MicroStrain®

User Guide

Using Node Commander® with the WSDA®-ETH

Overview

In Aggregate Data (default) mode, the WSDA® Wireless Sensor Data Aggregator will receive data from wireless sensor nodes, store the data in memory, and forward the data on to SensorCloud™. The WSDA® has an alternate mode (Live Connect) whereby it functions as a transceiver and allows Node Commander® software to communicate with the nodes. Live Connect mode is particular useful for configuring each node's operation prior to operating in Aggregate Data mode. This User Guide provides a step-by-step to Aggregate Data and Live Connect mode.

Live Connect mode

- We will assume that your WSDA® is operational after having followed the WSDA®-ETH Quick Start Guide.
- Launch the Live Connect software (Start > All Programs >MicroStrain > Live Connect).
- The Live Connect window will appear, automatically scan for WSDA®, and in a moment display your WSDA® IP address and serial number as shown in Figure 1.
- Click the WSDA® to highlight it.
- Click the View button.
- Your web browser window will spawn with the WSDA® Login window as shown in Figure 2.
- Enter your WSDA® Control Panel login credentials. The factory default credentials are:
  - Login: wsda
  - Password: wsda
- Click the Authenticate button.
- The WSDA® Control Panel will appear as shown in Figure 3.

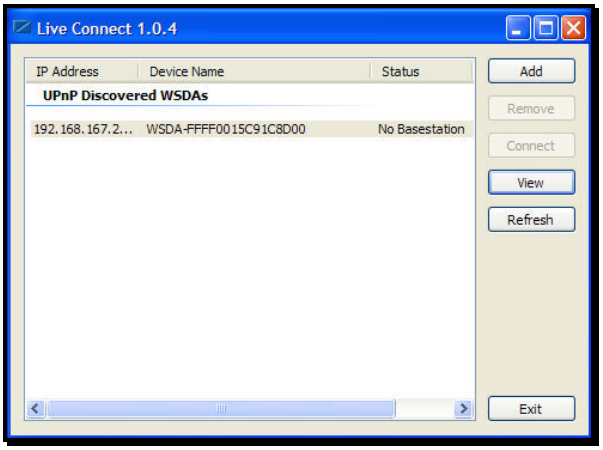

Figure 1. Live Connect window

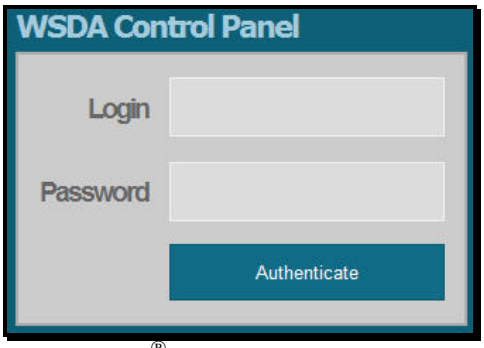

Figure 2. WSDA® Control Panel Login window

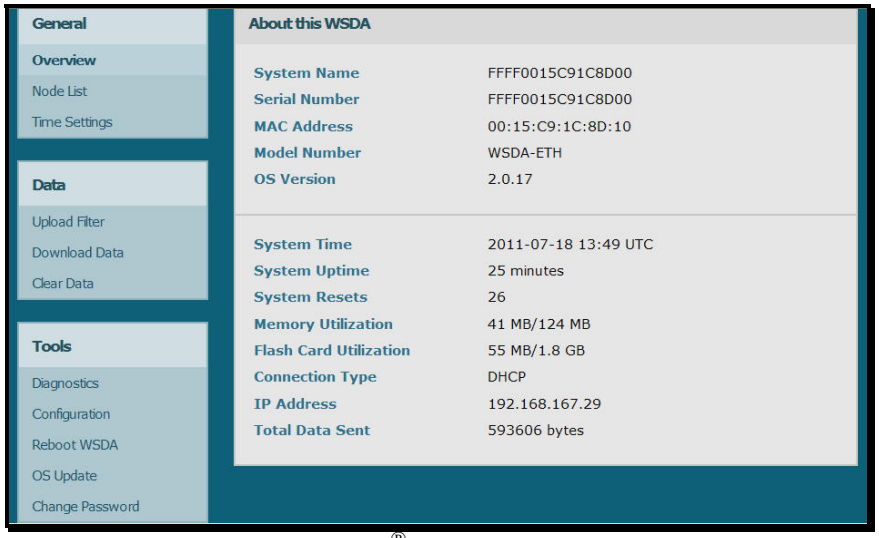

Figure 3. WSDA® Control Panel window

- Click Configuration in the Tools menu.
- The Configuration window will appear.
- Click the Live Connect radio button in the WSDA® Mode panel as shown in Figure 4.
- Click the Update WSDA® Mode button, the window will refresh and the mode will be changed.
- Return to the Live Connect program.
- Highlight your WSDA® and the Connect button will enable.
- Click Connect. In a moment the Status will change from Disconnected to Connected and a COM port will be assigned.

