ABB MEASUREMENT & ANALYTICS

Wi-Fi® Antenna Kit
Installation Guide

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^{G5} (XFC or XRC) or the XIO user manuals.

Additional information

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

Related documents	Document number
XIO user manual	2106424
XIO data sheet	2102774
XSeries^{G5} (XFC/XRC) quick start guide	2106124
XSeries^{G5} (XFC/XRC) user manual	2106026
XSeries^{G5} board replacement kit guide	2106079

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:

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

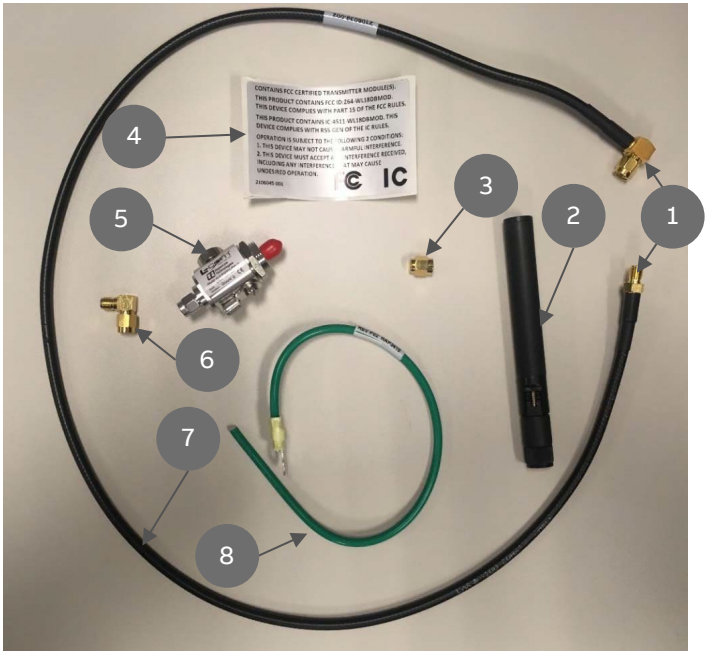
WARNING – Bodily injury: Make sure no explosive atmosphere is present before connecting or disconnecting any connector or performing maintenance on this unit.

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



Part number 2106049 kit contents

Photo #	Name	Photo #	Name
1	SMA Fittings	**6**	SMA plug-to-jack adapter
2	Antenna	**7**	Cable assembly
3	Terminator plug	**8**	Ground cable
4	FCC IC tag	**Not Shown**	Gasket .062 thick
5	Surge protector		

Cable assembly part numbers for XSeries^{G5} enclosures

Kit number	Cable length	Enclosures
2106049 001	24 inches	6410
2106049 002	32 inches	6413, 6713
2106049 003	44 inches	6890

For XIO enclosure specifications and information, see the XIO user manual and data sheet.

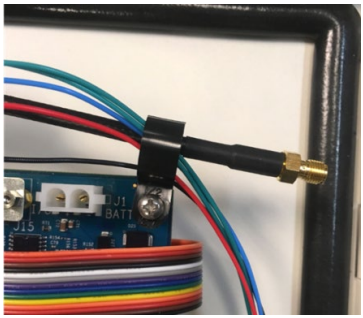
IMPORTANT NOTE: The cable used in the following procedure is included in the kit. Specify by number the required length when ordering the kit.

2 Installation procedures

These steps illustrate antenna kit installation in an XSeries enclosure as an example. For specific questions about installation in an XIO enclosure, contact Technical Support, listed on the last page of this guide.

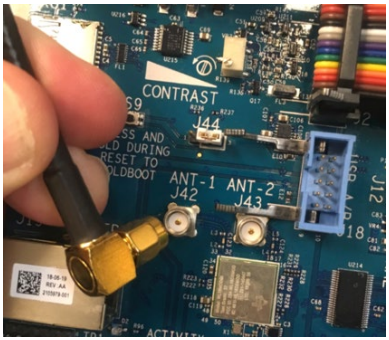
1. Locate the cable clamp on the upper right corner of the board. Put the straight end of the cable assembly through the cable clamp.

