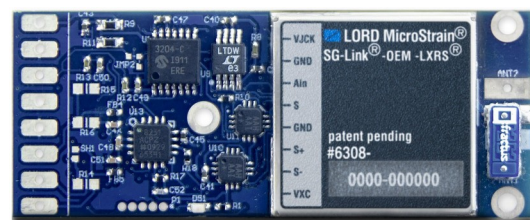
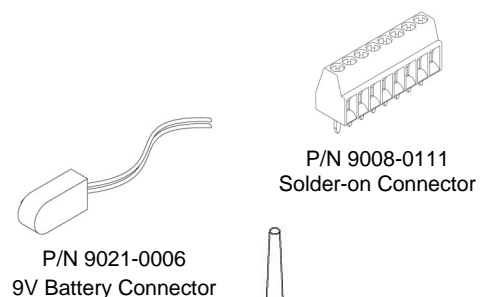


# Quick Start Guide **SG-Link®-OEM-LXRS®** Wireless OEM Analog Input Sensor Node - Extended Range



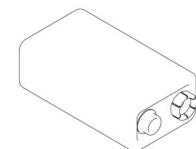
P/N 6308-4000  
SG-Link-OEM-LXRS



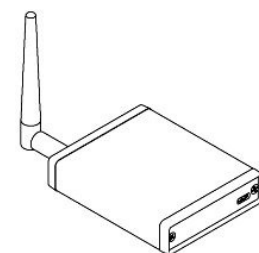
P/N 9008-0111  
Solder-on Connector



P/N 8200-0013  
CD, Node Commander Software



P/N 9021-0004  
9V Battery




P/N 6307-1040  
WSDA-BASE-104

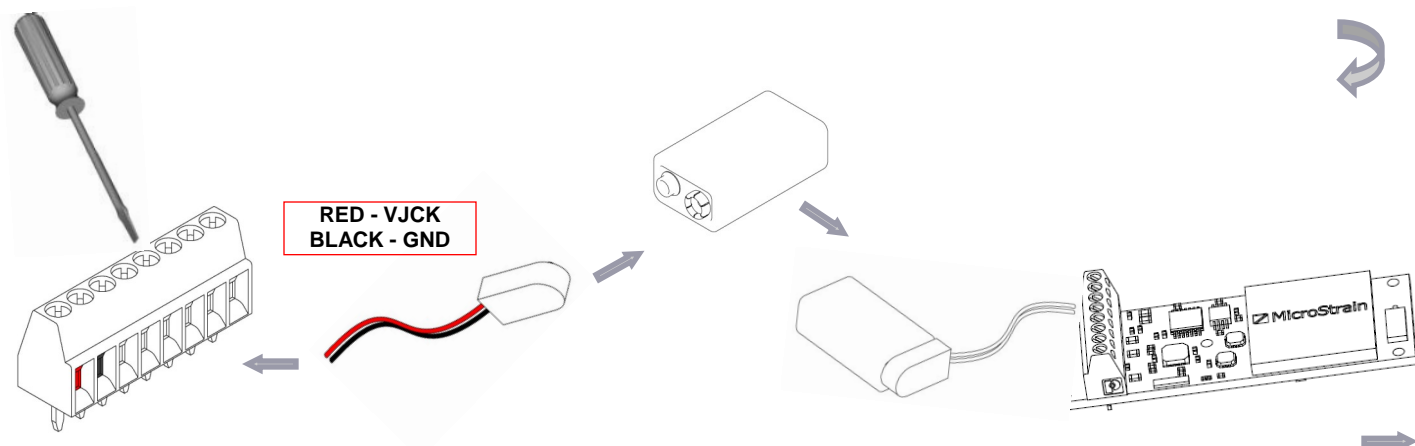


P/N 9022-0029  
USB Cable

## Final Assembly



The diagram illustrates the final assembly step. A MicroStrain module is shown being inserted into a terminal block. An inset shows a close-up of a wire being inserted into the terminal block.



