

SICP User Manual

NEX Series Video wall



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Serial Interface Communication Protocol

This document defines all the command and messages exchanged between the Primary (a PC or the other controller) and the Secondary (the displays).

It also describes the ways to send or read the commands or the messages.

1. Protocol definition

SICP stands for “Serial Interface Communication Protocol”.

The protocol is specifically designed to allow data communication in half duplex multi-point environments, but it can also be used for half duplex point-to-point RS-232C communication.

2. Communication characteristics

A half duplex communication is implemented starting from the concept of a Primary-Secondary structure, where the display is supposed to be the Secondary.

The first action is always taken by the Primary, which can be either a PC or any controlling device (acting as server) interfaced to the monitor. After sending a command or a request in the appropriate format the Primary receives from the Secondary an acknowledgment, which tells the transmitter whether the command is not valid (or not executable, anyway) or it is accepted. In case of a request, the requested information is sent back and it becomes the acknowledgment by itself.

3. How to connect external equipment

Female Pin number	Male Pin number
2 <----->	2
3 <----->	3
5 <----->	5

4. Hardware Protocol

Baud rate : 9600 bps
 Data bits : 8 bit
 Parity bits : None
 Stop bits : 1 bit
 Handshake : None

SICP Program

Introduction

This manual booklet describes how to manage and utilize the product (Video Wall set) through remote control via RS232 protocol. This will introduce SICP V5.20 (Software that enables you to control the Video Wall via serial) and various applications will be possible with this software. As per different way of customizing, the functions and specifications of each product may vary.

**Notice: Please extract VBRunTimesR7.zip and install the program on VISTA, WIN7/8/10 before installing SICP.*

Installing SICP V5.20

Step 1. Run the file named "SICP 5.20 Set up.exe" and follow the instruction below.

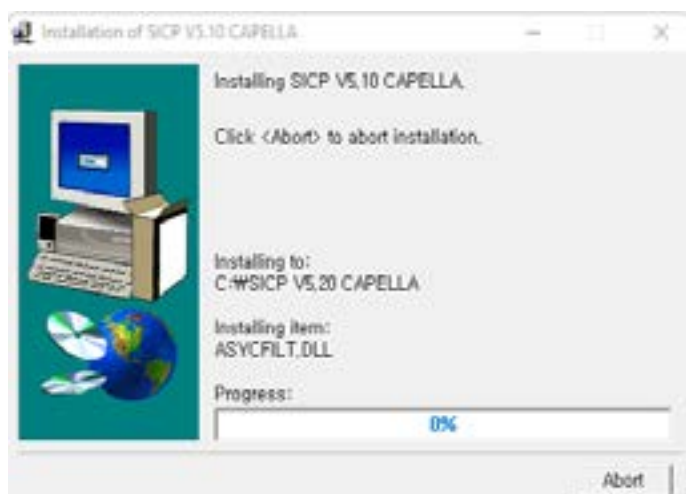
If you have SICP program installed previously, delete the previous one and re-install the new one.



Step 2. Press "Next"



Step 3. Select the folder in which you wish to save the file. Press "Install" after selecting the desired folder.



Step 4. Wait until the installation is complete.

