

# 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.

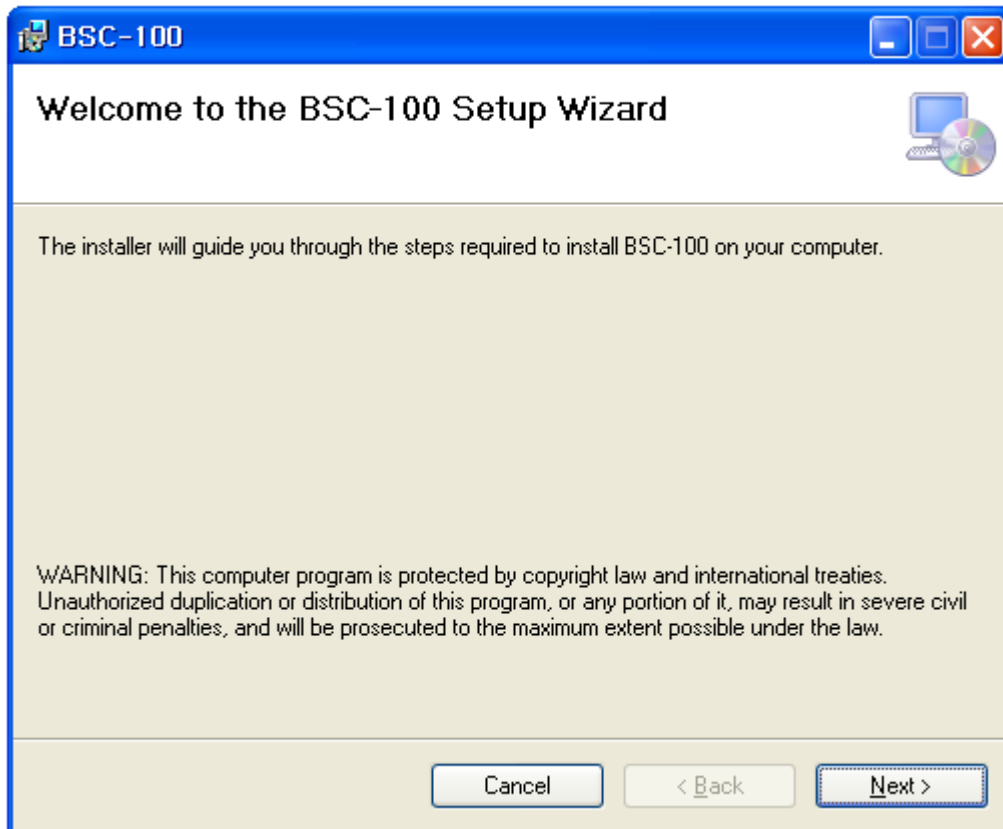
## 2). System Specifications Required for Operation

- 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

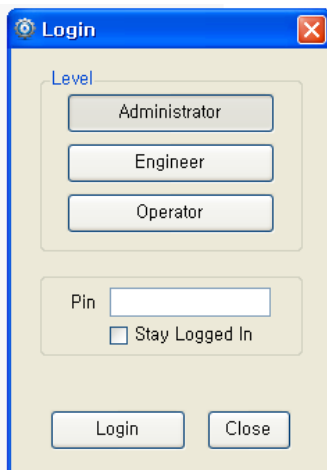
- To install the program on user pc, select “Run” installation file, and follow the “Boland System Controller Setup Wizard” instructions.



