



SightLine Network Configuration

Part Number: EAN-NETWORKCONFIGURATION.DOCX

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Summary

This document describes configuring a static IP address for the SLA-1500 and SLA-3000 video processing board. It additionally covers setting telemetry destination and port. This documentation pertains to SLE versions of these boards as well.

Requirements

Software Compatibility - Windows 7, 8, or 10 required for use with the SLA-Panel+ application.

Hardware Compatibility - Standard Ethernet network connection to the SLA-1500 or SLA-3000.

SLA Software - SLA firmware and SLA-Panel+ software revisions are available for download on the SightLine Applications Website - <http://www.sightlineapplications.com/support/software>

Procedure Summary

This procedure describes how to use the SLA-Panel+ application for configuring both the SLA-1500 and SLA-3000 boards to use a static IP address. General knowledge of IP addressing is recommended.

Default IP Addressing

Dynamic Host Configuration Protocol (DHCP) is supported by all SightLine boards. This support allows SLA boards to automatically obtain an Internet Protocol (IP) address. This assignment includes the subnet mask and default gateway. In the event that a DHCP server is not available on the connected network, then each SLA board will default to a predefined IP address.

SLA-1500 Predefined IP Address: 169.254.1.180, 255.255.0.0 subnet mask, and no gateway is defined.

SLA-3000 Predefined IP Address: 169.254.1.181, 255.255.0.0 subnet mask, and no gateway is defined.

This predefined assignment supports the implemented address block of 169.254.0.0/16. If a windows PC starts without either a static or DHCP assigned IP address, then it will default within this same address block (and subnet).

Note: These addresses are only valid on the link, such as a local network segment or point-to-point connection, that a host is connected to. These addresses are not routable and like private addresses cannot be the source or destination of packets traversing the Internet.

SLA-Panel+ and SLDiscover Packet

When opening the SLA-Panel+ software, it will initially send out a 'SLDiscover' packet on the connected network to look for any SLA boards. Here an example of this command sequence:

```
sent: SLDiscover
received: SLA1500_14015a, 192.168.0.114
received: SLA3000_f58448, 192.168.0.117
```

If there are boards on the same physical network, they will be displayed here as well as added to the dropdown menu for connection selection. Please note the address of the system that you want to connect with, and ensure your PC is on the same network/subnet.

Note: If you don't see a response with a board name and IP address then please refer to the Appendix for instructions on how to connect to your SLA-1500 or SLA-3000 board using a serial port.

1. Defining Static IP Address

- 1.1. Open **SLA-Panel+** and use the dropdown menu to select the SLA board.

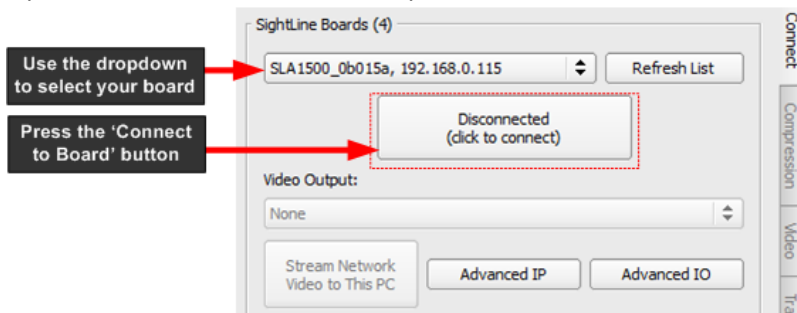


Figure 1: Connect to the SLA-HARDWARE

- 1.2. After connecting successfully to the board, use the menu bar to select Configure -> **Network Settings**.
- 1.3. Select the checkbox for **Use Static IP**
- 1.4. Enter the IP Address, Subnet, and Gateway address.

