Houston Radar SDLC

Quick Start Guide

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Purpose

The purpose of this document is to provide a simple set of instructions that describe the process to configure an SDLC module for use with the PX150, connect it to a PX150, and configure the PX150 using Houston Radar Stats Analyzer.

Revision History

1. Version 1.0, June 9, 2026 – Initial Release

Customer-Specific Radar and SDLC Module Settings

When applicable, the factory default configurations are replaced with the customer-specific settings shown below. If no customer-specific settings are listed, refer to the Factory Default Radar and SDLC Module Settings.

- PX150 Settings:
  - IP Address: 192.168.1.100
  - Subnet Mask: 255.255.255.0
  - SDLC Module IP Address: 192.168.1.101
  - SDLC Mode: TS2
- SDLC Module Settings:
  - IP Address: 192.168.1.101
  - Subnet Mask: 255.255.255.0
  - SDLC Mode: TS2

Factory Default Radar and SDLC Module Settings

These are the standard factory default configurations. Use these values only when no customer-specific settings are listed.

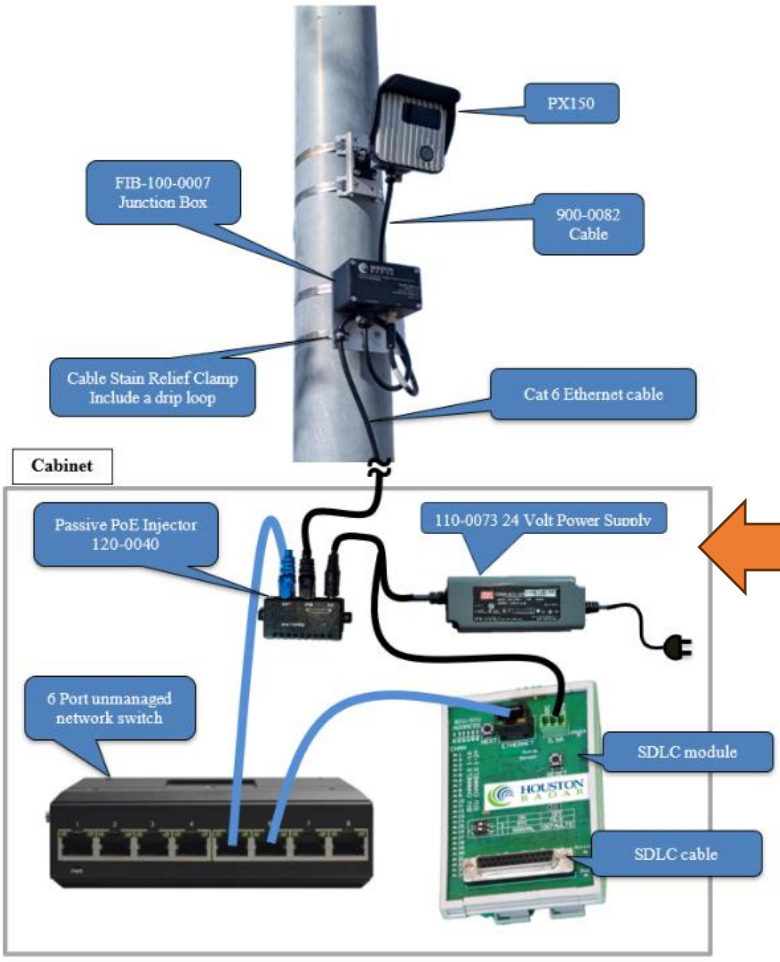
- PX150 Settings:
  - IP Address: DHCP
  - Subnet Mask: N/A
  - SDLC Module IP Address: Not set
  - SDLC Mode: Not set
- SDLC Module Settings:
  - IP Address: 192.168.11.3
  - Subnet Mask: 255.255.255.0
  - SDLC Mode: TS2