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

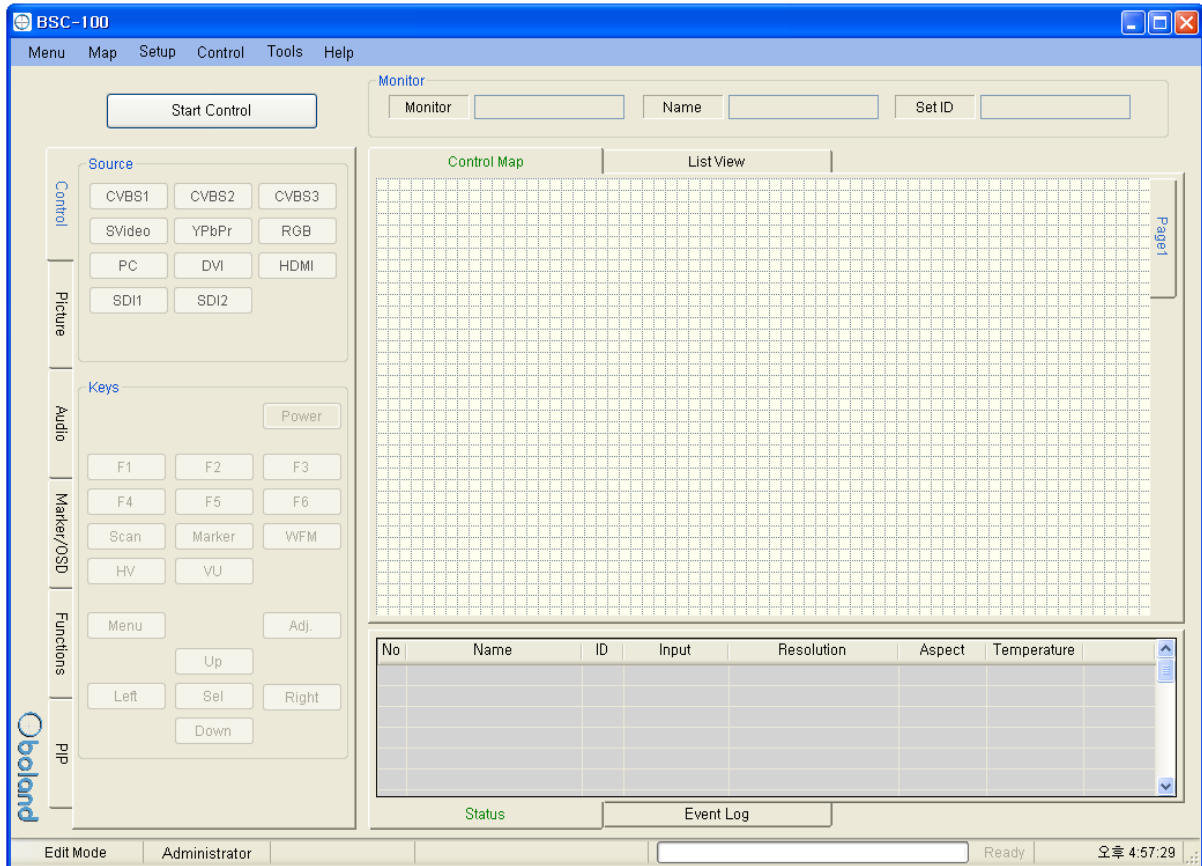
## 3. USER Lever Login

- 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

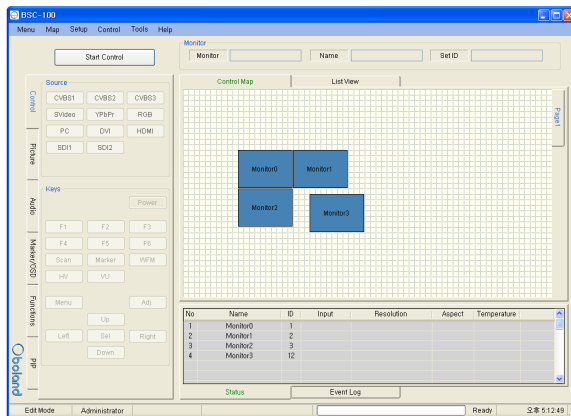
- Displays the selected monitor's model, name and ID.

Monitor

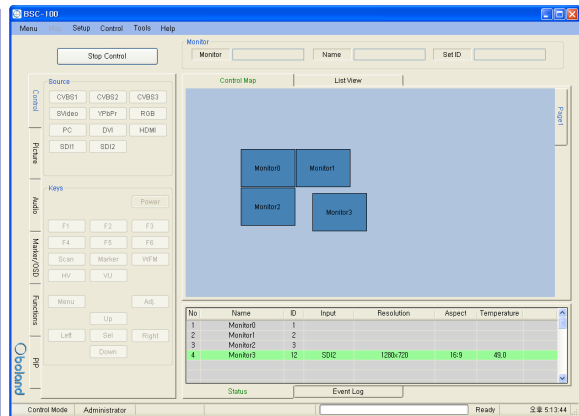
Monitor  Name  Set ID

## 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.



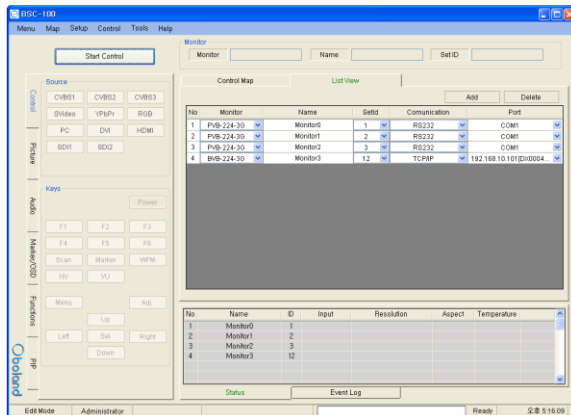
(Edit Mode)



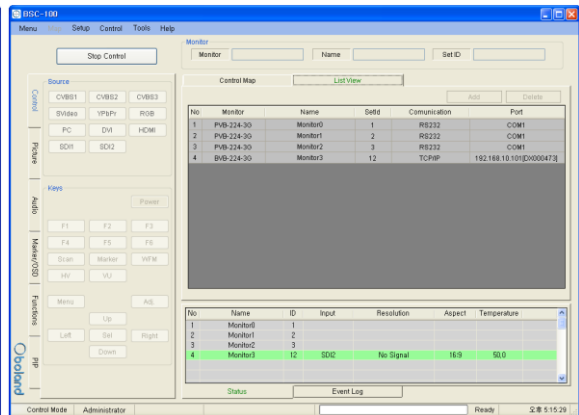
(Control Mode)

