

# Edge AI CIC Antenna Description

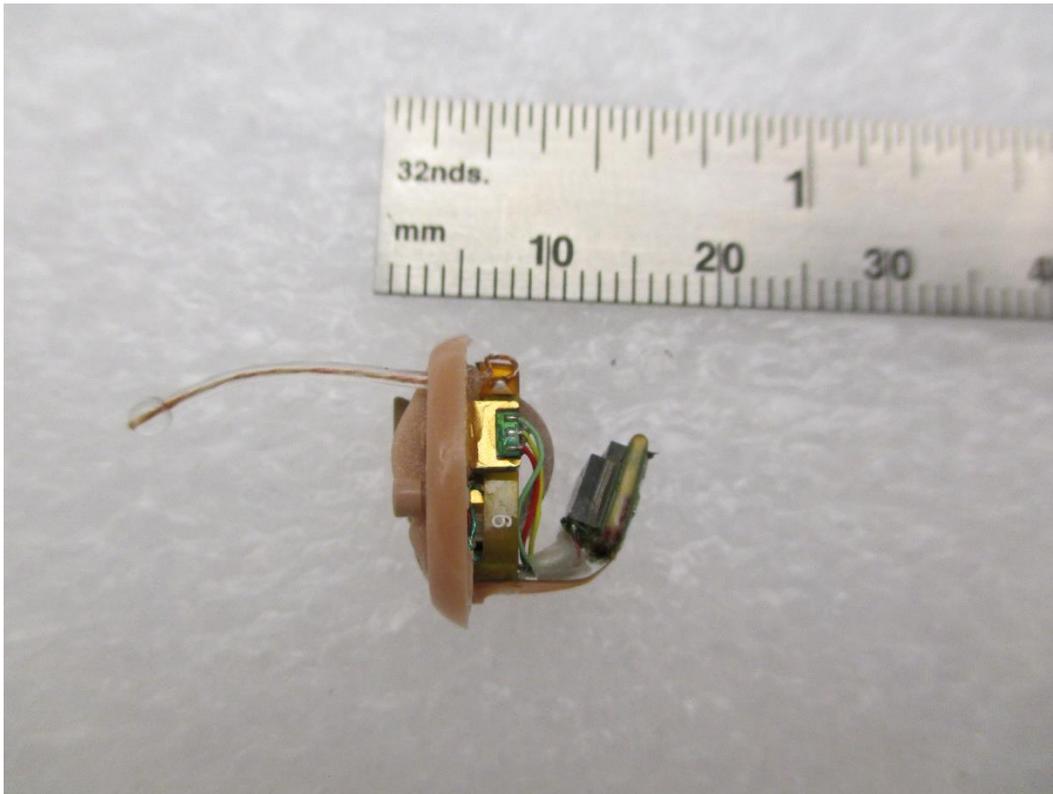
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## Antenna Type

The antenna is a monopole antenna containing a feedline flex and a removal handle.

The peak gain of the antenna is -2.72 dBi (See Calculations at the end)

