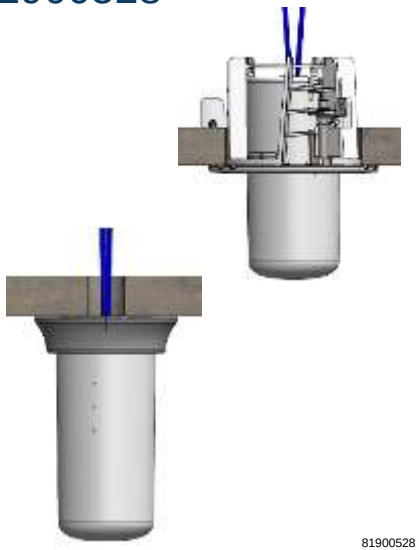
Rev.	Description	EC number
A	Initial release	ECO-01061
B	Add safety information and torque clarification	ECO-01082

IX02OMI136-M4 Antenna

Instructions for the IX02OMI136-M4 Antenna

P/N 81900528



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IX02OMI136-M4 Installation Guide

This is the installation guide for the IX02OMI136-M4 antenna. Below are the parts included with the antenna.

IX02OMI136-M4		
Item #	**Description**	**Qty. in kit**
1	ANTENNA BODY ASSY, IX02OMI136-M4	1
2	ANTENNA COLLAR ASSY	1
3	COLLAR COVER, PANEL HOLE 4.5”	1
4	CEILING MOUNT BRACKET	1
5	CEILING BRACKET COVER	1
NOTE: These item numbers refer to *Figure 1* on page 3.		

Other key details:

Ceiling tile specifications:
- Maximum thickness = 1.25 in. (31.75 mm)
- Ceiling tile hole = Ø4.5 in. (Ø114.3 mm)

For the ceiling mount bracket, use the appropriate screws for the ceiling material.

Safety:

The antenna and all associated equipment should be installed with all applicable local and national electrical code guidelines to ensure safe operation.

Precaution

For best PIM results:
- Make sure the connectors are clean and free from any metal flakes/dirt and tighten the connectors using torque wrench.
- Avoid extreme bending to the cable.
- During installation of the antenna, both cables should not be crossing one another.
- Do not remove the dust cap from connectors when not in use.
- Avoid mounting on metal surfaces.

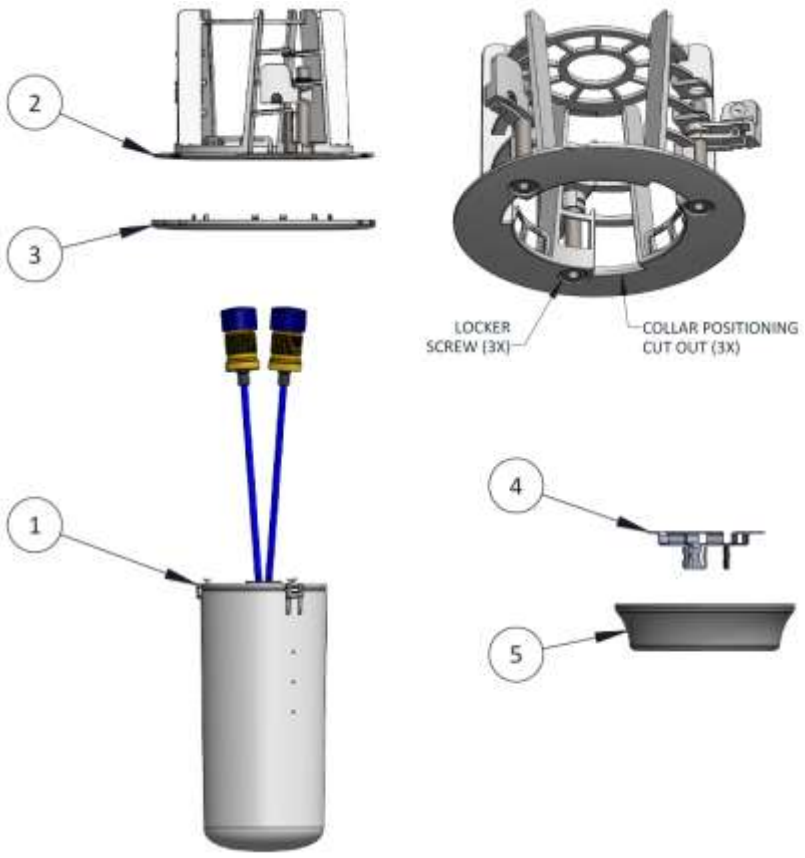

Figure 1: Components of IX02OMI136-M4

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Mounting the IX02OMI136-M4 antenna on a ceiling tile

