# Uptown 240 P.U.D.

# Proposed Telecommunications Antennas

# SP3-5.2

## 0.9 M | 3 FT STANDARD PERFORMANCE PARABOLIC REFLECTOR ANTENNA, SINGLE-POLARIZED, 5.25-5.85GHZ

The SP Standard Performance Series by RadioWaves offers a full line of cost effective standard performance parabolic antennas engineered to deliver reliable radio links. Designed for both unlicensed and licensed band applications, RadioWaves field-proven pre-assembled SP antennas and robust pole-mounts ensure “set and forget” installation with minimal post-installation maintenance. If it’s rugged, it must be RadioWaves!


## FEATURES AND BENEFITS

- Standard Performance Parabolic Antennas – Excellent performance for a wide range of licensed and unlicensed applications
- Fully Preassembled at the Factory – Simplifies installation on site and guarantees “factory-tested” quality
- Warranty – Industry leading 7-year warranty

## SPECIFICATIONS

### General

| | |
|---|---|
| Antenna Type | Standard Performance Parabolic Reflector Antenna |
| Size, nominal | 3 ft \| 0.9 m |
| Polarization | Single |

| | |
|---|---|
| Standard RF Connector Type | N-Female |
| Standard RF Connector Suffix | NS (append suffix to model number) |

### Electrical

| | |
|---|---|
| Operating Frequency Band | 5.25 - 5.85 GHz |
| Half Power Beamwidth, Horizontal | 4.2 degrees |
| Half Power Beamwidth, Vertical | 4.2 degrees |
| Cross-Polarization Discrimination | 30 dB |
| Front to Back Ratio (F/B) | 40 dB |

| | |
|---|---|
| Gain, Low Frequency | 32 dBi |
| Gain, Mid Frequency | 32.5 dBi |
| Gain, High Frequency | 33 dBi |
| VSWR | 1.5:1 |
| Return Loss | -14 dB |

## Mechanical

| | | |
|---|---|---|
| Fine Azimuth Adjustment | +/- 10 degrees | |
| Fine Elevation Adjustment | +/- 25 degrees | |
| Mounting Pipe Diameter, Min | 4.5 inch \| 11.4 cm | |
| Mounting Pipe Diameter, Max | 4.5 inch \| 11.4 cm | |
| Net Weight | 35 lbs \| 15.8 kg | 43 lbs \| 19.4 Kg with RD radome |
| Wind Velocity Operational | 90 mph \| 145 km/h | |
| Wind Velocity Survival Rating | 125 mph \| 201 km/h | |

| | | |
|---|---|---|
| Mechanical Configuration | SP3 | |
| Axial Force (FA) | 492 lbs \| 2189 N | 271 lbs \| 1206 Nm with RD radome |
| Side Force (FS) | 40 lbs \| 178 N | 64 lbs \| 285 Nm with RD radome |
| Twisting Moment (MT) | 545 ft-lbs \| 739 Nm | 394 lbs \| 534 Nm with RD radome |
| Operating Temperature Range | -40 to +60 C | |
| Max Pressure, PSIG, (if waveguide interface) | 5 | |

