

BSC-200

boland System Controller

User 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. Monitor Connection

For monitor control, you need to select either RS-232 or TCP/IP to connect.

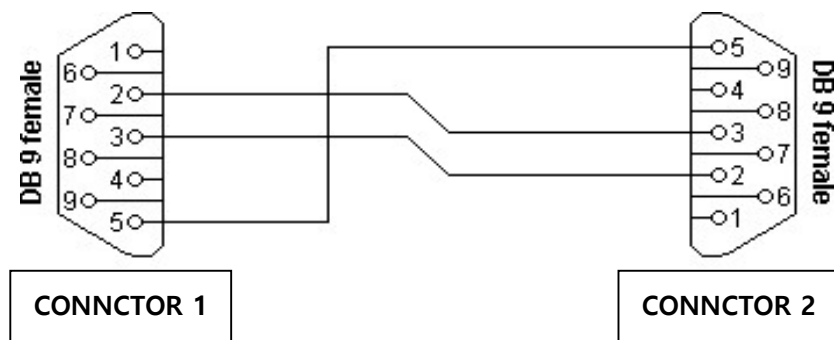
1) RS-232 Connection

a) Serial Setup

Item	Settings
Baud rate	9600bps
Data Bit	8bit
Stop Bit	1bit
Parity Bit	None
Stream Control	None