## 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.

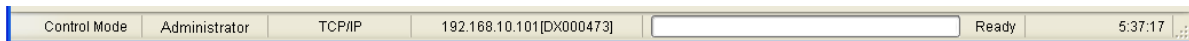
Up

LeftSelRight

Down

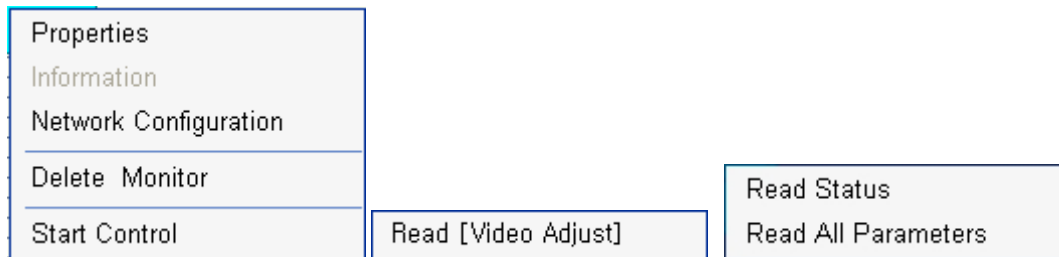
## 8) Status Bar

- 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.

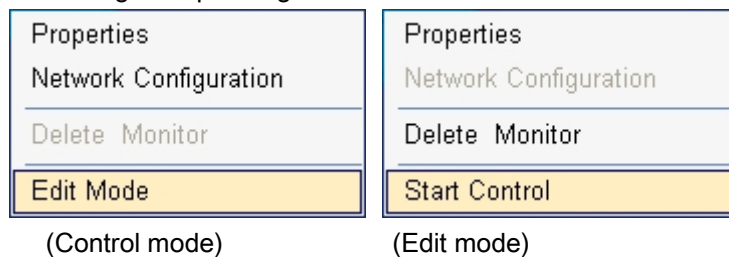


## 5. Edit Control Map

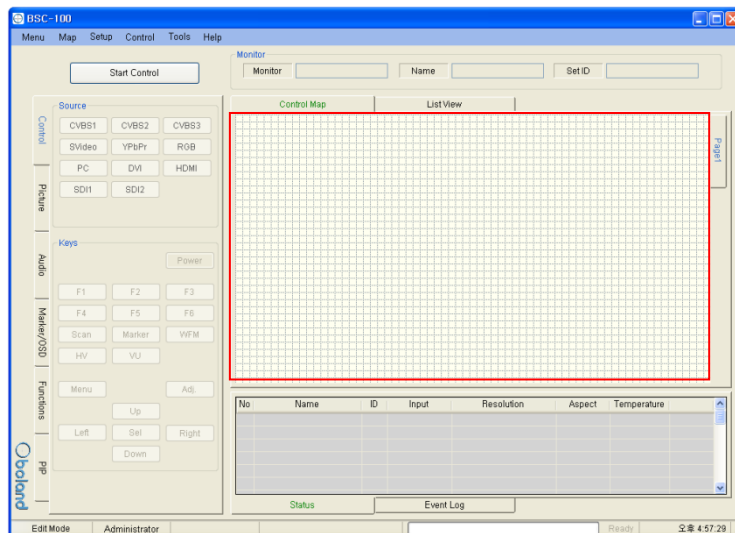
- User can edit the control map in EDIT MODE.
- Edit mode is only to use the Editing map. User cannot control any monitor in this mode.

### 1) Start Edit Mode

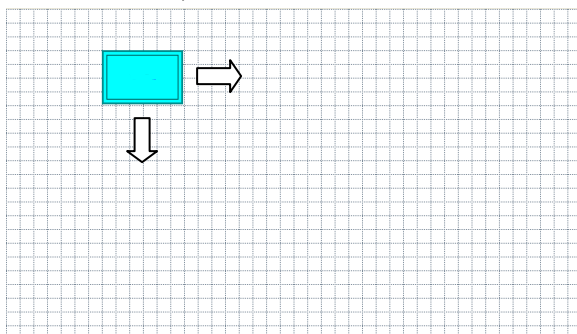
- User can change to edit mode through Mode items on menu strip, context menu on control table or mode changing button on control table.
- Below Context menu strip is opened by mouse right-clicking on the Control Table.
- It is changed depending on status of mode.