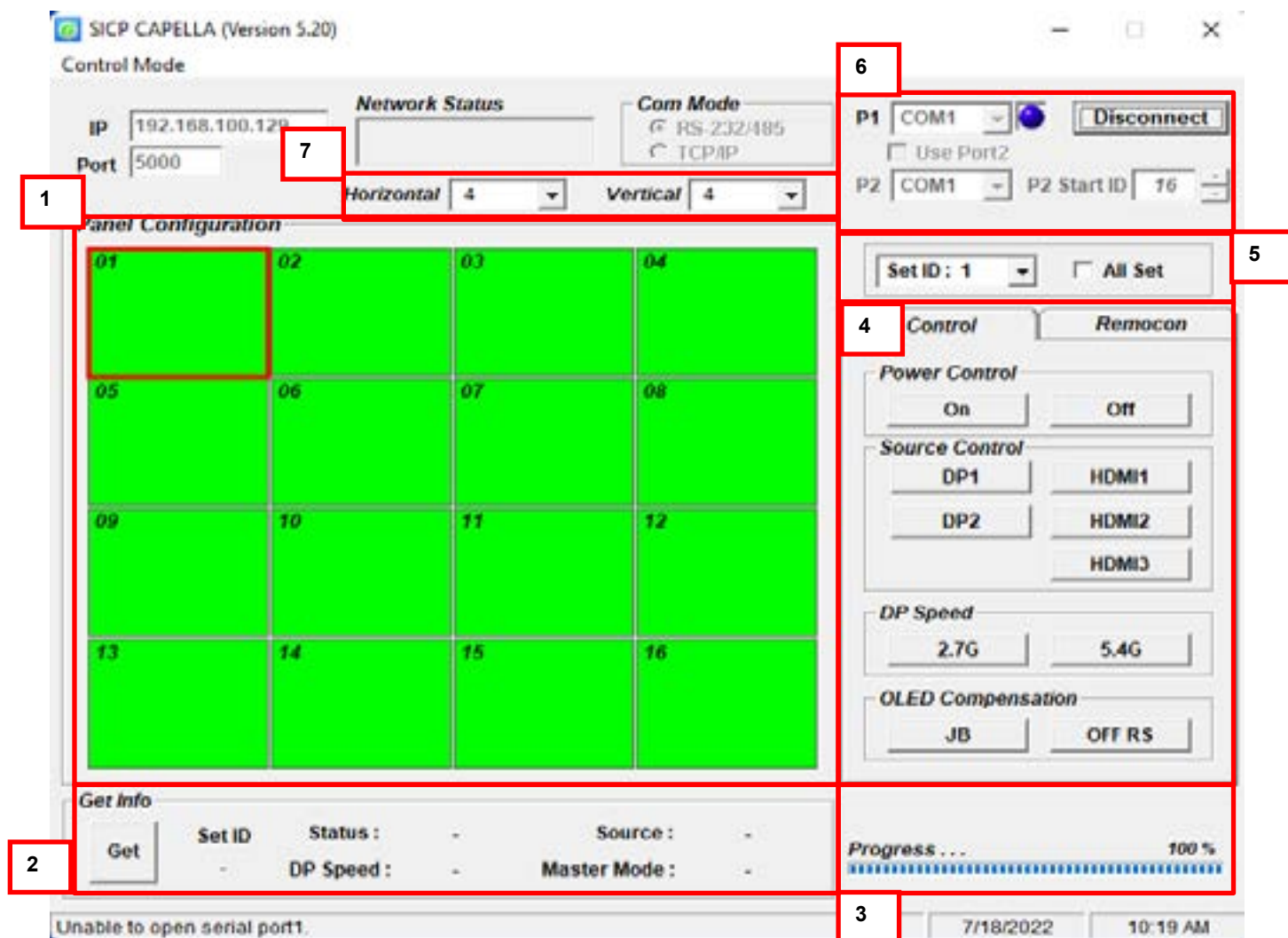


Step 5. Once installation is complete, go to "Start" Menu -> Programs -> SICP V5.20 to run the program

SICP Program, cont.

Running SICP V5.20 and Structure

Go to “Start” Menu -> Programs -> SICP V5.20 to run the program.



[Fig.1]

1. Panel Configuration : Indicates the information such as display configuration, source, Set ID and sequence number.
2. Get info: Indicates the status of selected video wall display.
3. Progress Bar : Shows the status of RS232 communication.
4. Control Tabs: Set of control buttons. Can toggle to “Remocon” tab for virtual remote controller.
5. Set ID : Shows the Set ID which is selected for control.
6. Communication : Select the Port connected to the PC.
7. Horizontal & Vertical : Shows the type of display you can select.

SICP Program, cont.



Connect & Disconnect

Users can connect RS-232 input and control from your PC using an RS232 Cable.