b) Serial Cable for PC to Monitor

CONNECTOR1	CONNECTOR2	FUNCTION		
2	3	RX		TX
3	2	TX		RX
5	5	SIGNAL GROUND		



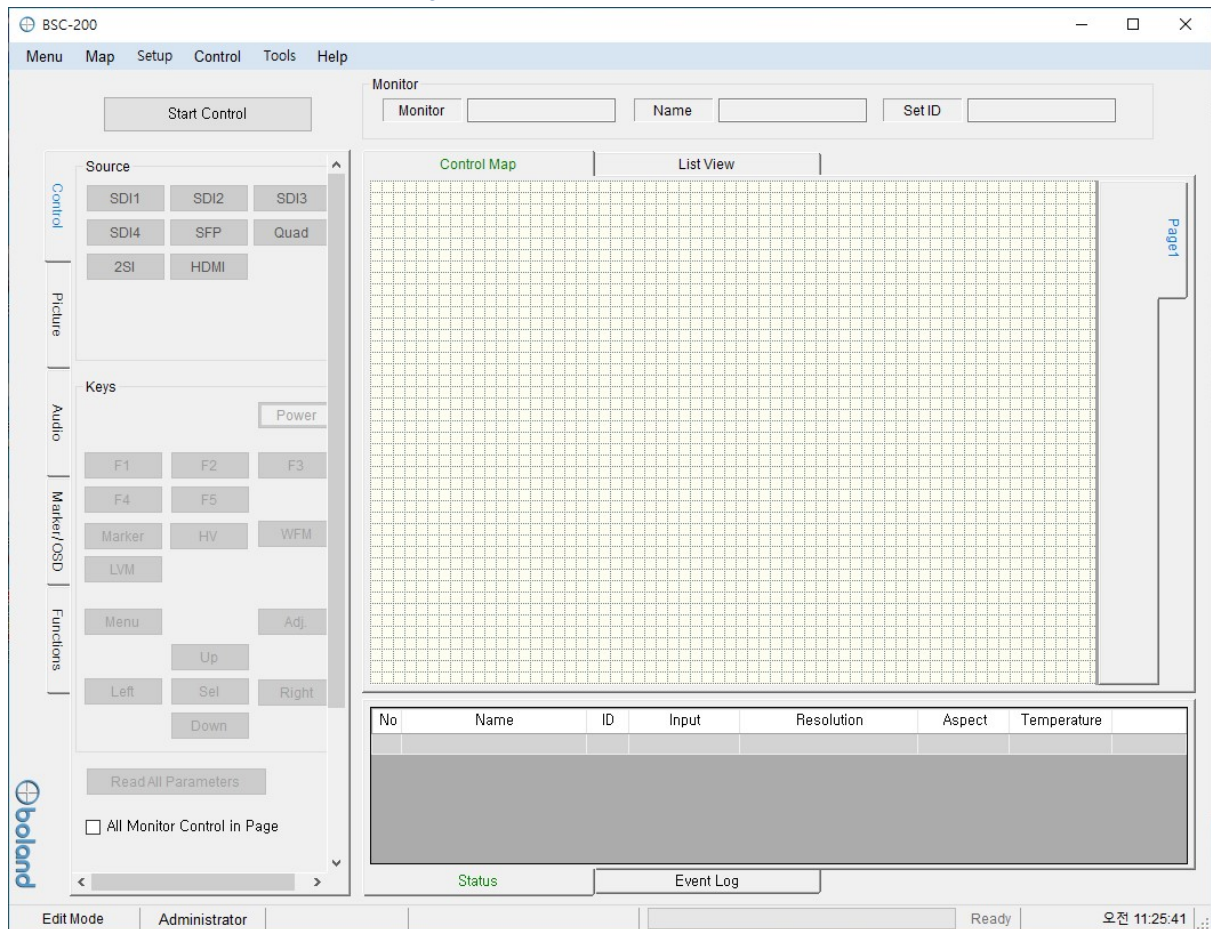
2) Network Connection

The easiest way for network connection is to connect the device to the network by wire, automatically obtain the IP address and DNS from the network without any settings on the device.

a) Check the Monitor IP

- Monitor Menu : Setup -> IP Config -> IP Address
- The checked IP is selected from Target IP when adding a monitor.

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: Shortcut, Network

d) Control: Function Key, GPI

e) Tools: FPGA ISP, F/W ISP(ST), LUTs Download

f) Help: About

2). Monitor Properties Group

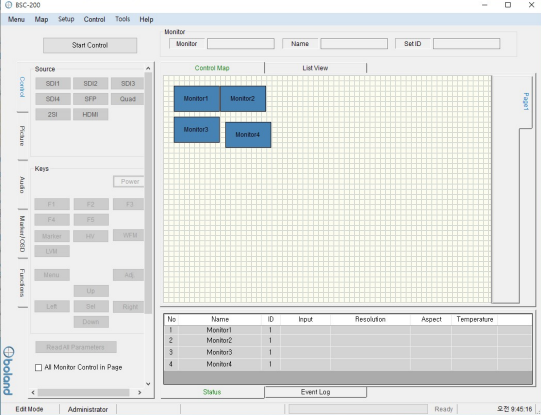
- Displays the selected monitor's model, name and ID.

Monitor

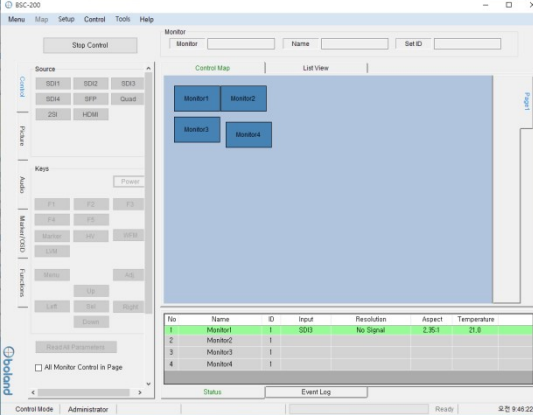
Monitor Name Set ID

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.



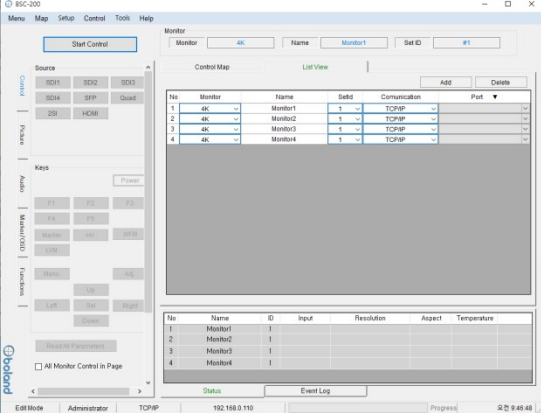
(Edit Mode)



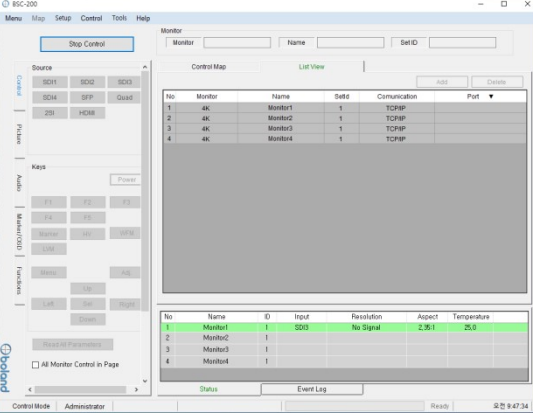
(Control Mode)

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: QBOXDX000473System: [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

Source

HDMI

SDI1

SDI2

SDI3

SDI4

SFP

Quad

2SI

Keys

Power

F1

F2

F3

F4

F5

Marker

HV

WFM

LVM

Menu

Adj.