## Regulatory Compliance

| | |
|---|---|
| FCC | undeclared |
| Industry Canada Compliance | undeclared |

| | |
|---|---|
| ETSI | undeclared |
| RoHS-compliant | Yes |

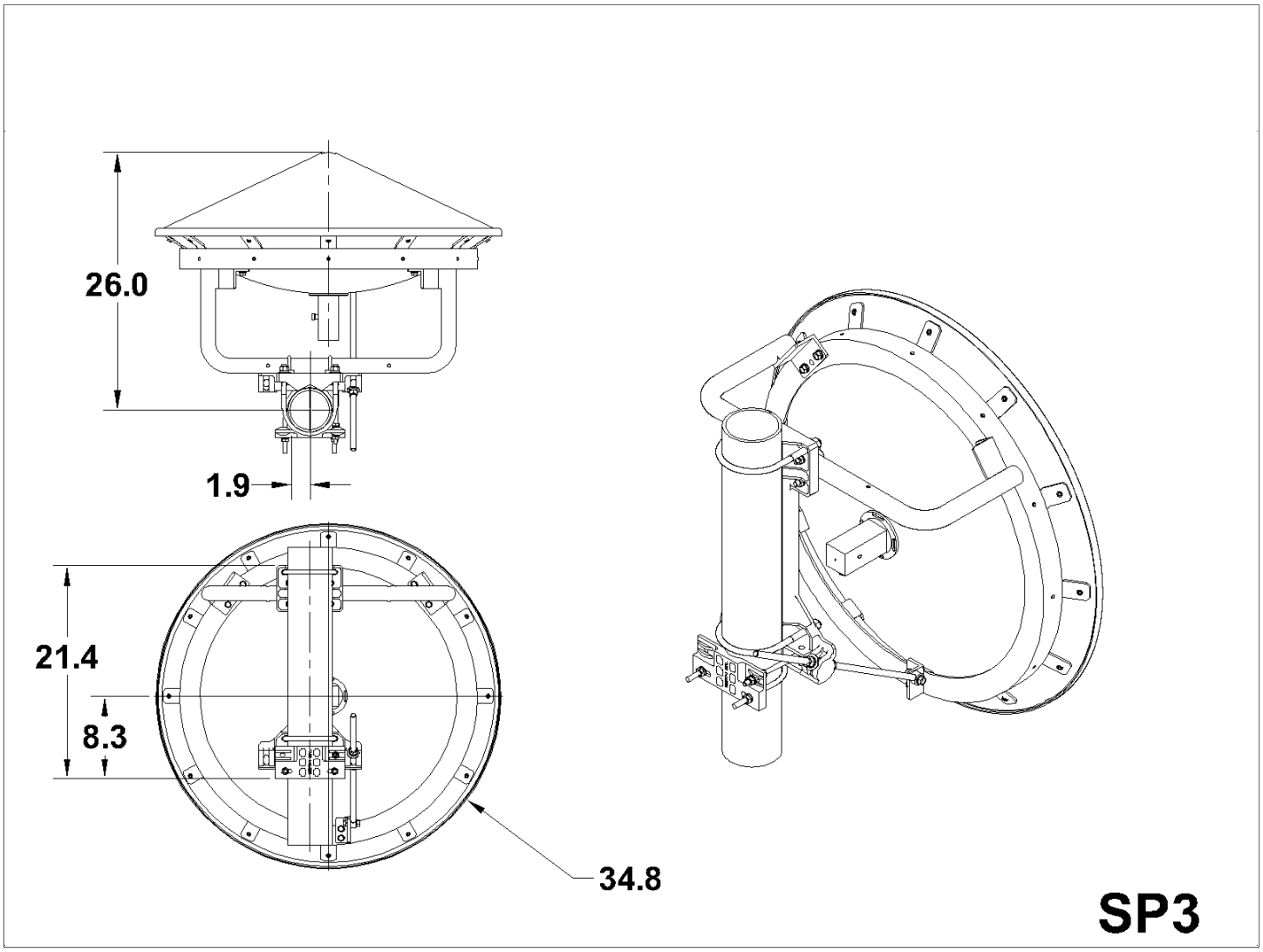
## Shipping Information

| | |
|---|---|
| Package Type | Wood Crate |
| Gross Weight | 78 lbs \| 35.3 kg |

| | |
|---|---|
| Dimensions, L x W x H | 40 x 17 x 44in \| 101 x 43 x 140 cm |
| Shipping Volume | 17.31 cu ft \| 0.49 cu m |

*Additional OEM interfaces and adapters may be available. Contact RadioWaves for a complete and current list of available adapters.

## TECHNICAL DRAWINGS



# Product Specifications

## DB420-B

**1-port omni exposed dipole antenna, 450–470 MHz, 360° HPBW, fixed electrical tilt**

- Broad response
- Moisture resistant
- Rugged, reliable design

## Electrical Specifications

| **Frequency Band, MHz** | **450–470** |
|---|---|
| Gain, dBi | 11.3 |
| Beamwidth, Horizontal, degrees | 360 |
| Beamwidth, Vertical, degrees | 7.0 |
| Beam Tilt, degrees | 0 |
| VSWR \| Return Loss, dB | 1.5 \| 14.0 |
| Input Power per Port, maximum, watts | 250 |
| Polarization | Vertical |
| Impedance | 50 ohm |

## General Specifications

| | |
|---|---|
| Operating Frequency Band | 450 – 470 MHz |
| Antenna Type | Omni |
| Band | Single band |
| Performance Note | Outdoor usage |

## Mechanical Specifications

| | |
|---|---|
| RF Connector Quantity, total | 1 |
| RF Connector Quantity, low band | 1 |
| RF Connector Interface | N Male |
| Color | Silver |
| Grounding Type | RF connector inner conductor and body grounded to reflector and mounting bracket |
| Radiator Material | Aluminum |
| RF Connector Location | End of flexible lead |
| Wind Loading, maximum | 591.6 N @ 100 mph<br>133.0 lbf @ 100 mph |
| Wind Speed, maximum | 161 km/h \| 100 mph |

## Dimensions

| | |
|---|---|
| Length | 5918.2 mm \| 233.0 in |
| Net Weight, without mounting kit | 15.6 kg \| 34.4 lb |

## Regulatory Compliance/Certifications

| **Agency** | **Classification** |
|---|---|
| RoHS 2011/65/EU | Compliant by Exemption |

# Product Specifications

DB420-B

| | |
|---|---|
| China RoHS SJ/T 11364-2006 | Above Maximum Concentration Value (MCV) |
| ISO 9001:2008 | Designed, manufactured and/or distributed under this quality management system |

## Included Products

DB365-OS — Pipe Mounting Kit that consists of two clamps for mounting antennas to round members 1.25 - 3.5 in (35 - 89 mm) OD round members.

## * Footnotes

| | |
|---|---|
| Performance Note | Severe environmental conditions may degrade optimum performance |