RentCafe Home IQ Hub

Internal Photos LTE

Model:	**H4P3-TWC**
Creation Date:	**June 6, 2023**
Revision #:	**1.4**
Revision Date:	**October 2, 2024**
Document Status:	**Preliminary**

TABLE OF CONTENTS

1. REVISION HISTORY 3

2. ZWAVE 800 RADIO 3

3. ASSEMBLY H4P3-TWC HUB 3

3.1 BASE MODULE – INSTALL ZIGBEE FCC LABEL AND COPPER STRIP 4
3.2 BASE MODULE - INSTALL CM4 5
3.3 MULTITECH MODEM - INSTALL SIM CARD 5
3.4 BASE MODULE - INSTALL MULTITECH MODEM 6
3.5 CASE BASE – INSTALL BASE MODULE 7
3.6 CM4 - INSTALL WIFI ANTENNA CABLE 8
3.7 CM4 - INSTALL HEAT SINK 9
3.7.1 Install Spacer Washers 9
3.7.2 Install Thermal Pads 10
3.7.3 Install Heat Sink 11
3.8 BASE MODULE – INSTALL SCREWS 12
3.9 CASE BASE – INSTALL THREAD/ZIGBEE RADIO ANTENNA 13
3.10 CASE BASE - INSTALL LTE ANTENNA CABLES 14
3.11 CASE BASE – INSTALL LED LIGHT PIPES 15
3.12 CASE BASE - INSTALL CASE COVER 16
3.13 CASE BASE - INSTALL RUBBER FEET, SCREWS AND LABELS 17
3.14 CASE BASE - INSTALL WIFI AND LTE ANTENNAS 18
3.15 CASE BASE - INSTALL SERIAL NUMBER LABEL 19

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1. Revision History

Revision	Date	Author(s)	Comments
1.0	6/6/23	Dan Cedrone	Initial version preliminary release
1.1	4/8/23	Dan Cedrone	Updated PCB revision
1.2	5/15/24	Dan Cedrone	Changed Tile and HVIN
1.3	6/17/24	Dan Cedrone	Added detailed assembly
1.4	10/2/24	Dan Cedrone	Updated with ECO034

2. ZWave 800 Radio

FCC ID 2BAL9YDIZW
IC ID 30221 -YDIZW
HVIN H4P3-TWC

3. Assembly H4P3-TWC Hub

BOM Assembly 103-05004-110

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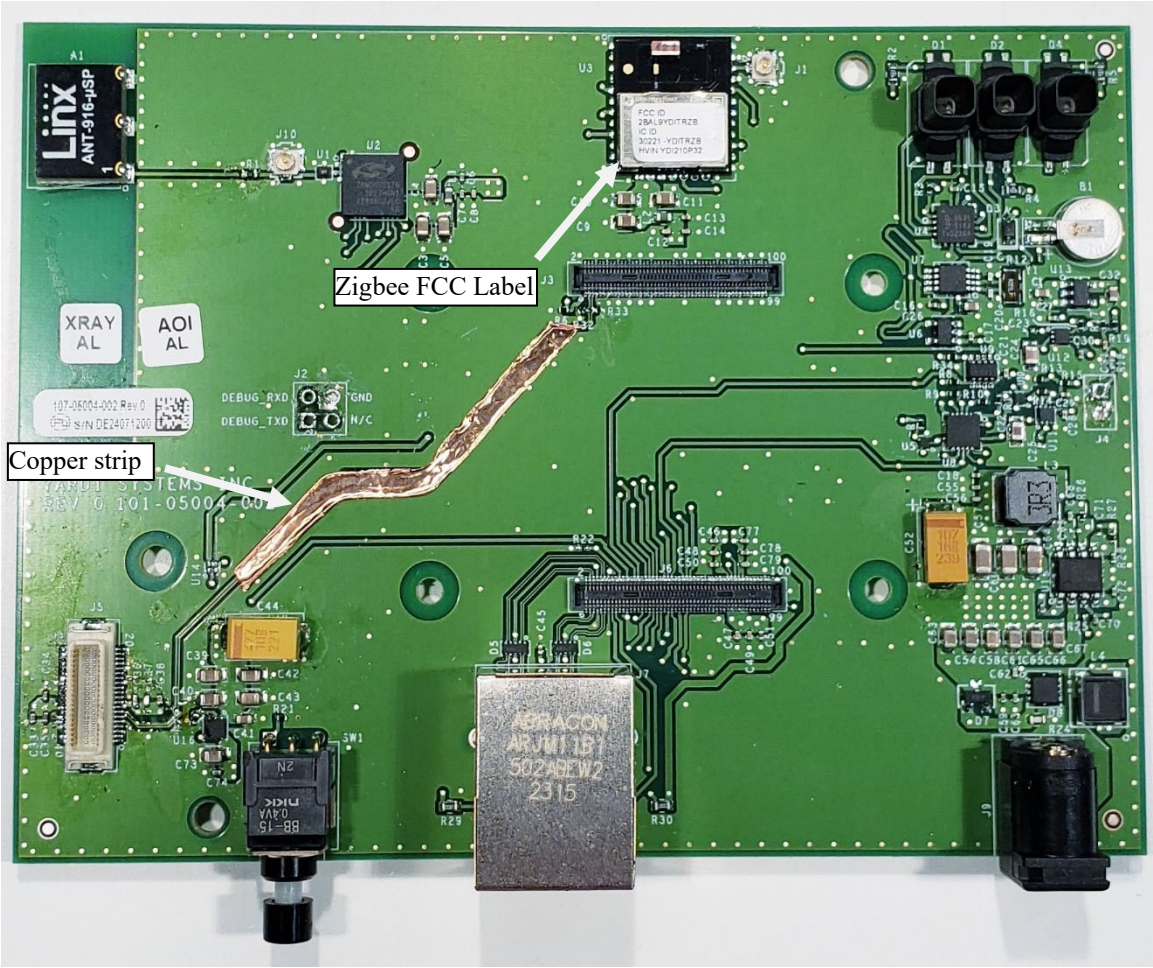
3.1 Base Module – Install ZigBee FCC Label and copper strip

Material added this Step:

100-05004-000 Base Module CM4, Zwave, Thread, LTE
552-05004-310 ZigBee FCC radio label .400x.250
501-05004-000 EMI, USB copper tape strip



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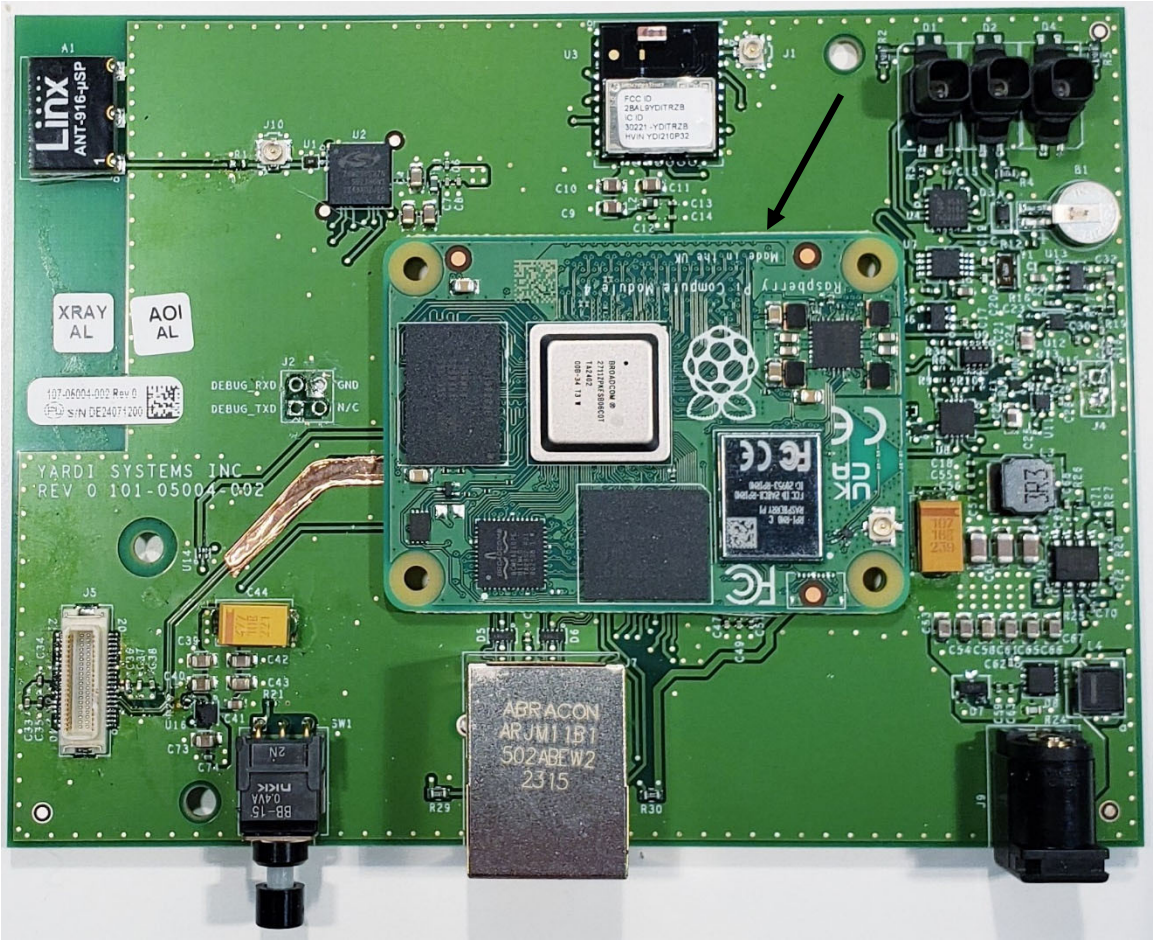
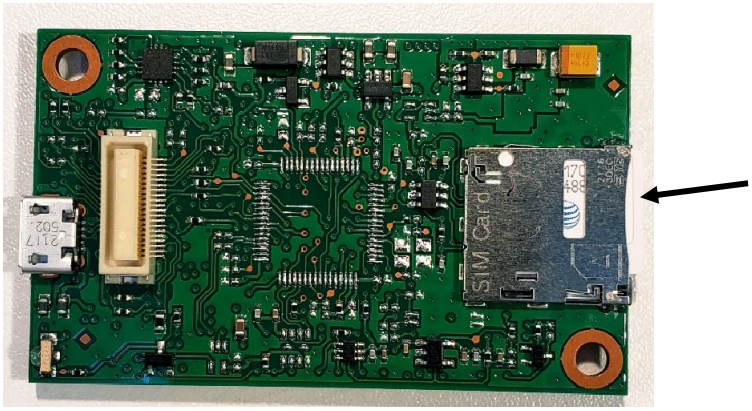
3.2 Base Module - Install CM4

Material added this Step:
100-00669-216 Compute Module 4



3.3 MultiTech Modem - Install SIM Card

Material added this Step:
100-07000-000 USB LTE Cat4 Modem
100-05727-100 Twilio SIM card