Up

Left

Sel

Right

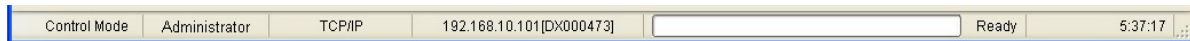
Down

Read All Parameters

☐ All Monitor Control in Page

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.

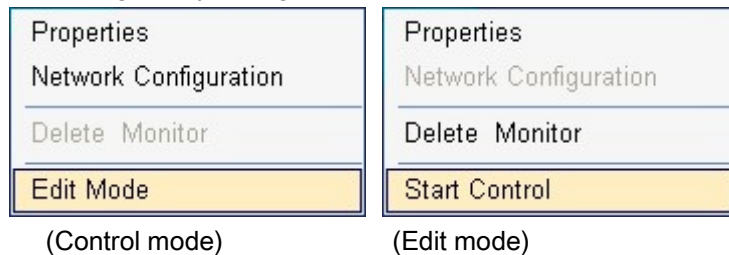


5. Edit Control Map

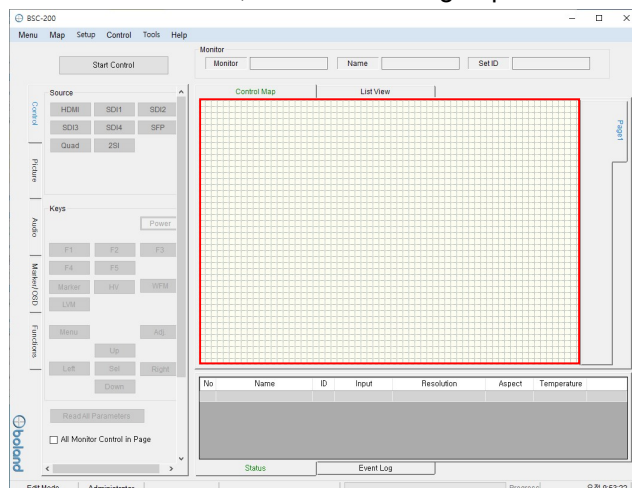
- User can edit the control map in EDIT MODE.
- Edit mode is only to use the Editing map. User cannot control any monitor in this mode.

1) Start Edit Mode

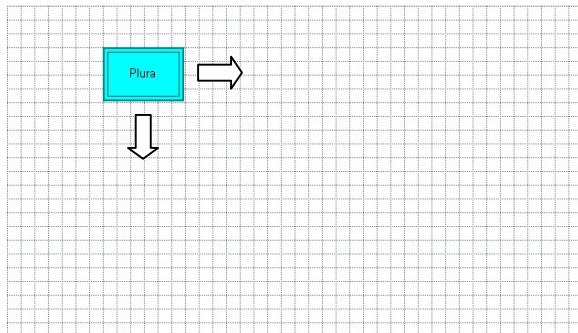
- User can change to edit mode through Mode items on menu strip, context menu on control table or mode changing button on control table.
- Below Context menu strip is opened by mouse right-clicking on the Control Table.
- It is changed depending on status of mode.



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

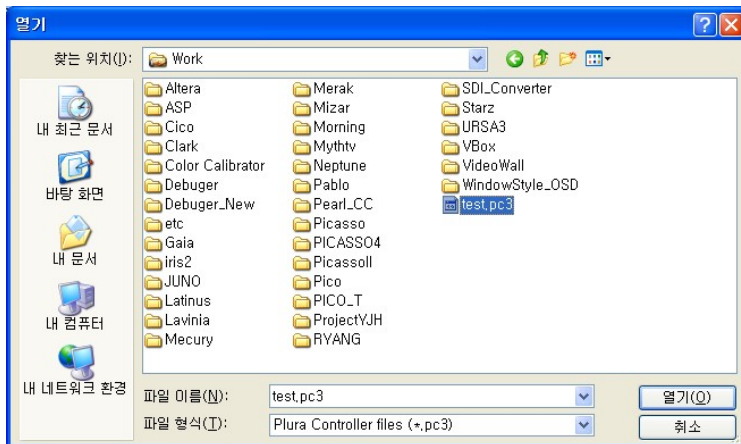


- In control table, user can locate the monitor icon any place.