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



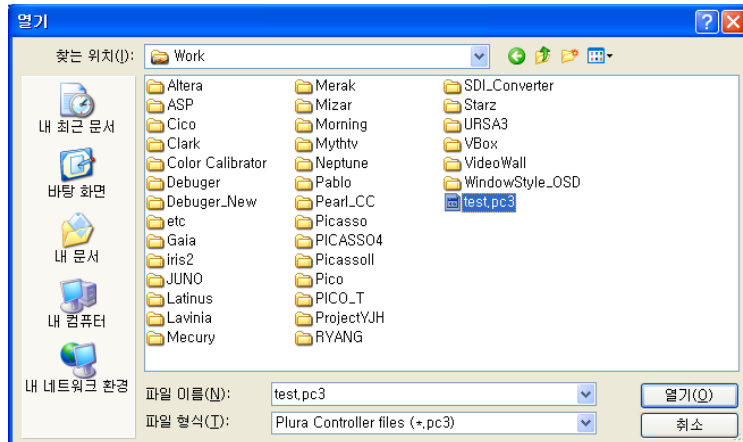
- In control table, user can locate the monitor icon any place.





## 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.

A screenshot of the 'Add Monitor' dialog box. The title bar says 'Add Monitor'. The dialog contains several input fields: 'Monitor' (dropdown menu with 'PVB-224-3G' selected), 'Monitor ID' (dropdown menu with '#5' selected), 'Name' (text box with 'Monitor4'), 'Communication' (dropdown menu with 'TCP/IP' selected), 'Com Port' (dropdown menu with 'COM1' selected), 'Host IP Address' (dropdown menu with '192.168.10.2' selected), and 'Target IP' (empty dropdown menu). Each dropdown menu has a small blue arrow icon. To the right of the 'Com Port', 'Host IP Address', and 'Target IP' fields are small circular icons with a refresh symbol. At the bottom, there are two buttons: 'Add' and 'Cancel'.

- 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.

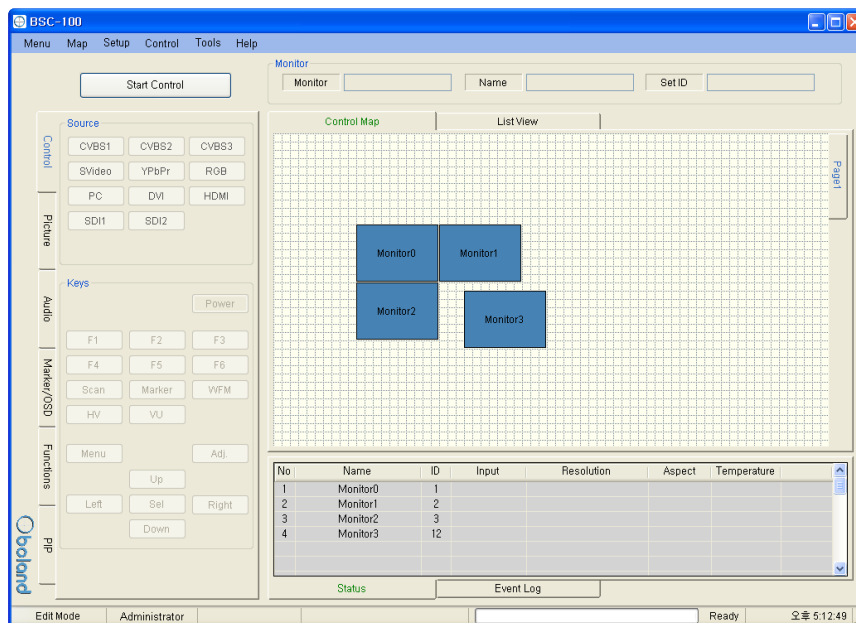
e) Com Port: select RS232 Comport of available in PC.

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.



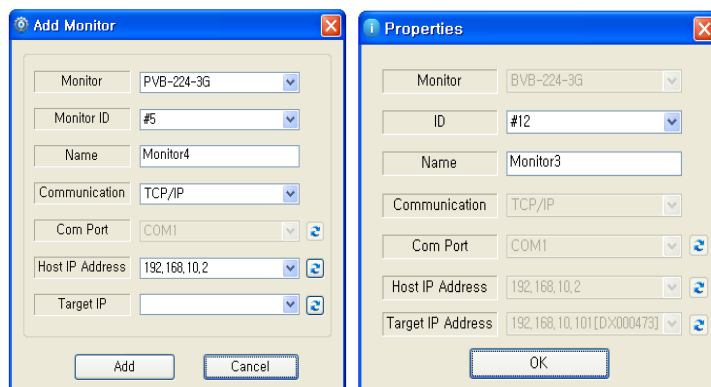
- User can delete the selected Monitor by Edit item on menu or context menu on control table.

