

# Radomes



photo courtesy of Planet Labs

Comtech Space & Component Technology, based in Torrance, CA, has developed a cost-effective radome manufacturing technology. These geodesic radomes can be delivered quickly, are easy to install, and RF tuned for the customer's mission. Comtech radomes offer the very best antenna environmental protection possible against all elements at a very competitive price.

## Key Features

- Single or Multi-Frequency Tuned
- Access Hatches
- Integrated Ring Wall
- Low Insertion Loss
- Lightweight
- Robust

## Available Options

- Lightning Protection
- Aircraft Warning Lights
- Passage Doors
- Air Conditioners
- Dehumidifiers
- Blower Ventilation Systems
- Snow Ropes
- Internal Lighting
- Heating
- Tedlar Coatings

## Radome Benefits

- Preservation of hardware by elimination of weather effects; thus extending the antenna's operational life expectancy
- Provides operational improvements such as pointing and tracking accuracy
- Provides operational maintenance cost reductions by reducing system wear due to wind effects



## Contact

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## Your Established Partner

Comtech brings proven, technology problem-solving expertise to its professional service offerings for the public sector. From continuity of operations and information assurance, to cyber security and integrated logistics support, Comtech solves the toughest technical challenges, under conditions that demand the highest level of reliability, availability, and security. As an ISO 9000-certified provider with many consultants holding active security clearances, Comtech has an established track record over the past decade as a trusted partner providing mission continuity for the Department of Defense, Special Operations and intelligence communities, the Department of Homeland Security, and the Department

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## Mechanical

- Radome Diameter Sizes: 3.5m – 13.5m (larger on request)
- Foam Core Sandwich Composition -Three Types of Construction:
  - 'A' sandwich consisting of three layers (i.e. two skins with a foam core)
  - 'C' sandwich consisting of five layers (i.e., two externally facing skins, two foam cores, and a central layer)
  - 'S,' a space frame design using a fiberglass framing with a reinforced PTFE-impregnated glass fiber (Teflon) fabric panel (ideal for wideband applications)
- Geodesic Design (stellated 6/5 hexagon/pentagon )
- Tuned for the Frequency or Frequencies of Interest

## RF

- Frequency Range L, S, X, C, Ku, Ka, Q, V, W Band
- Typical Insertion Loss - all losses depend on frequencies and bandwidth
  - <0.1-0.15 dB @ S-band
  - 0.20-0.35 dB @ X-band
  - 0.2-0.45 dB @ Ku-band
  - 0.1 dB @ Ka/ Q /V/W-band (PTFE material) exact losses vary with frequency

## Environmental

- Wind Speed:
  - Foam Core Sandwich (A or C): 240 km/hr (150 mph)
  - Foam Core Sandwich (A or C) (enhanced): 300 km/hr (190 mph)
  - PTFE (Teflon): 200 km/hr (125 mph)
- Temperature: -50 C -- +60 C (-58 F -- +140 F)
- Humidity: 100% Relative Humidity

