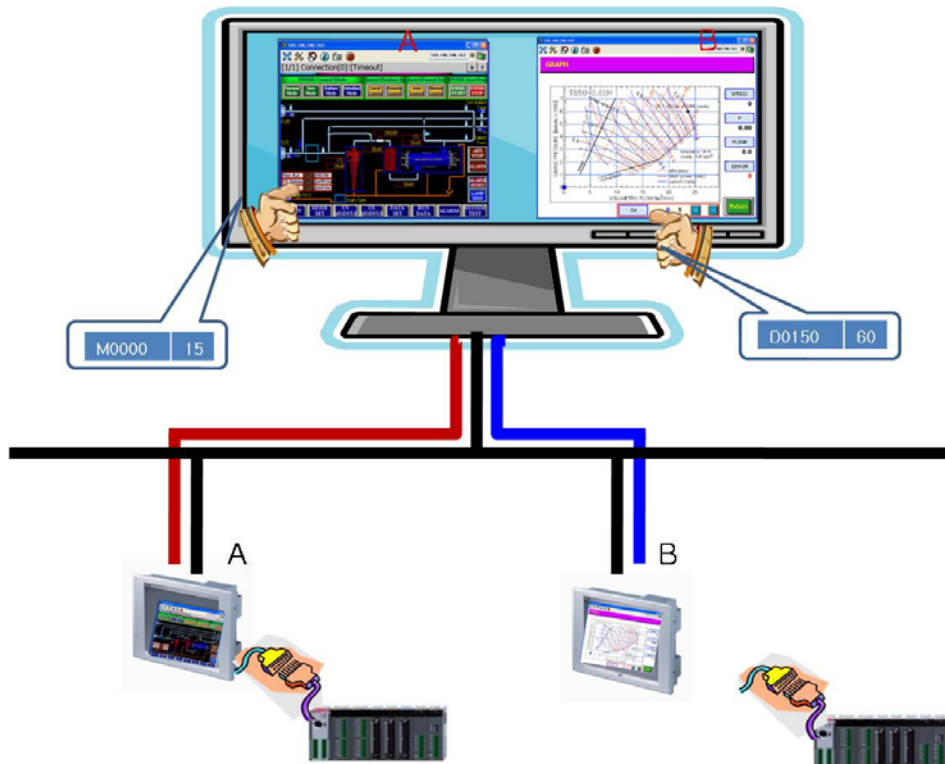
But, one XGT Panel can be connected to one XP-VNC client.

12.2 Operating XP-VNC Client

The operation processes for XP-VNC Client are as below.

```
┌─────────────────────────────────┐
│    Operating XP-VNC Server      │
└─────────────────────────────────┘
┌─────────────────────────────────┐
│      Starting XP-VNC Client     │
└─────────────────────────────────┘
┌─────────────────────────────────┐
│  Setting the option of XP-VNC Client │
└─────────────────────────────────┘
┌─────────────────────────────────┐
│ Connecting XP-VNC Client and XP-Server │
└─────────────────────────────────┘
┌─────────────────────────────────┐
│      Ending XP-VNC Client        │
└─────────────────────────────────┘
```
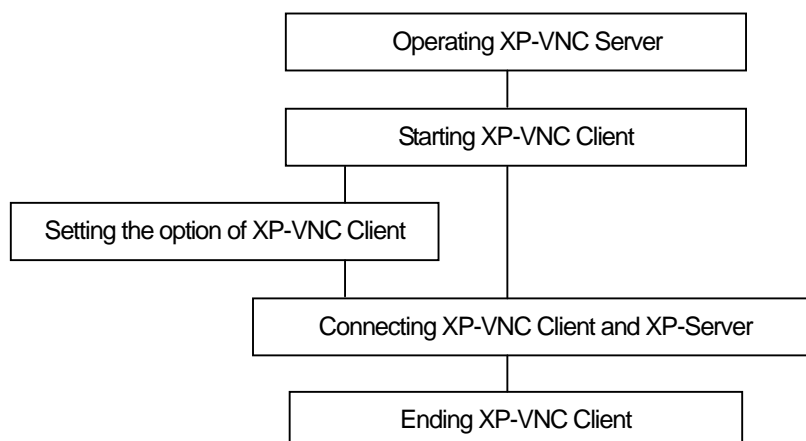
To monitor the XGT Panel screen at a PC; first, start XP-VNC Client of XP Manager. Second, operate XP-VNC server downloaded at XGT Panel to be connected. A user can set the options of XP-VNC Client (resolution, screen capture position, etc.) depending on the circumstances. After the above processes are completed, connect VNC server of the related XGT Panel at XP-VNC Client of PC. After monitoring XGT Panel screen is completed, terminate XP-VNC Client. For more details and process, refer to the below.

12.2.1 Operating XP-VNC Server

To operate XP-VNC Client, you need to run XP-VNC server downloaded at XGT Panel. There are two methods to operate XP-VNC Server as below.

1) Operate it through [XP-Manager]-[Communication]-[Manage XP-VNC Server]. For more details on XP-VNC, refer to [10.3 XP-VNC Server Management].
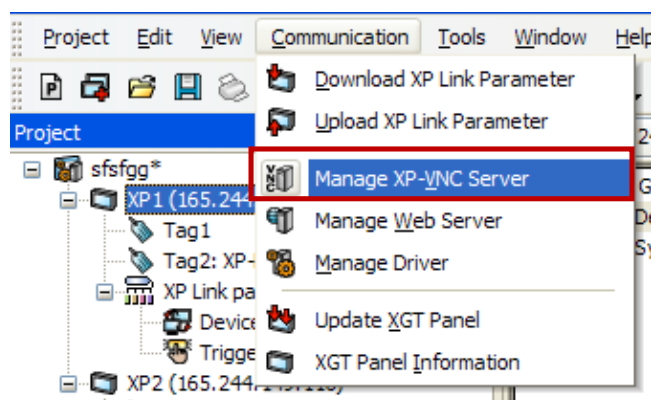
2) After selecting the node IP to be connected among the nodes connected XP-Manager, press the right mouse button and select [Manage XP-VNC Server].
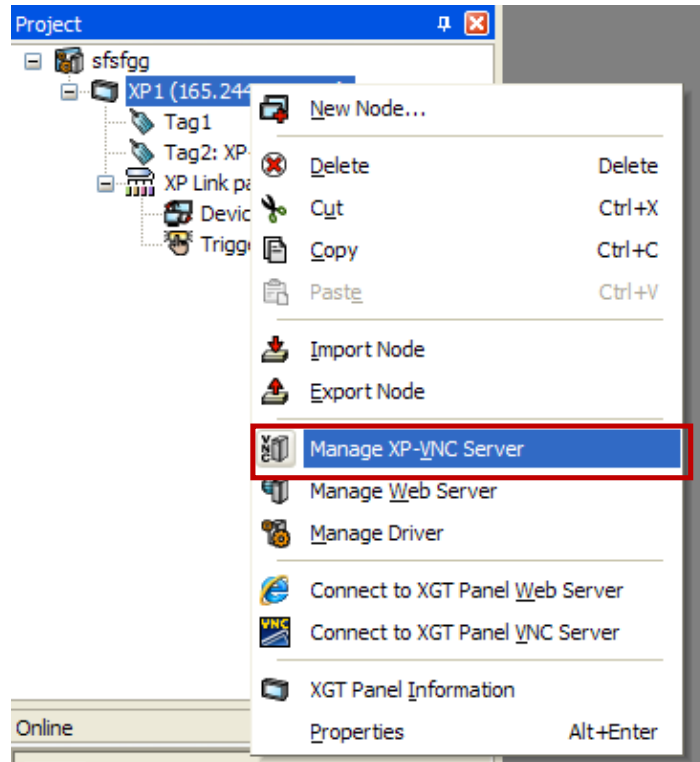
12.2.2 Starting XP-VNC Client

There are three methods to start XP-VNC Client as below.

1) Execute [Start]- [LSIS]- [XP-Manger 1.00]-[XP-VNC].
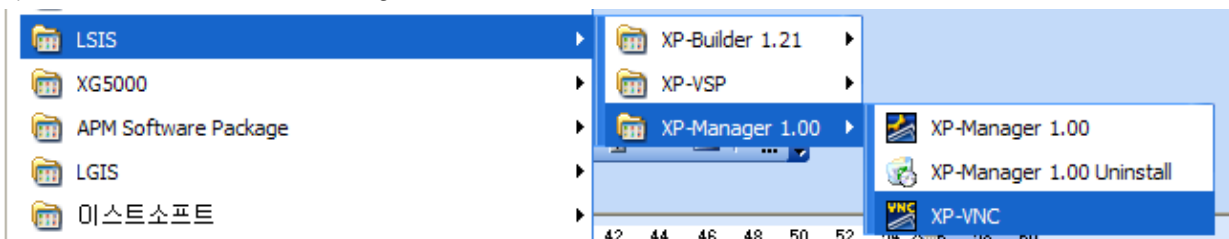
2) Execute XP-VNC at XP-Manager.

3) After selecting node added by XP-Manager, press the right mouse button and select [XP-VNC Server Connection].
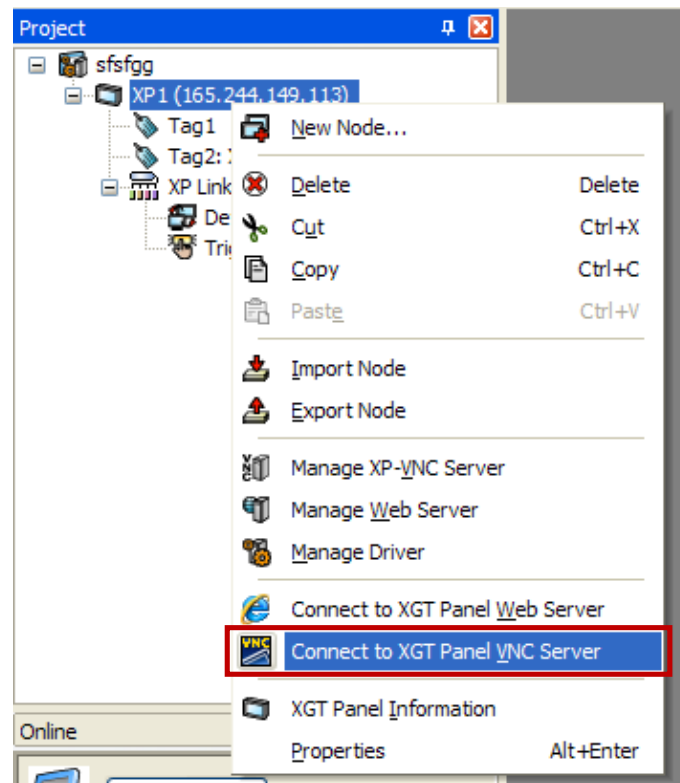
Notice

You can directly monitor the target XGT Panel screen without starting XP-VNC Client.

