

# BSC-100

**boland** System

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Controller

User's Manual

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# 1. Introduction to Boland System Controller

This PC program is designed to be a user friendly method for controlling a large number of Boland broadcasting monitors through RS-232C and TCP/IP interface.

## 1). Program Functions & Features

- Create & Edit the Boland broadcasting monitor System Controller Map.

This is available to save the layout of the System Controller Map as a file format.

- Control a Large Number of Monitors.

By using the Control Panel it is possible to control one or more monitors.

- Status Display

The status of each Monitor can be displayed.

- Designate Names for Each Monitor

Each monitor can be given a name & ID. Each monitor can show its channel name on screen.

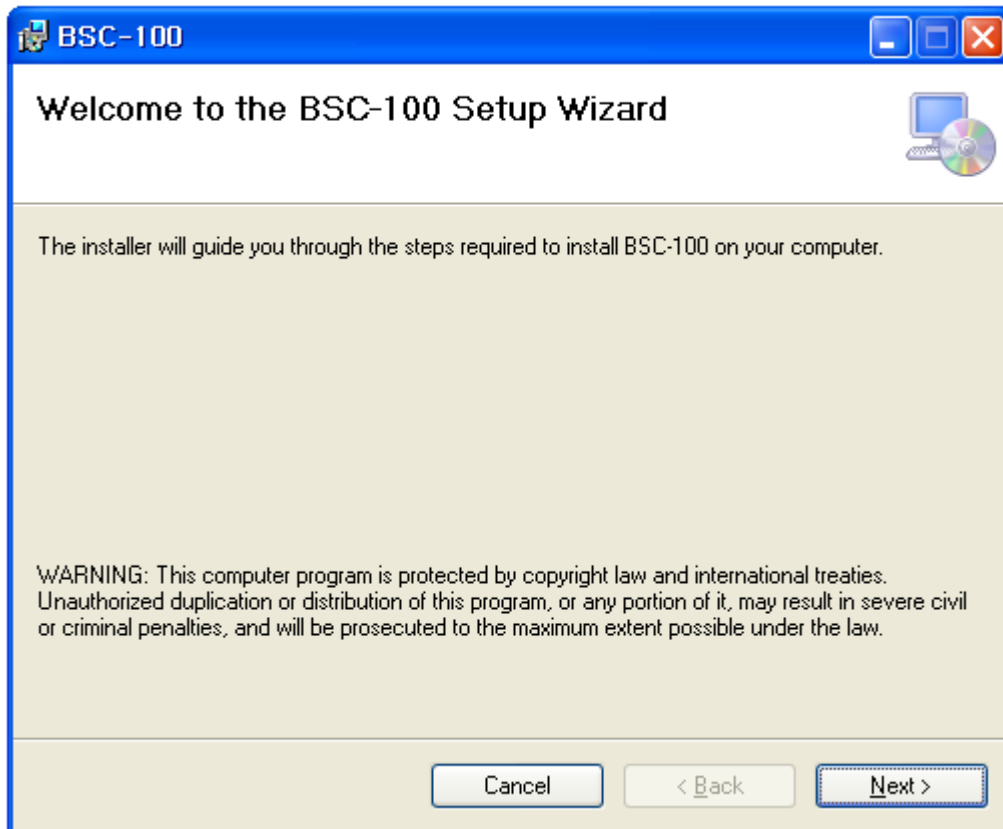
## 2). System Specifications Required for Operation

- This program only runs on Windows XP sp2 or above.
- Microsoft .NET framework 4.0 or later.

System Spec & Program can be upgraded & changed at any time for better quality of the program.

## 2. Installation of Boland System Controller

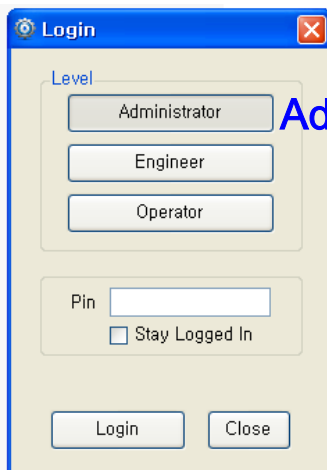
- To install the program on user pc, select “[System Controller.msi](#)” file, and follow the “Boland System Controller Setup Wizard” instructions.



After installation is completed, a shortcut button will be shown on the desktop and in the start menu.