Date of antenna pattern measurement: March 05, 2024



**Figure 1 CIC Antenna (Scale in cm)**

### Three-Dimensional Pattern (Scale in dBm)

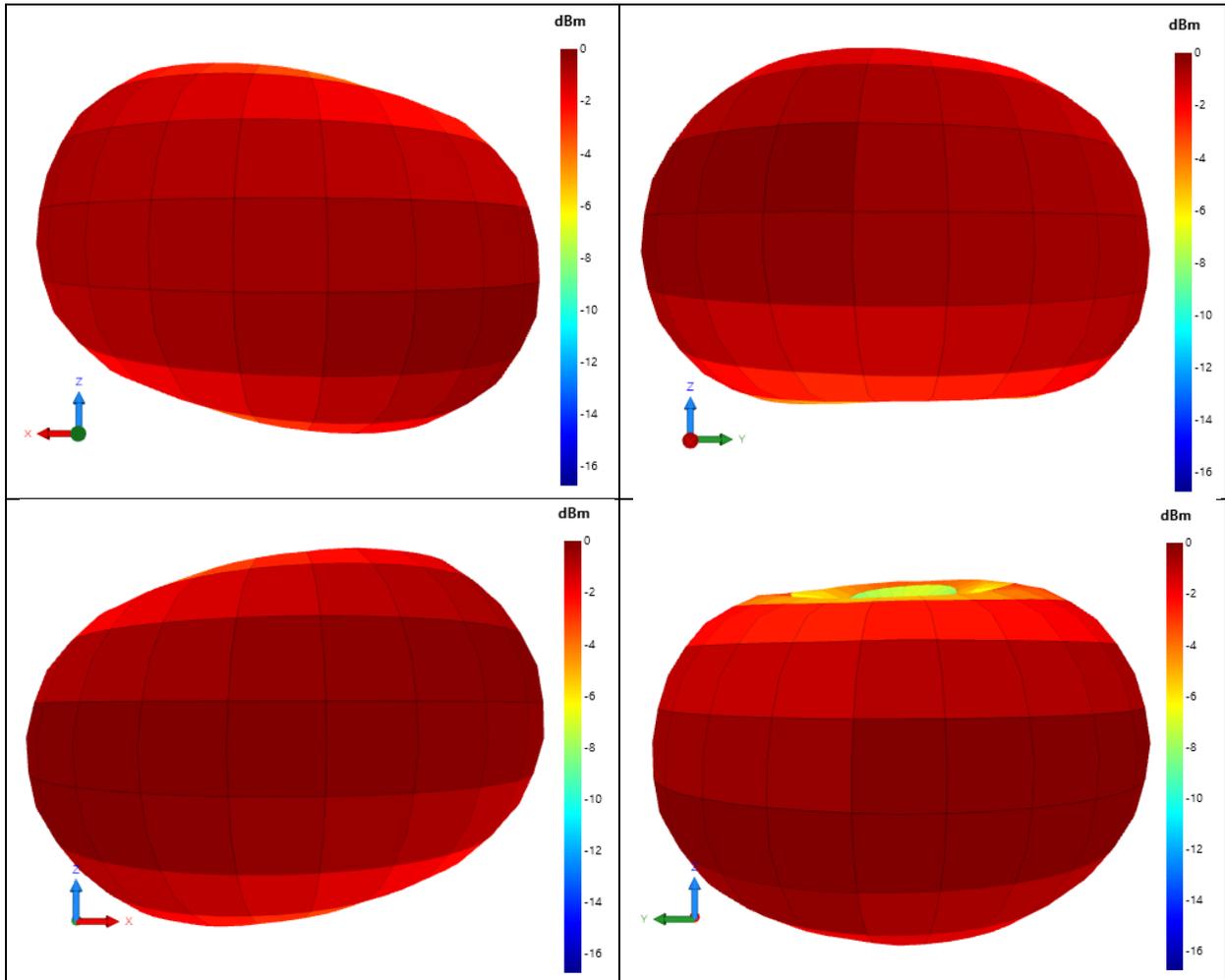
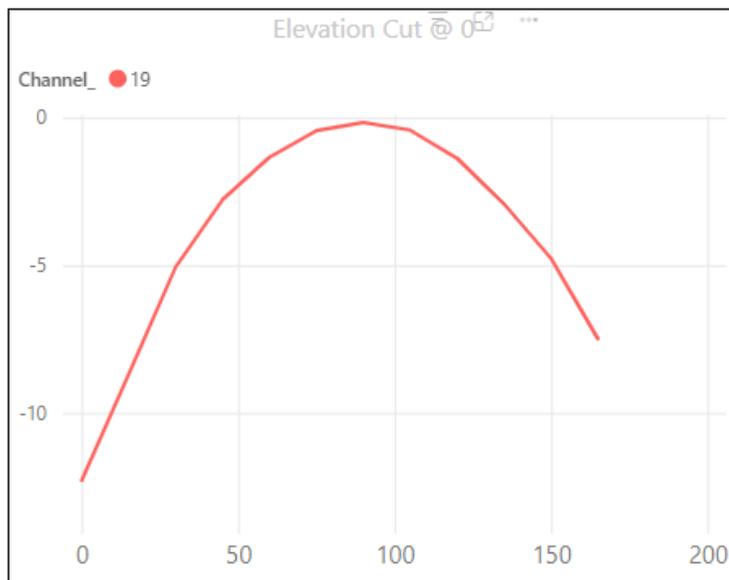
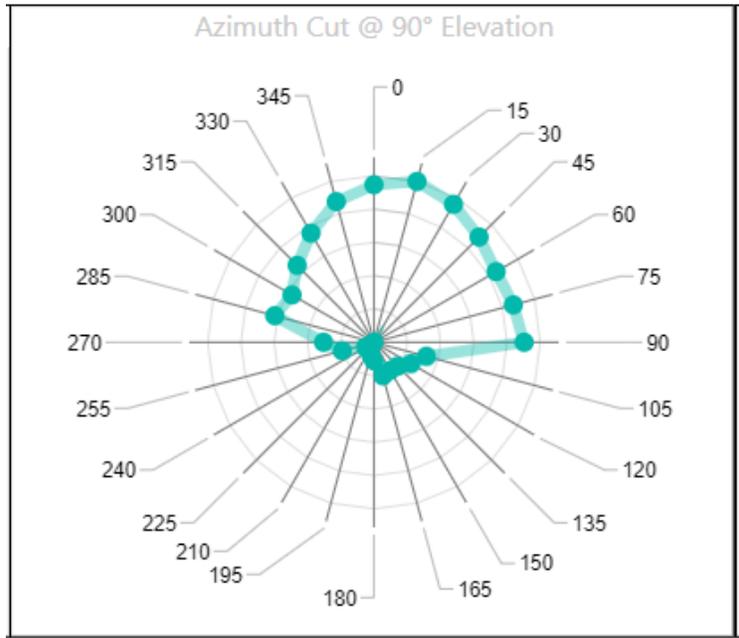


