SCRN-610 C Band Radio Overview

Corning Wireless

CORNING

Information Security

Stop. Think. Protect.

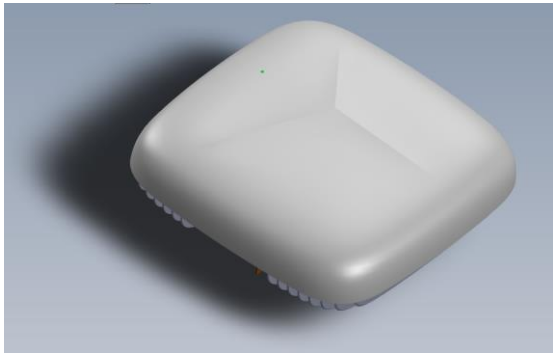
Corning Optical Communications, Silicon Valley Overview

- Located at 840 N McCarthy Blvd., Milpitas, CA 95035
  - Two story building consisting of Wireless R&D, shipping, and office space
  - Each floor is ~31k sq. ft.
  - Roof materials are concrete minimum 12”
  - Floor to floor materials are concrete minimum 12”
  - Outer layer is a mixture of concrete (minimum 12”) and windows

NR FR1 SCRN-610-77 Specification

SPECIFICATIONS

- **Features:**
  - Frequency: n77 (3.70 – 3.98 GHz)
  - O-RAN compliant FH 10Gbps fiber
  - MIMO
    - 4T4R mode: 1CC operation on band n77 (3.70 – 3.98 GHz)
      - Total OBW and IBW: 100 MHz each
  - Max Tx Power: 24 dBm per RF output (30dBm total)
  - Antenna Gain: 5 dBi
  - Corning ActiFi® Composite Fiber interface
  - Form factor: 11" x 11" x 3.28"
  - Operating Temperature: 0 ºC to 45 ºC
  - Mounting: Wall and Ceiling indoors only



SCRN-610-77

Antenna Configuration & Measurements Environment

24dBm TX power
+ 5dBi gain

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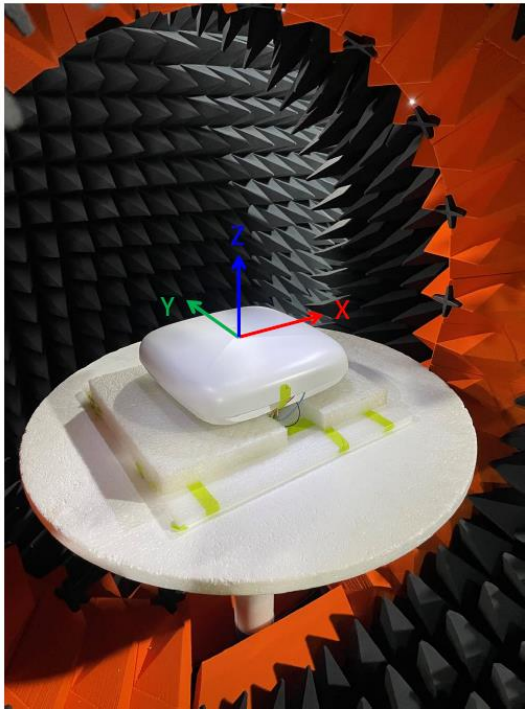
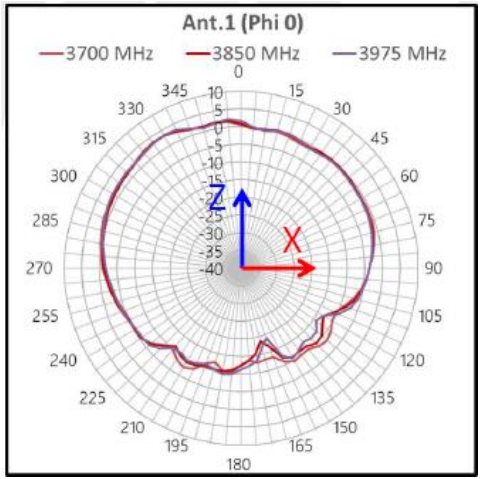
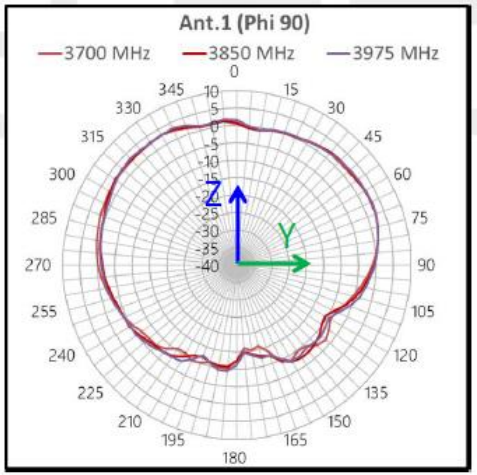


