RADIO FREQUENCY SYSTEMS

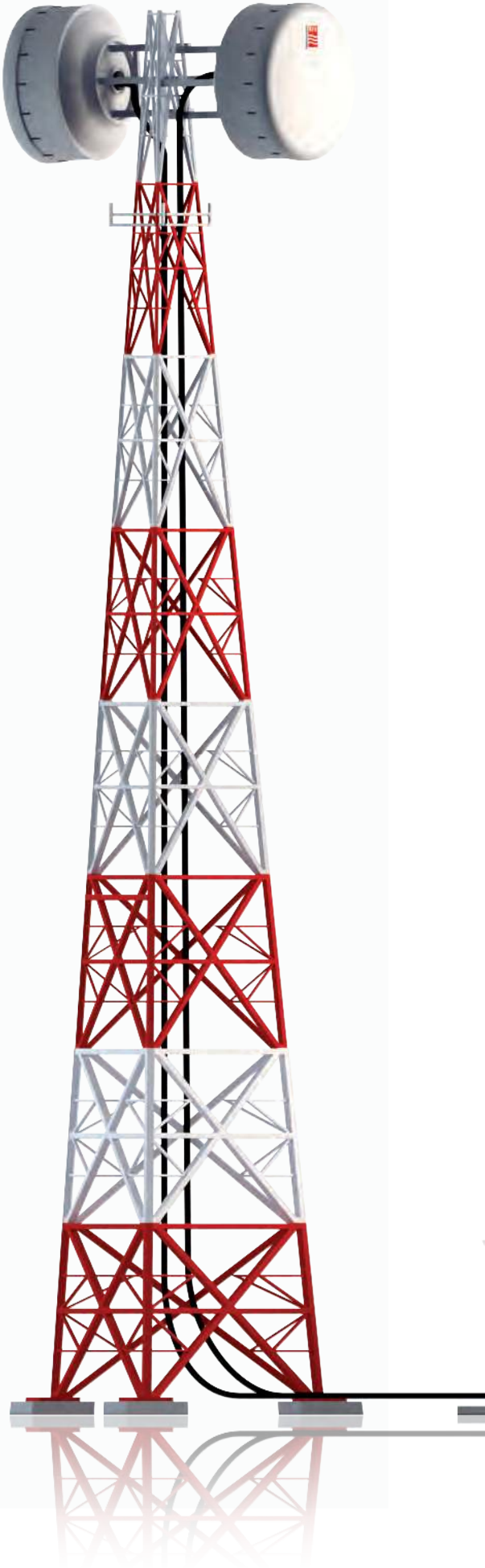
MICROWAVE ANTENNA SELECTION GUIDE

Edition 3a / 1.2020

RFS MICROWAVE ANTENNA SOLUTIONS

RADIO FREQUENCY SYSTEMS

TABLE OF CONTENTS



RFS OFFERS A COMPLETE PORTFOLIO OF **ANTENNAS TO MEET ALL OF YOUR NEEDS**

RFS offers eight types of microwave antennas, each one designed for a specific application in your network. Together, our complete portfolio of microwave antennas takes your network from rooftops in dense urban areas, through suburbs and across long stretches of land to the harshest mountaintop and seaside environments.

Whether you are a telecom operator, a telecom manufacturer, a government agency, an enterprise or a strategic industry, RFS offers microwave antennas that support your applications and deliver dependable performance at low total cost of ownership (TCO):

- Stringent design and quality testing procedures ensure that every RFS microwave antenna meets or exceeds electrical, mechanical and environmental performance standards with no compromises and no surprises.
- Simplified installation and deployment procedures, low maintenance and long-term reliability keep post-purchase costs to a minimum. Compact packaging keeps transportation costs low.
- Modular designs let you "pay as you grow", evolving antennas and adding capacity as needed without the cost of replacing the antenna.

We also offer a full range of options and accessories for each antenna type to support your end-to-end radio link network (RLN). With manufacturing facilities and teams around the world, RFS is ready to serve customers in any location.

RFS OFFERS DIFFERENT TYPES OF ANTENNAS FOR A WIDE VARIETY OF APPLICATIONS

CompactLine
CompactLine Easy:
Compact antennas optimized for integrated and short haul applications.

TrunkLine:
Large antennas for long distance and high capacity applications.

PrimeLine:
Dual-polarized antennas delivering ultra-high performance and the highest cross-polarization discrimination (XPD).

Harsh Area Line:
Robust antennas that can withstand the harshest environmental conditions.

INVISILine:
Very small antennas optimized for small cell and traditional applications.

SerenityLine:
Super high performance antennas that meet ETSI Class 4 standards.

Dual Band:
5G-ready antennas delivering higher capacity over longer distances.

E-Band:
E-band antennas for high capacity applications on short distances.

Size ft (m)	0.4 (0.1)	1 (0.3)		2 (0.6)		3 (0.9)		4 (1.2)		6 (1.8)		8 (2.4)		10 (3.0)		12 (3.7)		15 (4.6)	
Polariz.	single	single	dual	single	dual	single	dual	single	dual	single	dual	single	dual	single	dual	single	dual	single	dual
Antenna Name (Prefix)	INVISILine (SFA)	CompactLine Easy Class 3 (SC & SCX)						CompactLine Class 3 (SB & SBX)				TrunkLine Class 3 (UA & UDA)							
	SFA04	SC1	SCX1	SC2	SCX2	SC3	SCX3	SB4	SBX4	SB6	SBX6	UA8	UDA8	UA10	UDA10	UA12	UDA12	UA15	UDA15
		SerenityLine Class 4 (SL & SLX)						TrunkLine Class 2 (DA & DAX)											
		SL1	SLX1	SL2	SLX2			DA4	DAX4	DA6	DAX6	DA8	DAX8	DA10	DAX10	DA12	DAX12	DA15	DAX15
										Trunkline FCC A (PAD & PADX)									
										PAD6	PADX6	PAD8	PADX8	PAD10	PADX10				
				PrimeLine (UXA)															
				-	UXA2	-	-	-	UXA4	-	UXA6	-	UXA8	-	UXA10	-	UXA12	-	UXA15
				Harsh Areas Line (SU, SUX, DA, DAX & UXA)															
				SU2	SUX2	-	-	SU4	SUX4	SU6	SUX6	DA8	DAX8	DA10	DAX10	DA12	DAX12	-	-
				-	UXA2	-	-	-	UXA4	-	UXA6	-	UXA8	-	UXA10	-	UXA12	-	-

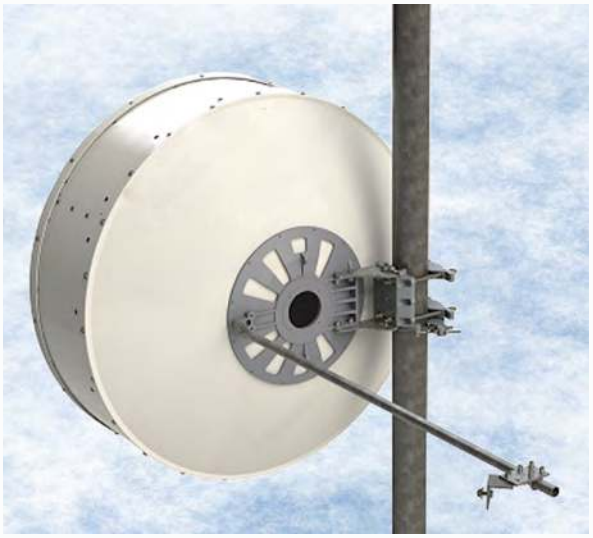
Additional antenna variants and customized antenna versions are also available. They include:

- Antennas that support higher wind speeds
- Antennas that are not part of the RFS Harsh Areas Line but are custom-treated with our harsh environment protective coatings
- Antennas that are manufactured in our US facility and optimized for North American standards
- Antennas with different colors, flanges and mounting options such as those required for 219 mm pipe

Please contact your RFS representative to discuss your specific requirements and identify the RFS antenna that best fits your needs.

UNDERSTANDING RFS ANTENNAS
COMPACTLINE® (SB) & COMPACTLINE® EASY (SC)

COMPACT ANTENNAS OPTIMIZED FOR INTEGRATED APPLICATIONS



Designed for: Dense urban areas, metropolitan and suburban locations, aggregation points

Installed on: Rooftop poles or towers

Featuring:

- Support for integrated radios to **reduce costs**, installation complexity and time
- Tested and validated **ultra-high** (ETSI EN 302 217 Class 3, FCC Class A) **electrical performance**
- Low-profile design to **reduce transportation requirements, wind load and antenna weight**
- Simplified mounting design to **accelerate installation**
- Hardcover radomes
- Support for **winds up to 252 km/h** (155 mph)
  Note: Antennas 1.2 m (4 ft) support wind speeds up to 200 km/h (125 mph) by default but can be enhanced to support winds up to 252 km/h (155 mph)
- Support for **winds up to 320 km/h** (198 mph) on 1 foot antennas
- An **optional sway bar** for antennas 0.9 m (3 ft) and larger for added assurance in case mistakes are made during installation

Available in:

- Frequencies ranging from **5.925 GHz to 86 GHz** with support for three wideband frequency ranges (5.925-7.125, 7.125-8.5 and 10-11.7 GHz) to reduce antenna requirements and simplify logistics
- Sizes ranging **from 0.3 m (1 ft) to 1.8 m (6 ft)**
- **Single- and dual-polarized** models with the ability to upgrade from single to dual polarization and change frequencies in the field[1]
- **CompactLine EASY models, which are extra light and easy** to transport, deploy and upgrade

[1] Please contact your RFS representative to verify which RFS CompactLine antenna models support these upgrades in the field.

ANTENNA MODEL SERIES AVAILABLE FOR **COMPACTLINE® (SB) & COMPACTLINE® EASY (SC)**

Frequency Range (GHz)	Sizes (m)	Sizes (ft)	Model Name (Single Polarized)	Model Name (Dual Polarized)
5.925 to 7.125	0.9	3	SC3-W60	SCX3-W60
	1.2	4	SB4-W60	SBX4-W60
	1.8	6	SB6-W60	SBX6-W60
7.125 to 8.5	0.6	2	SC2-W71	SCX2-W71
	0.9	3	SC3-W71	SCX3-W71
	1.2	4	SB4-W71	SBX4-W71
	1.8	6	SB6-W71	SBX6-W71
10.0 to 11.7	0.6	2	SC2-W100	SCX2-W100
	0.9	3	SC3-W100	SCX3-W100
	1.2	4	SB4-W100	SBX4-W100
	1.8	6	SB6-W100	SBX6-W100
12.7 to 13.25	0.3	1	SC1-127	SCX1-127
	0.6	2	SC2-127	SCX2-127
	0.9	3	SC3-127	SCX3-127
	1.2	4	SB4-127	SBX4-127
	1.8	6	SB6-127	SBX6-127
14.2 to 15.35	0.3	1	SC1-142	SCX1-142
	0.6	2	SC2-142	SCX2-142
	0.9	3	SC3-142	SCX3-142
	1.2	4	SB4-142	SBX4-142
	1.8	6	SB6-142	SBX6-142
17.7 to 19.7	0.3	1	SC1-190	SCX1-190
	0.6	2	SC2-190	SCX2-190
	0.9	3	SC3-190	SCX3-190
	1.2	4	SB4-190	SBX4-190
	1.8	6	SB6-190	SBX6-190
21.2 to 23.6	0.3	1	SC1-220	SCX1-220
	0.6	2	SC2-220	SCX2-220
	0.9	3	SC3-220	SCX3-220
	1.2	4	SB4-220	SBX4-220
	1.8	6	SB6-220	SBX6-220
24.25 to 26.5	0.3	1	SC1-250	SCX1-250
	0.6	2	SC2-250	SCX2-250
	0.9	3	SC3-250	SCX3-250
	1.2	4	SB4-250	SBX4-250
27.5 to 29.5	0.3	1	SC1-280	SCX1-280
	0.6	2	SC2-280	SCX2-280
31.0 to 33.4	0.3	1	SC1-320	SCX1-320
	0.6	2	SC2-320	SCX2-320
	0.9	3	SC3-320	SCX3-320
37.0 to 40.0	0.3	1	SC1-380	SCX1-380
	0.6	2	SC2-380	SCX2-380
40.5 to 43.55	0.3	1	SC1-420	SCX1-420
	0.6	2	SC2-420	SCX2-420
71.0 to 86.0	0.3	1	SB1-W800	SBX1-W800
	0.3	1	SB1-W800-FCC	SBX1-W800-FCC
	0.6	2	SC2-W800	SCX2-W800

This table summarizes the main RFS CompactLine (SB) and CompactLine EASY (SC) antenna models.

Additional antenna variants and customized versions are also available.

For example, variants that support specific vendor's radios are available.