Methods
1. After selecting the node of XGT Panel or IP address connected by XP-Manager, press the right mouse button.
2. Select [XGT Panel VNC Server Connection] with the right mouse button.
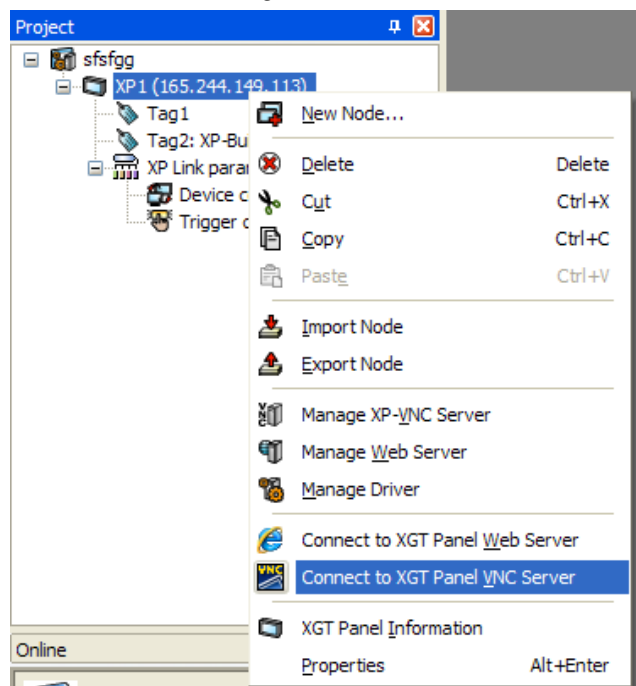
If you execute XP-VNC through the above method, the Start Screen will be not displayed but XGT Panel screen will be displayed directly.
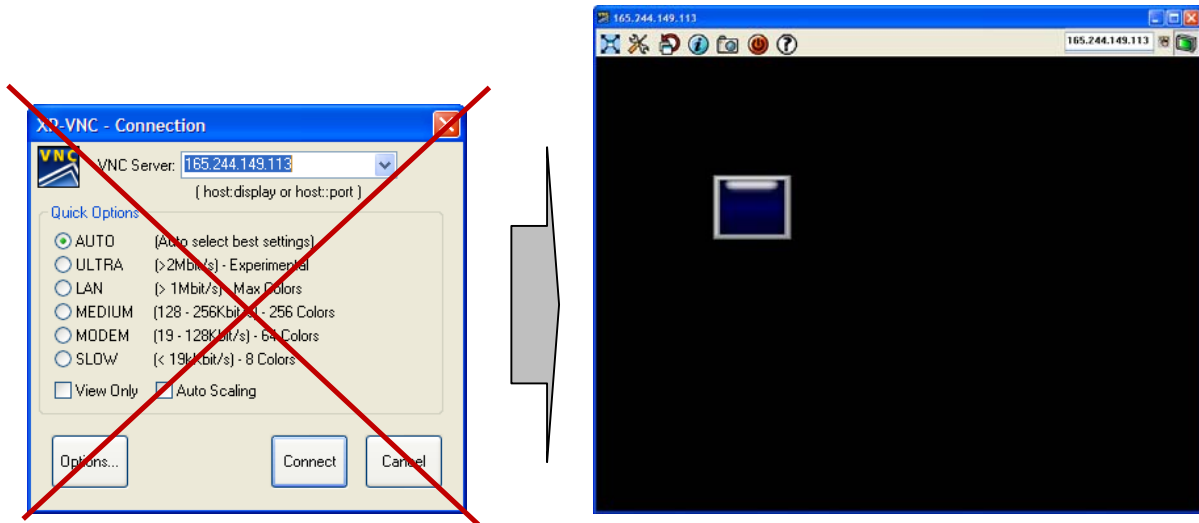
12.2.3 Setting the option of XP-VNC Client

Before connecting XP-VNC Client and XP-VNC Server of XGT Panel, a user can set the options of XP-VNC Client(resolution, screen capture position, etc). For more details on setting XP-VNC Client options, refer to [Connection Option] of [12.4 XP-VNC Client Tool Box].
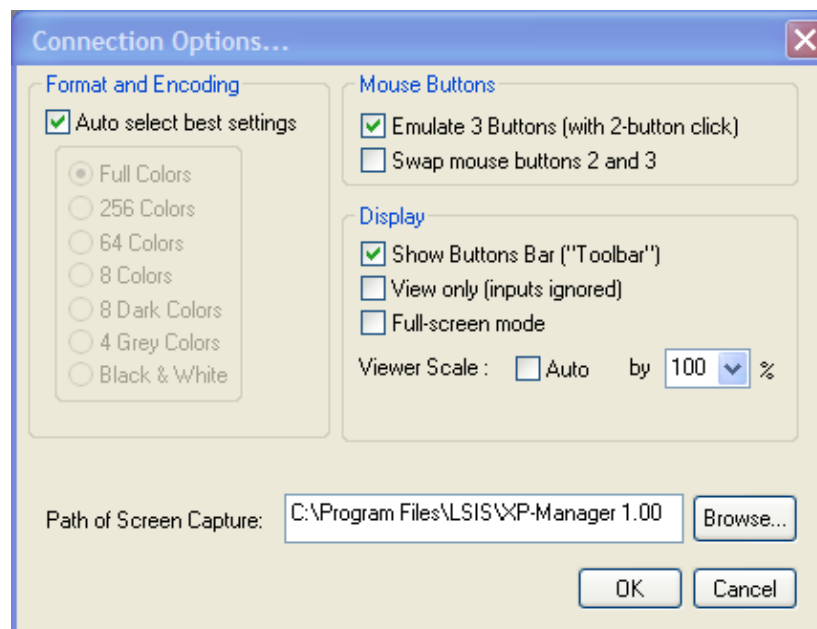
12.2.4 Connecting XP-VNC Client and XP-VNC Server

If you press [Connect] button at connection screen of XP-VNC Client started through the method from 12.2.2, the related server will be connected. It is properly connected provided that XP-VNC server works.
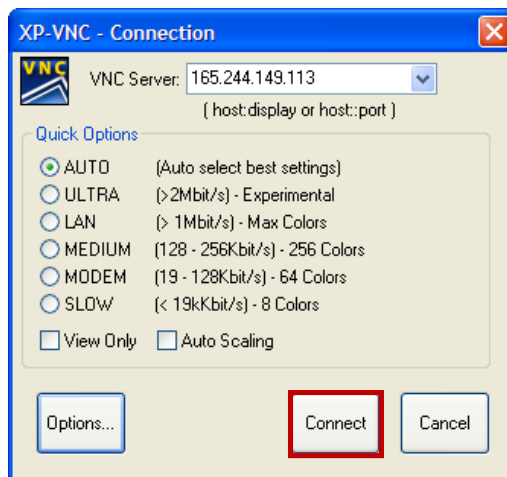
If you press [Connect] button at connection screen of XP-VNC Client as above, it is connected to XGT Panel VNC-Server and the target XGT Panel screen is displayed at PC. For more details on XP-VNC Client screen, refer to [12.3 XP-VNC Client Screen Composition].
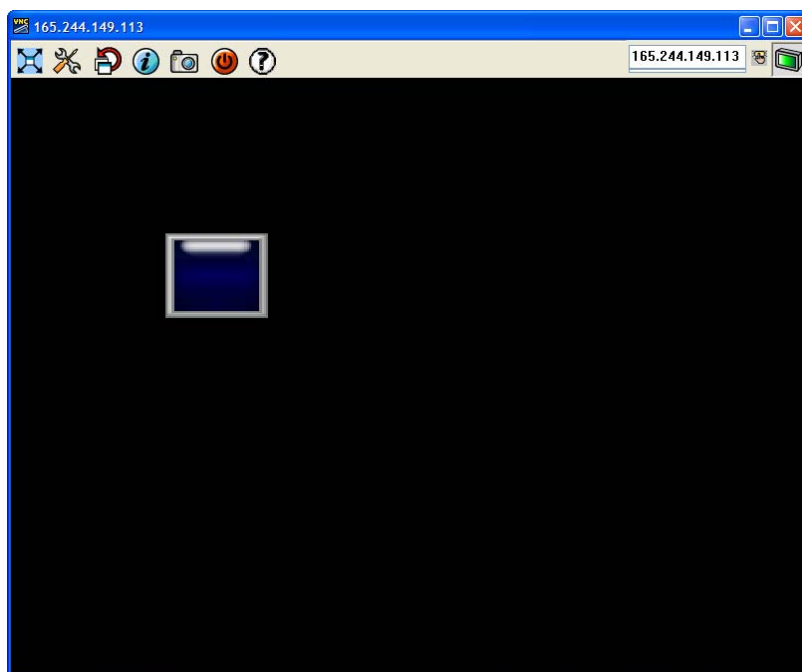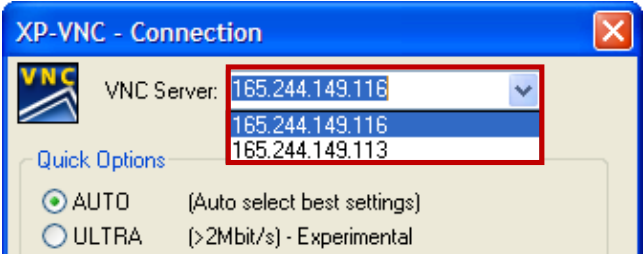
12.2.5 Ending XP-VNC Client

It terminates connection of XP-VNC Client. For details on terminating XP-VNC Client, refer to [Tool Box] of [12.4 XP-VNC Client Tool Box].

12.3 XP-VNC Client Screen Composition

The execution screen of XP-VNC Client has the below composition.

Item	Description
VNC Server(a)	Input the IP address of XGT Panel to be connected. (VNC Server should be operated at the XGT Panel to be connected) The Server IP list of XGT Panel recently connected is displayed at the combo box and you can select the one from them.
Quick options (b)	Set communication speed with VNC Server of XGT Panel and color type to be displayed. In the case of automatic setting, the color is automatically changed and displayed depending on transmission speed.
View Only(c)	Set whether the function to display screen only (Cannot input) is applied or not. User's input details is not transferred to XGT Panel but just XGT Panel screen is displayed
Auto Scaling (d)	In case that Automatic Size Adjustment is set, the size of VNC Client will be automatically set to fit the size of PC monitor connected to XGT Panel. On the other hand, in case that Automatic Size Adjustment is not set, XP-VNC Client is displayed as the size of XGT Panel.
Options (e)	You can set the connection between XP-VNC Client and VNC Server. For more details, refer to connection options of 12.4 Tool Box.
Connect (f)	Press the button to connect VNC server and VNC Client.
Cancel (g)	You can cancel the execution of VNC Client.

The screen of connection between XP-VNC and XGT Panel is composed of below.
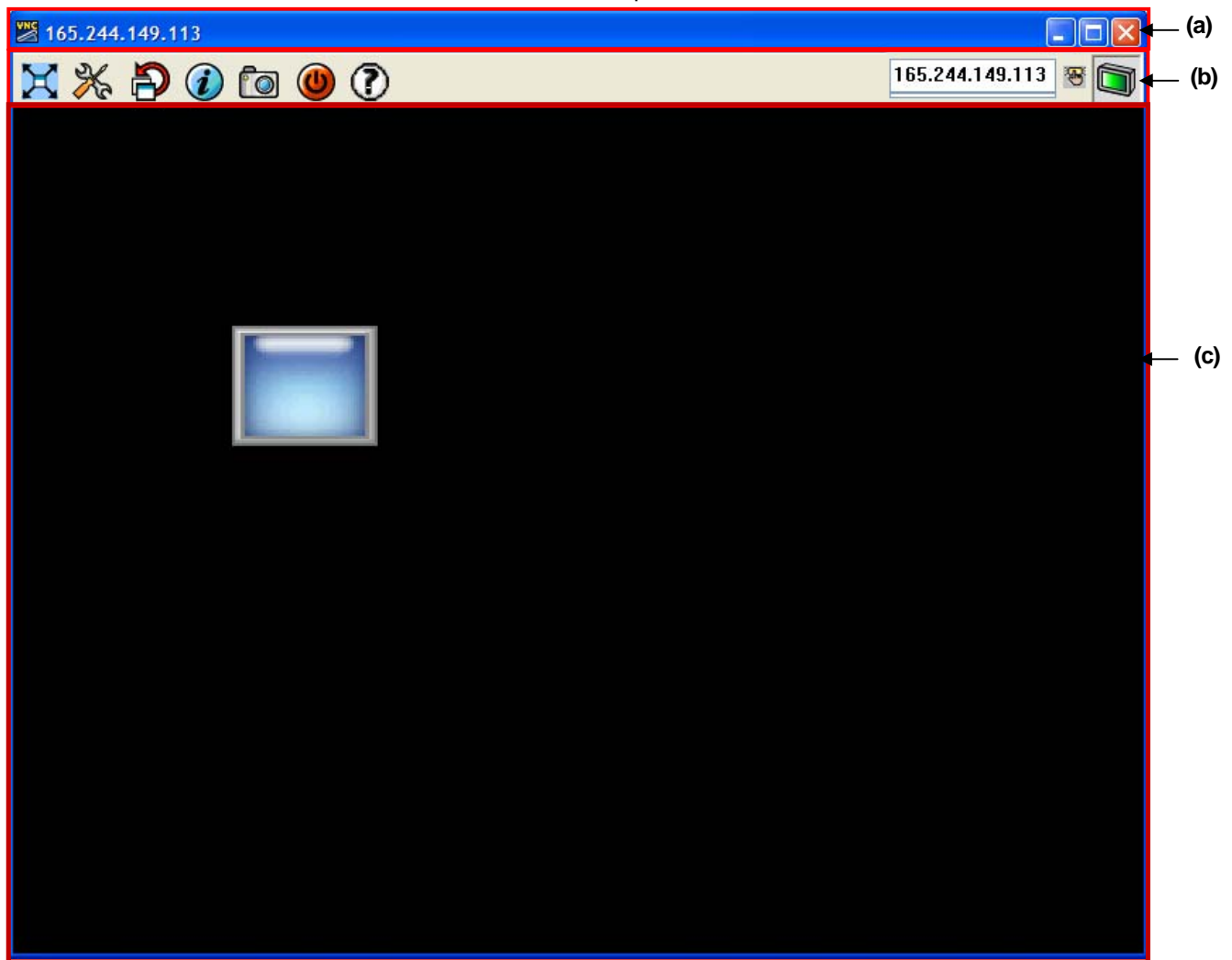
[Description on a dialog box]

Item	Description
Title(a)	It displays the IP of connected XGT Panel.
Tool Box(b)	It offers the tools to execute the functions provided by XP-VNC.
Screen (c)	It displays the screen of connected XGT Panel as it is.