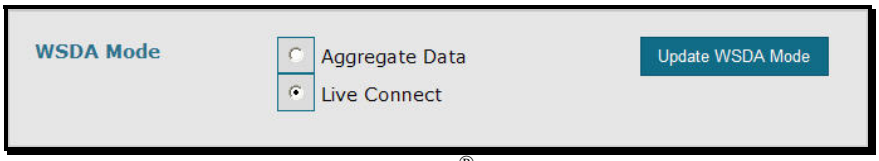

Figure 4. WSDA® Mode panel

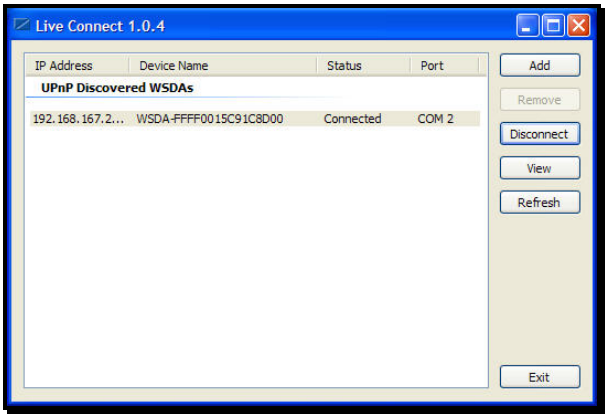

Figure 5. Live Connect window

- The example in Figure 5 shows a WSDA® connected on COM 2.
- Launch the Node Commander® software and the Main screen will appear.
- The WSDA® will now be found and reported in the Controller frame as Base Station Com X. Figure 6 shows an example Com 2.
- Node Commander® can now be used to configure the wireless nodes for operation, perform calibration using the wizards, set the sampling mode, update firmware, and so forth. Please refer to our Node Commander® Users Guide for a full step-by-step explanation of its use.
- For those users familiar with MicroStrain's previous base stations, the WSDA® is now operating as if it was a base station.
- When the WSDA® is set to Aggregate Data mode, it will receive, store and forward the data arriving from the wireless sensor nodes (V-Link®-mXRS™, SG-Link®-mXRS™, G-Link®-mXRS™, etc.). This is one-way traffic; the nodes transmit and the WSDA® receives. Specifically WSDA® will receive:
    - Legacy Low Duty Cycle (LDC) data
    - Legacy TC-Link® data
    - –mXRS™ Continuous and Burst Synchronized Sampling data
- Be sure to set your wireless nodes to one of these specific sampling methods.

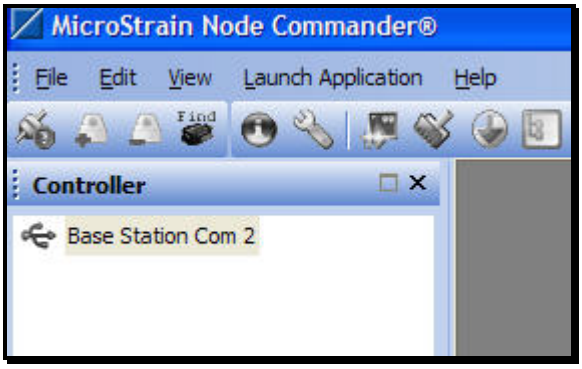

Figure 6. Node Commander Controller frame

Aggregate Data mode

- After having configured the nodes for sampling, close Node Commander®.
- Return to Live Connect.
- Highlight your WSDA®, click Disconnect, and in a moment, the WSDA® will be disconnected.
- Again highlight your WSDA®, click View, login, and the WSDA® Control Panel will appear.
- Click Configuration in the Tools menu.
- The Configuration window will appear.
- Click the Aggregate Data radio button in the WSDA® Mode panel.
- Click the Update WSDA® Mode button, the window will refresh and the mode will be changed.
- Click Logout and close your WSDA® Control Panel browser window.
- Return to Live Connect and click Exit to close the program.
- Your WSDA® is now returned to its default mode and will begin actively collecting data from your wireless nodes. This data will be stored in on-board memory and will be forwarded when connection is made to the SensorCloud™.

A Note on Network Delays

Some network architectures introduce communication delays. For example, if a cell modem is being used to provide the Ethernet connection to the WSDA® for Internet connectivity, slight communication delays can be introduced. Node Commander® has a setting that allows it to extend its 'timeouts' which can be helpful in improving the communication in such cases.

- In Node Commander®, click Edit.
- Click Preferences and the Preferences window will open.
- Click Devices.
- Check the Use Extended Timeouts checkbox.
- Click OK and the Preferences window will disappear.

Support

MicroStrain Support Engineers are always available to help you in any way we can by phone, email, SKYPE or on-line chat.

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