# UNDERSTANDING RFS ANTENNAS
# DUAL BAND 5G SOLUTIONS

## AN INNOVATIVE AND FIELD-PROVEN ALTERNATIVE TO FIBER FOR 5G BACKHAULING IN URBAN AREAS

**Designed for:** RFS' dual-band microwave antennas support high-capacity, low-latency 80 GHz E band transmissions as well as higher availability 15 GHz, 18 GHz or 23 GHz transmissions that can travel longer distances. With this combination, the medium-frequency band can supplement the E band with additional capacity and highest reliability for longer reach.

As a result, mobile operators can backhaul higher volumes of 5G traffic over longer distances than they can with single-band microwave antennas and with lower latency than fiber connections.

**Installed on:** Rooftop poles or towers

**Featuring:**

- **Simplified alignment** using microwave for initial alignment and E band for fine-tuning
- **A compact design** to reduce tower loading and antenna weight
- **Lower total cost of ownership** than using two single-band antennas due to lower transportation, installation, and tower leasing costs
- **Lower visual impact** than using two single-band antennas

**Available in:**

- Frequencies that combine the 80 GHz E band with 15 GHz, 18 GHz or 23 GHz
- 0.6 m (2 ft) size

5G-READY ANTENNAS DELIVERING HIGHER CAPACITY OVER LONGER DISTANCES

## DUAL BAND ANTENNAS

| Frequency | | Polarization | | Diameter | | RFS Antenna Code[1] |
|---|---|---|---|---|---|---|
| Band 1 | Band 2 | Band 1 | Band 2 | | | |
| GHz | GHz | | | m | ft | |
| 14.4-15.35 | 71.0 - 86.0 | single | single | 0.6 | 2 | DB2-142W800 |
| 14.4-15.35 | 71.0 - 86.0 | dual | single | 0.6 | 2 | DBX2-142W800 |
| 17.7-19.7 | 71.0 - 86.0 | single | single | 0.6 | 2 | DB2-190W800 |
| 17.7-19.7 | 71.0 - 86.0 | dual | single | 0.6 | 2 | DBX2-190W800 |
| 21.2-23.6 | 71.0 - 86.0 | single | single | 0.6 | 2 | DB2-220W800 |
| 21.2-23.6 | 71.0 - 86.0 | dual | single | 0.6 | 2 | DBX2-220W800 |

[1] Only available with a customized interface

# UNDERSTANDING RFS **MODEL NAMES**

## All RFS model names are based on a naming structure that tells you*:

The **antenna family** to which they belong

The **antenna diameter**

The **antenna frequency range**

The **antenna mechanical options**

The **antenna color**

**UA 8 - W71 A C 1 S 1 T**

### UA — ANTENNA FAMILY

| | |
|---|---|
| **SB** | Single polarized CompactLine® |
| **SBX** | Dual polarized CompactLine® |
| **SC** | Single polarized CompactLine® Easy |
| **SCX** | Dual polarized CompactLine® Easy |
| **DA** | Single polarized High Performance |
| **DAX** | Dual polarized High Performance |
| **UA** | Single polarized Ultra High Performance |
| **UDA** | Dual polarized Ultra High Performance |
| **PAD**[3] | Single polarized improved performance |
| **PADX**[3] | Dual polarized improved performance |
| **UXA** | Dual polarized Ultra High performance with High Cross Polarization Discrimination |
| **SU** | Single polarized SlimLine® Ultra High Performance |
| **SUX** | Dual polarized SlimLine® Ultra High Performance |
| **SPF** | Single polarized Slimline® Standard performance Non pressurized |
| **SL** | Single polarized SerenityLine® |
| **SLX** | Dual polarized SerenityLine® |
| **LA** | Single polarized Lens antenna |
| **SFA** | Single polarized InvisiLINE® |

### 8- DIAMETER

| | |
|---|---|
| **04** | 0.4 ft (0.1m) |
| **05**[2] | 0.5 ft (0.15m) |
| **1** | 1 ft (0.3 m) |
| **2** | 2 ft (0.6 m) |
| **3** | 3 ft (0.9 m) |
| **4** | 4 ft (1.2 m) |
| **6** | 6 ft (1.8 m) |
| **8** | 8 ft (2.4 m) |
| **10** | 10 ft (3.0 m) |
| **12** | 12 ft (3.7 m) |
| **15** | 15 ft (4.6 m) |

### W71 — FREQUENCY RANGE GHz

| | |
|---|---|
| **23** | 2.3-2.5 |
| **36** | 3.6-4.2 |
| **44** | 4.4-5 |
| **52** | 5.25-5.85 |
| **W57** | 5.725-6.875 |
| **U57** | 5.725-7.125 |
| **59** | 5.925-6.425 |
| **W59** | 5.925-6.875 |
| **W60** | 5.925-7.125 |
| **65** | 6.425-7.125 |
| **71** | 7.125-7.75 |
| **W71** | 7.125-8.5 |
| **78** | 7.725-8.5 |
| **W100** | 10-11.7 |
| **103** | 10.3-10.7 |
| **105** | 10.5-10.7 |
| **107** | 10.7-11.7 |
| **127** | 12.7-13.25 |
| **142** | 14.2-15.35 |
| **190** | 17.7-19.7 |
| **220** | 21.2-23.6 |
| **250** | 24.25-26.5 |
| **280** | 27.5-29.5 |
| **320** | 31-33.4 |
| **380** | 37-40 |
| **420** | 40.2-43.5 |
| **520** | 51.4-52.6 |
| **W800** | 71-86 |