Figure 2a Three Dimensional Antenna Pattern





**Figure 2b Hearing Aid Antenna Elevation and Azimuth Cuts**

**Antenna Pattern Measurement Information**

The antenna patterns shown in Figures 2a were measured using a MVG SG24L antenna test system, serial number ATL3843S located at Starkey Laboratories, Inc., 6600 Washington Avenue, South, Eden Prairie, MN 55344.

The system was calibrated on October 12, 2023, and due for calibration in October 2024. Signal levels were measured using a Keysight N9020B MXA Signal Analyzer (Spectrum Analyzer). serial number MY63470227, calibrated on May 04, 2023 and due for calibration on May 04, 2025. The antenna pattern plots in Figures 2 are generated by the SG24L test system software.

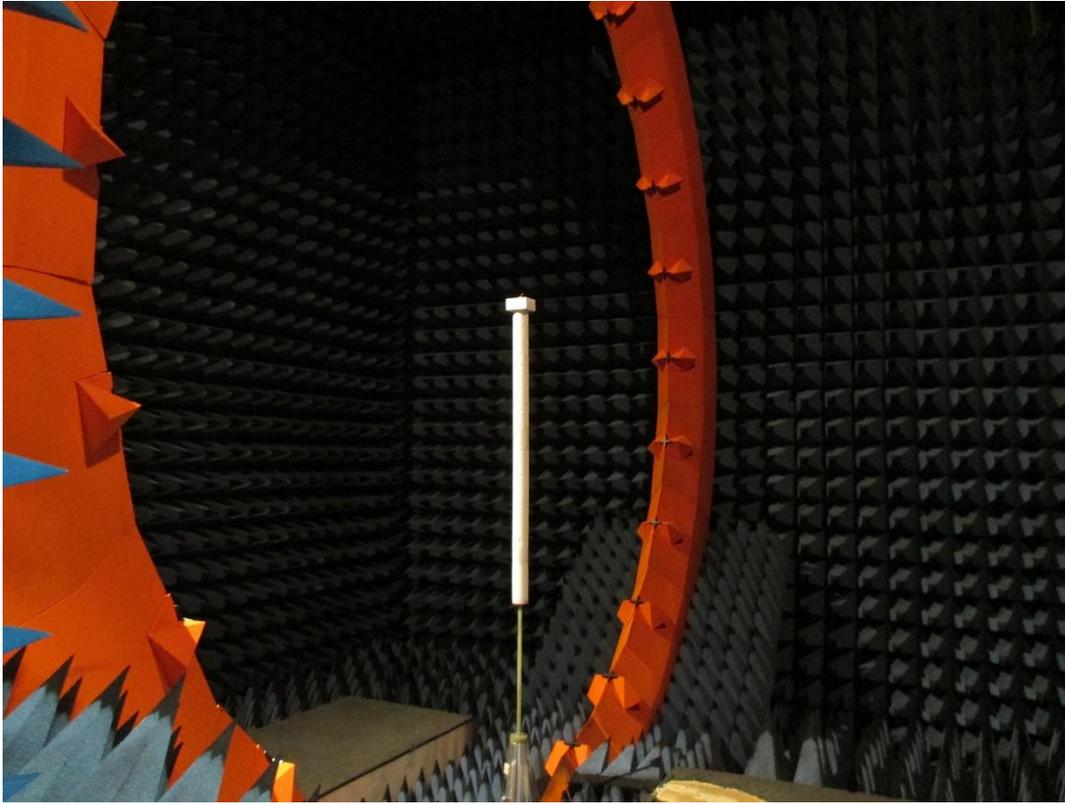