- Omni directional patterns out of each antenna element with different polarization
- All 4 will transmit at same time
- Expected to cover 7k-10k sq. ft per radio with minimal leakage outdoors

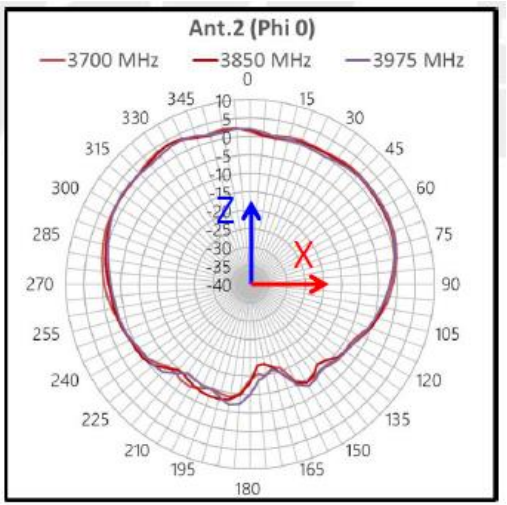
Radiation Pattern – A1

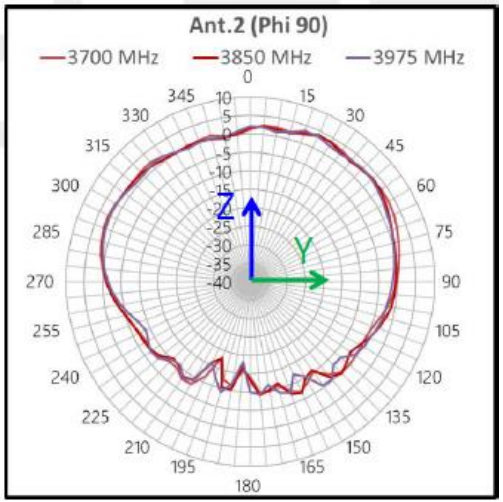




- Both elevation section (Phi 0º /Phi 90º) demonstrate without any null happen on the +z direction
- Pattern can handle both wall/ceiling mount

Radiation Pattern – A2





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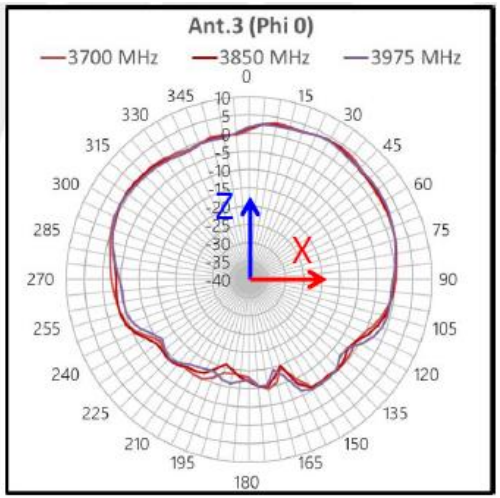
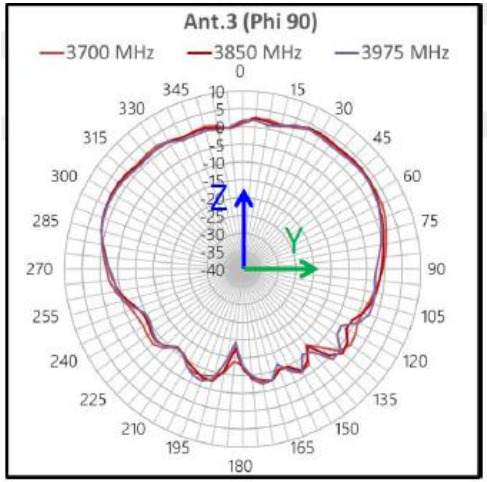
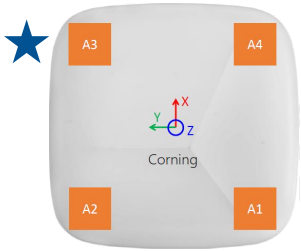
Radiation Pattern – A3