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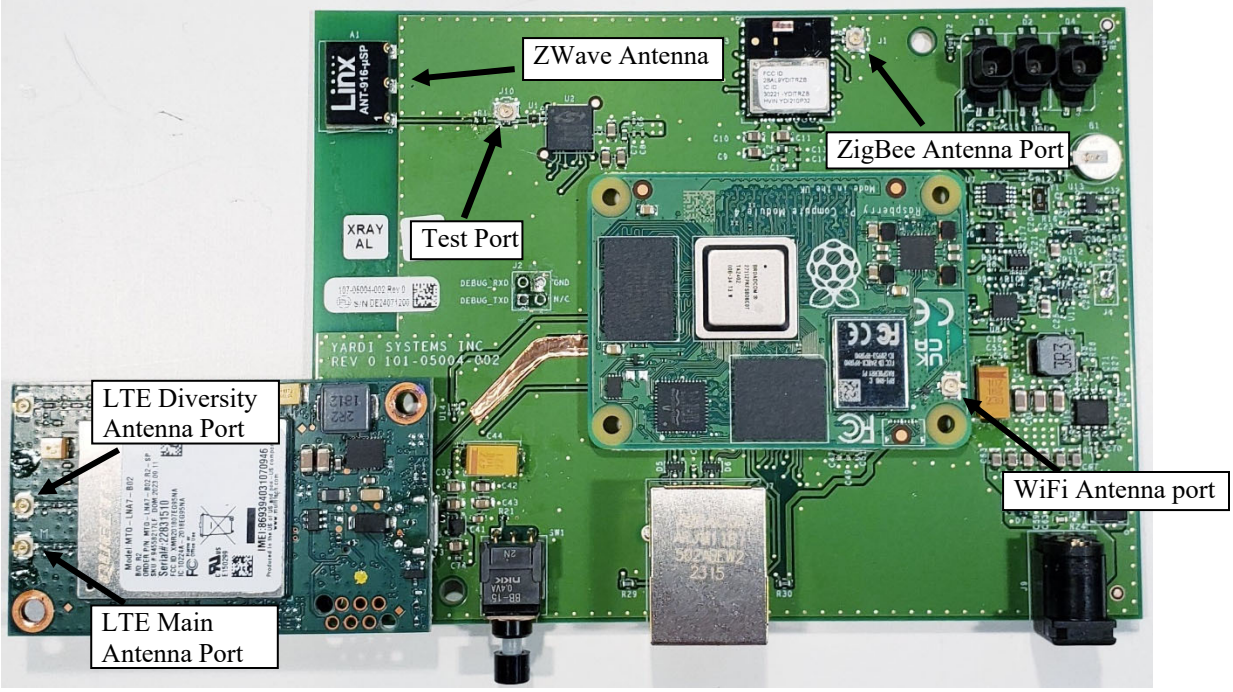
3.4 Base Module - Install MultiTech Modem

Material added this Step: none

Insert Multitech LTE Modem into the Base Module 40 pin connector.



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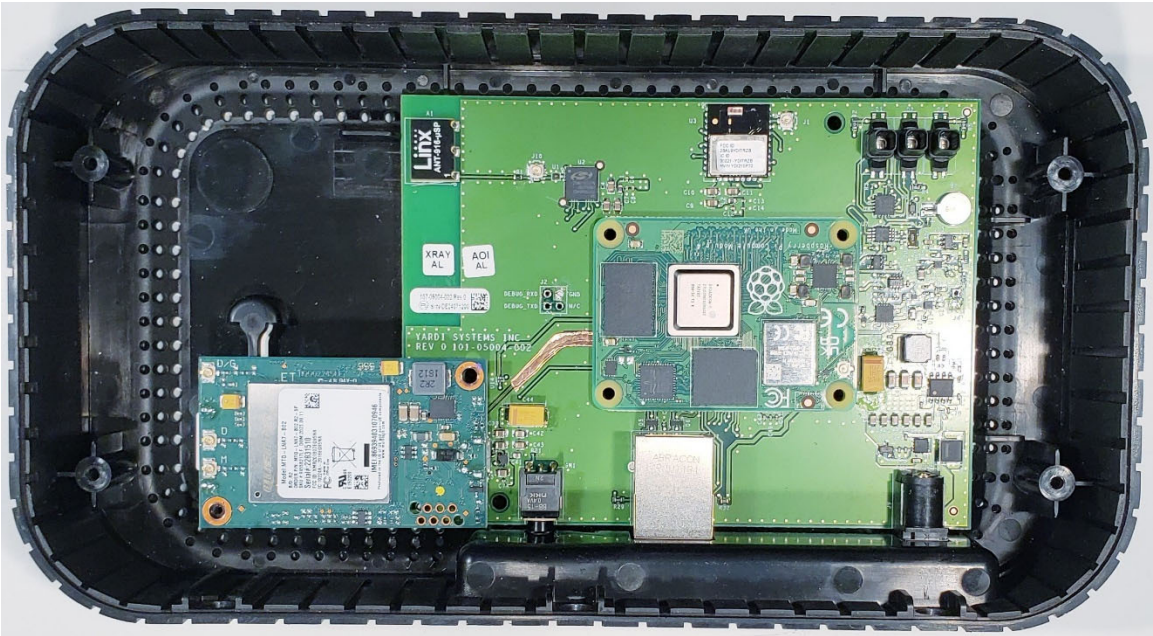
3.5 Case Base – Install Base Module

Material added this Step:
570-05004-120 Plastic, H4P3 Hub Base G3

Install Base Module with LTE modem into the plastic Base.



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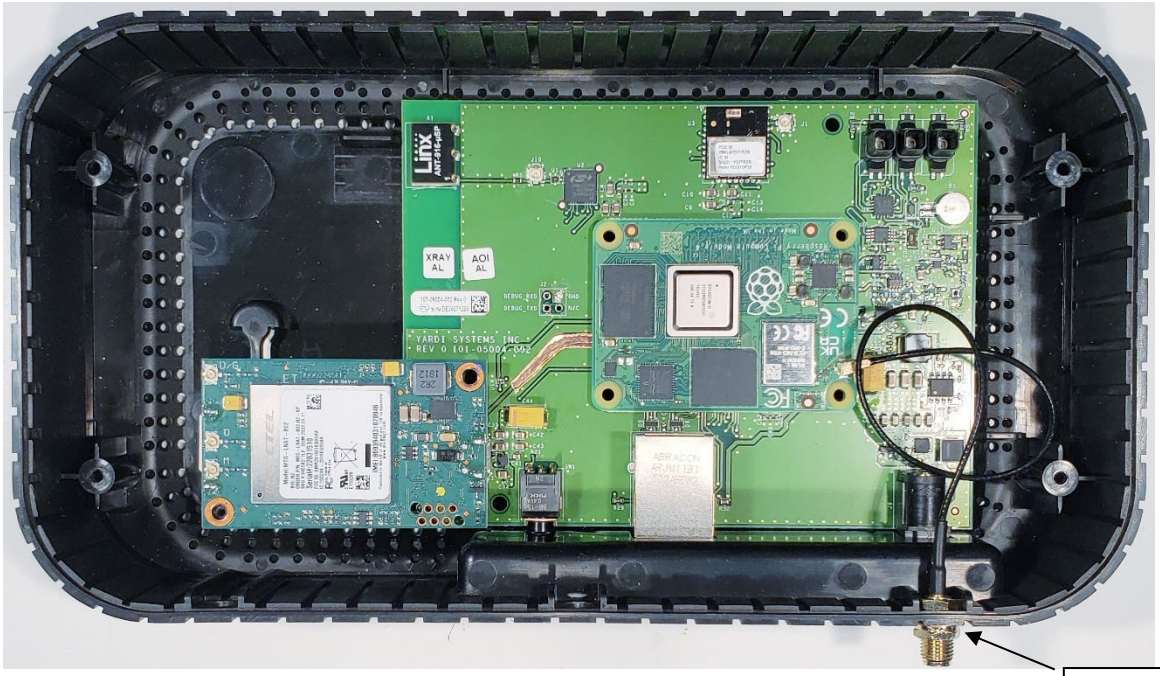
3.6 CM4 - Install WiFi Antenna Cable