1. Drill a Ø4.5 in. (Ø114.3 mm) hole in the ceiling tile and insert the collar, with its lockers closed.

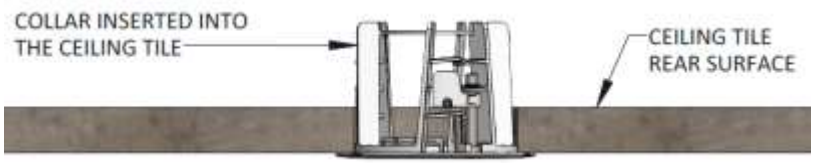

Figure 2: Inserting the collar

2. Screw the 3 locker screws using a 6 mm hex wrench until the lockers rotate to the open position and touch the ceiling tile rear surface. Depending on the ceiling tile material, either apply a maximum torque of 2 lbf·in (0.225 N·m) or tighten the screws just enough to secure the collar into the hole.

Figure 3: Screwing the lockers open

Inserting the antenna into the collar

3. Once the collar is properly locked into the ceiling tile, remove the RF connector caps from the connectors on the antenna cables, and pass the connectors and cables through the collar gate hole and set them gently on the ceiling tile rear surface.

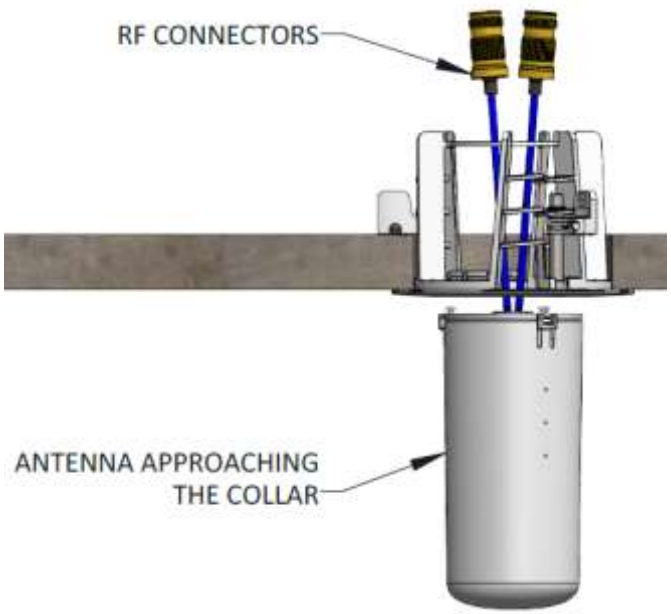

Figure 4: Inserting the antenna into the collar

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Adjusting the height of the antenna

4. The antenna has three possible positions marked by "reference spots" printed on the antenna radome.

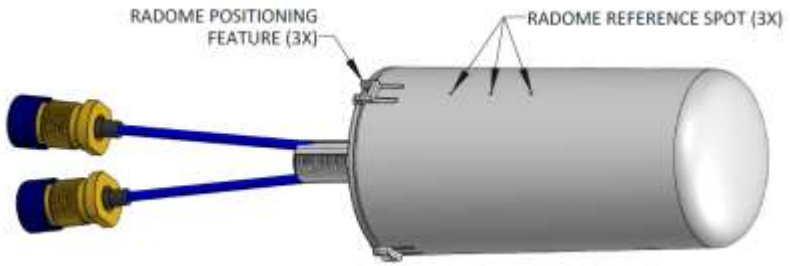

Figure 5: Radome reference spots

5. Push the antenna up until it has reached the desired position referenced by the spot aligned with the collar lower surface, then slightly turn the antenna clockwise until it stops. Gently pull it down to the correct position.