12.4 The Composition of XP-VNC Client Tool Box

The frequently used functions of XP-VNC are provided as shortcut icons. [Tool Box] will be shown as below and refer to the following each function.

[Tool Box]

165.244.149.113

(1) (2) (3) (4) (5) (6)   (7)
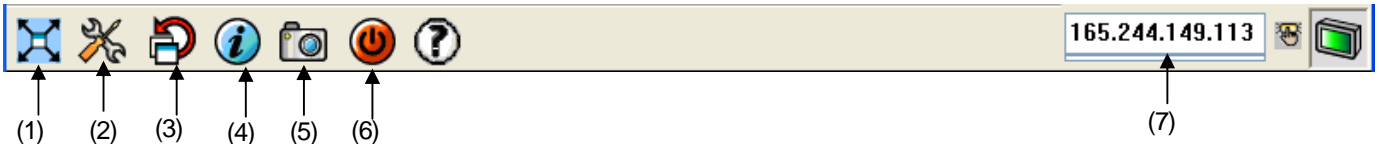
(1) Full-Screen Transition
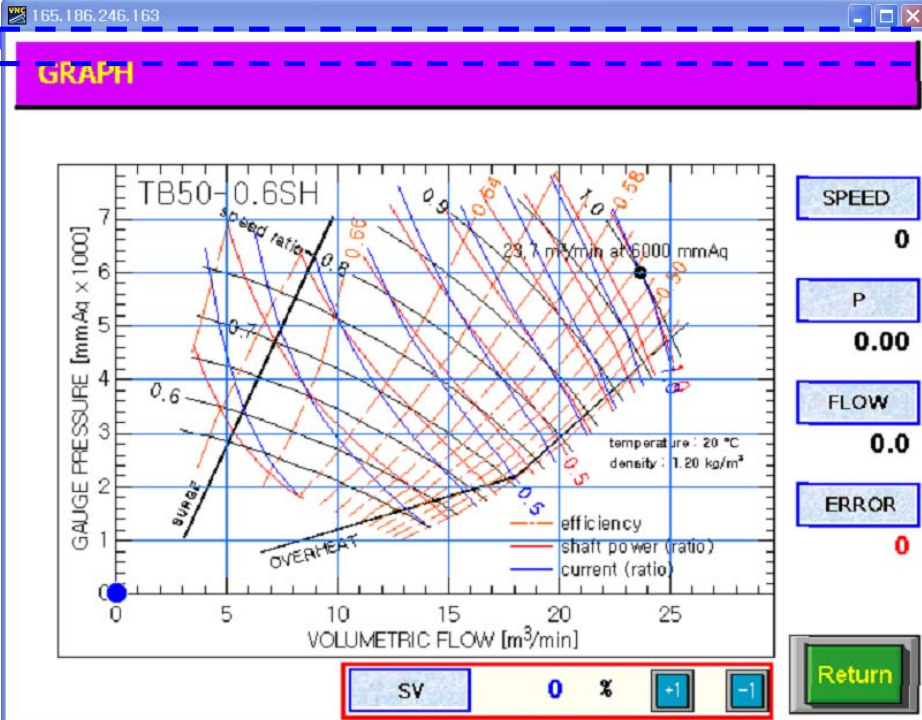
Item	Description
Full-Screen Transition	If Full-Screen Transition is not established, it is displayed as the size of XGT Panel at the whole screen of PC monitor.

(2) Connecting Options
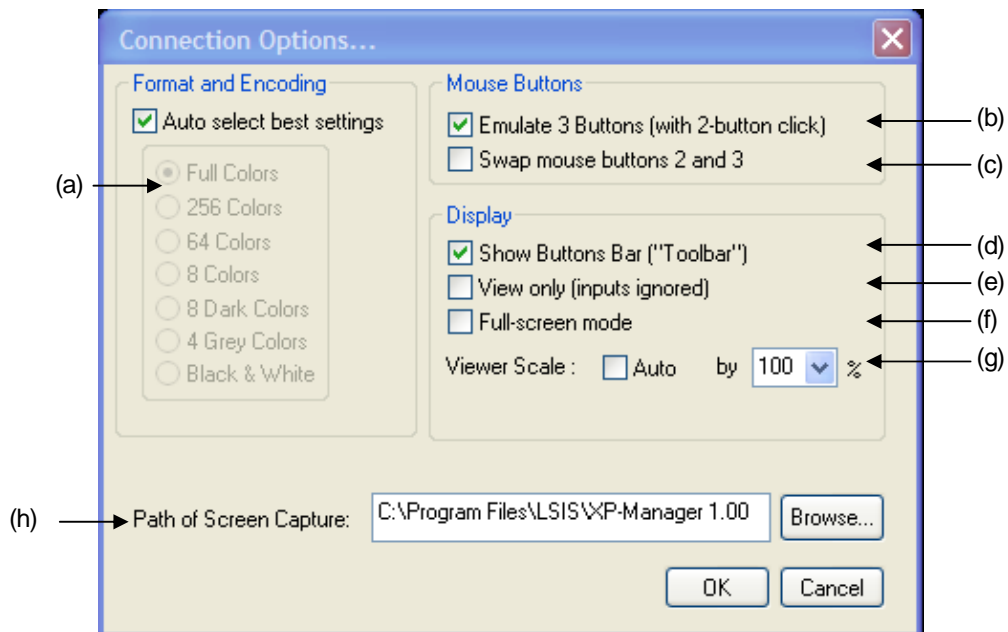
Item	Description	
Format and Encoding (a)	You can set the screen color to be displayed at XP-VNC. In the case of Automatic Setting, the color is automatically changed depending on PC's communication speed as below.	
	Speed	Color
	1Mbit/s	Full Colors
	125 ~ 256 Kbit/s	256 Colors
	128 ~ 19 Kbit/s	64 Colors
	5 ~ 19 Kbit/s	8 Colors
	Less than above	Black & White
Using 3 Button (b)	You can set whether a 3-button mouse will be used or not.	

Item	Description
	If the mouse connected to PC has three buttons, the option is set and you can use light, middle, right buttons.
Swap 2nd button and 3rd button (c)	If you use 3-button mouse, set whether the operation of middle button and right button will be exchanged or not.
Show Buttons Bar (d)	Set whether the tool box will be shown or not. If you undo [Showing Tool Box], the tool box is not shown at XP-VNC Client.
View Only (Cannot Input)(e)	Set whether the function to transfer user's operation to XGT Panel at XP-VNC Client will be applied or not. If Displaying Screen Only is applied, any functions of XP-VNC Client are not transferred to XGT Panel but just XGT Panel screen will be displayed. If you undo Displaying Screen Only, the operations of XP-VNC Client are transferred to XGT Panel. For example, if you press screen transition switch at XP-VNC Client, it is moved to the screen.
Full Screen (f)	It is displayed at the full screen of a user's PC. In the case, the size of a screen will be equivalent to the size of XGT Panel. (Refer to the figure of 12.3 The Composition of Screen).
Viewer scale (g)	You can adjust the size of a screen.(Refer to the figure of 12.3 The Composition of Screen) For example, if the size of XGT Panel is 320 * 240 and the size of a screen is 100%, the size of screen will be displayed as 320 *240.
Path of Screen Capture (h)	You can set the position to capture the current screen of XP-VNC Client (Refer to the figure of 12.3 The Composition of Screen). A user can set the upper position where the captured file will be saved and Year/Month/Day folder is created at the established position with the image whose file name is Hour/Minute/Second. bmp. For the method to capture the screen, refer to (5) Screen Capture of 12.4 The Composition of Tool Box.

(3) Refresh
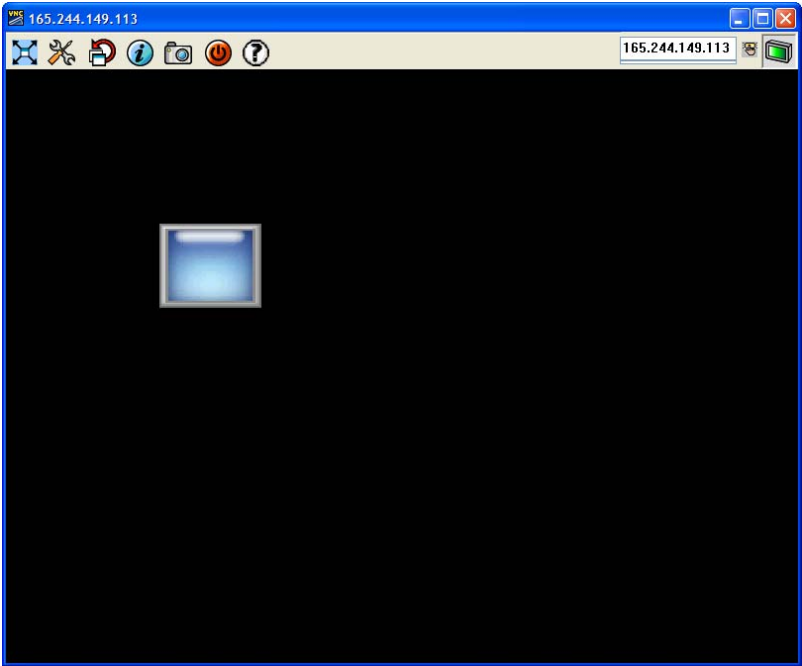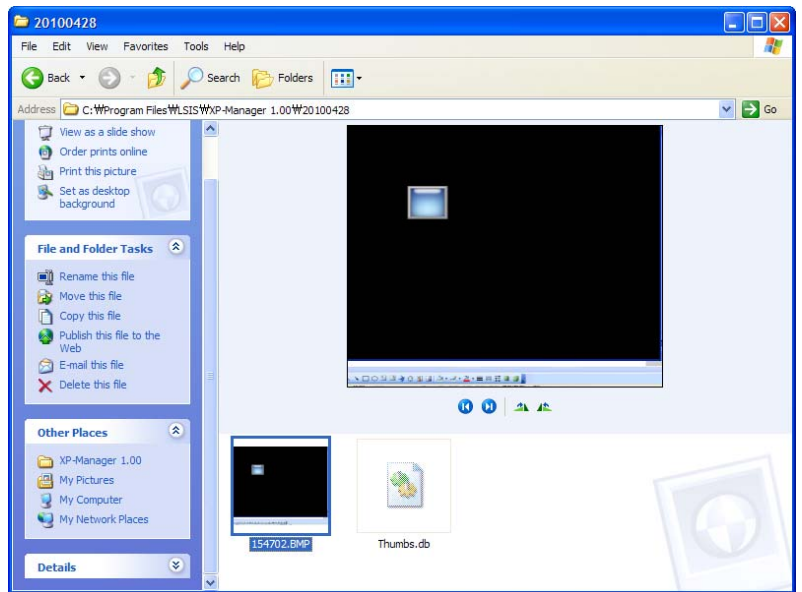
Item	Description
Refresh	It newly displays the screen of XP-VNC Client. If the data value is changed or the screen is converted, the event of XGT Panel may not be transferred and displayed to XP-VNC Client in real time. Namely, XP-VNC screen may not be updated immediately due to various factors such as PC transmission speed and XGT Panel's operation speed. In this case, through Refresh mode, you can communicate with XGT Panel and update XP-VNC screen with the XGT Panel screen.

(4) Connecting Information
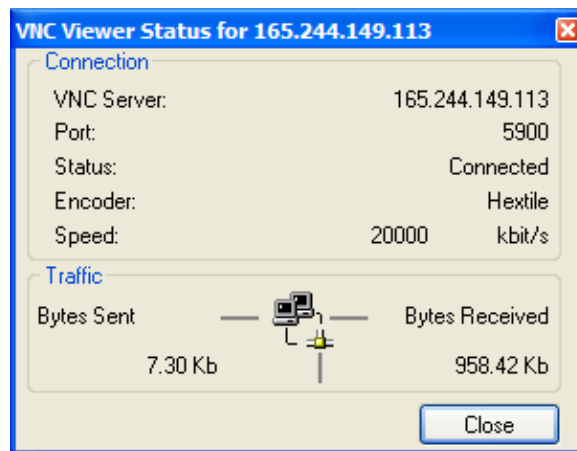
Item	Description
VNC Server	It displays the IP address or name of the VNC Server that is connected currently.
Port	It displays the port No. connected to VNC Server.
Status	It displays the status of VNC Server. For example, if it is connected to the server, [Under Connection] and if password is set, [Checking password] will be displayed.
Encoder	It indicates the status of screen encryption to transmit the screen. XP-VNC Client and Server adopts only Raw type for encoder.
Speed	It indicates the communication speed between VNC Server and XP-VNC Client. If encryption is automatically set at connection option, the color will be changed depending on the above speed.
Traffic	It indicates the communication amount transmitted by sever and the communication amount that XP-VNC Client receives.