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: Monitor Menu -> Setup -> Communication -> Set.ID

- Select the target monitor's ID number.

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) Host IP Address: select PC IP address of available in PC..

g) Target IP:

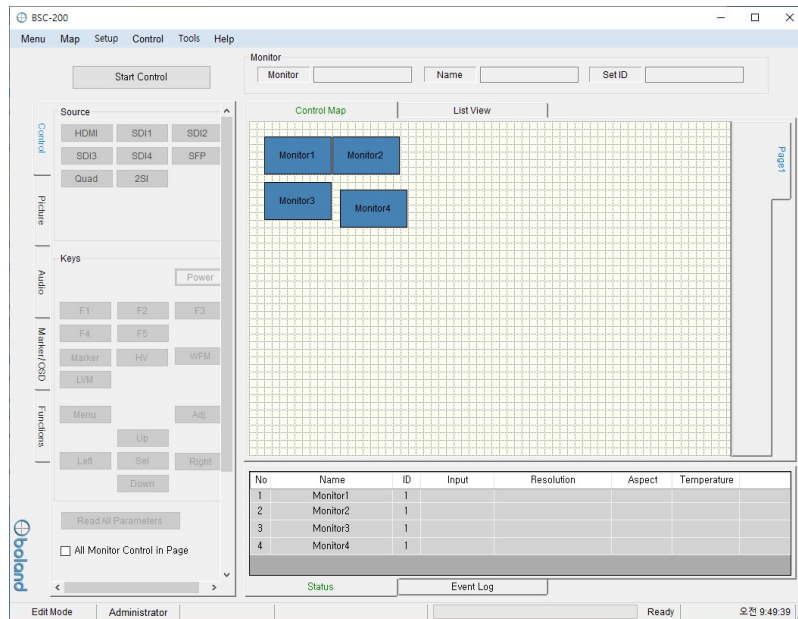
Select target IP address of linked monitor if Input IP Address Enable is unchecked.

User can enter the monitor IP address directly if Input IP Address Enable is checked.

- Monitor Menu: Setup -> IP Config -> IP Address

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

⚙️ Add Monitor

Monitor

4K

Set ID

#1

Name

Monitor1

Communication

TCP/IP

Com Port

COM1

Host IP Address

192.168.0.43

Target IP

Input IP Address Enable

☒

Target IP

192.168.0.101

Add

Cancel

ℹ️ Properties

Monitor

4K

Set ID

#1

Name

Monitor1

Communication

TCP/IP

Com Port

COM1

Host IP Address

192.168.0.43

Target IP

Input IP Address Enable

☒

Target IP Address

192.168.0.101

OK

(Edit Mode)

(Control Mode)

6. Control Mode

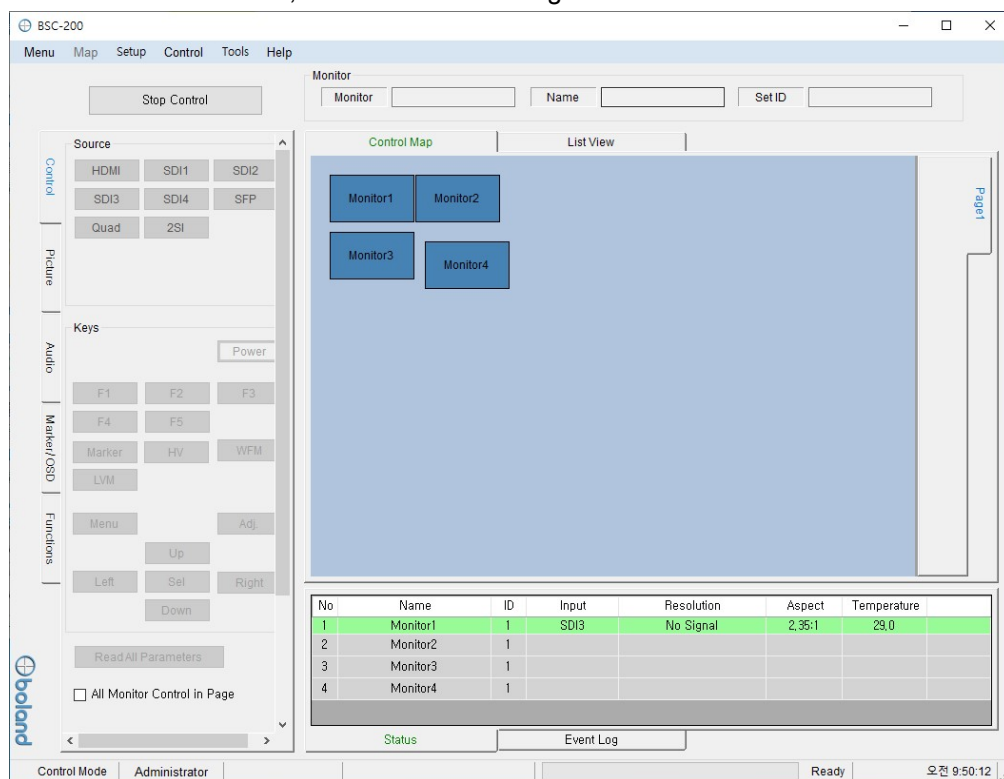
- User can control the selected monitor in this mode.
- Only for control, cannot edit.