Material added this Step:
551-00480-000 WiFi Antenna and SMA coax cable – antenna cable only

Insert the SMA connector into the Case Base hole. The SMA connector has two washers. Both on the outside. The tooth lock washer first, the split lock washer second and the nut. Tighten the nut securely. Plug the antenna cable into the CM4 UF.L connector.



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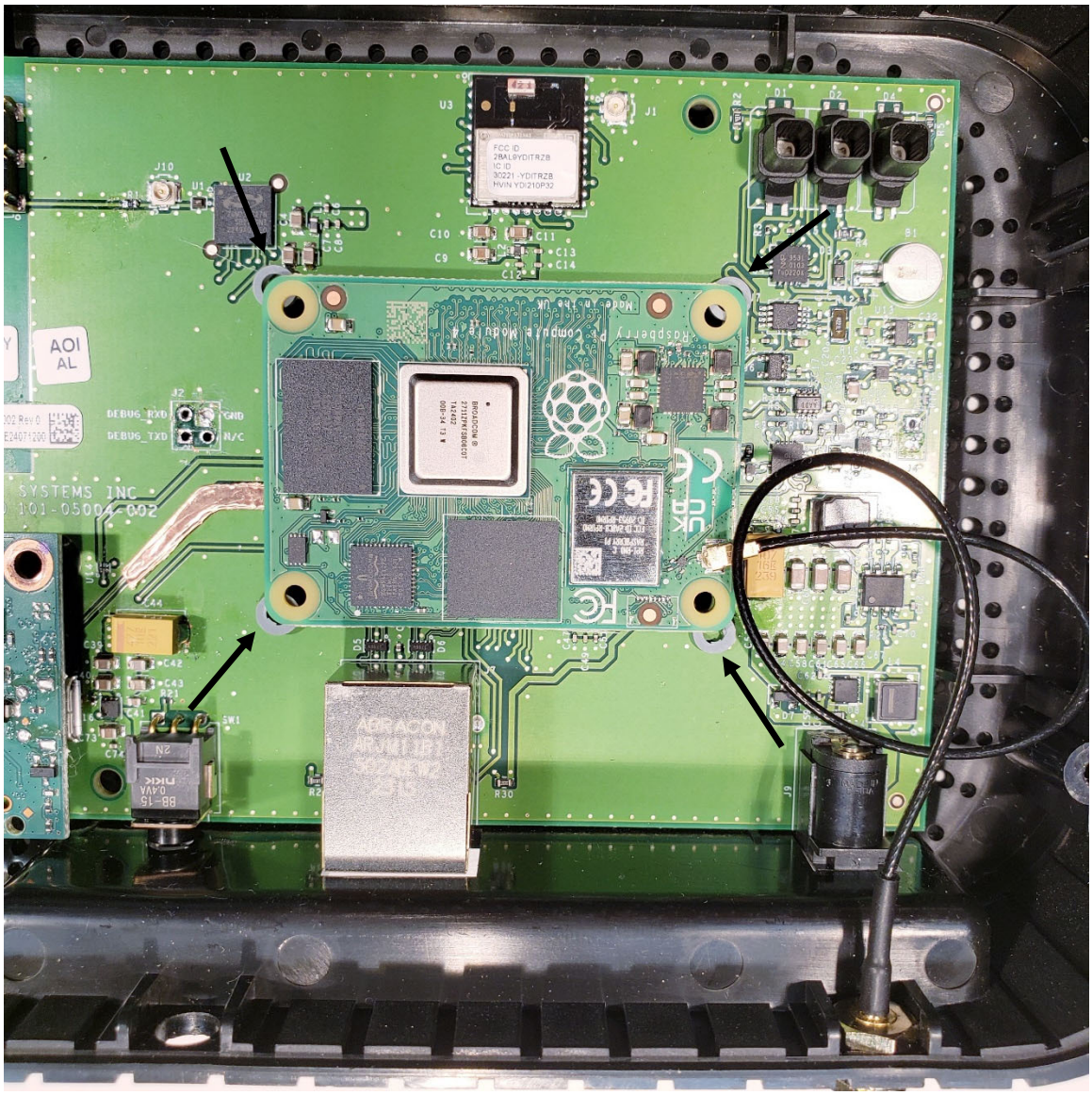
3.7 CM4 - Install Heat Sink

3.7.1 Install Spacer Washers

Material added this Step:
503-02500-001 M2.5 plastic washer, 1.5mm

Place the washers as shown and slide them, under the CM4 module until they align with the holes in the CM4.