#### 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)

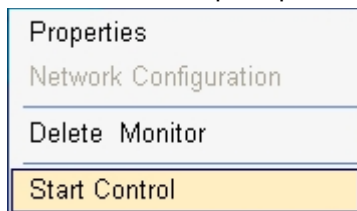
(Control Mode)

## 6. Control Mode

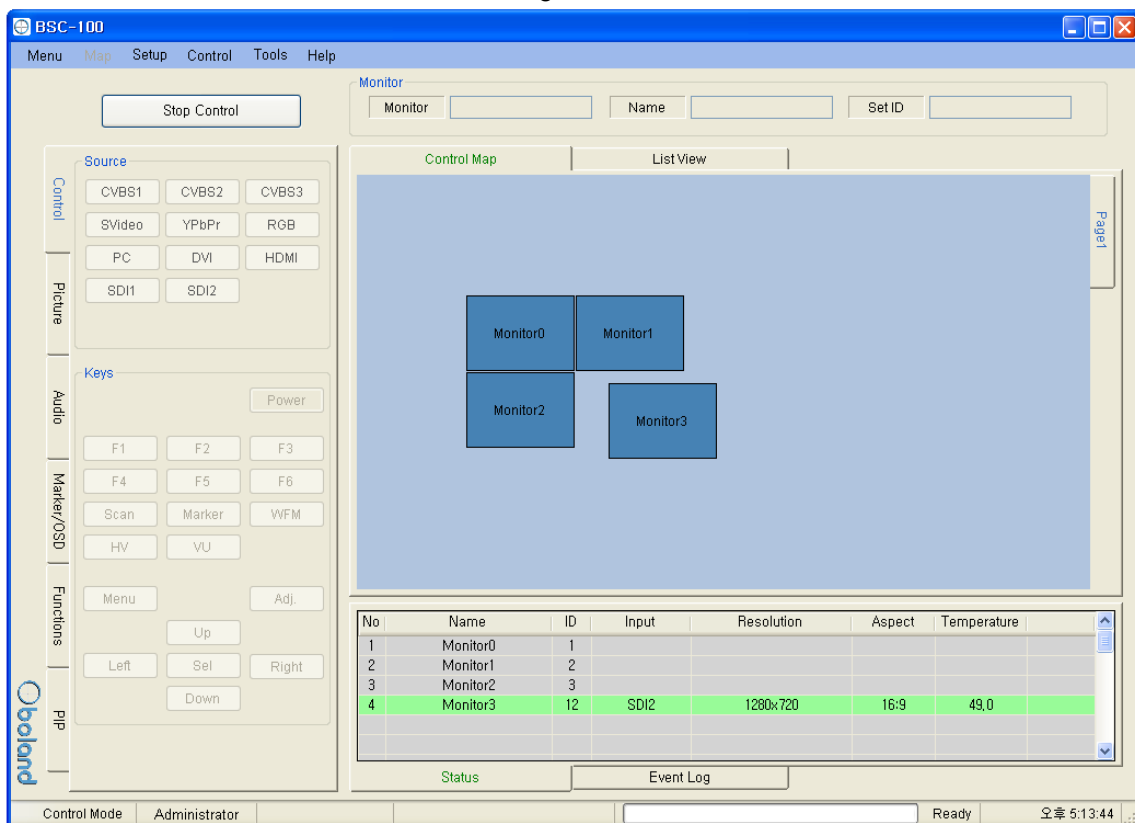
- User can control the selected monitor in this mode.
- Only for control, cannot edit.

### 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 dialog box is a window with a blue title bar and a close button. It contains several input fields and buttons. The fields are: Monitor (BVB-224-3G), ID (#12), Name (Monitor3), Communication (TCP/IP), Com Port (COM1), Host IP Address (192, 168, 10, 2), and Target IP Address (192, 168, 10, 101 [D:X000473]). There are OK and Cancel buttons at the bottom.

## 3) Controller Tap

- User can control the monitor through this tap.

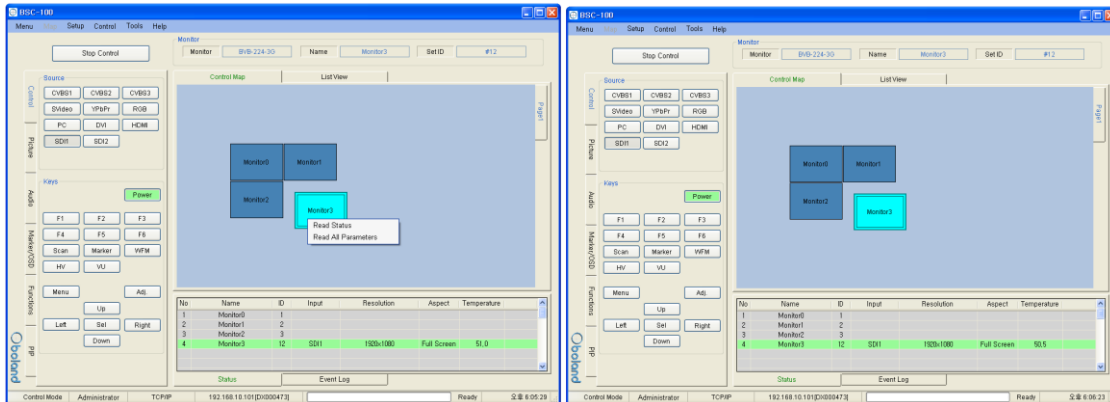
- Controller Tap is only available when monitor is selected in control mode.