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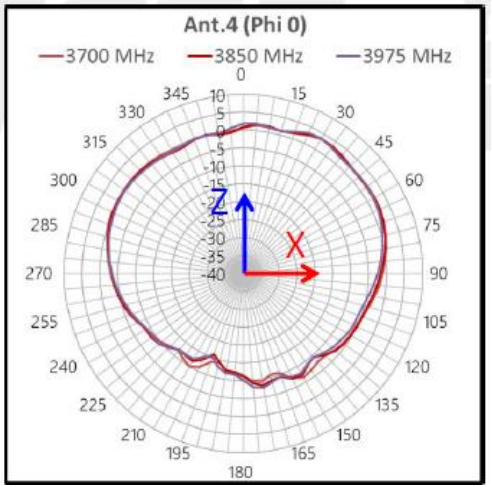
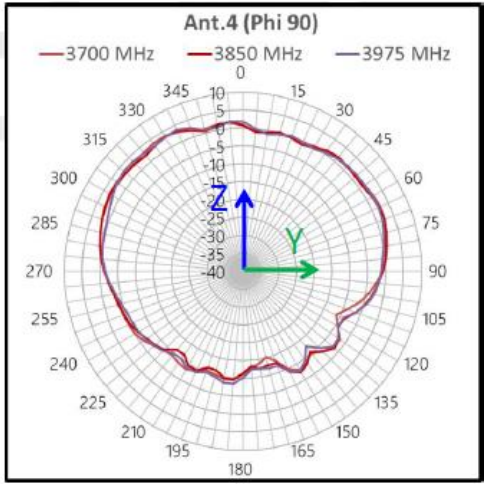
Radiation Pattern – A4





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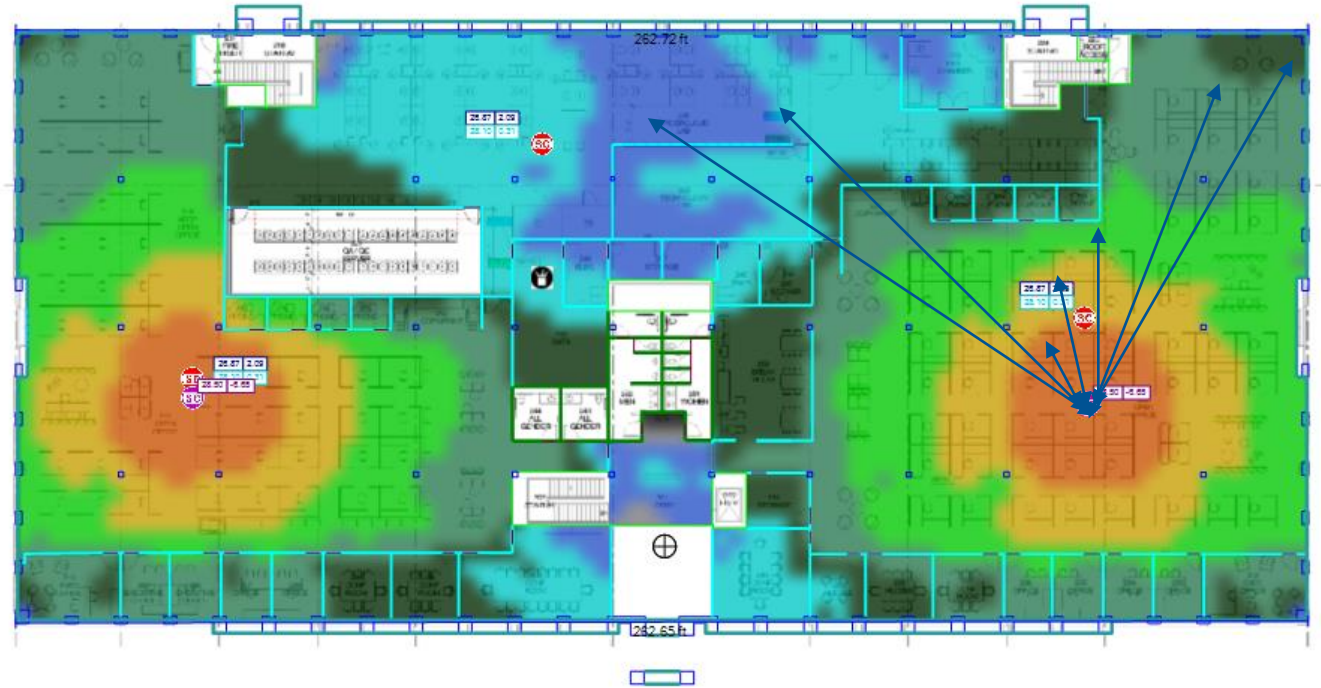
Expected Indoor Coverage



Indoor prediction legend

5GNR SS-RSRP (Diversity)