Select the Port into which PC is connected (refer to #6 on fig. 1 [p.5](#)) and click “connect” button.

If connected properly, the indicator in box #6 will turn BLUE (from RED). If not connected properly, one of the following messages will appear below box #2:

- “Unable to open serial port”:
The port may not be available on your PC, or another program may be running under this port.
- “Cannot connect with Easy DID System”:
RS232 Cable may not be connected properly or Set ID may be incorrect. Re-check on Set ID.

Control Tabs

Users can control each display separately.

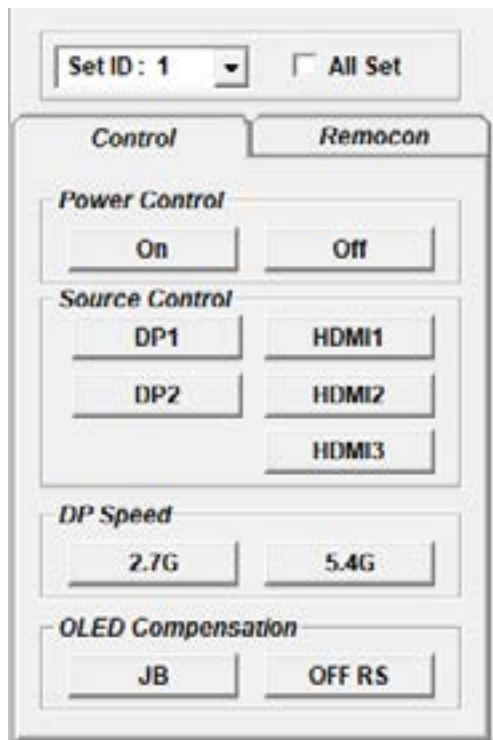
First, select the display you wish to control by selecting Set ID. You may click on it (refer to #1 on fig. 1 [p.5](#)) or select it from the drag-down menu (refer to #5 on fig. 1 [p.5](#)).

Users may conduct the following functions on the selected set:

Basic Control

Select “Control” Tab as shown on fig 2.

- Power Control: Powers the Set On/Off
- Source Control: Selects Source

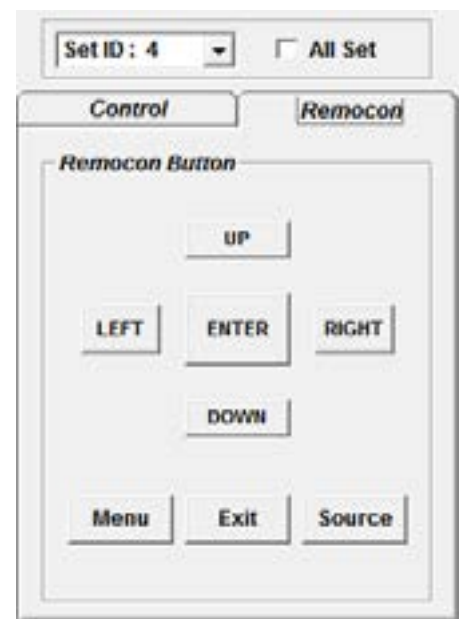


[Fig.2]

Virtual Remote Controller

Select the “Remocon” Tab as shown in fig 3.

This virtual remote controller controls sets (displays) via RS232 in the same manner that a physical IR remote controller would.



