

# H2SMART™ Studio

## SOFTWARE USER MANUAL

Version 3



\*Optional

## Manual #: 006

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# 1. INTRODUCTION

## 1.1 Overview

The *H<sub>2</sub>Smart™ Studio* software is used to connect, monitor and modify the *H<sub>2</sub>Smart™* internal configuration. The software gives access to view the unit info, critical internal information such as sensor values, block temperature, pump flow, etc. Using the software, the user can edit the communication parameters for TCP/IP as well as for the optional communication buses.

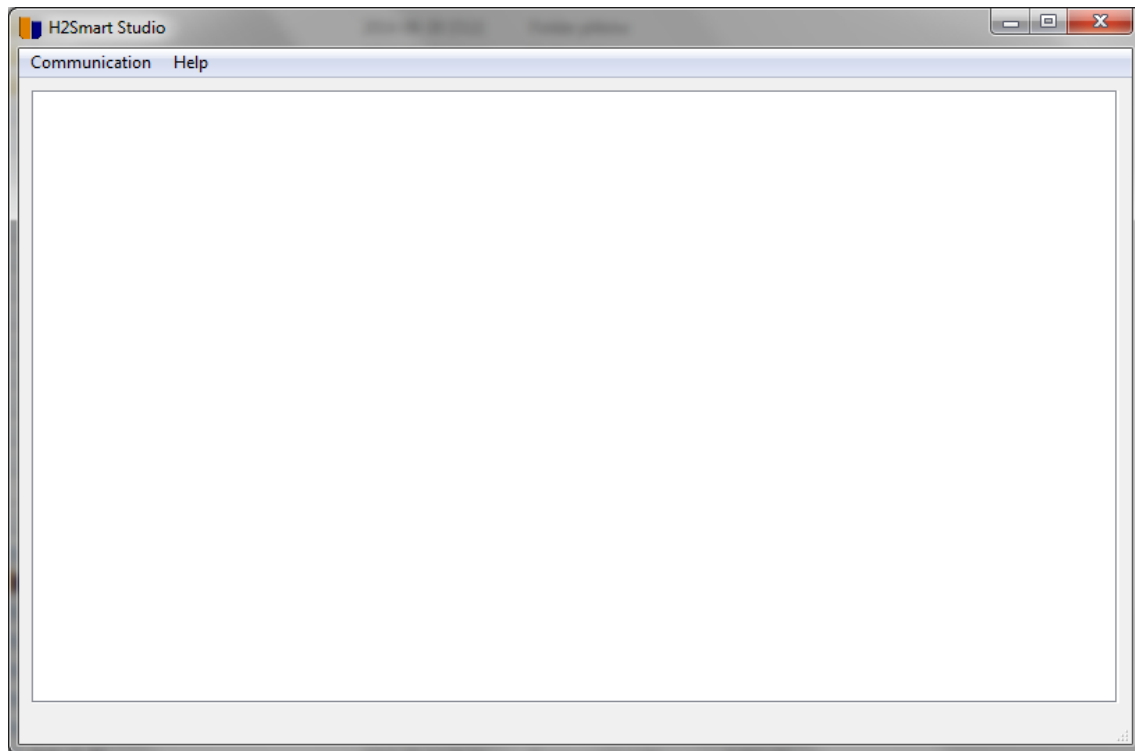
The internal furnace model used to calculate KN and KC values can be both monitored and configured. The real time flow inputs to the furnace model can be set and monitored.

If the unit configuration has been altered from the factory settings, the unit configuration can be both backed up and loaded using the software.

## 2. GETTING STARTED

### 2.1 Opening the software

The *H2Smart*<sup>™</sup> unit comes with either a CD or a USB memory stick containing the *H2Smart*<sup>™</sup> *Studio* software. Insert the media into your computer and double click the H2SmartStudio shortcut. The software will start and the window below will appear.