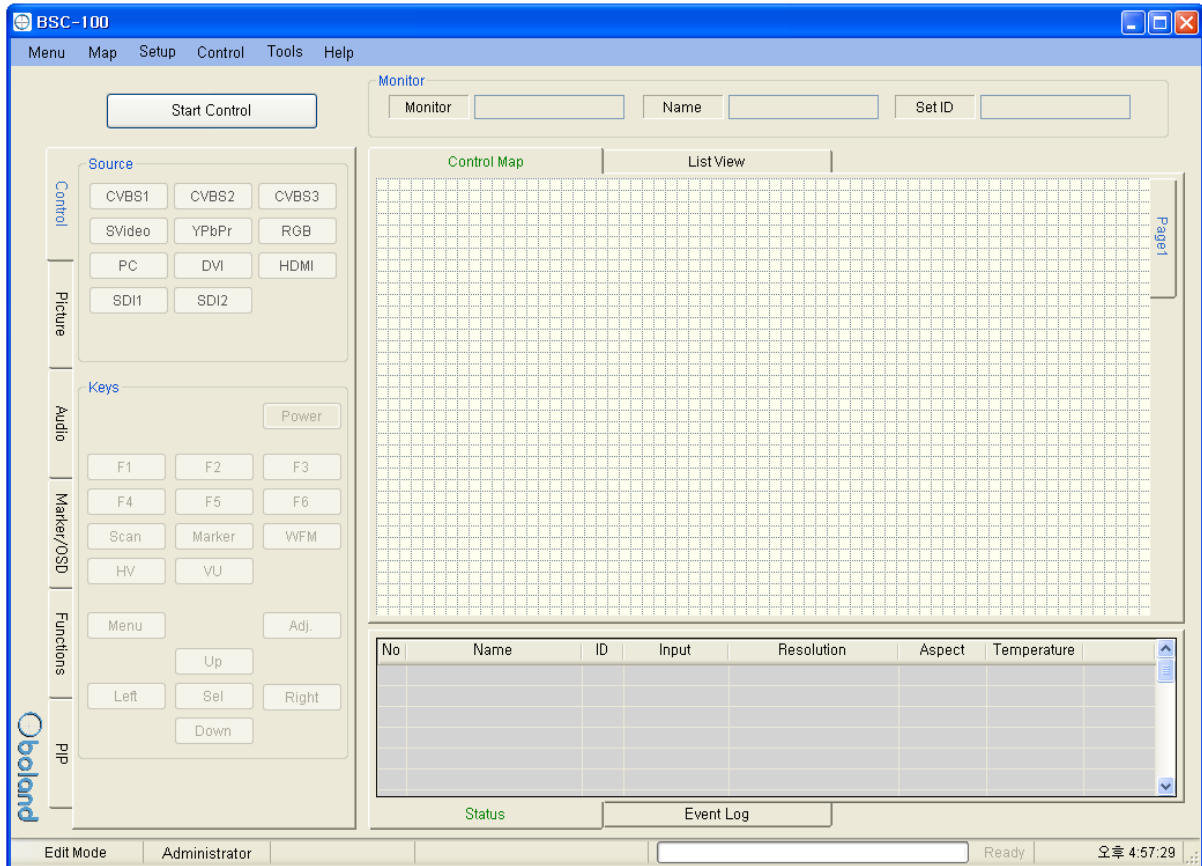
## 3. User Login

- Administrator: Open all items
- Engineer: Engineer access ALL below items except. (FPGA & Firmware update)
- Operator: Mode Start & Stop Control/ Open Map/Exit/Help /About



Administrator PIN: vboland

## 4. Contents of Boland System Controller



### 1). Menu strip

#### a) Menu: New, Open Map, Save as...

- New: start a new Map.
- Open Map: Load a control map from a saved file.
- Save as....: Save the control map to file.

#### b) Map: Control Map Wizard, Add Monitor, Delete Monitor, Add Page, Delete Page

#### c) Setup: User Level, Shortcut, Network

#### d) Control: Function Key, GPI

#### e) Tools: FPGA ISP, F/W ISP

#### f) Help: About

## 2). Monitor Properties Group

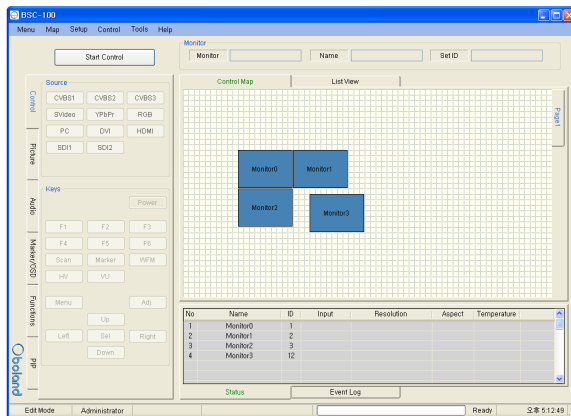
- Displays the selected monitor's model, name and ID.

Monitor

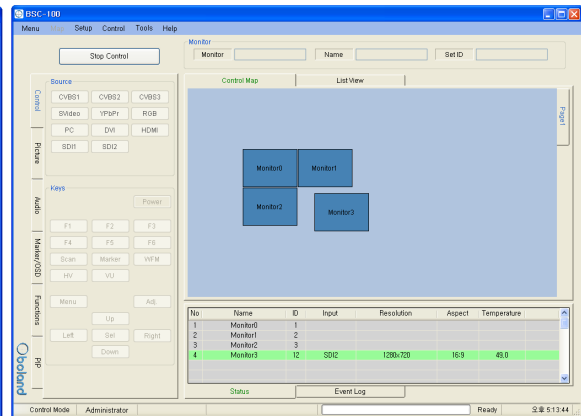
Monitor  Name  Set ID

## 3) Control Table

- Displays currently opened control Map.
- User can edit the control map and control the monitor on this table.
- This table is changed according to the mode changing as below.



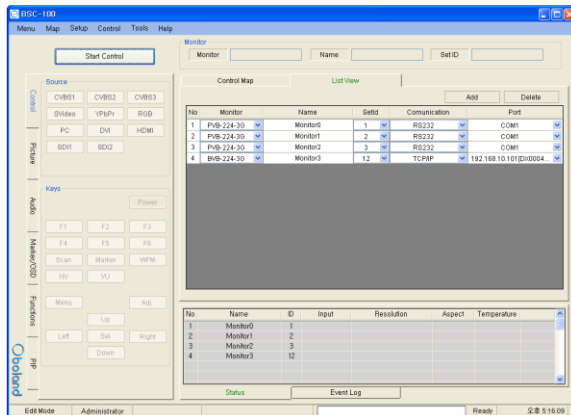
(Edit Mode)



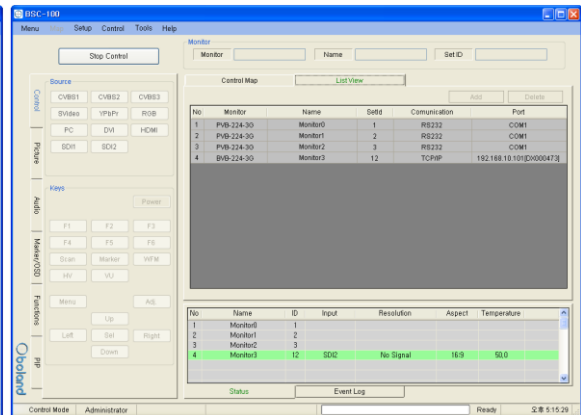
(Control Mode)

## 4) List View

- Displays list of currently opened control Map.
- User can edit and control the monitor.



(Edit Mode)



(Control Mode)

## 5) Information

- Displays each monitor's information which is added on control table.
- User can see the Monitor ID, Signal Locking status, Input resolution, Aspect and Board temperature.

No	Name	ID	Input	Resolution	Aspect	Temperature
1	Monitor0	1				
2	Monitor1	2				
3	Monitor2	3				
4	Monitor3	12	SDI2	1920x1080	16:9	50,0

StatusEvent Log

## 6) Log

- It shows the major events that occurred in system controller.
- Clear: Clear the log window.

TCP: Disconnected TCP: Disconnected TCP: Disconnected TCP: Disconnected TCP: QB0XD000473System: [COM1] Port Closed! TCP: Disconnected System: [COM1] Port Open! TCP: 192.168.10.101 Connected at port 5009 System: [COM1] Port Closed! TCP: Disconnected System: [COM1] Port Open!
StatusEvent Log

## 7) Controller Tap

- User can control the monitor easily through this tap.
- Controller Tap is only available when monitor is selected in the control mode.