Requirements

- Stats Analyzer Version 10.16.0002 or later
- PX150 Firmware 1.1.78 or later

Steps

1. Connecting the Radar and SDLC

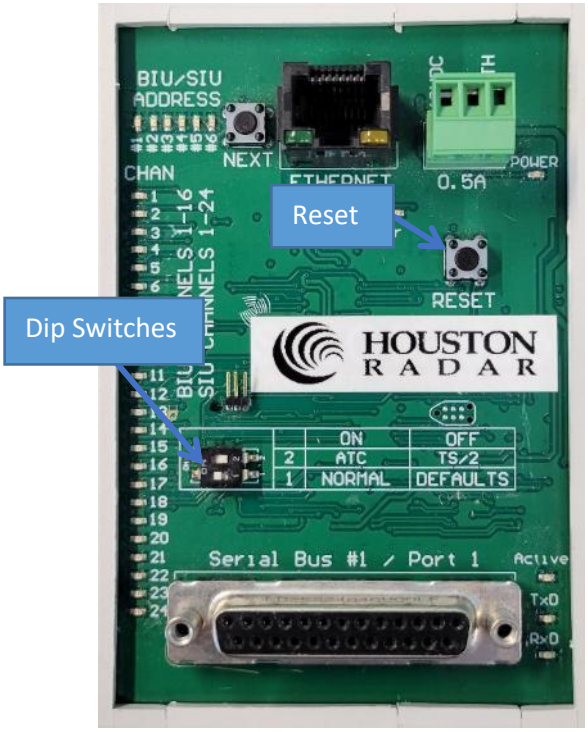


Available as DIN-200-000x assembly.

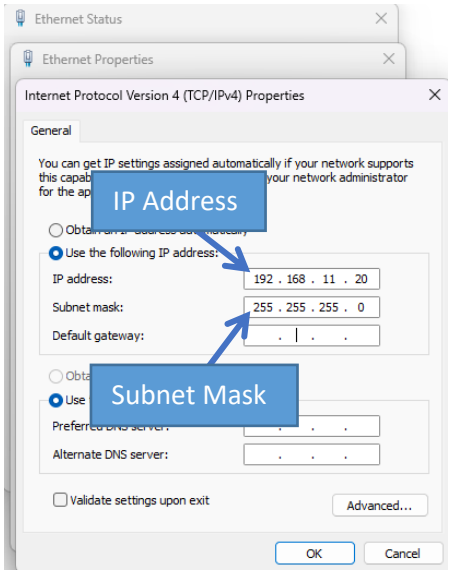
2. Set the IP Address and Mode on the SDLC module

If the SDLC module has not been pre-configured for your desired IP address and subnet by Houston Radar, you will need to set it using the module's web interface. **If your SDLC module came pre-configured, skip this step and continue to Step 3 (Set the BIU Addresses on the SDLC Module).**

I. Remove the plastic cover from the module by gently prying on one end.
II. Make sure the module has power and a network connection.
III. Set dip switch 2 to "ATC" or "TS/2" mode.
IV. Set dip switch 1 to the "Defaults" setting.
V. Hold the Reset button for at least 2 seconds, or power cycle the module.
VI. Set dip switch 1 back to the "Normal" setting.
VII. Re-install the plastic cover by pressing down firmly on each end.

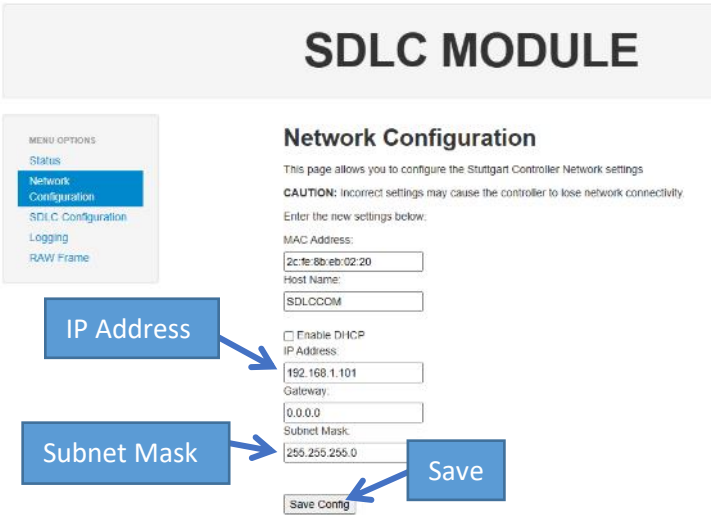


VIII. Set the network interface on your computer to the same as the SDLC module. The default IP Address for the SDLC module is 192.168.11.3/24. In Windows, this is under Network Connections -> [Your Adapter] -> Properties -> Internet Protocol Version 4 (TCP/IPv4).