*Figure 1 – Startup interface*

## 2.2 Connection

To connect to the H2Smart™ unit, with the H2Smart™ Studio software you must connect the included Ethernet adaptor to the H2Smart™ unit. Connect your PC to the H2Smart™ unit using a network switch or a crossover network cable. Your PC will need to be in the same IP subnet to connect to the unit. Open the Communication menu to enter the IP address of your H2Smart™ unit.

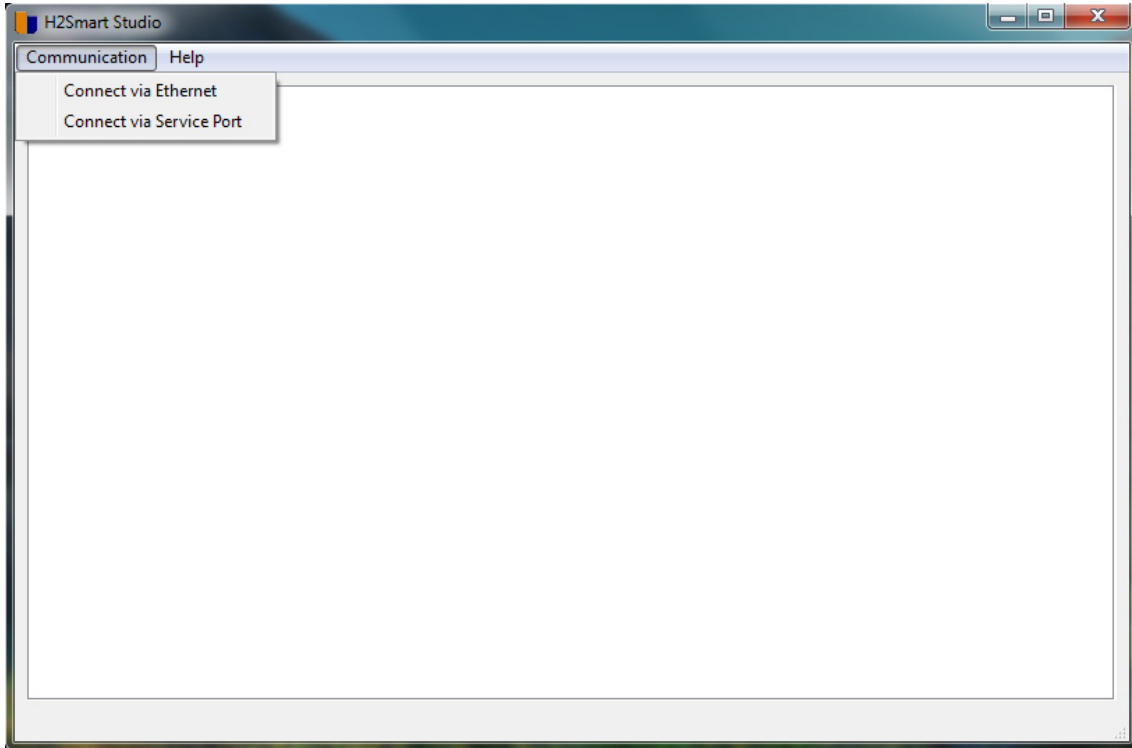


Figure 2 – Connection menu

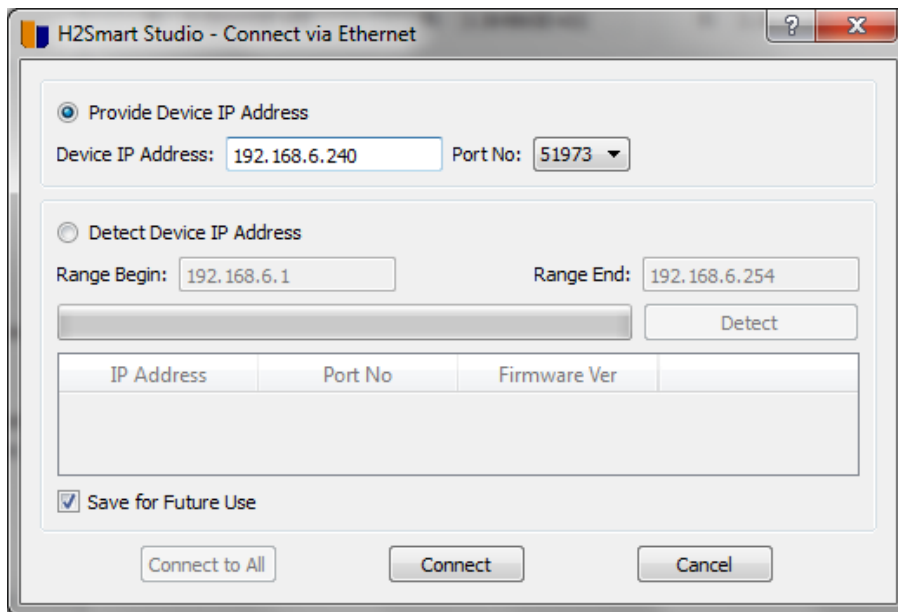