(5) Screen Capture

Item	Description
Screen Capture	It captures the screen of the current XP-VNC Client to designated position. (Refer to the figure of 12.3 The Composition of Screen) A user can set the upper position where the captured file will be saved and Year/Month/Day folder is created at the established position with the image whose file name is Hour/Minute/Second. bmp. For example, if the below screen is displayed and capture position is set as C:\Temp, 20091207(Year/Month/Day) folder and 181308(Hour/Minute/Second).bmp file will be creased as below.

(6) Screen End

Item	Description
Connection End	It terminates execution of the current XP-VNC Client. Other method to terminate connection is press X button that is on the upper right of XP-VNC Client.

(7) IP Input Screen

	Description
Item	
IP Input Screen	When XP-VNC Client is in progress, if you try to connect other XGT Panel, input the IP address of the server to be connected at IP Input Screen of the Client and press the left button of the screen. Then, new XP-VNC Client will be created and display the related XGT Panel. Namely, if you connect other XGT Panel through IP Input screen at executing XP-VNC Client, the current XP-VNC Client will not be terminated but the existing connected XGT Panel will be continuously displayed.

Notice

(1) If the password is set for connected XGT Panel, when XP-VNC Client is executed, the password will be requested with verification process. You can establish the password at [Communication]-[XGT Panel Information]-[Password] of XP-Builder.
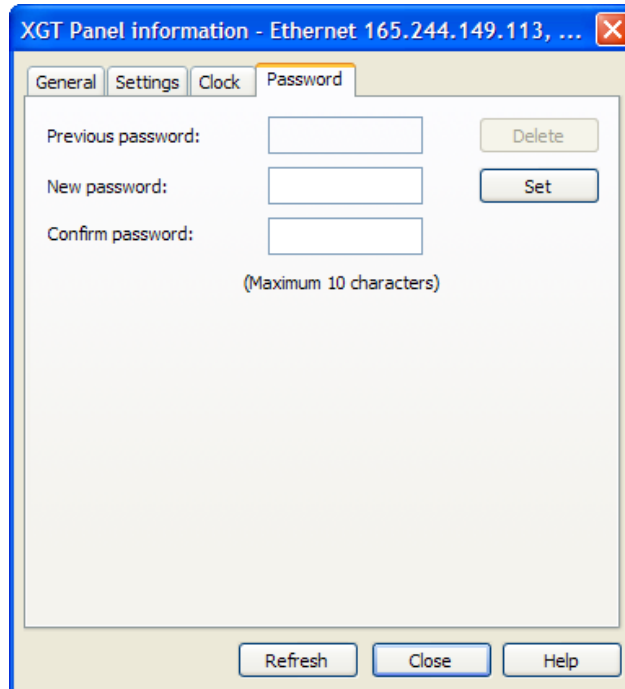
If XP-VNC Client is connected when the password is set for XGT Panel as above, password will be requested with verification process as below. Although the allowable password for XP-Builder is 10 digits, XP-VNC tries to connect to server when the password coincides with the 8th digits. If password verification is failed, XP-VNC Client will be terminated.
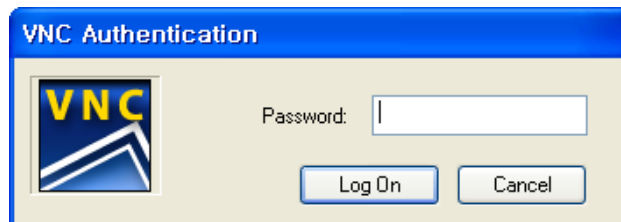
(2) XP-VNC Client can be connected to one VNC Server. If VNC Server is connected to either one XP-VNC Client or communication, other XP-VNC Client is the same VNC Server, the alarm message [Connection to Server failed] will be shown.
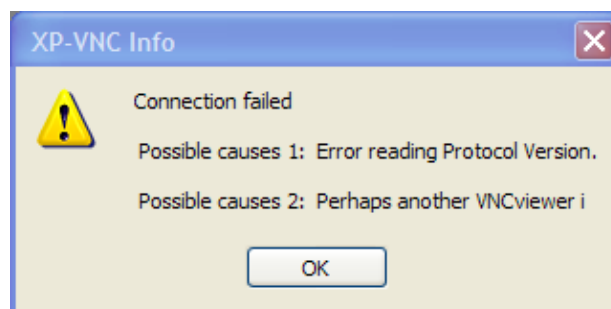
12.5 Monitoring XGT Panel Screen at web

XP-VNC ActiveX is the tool to check and control the data operated at XGT Panel and its status through web browser. Namely, it does not directly monitor, operate the controller such as PLC at XGT Panel but monitors, operates the controller by connecting XGT Panel at web browser of PC. XP-VNC ActiveX can connect to several XGT Panels with one PC like XP-VNC Client and you can monitor, operate each XGT Panels.
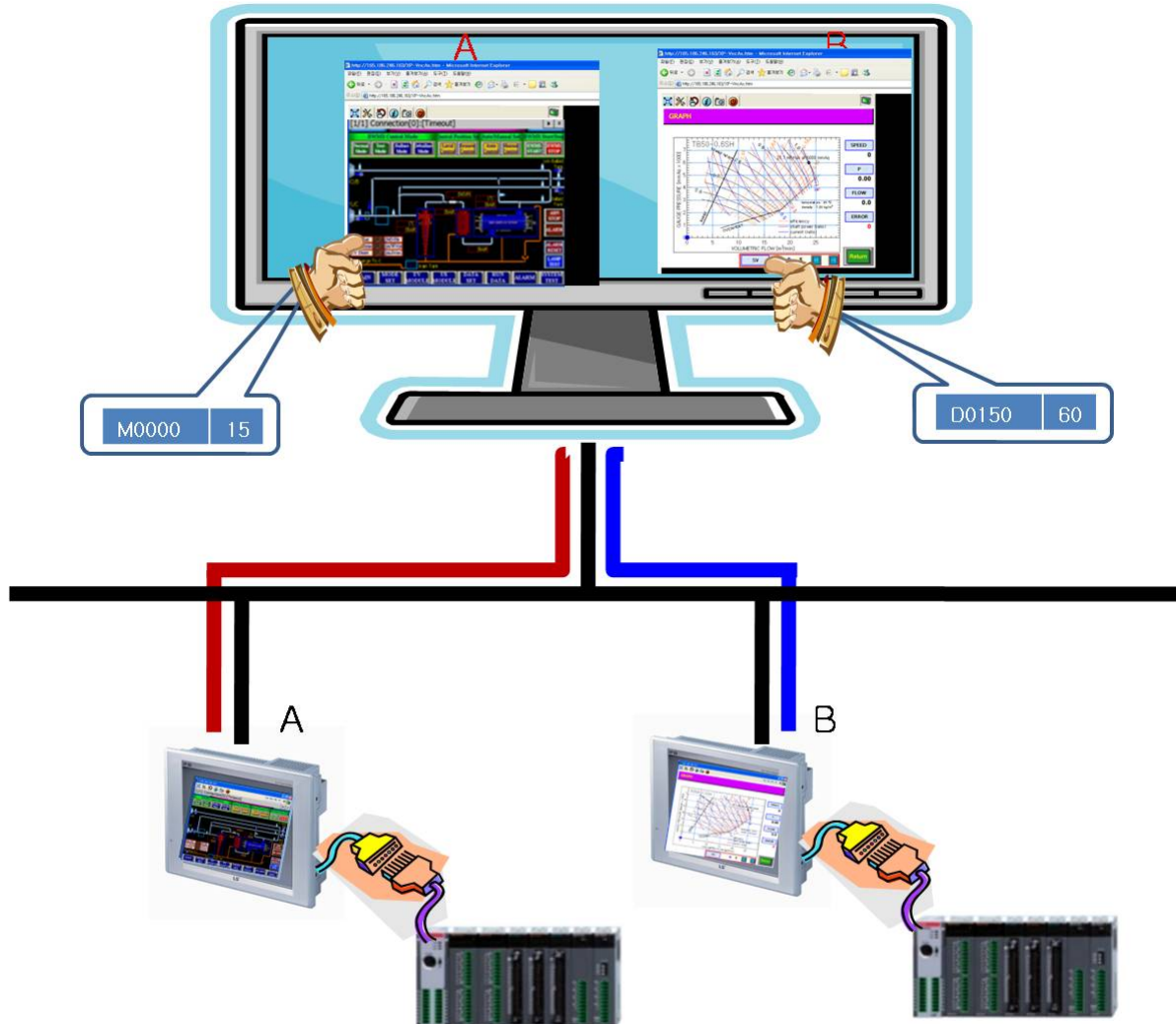
12.6 Starting

XP-VNC ActiveX is the application operated at web browser and you can download ActiveX from web browser. To download ActiveX provided by XP-VNC, [Security] should be established at web browser as below. Select [Control panel]-[Internet Options]-[Security]-[Custom Level] at web browser.
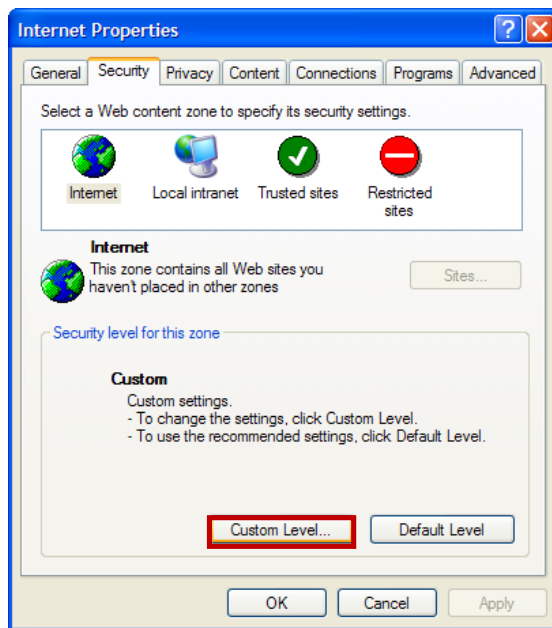
Enable the [Download unsigned Active X controls].
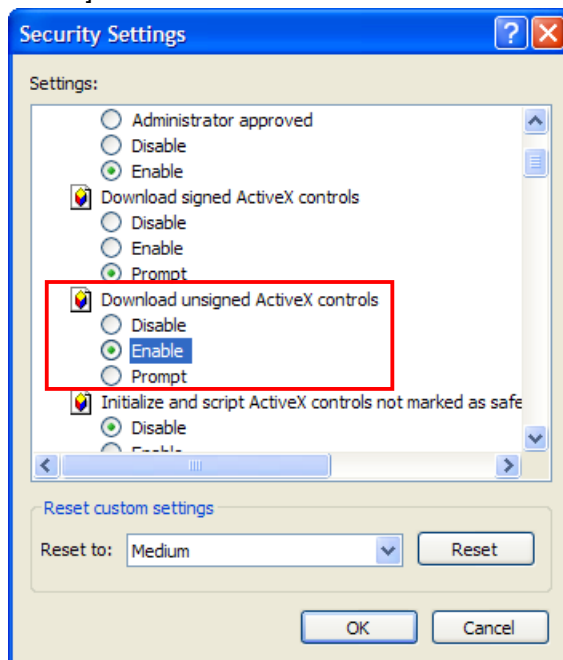
Enable [Initialize and script Active X controls not marked as safe.
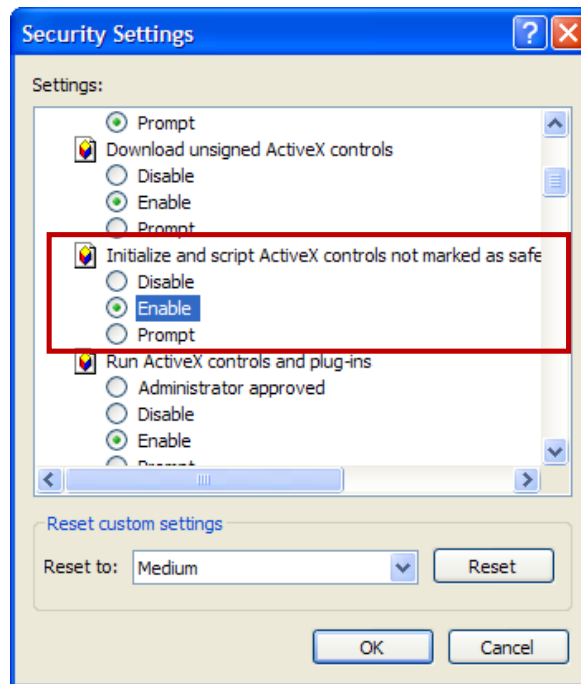
Operation processes for XP-VNC ActiveX are as below. To execute XP-VNC ActiveX, both web server and VNC Server should be operated at the same time.

```
┌────────────────────────────────┐
│     Operating Web Server        │
└────────────────────────────────┘
                │
┌────────────────────────────────┐
│    Operating XP-VNC Server      │
└────────────────────────────────┘
                │
┌────────────────────────────────┐
│     XP-VNC ActiveX Download     │
└────────────────────────────────┘
                │
┌────────────────────────────────┐
│   Setting XP-VNC ActiveX options │
└────────────────────────────────┘
                │
┌─────────────────────────────────────────┐
│ Connecting XP-VNC ActiveX to XP-VNC Server │
└─────────────────────────────────────────┘
                │
┌────────────────────────────────┐
│      Ending XP-VNC ActiveX      │
└────────────────────────────────┘
```
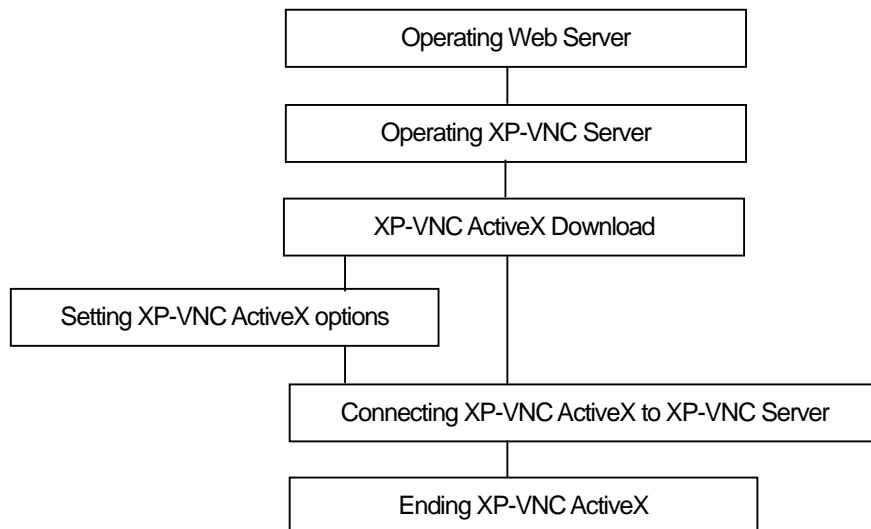
To monitor the XGT Panel screen at web browser; first, operate the web server downloaded at the target XGT Panel. Second, operate XP-VNC server downloaded at the XGT Panel as XP-VNC Client. The above two processes are the preconditions to monitor XGT Panel screen at web browser.