Control

Picture

Audio

Marker/OSD

Functions

PIP

Source

CVBS1CVBS2CVBS3

SVideoYPbPrRGB

PCDVIHDMI

SDI1SDI2

Keys

Power

F1F2F3

F4F5F6

ScanMarkerWFM

HV

VU

MenuAdj.

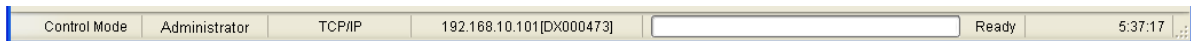
Up

LeftSelRight

Down

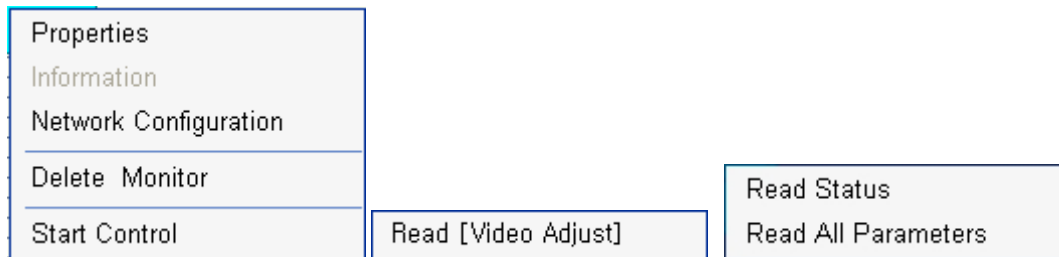
## 8) Status Bar

- It displays Mode, User Level, Com port or Target IP address, Progress bar and current time.



## 9) Context Menu

- Right-clicking or Double-clicking on Control Table or Controller Tap will bring up the commands used to control.

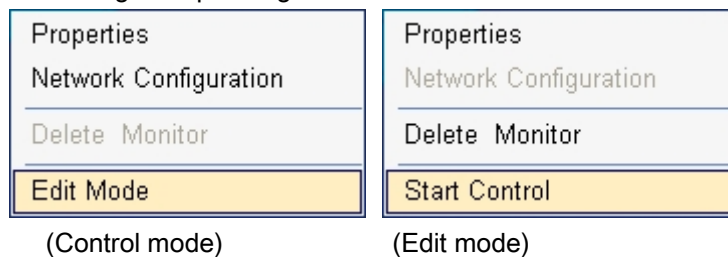


## 5. Edit Control Map

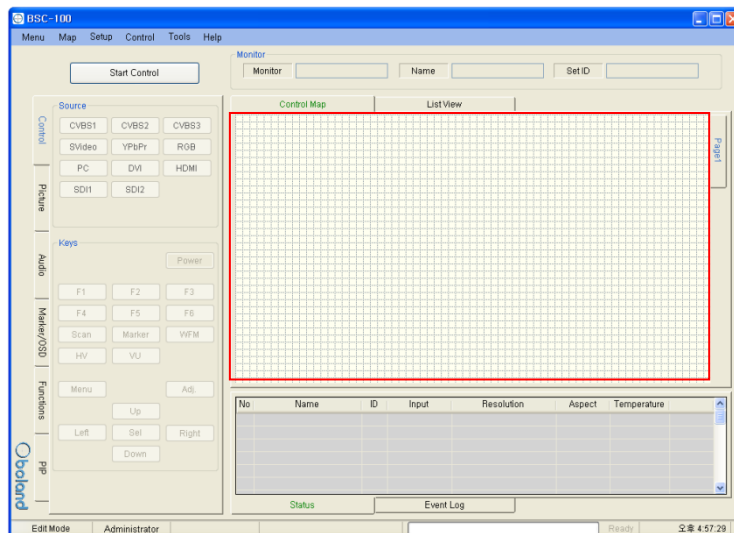
- User can edit the control map in EDIT MODE.
- Edit mode is only to use the Editing map. User cannot control any monitor in this mode.

### 1) Start Edit Mode

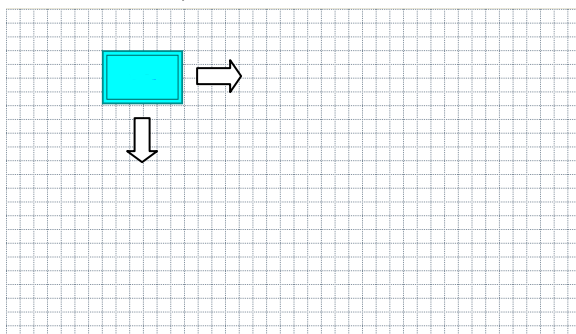
- User can change to edit mode through Mode items on menu strip, context menu on control table or mode changing button on control table.
- Below Context menu strip is opened by mouse right-clicking on the Control Table.
- It is changed depending on status of mode.



- If mode is edit state, Control table is grid pattern as below.



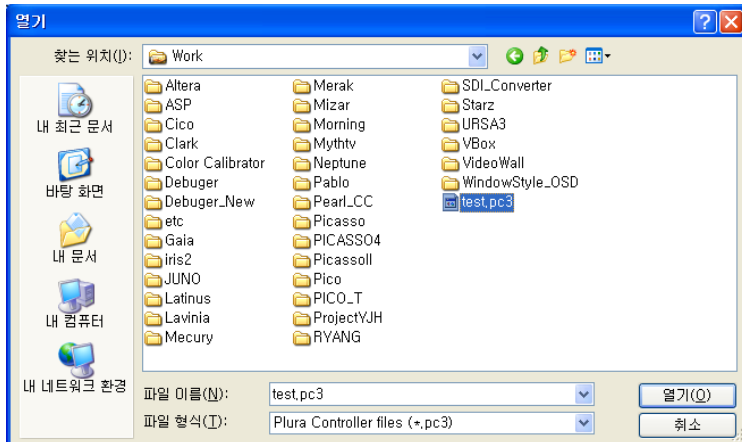
- In control table, user can locate the monitor icon any place.





## 2) Open and Save Map.

- User can save the control map and open the saved one.
- Filename extension is .pc3.



## 3) Add and Delete monitor

- User can add the monitor for use in control table by Add Monitor form as below.