Figure 3 – Ethernet Connection Interface

Enter the IP address of the H<sub>2</sub>Smart™ unit in the Device IP Address field, and click on the Connect button. The screen shown in Figure 4 will open.

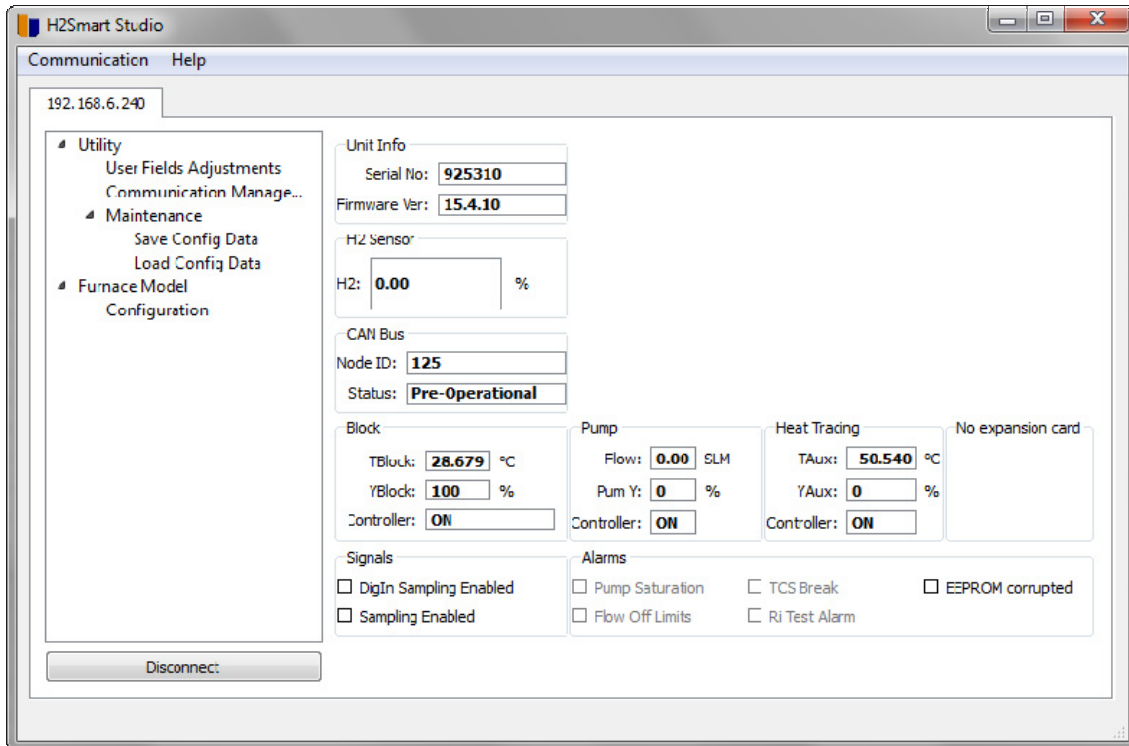


Figure 4 – Utility Main Interface



## 3. Module Overviews

### 3.1 Utility Module

The Utility module of the *H2Smart™ Studio* software is used to view the unit status, adjust the sensor reading, set up the communication interfaces and save or load configuration data.

