Remote Sensor Configuration

The SignalFire Remote Sensor Configuration allows the configuration of HART devices using the SignalFire ToolKit wirelessly through a SignalFire Ethernet Gateway or from the Gateway RS232 debug port. The ToolKit has built in quick configuration for common parameters for the Vega Flex81 series guided wave radars, Magenetrol 706 series GWS, Rosemount 5300 series GWR and the Yokogowa EJA series pressure transmitters. When using one of these devices many common settings can be changed quickly from within the SignalFire ToolKit software.

Additionally, either PACTware, RadarMaster, DeviceCare, and FieldCare can be operated though this wireless interface for advanced configuration or configuration of other sensor types.

Quick Configuration

After a remote node has been brought into a remote configuration session (see the Gateway manual for details), select the ‘HART Sensor Advanced Configuration’ menu item. This will open the quick configuration for the detected remote device.

For each supported HART device, the identification information and current HART variables will be displayed. The quick settings that are available for the detected device are also displayed. To change any settings, make the desired changes and click on the corresponding set button.
Example VEGA Flex 81 configuration screen
Example Magnetrol 706 configuration screen
**Example Rosemount 5300 configuration screen**
Example Yokogawa EJA configuration screen
Remote PACTware and Radar Master

Installation

Install the SignalFire Virtual Serial Port driver (Required for both PACTware and Radar Master)

From the main ToolKit window go to the Help menu, select Drivers, and select Install SignalFire Virtual Serial Port. Follow the installation prompts

Install the HART Communication DTM Driver for PACTware

From the main ToolKit window go to the Help menu, select Installer Downloads, and select Download CodeWrights HART CommDTM Installer.

- Unzip and run setup.exe from the downloaded .zip file
- Open PACTware and go to the “view” menu and select “device catalog”
- Click on the ‘Update device catalog” button to install the driver.
- Confirm that the CodeWrights GmbH driver appears under the devices menu.
**Wireless PACTware Mode**

The following steps are necessary to complete a PACTware session.

1. **Place the SignalFire Node into Remote Configuration Mode**
   Click the “Start PACTware 4.1” button. Note the virtual COM port listed in the pop-up window. PACTware will automatically open.

2. **Connect to HART sensor**
   Once PACTware opens, connecting to the HART sensor is slightly different than you may be used to.

   Double click on the COM port to open the COM configuration. Select the SignalFire Virtual Serial Port. Click “Apply and “OK”. Then right click on the COM port in the Project tab and click “Connect”
3. For Vega devices simply click on the “Start” button in the VEGA project assistant to connect to the device.

4. For other HART devices use the PACTware Topology scan to detect the attached device.
The attached HART sensor will be detected. Select the correct device DTM for the sensor and click Apply.

- Close the topology scan window
- Double click on the Sensor to open the device DTM
- Right click on the Sensor and select connect

The PACTware session is now fully active and the sensor may be configured as normal using the device DTM.

When finished, close PACTware and return to the Remote Configuration window. Close this window and then click on "End Session" in the gateway window to put the node back into normal operation (this will also happen automatically after a 10 minute inactivity timeout).

**Wireless Rosemount Radar Master Mode**

**Starting a remote Radar Master Session**

The following steps are necessary to complete a Remote Radar Master session.

1. After the node has been placed into Radar Master mode, click on “Start Rosemount Radar Master”. This will automatically open the Radar Master application. A pop-up window will indicate the Virtual COM port number to use within the RadarMaster application

2. Connect to HART sensor using Radar Master

Select the Virtual Serial Port, additionally the following setting must be changed. See below:

- Handshake = Node
- Response Timeout = 2000
- Retries = 10
- Max HART Query Length = 55
Now simply start a Radar Master using the selected COM port and configure the sensor as would normally be done using a HART modem cable.

When finished, close Radar Master and return to the Remote Configuration window. Close this window and click on “End Session” to put the Sentinel node back into normal operation (this will also happen automatically after a 10 minute inactivity timeout).

**Wireless DeviceCare/FieldCare Mode**

**Starting a remote DeviceCare/FieldCare Session**

The following steps are necessary to complete a DeviceCare/FieldCare session.

1. After the node has been placed into Remote Configuration Mode, click on “Create Virtual COM Port”. A pop-up window will indicate the Virtual COM port number to use within the DeviceCare/FieldCare application. This COM port number will be selected in step 7.
2. Open the Enress+Hauser DeviceCare or FieldCare application.

3. Select ‘Assistant Connection to device step-by-step’
4. Select ‘**HART**’ Connect to HART devices point-to-point or via multidrop’

5. Select Interface: ‘**FXA195**’
6. Select ‘**Advanced**’

7. Select the appropriate HART modem settings.
   - Serial Interface: **COMx (SignalFire Virtual Serial Port)**
   - Number of communication retries: **10**
   - Start address: **1**
   - End address: **1**

   Click ‘**Apply**’ and ‘**OK**’
DeviceCare SFE100

Communication interface:
- HART mode

Serial interface:
- CP212 Serial Port

HART protocol:
- Master
  - Present
  - Number of communication nodes
- Slave
  - Present
  - Number of communication nodes

Address scan:
- Start address: 1
- End address: 1

Additional support:
- Arbitrate and Busside support

Endress + Hauser
8. Click the right arrow in the lower right corner to scan for HART devices.
**SignalFire Telemetry**

**DeviceCare SFE100**

Instrument health status

- **OK**
Technical Support and Contact Information

SignalFire Telemetry
140 Locke Dr, Suite B
Marlborough, MA 01752
(978) 212-2868
support@signal-fire.com

Revision History

<table>
<thead>
<tr>
<th>Revision</th>
<th>Date</th>
<th>Changes/Updates</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td></td>
<td>Initial release</td>
</tr>
<tr>
<td>1.1</td>
<td>9/4/15</td>
<td>Added information on quick configuration, updated design</td>
</tr>
<tr>
<td>1.2</td>
<td>8/4/21</td>
<td>Added information on DeviceCare/FieldCare</td>
</tr>
<tr>
<td>1.3</td>
<td>11/30/21</td>
<td>Updated screen shots, added detail on Magnetrol 706 quick settings</td>
</tr>
</tbody>
</table>