- User can open the Add Monitor form by the Edit menu or context menu strip on control table.

a) Monitor: Select the target model. Icon size is changed by model.

b) Monitor ID:

- Select the target monitor's ID number.
- If ID is different, User cannot control the monitor.
- Cannot select same ID with other monitors.

c) Name:

- It appears in the center of the monitor icon.
- Cannot make same name with other monitors.

d) Communication: select communication interface between RS232 and TCP/IP.

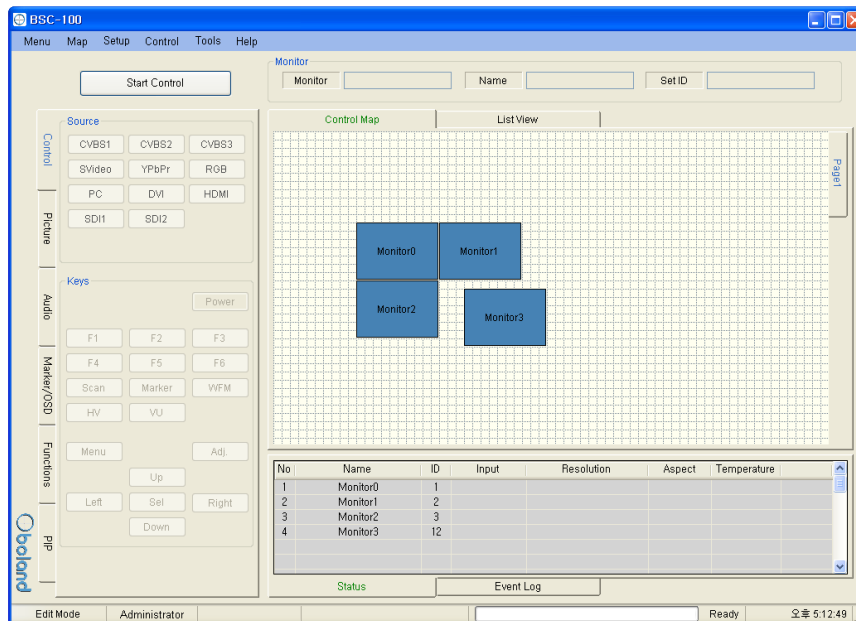
e) Com Port: select RS232 Comport of available in PC.

f) My IP Address: select PC IP address of available in PC..

g) Target IP: select target IP address of linked monitor.

h) Add and Cannel button: Add monitor or cannel the add monitor.

- If monitor is successfully added, user can see the monitor icon on control table and information as bellow.



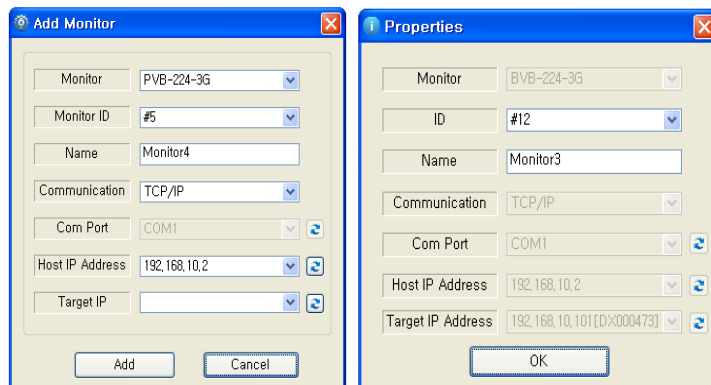
- User can delete the selected Monitor by Edit item on menu or context menu on control table.

#### 4) Properties

- User can change all properties of selected monitor that already added on control table.

- User can open the properties form of the selected Monitor by Edit item on menu or context menu on control table.

- It is changed depending on the mode



( Edit Mode)

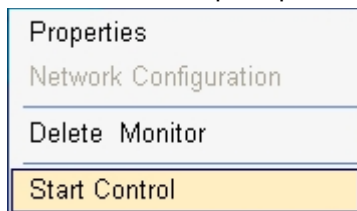
(Control Mode)

## 6. Control Mode

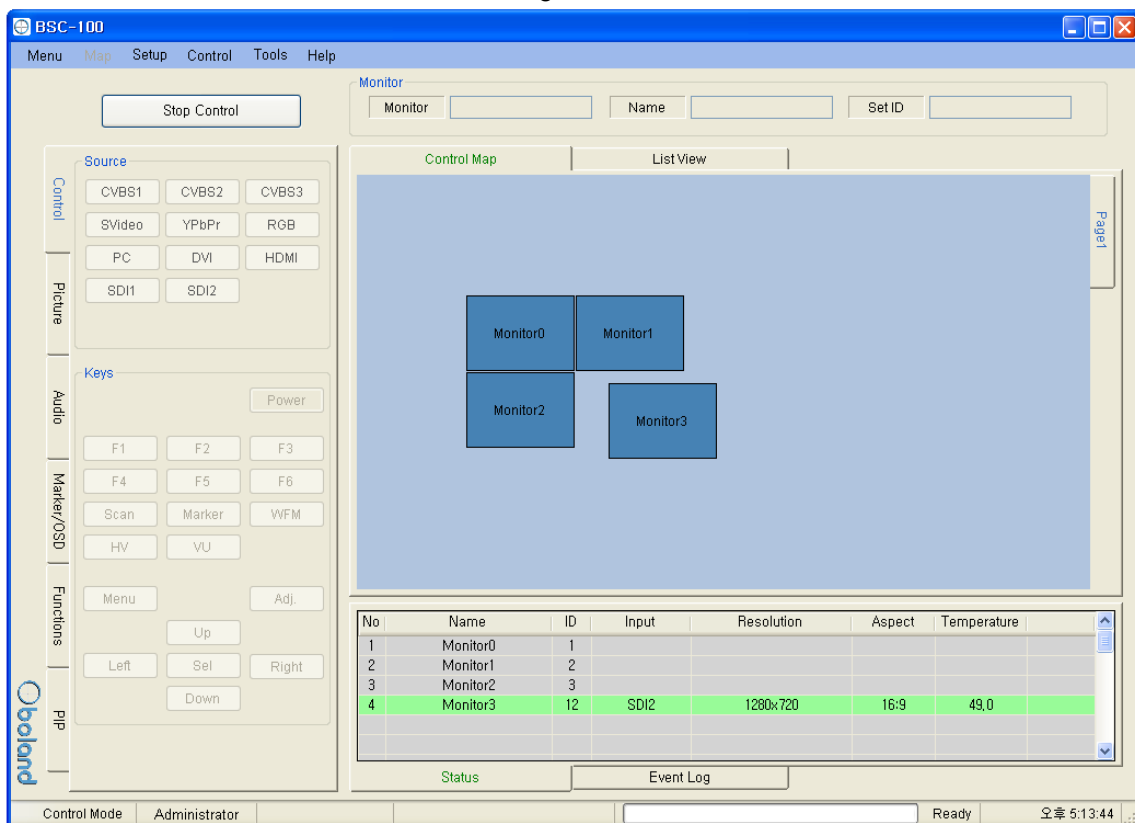
- User can control the selected monitor in this mode.
- Only for control, cannot edit.

