ENERGY INDUSTRIES

AWIN GW100
Release Notes
AWIN GW100
Release Notes
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1 About This Release Note

This document describes the new functionalities, the fixed problems, and the known problems in the AWIN GW100 firmware revision 1.5-1 (2005061200).

1.1 How Firmware works in AWIN GW100 WirelessHART Gateway?

AWIN GW100 WirelessHART gateway is delivered with the released firmware. The firmware includes both WirelessHART gateway functionalities and the built-in webserver. Therefore, the capability of the AWIN GW100 is based on the firmware version it is running.

It is possible to upgrade the firmware on the AWIN GW100 unit using the device’s built-in webserver.

1.2 Release Notes Conventions

Conventions to be used are listed below:

– The words in proper names of screen elements (for example, the title in the title bar of a window, the label for a field of a dialog box) are initially capitalized.

– The names of the keyboard keys are boldfaced.
  - Initial capital letters are used for the name of the keyboard key if it is labeled on the keyboard. For example, Return key or <Return>.
  - Lowercase letters are used for the name of the keyboard key that is not labeled on the keyboard. For example, space bar, comma key and so on.
  - In descriptions, the word “key” is used in conjunction with its name. For example, pressing Return key initiates the process.
  - In tables and procedures, angle brackets replace the word “key”. For example, press <Return>.
  - A dash is used to indicate that you must simultaneously press several keys. For example, <Ctrl-C> indicates that you must hold down the Control key while pressing the C key.
  - The phrase “press and release” is used to indicate that you sequentially press several keys. For example, to close a window, press and release <Alt> and then <F4>. This indicates that you press and release the Alt key and then you press and release the F4 function key.

– The names of push and toggle buttons are boldfaced.
  - Initial capital letters are used for the name of a push or toggle button labeled on the display. For example, OK button.
  - In descriptions, tables and procedures, the word “button” is used in conjunction with its name. For example, pressing the OK button initiates the process.

– The names of menus and menu items are boldfaced.
  - Initial capital letters are used for the name of menus listed in the menu bar. For example, File menu.
1.3 Released Versions and Related Documentation

This release is concerned with the following versions of the AWIN GW100 product.

**Table 1: AWIN GW100 version information**

<table>
<thead>
<tr>
<th>Type</th>
<th>Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firmware version</td>
<td>1.5-1 (2005061200).</td>
</tr>
<tr>
<td>Hardware version</td>
<td>Rev 01</td>
</tr>
</tbody>
</table>

For the previous firmware version (1.5-0) refer to revision A of the Release Notes 3BNP102932.

A complete list of documentation applicable to AWIN GW100 along with its version information (valid at the time of release notes publishing) is presented in **Table 2**.

**Table 2: AWIN GW100 documentation**

<table>
<thead>
<tr>
<th>Document ID</th>
<th>Title</th>
<th>Latest Revision</th>
</tr>
</thead>
<tbody>
<tr>
<td>3BNP102906</td>
<td>AWIN GW100 Product Datasheet</td>
<td>B</td>
</tr>
<tr>
<td>3BNP102683D2</td>
<td>Quick Setup Guide</td>
<td>B</td>
</tr>
<tr>
<td>3BNP102910</td>
<td>Quick Start Guide</td>
<td>B</td>
</tr>
<tr>
<td>3BNP102911</td>
<td>Bulk Configuration Guide</td>
<td>B</td>
</tr>
<tr>
<td>3BNP102912</td>
<td>AWIN GW100 User Manual</td>
<td>C</td>
</tr>
<tr>
<td>3BNP102683D3</td>
<td>AWIN GW100 - Specific Conditions of Use</td>
<td>A</td>
</tr>
</tbody>
</table>

AWIN GW100 is tested with System 800xA and the reference WirelessHART library is called **WirelessHART_AWIN** library. The compatibility details are provided in **Table 3**.

! Compatibility with older versions is not guaranteed. Projects should evaluate this beforehand.

**Table 3: System 800xA compatibility with AWIN GW100 gateway.**

<table>
<thead>
<tr>
<th>Item</th>
<th>Tested Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>System 800xA</td>
<td>6.0</td>
</tr>
<tr>
<td>CI867ModbusTCPHwLib</td>
<td>2.10-11</td>
</tr>
<tr>
<td>WirelessHART_AWIN Library*</td>
<td>1.0-8</td>
</tr>
<tr>
<td>ModbusTCPCommLib</td>
<td>6.0.0-1</td>
</tr>
</tbody>
</table>

* This library is provided as a sample reference library for customer projects.
1.4 WirelessHART Products Supported in this Release

All ABB native WirelessHART devices are supported by the AWIN GW100 gateway.

AWIN GW100 has been tested with the following products, shown in Table 4.

The use of non-ABB devices should be approved by the product manager.