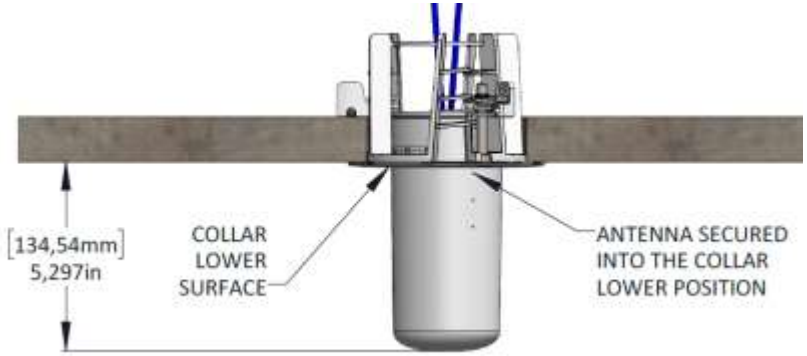

Figure 6: Antenna locked in lower position

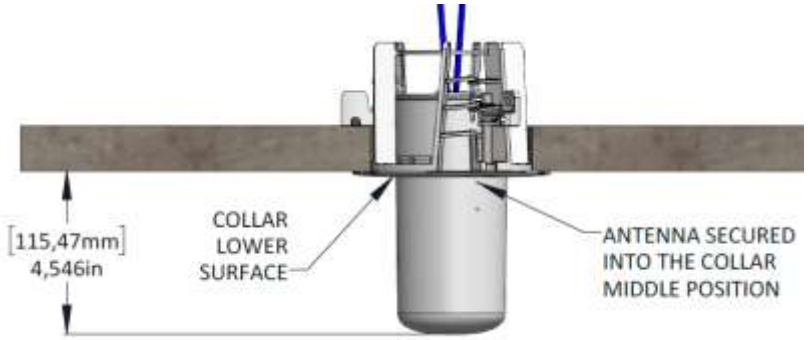

Figure 7: Antenna locked in middle position

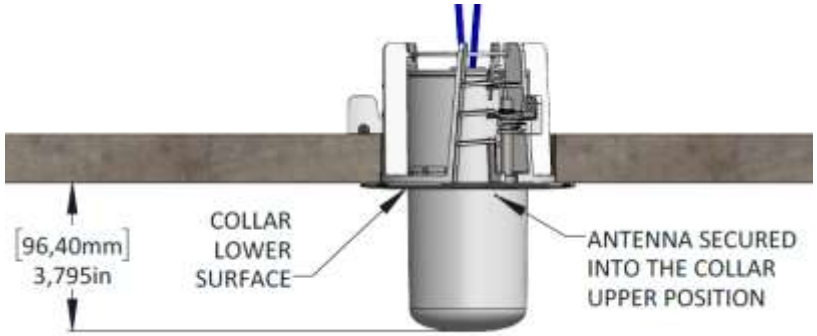

Figure 8: Antenna locked in upper position

Attaching the collar cover

6. To conceal the locker screws, match the cover latches with the collar latches housings, then push the cover on the collar.

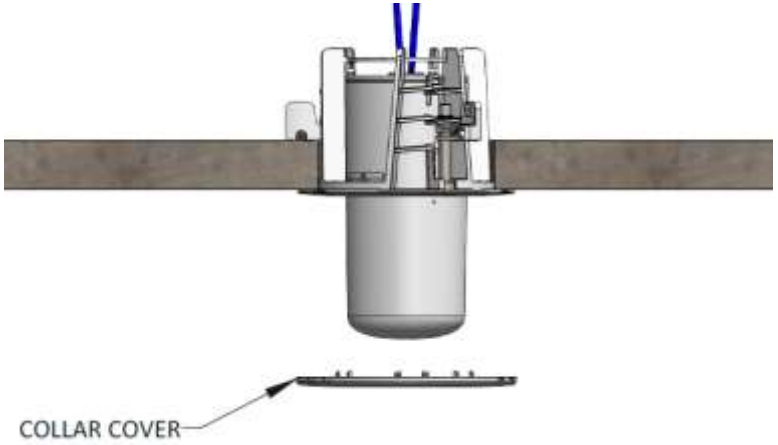

Figure 9: Lining up the collar

Figure 10: The collar in position

Mounting the antenna on a concrete roof using the supplied ceiling mount bracket

Drilling pattern shown below; instructions on the next page.