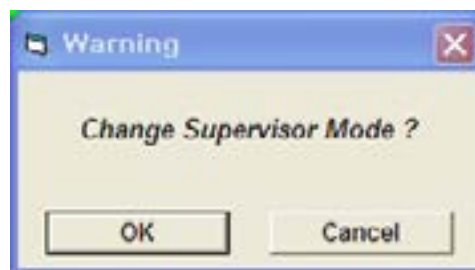
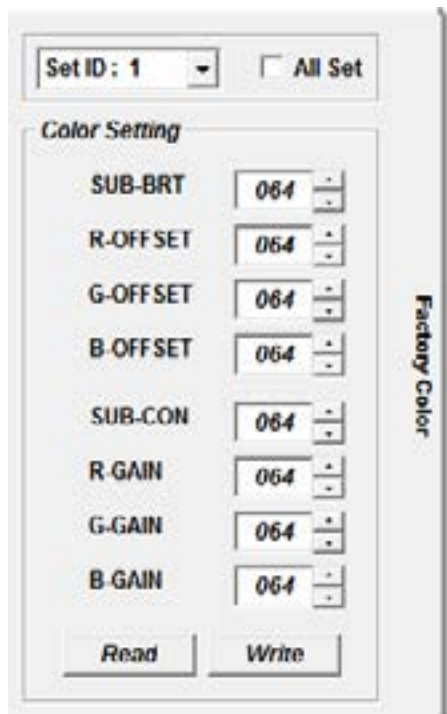
[Fig.3]

Additional Settings Modes

Color Setting

Users may access the “Color Setting” mode only after entering Supervisor Mode.

In order to enter Supervisor mode, go to “Control Mode” in the toolbar (top) and select “Setting Mode”. Hot key: Ctrl+F2.



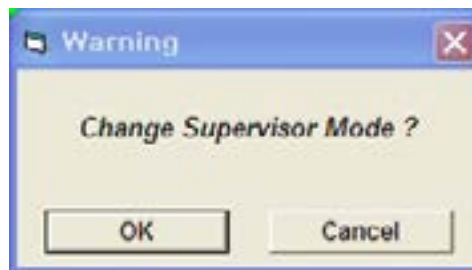
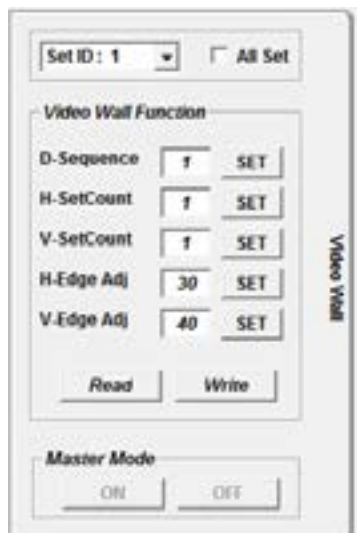
Click “OK”

Adjust color values (0~255). The color will be optimized during production & Quality Assurance. Manually adjusting color values is not recommended without prior consultation with GPO Display.

Additional Settings Modes, cont.

Video Wall Functions

Users can access Video Wall Functions only after entering Supervisor Mode. In order to enter Supervisor mode, go to "Control Mode" in the tool bar (top) and select "Setting Mode". Hot key: Ctrl+F3.



Click "OK"

Commands are writable only (not readable).



[Fig. 3]

Display Sequence

Position of display within context of the array (ex: fig.3)

H-Set Count

Horizontal Set Count: Number of displays in array horizontally (counting left-to-right).

Fig. 3 shows H-Set Count of "3"

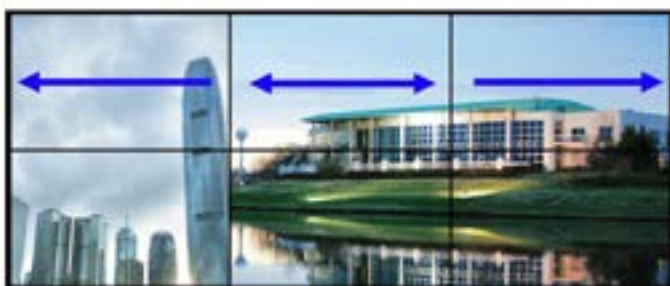
V-Set Count

Vertical Set Count: Number of displays in array vertically (counting top-to-bottom).

Fig. 3 shows V-Set Count of "3"

H-Edge Adj

Horizontal Edge Adjust: Set the horizontal gap between displays in video wall (value range: 0~200).



H-Edge Adj [Fig. 4]



V-Edge Adj [Fig. 5]

V-Edge Adj

Vertical Edge Adjust: Set the vertical gap of displays in Video Wall (0~200).