### 1) Start Control

- User can select the control mode through Mode items in menu strip, context menu strip or mode changing button on control table.
- Context menu strip is opened by mouse right-clicking on Control Table.



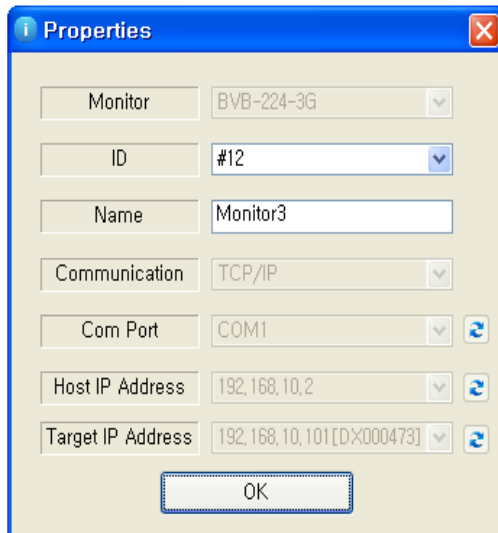
- If mode is control state, Control table is changed as below.



## 2) Properties

- User can only change ID and name through the properties form in this mode.

Properties form is opened by the Edit menu or context menu.



The Properties form is a dialog box with a blue title bar and a close button. It contains several input fields and buttons:

- Monitor: BVB-224-3G
- ID: #12
- Name: Monitor3
- Communication: TCP/IP
- Com Port: COM1
- Host IP Address: 192,168,10,2
- Target IP Address: 192,168,10,101[D:X000473]
- OK button

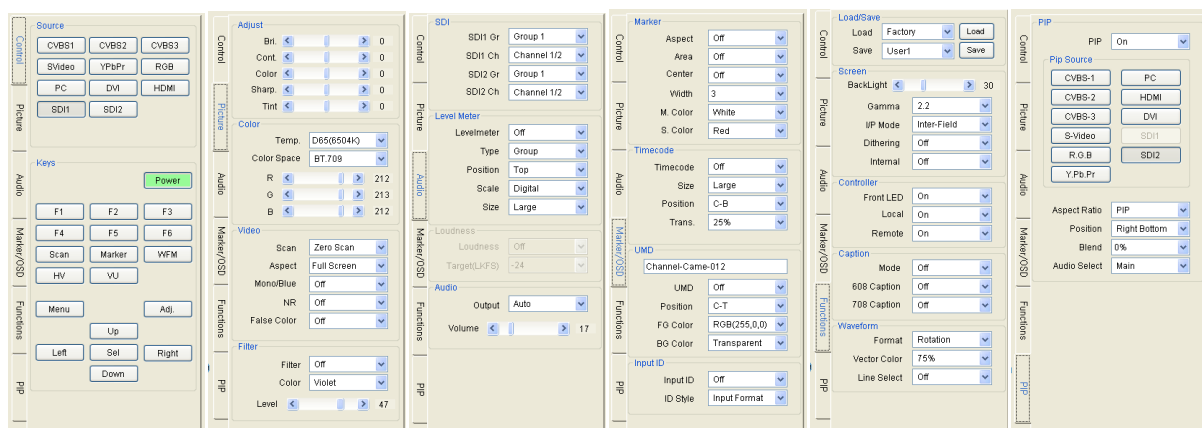
## 3) Controller Tap

- User can control the monitor through this tap.

- Controller Tap is only available when monitor is selected in control mode.

- It consists of Control, Video, Audio, Marker/OSD and Functions Tap.

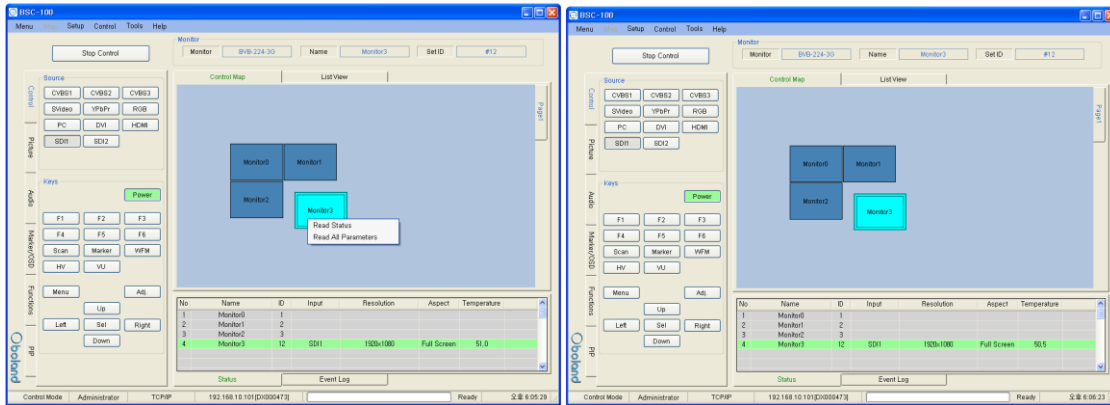
- Each controls are changed depend on model type. SFP module is only available in SFP model.



The Controller Tap interface is a complex control panel with multiple tabs and sections:

- Source:** CVBS1, CVBS2, CVBS3, S-Video, Y/PbPr, RGB, PC, DVI, HDMI, SDI1, SDI2.
- Adjust:** Brightness, Contrast, Color, Sharp, Tint, Temp, Color Space, R, G, B, Scan, Aspect, Mono/Blue, NR, False Color, Filter, Color, Level.
- SDI:** SDI1 Gr, SDI1 Ch, SDI2 Gr, SDI2 Ch, Level Meter, Levelmeter, Type, Position, Scale, Size, Loudness, Target(LKFS), Output, Volume.
- Marker:** Aspect, Area, Center, Width, M. Color, S. Color, Red, Timecode, Size, Position, Trans, UMD, Channel-Came-012, Input ID, ID Style, Input Format.
- Load/Save:** Load, Factory, Save, User1, Save.
- PIP:** PIP On, PIP Source, Aspect Ratio, Position, Blend, Audio Select.