To confirm proper ordering models, please contact your RFS representative.

COMPACTLINE (SB/SBX) AND COMPACTLINE EASY (SC/SCX) **ANTENNAS**

Frequency	Polarization	Model Number	Diameter		Gain			3 dB-BW	VSWR	RL.	X-Pol	IPI	F/B	ETSI RPE Class	US FCC 101 Cat	Fine Adjust.		Operational Windspeed		Survival Windspeed		Net Weight	
					Low	Mid	High									Az	Elev						
GHz			m	ft	dBi	dBi	dBi	deg		dB	dB	dB	dB			deg	deg	km/h	mph	km/h	mph	kg	lb
5.925 to 7.125	Single	SC3-W60	0.9	3	32.0	33.2	33.9	3.0	1.38	16.0	30		60	3	B2/B2	± 15	± 15	180	112	252	155	21	46
		SB4-W60	1.2	4	35.2	35.7	36.6	2.6	1.30	17.7	30		62	3	B2	± 15	± 15	200	125	200	125	30	66
		SB6-W60	1.8	6	38.4	39.4	40.2	1.7	1.30	17.7	30		65	3	A	± 5	± 5	252	155	252	155	90	198
	Dual	SCX3-W60	0.9	3	32.0	33.2	33.9	3.0	1.38	16.0	30	35	60	3	B2/B2	± 15	± 15	180	112	252	155	21	46
		SBX4-W60	1.2	4	35.2	35.7	36.6	2.6	1.30	17.7	30	35	62	3	B2	± 15	± 15	200	125	200	125	30	66
		SBX6-W60	1.8	6	38.4	39.4	40.2	1.7	1.30	17.7	30	35	65	3	A	± 5	± 5	252	155	252	155	90	198
7.125 to 8.5	Single	SC2-W71	0.6	2	30.5	31.7	32.3	4.3	1.38	16.0	30		58	3		± 15	± 15	180	112	252	155	7	15
		SC3-W71	0.9	3	34.7	35.6	35.8	2.6	1.38	16.0	30		62	3	A	± 15	± 15	180	112	252	155	18	40
		SB4-W71	1.2	4	36.2	36.9	37.6	2.3	1.30	17.7	30		63	3		± 15	± 15	200	125	200	125	30	66
		SB6-W71	1.8	6	40.1	40.6	41.1	1.5	1.38	16.0	30		67	3		± 5	± 5	252	155	252	155	90	198
	Dual	SCX2-W71	0.6	2	30.5	31.7	32.3	4.3	1.38	16.0	30	35	58	3		± 15	± 15	180	112	252	155	7	15
		SCX3-W71	0.9	3	34.7	35.6	35.8	2.6	1.38	16.0	30	35	62	3	A	± 15	± 15	180	112	252	155	18	40
		SBX4-W71	1.2	4	36.2	36.9	37.6	2.3	1.30	17.7	30	35	63	3		± 15	± 15	200	125	200	125	30	66
		SBX6-W71	1.8	6	40.1	40.6	41.1	1.5	1.38	16.0	30	35	67	3		± 5	± 5	252	155	252	155	90	198
10.0 to 11.7	Single	SC2-W100	0.6	2	33.8	34.5	35.2	3.2	1.38	16.0	30		61	3	A/B	± 15	± 15	180	112	252	155	7	15
		SC3-W100	0.9	3	37.6	38.3	39.1	2.0	1.38	16.0	30		64	3	A	± 15	± 15	180	112	252	155	18	40
		SB4-W100	1.2	4	39.4	39.9	40.3	1.5	1.30	17.7	30		66	3		± 15	± 15	200	125	200	125	30	66
		SB6-W100	1.8	6	42.7	43.4	43.9	1.0	1.30	17.7	30		70	3	A	± 5	± 5	252	155	252	155	90	198
	Dual	SCX2-W100	0.6	2	33.8	34.5	35.2	3.2	1.38	16.0	30	35	61	3	A/B[1]	± 15	± 15	180	112	252	155	7	15
		SCX3-W100	0.9	3	37.6	38.3	39.1	2.0	1.38	16.0	30	35	64	3	A	± 15	± 15	180	112	252	155	18	40
		SBX4-W100	1.2	4	39.4	39.9	40.3	1.5	1.30	17.7	30	35	66	3		± 15	± 15	200	125	200	125	30	66
		SBX6-W100	1.8	6	42.7	43.4	43.9	1.0	1.30	17.7	30	35	70	3	A	± 5	± 5	252	155	252	155	90	198
12.7 to 13.25	Single	SC1-127	0.3	1	30.8	30.9	31.1	4.5	1.30	17.7	30		57	3		± 15	± 15	252	156	320	198	5	11
		SC2-127	0.6	2	35.8	36.0	36.2	2.7	1.38	16.0	30		62	3		± 15	± 15	180	112	252	155	7	15
		SC3-127	0.9	3	39.9	40.0	40.1	1.6	1.38	16.0	30		66	3	A	± 15	± 15	180	112	252	155	18	40
		SB4-127	1.2	4	41.7	41.9	42.1	1.3	1.30	17.7	30		68	3	A	± 15	± 15	200	125	200	125	30	66
		SB6-127	1.8	6	45.1	45.4	45.7	0.9	1.30	17.7	30		72	3	A	± 5	± 5	252	155	252	155	90	198
	Dual	SCX1-127	0.3	1	30.8	30.9	31.1	4.5	1.30	17.7	30	35	57	3		± 15	± 15	252	156	320	198	5	11
		SCX2-127	0.6	2	35.8	36.0	36.2	2.7	1.38	16.0	30	35	62	3		± 15	± 15	180	112	252	155	7	15
		SCX3-127	0.9	3	39.9	40.0	40.1	1.6	1.38	16.0	30	35	66	3	A	± 15	± 15	180	112	252	155	18	40
		SBX4-127	1.2	4	41.7	41.9	42.1	1.3	1.30	17.7	30	35	68	3	A	± 15	± 15	200	125	200	125	30	66
		SBX6-127	1.8	6	45.1	45.4	45.7	0.9	1.30	17.7	30	35	72	3	A	± 5	± 5	252	155	252	155	90	198
14.2 to 15.35	Single	SC1-142	0.3	1	32.1	32.3	32.4	4.1	1.30	17.7	30		60	3		± 15	± 15	252	156	320	198	5	11
		SC2-142	0.6	2	36.8	37.2	37.5	2.3	1.38	16.0	30		65	3		± 15	± 15	180	112	252	155	7	15
		SC3-142	0.9	3	40.6	41.0	41.3	1.5	1.38	16.0	30		69	3		± 15	± 15	180	112	252	155	18	40
		SB4-142	1.2	4	42.7	42.9	43.1	1.1	1.30	17.7	30		72	3		± 15	± 15	200	125	200	125	30	66
		SB6-142	1.8	6	45.9	46.2	46.5	0.8	1.30	17.7	30		74	3		± 5	± 5	252	155	252	155	90	198
	Dual	SCX1-142	0.3	1	32.1	32.3	32.4	4.1	1.30	17.7	30	35	60	3		± 15	± 15	252	156	320	198	5	11
		SCX2-142	0.6	2	36.8	37.2	37.5	2.3	1.38	16.0	30	35	65	3		± 15	± 15	180	112	252	155	7	15
		SCX3-142	0.9	3	40.6	41.0	41.3	1.5	1.38	16.0	30	35	69	3		± 15	± 15	180	112	252	155	18	40
		SBX4-142	1.2	4	42.7	42.9	43.1	1.1	1.30	17.7	30	35	72	3		± 15	± 15	200	125	200	125	30	66
		SBX6-142	1.8	6	45.9	46.2	46.5	0.8	1.30	17.7	30	35	74	3		± 5	± 5	252	155	252	155	90	198
17.7 to 19.7	Single	SC1-190	0.3	1	34.0	34.7	34.9	3.2	1.30	17.7	30		62	3	B2	± 15	± 15	252	156	320	198	5	11
		SC2-190	0.6	2	38.7	39.2	39.7	1.8	1.38	16.0	30		68	3	A	± 15	± 15	180	112	252	155	7	15
		SC3-190	0.9	3	42.8	43.3	43.8	1.1	1.38	16.0	30		71	3	A	± 15	± 15	180	112	252	155	18	40
		SB4-190	1.2	4	44.2	44.7	45.2	1.0	1.30	17.7	30		72	3	A	± 15	± 15	200	125	200	125	30	66
		SB6-190	1.8	6	47.2	47.8	48.4	0.7	1.30	17.7	30		76	3	A	± 5	± 5	252	155	252	155	90	198
	Dual	SCX1-190	0.3	1	34.0	34.7	34.9	3.2	1.30	17.7	30	35	62	3	B2	± 15	± 15	252	156	320	198	5	11
		SCX2-190	0.6	2	38.7	39.2	39.7	1.8	1.38	16.0	30	35	68	3	A	± 15	± 15	180	112	252	155	7	15
		SCX3-190	0.9	3	42.8	43.3	43.8	1.1	1.38	16.0	30	35	71	3	A	± 15	± 15	180	112	252	155	18	40
		SBX4-190	1.2	4	44.2	44.7	45.2	1.0	1.30	17.7	30	35	72	3	A	± 15	± 15	200	125	200	125	30	66
		SBX6-190	1.8	6	47.2	47.8	48.4	0.7	1.30	17.7	30	35	76	3	A	± 5	± 5	252	155	252	155	90	198
21.2 to 23.6	Single	SC1-220	0.3	1	35.5	36.0	36.2	2.7	1.30	17.7	30		61	3	A	± 15	± 15	252	156	320	198	5	11
		SC2-220	0.6	2	40.8	41.1	41.5	1.5	1.29	18.0	30		66	3	A	± 15	± 15	180	112	252	155	7	15
		SC3-220	0.9	3	44.1	44.8	45.0	1.0	1.29	18.0	30		71	3	A	± 15	± 15	140	87	252	155	18	40
		SB4-220	1.2	4	45.5	46.1	46.6	0.8	1.30	17.7	30		74	3	A	± 15	± 15	200	125	200	125	30	66
		SB6-220	1.8	6	49.0	49.5	50.0	0.5	1.30	17.7	30		75	3	A	± 5	± 5	252	155	252	155	90	198
	Dual	SCX1-220	0.3	1	35.5	36.0	36.2	2.7	1.30	17.7	30	35	61	3	A	± 15	± 15	252	156	320	198	5	11
		SCX2-220	0.6	2	40.8	41.1	41.5	1.5	1.29	18.0	30	35	66	3	A	± 15	± 15	180	112	252	155	7	15
		SCX3-220	0.9	3	44.1	44.8	45.0	1.0	1.29	18.0	30	35	71	3	A	± 15	± 15	140	87	252	155	18	40
		SBX4-220	1.2	4	45.5	46.1	46.6	0.8	1.30	17.7	30	35	74	3	A	± 15	± 15	200	125	200	125	30	66
		SBX6-220	1.8	6	49.0	49.5	50.0	0.5	1.30	17.7	30	35	75	3	A	± 5	± 5	252	155	252	155	90	198
24.25 to 26.5	Single	SC1-250	0.3	1	36.7	37.3	37.5	2.3	1.30	17.7	30		63	3		± 15	± 15	252	156	320	198	5	11
		SC2-250	0.6	2	41.7	42.3	42.5	1.4	1.29	18.0	30		68	3	A	± 15	± 15	180	112	252	155	7	15
		SC3-250	0.9	3	45.6	46.1	46.5	0.8	1.29	18.0	30		73	3	A	± 15	± 15	140	87	252	155	18	40
		SB4-250	1.2	4	46.8	47.2	47.6	0.7	1.30	17.7	30		73	3	A	± 15	± 15	200	125	200	125	30	66
	Dual	SCX1-250	0.3	1	36.7	37.3	37.5	2.3	1.30	17.7	30	35	63	3		± 15	± 15	252	156	320	198	5	11
		SCX2-250	0.6	2	41.7	42.3	42.5	1.4	1.29	18.0	30	35	68	3	A	± 15	± 15	180	112	252	155	7	15
		SCX3-250	0.9	3	45.6	46.1	46.5	0.8	1.29	18.0	30	35	73	3	A	± 15	± 15	140	87	252	155	18	40
		SBX4-250	1.2	4	46.8	47.2	47.6	0.7	1.30	17.7	30	35	73	3	A	± 15	± 15	200	125	200	125	30	66

