

# Wi-Fi® Antenna Kit XIO, XSeries<sup>G5</sup>



Secure and easy wireless access for configuration.

Measurement made easy

## Introduction

This document defines 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 XSeries<sup>G5</sup> (XFC or XRC) or the XIO user manuals.

## Additional information

Additional free publications are available for download at:  
[www.abb.com/upstream](http://www.abb.com/upstream).

Related documents	Document number
XIO user manual	<a href="#">2106424</a>
XIO data sheet	<a href="#">2102774</a>
XSeries <sup>G5</sup> (XFC/XRC) quick start guide	<a href="#">2106124</a>
XSeries <sup>G5</sup> (XFC/XRC) user manual	<a href="#">2106026</a>
XSeries <sup>G5</sup> board replacement kit guide	<a href="#">2106079</a>

## 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.

## 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.

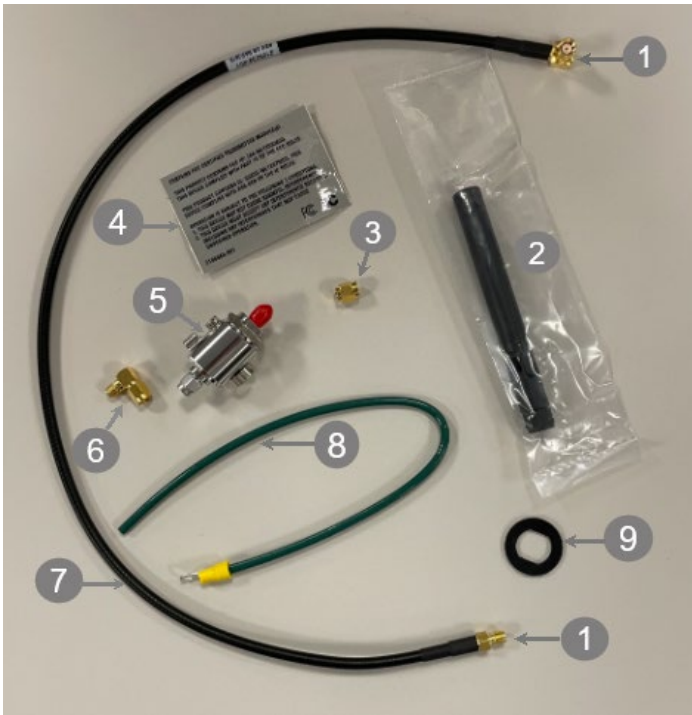


**WARNING – Bodily injury:** To prevent RF exposure and damage to equipment, remove all power sources before installing the Antenna Kit.

## 1 Overview

The photo below shows the Wi-Fi antenna kit parts. The table describes the parts.

**Figure 1: Wi-Fi antenna kit parts**



**Table 1-1: Part number 2106049 kit contents**

<b>ID #</b>	<b>Name</b>	<b>ID #</b>	<b>Name</b>
<b>1</b>	SMA Fittings	<b>6</b>	SMA plug-to-jack adapter
<b>2</b>	Antenna	<b>7</b>	Cable assembly
<b>3</b>	Terminator plug	<b>8</b>	Ground cable
<b>4</b>	FCC IC tag	<b>9</b>	Gasket .062 inches thick
<b>5</b>	Surge protector		

XSeries and XIO enclosures vary in size. Order the antenna kit option which includes the cable length appropriate for your enclosure:

**Table 1-2: Kit options per cable length**

<b>Kit number</b>	<b>Cable length</b>	<b>ABB Enclosure</b>
<b>2106049-501</b>	24 inches	6410
<b>2106049-502</b>	32 inches	6413, 6713
<b>2106049-503</b>	44 inches	6890

## 2 Installation procedures

These steps illustrate antenna kit installation in an XSeries enclosure as an example. For installation in an XIO, adapt instructions as appropriate.

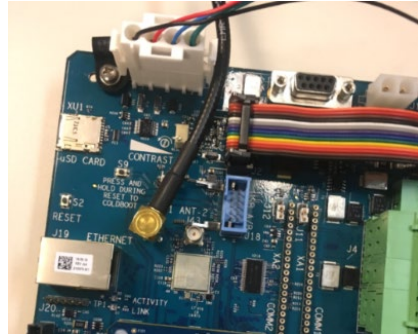
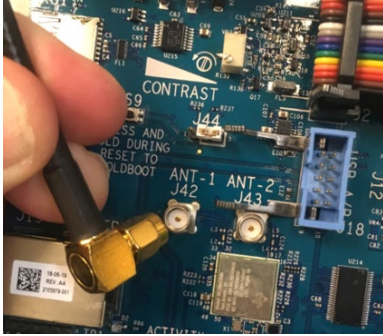
1. Locate the cable clamp on the upper right corner of the board. Put the straight end of the cable assembly through the cable clamp.