RED - VJCK  
BLACK - GND

|   |      |  |
|---|------|--|
| 1 | VJCK | Input power positive (3.1-12.0 volts DC).  |
| 2 | GND  | Input power ground (common with pin 5).  |
| 3 | Ain  | Analog 0-3.0 volt input.   |
|   | S    | Input for three wire mode on quarter bridge strain gauges. Leave unconnected for full and half bridge strain gauge applications. |
| 4 |      |  |
| 5 | GND  | Signal ground (common with pin 2).   |
| 6 | S+   | Positive input to the differential amplifier.  |
| 7 | S-   | Negative input to the differential amplifier.  |
| 8 | VXC  | 3.0 volt sensor excitation.  |

Internal Circuitry

VXC Sensor Power  $RL^*$

S- Sensor-  $RL^*$

GND Sensor Ground  $RL^*$

S+ Sensor+  $RL^*$

Shield (Drain)

$R_g$  (Active)

VXC

S-

S+

Ground

$R_g$  (Active)

$R_g$  (Active)

$R_g$  (Active)

\* $RL$ =Lead Resistance

\*RL=Lead Resistance

SG-Link-OEM-LXRS comes pre-configured from the factory with full-bridge completion. Half and quarter bridge completions are available options at time of purchase.

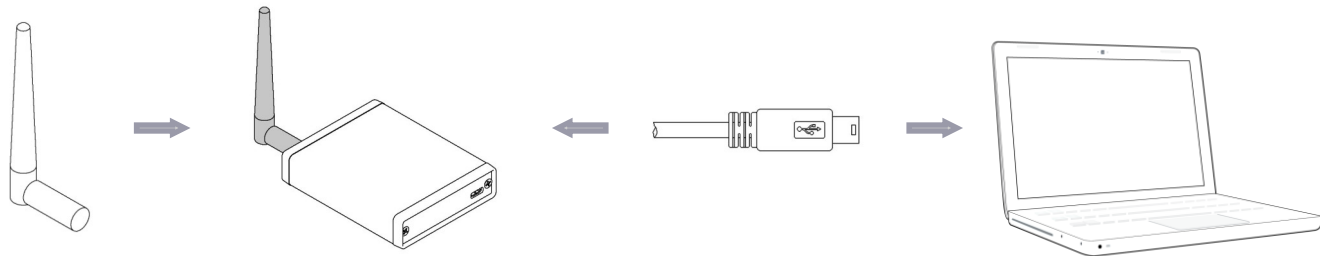
The diagram illustrates the internal circuitry of a sensor module. It features a Wheatstone bridge with four resistors, each labeled  $R_g$ . The bridge is powered by a "Sensor Power" source at the top and connected to ground ("GND") at the bottom. The bridge outputs are labeled  $S+$ ,  $S-$ , and  $S$ . A "Shield (Drain)" connection is shown on the right, with four lines passing through a dashed oval representing the shield. These lines are labeled "Sensor Sense", "Sensor -", "Sensor Ground", and "Sensor Sense". Each line has a lead resistance  $RL^*$  and is connected to a variable resistor  $R_g$  (Active). A note at the bottom right states:  $*RL = \text{Lead Resistance}$ .