- User can read each parameter's value from target monitor by context menu on control table or group box. Each context menu as below is opened by mouse right-clicking or double-clicking.



Read Status

Read All Parameters

Read [Video Adjust]

(On Icon of Control Table)

(On Group Box)

- Read All Parameter: read all of parameter in system controller from selected monitor.
- Read [Video Adjust(Group Box name)]: To open this context menu, use the mouse right button to click in group box.

#### 4) Network Configuration

- Use this form to configure the network settings.
- Open the Network form on the Setup menu.

No	IP Address	ID	DHCP	Mac Address
1	192.168.10.101	DX000473	On	00.50.C2.88.27.CB

Search Configuration Close

Network Configuration

ID: DX000473

MAC: 00 50 C2 88 27 CB

☒ Use DHCP

Static IP Configuration

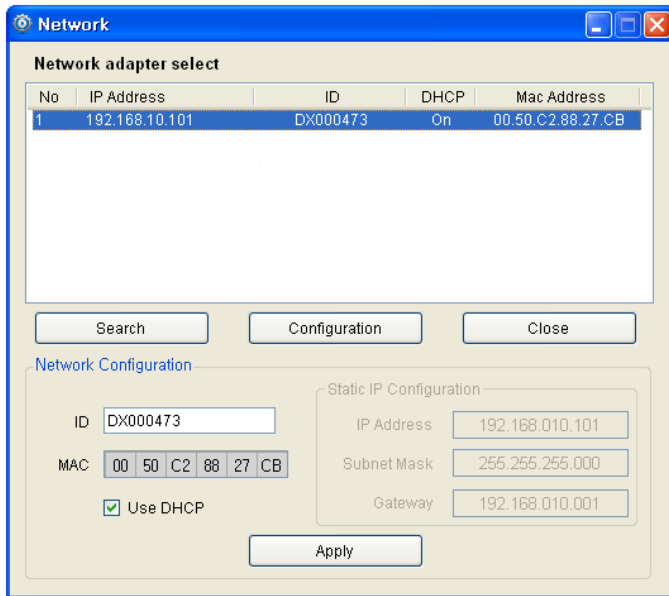
IP Address: 192.168.010.101

Subnet Mask: 255.255.255.000

Gateway: 192.168.010.001

Apply

- Click the item on list to connect the network board.
- If connected, Configuration button is enabled.
- Network Configuration box is enabled with clicking the Configuration button.



**Network**

**Network adapter select**

No	IP Address	ID	DHCP	Mac Address
1	192.168.10.101	DX000473	On	00.50.C2.88.27.CB

Search Configuration Close

**Network Configuration**

ID: DX000473

MAC: 00 50 C2 88 27 CB

☒ Use DHCP

Static IP Configuration

IP Address: 192.168.010.101

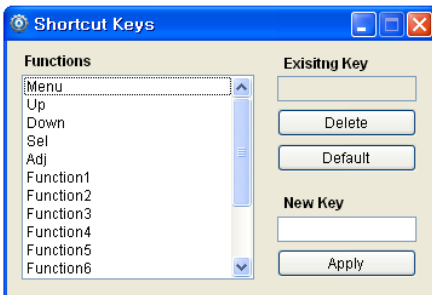
Subnet Mask: 255.255.255.000

Gateway: 192.168.010.001

Apply

## 5) Shortcut Keys

- Shortcut keys save user having to click the button.
- User can set up the shortcut keys with this form on Setup menu.



**Shortcut Keys**

**Functions**

- Menu
- Up
- Down
- Sel
- Adj
- Function1
- Function2
- Function3
- Function4
- Function5
- Function6

**Existing Key**

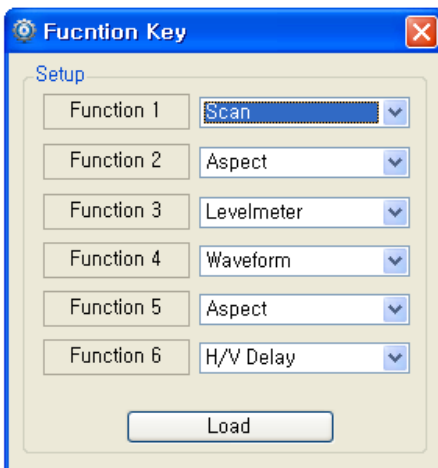
Delete Default

**New Key**

Apply

## 6) Function Key

- User can open the Function Key setting form on the Advanced menu.
- Name Button: Same as function key on keypad.
- Combo Box: Select a wanted function. It can be changed depending on the model.



**Function Key**

**Setup**

Function 1: Scan

Function 2: Aspect

Function 3: Levelmeter

Function 4: Waveform

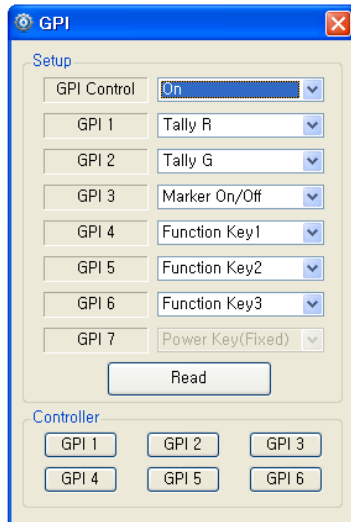
Function 5: Aspect

Function 6: H/V Delay

Load

## 7) GPI

- User can open the GPI setting form on the Advanced menu item.
- Setup: User can select GPI function.
- Controller: simulated GPI controller.



The screenshot shows a software window titled "GPI" with a blue header bar. The window is divided into two main sections: "Setup" and "Controller".