On the main utility module interface as shown in Figure 4 above, the unit's serial number, firmware revision and operating status is shown.

#### 3.1.1 User Field Adjustment

The User Field Adjustments module, as shown in Figure 5, should only be used by a qualified United Process Controls service technician, or my qualified maintenance personnel trained in the use of the optional *H2Smart™ Field Adjustment Kit*. Improper entry of values into these fields can void the factory calibration, or cause the unit to perform erratically.

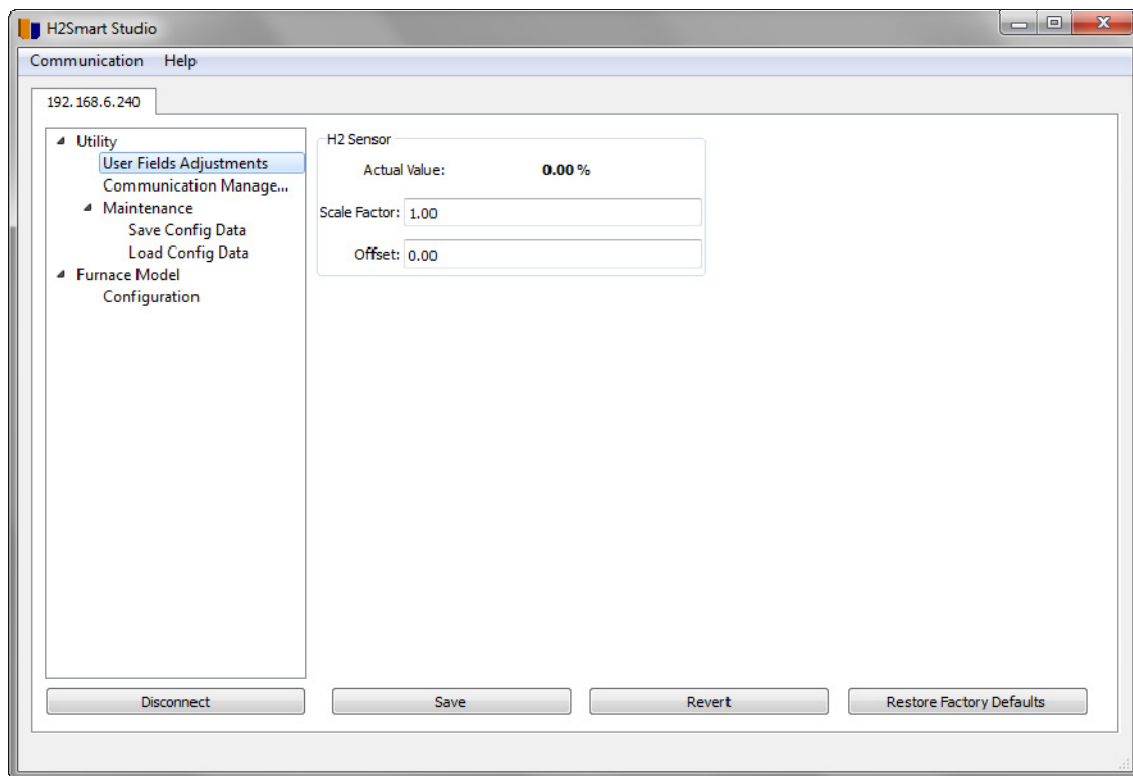


Figure 5 – User Field Adjustment Interface

### 3.1.2 Communication Management

The H<sub>2</sub>Smart™ Communication parameters can be configured in the Communication Management interface as shown in Figure 6. These values should be configured for integration into a furnace control or SCADA system. The unit's IP address can also be set for integration into your plant LAN. These values take effect when the H<sub>2</sub>Smart™ unit is rebooted.