COMPACTLINE (SB/SBX) AND COMPACTLINE EASY (SC/SCX) **ANTENNAS**

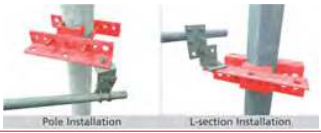
Frequency	Polarization	Model Number	Diameter		Gain			3 dB-BW	VSWR	RL.	X-Pol	IPI	F/B	ETSI RPE Class	US FCC 101 Cat	Fine Adjust.		Operational Windspeed		Survival Windspeed		Net Weight	
					Low	Mid	High									Az	Elev						
GHz			m	ft	dBi	dBi	dBi	deg		dB	dB	dB	dB			deg	deg	km/h	mph	km/h	mph	kg	lb
27.5 to 29.5	Single	SC1-280	0.3	1	38.2	38.4	38.8	2.2	1.30	17.7	30		64	3		± 15	± 15	252	156	320	198	5	11
		SC2-280	0.6	2	42.8	43.0	43.2	1.2	1.29	18.0	30		70	3		± 15	± 15	180	112	252	155	7	15
	Dual	SCX1-280	0.3	1	38.2	38.4	38.8	2.2	1.30	17.7	30	35	64	3		± 15	± 15	252	156	320	198	5	11
		SCX2-280	0.6	2	42.8	43.0	43.2	1.2	1.29	18.0	30	35	70	3		± 15	± 15	180	112	252	155	7	15
31.0 to 33.4	Single	SC1-320	0.3	1	39.2	39.5	39.7	1.9	1.30	17.7	30		63	3b		± 15	± 15	252	156	320	198	5	11
		SC2-320	0.6	2	43.8	44.2	44.4	1.0	1.29	18.0	30		70	3b		± 15	± 15	180	112	252	155	7	15
		SC3-320	0.9	3	47.0	47.4	47.8	0.7	1.29	18.0	27		70	3b		± 15	± 15	110	68	252	155	18	40
	Dual	SCX1-320	0.3	1	39.2	39.5	39.7	1.9	1.30	17.7	30	35	63	3b		± 15	± 15	252	156	320	198	5	11
		SCX2-320	0.6	2	43.8	44.2	44.4	1.0	1.29	18.0	30	35	70	3b		± 15	± 15	180	112	252	155	7	15
		SCX3-320	0.9	3	47.0	47.4	47.8	0.7	1.29	18.0	27	35	70	3b		± 15	± 15	110	68	252	155	18	40
37.0 to 40.0	Single	SC1-380	0.3	1	40.4	40.8	41.1	1.5	1.30	17.7	30		65	3c	A	± 15	± 15	252	156	320	198	5	11
		SC2-380	0.6	2	44.8	45.4	45.8	0.8	1.29	18.0	30		70	3b	A	± 15	± 15	180	112	252	155	7	15
	Dual	SCX1-380	0.3	1	40.4	40.8	41.1	1.5	1.30	17.7	30	35	65	3c	A	± 15	± 15	252	156	320	198	5	11
		SCX2-380	0.6	2	44.8	45.4	45.8	0.8	1.29	18.0	30	35	70	3b	A	± 15	± 15	180	112	252	155	7	15
40.5 to 43.5	Single	SC1-420	0.3	1	40.8	41.2	41.5	1.3	1.30	17.7	30		64	3b		± 15	± 15	252	156	320	198	5	11
		SC2-420	0.6	2	45.5	45.8	46.1	0.7	1.29	18.0	30		65	3b	A	± 15	± 15	180	112	252	155	7	15
	Dual	SCX1-420	0.3	1	40.8	41.2	41.5	1.3	1.30	17.7	30	35	64	3b		± 15	± 15	252	156	320	198	5	11
		SCX2-420	0.6	2	45.5	45.8	46.1	0.7	1.29	18.0	30	30	65	3b	A	± 15	± 15	180	112	252	155	7	15
71.0 to 86.0	Single	SB1-W800	0.3	1	43.1	44.6	45.7	0.8	1.50	14.0	27		63	3		± 15	± 20	224	139	320	198	6	13
		SB1-W800-FCC	0.3	1	43.1	44.6	45.7	0.8	1.50	14.0	27		63	3	A	± 15	± 20	224	139	320	198	6	13
		SC2-W800	0.6	2	49.8	50.9	51.9	0.5	1.50	14.0	27		68	3	A	± 15	± 20	120	75	252	155	9	20
	Dual	SBX1-W800	0.3	1	41.1	42.6	43.7	0.8	1.67	12.0	25	30	63	3		± 15	± 20	224	139	320	198	6	13
		SBX1-W800-FCC	0.3	1	41.1	42.6	43.7	0.8	1.67	12.0	25	30	63	3	A	± 15	± 20	224	139	320	198	6	13
		SCX2-W800	0.6	2	47.8	48.9	49.9	0.5	1.67	12.0	25	30	68	3	A	± 15	± 20	120	75	252	155	9	20

[1] A in 10.55-10.68 GHz, B in 10.7-11.7 GHz

WIND SPEED AND SWAY BAR SELECTION GUIDE

A wind kit, perimeter sway bar and sway bar connecting kit are available to complement your RFS CompactLine and CompactLine EASY antennas:

- A wind kit increases antenna survival wind speed support from 200 km/h (125 mph) to 252 km/h (155 mph). Wind kits give customers the flexibility to upgrade survival wind speed support levels in the field during installation if wind conditions are more severe than anticipated. Note that:
  - The wind kit is available for 1.2m (4 ft) antennas
  - 0.3 m (1 ft) have a survival wind speed of 320 km/h (198 mph)
  - 0.6m (2 ft), 0.9 (3 ft), and 1.8m (6 ft) antennas have a survival wind speed of 252 km/h (155 mph)
- An optional perimeter sway bar provides added assurance on antennas that are 0.9 m (3 ft) and larger in case mistakes are made during installation.
- A universal sway bar tower connecting kit allows sway bars to be attached to pipes or L-structures without drilling a hole in the pipe or structure.

Sizes (ft)	1	2	3	4		6
Model (Prefix)	SC/SCX	SC/SCX	SC/SCX	SB/SBX		SB/SBX
Wind Speed km/h (mph)	320 (198)	252 (155)	252 (155)	**Configuration 1**	**Configuration 2**	252 (155)
				200 (125)	252 (155)	
Sway Bar Qty	0	0	0	1	1	1
252 km/h Windkit	-	-	-	**SMA-WK-4D** 	-	-
Additional Perimeter Sway Bar	-	-	**SMA-SK-3** 	**SMA-SK-4** 		**SMA-SK-6** 
Sway Bar Tower Fixation Kit	-	-	**SMA-SKO-UNIVERSAL** 			**SMA-SKO-UNIV-L** 

UNDERSTANDING RFS ANTENNAS
SERENITY LINE (SL/SLX)

SUPER-HIGH-PERFORMANCE ANTENNAS THAT MEET ETSI CLASS 4 STANDARDS

Designed for: Increasing microwave link capacity in extremely dense network environments where interference is present

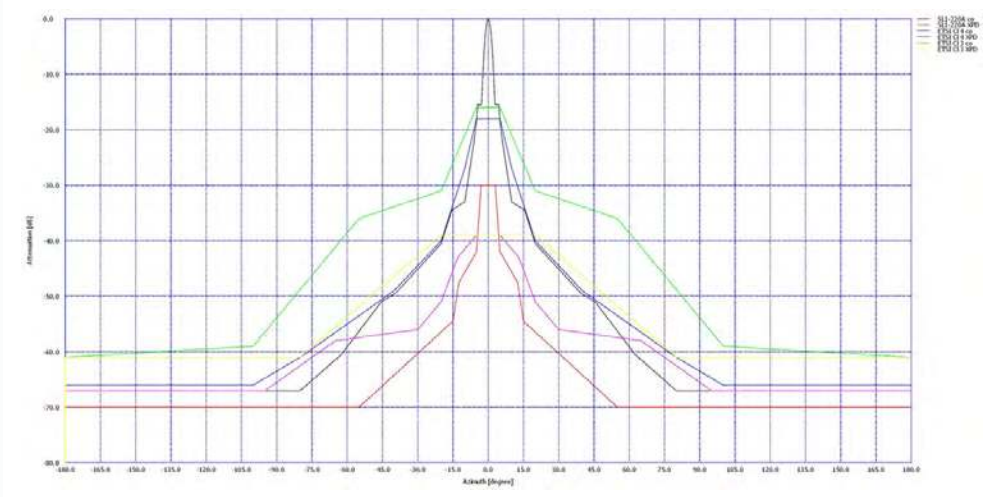
Installed on: Rooftop poles or towers

Featuring:

- **High-performance radiation characteristics** that meet ETSI EN 202217 Class 4 standards
- **High upper side lobe suppression** to enable installation in ultra-dense areas and earlier reuse of frequencies
- **Extremely low interference** levels to increase the carrier-to-interference-ratio and allow smaller antennas to support higher data capacities and deliver higher link throughput
- **Very small sizes, low weights and compact mounting systems** to simplify installations, enable installation in congested locations and reduce leasing fees
- **A field-upgradeable design** that supports evolution to dual polarization and next generation radios

Available in:

- Frequencies ranging from 14.2 GHz to 43.5 GHz
- 0.3 m (1 ft) and 0.6 m (2 ft) sizes
- 5 kg (0.3 m model) and 10 kg (0.6 m model) weights
- Single- and dual-polarized models with the ability to upgrade from single to dual polarization and change frequencies in the field



ANTENNA MODEL SERIES AVAILABLE FOR **SERENITY LINE (SL/SLX)**

Frequency Range (GHz)	Sizes (m)	Sizes (ft)	Model Name (Single Polarized)	Model Name (Dual Polarized)
14.2 to 15.35	0.6	2	SL2-142	SLX2-142
17.7 to 19.7	0.6	2	SL2-190	SLX2-190
21.2 to 23.6	0.3	1	SL1-220	SLX1-220
	0.6	2	SL2-220	SLX2-220
24.25 to 26.5	0.3	1	SL1-250	SLX1-250
	0.6	2	SL2-250	SLX2-250
27.5 to 29.5	0.3	1	SL1-280	SLX1-280
	0.6	2	SL2-280	SLX2-280
31.0 to 33.4	0.3	1	SL1-320	SLX1-320
	0.6	2	SL2-320	SLX2-320
37.0 to 40.0	0.3	1	SL1-380	SLX1-380
	0.6	2	SL2-380	SLX2-380
40.5 to 43.5	0.3	1	SL1-420	SLX1-420
	0.6	2	SL2-420	SLX2-420

This table summarizes the main RFS Serenity Line (SL&SLX) antenna models.

Additional antenna variants and customized versions are also available.

For example, variants that support specific vendor's radios are available.