Third, download XP-VNC ActiveX that is the application to display XGT Panel screen at web browser to the XGT Panel.

A user can set the options of XP-VNC Client(resolution, screen capture position, etc.) depending on the circumstances. After the above processes are completed, connect VNC server of the related XGT Panel at web browser. After monitoring XGT Panel screen is completed, terminate web browser. For more details and process, refer to the below.

12.6.1 Operating Web Server

To operate XP-VNC ActiveX, make sure to run web server. There are two methods to operate XP-VNC web server as below.

1) Operate web server through [XP-Manager]-[Communication]-[Manage Web Server]. For more details on XP-VNC Web Server, refer to [10.4 Web Server Management].
2) After selecting the node registered at XP-Manager, click the right mouse button and operate it through [Web Server Management].
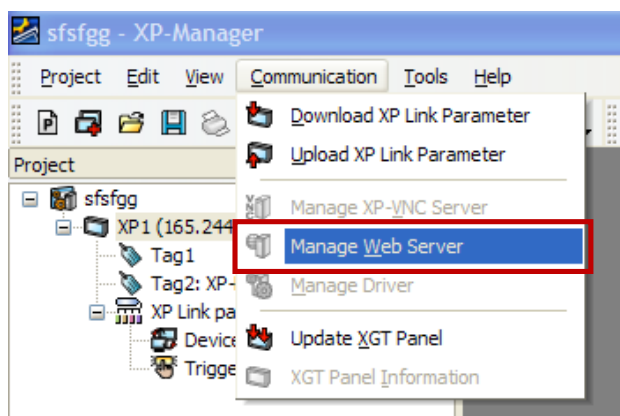
After executing as the above, make sure to press [Set] and [Start] as below.
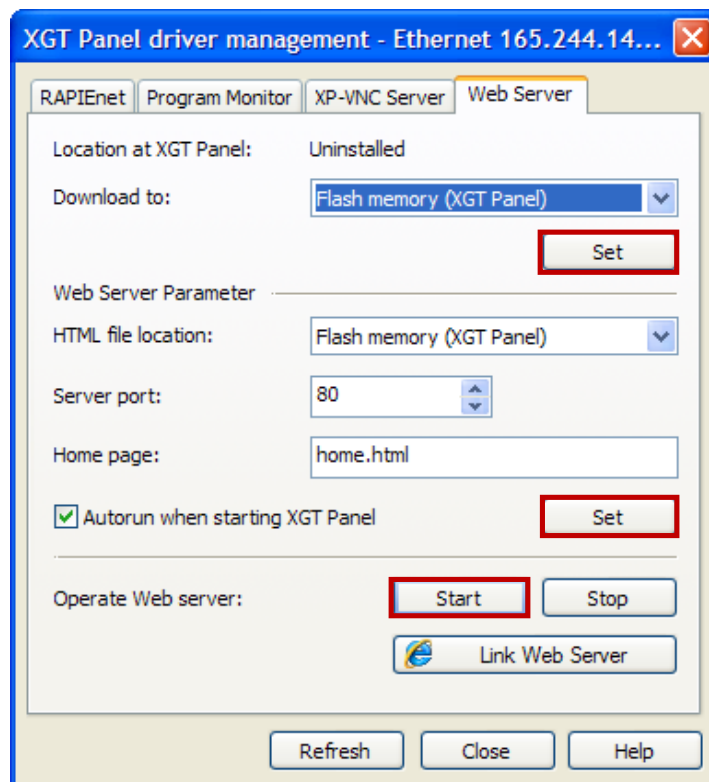
12.6.2 Operating XP-VNC Server

To operate XP-VNC ActiveX, for the details on XP-VNC Server, make sure to refer to [10.3 XP-VNC Server Management] and [12.2.2 Operating XP-VNC Server] as XP-VNC Client.

12.6.3 Setting the options of XP-VNC ActiveX

A user can set the options(resolution, screen capture position, etc.) of XP-VNC ActiveX before connecting XP-VNC ActiveX and XP-VNC of the target XGT Panel. For more details on setting the options of XP-VNC ActiveX, refer to [Connecting Option] of [12.4 XP-VNC Client Tool Box Composition].

12.6.4 Downloading ActiveX Application and Connecting to Web Server, XP-VNC Server

For the method to connect XP-VNC ActiveX to server with downloading it, refer to the below. After selecting the node to connected at XP-Manager, apply [Communication]-[Web Server Management] and press [Web Server Connection], web browser will be executed automatically with the below screen.
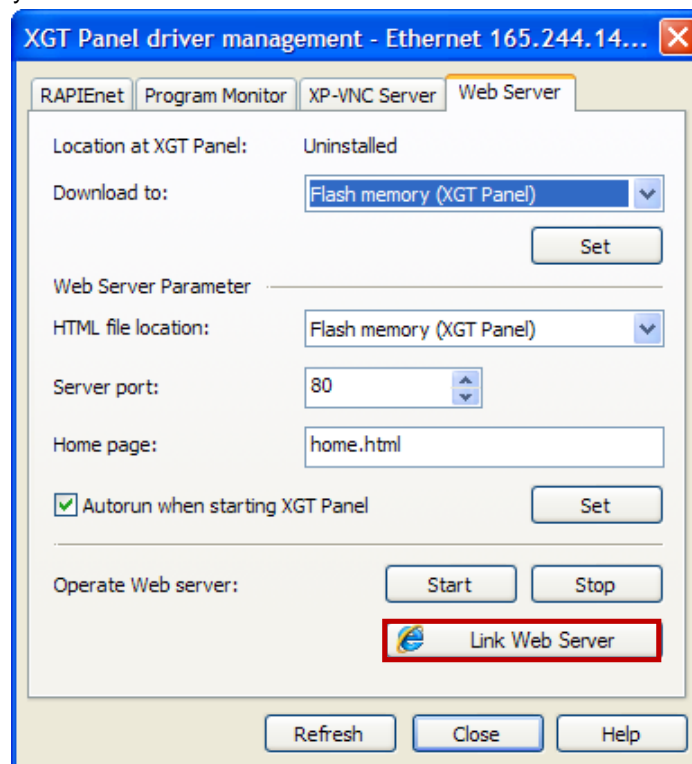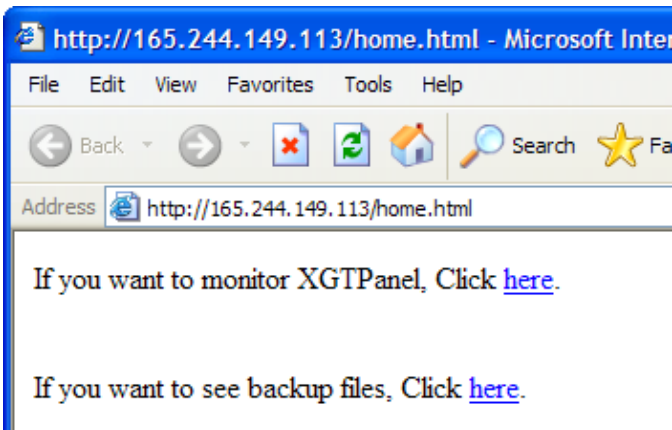
If you select [If you want to monitor XGT Panel, Click here] at the above web browser, it will be connected to the related XGT Panel.
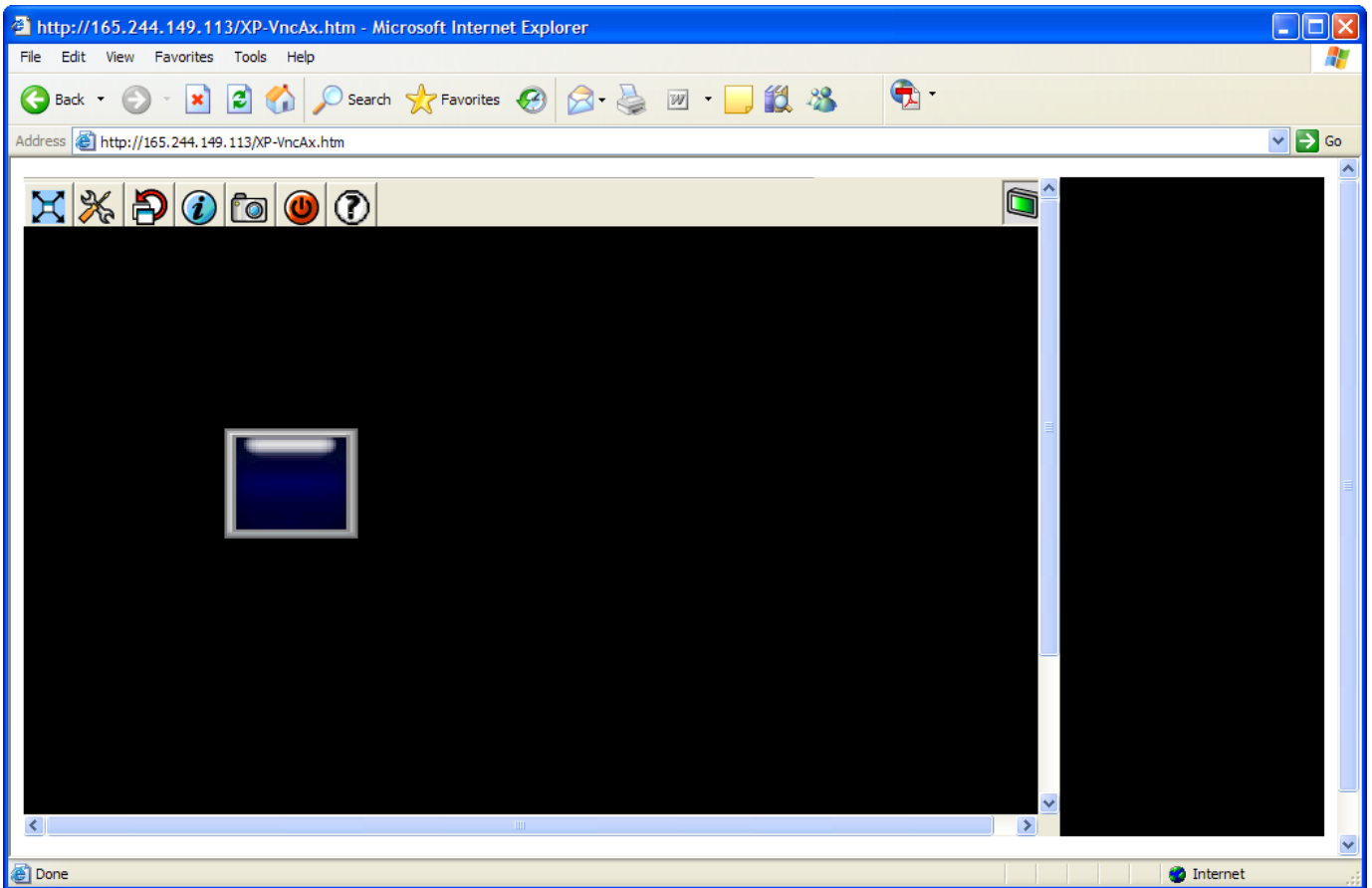
Notice