IX. In your browser, navigate to http://192.168.11.3/netconf.htm.

X. Set the correct IP Address and Subnet Mask for your network and click “Save Config”.



XI. Restore your computer’s original network configuration.

3. Set the BIU Addresses on the SDLC Module

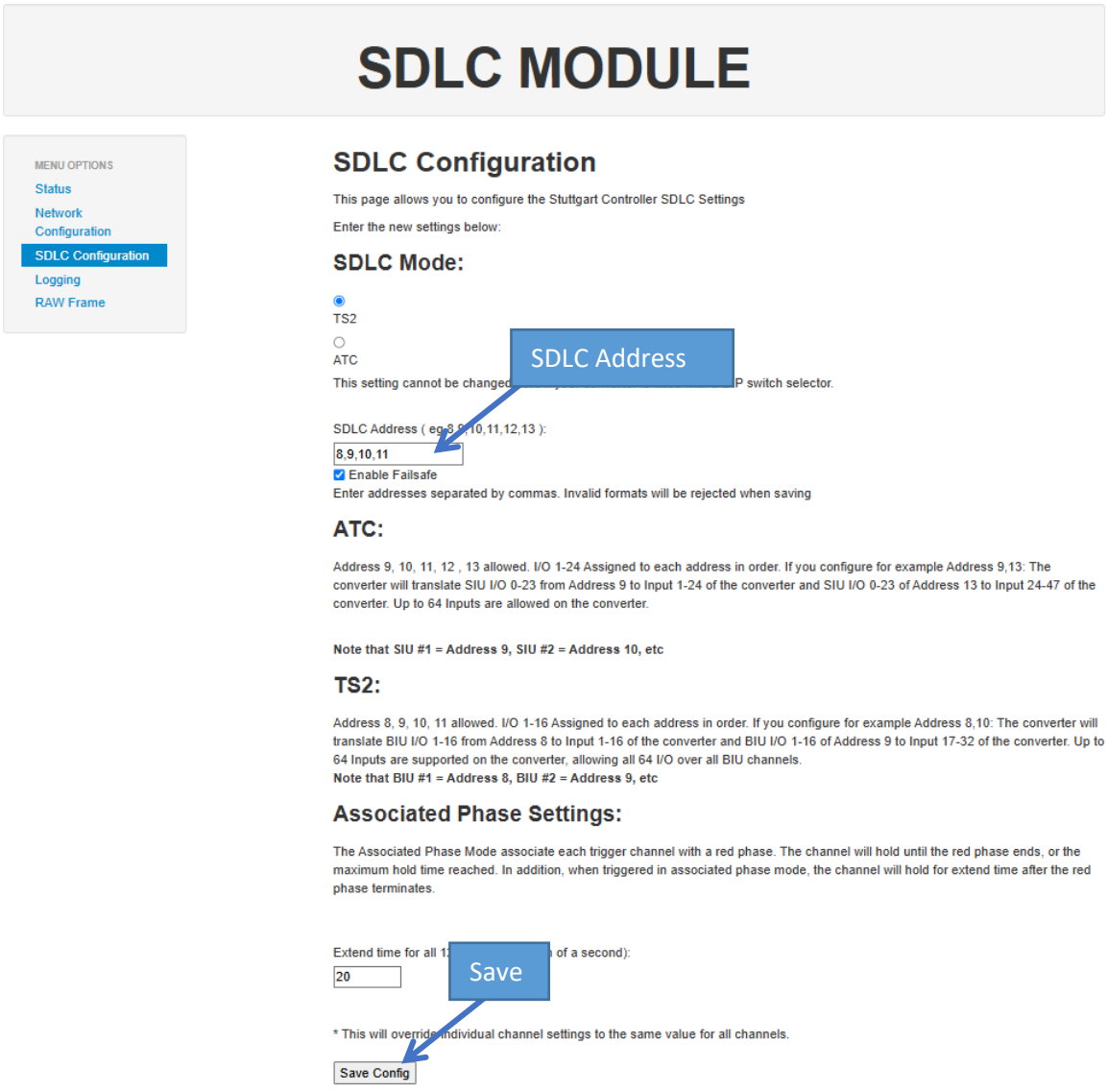
I. In your browser, navigate to http://192.168.1.101/sdlc.htm (Use your configured SDLC module IP Address). You will need to ensure your computer is on the same subnet as the SDLC module.

II. In the SDLC Address box, provide a comma separated list of the BIUs/SIUs you wish to use. Omitting addresses here will prevent the module from responding to poll requests from the controller. The module will answer poll requests for any address listed here, even if all associated BIU/SIU channels are disabled. Valid values are 8, 9, 10, and 11 for TS2 mode, and 9, 10, 11, 12, and 13 for ATC mode.

   a. In NEMA TS2 mode, SDLC Addresses 8, 9, 10, and 11 are associated with Detector BIUs 1, 2, 3, and 4 respectively.

   b. In ATC mode, SDLC Addresses 9, 10, 11, 12, and 13 are associated with Detector SIUs 1, 2, 3, 4, and 5 respectively.

