ABB MEASUREMENT & ANALYTICS

Wi-Fi® Antenna kit installation guide

Secure and easy wireless access for configuration.

Measurement made easy

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**Introduction**

This document will define the procedures and list the parts required to install a Wi-Fi antenna.

**IMPORTANT NOTE:** To enable and configure Wi-Fi for secure access, refer to the XSeriesG5 XFC or XRC user manuals.
Additional information

Additional free publications are available for download at: www.abb.com/totalflow.

<table>
<thead>
<tr>
<th>Related documents</th>
<th>Document number</th>
</tr>
</thead>
<tbody>
<tr>
<td>XSeries G5 XFC/XRC quick start guide</td>
<td>2106124</td>
</tr>
<tr>
<td>XSeries G5 XRC user manual</td>
<td>2106000</td>
</tr>
<tr>
<td>XSeries G5 XFC user manual</td>
<td>2105999</td>
</tr>
<tr>
<td>XSeries G5 board replacement kit guide</td>
<td>2106079</td>
</tr>
</tbody>
</table>

Cyber security

This product is designed to be connected, and communicate information and data, via a network interface, which should be connected to a secure network. It is the customer's sole responsibility to provide and continuously ensure a secure connection between the product and the customer network or any other network (as the case may be). The customer shall establish and maintain appropriate measures (such as, but not limited to, the installation of firewalls, application of authentication measures, encryption of data, installation of antivirus programs, etc.) to protect this product, the network, its system and interfaces against any kind of security breaches, unauthorized access, interference, intrusion, leakage and/or theft of data or information. ABB Inc. and its affiliates are not liable for damages and/or losses related to such security breaches, any unauthorized access, interference, intrusion, leakage and/or theft of data or information.

Although ABB provides functionality testing on the products and updates that it releases, the customer should institute its own testing program for any product updates or other major system updates (to include, but not limited to, code changes, configuration file changes, third party software updates or patches, hardware change out, etc.) to ensure that the security measures that the customer has implemented have not been compromised and that system functionality in the customer's environment is as expected.

IMPORTANT NOTE: Enable the highest security settings on Wi-Fi, Bluetooth, or wired networks to prevent unauthorized wireless access to the device. Use unique passwords and change them periodically.
Safety

Observe warning signs on packaging and on the devices, prior to software configuration.

Safety symbol conventions

The following conventions are used throughout this document to bring attention to important information:

"NOTICE" hazards are associated with equipment or property damage, it must be understood that under certain operating conditions, operating damaged equipment can result in degraded system / process performance leading to serious or life-threatening injuries. Therefore, compliance with all "NOTICE" hazards is required at all times.

**WARNING – Bodily injury:** This symbol and with the signal word "WARNING", indicates a potentially dangerous situation. Failure to observe this safety information will result in death or severe injury. The text may state the hazard, how to avoid the hazard, and the result if not followed. The bolt is for electrical warnings; the exclamation point is for general warnings.

**IMPORTANT NOTE:** This symbol indicates operator tips, particularly useful information, or important information about the product or its further uses.

Potential safety hazards

**WARNING – Bodily injury:** Make sure no explosive atmosphere is present before connecting or disconnecting any connector or performing maintenance on this unit.

**WARNING – Bodily injury:** to prevent RF exposure and damage to equipment remove all power sources before installing the Antenna Kit.
1 Overview
The photo below shows the Wi-Fi antenna kit parts.