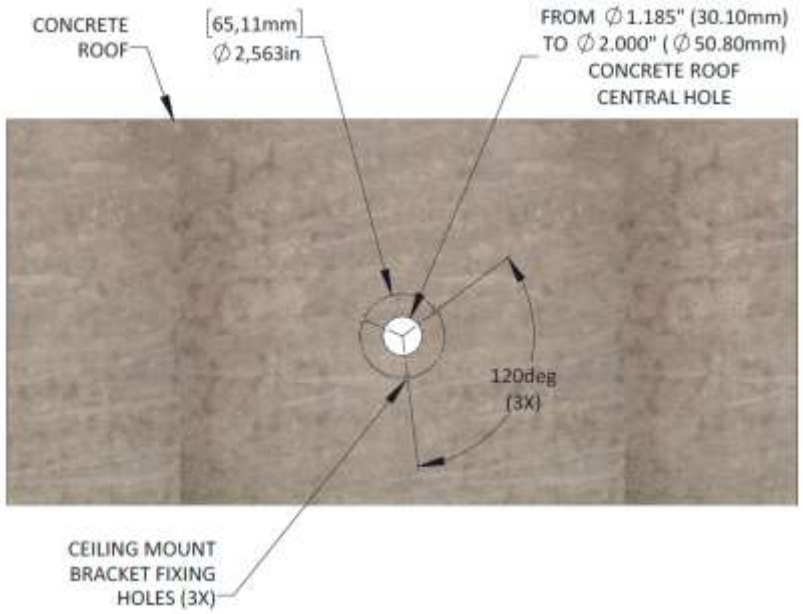

Figure 11: Hole patterns

Attaching the ceiling mount bracket

1. Drill a central hole in the concrete roof for passage of RF connectors and cables. The hole size can range from Ø1.185 in. (Ø30.10 mm) to Ø2.000 in. (Ø50.80 mm). (See *Figure 11*.)
2. Drill ceiling mount bracket assembly holes according to the following specifications:
   - The holes have to be centered with the roof central hole.
   - The holes have to be 120° spaced on a diameter of 2.563 in. (65.11 mm).
   - To correctly drill the fixing holes, the wall mount bracket can be used as a drilling template. Though it has 6 holes, only 3 will be used.
   - Imperial: Drill 3 holes for UNC 10-24 or 12-24 thread size screws
   - Metric: Drill 3 holes for Ø4 or Ø5 thread size screws
   - Torque: 30 lbf·in (3.30 N·m)
3. Attach the ceiling mount bracket to the concrete roof.

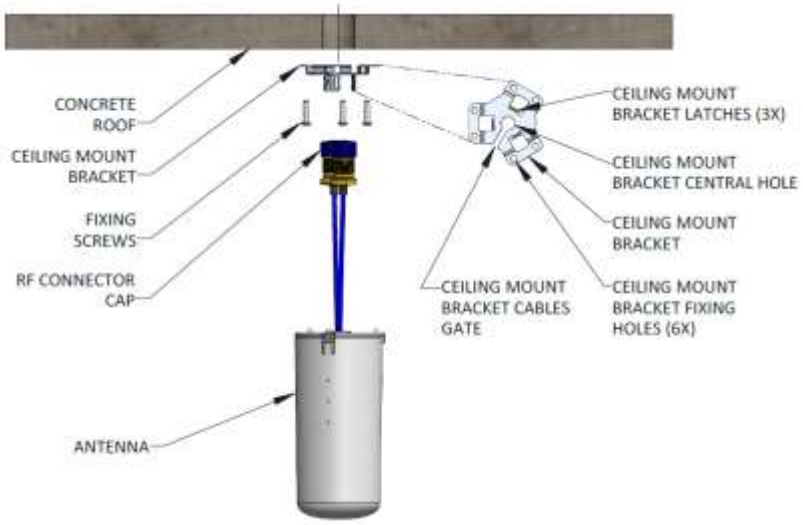

Figure 12: Antenna and equipment for concrete roof installation

Mounting the IX02OMI136-M4 antenna on a concrete roof after ceiling mount bracket installation

4. Pull the RF male connectors through the roof central hole and ceiling mount bracket, and plug them into the antenna RF connectors.
5. Pass both RF connectors back up through the ceiling mount bracket and gently store them and the RF cables on the concrete rear surface.
6. Align the 3 antenna lid silkscreen references with the ceiling mount bracket.