### A — ANTENNA REVISION

| | |
|---|---|
| **A** | 1st Revision |
| **B** | 2nd Revision |
| **C** | 3rd Revision |
| **...** | D, E, F, etc. |

### C — FLANGE OPTIONS

| | |
|---|---|
| **B** | PBR flange |
| **C** | CPR flange |
| **D** | PDR flange |
| **J** | N-Male Connector with Jumper |
| **N** | N-female connector |
| **U** | UG-flange |
| **V** | UDR-flange |
| **W** | UBR-flange |
| **X** | PBR 260 flange in 250 band Flange R84 on frequency 71 |
| **Z** | Choke-Flange |

### 1[1] — MECHANICAL OPTIONS

| | |
|---|---|
| **1** | Survival wind speed 200 km/h, standard reflector condition<br>• From 1 ft to 10 ft: reflector is non-split<br>• 12 ft: reflector is split (except UXA type which is non split)<br>• 15 ft: reflector is split (including UXA)This digit is omitted in the model name when no other specific option is needed. |
| **2** | Survival wind speed 250 km/h, standard reflector condition |
| **4** | Survival wind speed 200 km/h, non standard reflector condition<br>• From 8 ft to 10 ft: reflector is split<br>• 12 ft: reflector is non split (except UXA type which is split) |
| **5** | Survival wind speed 250 km/h, non standard reflector condition |
| **7** | Survival wind speed 200 km/h, standard reflector and extra sway bar at the rim |
| **8** | Survival wind speed 250 km/h, standard reflector and extra sway bar at the rim |
| **B** | Installation on pipe diameter 219 mm |
| **Q** | Survival wind speed 250km/h and installation on pipe diameter 219mm |
| **R** | Class 1 antenna (200 km/h +25mm ice or 180 km/h +55 mm ice) applicable on specific antenna |
| **S** | Class 2 antenna (250 km/h +25mm ice or 225 km/h +55 mm ice) applicable on specific antenna |
| **T** | Survival wind speed 200 km/h, standard reflector and 2 extra sway bars at the rim applicable on specific antenna |
| **U** | Survival wind speed 250 km/h, standard reflector and 2 extra sway bars at the rim applicable on specific antenna |

### S[1] — ENVIRONMENT OPTIONS

| | |
|---|---|
| **S** | Standard Environment Corresponds to the most common configurations. This digit is therefore omitted in the model name when no other specific option is needed. |
| **H** | Harsh Enviroment |
| **Q** | Northern Climate (High Wind/ High Ice) |

### 1[1] — COLOR OPTIONS[4]

| | |
|---|---|
| **1** | Natural White (Standard) – Corresponds to the RFS standard configuration. |
| **D** | Dark Grey (RAL 7030) |
| **G** | Grey (RAL7000) |
| **L** | Light Grey (RAL 7035) |
| **O** | Olive Green (RAL 6003) |
| **Z** | Gray (RAL7000) with white radome |

### 1[1] — RADOME OPTIONS

| | |
|---|---|
| **T** | Teflon Radome |
| **R** | Rigid radome for standard performance antenna only |
| **L** | No logo on radome |
| **E** | Extreme radome (no logo on radome) |

### FEEDHORN RECTANGULAR WAVEGUIDE SIZE

| Frequency | IEC | EIA |
|---|---|---|
| **36** | R40 | WR-229 |
| **44** | R48 | WR-187 |
| **W57** | R70 | WR-137 |
| **U57** | R70 | WR-137 |
| **59** | R70 | WR-137 |
| **W59** | R70 | WR-137 |
| **W60** | R70 | WR-137 |
| **65** | R70 | WR-137 |
| **71 **** | R70 | WR-137 |
| **W71** | R84 | WR-112 |
| **78** | R84 | WR-112 |
| **W100** | R100 | WR-90 |
| **103** | R100 | WR-90 |
| **105** | R100 | WR-90 |
| **107** | R100 | WR-90 |
| **127** | R120 | WR-75 |
| **142** | R140 | WR-62 |
| **190** | R220 | WR-42 |
| **220** | R220 | WR-42 |
| **250***** | R220 | WR-42 |
| **280** | R320 | WR-28 |
| **320** | R320 | WR-28 |
| **380** | R320 | WR-28 |
| **420** | R500 | WR-19 |
| **W800****** | R740 | WR-12 |

* Antenna versions that support specific vendor radios are not shown in this table
** 71 is available with R84/WR-112 as an option
*** 250 is available in R260/WR-34 as an option
**** W800 is only available customized

Some options might not be available on all antennas (contact RFS)
[1] Digits are omitted when options are not present
[2] Lens antenna only
[3] Specific to North America
[4] Other color options are available upon request

Официальный поставщик RFS

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