SERENITY LINE (SL/SLX) **ANTENNAS**

Frequency	Polarization	Model Number	Diameter		Gain			3 dB-BW	VSWR	RL.	X-Pol	IPI	F/B	ETSI RPE Class	US FCC 101 Cat	Fine Adjust.		Operational Windspeed		Survival Windspeed		Net Weight	
					Low	Mid	High									Az	Elev						
GHz			m	ft	dBi	dBi	dBi	deg		dB	dB	dB	dB			deg	deg	km/h	mph	km/h	mph	kg	lb
14.2 to 15.35	Single	SL2-142	0.6	2	36.4	36.8	37.1	2.3	1.38	16.0	30		68	4		± 20	± 15	180	112	252	155	10	22
	Dual	SLX2-142	0.6	2	36.4	36.8	37.1	2.3	1.38	16.0	30	35	68	4		± 15	± 20	180	112	252	155	10	22
17.7 to 19.7	Single	SL2-190	0.6	2	38.3	38.6	39.1	1.9	1.38	16.0	30		70	4	A	± 20	± 15	180	112	252	155	10	22
	Dual	SLX2-190	0.6	2	38.3	38.6	39.1	1.9	1.38	16.0	30	35	70	4	A	± 15	± 20	180	112	252	155	10	22
21.2 to 23.6	Single	SL1-220	0.3	1	35.5	36.0	36.5	2.7	1.30	17.7	30		68	4	A	± 15	± 15	252	156	320	198	5	11
		SL2-220	0.6	2	40.1	40.6	41.2	1.6	1.29	18.0	30		72	4	A	± 20	± 15	180	112	252	155	10	22
	Dual	SLX1-220	0.3	1	35.5	36.0	36.5	2.7	1.30	17.7	30	35	68	4	A	± 15	± 15	252	156	320	198	5	11
		SLX2-220	0.6	2	40.1	40.6	41.2	1.6	1.29	18.0	30	35	72	4	A	± 15	± 20	180	112	252	155	10	22
24.25 to 26.5	Single	SL1-250	0.3	1	36.9	37.3	37.7	2.3	1.30	17.7	30		69	4	A	± 15	± 15	252	156	320	198	5	11
		SL2-250	0.6	2	41.1	41.7	42.1	1.4	1.29	18.0	30		73	4	A	± 20	± 15	180	112	252	155	10	22
	Dual	SLX1-250	0.3	1	36.9	37.3	37.7	2.3	1.30	17.7	30	35	69	4	A	± 15	± 15	252	156	320	198	5	11
		SLX2-250	0.6	2	41.1	41.7	42.1	1.4	1.29	18.0	30	35	73	4	A	± 15	± 20	180	112	252	155	10	22
27.5 to 29.5	Single	SL1-280	0.3	1	38.2	38.4	38.8	2.2	1.30	17.7	30		71	4		± 15	± 15	252	156	320	198	5	11
		SL2-280	0.6	2	42.2	42.6	42.8	1.2	1.29	18.0	30		73	4		± 20	± 15	180	112	252	155	10	22
	Dual	SLX1-280	0.3	1	38.2	38.4	38.8	2.2	1.30	17.7	30	35	71	4		± 15	± 15	252	156	320	198	5	11
		SLX2-280	0.6	2	42.2	42.6	42.8	1.2	1.29	18.0	30	35	73	4		± 15	± 20	180	112	252	155	10	22
31.0 to 33.4	Single	SL1-320	0.3	1	39.2	39.5	39.7	1.9	1.30	17.7	30		70	4		± 15	± 15	252	156	320	198	5	11
		SL2-320	0.6	2	43.2	43.6	44.0	1.1	1.29	18.0	30		72	4		± 20	± 15	164	102	252	155	10	22
	Dual	SLX1-320	0.3	1	39.2	39.5	39.7	1.9	1.30	17.7	30	35	70	4		± 15	± 15	252	156	320	198	5	11
		SLX2-320	0.6	2	43.2	43.6	44.0	1.1	1.29	18.0	30	35	72	4		± 15	± 20	164	102	252	155	10	22
37.0 to 40.0	Single	SL1-380	0.3	1	40.2	40.5	40.9	1.7	1.30	17.7	30		72	4	A	± 15	± 15	252	156	320	198	5	11
		SL2-380	0.6	2	44.6	45.2	45.7	0.8	1.29	18.0	30		72	4	A	± 20	± 15	140	87	252	155	10	22
	Dual	SLX1-380	0.3	1	40.2	40.5	40.9	1.7	1.30	17.7	30	35	72	4	A	± 15	± 15	252	156	320	198	5	11
		SLX2-380	0.6	2	44.6	45.2	45.7	0.8	1.29	18.0	30	35	72	4	A	± 15	± 20	140	87	252	155	10	22
40.5 to 43.5	Single	SL1-420	0.3	1	40.8	41.2	41.5	1.5	1.30	17.7	30		72	4		± 15	± 15	252	156	320	198	5	11
		SL2-420	0.6	2	45.5	45.7	46.1	0.7	1.29	18.0	30		75	4		± 20	± 15	140	87	252	155	10	22
	Dual	SLX1-420	0.3	1	40.8	41.2	41.5	1.5	1.30	17.7	30	35	72	4		± 15	± 15	252	156	320	198	5	11
		SLX2-420	0.6	2	45.5	45.7	46.1	0.7	1.29	18.0	30	35	75	4		± 15	± 20	140	87	252	155	10	22

UNDERSTANDING RFS ANTENNAS
TRUNKLINE CLASS 2 (DA/DAX) AND CLASS 3 (UA/UDA)

FOR LONG DISTANCES AND HIGH-CAPACITY APPLICATIONS

Designed for: Microwave backbone networks, long distances, high-capacity links

Installed on: Towers

Featuring[1]:

- Field-proven **reliability and long life**
- **A choice** between tested and validated ultra-high (ETSI EN 302 217 Class 3 and FCC Class A) electrical performance or high (ETSI Class 2 and FCC Class B) performance
- **Support for winds** up to 200 km/h (125 mph) with high-wind versions that support winds up to 252 km/h (155 mph) and an optional sway bar for **added assurance** in case mistakes are made during installation
- A single-piece or a split-reflector configuration[2] and compact packaging to **reduce transportation costs**
- A **full line of waveguides**, options and accessories

Available in:

- Frequencies ranging from **3.6 GHz to 15.35 GHz** with support for **two wideband frequency ranges (5.725-6.875 and 7.125-8.5 GHz)** to reduce antenna requirements and simplify logistics
- Sizes ranging from **1.2 m (4 ft) to 4.6 m (15 ft)**
- **Single- and dual-polarized models** with the ability to upgrade from single to dual polarization and change frequencies in the field in most cases[3]

TRUNKLINE ANTENNAS GO THE DISTANCE

RFS TrunkLine antennas are proven around the world:

- **In Russia, a microwave backbone network based on RFS TrunkLine antennas provides cellular coverage along the main road and train arteries between Moscow and St. Petersburg**
- **In Arizona, USA, RFS TrunkLine antennas, waveguides and accessories provide the lifeline for the state's highway patrol, Emergency Medical Services (EMS) providers and other public safety services operating across long distances.**

[1] These features and model ranges apply to RFS TrunkLine DA, DAX, UA and UDA antenna models. Features and models for RFS TrunkLine PAD and PADX antennas are described separately.

[2] The split-reflector configuration is available on antennas 2.4 m (8 ft) and larger. Single-piece is the default configuration for antennas 2.4 m (8 ft) and 3 m (10 ft). Split-reflector is the default configuration for antennas 3.7 m (12 ft) and 4.6 m (15 ft)

[3] Please contact your RFS representative to verify which RFS TrunkLine antenna models support these upgrades in the field.

ANTENNA MODEL SERIES AVAILABLE FOR **TRUNKLINE CLASS 2 (DA/DAX) AND CLASS 3 (UA/UDA)**

			High Performance		Ultra High Performance		
Frequency Range (GHz)	**Sizes (m)**	**Sizes (ft)**	**Model Name (Single Pol)**	**Model Name (Dual Pol)**	**Model Name (Single Pol)**	**Model Name (Dual Pol)**	
3.6 to 4.2	1.8	6	DA6-36	DAX6-36			
	2.4	8	DA8-36	DAX8-36			
	3.0	10	DA10-36	DAX10-36			
	3.7	12	DA12-36	DAX12-36			
	4.6	15	DA15-36	DAX15-36			
4.4 to 5.0	1.2	4	DA4-44	DAX4-44			This table summarizes the main RFS TrunkLine Class 2 (DA/DAX) and TrunkLine Class 3 (UA/UDA) antenna models. Additional antenna variants and customized versions are also available. For example, variants that support specific vendor's radios are available.
	1.8	6	DA6-44	DAX6-44			
	2.4	8	DA8-44	DAX8-44			
	3.0	10	DA10-44	DAX10-44			
	3.7	12	DA12-44	DAX12-44			
	4.6	15	DA15-44	DAX15-44			
5.725 to 6.875	1.8	6	DA6-W57				
	2.4	8	DA8-W57				
	3.0	10	DA10-W57				
5.925 to 6.425	1.8	6	DA6-59	DAX6-59			
	2.4	8	DA8-59	DAX8-59	UA8-59		
	3.0	10	DA10-59	DAX10-59	UA10-59		
	3.7	12	DA12-59	DAX12-59	UA12-59		
	4.6	15	DA15-59	DAX15-59			
6.425 to 7.125	1.8	6	DA6-65	DAX6-65			
	2.4	8	DA8-65	DAX8-65	UA8-65		
	3.0	10	DA10-65	DAX10-65	UA10-65		
	3.7	12	DA12-65	DAX12-65	UA12-65		
	4.6	15	DA15-65	DAX15-65			
7.125 to 8.5	1.8	6	DA6-W71	DAX6-W71			
	2.4	8	DA8-W71	DAX8-W71	UA8-W71	UDA8-W71	
	3.0	10	DA10-W71	DAX10-W71	UA10-W71	UDA10-W71	
	3.7	12	DA12-W71	DAX12-W71	UA12-W71	UDA12-W71	
	4.6	15	DA15-W71	DAX15-W71		UDA15-W71	
10.3 to 10.7	2.4	8	DA8-103	DAX8-103			**To confirm proper ordering models, please contact your RFS representative.**
	3.0	10	DA10-103	DAX10-103			
	3.7	12	DA12-103	DAX12-103			
10.7 to 11.7	2.4	8	DA8-107	DAX8-107	UA8-107		
	3.0	10	DA10-107	DAX10-107	UA10-107		
	3.7	12	DA12-107	DAX12-107			
12.7 to 13.25	2.4	8	DA8-127	DAX8-127	UA8-127		
	3.0	10	DA10-127	DAX10-127	UA10-127		
14.2 to 15.35	2.4	8	DA8-142	DAX8-142	UA8-142		