(1) If you download ActiveX through [Communication]-[Manage Web Server], ActiveX cab file is automatically downloaded to XGT Panel. Download route is the same as Flash memory where web server is located.
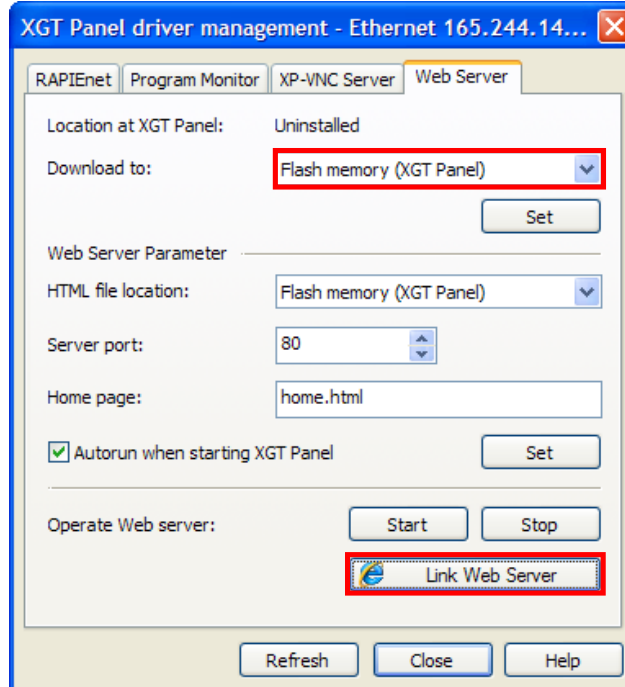
(2) If you try to execute web browser by downloading ActiveX .cab file and .html file to USB Memory or CF Card, refer to the below. Select [Communication]-[Manage XP-VNC Server]-[Copy XP-VNC ActiveX for web server to clipboard]. After that, paste it to USB Memory or CF Card and copy cab file and .html file.
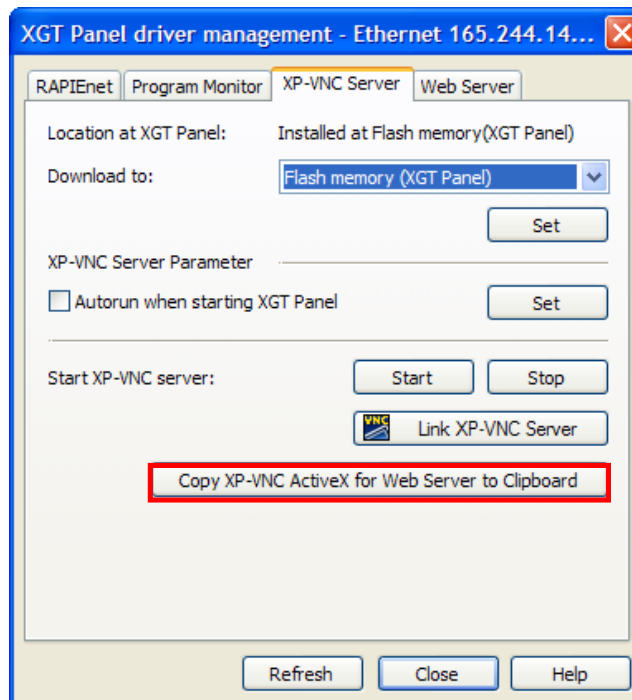
After copying the file to USB Memory or CF Card with the above method, connect the Memory Card to XGT Panel and input the IP to be connected at web browser, the below screen will be shown. Select [If you want to see backup files, Click here] at the below screen and move to the route where the position is located.
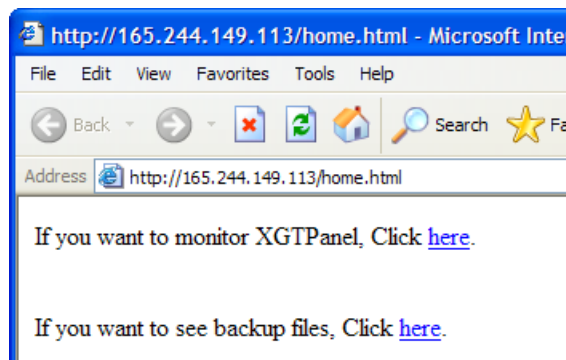
If you select XP-VncAx.htm from the above screen, the XGT Panel screen connected to memory card will be displayed at web browser.
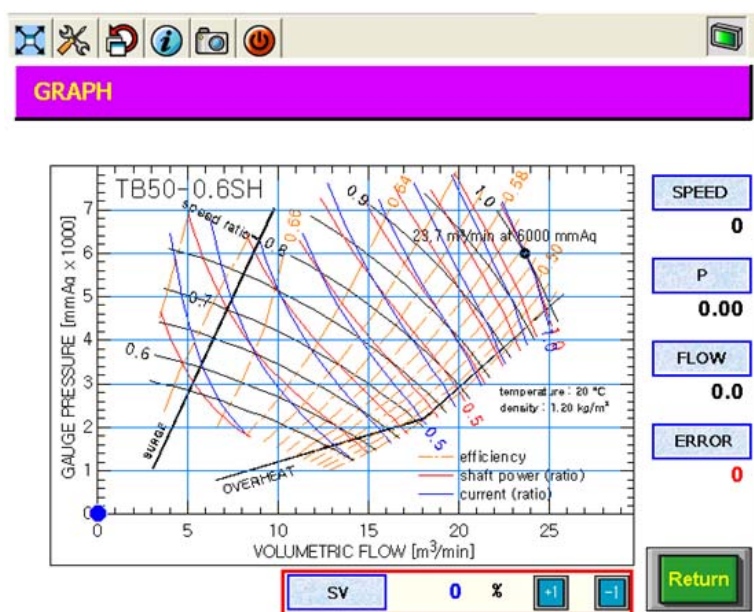
Chapter 13 Web Server

13.1 Installation and Operation of Web Server

Describes the function of XGT Panel Web Server

If you download the Web Server module in the Web Server management dialog box of the XP-Manager, the image like figure below will be displayed. (For more detail on how to download, refer to XP-Manager manual). The icon below means Web Server has been installed and is ready to operate. Click the Start button in the Web Server management dialog box you used when installing, then Web Server starts. Though the XGT Panel is "Start Menu" status, Web Server can operate.
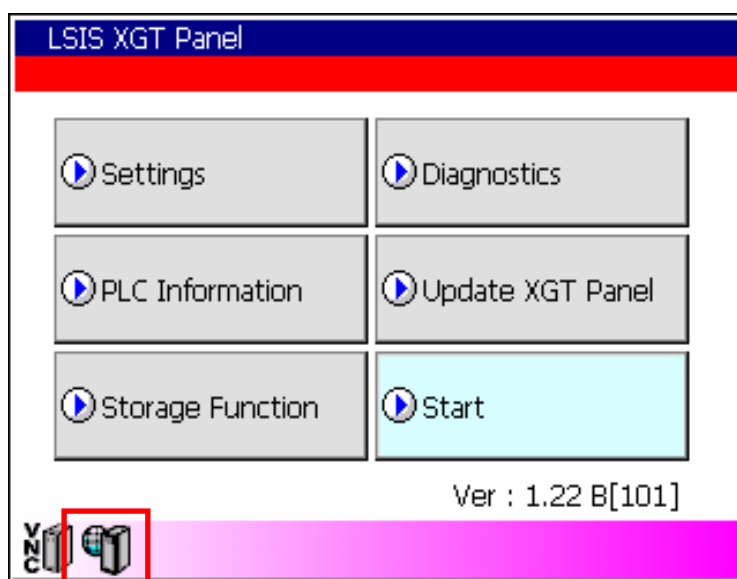
13.2 Viewing Web Page

Go out the screen by pressing [OK] button. Web Server displays the web page located in the specific path; you can see that through web browser. And it can set which page to display when inputting IP of the device at address window of web browser. At this time, you can set the path of web page and the home page (the web page that is displayed first when inputting IP) in the XP-Manager web server management dialog box. (For detail, refer to XP-Manager manual)
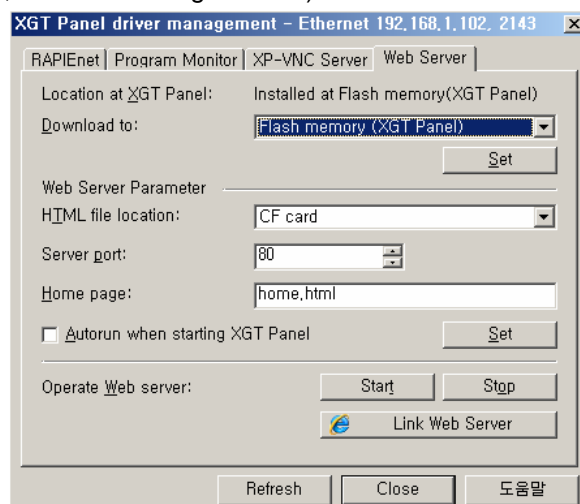
While home.html is set as home page, when the device gets the request for web page from web browser, if there is no "home.html", the web server creates the following page.

Automatically created web page is as follows.

If you want to use other start page, write web page with name of home.html at the specified web page path

13.3 Viewing Backup File saved in the Device

You can view the backup file saved in the device or download them to your PC through web server. If you click the "Inquiring file lists in Storage" of homepage basically provided by the XGT Panel, you can view the list of the backup file as follows.

On the top of the page, entire paths you are viewing are displayed. If you click each path, the list of the directory and file on the corresponding path will be displayed. And if you click the file among directory, file list on the bottom, you can download the file.

If you want to link this page to user-made page, set to move to "/xp-runtime/backup/" link.
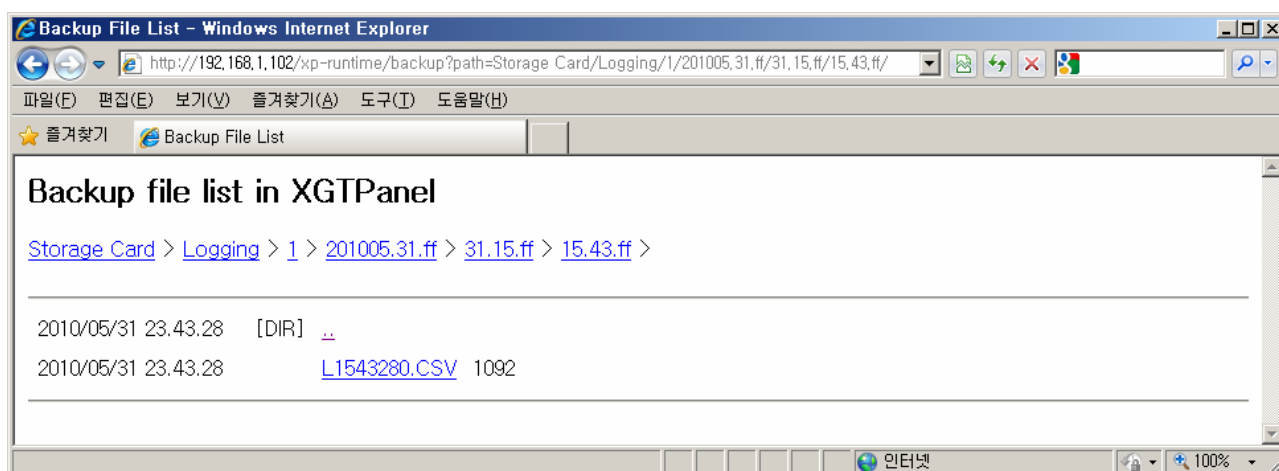
13.4 VNC Function

You can view the current screen of the XGT Panel and manipulate the screen at the web browser. Click the "Monitoring XGT Panel" of homepage basically provided by the XGT Panel, then you can see the screen of the current device at the web browser. In this screen, if you manipulate the screen, same action will occur in the actual XGT Panel. This function is realized by the standard VNC (Virtual Network Computing) technology. (For more detail, refer to XP-Manager manual).