III. Click "Save Config" to save changes.



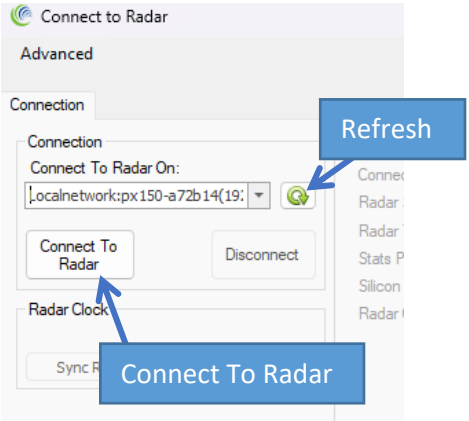
4. Set the IP Address on the PX150

If the PX150 has not been pre-configured for your desired IP address and subnet by Houston Radar, you will need to set it using the StatsAnalyzer software. **If your radar networking settings came pre-configured, skip this step and continue to Step 5 (Setup the PX150 for SDLC).**

I. Open Stats Analyzer and click “Connect To Radar”.

II. The radar should appear as an option on the local network once connected. Click the refresh button as needed. Once you have located the radar, select it and click “Connect To Radar”.

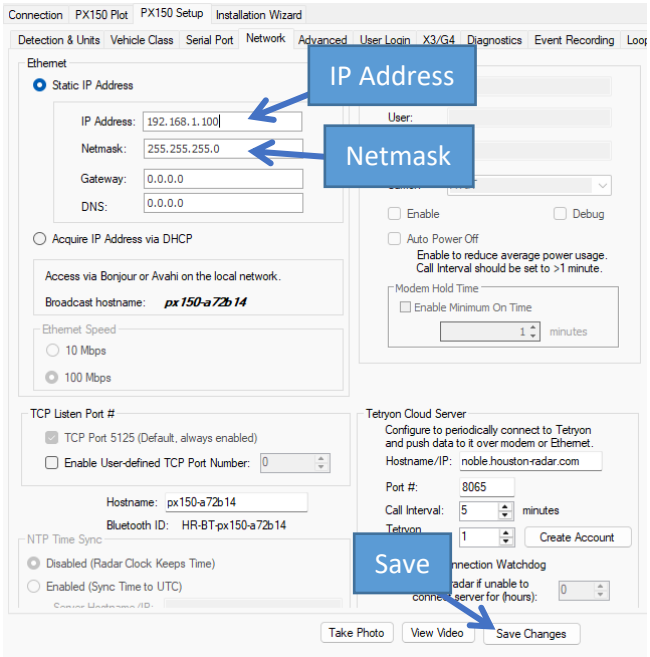
   a. Alternatively, you can connect directly to the PX150 with an ethernet cable to configure it. In this configuration, AutoIP will be used to assign an IP address to the radar.



III. Go to the “PX150 Setup” tab, then the “Network” tab within that section.

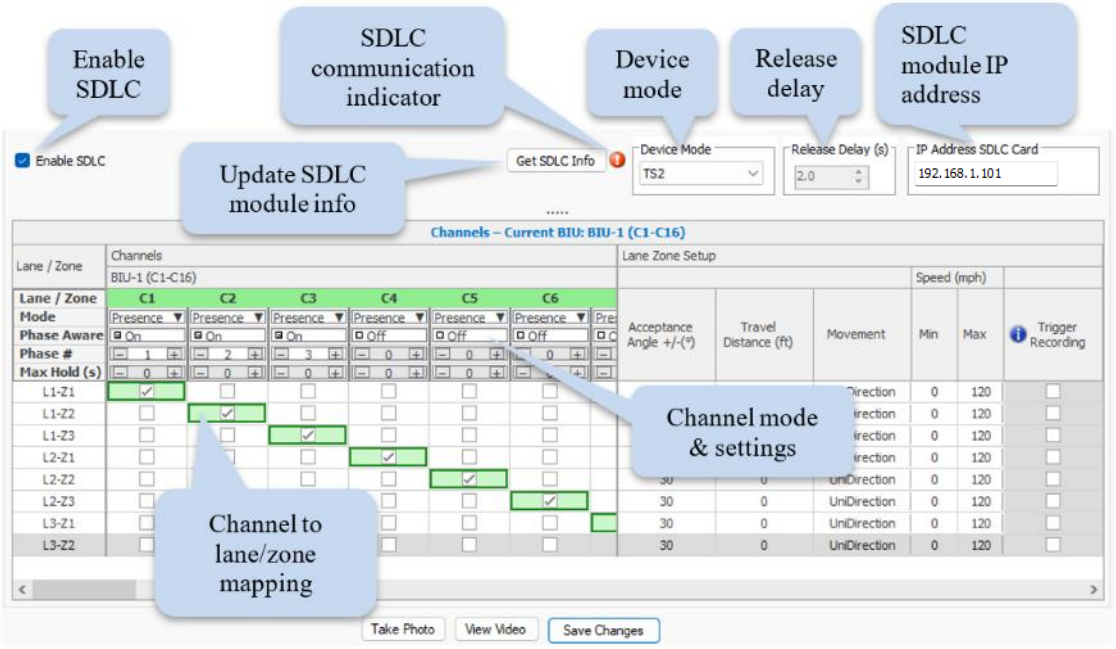
IV. Click “Static IP Address” and assign the desired “IP Address” and “Netmask”.