TRUNKLINE HIGH PERFORMANCE (DA/DAX) **ANTENNAS**

Frequency	Polarization	Model Number	Diameter		Gain			3 dB-BW	VSWR	RL.	X-Pol	IPI	F/B	ETSI RPE Class	US FCC 101 Cat	Fine Adjust.		Operational Windspeed		Survival Windspeed		Net Weight	
					Low	Mid	High									Az	Elev						
GHz			m	ft	dBi	dBi	dBi	deg		dB	dB	dB	dB			deg	deg	km/h	mph	km/h	mph	kg	lb
3.6 to 4.2	Single	DA6-36	1.8	6	33.7	34.4	35.0	3.0	1.08	28.3	30		56	2		± 5	± 5	190	118	200	125	95	209
		DA8-36	2.4	8	36.5	37.2	37.8	2.3	1.06	30.7	30		60	2		± 5	± 5	190	118	200	125	180	396
		DA10-36	3.0	10	38.4	39.1	39.7	1.8	1.06	30.7	30		62	2		± 5	± 5	190	118	200	125	290	638
		DA12-36	3.7	12	40.0	40.7	41.3	1.5	1.06	30.7	30		63	2	B	± 5	± 5	190	118	200	125	420	924
		DA15-36	4.6	15	42.0	42.7	43.3	1.1	1.06	30.7	30		65	2	A	± 5	± 5	190	118	200	125	750	1650
	Dual	DAX6-36	1.8	6	33.7	34.4	35.0	3.0	1.08	28.3	30	35	56	2		± 5	± 5	190	118	200	125	95	209
		DAX8-36	2.4	8	36.5	37.2	37.8	2.3	1.08	28.3	30	35	60	2		± 5	± 5	190	118	200	125	180	396
		DAX10-36	3.0	10	38.4	39.1	39.7	1.8	1.06	30.7	30	35	62	2		± 5	± 5	190	118	200	125	290	638
		DAX12-36	3.7	12	40.0	40.7	41.3	1.5	1.06	30.7	30	35	63	2	B	± 5	± 5	190	118	200	125	420	924
		DAX15-36	4.6	15	42.0	42.7	43.3	1.1	1.06	30.7	30	35	65	2	A	± 5	± 5	190	118	200	125	750	1650
4.4 to 5.0	Single	DA4-44	1.2	4	32.0	32.5	33.0	3.7	1.10	26.4	28		52	2		± 5	± 15	190	118	200	125	45	99
		DA6-44	1.8	6	35.9	36.5	37.0	2.4	1.06	30.7	30		62	2		± 5	± 5	190	118	200	125	95	209
		DA8-44	2.4	8	38.5	39.1	39.6	1.8	1.06	30.7	30		65	2		± 5	± 5	190	118	200	125	180	396
		DA10-44	3.0	10	40.4	41.0	41.5	1.5	1.06	30.7	30		67	2		± 5	± 5	190	118	200	125	290	638
		DA12-44	3.7	12	42.0	42.6	43.1	1.2	1.06	30.7	30		68	2		± 5	± 5	190	118	200	125	420	924
		DA15-44	4.6	15	43.7	44.3	44.8	0.9	1.06	30.7	30		68	2		± 5	± 5	190	118	200	125	750	1650
	Dual	DAX4-44	1.2	4	32.0	32.5	33.0	3.7	1.15	23.1	30	35	54	2		± 5	± 5	190	118	200	125	45	99
		DAX6-44	1.8	6	35.6	36.2	36.7	2.4	1.06	30.7	30	35	60	2		± 5	± 5	190	118	200	125	95	209
		DAX8-44	2.4	8	38.2	38.8	39.6	1.8	1.06	30.7	30	35	64	2		± 5	± 5	190	118	200	125	180	396
		DAX10-44	3.0	10	40.1	40.7	41.2	1.5	1.06	30.7	30	35	66	2		± 5	± 5	190	118	200	125	290	638
		DAX12-44	3.7	12	41.7	42.3	42.8	1.2	1.06	30.7	30	35	67	2		± 5	± 5	190	118	200	125	420	924
		DAX15-44	4.6	15	43.7	44.3	44.8	0.9	1.06	30.7	30	35	67	2		± 5	± 5	190	118	200	125	750	1650
5.725 to 6.875	Single	DA6-W57	1.8	6	38.2	39.0	39.8	1.9	1.15	23.1	30		64	2	A	± 5	± 5	190	118	200	125	95	209
		DA8-W57	2.4	8	40.7	41.5	42.3	1.4	1.15	23.1	30		68	2		± 5	± 5	190	118	200	125	180	396
		DA10-W57	3.0	10	42.6	43.5	44.2	1.1	1.15	23.1	30		70	2	A	± 5	± 5	190	118	200	125	290	638
5.925 to 6.425	Single	DA6-59	1.8	6	38.5	39.0	39.3	1.9	1.06	30.7	30		62	2	A	± 5	± 5	190	118	200	125	95	209
		DA8-59	2.4	8	41.2	41.6	42.0	1.5	1.06	30.7	30		66	2	A	± 5	± 5	190	118	200	125	180	396
		DA10-59	3.0	10	43.0	43.4	43.7	1.2	1.06	30.7	30		69	2	A	± 5	± 5	190	118	200	125	290	638
		DA12-59	3.7	12	44.8	45.1	45.4	0.9	1.06	30.7	30		70	2	A	± 5	± 5	190	118	200	125	420	924
		DA15-59	4.6	15	46.3	46.6	47.0	0.8	1.06	30.7	30		71	2	B	± 5	± 5	190	118	200	125	750	1650
	Dual	DAX6-59	1.8	6	38.3	38.7	39.0	1.9	1.06	30.7	30	35	64	2	A	± 5	± 5	190	118	200	125	95	209
		DAX8-59	2.4	8	40.9	41.3	41.7	1.5	1.06	30.7	30	35	67	2	A	± 5	± 5	190	118	200	125	180	396
		DAX10-59	3.0	10	42.9	43.2	43.5	1.2	1.06	30.7	30	35	69	2	A	± 5	± 5	190	118	200	125	290	638
		DAX12-59	3.7	12	44.6	44.8	45.2	0.9	1.06	30.7	30	35	71	2	A	± 5	± 5	190	118	200	125	420	924
		DAX15-59	4.6	15	46.3	46.6	47.0	0.8	1.06	30.7	30	35	71	2	A	± 5	± 5	190	118	200	125	750	1650
6.425 to 7.125	Single	DA6-65	1.8	6	39.4	39.8	40.2	1.7	1.06	30.7	30		64	2	A	± 5	± 5	190	118	200	125	95	209
		DA8-65	2.4	8	41.9	42.3	42.8	1.3	1.06	30.7	30		66	2	A	± 5	± 5	190	118	200	125	180	396
		DA10-65	3.0	10	43.7	44.1	44.6	1.0	1.06	30.7	30		69	2	A	± 5	± 5	190	118	200	125	290	638
		DA12-65	3.7	12	45.3	45.8	46.2	0.8	1.06	30.7	30		70	2	A	± 5	± 5	190	118	200	125	420	924
		DA15-65	4.6	15	47.0	47.5	47.9	0.7	1.06	30.7	30		71	2	A	± 5	± 5	190	118	200	125	750	1650
	Dual	DAX6-65	1.8	6	39.2	39.7	40.1	1.7	1.06	30.7	30	35	64	2	A	± 5	± 5	190	118	200	125	95	209
		DAX8-65	2.4	8	41.8	42.2	42.7	1.3	1.06	30.7	30	35	68	2	A	± 5	± 5	190	118	200	125	180	396
		DAX10-65	3.0	10	43.5	43.9	44.4	1.0	1.06	30.7	30	35	70	2	A	± 5	± 5	190	118	200	125	290	638
		DAX12-65	3.7	12	45.1	45.6	46.0	0.8	1.06	30.7	30	35	71	2	A	± 5	± 5	190	118	200	125	420	924
		DAX15-65	4.6	15	47.0	47.5	47.9	0.7	1.06	30.7	30	35	71	2	A	± 5	± 5	190	118	200	125	750	1650
7.125 to 8.5	Single	DA6-W71	1.8	6	40.1	40.8	41.6	1.5	1.10	26.4	30		66	2		± 5	± 5	190	118	200	125	95	209
		DA8-W71	2.4	8	42.6	43.3	44.1	1.1	1.10	26.4	30		68	2		± 5	± 5	190	118	200	125	180	396
		DA10-W71	3.0	10	44.6	45.3	46.1	0.9	1.10	26.4	30		70	2		± 5	± 5	190	118	200	125	290	638
		DA12-W71	3.7	12	46.2	47.0	47.7	0.7	1.10	26.4	30		71	2		± 5	± 5	190	118	200	125	420	924
		DA15-W71	4.6	15	47.9	48.7	49.4	0.6	1.10	26.4	30		72	2		± 5	± 5	190	118	200	125	750	1650
	Dual	DAX6-W71	1.8	6	39.9	40.6	41.4	1.5	1.10	26.4	30	35	65	2		± 5	± 5	190	118	200	125	95	209
		DAX8-W71	2.4	8	42.4	43.1	43.9	1.1	1.10	26.4	30	35	68	2		± 5	± 5	190	118	200	125	180	396
		DAX10-W71	3.0	10	44.4	45.1	45.9	0.9	1.10	26.4	30	35	70	2		± 5	± 5	190	118	200	125	290	638
		DAX12-W71	3.7	12	46.0	46.7	47.5	0.7	1.10	26.4	30	35	71	2		± 5	± 5	190	118	200	125	420	924
		DAX15-W71	4.6	15	47.7	48.6	49.4	0.6	1.10	26.4	30	35	72	2		± 5	± 5	190	118	200	125	750	1650
10.3 to 10.7	Single	DA8-103	2.4	8	45.7	45.9	46.0	0.8	1.08	28.3	30		68	2	A	± 5	± 5	190	118	200	125	180	396
		DA10-103	3.0	10	47.6	47.8	47.9	0.7	1.08	28.3	30		70	2	A	± 5	± 5	190	118	200	125	290	638
		DA12-103	3.7	12	49.0	49.2	49.3	0.5	1.08	28.3	30		71	2	A	± 5	± 5	190	118	200	125	420	924
	Dual	DAX8-103	2.4	8	45.6	45.8	45.9	0.8	1.10	26.4	30	35	68	2	A	± 5	± 5	190	118	200	125	180	396
		DAX10-103	3.0	10	47.5	47.7	47.8	0.7	1.10	26.4	30	35	70	2	A	± 5	± 5	190	118	200	125	290	638
		DAX12-103	3.7	12	48.9	49.1	49.2	0.5	1.10	26.4	30	35	71	2	A	± 5	± 5	190	118	200	125	420	924
10.7 to 11.7	Single	DA8-107	2.4	8	46.1	46.4	46.9	0.8	1.06	30.7	30		71	2	A	± 5	± 5	190	118	200	125	180	396
		DA10-107	3.0	10	48.0	48.4	48.6	0.7	1.06	30.7	30		71	2	A	± 5	± 5	190	118	200	125	290	638
		DA12-107	3.7	12	49.4	49.8	50.0	0.5	1.06	30.7	30		71	2	A	± 5	± 5	190	118	200	125	420	924
	Dual	DAX8-107	2.4	8	45.9	46.2	46.7	0.8	1.06	30.7	30	35	69	2	A	± 5	± 5	190	118	200	125	180	396
		DAX10-107	3.0	10	47.8	48.2	48.4	0.7	1.06	30.7	30	35	70	2	A	± 5	± 5	190	118	200	125	290	638
		DAX12-107	3.7	12	49.2	49.6	49.9	0.5	1.06	30.7	30	35	72	2	A	± 5	± 5	190	118	200	125	420	924
12.7 to 13.25	Single	DA8-127	2.4	8	47.6	47.7	47.9	0.7	1.08	28.3	30		71	2	A	± 5	± 5	190	118	200	125	180	396
		DA10-127	3.0	10	49.4	49.5	49.7	0.6	1.08	28.3	30		71	2	A	± 5	± 5	190	118	200	125	290	638
	Dual	DAX8-127	2.4	8	47.4	47.5	47.7	0.7	1.10	26.4	30	35	70	2	A	± 5	± 5	190	118	200	125	180	396
		DAX10-127	3.0	10	49.2	49.3	49.5	0.6	1.10	26.4	30	35	71	2	A	± 5	± 5	190	118	200	125	290	638
14.2 to 15.35	Single	DA8-142	2.4	8	48.3	48.5	48.8	0.6	1.10	26.4	30		70	1		± 5	± 5	190	118	200	125	180	396
	Dual	DAX8-142	2.4	8	48.3	48.5	48.8	0.6	1.10	26.4	30	35	69	2		± 5	± 5	190	118	200	125	180	396

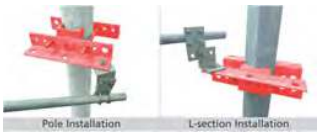
TRUNKLINE ULTRA HIGH PERFORMANCE (UA/UDA) **ANTENNAS**

Frequency	Polarization	Model Number	Diameter		Gain			3 dB-BW	VSWR	RL.	X-Pol	IPI	F/B	ETSI RPE Class	US FCC 101 Cat	Fine Adjust.		Operational Windspeed		Survival Windspeed		Net Weight	
					Low	Mid	High									Az	Elev						
GHz			m	ft	dBi	dBi	dBi	deg		dB	dB	dB	dB			deg	deg	km/h	mph	km/h	mph	kg	lb
5.925 to 6.425	Single	UA8-59	2.4	8	41.2	41.6	42.0	1.5	1.06	30.7	30		70	3	A	± 5	± 5	190	118	200	125	180	396
		UA10-59	3.0	10	43.0	43.4	43.7	1.2	1.06	30.7	30		72	3	A	± 5	± 5	190	118	200	125	290	638
		UA12-59	3.7	12	44.8	45.1	45.4	0.9	1.06	30.7	30		74	3	A	± 5	± 5	190	118	200	125	420	924
6.425 to 7.125	Single	UA8-65	2.4	8	41.9	42.3	42.8	1.3	1.06	30.7	30		70	3	A	± 5	± 5	190	118	200	125	180	396
		UA10-65	3.0	10	43.7	44.1	44.6	1.0	1.06	30.7	30		72	3	A	± 5	± 5	190	118	200	125	290	638
		UA12-65	3.7	12	45.3	45.8	46.2	0.8	1.06	30.7	30		74	3	A	± 5	± 5	190	118	200	125	420	924
7.125 to 8.5	Single	UA8-W71	2.4	8	42.6	43.3	44.1	1.1	1.10	26.4	30		71	3		± 5	± 5	190	118	200	125	180	396
		UA10-W71	3.0	10	44.6	45.3	46.1	0.9	1.10	26.4	30		73	3		± 5	± 5	190	118	200	125	290	638
		UA12-W71	3.7	12	46.2	47.0	47.7	0.7	1.10	26.4	30		74	3		± 5	± 5	190	118	200	125	420	924
	Dual	UDA8-W71	2.4	8	42.4	43.1	43.9	1.1	1.10	26.4	30	35	71	3		± 5	± 5	190	118	200	125	180	396
		UDA10-W71	3.0	10	44.4	45.1	45.9	0.9	1.10	26.4	30	35	73	3		± 5	± 5	190	118	200	125	290	638
		UDA12-W71	3.7	12	46.0	46.7	47.5	0.7	1.10	26.4	30	35	74	3		± 5	± 5	190	118	200	125	420	924
		UDA15-W71	4.6	15	47.7	48.1	48.4	0.6	1.10	26.4	30	35	76	3		± 5	± 5	190	118	200	125	750	1650
12.7 to 13.25	Single	UA8-127	2.4	8	47.6	47.7	47.9	0.7	1.08	28.3	30		74	3	A	± 5	± 5	190	118	200	125	180	396
		UA10-127	3.0	10	49.4	49.5	49.7	0.6	1.08	28.3	30		76	3	A	± 5	± 5	190	118	200	125	290	638
14.2 to 15.35	Single	UA8-142	2.4	8	48.3	48.5	48.8	0.6	1.10	26.4	30		73	3		± 5	± 5	190	118	200	125	180	396
	Dual	UDA8-142	2.4	8	48.3	48.5	48.8	0.6	1.10	26.4	30	35	69	3		± 5	± 5	190	118	200	125	180	396

WIND SPEED AND SWAY BAR SELECTION GUIDE

A wind speed, perimeter sway bar and sway bar connecting kit are available to complement your RFS TrunkLine antennas:

- A wind kit increases antenna survival wind speed support from 200 km/h (125 mph) to 252 km/h (155 mph). Wind kits give customers the flexibility to upgrade survival wind speed support levels in the field during installation if wind conditions are more severe than anticipated.
- An optional perimeter sway bar provides added assurance in case mistakes are made during installation.
- A universal sway bar tower connecting kit allows sway bars to be attached to pipes or L-structures without drilling a hole in the pipe or structure.

