

# NGS2 Demo

## Hardware Needed:

- STW ESX-3XL Controller
- Wachendorff A3 display
- STW TUX development/test box
- STW-NGS2 sensor
- M12 connectors for NGS2 sensor
  - Peak-CAN dongle

## Software Needed:

- Codesys 3.5+
- Projektor Development Suite
- PCAN view (for testing)

## Resources

L:/engineering/documentation/internal/products/sensors/NGS2

## Requirements

1. Create a wire harness for an NGS2 sensor using the M12 connector
2. Create a demo application using a 3xl controller and Codesys 3 to read the can messages from the sensor.
  - a. **First phase:** read and scale data from can bus into human-readable values.  
Set up can message, create local variables, and mask data bytes from CAN msg into local variables.
  - b. **Second Phase:** use the 3XL's analog outputs to turn LEDs on the TUX, and the beeper as an alarm whenever any of the NGS2 values go over a threshold value that you pick for demo purposes. (i.e. threshold > 45 degrees x-axis)
  - c. **Third phase:** use the A3 display and Projektor to create a simple display application that displays the XYZ values. (use bar graphs, numeric fields, colors, STW logo, etc be creative)

This would require knowledge in the following areas:

- CAN communication.
- Codesys Interface Familiarization.
- Sending and Receiving CAN messages.
- Projektor Interface.