**Figure 2: Cable clamp**



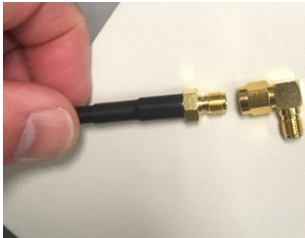
2. Attach the right angle SMA fitting of the cable to the board ANT-1, connector (J42).

**Figure 3: Attach at ANT-1**



3. Attach the plug-to-jack adapter to the straight SMA fitting of the cable.

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



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

**Figure 5: Attach the surge protector**



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

**i**

**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.

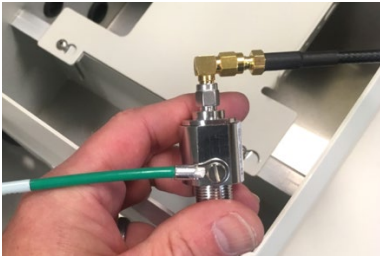
6. Remove the crimp ring terminal from the surge protector. (See number 1 in the following photo).

## 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).


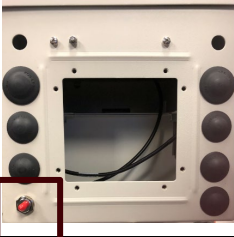


## Figure 7: Attach the cable



10. Remove the split washer and hex nut from the surge protector.
11. Slide the gasket onto the surge-protector where the split washer and hex nut were removed.
12. 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.

ABB Enclosure number	Antenna hole location	Photo of enclosure
<b>6410</b>	On the left side of the enclosure, in the upper left corner.	
<b>6413</b>	On the bottom of the enclosure, in the back left corner	
<b>6890</b>	2 holes are on the bottom left of enclosure, both are usable	
<b>6713</b>	2 holes are on the bottom of the enclosure in the back left corner. There is a 3rd hole of same size in the back right corner. The cable assembly is not long enough to reach that hole.	

13. Remove the black protective plug from the antenna hole in the enclosure.

14. Install the assembled surge protector into the hole (see below).

**Figure 8: Install surge protector**



15. Ensure the gasket that was installed in step 11 is between the surge-protector and the enclosure (on the inside of the enclosure).
16. 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). ABB enclosure 6413 is shown.

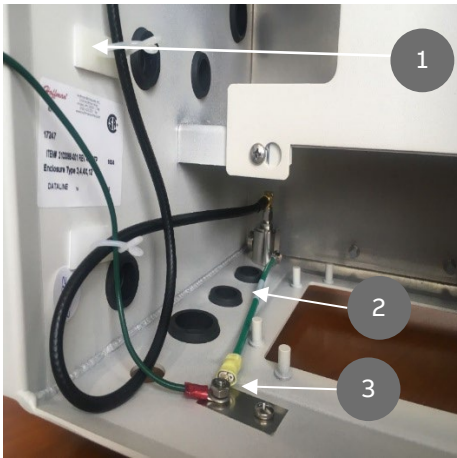
**Figure 9: Inside the enclosure**



17. Attach the ground cable to the ground post (see number 2 in the picture below).
18. Route the cable assembly via mountable cable ties attached to the enclosure (see number 1, below).



**Figure 10: Cable assembly**



ID	Description
1	Mountable cable ties
2	Ground cable
3	Enclosure ground post

19. Attach the FCC transmission compliance tag to the outside of the enclosure (see below).

**Figure 11: FCC compliance tag**



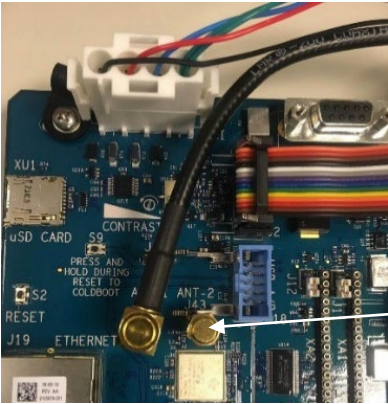
20. Remove the red protective cap from the surge protector.
21. Attach the antenna to the surge protector. Keep the antenna in the straight position (see below).

**Figure 12: Straight antenna**



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

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



The Wi-Fi antenna installation is complete.

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