Sizes (ft)	4 (< 10 GHz)		4		6		8		10		12		15
Model (Prefix)	DAX		DA/DAX		DA/DAX/UA/UDA		DA/DAX/UA/UDA		DA/DAX/UA/UDA		DA/DAX/UA/UDA		DA/DAX/UA/UDA
Wind Speed km/h (mph)	**Config. 1**	**Config. 2**	**Config. 1**	**Config. 2**	**Config. 1**	**Config. 2**	**Config. 1**	**Config. 2**	**Config. 1**	**Config. 2**	**Config. 1**	**Config. 2**	200 (125)
	200 (125)	252 (155)	200 (125)	252 (155)	200 (125)	252 (155)	200 (125)	252 (155)	200 (125)	252 (155)	200 (125)	252 (155)	
Sway Bar Qty	0	1	1	1	1	1	1	1	1	1	1	1	4
252 km/h Windkit	**SMA-WK-4** 	-	**SMA-WK-4D** 	-	**SMA-WK-6A** 	-	**SMA-WK-8** 	-	**SMA-WK-10** 	-	**SMA-WK-12** 	-	-
Additional Perimeter Sway Bar	-	-	**SMA-SK-4** 		**SMA-SK-60-2000A** 		**SMA-SK-60-3000A** 						-
Sway Bar Tower Fixation Kit	**SMA-SKO-UNIVERSAL** 				**SMA-SKO-UNIV-L** 								

UNDERSTANDING RFS ANTENNAS
TRUNKLINE FCC CATEGORY A (PAD/PADX)

COST-EFFECTIVE, IMPROVED-PERFORMANCE ANTENNAS THAT MEET FCC CATEGORY A WITHOUT A SHROUD

Designed for: North American backhauling applications that require FCC Category A standards

Installed on: Rooftop poles or towers

Featuring:

- Improved performance that meets Federal Communications Commission **(FCC) category A standards without a shroud**
- Good **radiation performance**, particularly in the back end
- **Low weight and low tower loading** for quick and easy installation
- An efficient feed design and a deep-dish reflector to **improve front-to-back ratio**
- Every model, regardless of size, polarization and frequency, is available with or without a radome

Available in:

- Ultra-wideband frequency range (5.725-7.125 GHz) and two wideband frequency ranges (5.725-6.875 and 5.925-6.875 GHz)
- **Different colors** to conceal the antenna or blend it into surrounding environment
- Sizes ranging from **1.8 m (6 ft) to 3 m (10 ft)**
- **Single- and dual-polarized models** with the ability to upgrade from single to dual polarization and change frequencies in the field in most cases[3]
- Optional swaybar is available to decrease vibration

WIND SPEED AND SWAY BAR SELECTION GUIDE

Sizes (ft)	6	8	10
Model (Prefix)	PAD/PADX		
Wind Speed km/h (mph)	200 (125)		
Sway Bar Qty	1	1	1
Additional Perimeter Sway Bar	**SMA-SK-60-2000A** 	**SMA-SK-60-3000A** 	
Sway Bar Tower Fixation Kit	**SMA-SKO-UNIV-L** 		

ANTENNA MODEL SERIES AVAILABLE FOR **TRUNKLINE FCC CATEGORY A (PAD/PADX)**

Frequency Range (GHz)	Sizes (m)	Sizes (ft)	Model Name (Single Pol)	Model Name (Dual Pol)
5.725 to 6.875	1.8	6	PAD6-W57	PADX6-W57
	2.4	8	PAD8-W57	PADX8-W57
	3.0	10	PAD10-W57	PADX10-W57
5.725 to 7.125	1.8	6		PADX6-U57
	2.4	8		PADX8-U57
	3.0	10		PADX10-U57
5.925 to 6.425	1.8	6	PAD6-59	
	2.4	8	PAD8-59	
	3.0	10	PAD10-59	
5.925 to 6.875	1.8	6	PAD6-W59	PADX6-W59
	2.4	8	PAD8-W59	PADX8-W59
	3	10	PAD10-W59	PADX10-W59
6.425 to 7.125	1.8	6	PAD6-65	
	2.4	8	PAD8-65	
	3.0	10	PAD10-65	
10.7 to 11.7	1.8	6	PAD6-107	PADX6-107
	2.4	8	PAD8-107	PADX8-107
	3.0	10	PAD10-107	PADX10-107

This table summarizes the main RFS FCC Category A (PAD/PADX) antenna models.

Additional antenna variants and customized versions are also available.

To confirm proper ordering models, please contact your RFS representative.

TRUNKLINE IMPROVED PERFORMANCE (PAD/PADX) **ANTENNAS**

Frequency	Polarization	Model Number	Diameter		Gain			3 dB-BW	VSWR	RL.	X-Pol	IPI	F/B	ETSI RPE Class	US FCC 101 Cat	Fine Adjust.		Operational Windspeed		Survival Windspeed		Net Weight	
					Low	Mid	High									Az	Elev						
GHz			m	ft	dBi	dBi	dBi	deg		dB	dB	dB	dB			deg	deg	km/h	mph	km/h	mph	kg	lb
5.725 to 6.875	Single	PAD6-W57	1.8	6	38.1	38.9	39.7	1.9	1.15	23.1	30		55		A	± 5	± 5	190	118	200	125	65	141
		PAD8-W57	2.4	8	40.6	41.4	42.2	1.4	1.15	23.1	30		57		A	± 5	± 5	190	118	200	125	130	285
		PAD10-W57	3.0	10	42.6	43.5	44.2	1.1	1.15	23.1	30		61		A	± 5	± 5	190	118	200	125	264	580
	Dual	PADX6-W57	1.8	6	37.9	38.7	39.5	1.7	1.1/1.5[1]	26.4/14[2]	30	35	55		A	± 5	± 5	190	118	200	125	65	141
		PADX8-W57	2.4	8	40.4	41.2	42.0	1.3	1.1/1.5[1]	26.4/14[2]	30	35	57		A	± 5	± 5	190	118	200	125	130	285
		PADX10-W57	3.0	10	42.3	43.2	43.9	1.1	1.1/1.5[1]	26.4/14[2]	30	35	59		A	± 5	± 5	190	118	200	125	264	580
5.725 to 7.125	Dual	PADX6-U57	1.8	6	37.9	38.9	39.8	1.7	1.15/1.5[1]	23.1/14[2]	30	35	55		A	± 5	± 5	190	118	200	125	65	141
		PADX8-U57	2.4	8	40.4	41.4	42.3	1.3	1.15/1.5[1]	23.1/14[2]	30	35	57		A	± 5	± 5	190	118	200	125	130	285
		PADX10-U57	3.0	10	42.3	43.2	44.2	1.1	1.15/1.5[1]	23.1/14[2]	30	35	59		A	± 5	± 5	190	118	200	125	264	580
5.925 to 6.425	Single	PAD6-59	1.8	6	38.4	38.7	39.1	1.8	1.06	30.7	30		55		A	± 5	± 5	190	118	200	125	65	141
		PAD8-59	2.4	8	40.9	41.3	41.6	1.4	1.06	30.7	30		57		A	± 5	± 5	190	118	200	125	130	285
		PAD10-59	3.0	10	42.8	43.2	43.5	1.2	1.06	30.7	30		61		A	± 5	± 5	190	118	200	125	264	580
5.925 to 6.875	Single	PAD6-W59	1.8	6	38.4	39.1	39.7	1.7	1.08	28.3	30		55		A	± 5	± 5	190	118	200	125	65	141
		PAD8-W59	2.4	8	40.9	41.6	42.2	1.3	1.08	28.3	30		57		A	± 5	± 5	190	118	200	125	130	285
		PAD10-W59	3.0	10	42.7	43.4	44.0	1.1	1.08	28.3	30		61		A	± 5	± 5	190	118	200	125	264	580
	Dual	PADX6-W59	1.8	6	38.2	38.9	39.5	1.7	1.10	26.4	30	35	55		A	± 5	± 5	190	118	200	125	65	141
		PADX8-W59	2.4	8	40.7	41.4	42.0	1.3	1.10	26.5	30	35	57		A	± 5	± 5	190	118	200	125	130	285
		PADX10-W59	3.0	10	42.7	43.4	44.0	1.1	1.10	26.4	30	35	59		A	± 5	± 5	190	118	200	125	264	580
6.425 to 7.125	Single	PAD6-65	1.8	6	39.1	39.6	40.0	1.6	1.06	30.7	30		57		A	± 5	± 5	190	118	200	125	65	141
		PAD8-65	2.4	8	41.6	42.1	42.5	1.2	1.06	30.7	30		59		A	± 5	± 5	190	118	200	125	130	285
		PAD10-65	3.0	10	43.5	43.9	44.3	1.1	1.06	30.7	30		63		A	± 5	± 5	190	118	200	125	264	580
10.7 to 11.7	Single	PAD6-107	1.8	6	43.5	43.9	44.3	1.0	1.06	30.7	30		60		A	± 5	± 5	190	118	200	125	65	141
		PAD8-107	2.4	8	46.0	46.4	46.8	0.7	1.06	30.7	30		62		A	± 5	± 5	190	118	200	125	130	285
		PAD10-107	3.0	10	47.9	48.3	48.5	0.7	1.06	30.7	30		64		A	± 5	± 5	190	118	200	125	264	580
	Dual	PADX6-107	1.8	6	43.5	43.9	44.3	1.0	1.06	30.7	30	35	60		A	± 5	± 5	190	118	200	125	65	141
		PADX8-107	2.4	8	45.9	46.3	46.7	0.7	1.06	30.7	30	35	62		A	± 5	± 5	190	118	200	125	130	285
		PADX10-107	3	10	47.9	48.3	48.5	0.7	1.06	30.7	30	35	64		A	± 5	± 5	190	118	200	125	264	580

[1] 1.5 @ 5.725-5.85 GHz

[2] 14 @ 5.725-5.85 GHz

UNDERSTANDING RFS ANTENNAS
PRIMELINE (UXA)

DUAL-POLARIZED ANTENNAS DELIVERING ULTRA-HIGH PERFORMANCE AND THE HIGHEST XPD

Designed for: All applications that require the best RF performance, especially where interference could be an issue

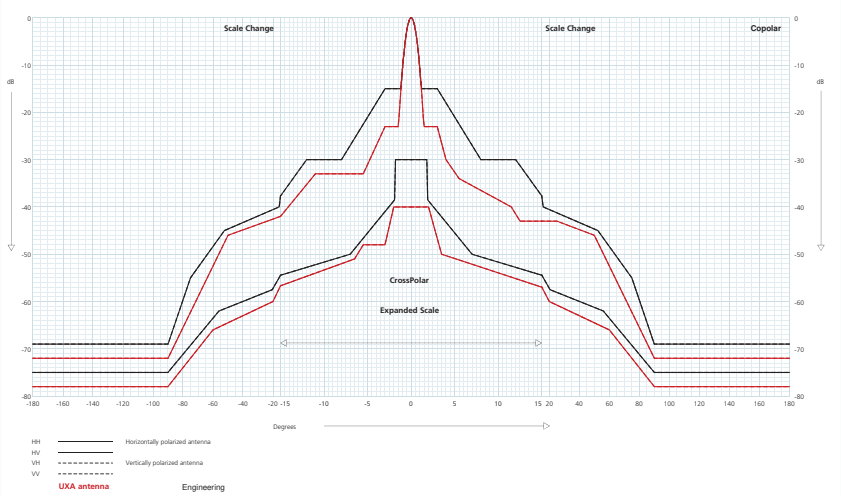
Installed on: Rooftop poles or towers

Featuring:

- **Extremely high XPD** for complete isolation between the radios in each polarization
- **Tested and validated** ultra-high (ETSI EN 302 217 Class 3 and FCC Class A) electrical performance
- **Excellent radiation pattern envelope** (RPE), particularly in the cross-polar area
- Support for winds **up to 200 km/h (125 mph) with high-wind versions that support winds up to 252 km/h (155 mph)** and an optional sway bar for added assurance in case mistakes are made during installation
- **Ability to change frequencies in the field** in most cases[1]

Available in:

- Frequencies ranging from **3.6 GHz to 23.6 GHz with support for two wideband frequency ranges (5.725-6.875 and 5.925-6.875 GHz)** to reduce antenna requirements and simplify logistics
- Sizes ranging from **0.6 m (2 ft) to 4.6 m (15 ft)**
- Configurations with single-piece or split reflectors; **RFS recommends single-piece reflectors** for optimal performance[2]



RFS PrimeLine antennas offer XPD that is typically higher than 40 dB, very low secondary lobe levels and excellent front-to-back ratios

[1] Please contact your RFS representative to verify which RFS PrimeLine antenna models support this upgrade in the field

[2] Split reflectors are available on request for 2.4 m to 3.7 m (8 ft to 12 ft) antennas.