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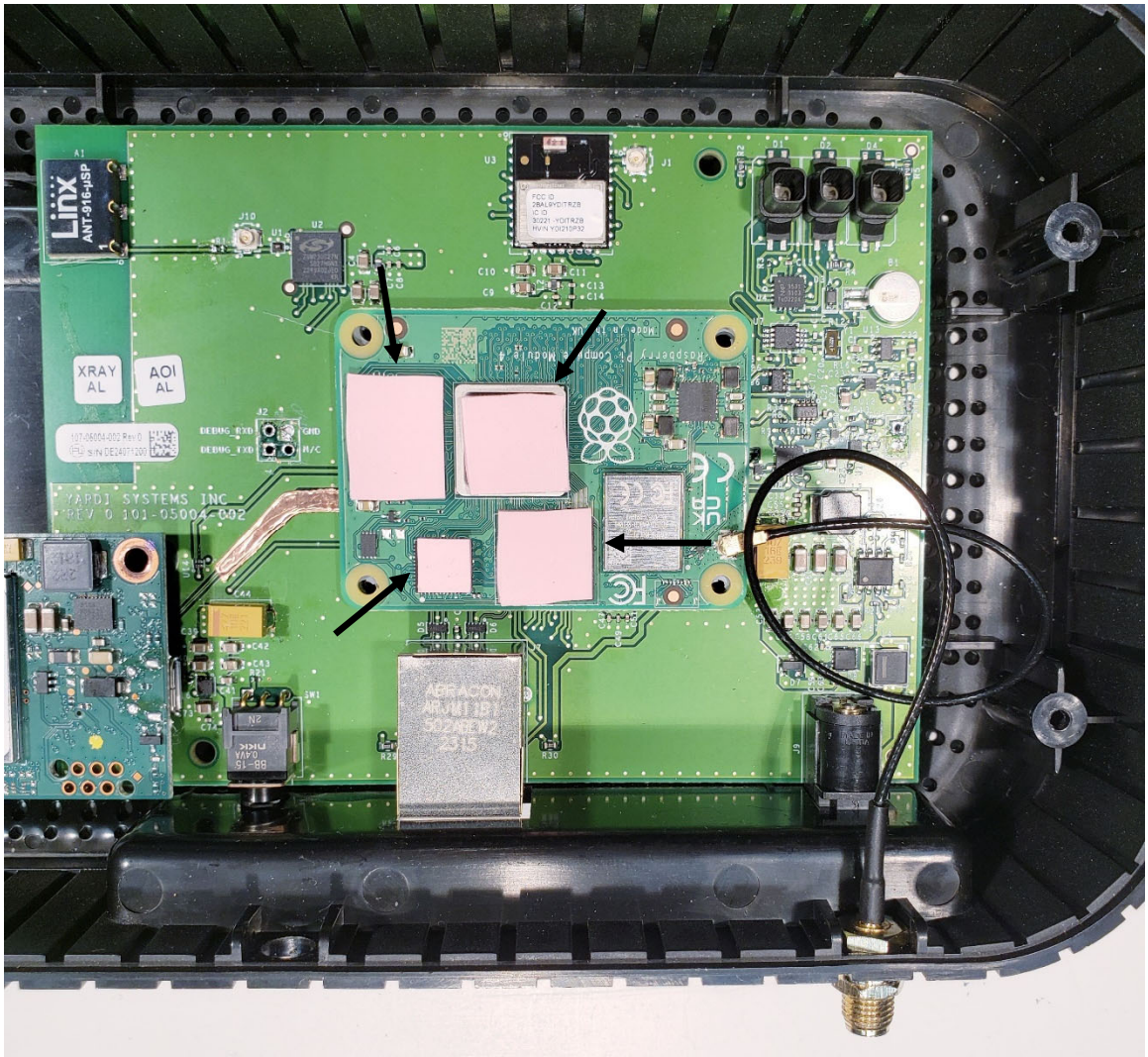
3.7.2 Install Thermal Pads

Material added this Step:
504-11499-980 Heat Sink Kit – Thermal Pads

The thermal pads have plastic on each side. Remove the plastic from one side and place it on the component.



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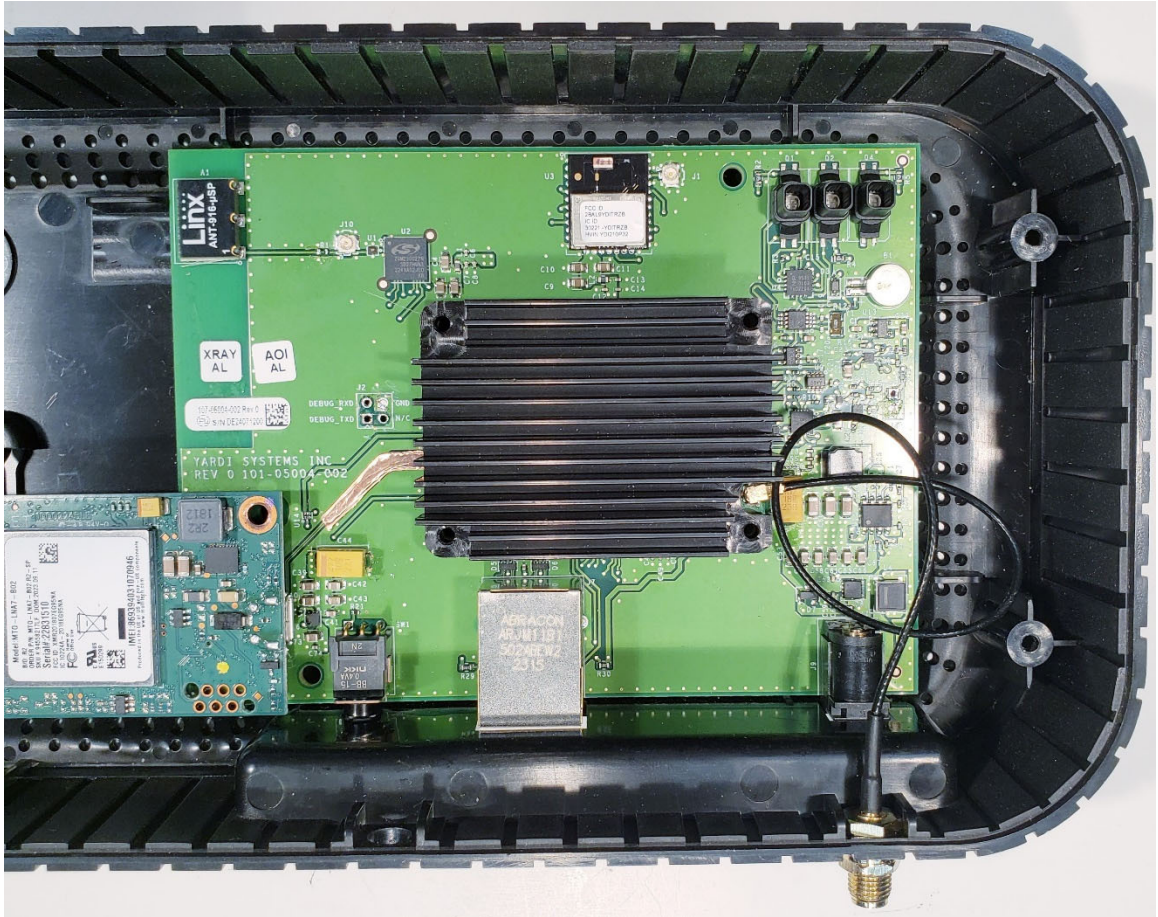
3.7.3 Install Heat Sink

Material added this Step:
504-11499-980 Heat Sink Kit – Heat Sink

Remove the plastic on the thermal pads and place the heat sink over the CM4. The heat sink can only be placed one direction. It has raised surfaces that only fit one way.