Set ID Adjust

Set ID Setting: Adjust the Set ID of display (1~100) for control purposes.



Network Config Tools

NEX-series displays have an RJ45 input and TCP/IP control option.

Follow the instructions below to load the NetworkConfigTool necessary for network control. The commands listed in the serial commands list still apply when controlling via IP. Installation and setup of the Network Config Tool is necessary for the use of NEX-series displays' IP control option.

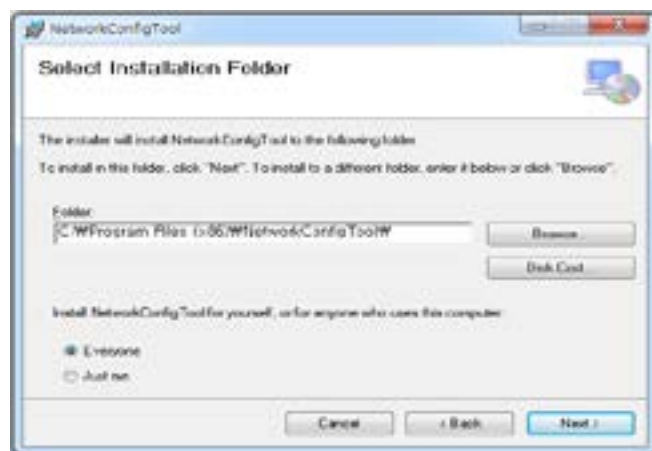
Follow the steps listed below and test network control using SICP software before removing your control PC (if using third-party control system).

1. Installing NetworkConfigTool

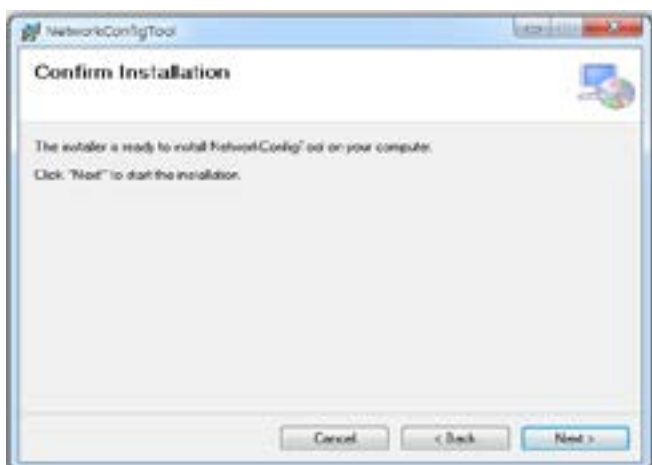
Step 1. Run the file named "Setup.exe" and follow the instruction below:



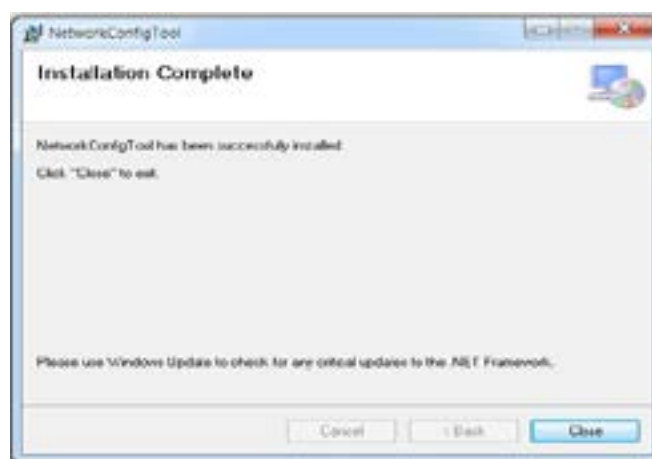
Step 2. Click "Next"



Step 2. Select the folder you wish to save the file in. Click "Install" if you are ok with the designated folder.