Figure 3a Overall view of SG24L test chamber, showing ring of receiving antennas

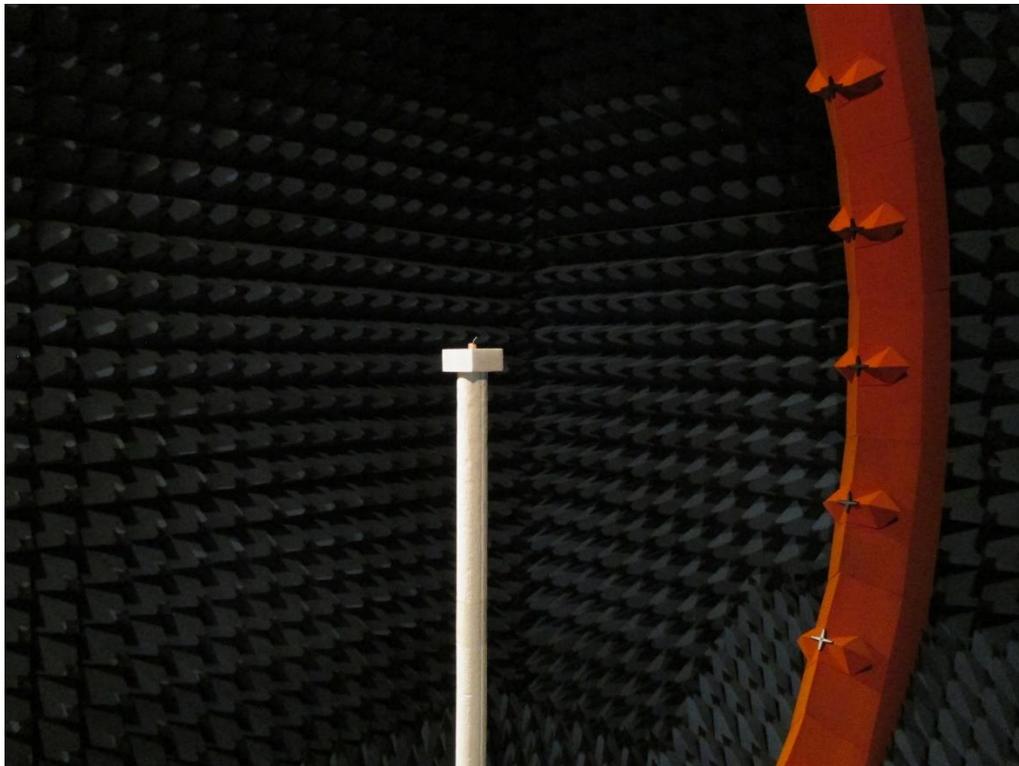


Figure 3b Test stand in SG24L test chamber

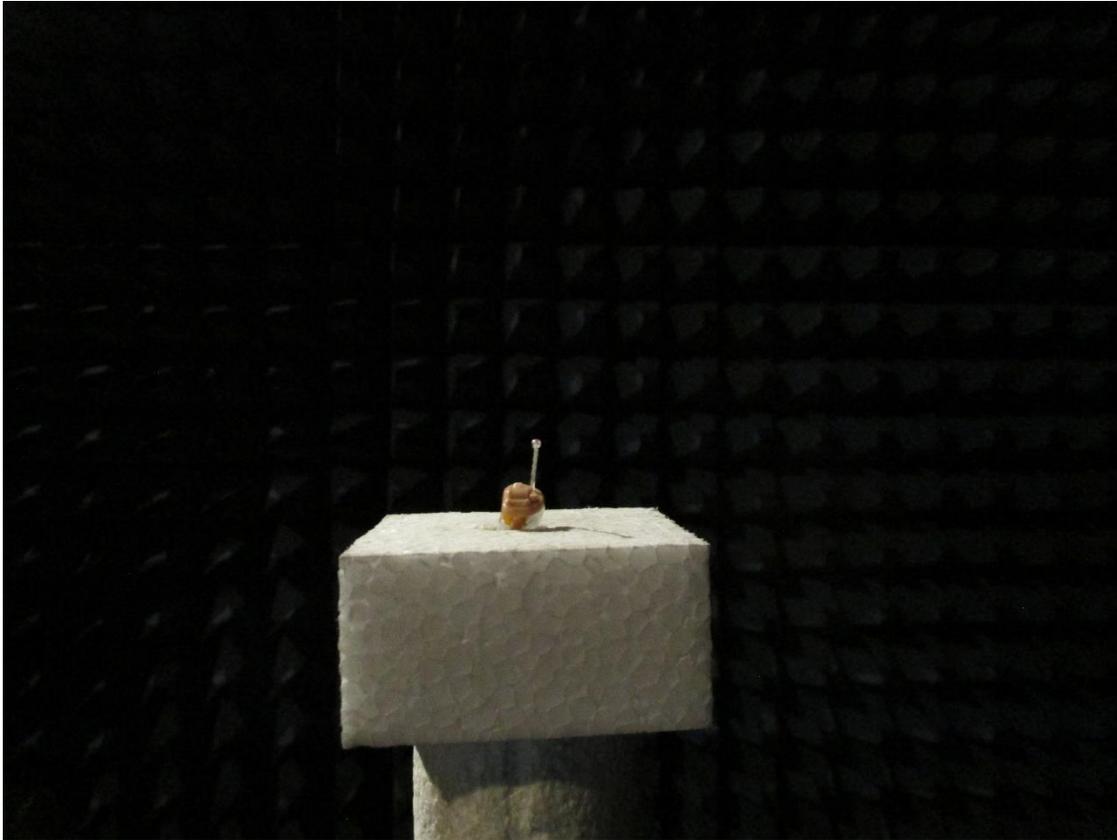


Figure 3c close-up of unit under test in test chamber

## Antenna Gain Measurement Information

The MVG SG24L antenna test system runs internal scripts that yield the maximum EIRP from each radiated power measurement. From there, the following equation could be used to calculate the antenna gain in dBi.

Max Antenna Gain = Max EIRP – Power at antenna pads

Where,

Power at antenna pads = BLE Chipset Power Setting – Simulated PCB Insertion Loss

Subtracting the conducted power at the antenna pads from the EIRP value, yields the antenna gain as follows:

- Max Antenna Gain = -2.72 dBi