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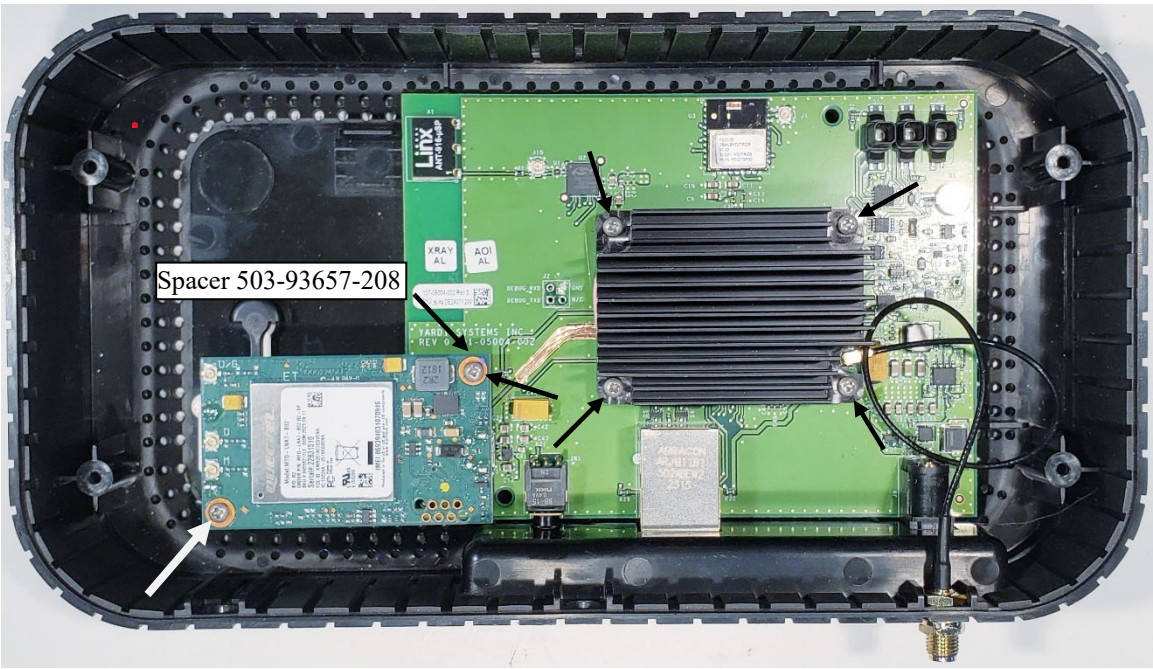
3.8 Base Module – Install screws

Material added this Step:
503-02500-010 SCR, #2x1/2, Thread forming, SS, Phillips pan head
503-93657-208 SPC, Nylon Unthreaded Spacer, 6mm L x 2.7mm ID

Install one Spacer between the Multitech LTE Modem and Base module. Install two screws to the LTE Modem and 4 screws to the Base Module heat sink. DO NOT OVER TIGHTEN the heat sink screws.



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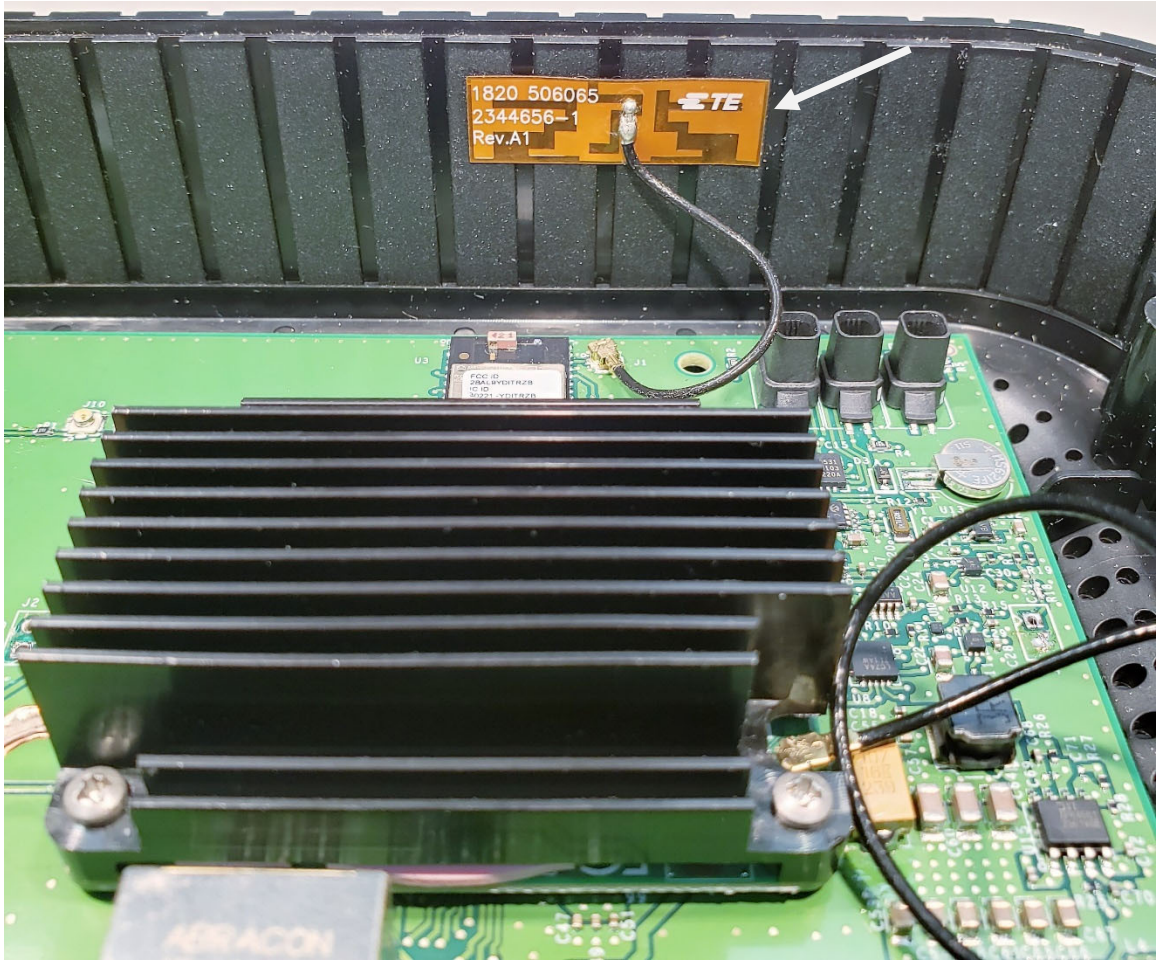
3.9 Case Base – Install Thread/Zigbee Radio Antenna