**Setup Section:**

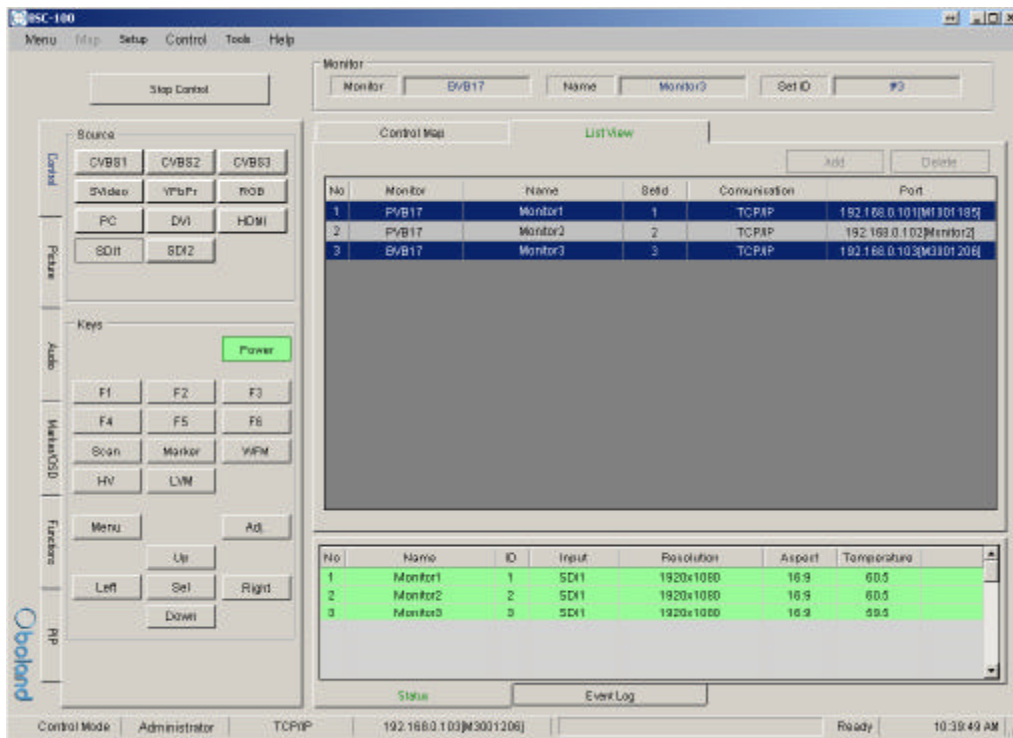
- GPI Control:** A dropdown menu currently set to "On".
- GPI 1:** A dropdown menu set to "Tally R".
- GPI 2:** A dropdown menu set to "Tally G".
- GPI 3:** A dropdown menu set to "Marker On/Off".
- GPI 4:** A dropdown menu set to "Function Key1".
- GPI 5:** A dropdown menu set to "Function Key2".
- GPI 6:** A dropdown menu set to "Function Key3".
- GPI 7:** A dropdown menu set to "Power Key(Fixed)".
- Read:** A button located below the GPI settings.

**Controller Section:**

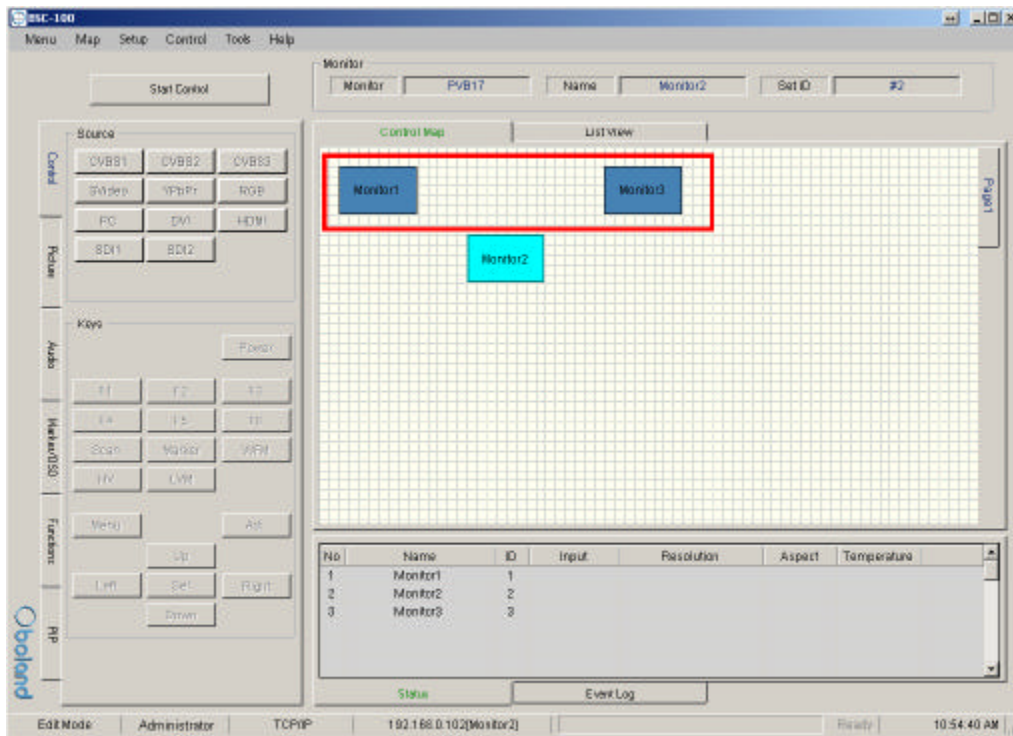
- Contains six buttons labeled "GPI 1", "GPI 2", "GPI 3", "GPI 4", "GPI 5", and "GPI 6" arranged in two rows of three.

## 8) Grouping

User can group monitors in list by holding ctrl key while clicking, or dragging mouse



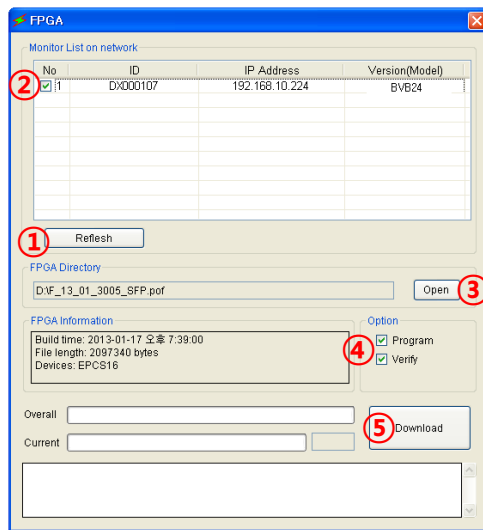
User can group monitors in map by dragging mouse around monitors





## 7. FPGA Download

- Menu > Tool > FPGA ISP



1) Refresh Click.