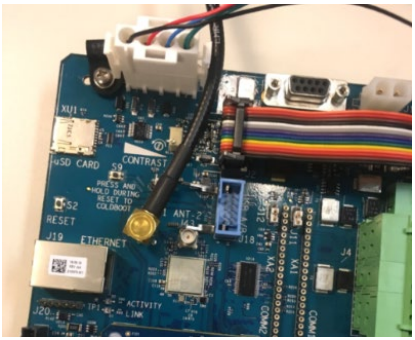
Figure 2: Cable clamp



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

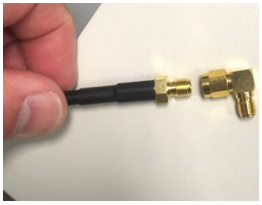


Figure 5: Attach the surge protector

5. Cut the ground cable to length. Strip ⅜ inch of insulation from the free end.

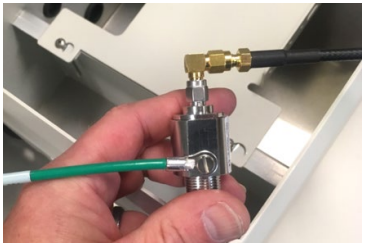
IMPORTANT NOTE: The ground cable is attached to the ground post located near the enclosure's door. Allow enough length for a service loop of approximately 1 inch from the surge protector to the ground post.

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).

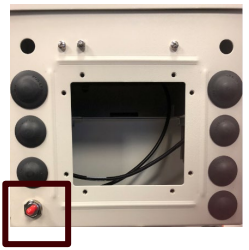
Figure 7: Attach the cable



10. Remove the split washer and hex nut from the surge protector.

11. 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.

Enclosure number	Antenna hole location	Photo of enclosure
6410	On the Left side of the enclosure, in the upper left corner.	
6413	On the bottom of the enclosure, in the back left corner	
6890	2 holes are on the bottom left of enclosure, both are usable	

Enclosure number	Antenna hole location	Photo of enclosure
6713	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.	

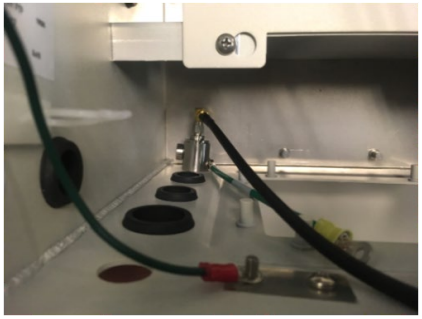
13. Remove the black protective plug from the antenna hole in the enclosure.
14. Install the assembled surge protector into the hole (see below).

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.

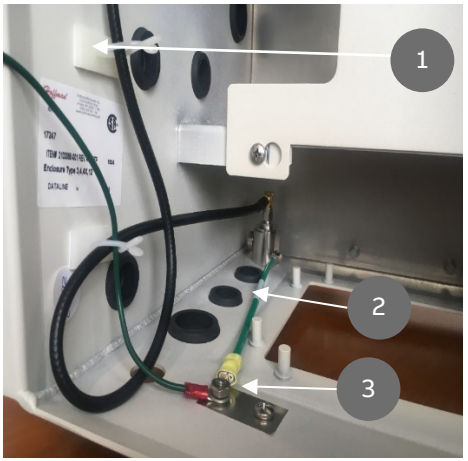
View of the installed surge protector from the inside of the enclosure (see below). Enclosure 6413 shown.

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).

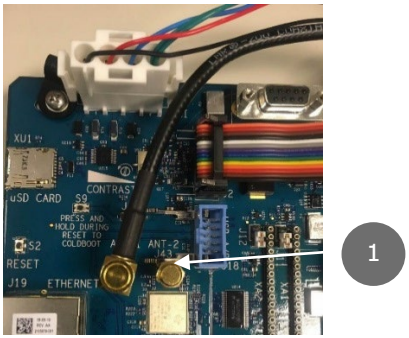
Figure 11: FCC compliance tag

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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