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.



Using new features in BSC-200, Networked Monitor System Controller

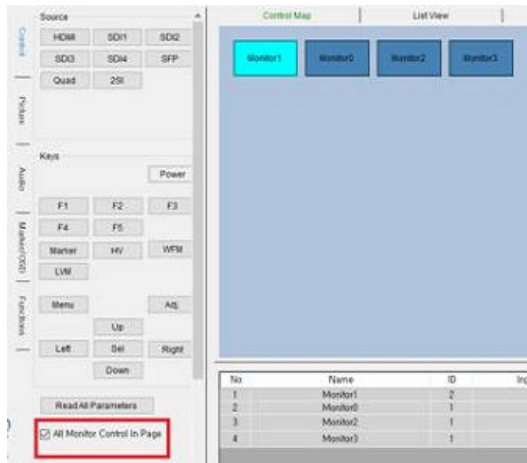
Please find and install the attached new version, 1v070 and later, of BSC-200.

In this version BSC-200, user can a control number of monitors three different ways.

[Method 1, Control all monitors.](#)

Checking the box below, "Control All Monitor on Page" as shown below.

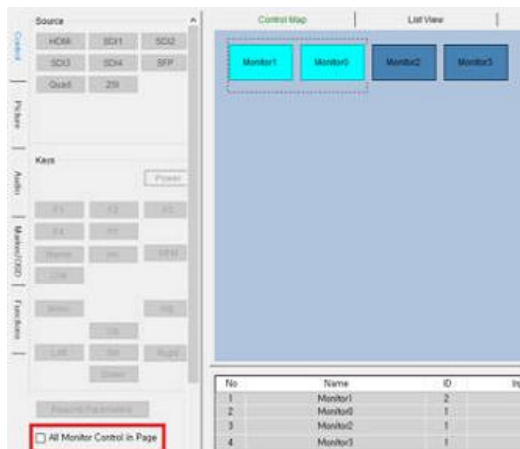
All the all monitors in the blue workspace will be controlled in parallel:



[Method 2, Control selected monitors.](#)

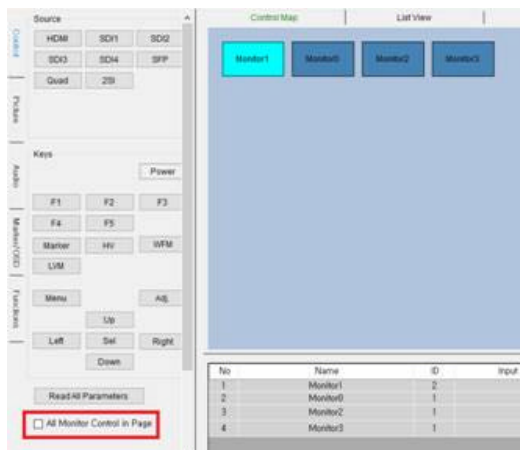
User can control partial monitors on the page like below.