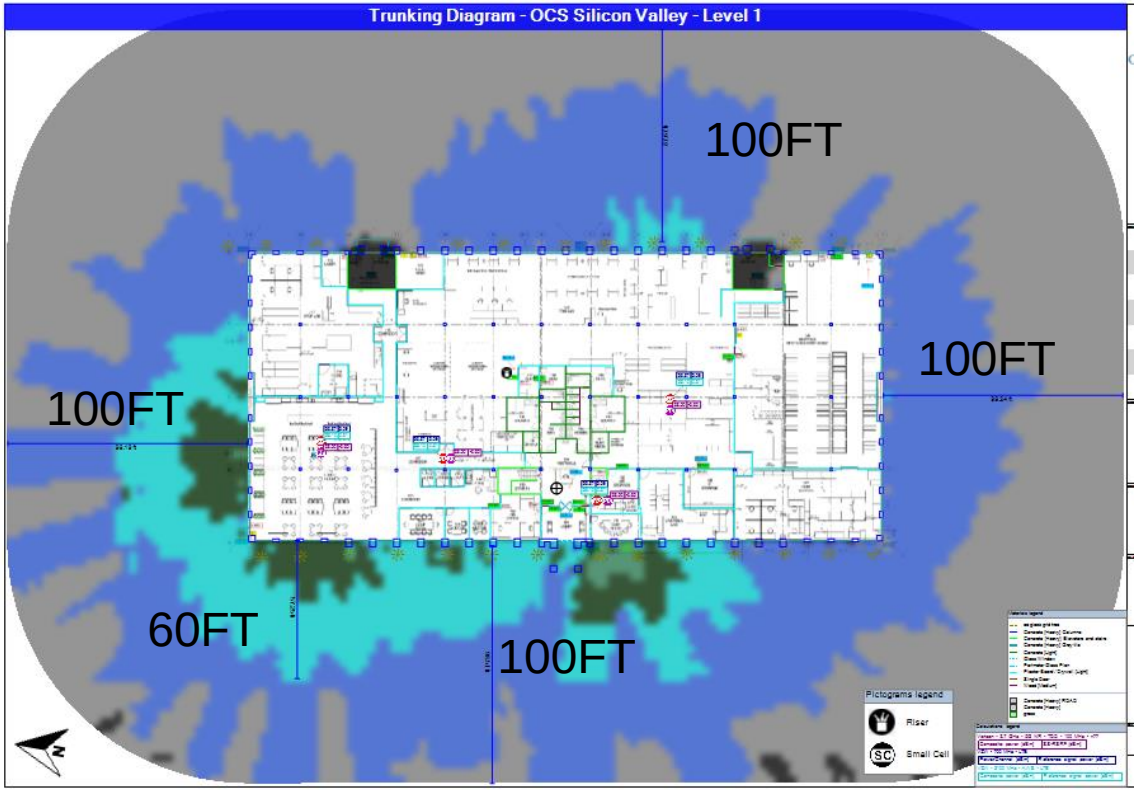
[dBm]

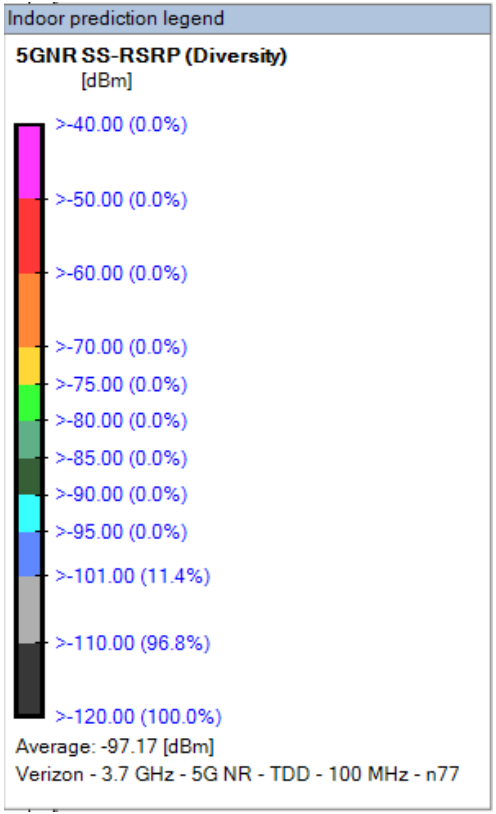
>-40.00 (0.0%)	
>-50.00 (0.0%)	
>-60.00 (0.0%)	
>-70.00 (6.9%)	15 ft from radio
>-75.00 (19.6%)	30 ft from radio
>-80.00 (40.9%)	45 ft from radio
>-85.00 (62.4%)	65 ft from radio
>-90.00 (75.2%)	80 ft from radio
>-95.00 (91.2%)	100 ft from radio
>-101.00 (99.5%)	110 ft from radio
>-110.00 (99.9%)	
>-120.00 (100.0%)	

Average: -75.40 [dBm]

Verizon - 3.7 GHz - 5G NR - TDD - 100 MHz - n77

Expected Outdoor Leakage at Ground Level from building





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