AWIN GW100 is not designed to be used with Wimon100, Smart Sensor and the wireless condition monitoring software from ABB. AWIN GW100 connects to Wimon100 and Smart Sensor but it does not support HART-IP protocol which is required by the ABB condition monitoring software.

Table 4: Compatible Devices

<table>
<thead>
<tr>
<th>Device</th>
<th>Manufacturer</th>
<th>Power Source</th>
<th>Instrument Type</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSP300-W</td>
<td>ABB</td>
<td>Battery</td>
<td>Temperature</td>
<td>Without energy harvester.</td>
</tr>
<tr>
<td>TSP300-W</td>
<td>ABB</td>
<td>Battery</td>
<td>Temperature</td>
<td>With energy harvester.</td>
</tr>
<tr>
<td>2600T</td>
<td>ABB</td>
<td>Battery</td>
<td>Pressure</td>
<td></td>
</tr>
<tr>
<td>Wimon100</td>
<td>ABB</td>
<td>Battery</td>
<td>Vibration</td>
<td>No support for WDM software and condition monitoring.</td>
</tr>
<tr>
<td>WHA-ADP-F8B2</td>
<td>Pepperl+Fuchs</td>
<td>Battery</td>
<td>WirelessHART adapter</td>
<td></td>
</tr>
<tr>
<td>Bullet</td>
<td>Pepperl+Fuchs</td>
<td>Loop power</td>
<td>WirelessHART adapter</td>
<td></td>
</tr>
<tr>
<td>Smart Sensor</td>
<td>ABB</td>
<td>Battery</td>
<td>Vibration, Acoustic, Temperature</td>
<td>No support for WDM software and condition monitoring.</td>
</tr>
<tr>
<td>RAD-WHA</td>
<td>Phoenix Contact</td>
<td>Loop power</td>
<td>WirelessHART adapter</td>
<td></td>
</tr>
<tr>
<td>THUM</td>
<td>Emerson</td>
<td>Loop power</td>
<td>WirelessHART adapter</td>
<td></td>
</tr>
<tr>
<td>Caliperay 1616</td>
<td>Mistras</td>
<td>Battery</td>
<td>Thickness Monitor</td>
<td></td>
</tr>
</tbody>
</table>
1.5 Supported Tools

Table 5 shows the lists of tools supported by the AWIN GW100 WirelessHART Gateway. AWIN WirelessHART Gateways Configurator is used for bulk configuration of WirelessHART devices and Modbus map.

<table>
<thead>
<tr>
<th>Tool ID</th>
<th>Tool Name</th>
<th>Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>3BNP102928</td>
<td>AWIN WirelessHART Gateways Configurator</td>
<td>Revision A</td>
</tr>
</tbody>
</table>

ABB FIM is not supported by AWIN GW100 gateway. However, the WirelessHART devices (i.e., instruments) from ABB can be configured using the FIM.
2 Release Notes

2.1 Functionality Changes

This section provides an overview of the functional changes made in the firmware release of AWIN GW100.

2.1.1 New Functions

<table>
<thead>
<tr>
<th>Reference</th>
<th>Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Modbus map persistency</td>
<td>Auto Modbus mapping functionality no longer rebuilds map as devices join the network. Once devices are added to the map, they retain their slot in the mapping table between system power cycles. The gateway only rebuilds a map when a new device is added to the network.</td>
</tr>
<tr>
<td>2</td>
<td>Gateway profile</td>
<td>Profiles P1 and P2 were added as options for network bandwidth profile in web manager.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>P1 profile – Normal profile</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>P1 allows about 4.5 pkt/s to be injected by the gateway into the network.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>P2 profile – Low power profile</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>P2 has one-eighth of the downstream capacity. Using P2 can save all devices battery power but takes longer to build the network and greatly reduces downstream application bandwidth.</td>
</tr>
<tr>
<td>3</td>
<td>Reform Network</td>
<td>Functionality to rebuild gateway’s WirelessHART network added to Utilities webpage.</td>
</tr>
<tr>
<td>4</td>
<td>Battery life variable</td>
<td>The “battery life” variable is updated to a floating-point number rather than unsigned 16-bit integer.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Note: Modbus Mappings is updated to use a 2-register range for “battery life”</strong></td>
</tr>
<tr>
<td>5</td>
<td>Modbus map with new sub-device</td>
<td>If a device is already in the mapping table and reconnects with a different sub-device configuration, any missing sub-devices remain in the mapping at their original slot. Any new sub-devices are added to the last available slot(s) in the mapping table.</td>
</tr>
<tr>
<td>Reference</td>
<td>Title</td>
<td>Description</td>
</tr>
<tr>
<td>-----------</td>
<td>-------</td>
<td>-------------</td>
</tr>
<tr>
<td>6</td>
<td>Fast pipe</td>
<td>Devices page now allows the user to check the existing status of fast pipe for each device. Moreover, the user can enable and disable fast pipe using web browser.</td>
</tr>
</tbody>
</table>

2.1.2 Improvements

Table 7: Improvements

<table>
<thead>
<tr>
<th>Reference</th>
<th>Title</th>
<th>Description</th>
</tr>
</thead>
</table>
| 1         | Modbus map after device delete | The only way a device is ever removed from the Modbus map (in Auto Mapping Configuration) is via a manual deletion of the device via the web manager.  