Clear check box and select monitors with a mouse left button press:



[3. Control a single monitor.](#)

Click to highlight only one monitor:



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 shown with the following settings:

- Monitor: 4K
- Set ID: #1
- Name: Monitor1
- Communication: TCP/IP
- Com Port: COM1
- Host IP Address: 192.168.0.43
- Target IP:
 - Input IP Address Enable: ☒
 - Target IP Address: 192.168.0.110

OK

3) Controller Tap

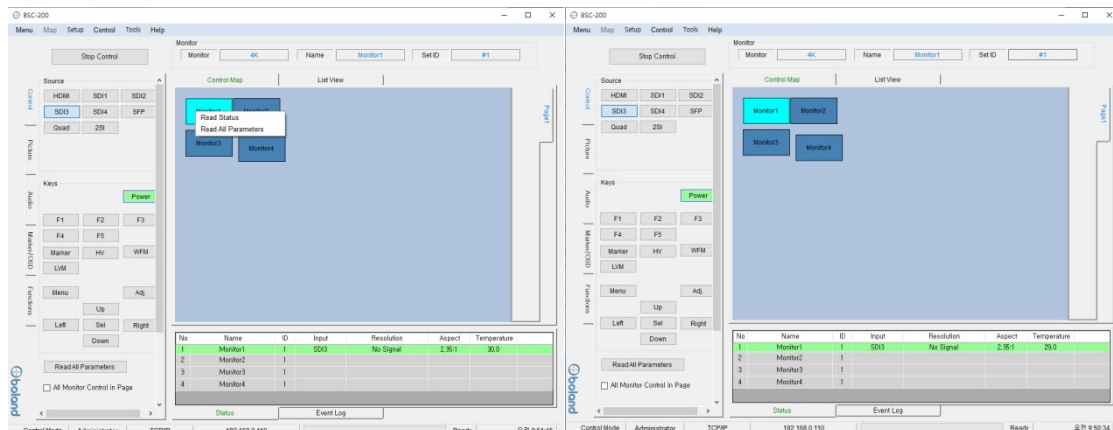
- User can control the monitor through this tap.
- Controller Tap is only available when monitor is selected in control mode.
- It consists of Control, Video, Audio, Marker/OSD and Functions Tap.
- Each controls are changed depend on model type.

The Controller Tap interface displays the following sections:

- Source:** HDMI, SDI1, SDI2, SDI3, SDI4, SFP, Quad, 2SI
- Keys:** F1, F2, F3, F4, F5, Power, LVM, Menu, Up, Down, Left, Right, Set
- Adjust:** Bk, Cont, Color, Tint
- Color:** Temp, Color Space, R, G, B
- Level Meter:** Levelmeter, Type, Scale
- SDI:** SDI Gr, SDI Ch
- Marker:** Aspect, Area, Center, Width, M. Color, S. Color
- Timecode:** Timecode, Size, Position, Trans.
- UMD:** UMD, FG Color, BG Color
- Waveform:** Waveform, Format, Line Select
- Functions:** Peaking Filter, Filter, Color, Level, HDR Mode, Load User LUT
- Read All Parameters:** Button to read the value of the selected monitor
- Set ID:** Set ID

- If the All Monitor Control in Page is checked, the entire monitor of the page shown in the Control Map in will execute the same write command
- Click the button of the command to read the value of the selected monitor
- 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

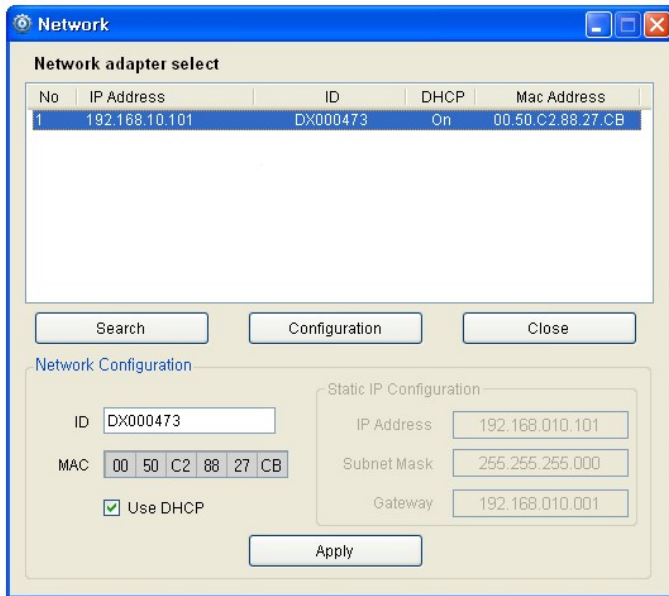
IP Address: 192.168.010.101

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
- Set
- Adj
- Function1
- Function2
- Function3
- Function4
- Function5
- Function6