\*RL=Lead Resistance

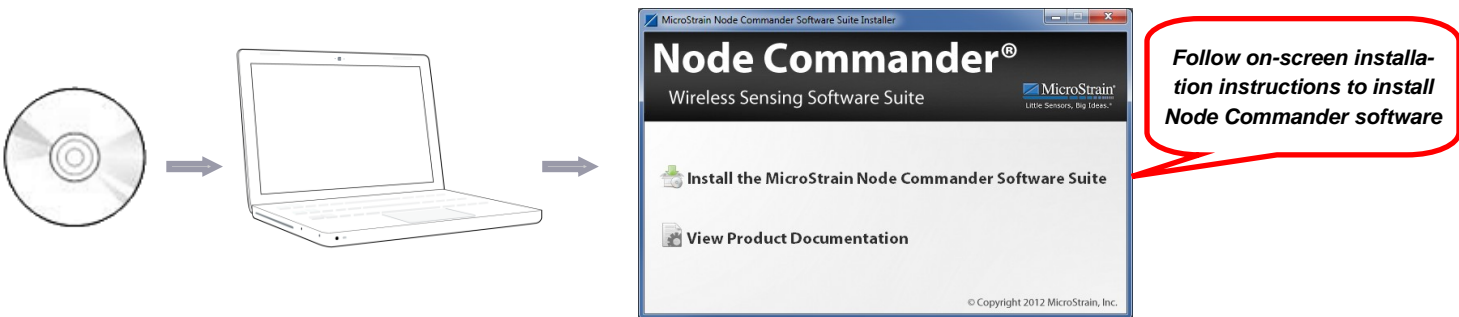
\*RL=Lead Resistance

2c ASSEMBLE AND CONNECT

BASE UNIT ASSEMBLY

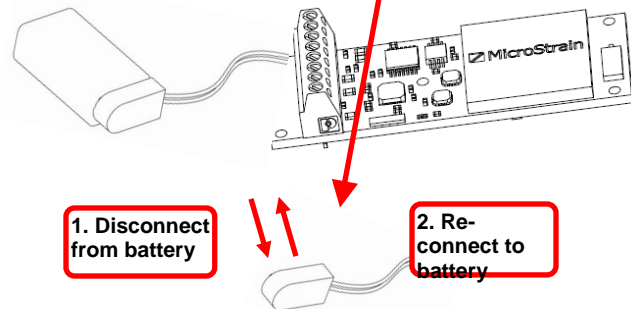
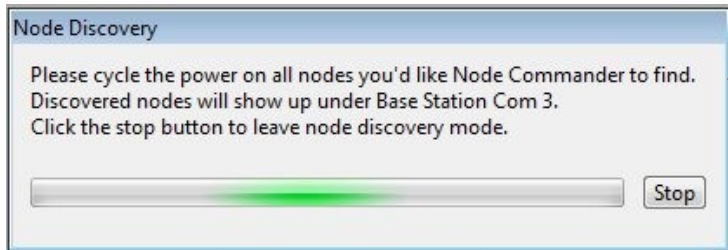
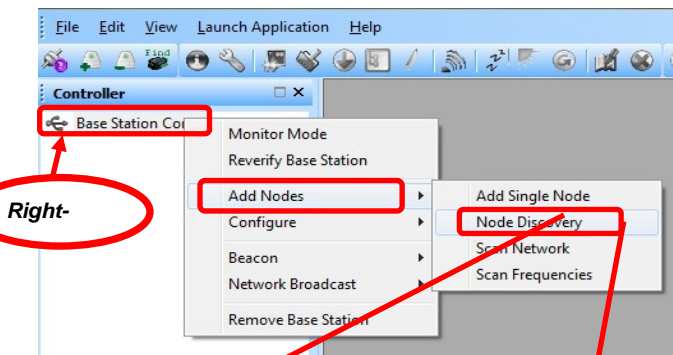


3a INSTALL AND CONFIGURE

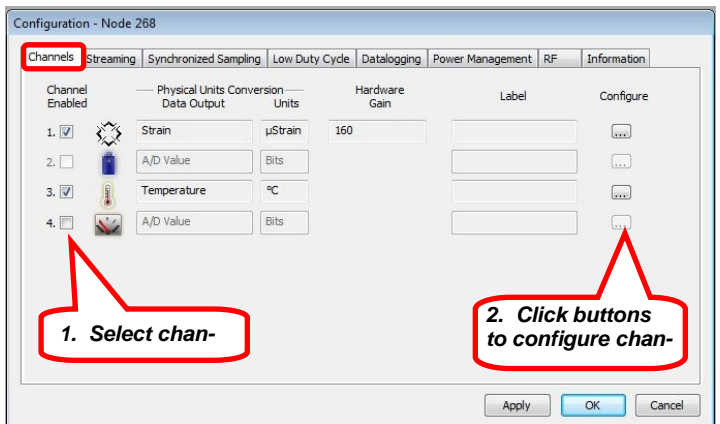
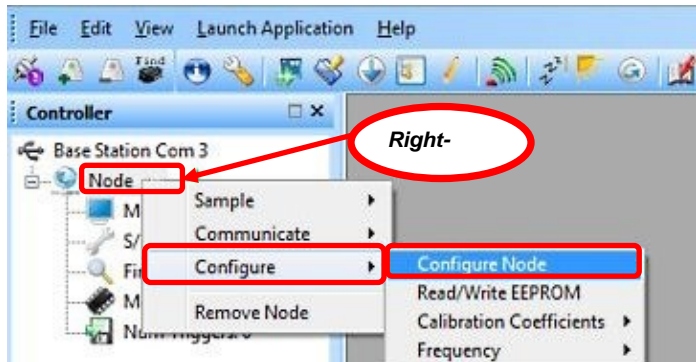
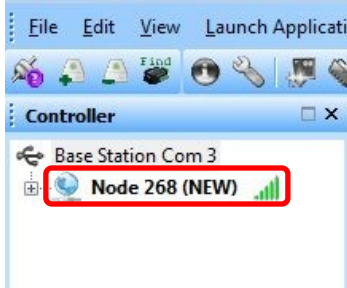