If you want to link this page to user-made page, set to move to "/XP-VncAx.htm" link.

13.5 Reading/Writing at Web Server

XGT Panel web server provides the function for the user to read/write the device value of the controller such as PLC connected to XGT Panel at the web page. Writing specification of web page is as follows.

13.5.1. Writing Example

```
<html>

<head>
<title>Test Page</title>
<link rel="stylesheet" href="/style/normal_ws.css" type="text/css">

<% language=javascript %>                      ①

</head>

<body>
<h3><font color=Olive>Usecase 1. Read and diplay value from XGTPanel. </font></h3>
<p>HW00's Current Value: <% GetXPData("00000001 00FFFF81", "3", "4"); %></p>      ②

<br><br><br>

<h3><font color=Olive>Usecase 2. Write value to XGTPanel.</font></h3>
<form action=/xp-runtime/SetXPData method=GET>
                <p> HW00
                    <input type=hidden name=device value="00000001 00FFFF81">
                    <input type=hidden name=devSize value="3">
                    <input type=hidden name=devType value="4">         ③
                    <input type=text name=value size=50 value="">
                    <input type=submit name=ok value="Input">
                </p>
</form>

<br><br><br>

<h3><font color=Olive>Usecase 3. Write value to XGTPanel with Setting dynamically.</font></h3>
<p>device   : <input type=text id=device1 value=""> </p>
<p>devSize     : <input type=text id=devSize1 value=""> </p>
<p>devType  : <input type=text id=devType1 value=""> </p>          ④-1
<p>value     : <input type=text id=value1 value=""> </p>
<p>redirect : <input type=text id=redirect1 value="Device.asp"> </p>
<p><input type=button id=btn value="Input" onclick=SetData()>

</body>
</html>
```

```
<script type="text/javascript">
function SetData()
{
                var device = document.all.device1.value;
                var devSize = document.all.devSize1.value;
                var devType = document.all.devType1.value;         ④-2
                var value = document.all.value1.value;
                var redir = document.all.redirect1.value;
                document.URL="/xp-runtime/SetXPData?device="+device+"&devSize="+devSize+
                                          "&devType="+devType+"&value="+value+"&redirect="+redir
}
</script>
```

13.5.2. Displaying the Device value at the Web Page

You can display the device value of the controller connected to the current XGT Panel at the web page. As shown in ②, write like <% GetXPData("0000000A 00FFFF01", "3", "4")% >. You can fine this type by using HTML device copier on the tool menu of the XP-Builder.
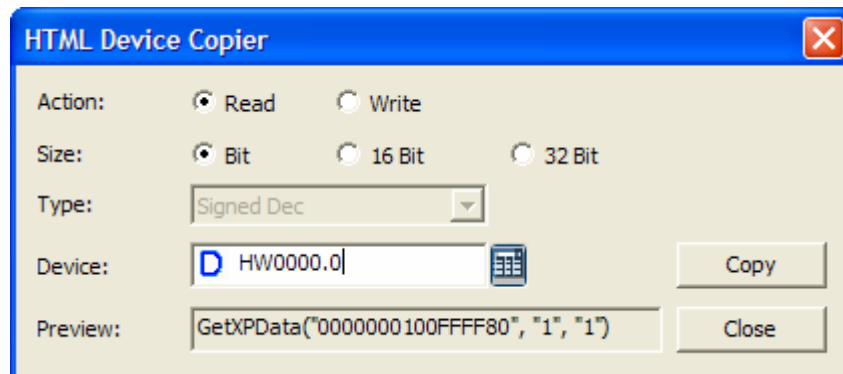
In the device copier, if you specify the device address, size and format, it displays statement to insert at HTML tag with 16-digit device code. The user has to copy that statement into HTML tag. When this statement is called, web server transmits the current value of the device of the corresponding statement to web browser.

The first transfer factor of the GetXPData statement means device address, and the second means device size, the third means the format of the device value. The description is as follows.

1) Device address

If you input the device address at the device value converter of the XP-Builder, it returns character string consisting of 16 characters. This value is used as first transfer factor.

2) Device size

Bit   : "1"

16bit   : "2"

32bit   : "3"

3) Format of device value (for real number, applied when device size is 32 bit)

Signed decimal   : "1"

Unsigned decimal   : "2"

BCD   : "3"

Real   : "4"

Octal   : "5"

Hex   : "6"

Binary   : "7"

13.5.3. Writing device value from web page

Through the web page, you can write the value into the specific device of the controller connected to XGT Panel.

How to input the value while the device address, format and so on are fixed is as follows. As shown at ③, it is available by designating "Action" as "xp-runtime/SetXPData" at <form> tag

1) Transfer factor when writing the device value

Five transfer factors are needed for SetXPData CALL statement. Device address, size, format, the value to write are needed and you can specify the page to move after writing. For this, you have to write 5 <input> tags.

● Device address

Set "type" property as "hidden", "name" property as "device", and allocate actual device address at "value" property. Device address can be found as the above description 13.5.2-1)

● Device size

Set "type" property as "hidden", "name" property as "devSize" and allocate the value that specifies device size at "value" property.

This value can be found as the above description 13.5.2-2)

● Device value format

Set "type" property as "hidden", "name" property as "devType" and allocate the value that specifies device format at "value" property.

This value can be found as the above description 13.5.2-3)

● Device value transfer factor

Since this value will be got from the web page, set "type" property as "text", "name" property as "value", and "size" property randomly. Since "value" property will be got from the user, allocate initial value or make empty.

● Web page URL to move after input

If you specify this path, web page showing error message or success message. If you specify this path, it moves corresponding path after input. This value has to be inputted with relative path.

2) Action Call

Since it has to call "SetXPData action", allocate "type" property as "submit", "name" as "ok" and set "value" randomly.

When inputting device address, size, format, value and URL directly, method ⑤-1, ⑤-2 can be used.

3) Error process

When communication fails because of transfer factor or communication problem, it is expressed as ""Error #3 occurred" instead of character string. The following error code can be displayed.

Error # -1 : NAK

Error # 1 : Communication time out

Error # 11: Arguments for SetXPData are not valid.

Error # 11: Invalid data

Error # 12: Less than the minimum.

Error # 13: Greater than the maximum.

Error # 14: Exceed the allowed number of digits.

4) How to use

    A.   Input at web page

You can make the value be inputted at web page like Numeric Input of XP builder. At this time, you have to set device address, size and format in advance as you have to set for Numeric Input of XP builder. For this, write as example ③. HTML code of this part is displayed as follows at the actual web page.

Usecase 2. Write value to XGTPanel.

HW00   [   ] Input

If you input the value at the input field and click "Input" button, the value is inputted at HW00 and the value is hex decimal. (If you input "A", decimal number 10 will be saved.)

    B.   Input the value at web page with designating device address, size and format

When inputting the value at web page, you can specify the device address, size, format and web page to be shown after input. For this, write as example ④-1, ④-2. HTML code of ④-1 part is displayed as follows at the actual web page.

If you click "Input" button at the page below, all the inputted value will be collected and it transmits the SetXPData Call statement to web server by ④-2 code.

Usecase 3. Write value to XGTPanel with Setting dynamically.

device : [00000001 00FFFF81]

devSize : [3]

devType : [4]

value : [A]

redirect : [Device.asp]

[Input]

If you input the value at the each field as the above figure and click "Input" button, the DWORD value will be saved at HW00 and the value will be save as hex decimal. (In case of "A", decimal number 10 will be saved). After input, it goes to Device.asp web page.

Remark

You can input up to 32 digits.

For real number, up to 5 digits below decimal point are available.

When device is "Start Menu" status, reading/writing the device is not available. At this time, Error #1 appears.

13.6 Web Page Security Function

In XP-Webserver, you can set up access limit for web pages in certain path or certain web page.

This allows only registered user to view the certain web page

Detail of web page security function is as follows.

13.6.1. XP-Web Server security policy

1) Security level

(1) NONE

You can't access

(2) Basic Access Authentication (called BAA below)

(http://en.wikipedia.org/wiki/Basic_access_authentication) it sets security at the path of web by using user account and password. Coding is not used during communication between server and client

(3) Digest Access Authentication (called DAA below)

(http://en.wikipedia.org/wiki/Digest_access_authentication) it sets security at the path of web by using user account and password. It codes user account and password and validates during communication between server and client.

(4) FULL

No limit to access

2) User group management

Can create, delete the group of the user. Can specify access-limited path based on group unit or connection method. The necessary information is as follows when creating.

(1) Group name

(2) Security level

Select one among NNE, BAA, DAA, FULL described in above (1)

(3) Protection mode

If you set protection mode, user history will be deleted.

(4) Active or not

It determines whether to activate all users included in the group. After creation, you can change the status of activation.

3) User account management

Can create, delete the user. The necessary information is as follows when creating.

(1) User ID

(2) User password

(3) User group

(4) Activation status

It determines whether to activate the user

4) Access-limited path management

Can set up access limit on the path of certain web server or web page. And can allow access for the user included in certain group

(1) URL to limit access (relative path)

(2) Security level used at access

(3)　Whether to code web page or not

(4)　User group to allow access
not specifying the user group is available. When it's not specified, only security level and coding status are applied.

13.6.2. XP-Web Server Security Management Procedure

1) Viewing security management screen

2) User group management screen

Since user account has to belong to certain user group, create the group first. When creating, specify the group name and group's basic security level. This security level is used later when setting the access-limited path. When you want to limit access for specific user group, set "disable" for corresponding user group.
When you want to delete certain user group, click "Delete Group" button after selecting group name in "Current Group List".

3) User management screen

You can create the user account after creating user group. Input password after selecting user account and user group. If you click "OK" button of "Add User", account will be created.
When you want to limit access for specific user, set "disable" for corresponding user. When you want to delete certain user account, click "Delete User" button after selecting user account in "Current User List".

4) Access-limited path management screen

It sets up the access limit about certain path or web page. When setting up the access limit about certain path, the limit for entire web page belonging to corresponding path will be set up. But, if there is web page whose access limit is set up individually in corresponding path, setup will be applied to that web page.
When setting access limit, you can set up security level and specify the user group selectively. When specifying user group, it is set up as security level of corresponding user group and the user who belongs to corresponding user group can access. Procedure is as follows according to security level.

✓ If security level is "NONE", error message "Can't find page" will be displayed. Namely, can't view page.

✓ If security level is "FULL", can always inquire the page.
✓ When security level is "BAA" or "DAA", if current user is "Log-in" state, inquiry is available and otherwise Log-in is needed. When setting security level, if you don't select certain user group, that is applied to all users regardless of group.

Remark

A.   User ID and Adding/creating group
User has to belong to certain user group. When "user1", "user2" belongs to "GroupA", if you want to delete GroupA, before deletion, you have to delete "user1" and "user2" user ID.
When setting up access limit, in case of specifying accessible user group, if you want to delete user group, before deletion, you have to delete setup of access limit.

B.   Keeping user confirmation state
When user confirmation is successful at web browser, confirmation state is kept until the web browser closes
After user confirmation is successful, current user can't access the web page allowed to other user. 403 error appears.
After user confirmation is successful, if you close web browser and open it again, user confirmation is needed again.

Appendix 1. Trouble shooting

1.1　　The kinds of Expected Problems

When using XP-Manager, the description on the expected problems and solutions is provided hereupon. Refer to the related section.