Existing Key

Delete

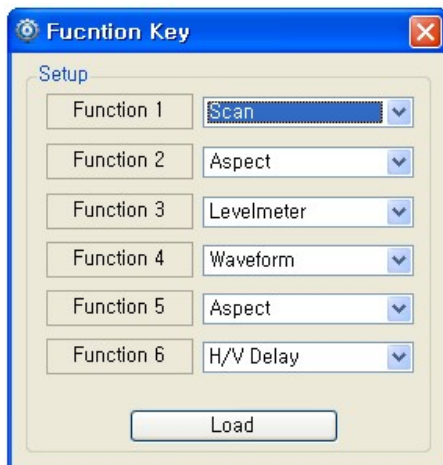
Default

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 containing a gear icon and a close button. The window is divided into two main sections: "Setup" and "Controller".

Setup Section:

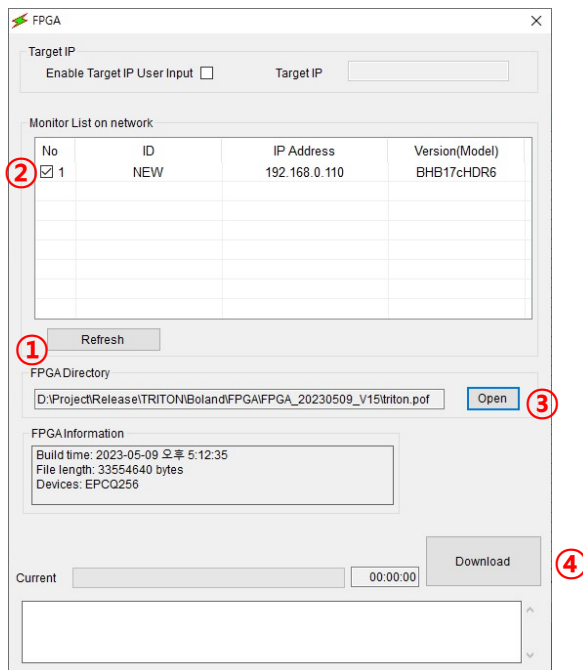
- GPI Control:** A dropdown menu currently set to "On".
- GPI 1:** A dropdown menu set to "Tally R".
- GPI 2:** A dropdown menu set to "Tally G".
- GPI 3:** A dropdown menu set to "Marker On/Off".
- GPI 4:** A dropdown menu set to "Function Key1".
- GPI 5:** A dropdown menu set to "Function Key2".
-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

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

7. FPGA Download

- Menu > Tool > FPGA ISP



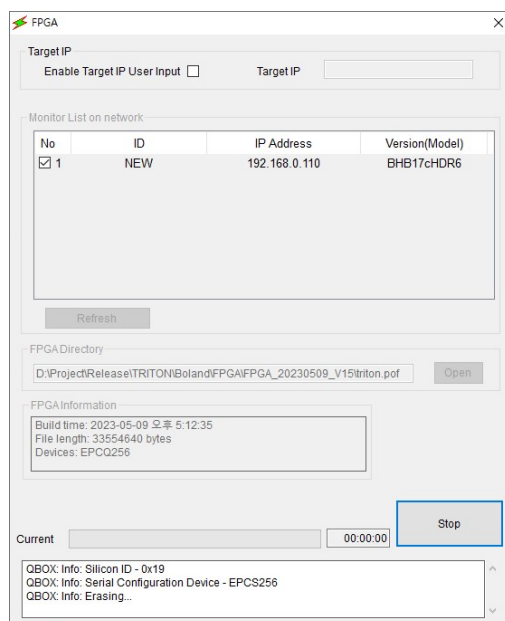
1) Refresh Click.

-Appears on the monitor connected to the network.

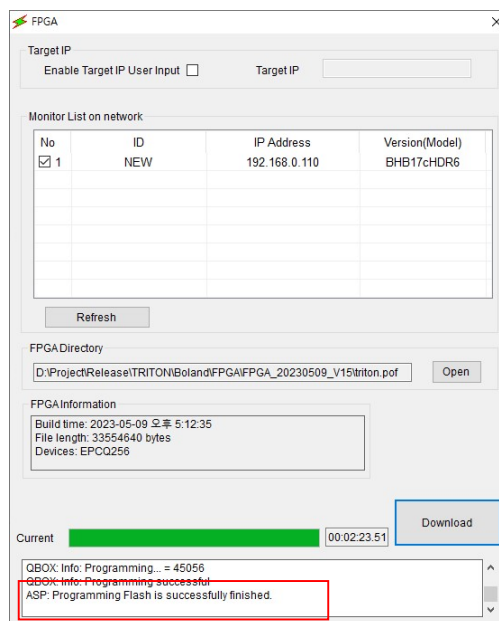
2) Monitor select.