Double-click Node Commander icon on the Desktop

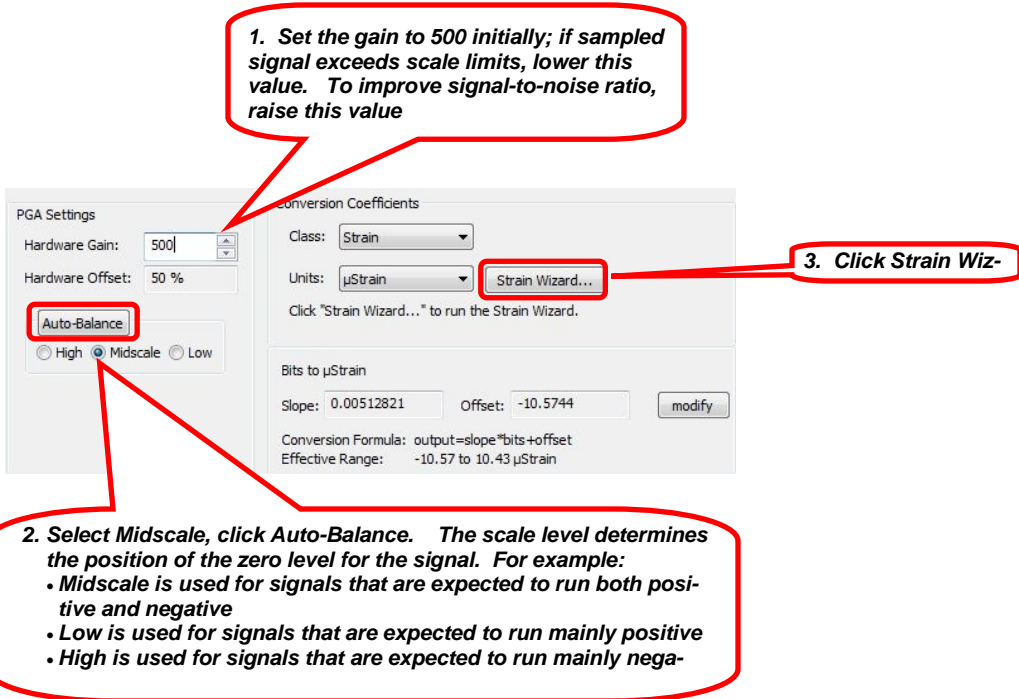
Node Commander



3b INSTALL AND CONFIGURE

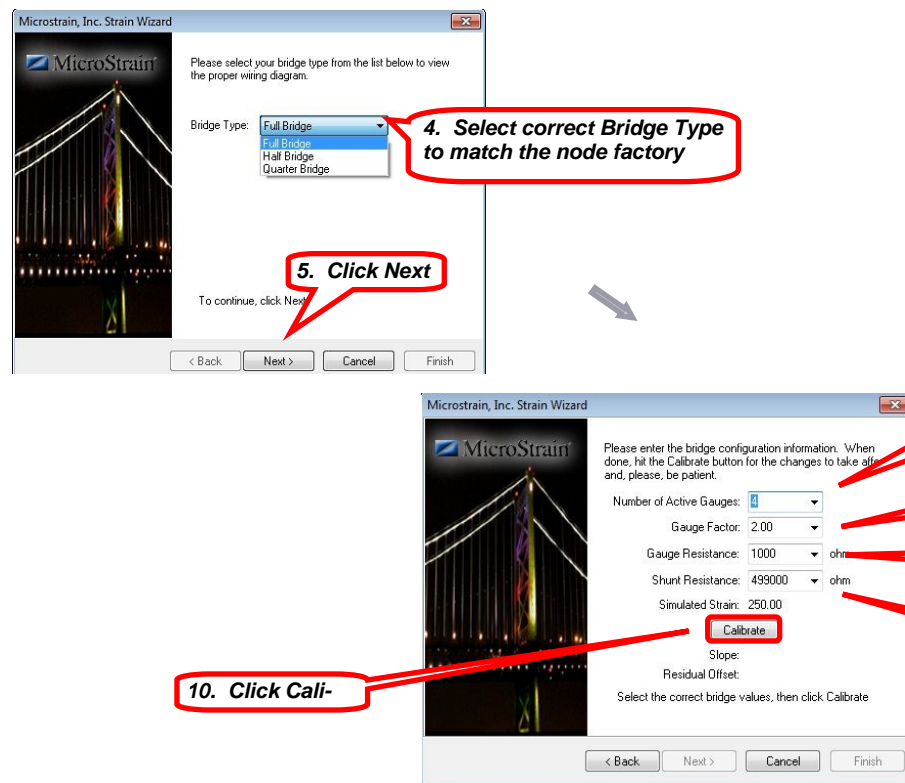


STRAIN SETTINGS





### 3c INSTALL AND CONFIGURE



Microstrain, Inc. Strain Wizard

Please select your bridge type from the list below to view the proper wiring diagram.

Bridge Type: **Full Bridge**

4. Select correct Bridge Type to match the node factory

5. Click Next

