

# RF Board Installation Instructions

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## Notice

This device complies with Part 15 of the FCC Rules [and with Industry Canada licence-exempt RSS standard(s)].

Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

- (1) l'appareil ne doit pas produire de brouillage, et
- (2) l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Changes or modifications made to this equipment not expressly approved by Aversan Inc may void the FCC authorization to operate this equipment.

Installation shall ensure at least 27 cm separation distance between the rear antennas and the user's body.

Installation shall ensure at least 24 cm separation distance between the front panel (internal) antennas and the user's body.

## Overview

The RF Board contains all the wireless communication that ADG-400 host unit implements. This includes one WiFi/BT module, one WiFi module, and one Cellular module as seen in figure 1. In addition to the wireless modules the board contains a USB 3.0 HUB, low noise power supplies for all modules and RF switches, and RF Switching circuitry to route the RF signals to the required antennas.

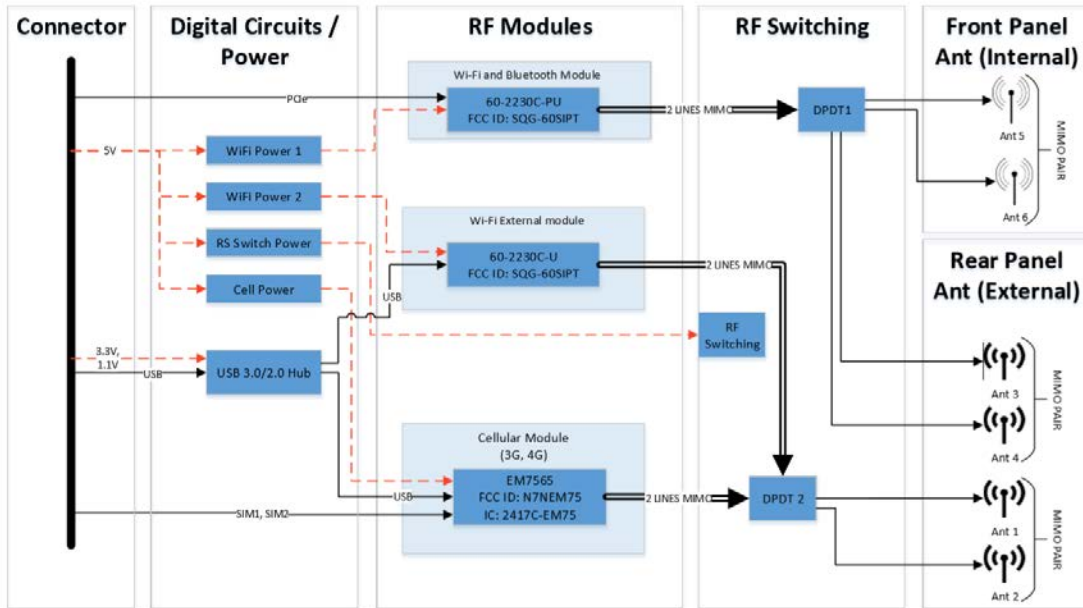


Figure 1 Block Diagram of RF Board

## Additional Accessories

The RF board is an internal module installed within the ADG-400 host unit and does not have additional accessories. The RF board is a self enclosed solution intended to be used as a module of the ADG-400.

## Setup and Installation

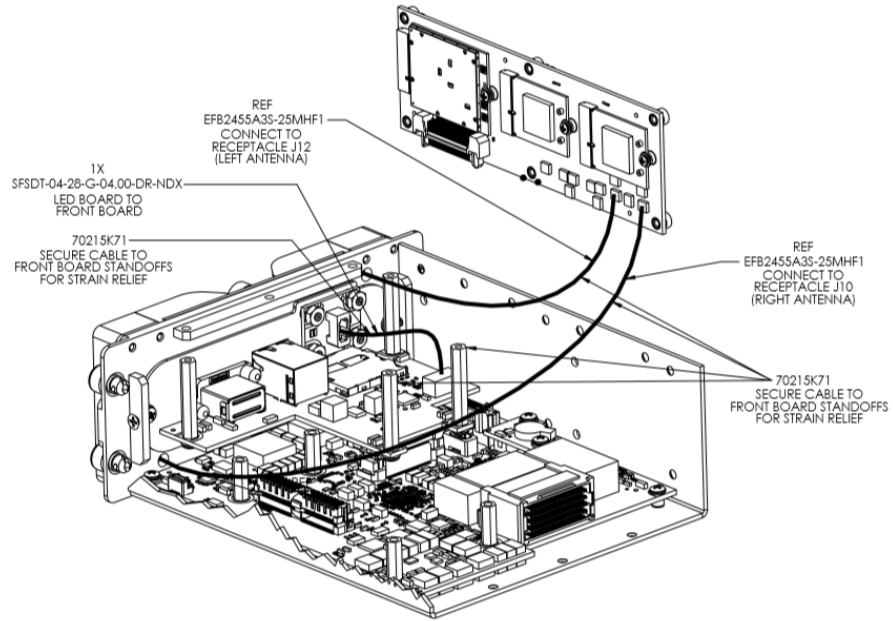
The RF board is placed within the ADG-400 Host unit prior to any setup. The installation of the RF board is shown below and in further detail within the assembly drawing document. Afterwards, the following voltages are required for proper operation of the RF board when installed in the ADG-400:

- 5.0V +/- 5% Pins 1, 3, 5, and 7
- 3.3V +/- 5% Pins 2 and 4
- 1.1V +/- 5% Pins 6 and 8

Note: Contact the manufacturer for further details on the full schematics of RF board.

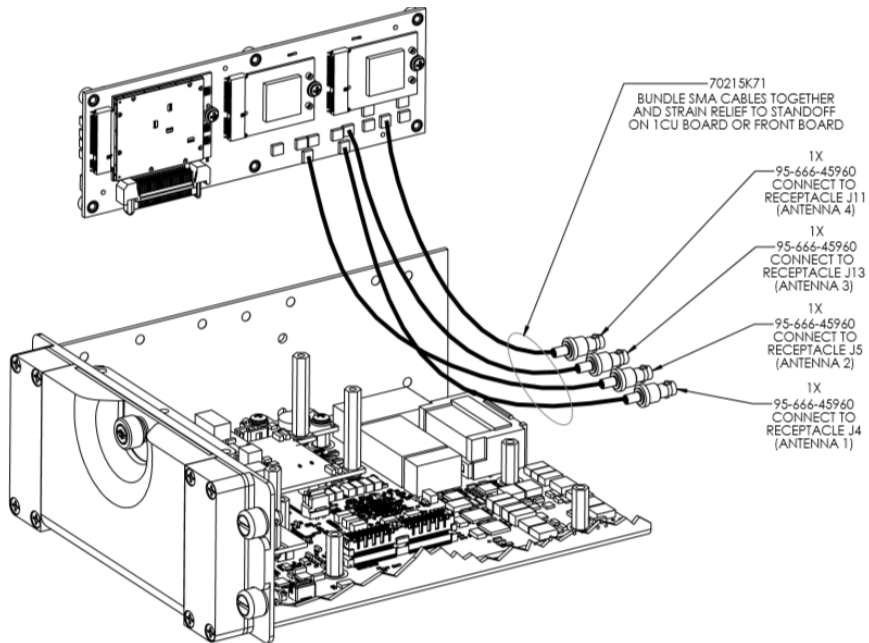
All power is provided to the RF board from the ADG-400 Host unit. The ADG-400 Host unit must be connected to a 28V power supply using the provided ADG power cable (part # 022113-01). In addition a ethernet cable must be connected to the front of the ADG-400 Host unit to control the entire unit. All 6 antenna connections shown in figure 5 are to be connected during normal operation. Any antenna used must support 2.4 GHz, 5 GHz wireless and cellular frequencies.

For stand-alone operation of the RF board 10k pull-up resistors must be applied to pins 15 and 17 of the RF board. In addition, correct power levels must be applied to the RF board outline above.