*Note: In the event a device is deleted from the mapping, devices mapped after the deleted device will not shift to the newly empty slots.* |

2.1.3 Corrections

Table 8: Corrections

<table>
<thead>
<tr>
<th>Reference</th>
<th>Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Modbus registers name change</td>
<td>PVStale, SVStale, TVStale and QVStale are now same in both the web page and the Modbus map export file.</td>
</tr>
<tr>
<td>2</td>
<td>Firmware number</td>
<td>Firmware version displayed on the webpages was overridden when importing old configuration backup. This is now fixed.</td>
</tr>
</tbody>
</table>
## 2.2 Known Limitations

### Table 9: Known Limitations

<table>
<thead>
<tr>
<th>Reference</th>
<th>Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Restore Factory Defaults</td>
<td>Currently no feedback is provided to the user while process is executing. May take up to 15 seconds for “Reboot” prompt to be presented.</td>
</tr>
<tr>
<td>2</td>
<td>Firmware upload progress bar</td>
<td>During firmware update the progress bar will remain at 100% for some time before reboot prompt is presented.</td>
</tr>
<tr>
<td>3</td>
<td>Automatic Time sync</td>
<td>Current time zone is fixed to EST.</td>
</tr>
<tr>
<td>4</td>
<td>Font in Internet Explorer</td>
<td>Font appears to load as bold when using Internet Explorer. This is not an issue when used with other browsers.</td>
</tr>
<tr>
<td>5</td>
<td>Duplicate Tag names</td>
<td>If two devices with the same tag name are added to the gateway, then they will join the wireless network but will not operate on the Modbus network. Note. Every device in the WirelessHART network should have a unique tag name.</td>
</tr>
<tr>
<td>6</td>
<td>LEDS are off when reboot in process</td>
<td>When the gateway is soft rebooted all LEDS are off for some time before the bootup starts.</td>
</tr>
<tr>
<td>7</td>
<td>Modbus map import from previous revision not supported</td>
<td>Modbus map from rev 1.5-0 cannot be imported in rev 1.5-1. Work around: The user shall manually configure the Modbus map as per guidelines in the user manual.</td>
</tr>
<tr>
<td>8</td>
<td>Gateway backup import from previous revision not supported</td>
<td>Gateway backup from rev 1.5-0 cannot be imported in rev 1.5-1. Work around: The user shall manually configure the gateway as per guidelines in the user manual.</td>
</tr>
<tr>
<td>9</td>
<td>Gateways’ username cannot be changed inde-</td>
<td>Gateways’ username cannot be changed independently. It must be changed with the password as well.</td>
</tr>
<tr>
<td>10</td>
<td>Changing IP address using IO Schedule functiona</td>
<td>It is recommended not to use IO schedule for changing static IP address. The functionality works but will redirect you to new IP address and user will have to sign in again.</td>
</tr>
<tr>
<td>11</td>
<td>Modbus map after reset</td>
<td>Modbus map after cold reset still shows old Modbus map on reboot. However, it is automatically removed once devices join the network.</td>
</tr>
</tbody>
</table>
2.3 Known Errata

Consult relevant ABB bulletin for latest updates.
3 Firmware Upgrade

3.1 Pre-installation

To upgrade the firmware on AWIN GW100 gateway kindly request the new firmware from the product manager or your technical support contact.

The firmware file is distributed as a “.tar” file which should not be unzipped. It is to be uploaded as-is. Firmware procedure is provided in detail in the User Manual (3BNP102912).

3.2 Installation

For installation procedure, refer to the User Manual (3BNP102912).

3.3 Post installation

After the firmware upgrade, reboot the gateway and login using the default IP address and credentials.

Under the “system” section in the “Monitor” user account you can verify the firmware version running on the gateway. If the gateway was successfully upgraded, then it will be shown in this page.
4 Technical Support

For technical support get in touch with your local ABB Contact Center.
# Firmware Revisions History

## Table 10: Firmware Revision Table

<table>
<thead>
<tr>
<th>Version</th>
<th>Release Status</th>
<th>Release Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5-0</td>
<td>Released</td>
<td>Jan. 2019</td>
</tr>
<tr>
<td>1.5-1</td>
<td>Released</td>
<td>June 2020</td>
</tr>
</tbody>
</table>