To continue, click Next

6. Select the number of active gauges:  
• 4=Full Bridge  
• 2=Half Bridge

7. Enter strain gauge factor from strain gauge certificate

8. Set the gauge resistance to match the node

9. Set shunt resistance to 499000  $\Omega$

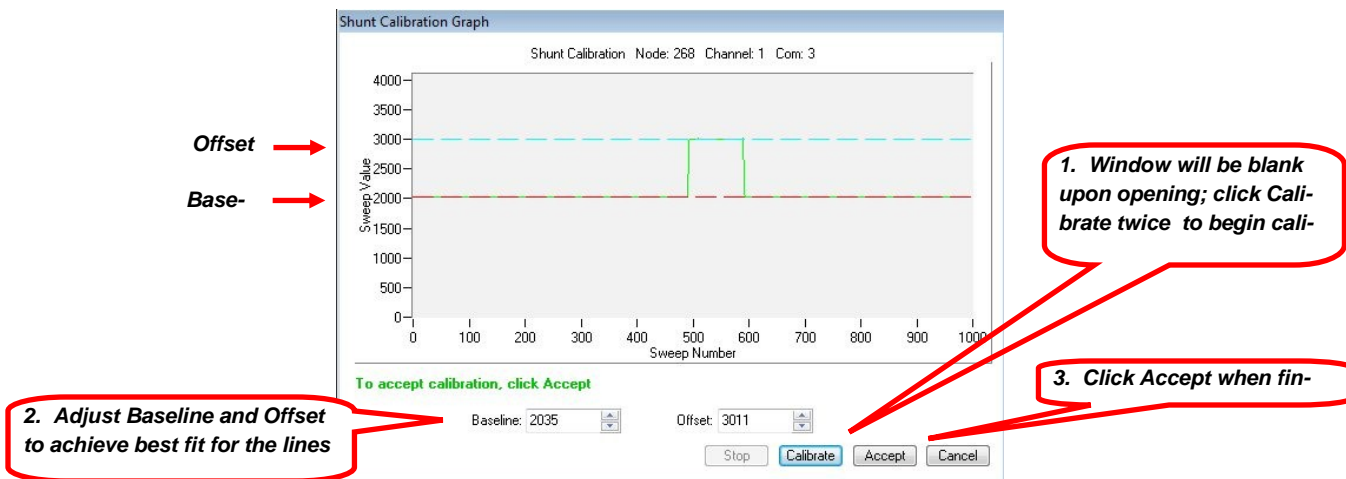
10. Click Calibrate

Calibrate

Number of Active Gauges: 4  
Gauge Factor: 2.00  
Gauge Resistance: 1000 ohm  
Shunt Resistance: 499000 ohm  
Simulated Strain: 250.00