V. Click “Save Changes”. Reboot when prompted.



5. Setup the PX150 for SDLC

I. Connect to the radar using StatsAnalyzer. You will need to ensure your computer is on the same subnet as the radar.
II. Complete lane and zone configuration. Zones must be defined before SDLC channels can be mapped to them.
III. Open the **SDLC** tab.
IV. Enable SDLC output.
V. Enter the IP address of the SDLC interface module.
VI. Select the device mode, **TS2** or **ATC**.
VII. Save changes.
VIII. Retrieve module information to confirm communications, by clicking the "Get SDLC Info" button. Ensure there are no communication errors.
IX. Map lane/zone calls to controller channels.
    a. Use the horizontal scroll bar to access additional channels. The BIU/SIU number for each group of channels is shown in the header immediately above the channel numbers.
X. If required for your installation, enable Phase Awareness, set Max Hold Times and Release Delay. Max Hold Times and Release Delay will not be available if there are SDLC module communication problems. See Interface Module Settings below for descriptions of each option.
XI. Save changes.



TS2 and ATC addressing

In TS2 environments, controller calls are typically organized by **Detector BIU group and channel number**. In ATC environments, calls are typically organized by **Detector SIU group** and a larger detector-channel space.

The SDLC module supports 64 BIU detector channels (16 per BIU) and 120 ATC detector channels (24 per SIU). Document the address plan before commissioning. Incorrect addressing is one of the most common causes of "good radar, no controller call" problems in SDLC setups.

Interface Module Settings

Some SDLC applications require more than simple on/off detector calls. The required settings can be configured with Stats Analyzer.

The module supports advanced behaviors such as:

Phase Aware

When a channel is made phase aware, hold time and release delay settings are applied to channel activations and deactivations depending on the state of the configured phase.

Maximum Hold

For phase aware channels, the device will automatically hold a call indefinitely while that phase is RED (waiting to be served). Max Hold is the safety cap — it forces the call to clear after N seconds even if the phase was never served. This prevents a stuck detection from permanently locking up a phase. This option can be configured for each individual phase aware channel.

Release Delay

After the phase turns GREEN (the call is served), the SDLC module holds the call for this additional duration before releasing it. This option is universal for all phase aware channels.

6. SDLC Verification

Configuration Verification

- Confirm the PX150 can reach the SDLC module by IP. Do this by ensuring there are no SDLC Communication Errors.
- Verify that the module reports the correct operating mode.
- Verify that the configured BIU/SIU address set matches the cabinet.
- Apply a known vehicle detection and confirm the expected controller channel changes state.
- Verify any hold, release-delay, or phase-aware behavior using live controller status.

Best Practices for Either Integration Method

- Start with a small number of channels and verify them before completing the full mapping.
- Keep a written channel-assignment table in the cabinet.
- Use descriptive lane and zone names in PX150 so the mapping is easy to audit later.
- For stop-bar and queue applications, begin with presence-style behavior unless the agency specifically requires pulse-style actuation.
- Verify controller behavior in the cabinet, not only in the radar software.
- If the controller integration depends on serial buses or networked modules, verify fault behavior and recovery after power cycling.
- Keep the loop-card or SDLC quick start guide with the cabinet documentation for future maintenance.

Questions? Call us at 1-888-602-3111 and select “Tech Support” option or email us at contact@houston-radar.com.