3) FPGA File Open (*.pof).

4) Download Click.

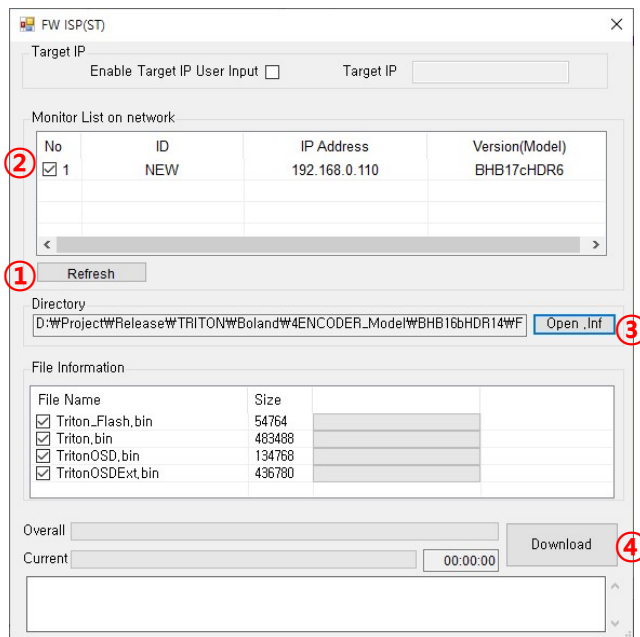


>Download finish.



8. Firmware Download

- Menu > Tool > F/W ISP(ST)



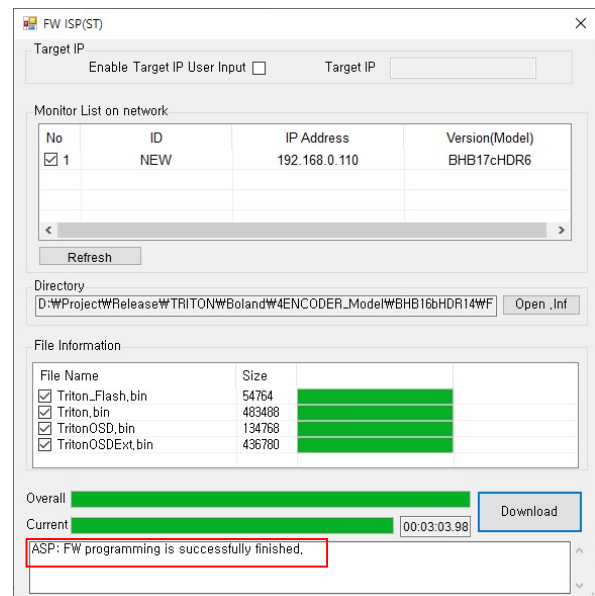
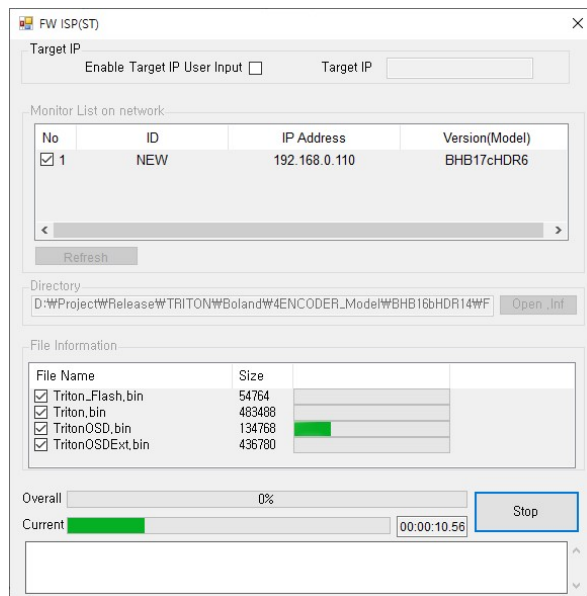
1) Refresh Click.

-Appears on the monitor connected to the network.

2) Monitor select.

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

4) Download Click.



>Download finish.