Step 3. Click "Next"

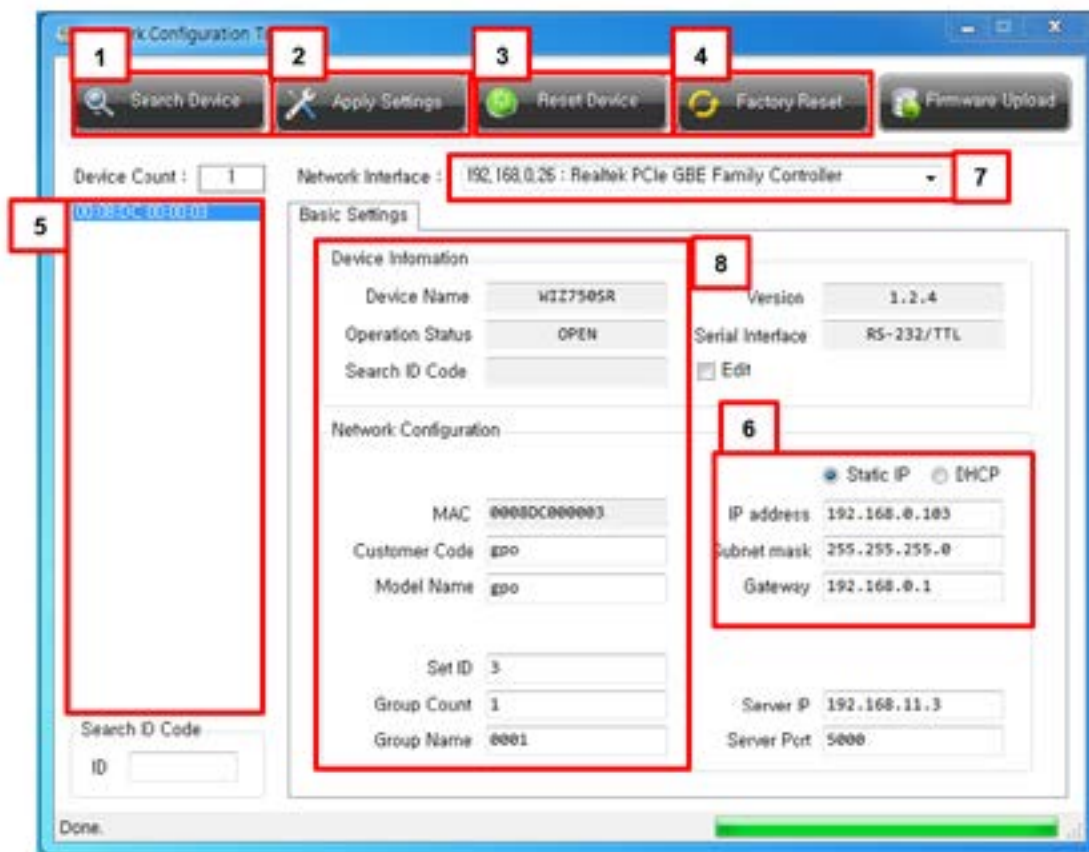


Step 4. Once installation is complete, click "Close" to exit.

Network Config Tools, cont.

2. Running NetworkConfigTool and Structure

Open NetworkConfig Tool application and you will see the window below:



1. Search Device: Search for connected Network devices button.
(Search after about 10 seconds when the product is turned on or the setting has been changed)
2. Apply Settings: Save device setting.
3. Reset Device: Network Device Restart button.
4. Factory Reset: Network Device setting initialization.
* The setting is initialized. Please be careful.
5. Device Count: List of discovered devices.
6. IP Setting: Select DHCP or Static IP, Can be set when Static IP
7. Network Interface: Network Device can only be used in the local network.
If not, check if the network interface, as it will be different.
8. Device Information & Network Configuration: Do not use as an extension
9. Open SICP and select TCP/IP control. Test control to verify it is functioning correctly.
10. Disconnect control PC and commence network control via 3rd party control system, if desired.
**IMPORTANT: If display is replaced or rearranged in array configuration, user must setup NetworkConfigTool again.*