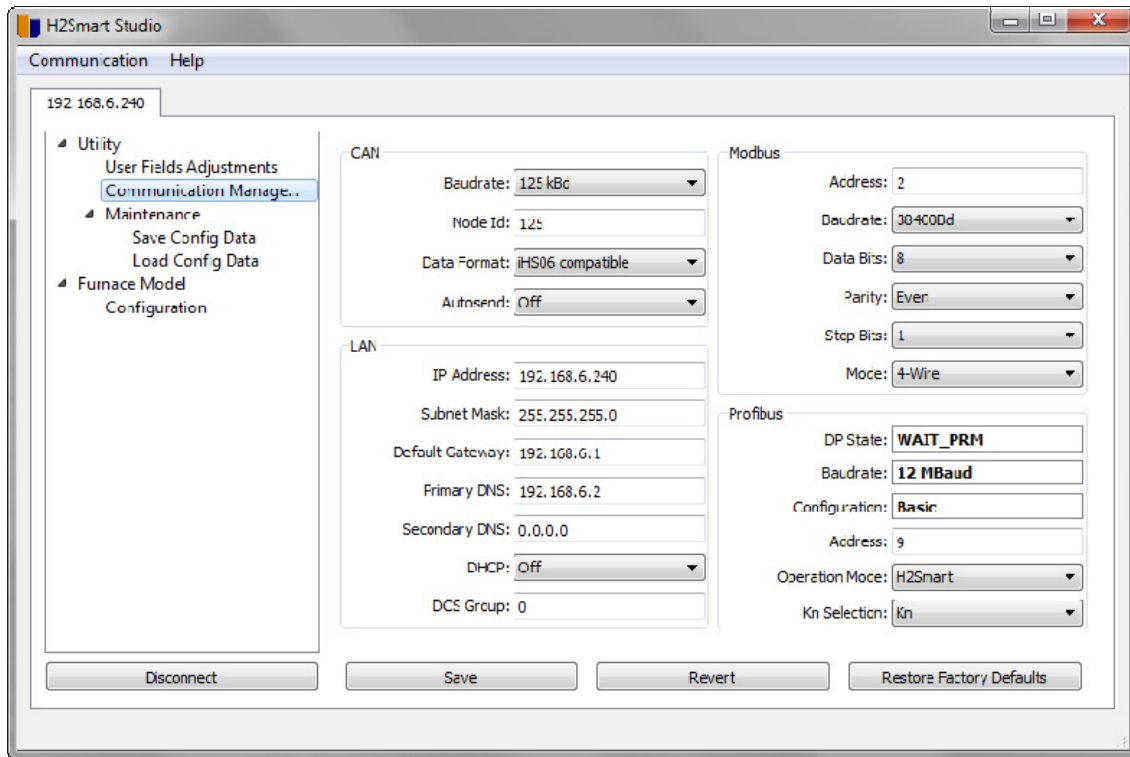


Figure 6 – Communication Management Interface

### 3.1.3 Maintenance

If the *H2Smart*<sup>TM</sup> configuration is modified from the factory setup, the configuration can be saved for quick restoration in the event of a unit replacement. The Save Config Data interface can be used to save the configuration of the unit to your PC.