- 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 panel with multiple tabs and sections. The tabs are: Control, Video, Audio, Marker/OSD, and Functions. The Control tab is active, showing various settings like Source (CVBS1, CVBS2, CVBS3, S-Video, Y/PbPr, RGB, PC, DVI, HDMI, SDI1, SDI2), Keys (F1, F2, F3, F4, F5, F6, Scan, Marker, WFM, HV, VU, Menu, Up, Sel, Right, Down), and a Power button. The Video tab shows settings like Adjust (Br, Cont, Color, Sharp, Tint), Color (Temp, Color Space, R, G, B), Video (Scan, Aspect, Mono/Blue, NR, False Color), and Filter (Filter, Color, Level). The Audio tab shows settings like SDI (SDI1 Gr, SDI1 Ch, SDI2 Gr, SDI2 Ch), Level Meter, Loudness, and Audio (Output, Volume). The Marker/OSD tab shows settings like Marker (Aspect, Area, Center, Width, M. Color, S. Color, Red), Timecode, UMD, and Input ID. The Functions tab shows settings like Load/Save, Screen (BackLight, Gamma, IP Mode, Dithering, Internal), Controller (Front LED, Local, Remote), Caption (Mode, 608 Caption, 708 Caption), and Waveform (Format, Vector Color, Line Select). The PIP tab shows settings like PIP (On/Off), PIP Source (CVBS-1, CVBS-2, CVBS-3, S-Video, R.G.B, Y.Pb.Pr), Aspect Ratio, Position, Blend, and 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 adapter select**

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

Buttons: 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**

Buttons: Delete, Default

**New Key**

Buttons: 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

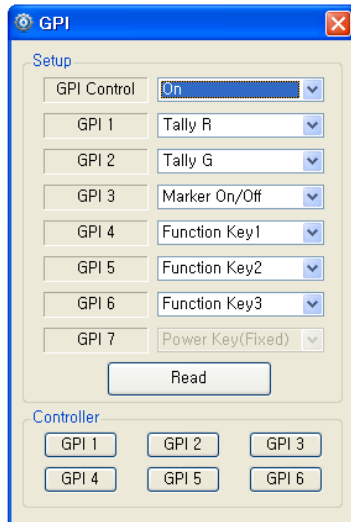
Function 5: Aspect

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:**

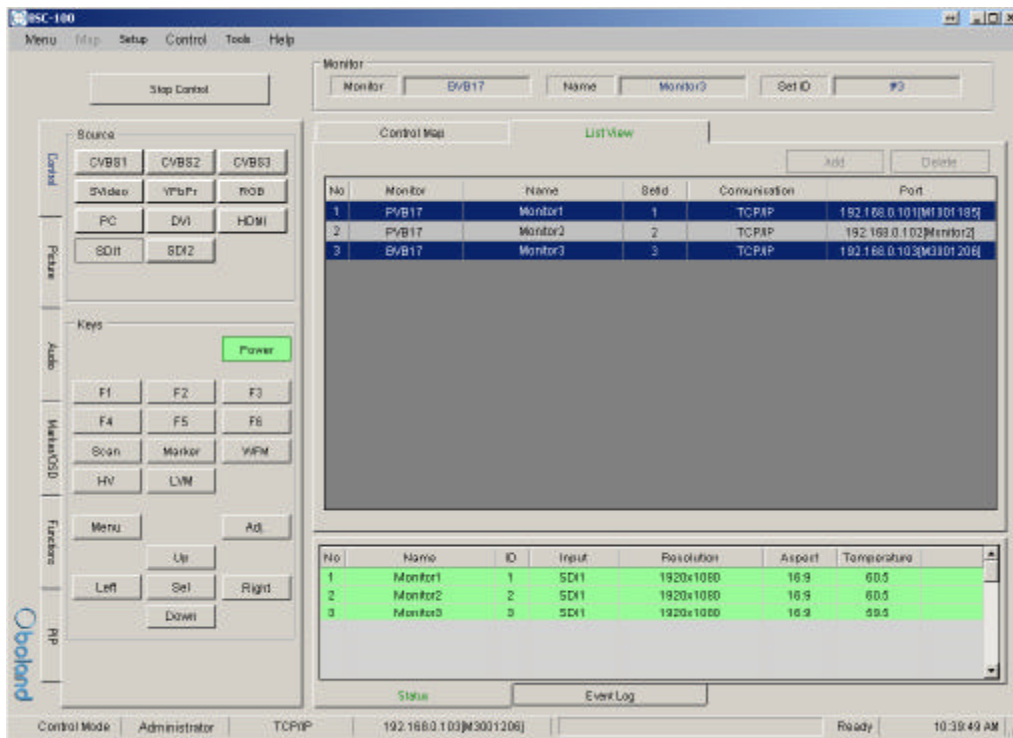
- GPI Control:** A dropdown menu currently set to "On".
- GPI 1:** A dropdown menu set to "Tally R".
- GPI 2:** A dropdown menu set to "Tally G".
- GPI 3:** A dropdown menu set to "Marker On/Off".
- GPI 4:** A dropdown menu set to "Function Key1".
- GPI 5:** A dropdown menu set to "Function Key2".
- 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:**