Material added this Step:
551-02344-656 FPC Antenna WLAN Dual Band



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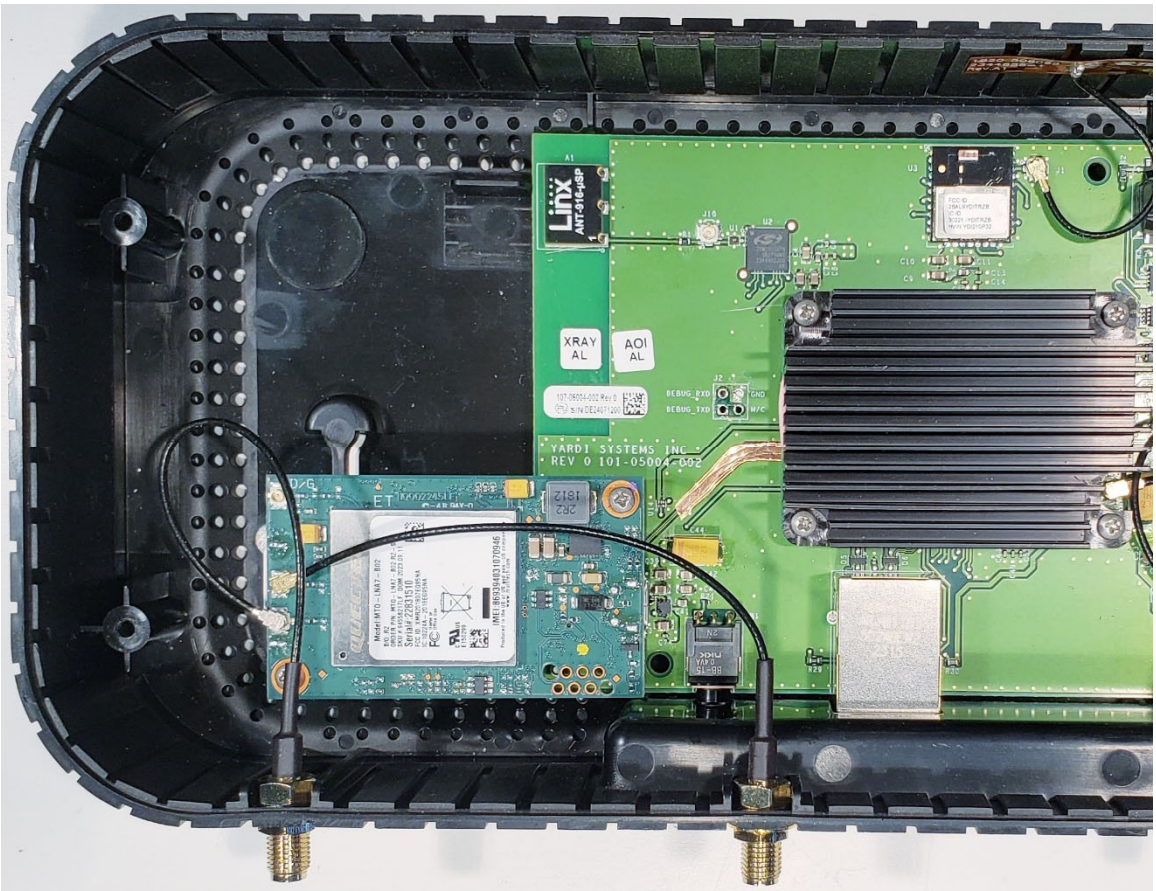
3.10 Case Base - Install LTE Antenna Cables

Material added this Step:
551-00010-004 SMA-UF.L coax antenna cable

Insert the SMA connector into the Case Base hole. Insert the washer and nut on the outside and tighten securely. Plug the UF.L end of the cable into the modem UF.L connector. **Make sure you rotate the SMA connector until the UF.L connector at the other end of the cable is facing downward**.