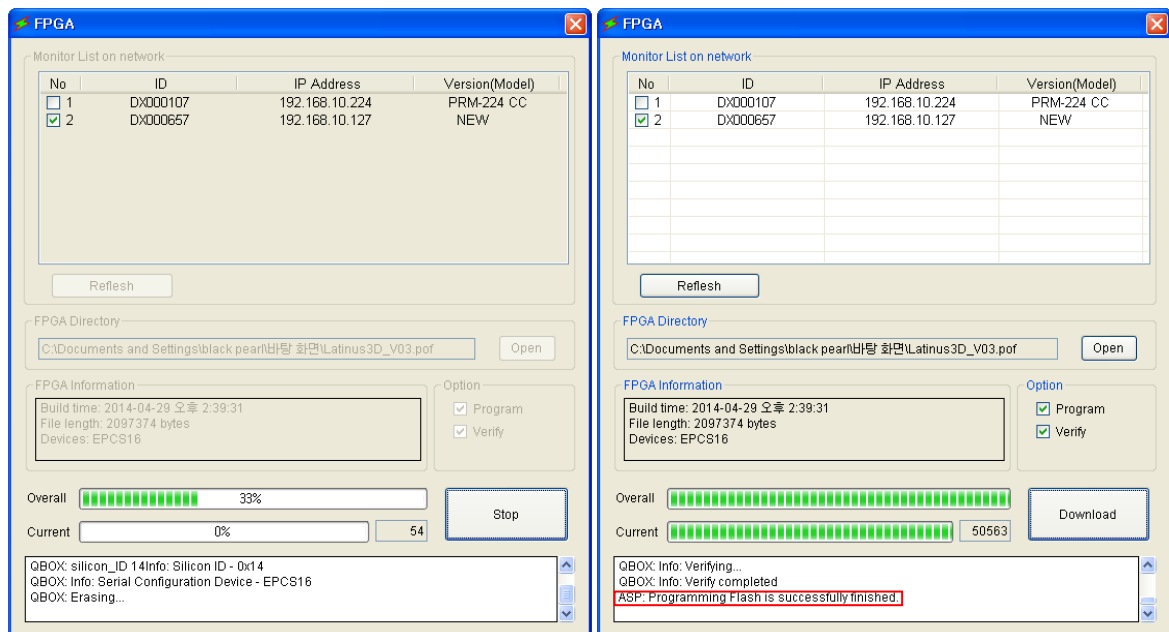
-Appears on the monitor connected to the network.

2) Monitor select.

3) FPGA File Open (\*.pof).

4) Program & Verify Click.

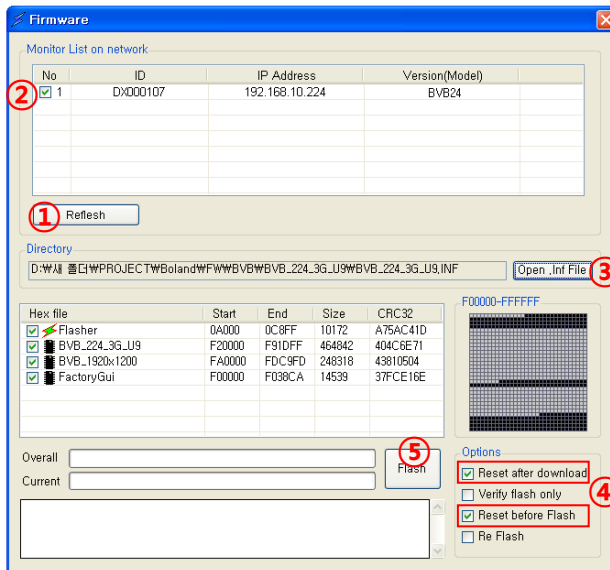
5) Download Click.



>Download finish.

## 8. Firmware Download

- Menu > Tool > F/W ISP



1) Refresh Click.

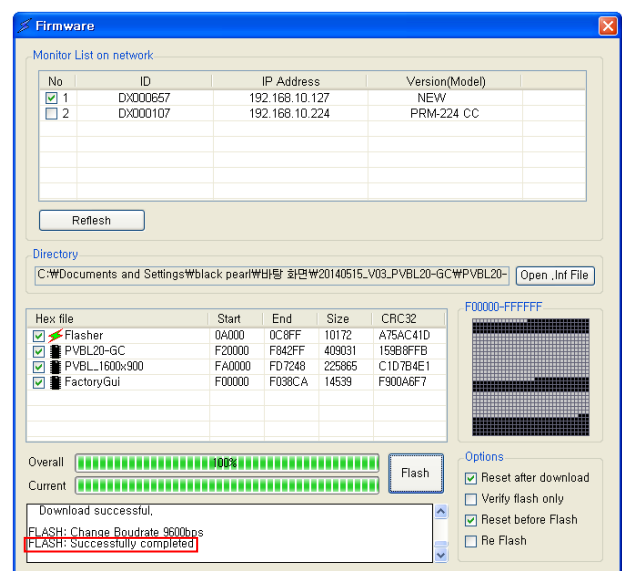
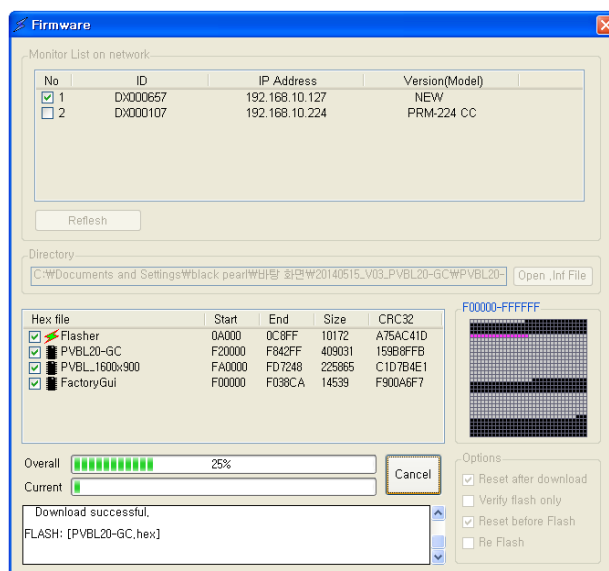
-Appears on the monitor connected to the network.

2) Monitor select.

3) F/W File Open (\*.inf).

4) Reset after download & Reset before Flash Click.

5) Flash Click.



>Download finish.