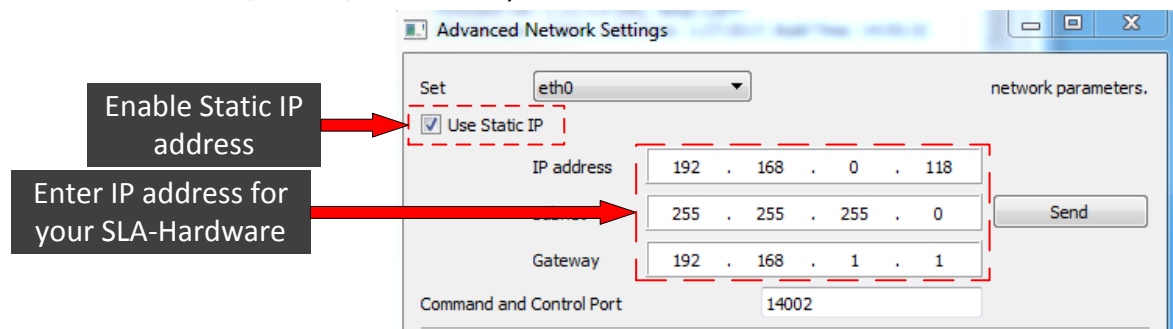


Figure 2: Set a Static IP address

- 1.5. Click the **Send** button to update the parameter file.
 - 1.6. Use the top main menu to save settings to the parameter file, select Parameters → **Save to board**.
 - 1.7. Restart the board either using the top menu, Reset → **Board** or power cycle. After rebooting the board will now have the newly assigned IP address.
 - 1.8. Make sure to change your PC's IP address to an address on the same logical subnet.
- .
2. **Setting and Removing Telemetry Destination IP Addresses**
 - 2.1. The destination IP address for telemetry is normally going to be the IP address (as input) of the gimbal control system or the autopilot program. Use the main top menu to select Configure → **Network Settings**.
 - 2.2. Select the camera index. This will be the source camera for the pixel telemetry.
 - 2.3. Set the destination IP address and port. This will be UDP packet, and therefore the port will be a listening UDP port on the remote system.
 - 2.4. Select the **Add selected IP as destination** radio button, and then press the **Send** button. This sends this configuration data to the SLA board.

Note: You may add up to five telemetry destinations. Before you change any one of the five (if you've entered the maximum of five), you will need to remove an existing destination. You also have the option of clearing all.
 - 2.5. Use the main top menu to select the option for saving the parameter file. Select Parameters → **Save to board**.
 - 2.6. To initiate the new settings and make the new telemetry destination active you will need to restart the SLA board. Use the top menu to restart the board, select Reset → **Board**.

Set the IP of the associated control system

Set telemetry destination

For Camera index 0

IP address 192 . 168 . 0 . 115 port 14002

Add selected IP as destination Remove selected IP from receiving Clear all IP Addresses from receiving

Save

Figure 3: Screen shot of the Set telemetry destination.

- 2.7. To remove destinations, select the **Clear all IP Addresses from receiving** radio button.

- 2.8. Then select the **Send** button.
- 2.9. As needed **Save Parameters** to have your settings remain persistent through restarts and power cycles.

This completes the steps necessary for setting and removing telemetry destinations.

3. Changing Network Interface Metric for SLA-Panel+

To use your wireless adapter for general Internet and network access and use your local LAN (hard wired interface) connection to an SLA board, you will need to optionally change the network interface metric. This will allow the SLA-Panel+ application to communicate on local LAN adapter.

- 3.1. Go to the Network Sharing Center in Windows
- 3.2. Select 'Change Adapter Settings'
- 3.3. Right-Click on the local area network adapter
- 3.4. Click on TCP/IPv4 settings, select properties
- 3.5. Click on Advanced tab
- 3.6. Disable Automatic metric check box
- 3.7. Set interface metric to 1 - this is a cost metric, so a low number means use this adapter.
- 3.8. Select wireless adapter, repeat process - set metric to something higher 999.

Note: You must disable and re-enable adapters (or reboot machine) for this to take effect.

Appendix - Serial Connection & Troubleshooting

If you are having issues connecting over a standard network connection to the SLA-1500 or SLA-3000 board, try to establish communication using a serial com port. Most network connection issues are related to either cabling or assigned IP addresses not matching properly. The SLA-Panel+ software will automatically recognize serial ports and list these in the dropdown for available connections.