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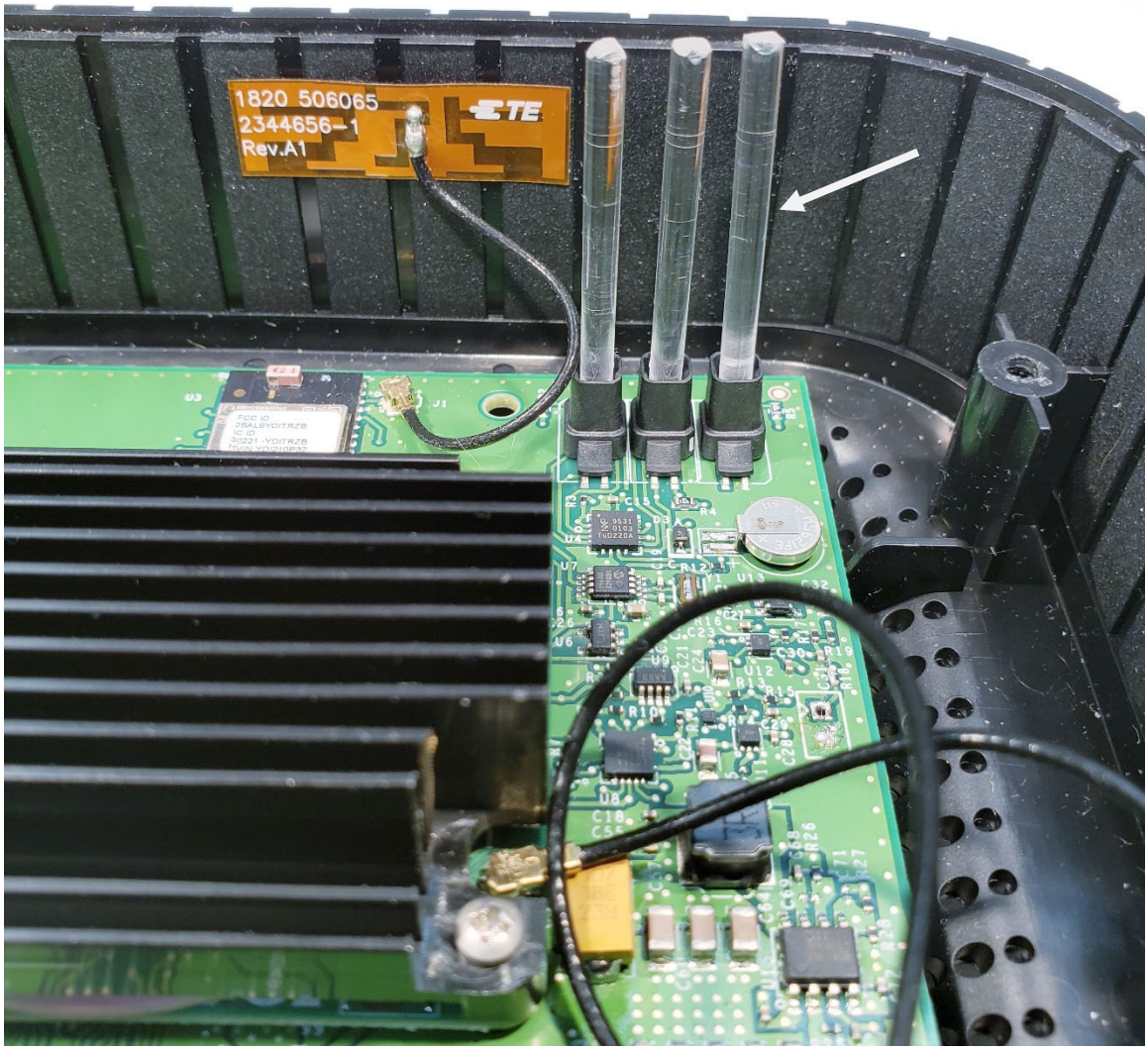
3.11 Case Base – Install LED Light Pipes

Material added this Step:

221-31500-000 LED, SMT, RGB, 1500 mil Light Pipe
221-31500-010 LED, SMT, Green, 1500 mil Light Pipe



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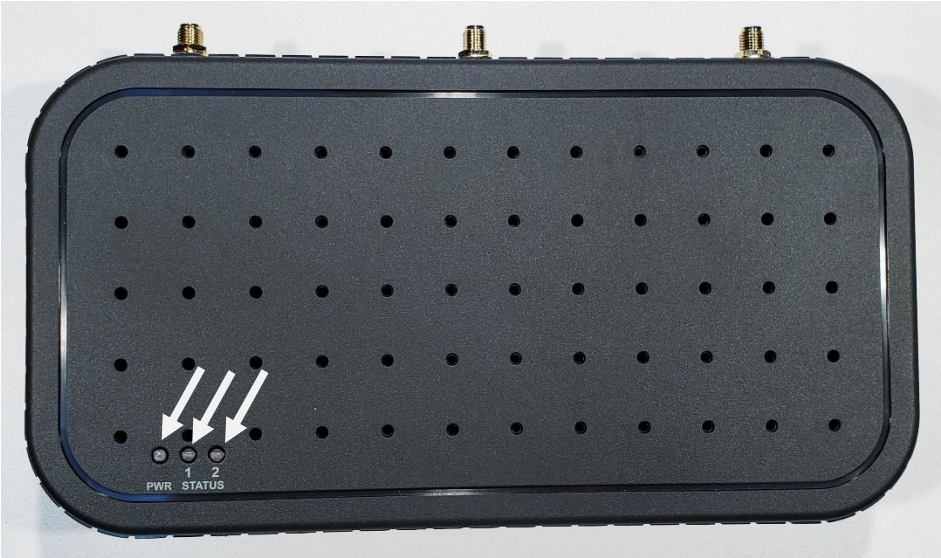
3.12 Case Base - Install Case Cover

Material added this Step:
570-05004-121 Plastic, H4P3 Hub Cover G3
Place cover onto the Case Base. You must align the LED light pipes to the three holes in the cover.



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3.13 Case Base - Install Rubber feet, Screws and Labels

Material added this Step:
503-02500-010 SCR, #2x1/2, Thread forming, SS, Phillips pan head
570-05004-001 Rubber, cylindrical flat bumper .375" Dia. X .125" Black
552-05004-110 FCC certifications
552-05004-200 ZWave Logo
552-05004-300 Zigbee Logo

Secure the cover with 4 screws as shown by the orange arrows. Install the rubber feet as shown by the white arrows.

Install the ZWave Logo, ZigBee Logo and FCC label.

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3.14 Case Base - Install WiFi and LTE Antennas

Material added this Step:
551-05102-001 LTE Antenna SMA
551-00480-000 WiFi Antenna and SMA coax cable - Antenna

Install the three antennas securely.

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3.15 Case Base - Install Serial Number Label

Material added this Step:
552-05004-100 Smart Hub Product (S/N, Model)

The Serial Number label is printed at the Testbench station. **Shown here just for placement.** The SN should start with XF.

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