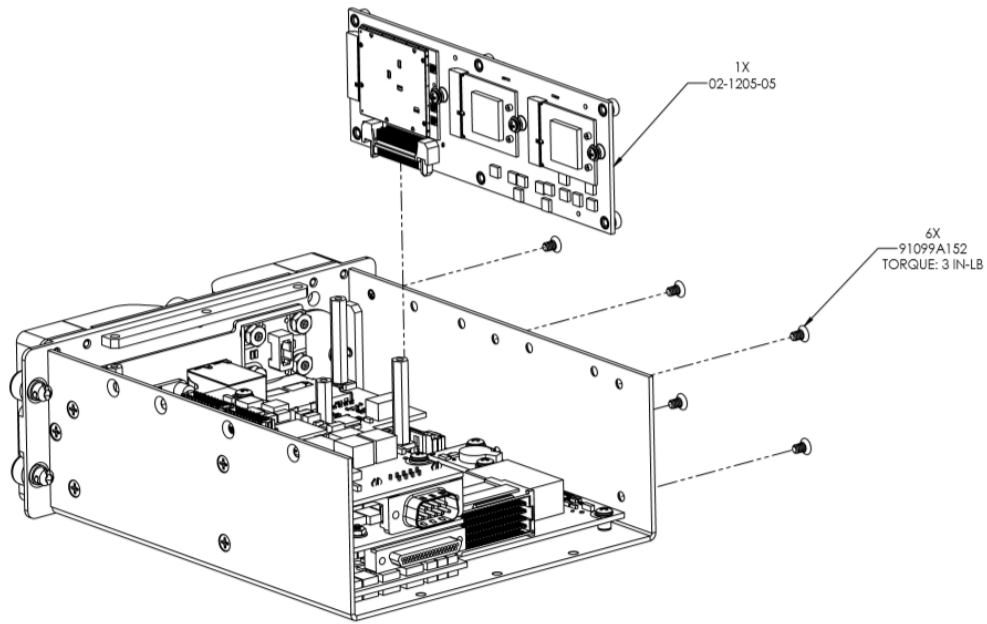
**STEP 9**  
**LEFT/RIGHT RF & LED WIRING DETAIL**  
 RMI CCA's HIDDEN FOR CLARITY

*Figure 2 Assembly Drawing Reference 1*



**STEP 10**  
**RF ANTENNA WIRING DETAIL**  
 RMI CCA's HIDDEN FOR CLARITY

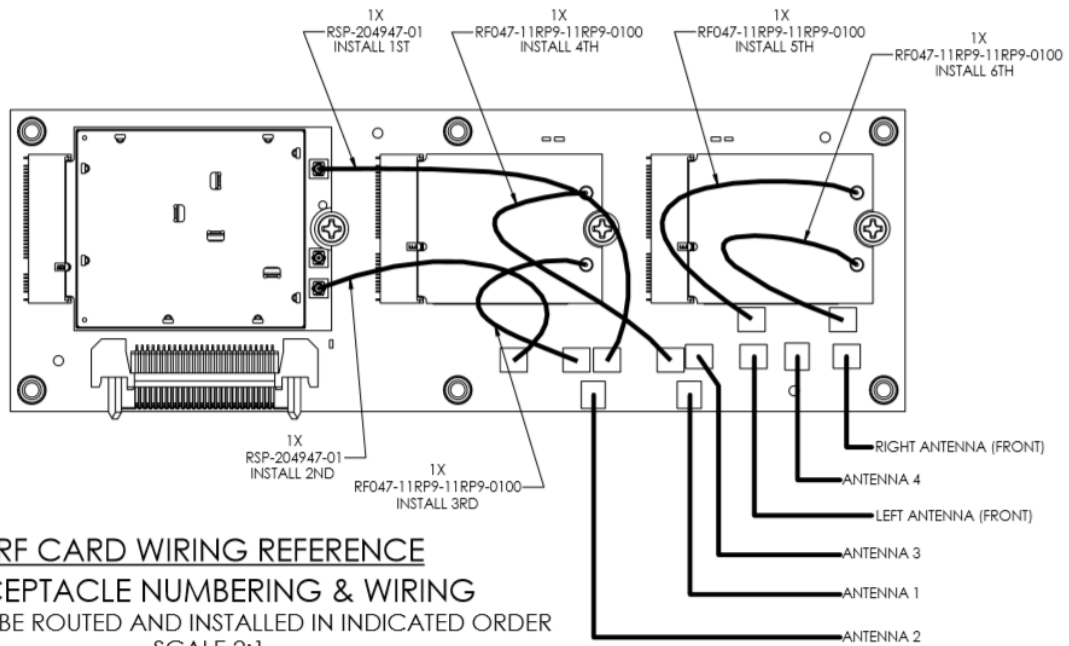
*Figure 3 Assembly Drawing Reference 2*



**STEP 11**  
**RF CARD INSTALLATION**

Figure 4 Assembly Drawing Reference 3

**STEP 10**  
**RF ANTENNA WIRING DETAIL**  
RMI CCA's HIDDEN FOR CLARITY



**RF CARD WIRING REFERENCE**  
**RECEPTACLE NUMBERING & WIRING**  
CABLES TO BE ROUTED AND INSTALLED IN INDICATED ORDER  
SCALE 2:1

Figure 5 Assembly Drawing Reference 4