Figure 1: Wi-Fi antenna kit parts

<table>
<thead>
<tr>
<th>Photo #</th>
<th>Name</th>
<th>Photo #</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SMA Fittings</td>
<td>5</td>
<td>Surge protector</td>
</tr>
<tr>
<td>2</td>
<td>Antenna</td>
<td>6</td>
<td>SMA plug-to-jack adapter</td>
</tr>
<tr>
<td>3</td>
<td>Terminator plug</td>
<td>7</td>
<td>Cable assembly</td>
</tr>
<tr>
<td>4</td>
<td>FCC IC tag</td>
<td>8</td>
<td>Ground cable</td>
</tr>
</tbody>
</table>

Cable assembly part numbers for enclosures

<table>
<thead>
<tr>
<th>Kit number</th>
<th>Cable length</th>
<th>Enclosures</th>
</tr>
</thead>
<tbody>
<tr>
<td>2106049 001</td>
<td>24 inches</td>
<td>6410</td>
</tr>
<tr>
<td>2106049 002</td>
<td>32 inches</td>
<td>6413, 6713</td>
</tr>
<tr>
<td>2106049 003</td>
<td>44 inches</td>
<td>6890</td>
</tr>
</tbody>
</table>
**IMPORTANT NOTE:** The cable used in the following procedure is included in the kit. Specify by number the required length when ordering the kit.

### 2 Installation procedures

1. Locate the cable clamp on the upper right corner of the board. Put the straight end of the cable assembly through the cable clamp.

   **Figure 2: Cable clamp**

2. Attach the right angle SMA fitting of the cable to the board ANT-1, connector (J42).

   **Figure 3: Attach at ANT 1**
3. Attach the plug-to-jack adapter to the straight SMA fitting of the cable.

4. Attach the surge protector to the plug-to-jack adapter.

**Figure 4: Attach the straight SMA fitting**

5. Cut the ground cable to length. Strip \( \frac{3}{8} \) inch of insulation from the free end.

**IMPORTANT NOTE:** The ground cable is attached to the ground post located near the enclosure’s door. Allow enough length for a service loop of approximately 1 inch from the surge protector to the ground post.

6. Remove the crimp ring terminal from the surge protector. (See number 1 in the following photo).

**Figure 6: Crimp ring terminal**

7. Crimp the surge protector terminal ring to the ground cable.

8. Re-attach the crimped terminal with ground cable to the surge protector.

9. Attach the cable to the surge protector (see below).

**Figure 7: Attach the cable**

10. Remove the split washer and hex nut from the surge protector.
11. Identify the enclosure used and the location of the antenna hole.

**IMPORTANT NOTE:** The 8 AH, 13 AH, 16 AH, and 26 AH batteries fit in the 6410 enclosure with the antenna surge protector installed.

<table>
<thead>
<tr>
<th>Enclosure number</th>
<th>Antenna hole location</th>
<th>Photo of enclosure</th>
</tr>
</thead>
<tbody>
<tr>
<td>6410</td>
<td>On the Left side of the enclosure, in the upper left corner.</td>
<td><img src="image" alt="6410_enclosure" /></td>
</tr>
<tr>
<td>6413</td>
<td>On the bottom of the enclosure, in the back left corner</td>
<td><img src="image" alt="6413_enclosure" /></td>
</tr>
<tr>
<td>6890</td>
<td>2 holes are on the bottom left of enclosure, both are usable</td>
<td><img src="image" alt="6890_enclosure" /></td>
</tr>
</tbody>
</table>
12. Remove the black protective plug from the antenna hole in the enclosure.
13. Install the assembled surge protector into the hole (see below).

**Figure 8: Install surge protector**

14. Secure the surge protector to the enclosure with the provided split washer and hex nut.

View of the installed surge protector from the inside of the enclosure (see below). Enclosure 6413 shown.
15. Attach the ground cable to the ground post (see number 2 in the picture below).
16. Route the cable assembly via mountable cable ties attached to the enclosure (see number 1, below).

17. Attach the FCC transmission compliance tag to the outside of the enclosure (see below).
18. Remove the red protective cap from the surge protector.
19. Attach the antenna to the surge protector. Keep the Antenna in the straight position (see below).

**Figure 12: Straight antenna**

20. Attach the terminator plug to the board ANT-2, connector (J43). (see number 1, below).

**Figure 13: ANT-2 terminator plug**

The Wi-Fi antenna installation is complete.
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