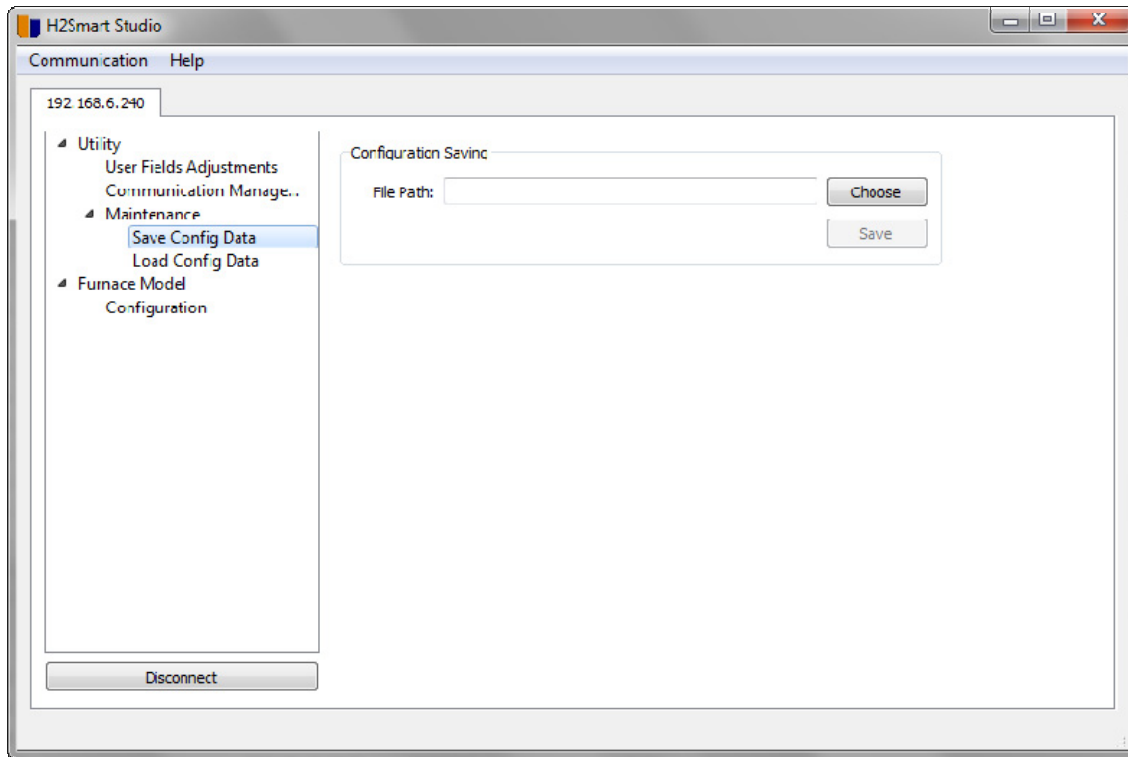


Figure 7 – Configuration Backup Interface

Click the Browse button to select the path on your computer where you wish to store the configuration backup. You must give the file a path and name before the save button will become active. A \*.cfg file will be created on your computer at the specified path. You can move this file to another location for archiving if desired.

The configuration can be restored using the Load Configuration Data interface shown in Figure 8 below. This operation will load the unit with a stored configuration. Once this operation is performed the previous configuration cannot be retrieved unless it was backed up separately.