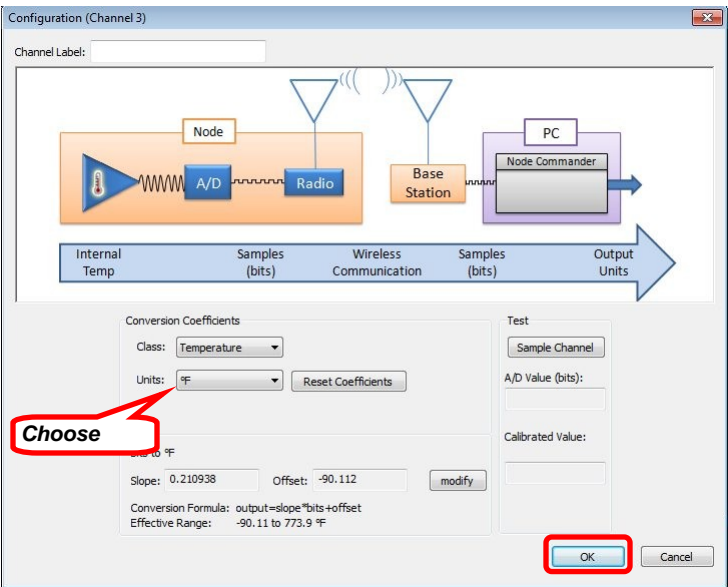
Slope: Residual Offset: Select the correct bridge values, then click Calibrate

< Back Next > Cancel Finish



### 3d INSTALL AND CONFIGURE

#### TEMPERATURE SETTINGS



Configuration (Channel 3)

Channel Label:

Node

PC

Node Commander

Base Station

Internal Temp

Samples (bits)

Wireless Communication

Samples (bits)

Output Units

Conversion Coefficients

Class: Temperature

Units: °F

Reset Coefficients

Slope: 0.210938 Offset: -90.112

Conversion Formula: output=slope\*bits+offset

Effective Range: -90.11 to 773.9 °F

Test

Sample Channel

A/D Value (bits):

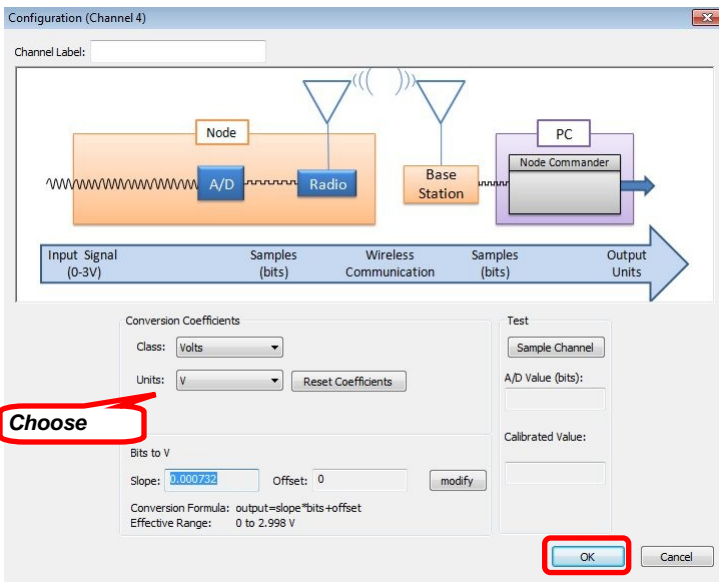
Calibrated Value:

Choose

OK Cancel

**NOTE:** Analog input 0-3V maximum

#### VOLTAGE SETTINGS



Configuration (Channel 4)

Channel Label:

Node

PC

Node Commander

Base Station

Input Signal (0-3V)

Samples (bits)

Wireless Communication

Samples (bits)

Output Units

Conversion Coefficients

Class: Volts

Units: V

Reset Coefficients

Bits to V

Slope: 0.0007232 Offset: 0

Conversion Formula: output=slope\*bits+offset

Effective Range: 0 to 2.998 V

Test

Sample Channel

A/D Value (bits):

Calibrated Value:

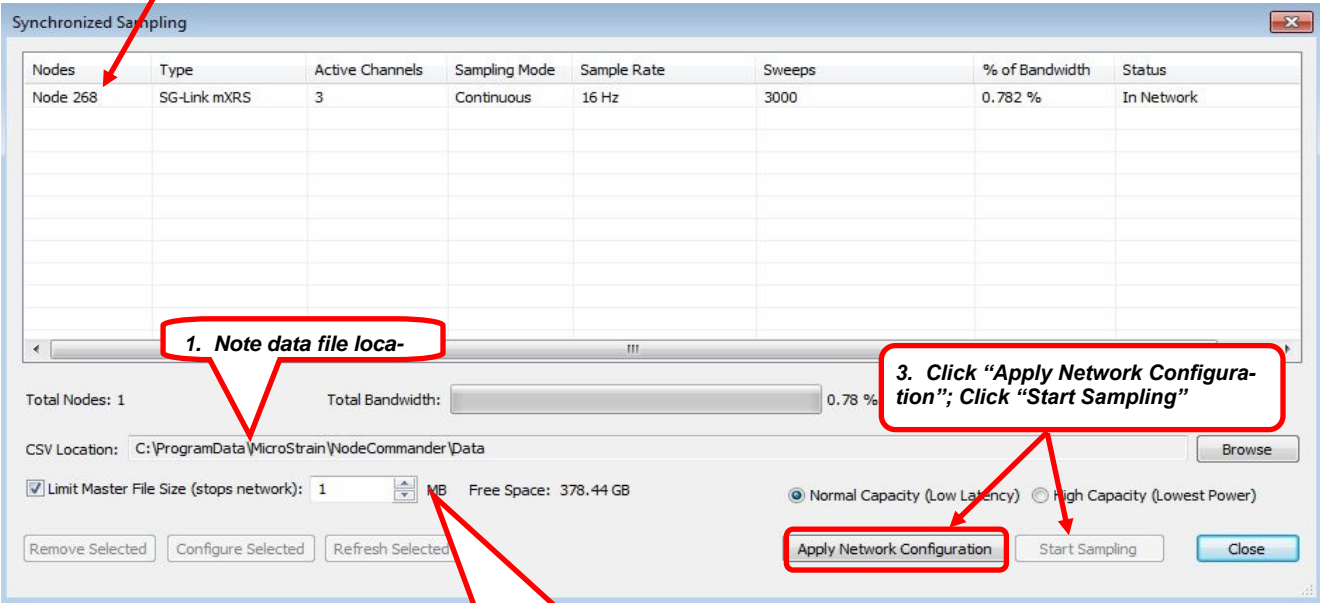
Choose

OK Cancel

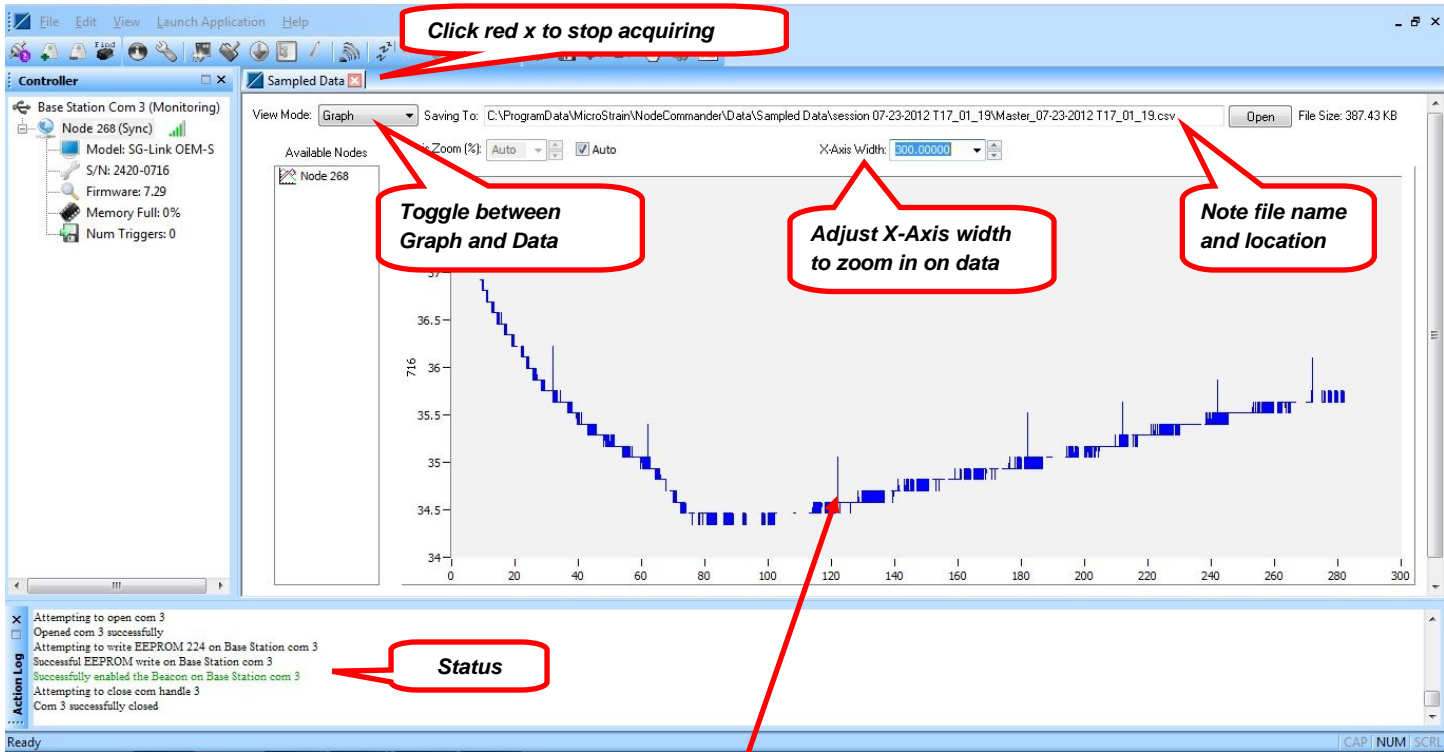
4a ACQUIRE DATA



NOTE: Select a node on the following screen and choose "Configure Selected" then the "Synchronized Sampling" tab to select sample rate and duration

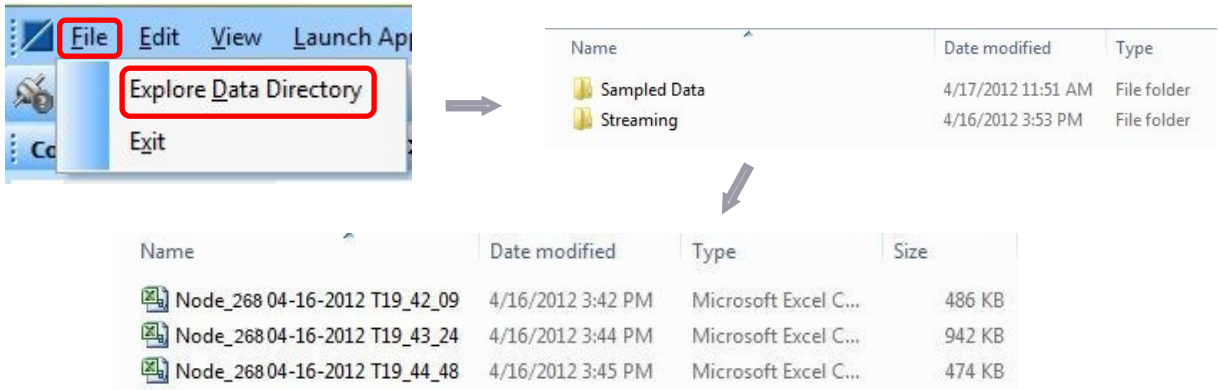


4b ACQUIRE DATA



NOTE: Adjust the Hardware Gain and Auto-Balance settings (see Page 2) if data is being clipped (railing) on either the high or low ends of the signal

5 VIEW STORED DATA



CONTACT LORD MICROSTRAIN®

SG-Link-OEM-LXRS Wireless OEM Analog input Sensor Node - Extended Range  
See <http://www.microstrain.com/wireless/sg-link-oem-lxrs> for more information.  
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