Problem Type	Description
Communication Problem	In case that communication between XP-Manager and XGT Panel does not work properly ☞　**Refer to 1.2 Communication problem**
Device Communication problem	In case that device communication between XP-Manager and XGT Panel does not work properly ☞　**Refer to 1.3 Device Communication problem**
Monitoring XGT Panel screen at PC and web	In case that screen monitor is not smooth when using XP-VNC ☞ **Refer to 1.4 Monitoring XGT Panel at PC and web**
Web Server Problem	In case that you have bad connection or communication when using web server. ☞ **Refer to 1.5 Web Server Problem**

1.2   Communication Problem

1.2.1   When downloading XP Link Parameter, communication is not connected.

Status Record. When downloading XP Link Parameter, the below error message is shown.
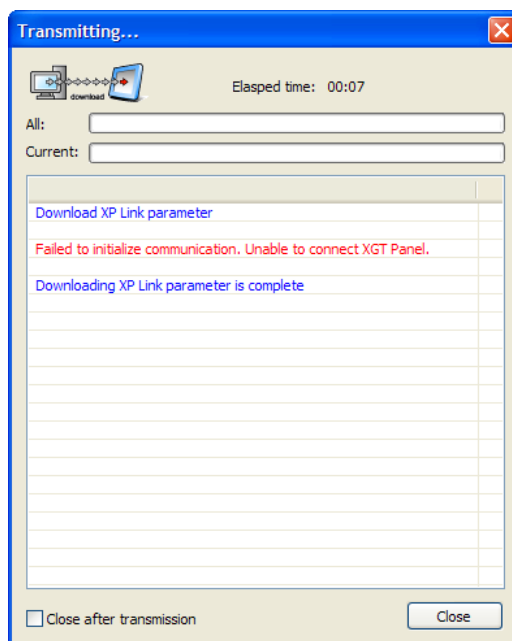
<Main Causes>

The problem may be caused by one or more among the below factors.

1) There is no XGT Panel that comes under the IP address of target node in the network.
2) Ethernet is not connected to XGT Panel.
3) You have wrong Ethernet cable; cut or broken
4) The network administrator may interrupt TCP/IP connection.
5) The IP range of target XGT Panel is not same as the gateway range set for PC.
6) XGT Panel is not set as monitor mode or menu mode.

<Solutions>

1) Connect Ethernet cable to XGT Panel of target node and include it to network.
2) Connect Ethernet cable of XGT Panel.
3) Check the connection status of Ethernet cable with its operating status. If XGT Panel is connected to PC, cross cable is recommend, if you use hub, direct cable is recommended.
4) Contact the network administrator for inquiry.
5) Change the IP of XGT Panel. The IP address may be conflicted so please contact the network administrator.
6) Convert XGT Panel into monitor mode or menu mode.

Notice
(1) Most communication problems are as above. If the same problem remains after taking the above measures, contact the Customer Center of LS Industrial Systems.

1.2.2   A monitor does not work.

Status Record. When starting monitor at monitor screen, it does not wok with the below error message.

\<Main Causes\>

The problem may be caused by one or more among the below factors.

1)   There is no XGT Panel that comes under the IP address of target node in the network.
2)   Ethernet is not connected to XGT Panel.
3)   You have wrong Ethernet cable; cut or broken
4)   The network administrator may interrupt TCP/IP connection.
5)   The IP range of target XGT Panel is not same as the gateway range set for PC.
6)   XGT Panel is not set as monitor mode.

\<Solutions\>
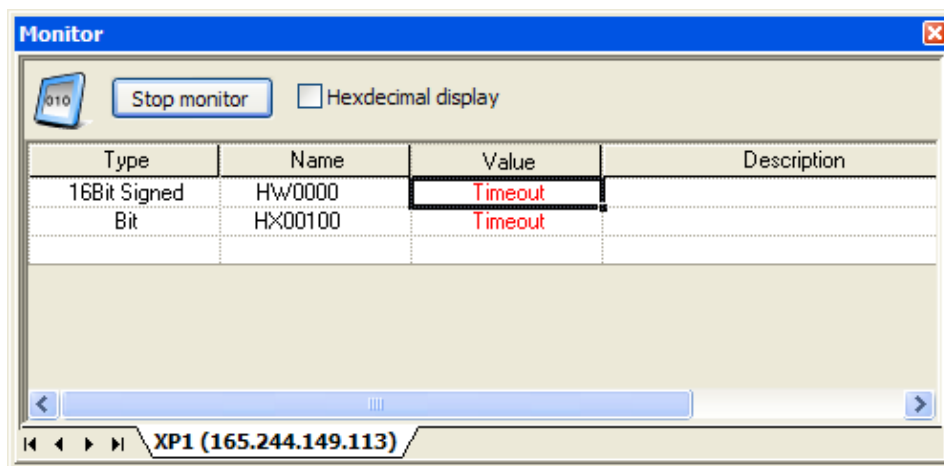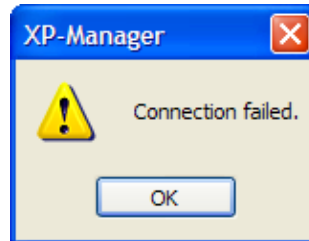
1) If the error message such as "Communication failed" occurs, it indicates the problem of 1.2.1 so refer to the solutions for 1.2.1.
2) To operate the monitor at XP-Manager, the target XGT Panel should be monitor mode.   Press [Start] button of XGT Panel and start monitor.

1.3 Device Communicaiton Problem

1.3.1 Writing is not smooth during device communication.

Status Record. When setting device communication between the two XGT Panels, device writing is not available.

<Main Causes>
1) There may be the XGT Panel whose communication is not connected.
2) There ma be the XGT Panel that has different IP range.
3) The trigger of operating XGT Panel is not established.
4) There may be the XGT Panel that is not set as monitor mode.
5) The XGT Panel for device writing is not connected to PLC.
6) The device value for writing is changing by connected PLC.

<Solutions>
1) Refer to the solutions of 1.2.1.
2) Change the IP of XGT Panel. The IP address may be conflicted so contact the network administrator.
3) After checking if trigger condition and device communication of XGT Panel are set properly, download the parameter again.
4) Convert all XGT Panels into monitor mode.
5) Check if the XGT Panel for device writing communicates with the PLC normally.
6) After checking if the device is updated from the PLC of the XGT Panel for device writing, change PLC program or device address.

1.3.2 Reading is not smooth during device communication.

Status Record. When setting device communication between the two XGT Panels, device reading is not available.

<Main Causes>
1) There may be the XGT Panel whose communication is not connected.
2) There ma be the XGT Panel that has different IP range.
3) The trigger of operating XGT Panel is not established.
4) There may be the XGT Panel that is not set as monitor mode.
5) The XGT Panel for device writing is not connected to PLC.
6) The device value for reading is changing by connected PLC.

<Solutions>
1) Refer to the solutions of 1.2.1.
2) Change the IP of XGT Panel. The IP address may be conflicted so contact the network administrator.
3) After checking if trigger condition and device communication of XGT Panel are set properly, download the parameter again.
4) Convert all XGT Panels into monitor mode.
5) Check if the operating XGT Panel communicates with the PLC normally.
6) After checking if the device is updated from the PLC of the operating XGT Panel, change PLC program or device address.

1.4 Monitoring XGT Panel Screen at PC and Web

1.4.1   Server failure message occurs.

Status Record. When you try to connect the XGT Panel at XP-VNC Client of PC or web, the bellow message will be shown.
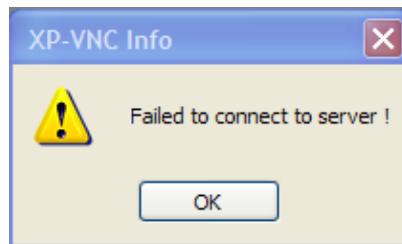
<Main causes>
1)   The IP address of wrong XGT Panel is input.
2)   XP-VNC Server doest not work at the target XGT Panel.
3)   When you have the above message during XGT Panel monitoring at web, XP-VNC Server or Web Server do not work.

<Solutions>
1)   To monitor XGT Panel, XP-VNC Server and Web Server downloaded at the XGT Panel should be operated. Accordingly, make to operate XP-VNC Server and Web Server through XP-Manager before monitor.
2)   To operate XP-VNC Server, refer to the Chap.10 [10.3 XP-VNC Server Management].
3)   To operate Web Server, refer to the Chap.10 [10.4 Web Server Management].

1.4.2   You have a wrong protocol. Two or more XP-VNCs are connected to one server.

Status Record. When you try to connect to the XGT Panel at XP-VNC Client of PC or web, the bellow message will be shown.
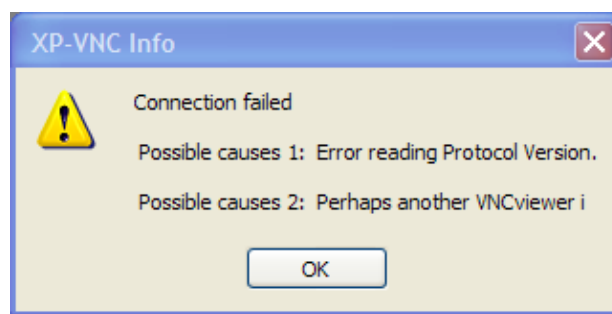
<Main Causes>
1)   Not XP-VNC Server but other common VNC Server is being operated at the XGT Panel.
2)   The XP-VNC Server of the XGT Panel has already communicated with other XP-VNC Client or other ActiveX. Namely, you are trying to connect the XP-VNC Server that is under communication.

<Solutions>
1)   One XP-VNC server can not communicate with multiple XP-VNC Clients, ActiveXs. Only 1:1 communication is available. Accordingly, stop the existing XP-VNC Client or ActiveX.
2)   Download XP-VNC to the XGT Panel and operate it. To operate XP-VNC Server, refer to [10.3 XP-VNC Server Management].

1.4.3 . XP-VNC Client or ActiveX disappears during monitoring XGT Panel.

1.4.4 Status Record. XP-VNC Client or ActiveX disappears during monitoring XGT Panel screen at PC.

<Main Causes>
1) The connection is cut off with the XGT Panel.
2) XP-VNC operation is stopped at the XGT Panel
3) Web Server operation is stopped at the XGT Panel.

<Solutions>
1) Check the connection status of the XGT Panel (cable, network status).
2) Operate XP-VNC at the XGT Panel. To operate XP-VNC Sever, refer to [10.3 XP-VNC Server Management].
3) Operate Web Server at the XGT Panel. Top operate Web Server, refer to the Chap.10 [10.4 Web Server Management].

1.5   Web Server Problems

1.5.1   When connecting XGT Panel web server, the message "Webpage cannot be displayed" will be shown.

Status Record. When connecting XGT Panel web server, the message "Webpage cannot be displayed " will be shown.

<Main Causes>
1)   Web Server module is not installed to the equipment.
2)   Web Server module is installed to the equipment but Web Server is not started.

<Solutions>
1)   Install Web Server to the equipment referring to the Chap.10 [10.4 Web Server Management].
 2)   After installing Web Server, start Web Server referring to the Chap.10 [10.3 XP-VNC Server Management].

1.5.2 You have a connection error.

Status Record. When connecting XGT Panel Web Server, access error message will be shown.

<Main Cause>

1) When setting the parameter for Web Server, the storage device that is designated for HTML file position is not installed. If CF Card is designated for HTML file position, CF Card should be embedded and USD Memory is designated, USB storage device should be installed.

<Solutions>

1) When setting the parameters for web server, check where HTML parameter position is placed. Otherwise, you can re-establish the position of parameters referring to the Chap.10 [10.4 Web Server Management].

2) Install the storage device that is set for HTML parameter position to the equipment.

Warranty

1. Warranty Period
The product you purchased will be guaranteed for 18 months from the date of manufacturing.

2. Scope of Warranty
Any trouble or defect occurring for the above-mentioned period will be partially replaced or repaired. However, please note the following cases will be excluded from the scope of warranty.

Any trouble attributable to unreasonable condition, environment or handling otherwise specified in the manual,
Any trouble attributable to others' products,
If the product is modified or repaired in any other place not designated by the company,
Due to unintended purposes
Owing to the reasons unexpected at the level of the contemporary science and technology when delivered.
Not attributable to the company; for instance, natural disasters or fire

3. Since the above warranty is limited to HMI unit only, make sure to use the product considering the safety for system configuration or applications.

Environmental Policy

LS Industrial Systems Co.,Ltd supports and observes the environmental policy as below.

Environmental Management

LS Industrial Systems considers the environmental preservation as the preferential management subject and every staff of LS Industrial Systems use the reasonable endeavors for the pleasurably environmental preservation of the earth.

About Disposal

LS Industrial Systems' PLC unit is designed to protect the environment. For the disposal, separate aluminum, iron and synthetic resin (cover) from the product as they are reusable.

LS values every single customers.

Quality and service come first at LSIS.

Always at your service, standing for our customers.

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