ANTENNA MODEL SERIES AVAILABLE FOR **PRIMELINE (UXA)**

Frequency Range (GHz)	Sizes (m)	Sizes (ft)	Model Name (Dual Polarized)
3.6 to 4.2	1.8	6	UXA6-36
	2.4	8	UXA8-36
	3.0	10	UXA10-36
	3.7	12	UXA12-36
	4.6	15	UXA15-36
4.4 to 5.0	1.8	6	UXA6-44
	2.4	8	UXA8-44
	3.0	10	UXA10-44
	3.7	12	UXA12-44
	4.6	15	UXA15-44
5.725 to 6.875	1.8	6	UXA6-W57
	2.4	8	UXA8-W57
	3.0	10	UXA10-W57
5.725 to 7.125	1.8	6	UXA6-U57
	2.4	8	UXA8-U57
	3.0	10	UXA10-U57
	3.7	12	UXA12-U57
5.925 to 6.475	1.2	4	UXA4-59
	1.8	6	UXA6-59
	2.4	8	UXA8-59
	3.0	10	UXA10-59
	3.7	12	UXA12-59
	4.6	15	UXA15-59
5.925 to 6.875	1.8	6	UXA6-W59
	2.4	8	UXA8-W59
	3.0	10	UXA10-W59
	3.7	12	UXA12-W59
6.425 to 7.125	1.2	4	UXA4-65
	1.8	6	UXA6-65
	2.4	8	UXA8-65
	3.0	10	UXA10-65
	3.7	12	UXA12-65
	4.6	15	UXA15-65
7.125 to 7.75	1.2	4	UXA4-71
	1.8	6	UXA6-71
	2.4	8	UXA8-71
	3.0	10	UXA10-71
	3.7	12	UXA12-71
	4.6	15	UXA15-71
7.725 to 8.5	1.2	4	UXA4-78
	1.8	6	UXA6-78
	2.4	8	UXA8-78
	3.0	10	UXA10-78
	3.7	12	UXA12-78
	4.6	15	UXA15-78
10.3 to 10.7	1.2	4	UXA4-103
	1.8	6	UXA6-103
	2.4	8	UXA8-103
	3.0	10	UXA10-103
	3.7	12	UXA12-103
10.5 to 10.7	1.2	4	UXA4-105
	1.8	6	UXA6-105
10.7 to 11.7	1.2	4	UXA4-107
	1.8	6	UXA6-107
	2.4	8	UXA8-107
	3.0	10	UXA10-107
	3.7	12	UXA12-107
12.7 to 13.25	1.2	4	UXA4-127
	1.8	6	UXA6-127
	2.4	8	UXA8-127
	3.0	10	UXA10-127
14.2 to 15.35	0.6	2	UXA2-142
	1.2	4	UXA4-142
	1.8	6	UXA6-142
	2.4	8	UXA8-142
17.7 to 19.7	0.6	2	UXA2-190
	1.2	4	UXA4-190
	1.8	6	UXA6-190
21.2 to 23.6	0.6	2	UXA2-220
	1.2	4	UXA4-220
	1.8	6	UXA6-220

This table summarizes the main RFS PrimeLine models.

Additional antenna variants and customized versions are also available.

For example, RFS PrimeLine antennas can be upgraded with our specialized epoxy paints and corrosion-resistant hardware so you can bring ultra-high performance and the highest XPD levels to the harshest environments. Antenna models that are designed to meet North American standards are also available.

To confirm proper ordering models, please contact your RFS representative.

PRIMELINE (UXA) **ANTENNAS**

Frequency	Polarization	Model Number	Diameter		Gain			3 dB-BW	VSWR	RL.	X-Pol	IPI	F/B	ETSI RPE Class	US FCC 101 Cat	Fine Adjust.		Operational Windspeed		Survival Windspeed		Net Weight	
					Low	Mid	High									Az	Elev						
GHz			m	ft	dBi	dBi	dBi	deg		dB	dB	dB	dB			deg	deg	km/h	mph	km/h	mph	kg	lb
3.6 to 4.2	Dual	UXA6-36	1.8	6	33.5	34.2	34.8	3.0	1.10	26.4	35	40	60	3		± 5	± 5	190	118	200	125	110	242
		UXA8-36	2.4	8	36.5	37.2	37.8	2.3	1.08	28.3	40	45	66	3		± 5	± 5	190	118	200	125	180	396
		UXA10-36	3.0	10	38.4	39.1	39.7	1.8	1.06	30.7	40	45	67	3	B	± 5	± 5	190	118	200	125	290	638
		UXA12-36	3.7	12	40.0	40.7	41.3	1.5	1.06	30.7	40	45	70	3	A	± 5	± 5	190	118	200	125	420	924
		UXA15-36	4.6	15	42.0	42.7	43.3	1.1	1.06	30.7	38	45	72	3	A	± 5	± 5	190	118	200	125	750	1650
4.4 to 5.0	Dual	UXA6-44	1.8	6	35.6	36.2	36.7	2.4	1.10	26.4	35	40	64	3		± 5	± 5	190	118	200	125	110	242
		UXA8-44	2.4	8	38.2	38.8	39.6	1.8	1.06	30.7	40	45	66	3		± 5	± 5	190	118	200	125	180	396
		UXA10-44	3.0	10	40.1	40.7	41.2	1.5	1.06	30.7	40	45	68	3		± 5	± 5	190	118	200	125	290	638
		UXA12-44	3.7	12	41.7	42.3	42.8	1.2	1.06	30.7	40	45	69	3		± 5	± 5	190	118	200	125	420	924
		UXA15-44	4.6	15	43.7	44.3	44.8	0.9	1.06	30.7	38	45	71	3		± 5	± 5	190	118	200	125	750	1650
5.725 to 6.875	Dual	UXA6-W57	1.8	6	38.1	38.9	39.7	2.0	1.08/1.5[1]	28.3/14[2]	40	45	69	3	A	± 5	± 5	190	118	200	125	110	242
		UXA8-W57	2.4	8	40.6	41.4	42.2	1.5	1.08/1.5[1]	28.3/14[2]	40	45	77	3	A	± 5	± 5	190	118	200	125	180	396
		UXA10-W57	3.0	10	42.5	43.4	44.1	1.1	1.08/1.5[1]	28.3/14[2]	40	45	79	3	A	± 5	± 5	190	118	200	125	290	638
5.725 to 7.125	Dual	UXA6-U57	1.8	6	38.1	39.0	40.0	1.7	1.12/1.5[1]	25.0/14[2]	40	45	69	3	A	± 5	± 5	190	118	200	125	110	242
		UXA8-U57	2.4	8	40.6	41.6	42.6	1.3	1.12/1.5[1]	25.0/14[2]	40	45	77	3	A	± 5	± 5	190	118	200	125	180	396
		UXA10-U57	3.0	10	42.5	43.4	44.4	1.1	1.12/1.5[1]	25.0/14[2]	40	45	79	3	A	± 5	± 5	190	118	200	125	290	638
		UXA12-U57	3.7	12	44.2	45.1	46.0	0.9	1.12/1.5[1]	25.0/14[2]	40	45	75	3	A	± 5	± 5	190	118	200	125	420	924
5.925 to 6.475	Dual	UXA4-59	1.2	4	34.1	34.5	34.8	2.8	1.10	26.4	38	42	60	3	2	± 5	± 5	190	118	200	125	45	99
		UXA6-59	1.8	6	38.3	38.7	39.0	1.9	1.06	30.7	40	45	69	3	A	± 5	± 5	190	118	200	125	110	242
		UXA8-59	2.4	8	40.9	41.3	41.7	1.5	1.06	30.7	40	45	71	3	A	± 5	± 5	190	118	200	125	180	396
		UXA10-59	3.0	10	42.9	43.2	43.5	1.2	1.06	30.7	40	45	74	3	A	± 5	± 5	190	118	200	125	290	638
		UXA12-59	3.7	12	44.6	44.8	45.2	0.9	1.06	30.7	40	45	76	3	A	± 5	± 5	190	118	200	125	420	924
		UXA15-59	4.6	15	46.3	46.6	47.0	0.8	1.06	30.7	38	45	77	3	A	± 5	± 5	190	118	200	125	750	1650
5.925 to 6.875	Dual	UXA6-W59	1.8	6	38.4	39.1	39.7	1.9	1.08	28.3	40	45	69	3	A	± 5	± 5	190	118	200	125	110	242
		UXA8-W59	2.4	8	40.9	41.6	42.2	1.4	1.08	28.3	40	45	77	3	A	± 5	± 5	190	118	200	125	180	396
		UXA10-W59	3.0	10	42.9	43.5	44.1	1.0	1.08	28.3	40	45	73	3	A	± 5	± 5	190	118	200	125	290	638
		UXA12-W59	3.7	12	44.6	45.1	45.7	0.8	1.08	28.3	40	45	75	3	A	± 5	± 5	190	118	200	125	420	924
6.425 to 7.125	Dual	UXA4-65	1.2	4	34.8	35.3	35.7	2.5	1.10	26.4	38	42	61	3	2	± 5	± 5	190	118	200	125	45	99
		UXA6-65	1.8	6	39.2	39.7	40.1	1.7	1.06	30.7	40	45	69	3	A	± 5	± 5	190	118	200	125	110	242
		UXA8-65	2.4	8	41.8	42.2	42.7	1.3	1.06	30.7	40	45	71	3	A	± 5	± 5	190	118	200	125	180	396
		UXA10-65	3.0	10	43.5	43.9	44.4	1.0	1.06	30.7	40	45	74	3	A	± 5	± 5	190	118	200	125	290	638
		UXA12-65	3.7	12	45.1	45.6	46.0	0.8	1.06	30.7	40	45	76	3	A	± 5	± 5	190	118	200	125	420	924
		UXA15-65	4.6	15	47.0	47.5	47.9	0.8	1.06	30.7	38	45	77	3	A	± 5	± 5	190	118	200	125	750	1650
7.125 to 7.75	Dual	UXA4-71	1.2	4	35.7	36.1	36.4	2.2	1.10	26.4	38	42	62	3		± 5	± 5	190	118	200	125	45	99
		UXA6-71	1.8	6	39.9	40.3	40.6	1.5	1.06	30.7	40	45	68	3		± 5	± 5	190	118	200	125	110	242
		UXA8-71	2.4	8	42.4	42.8	43.1	1.1	1.06	30.7	40	45	72	3		± 5	± 5	190	118	200	125	180	396
		UXA10-71	3.0	10	44.4	44.7	45.1	0.9	1.06	30.7	40	45	74	3		± 5	± 5	190	118	200	125	290	638
		UXA12-71	3.7	12	46.0	46.4	46.8	0.7	1.06	30.7	40	45	76	3		± 5	± 5	190	118	200	125	420	924
		UXA15-71	4.6	15	47.9	48.3	48.6	0.6	1.06	30.7	38	45	77	3		± 5	± 5	190	118	200	125	750	1650
7.725 to 8.5	Dual	UXA4-78	1.2	4	36.8	37.2	37.6	2.1	1.08	28.3	38	42	62	3		± 5	± 5	190	118	200	125	45	99
		UXA6-78	1.8	6	40.6	41.1	41.4	1.5	1.06	30.7	40	45	70	3		± 5	± 5	190	118	200	125	110	242
		UXA8-78	2.4	8	43.1	43.6	43.9	1.1	1.06	30.7	40	45	73	3		± 5	± 5	190	118	200	125	180	396
		UXA10-78	3.0	10	45.1	45.5	45.9	0.9	1.06	30.7	40	45	76	3		± 5	± 5	190	118	200	125	290	638
		UXA12-78	3.7	12	46.7	47.1	47.5	0.7	1.06	30.7	40	45	77	3		± 5	± 5	190	118	200	125	420	924
		UXA15-78	4.6	15	48.6	49.0	49.4	0.6	1.06	30.7	38	45	78	3		± 5	± 5	190	118	200	125	750	1650
10.3 to 10.7	Dual	UXA4-103	1.2	4	39.5	39.7	39.8	1.7	1.10	26.4	40	45	69	3	A	± 5	± 15	190	118	200	125	40	88
		UXA6-103	1.8	6	43.1	43.3	43.4	1.0	1.08	28.3	40	45	73	3	A	± 5	± 5	190	118	200	125	110	242
		UXA8-103	2.4	8	45.6	45.8	45.9	0.8	1.08	28.3	40	45	76	3	A	± 5	± 5	190	118	200	125	180	396
		UXA10-103	3.0	10	47.5	47.7	47.8	0.7	1.08	28.3	40	45	78	3	A	± 5	± 5	190	118	200	125	290	638
		UXA12-103	3.7	12	48.9	49.1	49.2	0.5	1.08	28.3	40	45	78	3	A	± 5	± 5	190	118	200	125	420	924
10.5 to 10.7	Dual	UXA4-105	1.2	4	39.7	39.8	39.9	1.7	1.08	28.3	40	45	69	3	A	± 5	± 15	190	118	200	125	40	88
		UXA6-105	1.8	6	43.2	43.3	43.4	1.1	1.06	30.7	40	45	75	3	A	± 5	± 5	190	118	200	125	110	242
10.7 to 11.7	Dual	UXA4-107	1.2	4	40.0	40.4	40.8	1.5	1.08	28.3	40	45	70	3	A	± 5	± 15	190	118	200	125	40	88
		UXA6-107	1.8	6	43.5	43.8	44.3	1.0	1.06	30.7	40	45	73	3	A	± 5	± 5	190	118	200	125	110	242
		UXA8-107	2.4	8	45.9	46.2	46.7	0.8	1.06	30.7	40	45	75	3	A	± 5	± 5	190	118	200	125	180	396
		UXA10-107	3.0	10	47.8	48.2	48.4	0.7	1.06	30.7	40	45	77	3	A	± 5	± 5	190	118	200	125	290	638
		UXA12-107	3.7	12	49.2	49.6	49.9	0.5	1.06	30.7	40	45	78	3	A	± 5	± 5	190	118	200	125	420	924
12.7 to 13.25	Dual	UXA4-127	1.2	4	41.3	41.4	41.6	1.4	1.10	26.4	40	45	67	3	A	± 5	± 15	190	118	200	125	40	88
		UXA6-127	1.8	6	45.0	45.1	45.3	0.9	1.10	26.4	40	45	73	3	A	± 5	± 5	190	118	200	125	110	242
		UXA8-127	2.4	8	47.4	47.5	47.7	0.7	1.10	26.4	40	45	75	3	A	± 5	± 5	190	118	200	125	180	396
		UXA10-127	3.0	10	49.2	49.3	49.5	0.6	1.10	26.4	40	45	76	3	A	± 5	± 5	190	118	200	125	290	638
14.2 to 15.35	Dual	UXA2-142	0.6	2	36.3	36.5	36.8	2.3	1.13	24.3	36	40	64	3		± 30	± 30	190	118	252	155	15	33
		UXA4-142	1.2	4	42.3	42.5	42.8	1.2	1.10	26.4	36	40	70	3		± 5	± 15	190	118	200	125	40	88
		UXA6-142	1.8	6	45.8	46.0	46.3	0.8	1.10	26.4	38	40	75	3		± 5	± 5	190	118	200	125	110	242
		UXA8-142	2.4	8	48.3	48.5	48.8	0.6	1.10	26.4	38	40	76	3		± 5	± 5	190	118	200	125	180	396