Note: Please note that if you are connecting to the serial port on the SLA-1500 or SLA-3000 boards from a host PC, this connection requires a null modem serial cable or adapter for proper communications.

A1	Connecting to the 9-pin serial port provided on the accessory board or via the power plug connector.	Serial 0 is the serial port that is accessible through the power connector or via the accessory or main interface board. Connect a null modem serial cabal using the 9-pin. As needed, the pinout for this cable can be found in the interface control document our website: ICD-SLA-1500-OEM.pdf or ICD-SLA-3000-OEM.pdf
A2	Launch the SLA-Panel+ software.	Using the Start Menu select 'All Programs/SightLine Applications' program group. Then select the 'SLA Panel Plus' program.
A3	Using the dropdown, select the COM port listed.	The SLA-Panel+ application will list available serial communication ports in the dropdown. Select the available serial com port and then press the 'Connect to Board' button.

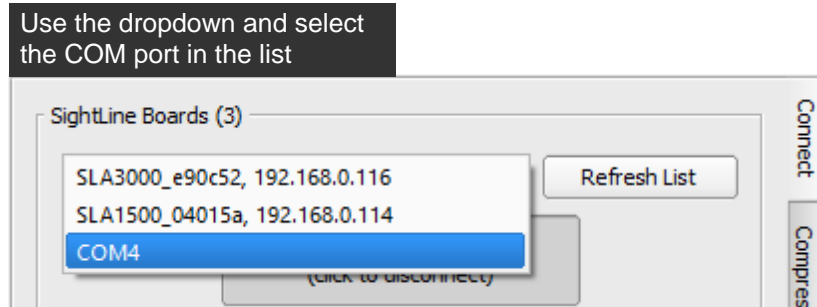


Figure 4: Select the COM port

A4	Checking connection status	Once the serial connection is successful, the status bar will display board information.
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[Board: SLA1500_0b015a, 192.168.0.118 Firmware Ver: 2.21.10 \[05\], temp:210°F This PC: 192.168.0.105](#)

SLA Board ID – Assigned IP – Firmware Version Loaded – Temperature – HOST IP Address

Figure 5: Check the status bar to confirm connection.

A5	Checking Network configuration	Use the main menu to check the network configuration to see if the board is obtaining an IP address from an available DHCP address or is assigned an unknown static IP address. Select Configure -> Network Settings...
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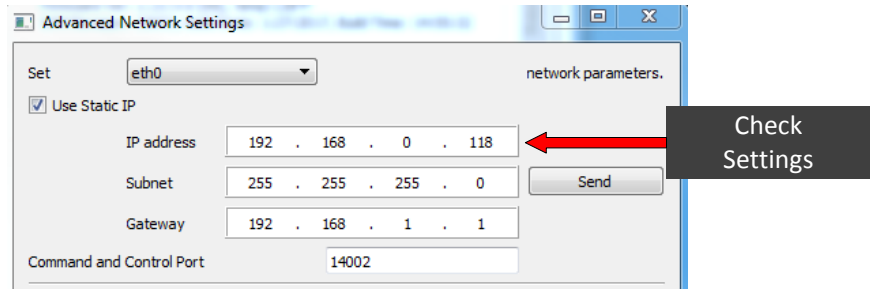


Figure 6: Confirm IP address settings are correct for your network.

A6	Assign or uncheck the Use Static IP checkbox	As needed, be sure to assign an IP address that is either part of your own subnet or review your DHCP servers assignments (or default assignments).
This concludes these steps for connecting serially to a SLA board. If you are still experiencing problems connecting, please contact Technical Support .		

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Contacts

SightLine Applications, Inc.
1101 12th Street
Hood River, OR 97031

SightLine Applications, Inc.
524 N Tillamook Street Suite 101
Portland, OR 97227

Sales sales@sightlineapplications.com
General info@sightlineapplications.com
Website www.sightlineapplications.com