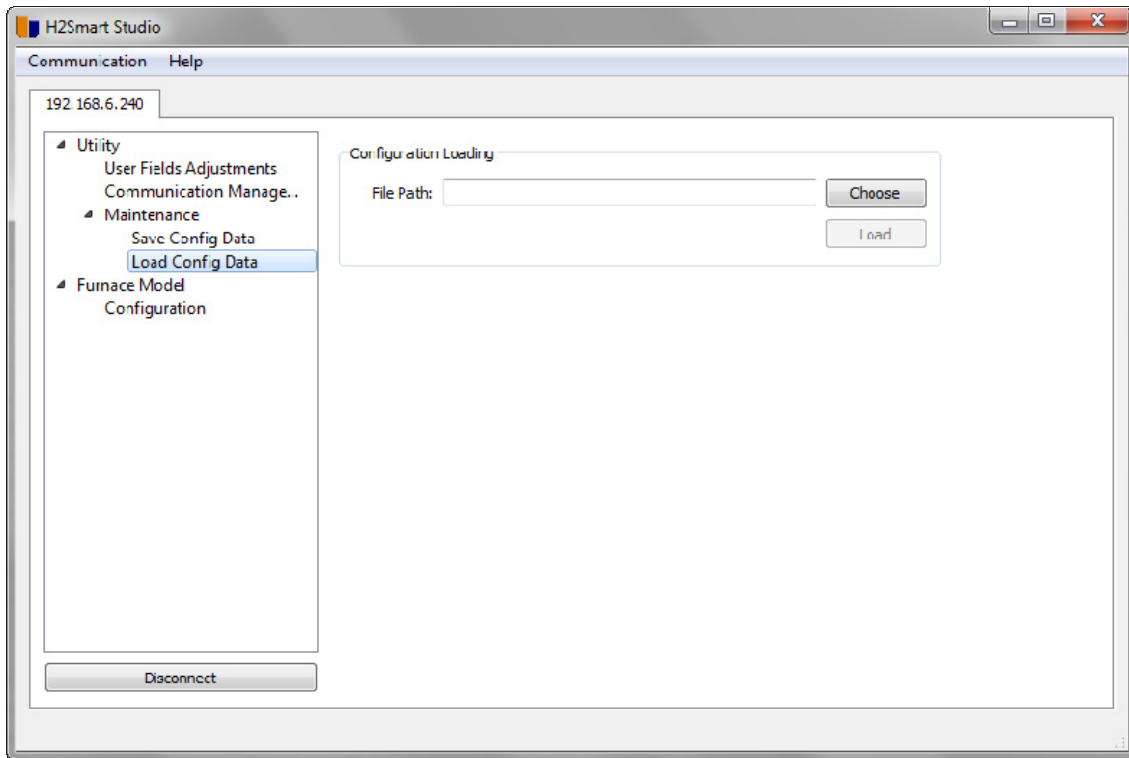


Figure 8 – Configuration Restore Interface

### 3.2 Furnace Model Module

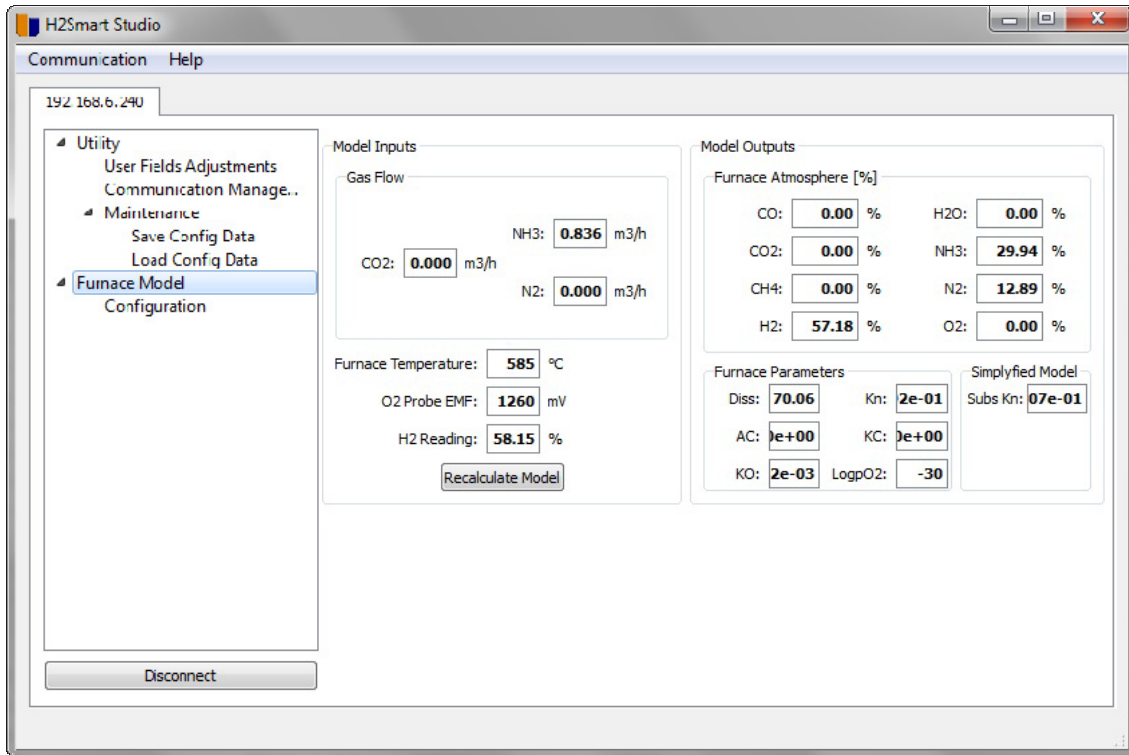


Figure 9 – Furnace Model Overview

The furnace model operation parameters can be viewed through the furnace model overview. The model inputs can be verified using this interface. The model gas flow inputs are shown. These values are as set via the industrial communication bus or via the furnace model configuration.