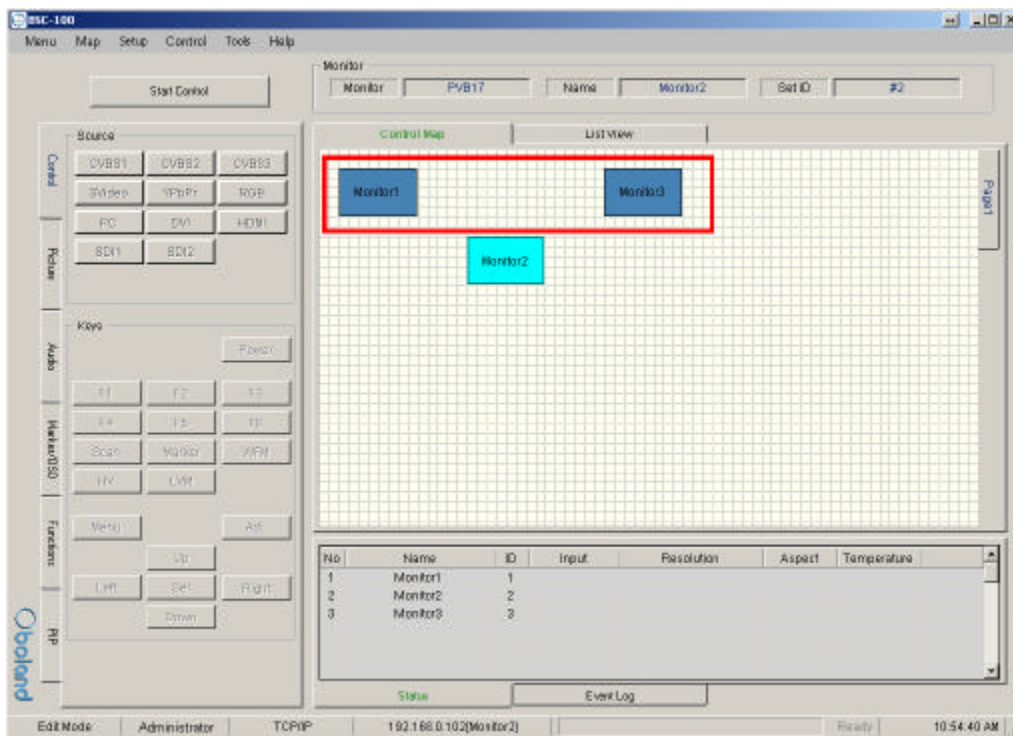
- Contains six buttons labeled GPI 1, GPI 2, GPI 3, GPI 4, GPI 5, and GPI 6, arranged in two rows of three.

## 8) Grouping

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



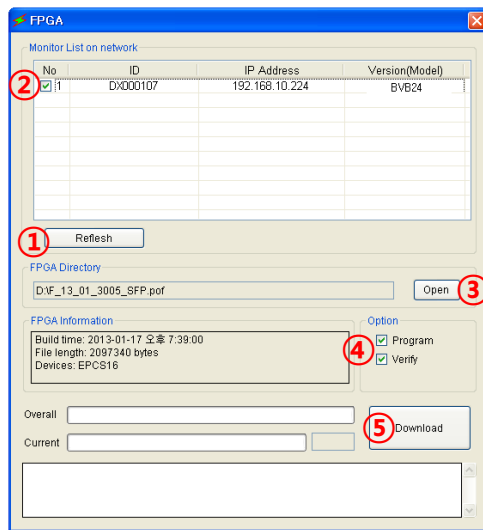
User can group monitors in map by dragging mouse around monitors





## 7. FPGA Download

- Menu > Tool > FPGA ISP



1) Refresh Click.

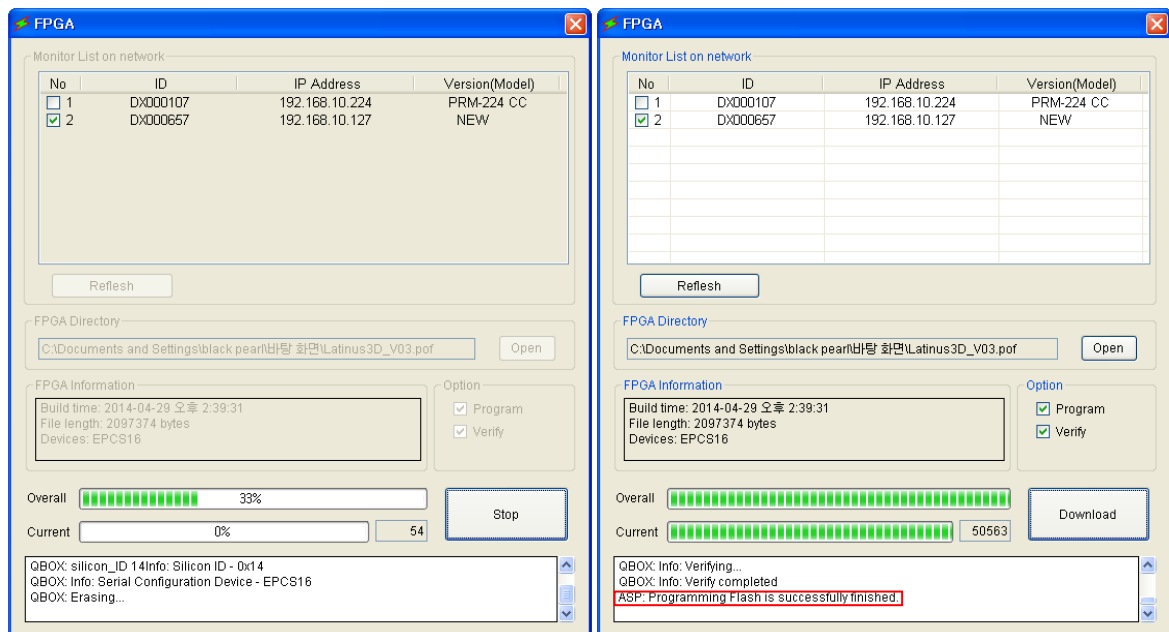
-Appears on the monitor connected to the network.