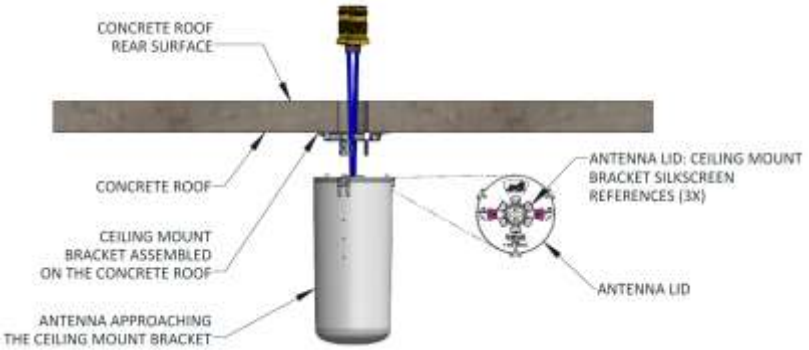

Figure 13: Aligning the antenna lid silkscreen to the ceiling mount bracket

7. Push the antenna toward the ceiling mount bracket until the latches engage the antenna with a "click."

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Attaching the ceiling bracket cover

8. To conceal the ceiling mount bracket, align the ceiling bracket cover with the radome positioning features on the antenna.
9. Push up and click into place.

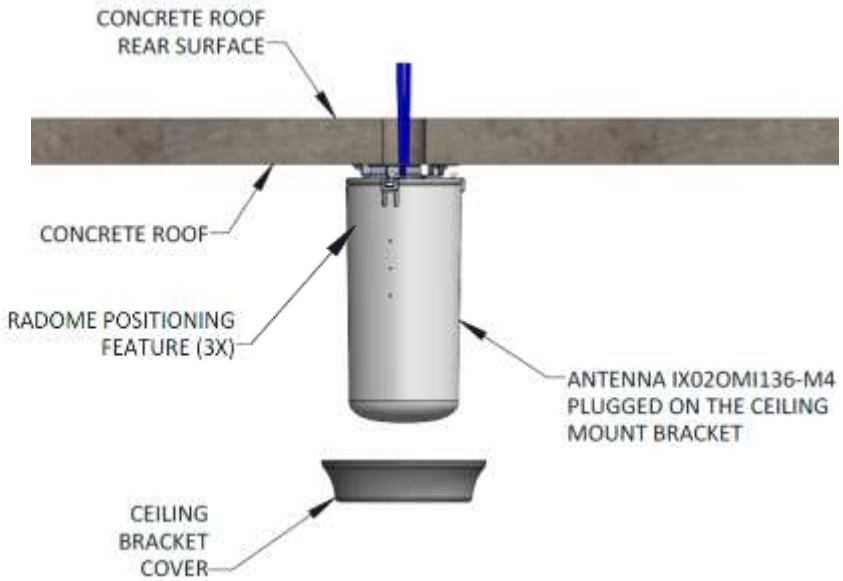

Figure 14: Adding the cover

Figure 15: The cover in place

Connecting external jumpers to pigtails

Using a calibrated torque wrench on the male jumper 4.3-10 connector, torque the connects to 44.25 lbf·in (5 N·m or 3.7 lbf·ft).

Figure 16: Torque details

Unplugging the antenna

1. Grab the antenna with one hand and slightly turn it counterclockwise. Pull the antenna down and leave it dangling.
2. Unscrew the ceiling mount bracket from the concrete roof and move the RF cables from the central hole.
3. Pull out the RF connectors from the central hole and disconnect them.