The furnace model calculations are shown on the right side of the screen.

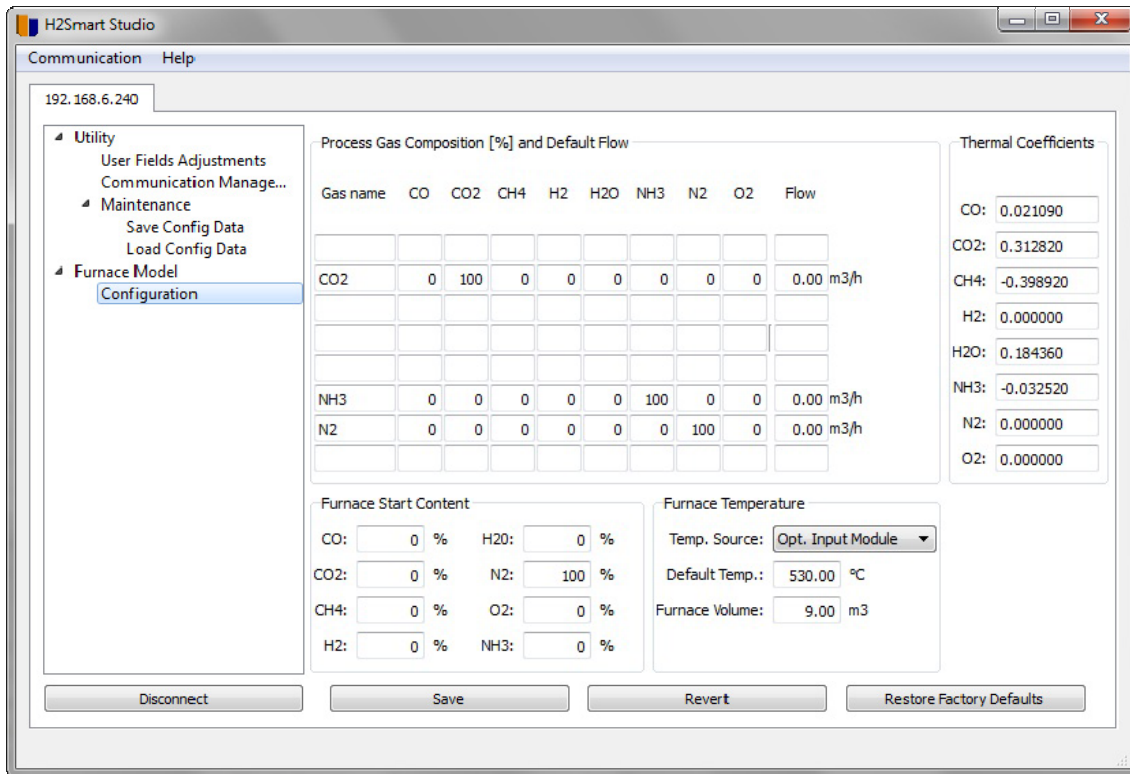


Figure 9 – Furnace Model Configuration Interface

The furnace model configurations can be set through the Furnace Model Configuration Interface. The furnace model configuration should be set at the factory and should not be modified.

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