2) Monitor select.

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

4) Program & Verify Click.

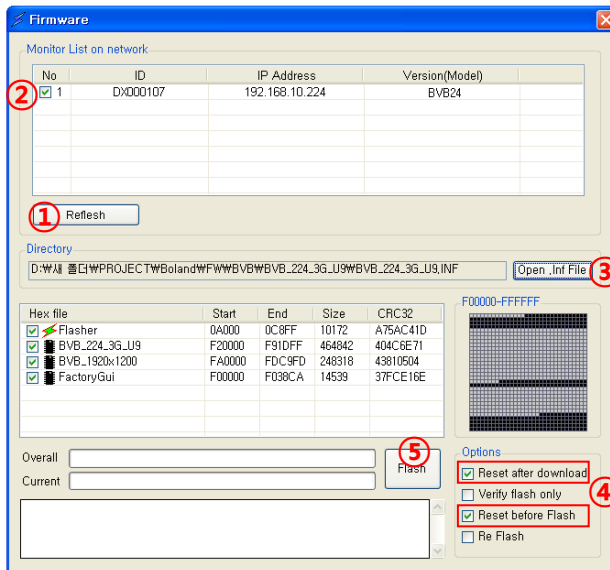
5) Download Click.



>Download finish.

## 8. Firmware Download

- Menu > Tool > F/W ISP



1) Refresh Click.

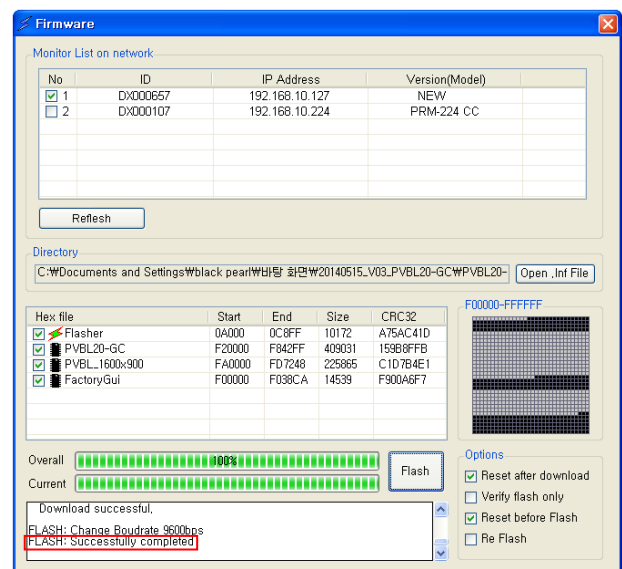
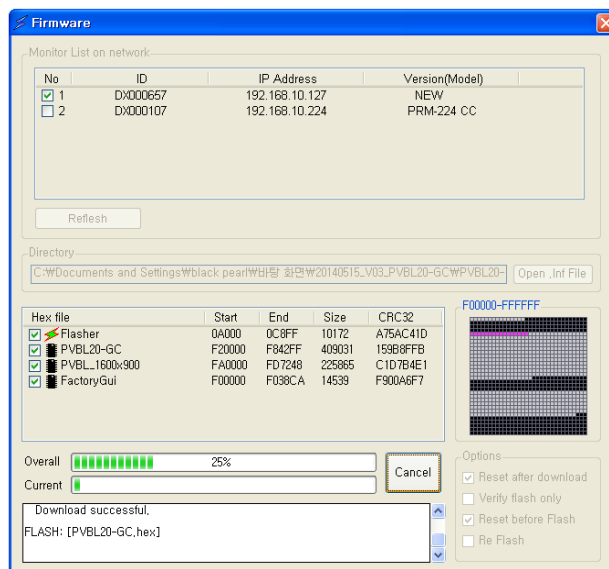
-Appears on the monitor connected to the network.

2) Monitor select.

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

4) Reset after download & Reset before Flash Click.

5) Flash Click.



>Download finish.