[1] 1.5 @ 5.725-5.85 GHz

[2] 14 @ 5.725-5.85 GHz

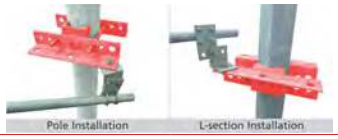
PRIMELINE (UXA) **ANTENNAS**

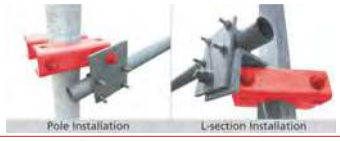
Frequency	Polarization	Model Number	Diameter		Gain			3 dB-BW	VSWR	RL.	X-Pol	IPI	F/B	ETSI RPE Class	US FCC 101 Cat	Fine Adjust.		Operational Windspeed		Survival Windspeed		Net Weight	
					Low	Mid	High									Az	Elev						
GHz			m	ft	dBi	dBi	dBi	deg		dB	dB	dB	dB			deg	deg	km/h	mph	km/h	mph	kg	lb
17.7 to 19.7	Dual	UXA2-190	0.6	2	37.8	38.3	38.7	1.9	1.13	24.3	36	40	66	3	A	± 30	± 30	190	118	252	155	15	33
		UXA4-190	1.2	4	44.0	44.5	44.9	0.9	1.13	24.3	36	40	72	3	A	± 5	± 15	190	118	200	125	40	88
		UXA6-190	1.8	6	47.5	48.0	48.4	0.7	1.13	24.3	36	40	76	3	A	± 5	± 5	190	118	200	125	110	242
21.2 to 23.6	Dual	UXA2-220	0.6	2	39.5	40.0	40.5	1.6	1.15	23.1	36	40	66	3	A	± 30	± 30	190	118	252	155	15	33
		UXA4-220	1.2	4	45.5	46.0	46.4	0.8	1.13	24.3	36	40	72	3		± 5	± 15	190	118	200	125	40	88
		UXA6-220	1.8	6	49.0	49.5	49.9	0.5	1.13	24.3	36	40	76	3		± 5	± 5	190	118	200	125	110	242

WIND SPEED AND SWAY BAR SELECTION GUIDE

A wind speed, perimeter sway bar and sway bar connecting kit are available to complement your RFS PrimeLine antennas:

- A wind kit increases antenna survival wind speed support from 200 km/h (125 mph) to 252 km/h (155 mph). Wind kits give customers the flexibility to upgrade survival wind speed support levels in the field during installation if wind conditions are more severe than anticipated.
- An optional perimeter sway bar provides added assurance in case mistakes are made during installation.
- A universal sway bar tower connecting kit allows sway bars to be attached to pipes or L-structures without drilling a hole in the pipe or structure.

Sizes (ft)	2	4 (< 10 GHz)		4		6	
Model (Prefix)	UXA	UXA		UXA		UXA	
Wind Speed km/h (mph)	252 (155)	**Config. 1**	**Config. 2**	**Config. 1**	**Config. 2**	**Config. 1**	**Config. 2**
		200 (125)	252 (155)	200 (125)	252 (155)	200 (125)	252 (155)
Sway Bar Qty	0	0	1	1	1	1	1
252 km/h Windkit	-	**SMA-WK-4** 	-	**SMA-WK-4D** 	-	**SMA-WK-6A** 	-
Additional Perimeter Sway Bar	-	-	-	**SMA-SK-4** 		**SMA-SK-60-2000A** 	
Sway Bar Tower Fixation Kit	-	**SMA-SKO-UNIVERSAL** 				**SMA-SKO-UNIV-L** 	

Sizes (ft)	8		10		12		15
Model (Prefix)	UXA		UXA		UXA		UXA
Wind Speed km/h (mph)	**Config. 1**	**Config. 2**	**Config. 1**	**Config. 2**	**Config. 1**	**Config. 2**	200 (125)
	200 (125)	252 (155)	200 (125)	252 (155)	200 (125)	252 (155)	
Sway Bar Qty	1	1	1	1	1	1	4
252 km/h Windkit	**SMA-WK-8** 	-	**SMA-WK-10** 	-	**SMA-WK-12** 	-	-
Additional Perimeter Sway Bar	8 ft offset 		**SMA-SK-60-3000A** 10 ft offset 		12 ft offset 		-
Sway Bar Tower Fixation Kit			**SMA-SKO-UNIV-L** 				

UNDERSTANDING RFS ANTENNAS
HARSH AREAS LINE

ROBUST ANTENNAS FOR THE HARSHEST ENVIRONMENTAL CONDITIONS

Designed for: Marine environments, off-shore locations, industrial and highly corrosive locations, volcanic areas, tropical climates, mountaintops with severe wind, ice and snow conditions

Installed on: Rooftop poles or towers

Featuring:

- Reflectors and shrouds **painted inside and outside** with a two-component epoxy paint
- Feeds painted with a **two-component epoxy paint**
- Mounting hardware and attachment hardware in **corrosion-resistant ISO 3506 A4 (SAE 316L) steel** stabilized with molybdenum
- Steel mounting with an **extended galvanic layer**
- **Additional silicon sealant** applied to screws, connectors and couplings during installation
- Factory-installed equipment to **support winds up to 252 km/h (155 mph)**
- A single-piece reflector to ensure all antenna **surfaces are treated and protected**
- A flexible radome that is designed to **avoid snow accumulation**[1]

Available in:

- Frequencies ranging from **3.6 GHz to 26.5 GHz with support for a wideband frequency range (7.125-8.5 GHz)** to reduce antenna requirements and simplify logistics
- Sizes ranging from **0.6 m (2 ft) to 3.7 m (12 ft)**
- **Single- and dual-polarized models** with the ability to upgrade from single to dual polarization and change frequencies in the field[2]

RFS Harsh Areas Line antennas help Pioneer Cellular maintain communications after a severe ice storm in Oklahoma, United States

Despite the damage they sustained, the RFS microwave antenna systems that comprise approximately 98 percent of the 200-hop microwave backhaul network remained functional.

[1] Provided on all RFS Harsh Areas Line antennas 1.2 m (4 ft) and larger.

[2] Please contact your RFS representative to verify which RFS Harsh Areas Line antenna models support these upgrades in the field.

ANTENNA MODEL SERIES AVAILABLE FOR **HARSH AREAS LINE**

			High XPD Performance		Ultra High XPD Performance
Frequency Range (GHz)	**Sizes (m)**	**Sizes (ft)**	**Model Name (Single Polarized)**	**Model Name (Dual Polarized)**	**Model Name (Dual Polarized)**
3.6 to 4.2	2.4	8	DA8-36**2H	DAX8-36**2H	UXA8-36**2H
	3.0	10	DA10-36**2H	DAX10-36**2H	UXA10-36**2H
	3.7	12	DA12-36**5H	DAX12-36**5H	UXA12-36**2H
4.4 to 5.0	2.4	8	DA8-44**2H	DAX8-44**2H	UXA8-44**2H
	3.0	10	DA10-44**2H	DAX10-44**2H	UXA10-44**2H
	3.7	12	DA12-44**5H	DAX12-44**5H	UXA12-44**2H
5.725 to 7.125	1.8	6			UXA6-U57**2H
	2.4	8			UXA8-U57**2H
	3.0	10			UXA10-U57**2H
	3.7	12			UXA12-U57**2H
5.925 to 6.475	1.2	4	SU4-59**2H	SUX4-59**2H	UXA4-59**2H
	1.8	6	SU6-59**2H	SUX6-59**2H	UXA6-59**2H
	2.4	8	DA8-59**2H	DAX8-59**2H	UXA8-59**2H
	3.0	10	DA10-59**2H	DAX10-59**2H	UXA10-59**2H
	3.7	12	DA12-59**5H	DAX12-59**5H	UXA12-59**2H
5.925 to 6.875	1.8	6			UXA6-W59**2H
	2.4	8			UXA8-W59**2H
	3.0	10			UXA10-W59**2H
	3.7	12			UXA12-W59**2H
6.425 to 7.125	1.2	4	SU4-65**2H	SUX4-65**2H	UXA4-65**2H
	1.8	6	SU6-65**2H	SUX6-65**2H	UXA6-65**2H
	2.4	8	DA8-65**2H	DAX8-65**2H	UXA8-65**2H
	3.0	10	DA10-65**2H	DAX10-65**2H	UXA10-65**2H
	3.7	12	DA12-65**5H	DAX12-65**5H	UXA12-65**2H
7.125 - 7.75	1.2	4			UXA4-71**2H
	1.8	6			UXA6-71**2H
	2.4	8			UXA8-71**2H
	3.0	10			UXA10-71**2H
	3.7	12			UXA12-71**2H
7.125 to 8.5	0.6	2	SU2-W71**2H		
	1.2	4	SU4-W71**2H	SUX4-W71**2H	
	1.8	6	SU6-W71**2H	SUX6-W71**2H	
	2.4	8	DA8-W71**2H	DAX8-W71**2H	
	3.0	10	DA10-W71**2H	DAX10-W71**2H	
	3.7	12	DA12-W71**5H	DAX12-W71**5H	
7.725 - 8.5	1.2	4			UXA4-78**2H
	1.8	6			UXA6-78**2H
	2.4	8			UXA8-78**2H
	3.0	10			UXA10-78**2H
	3.7	12			UXA12-78**2H
10.3 to 10.7	0.6	2	SU2-103**2H		
	1.2	4	SU4-103**2H	SUX4-103**2H	UXA4-103**2H
	1.8	6	SU6-103**2H	SUX6-103**2H	UXA6-103**2H
	2.4	8	DA8-103**2H	DAX8-103**2H	UXA8-103**2H
	3.0	10	DA10-103**2H	DAX10-103**2H	UXA10-103**2H
	3.7	12	DA12-103**5H	DAX12-103**5H	UXA12-103**2H
10.7 to 11.7	0.6	2	SU2-107**2H		
	1.2	4	SU4-107**2H	SUX4-107**2H	UXA4-107**2H
	1.8	6	SU6-107**2H	SUX6-107**2H	UXA6-107**2H
	2.4	8	DA8-107**2H	DAX8-107**2H	UXA8-107**2H
	3.0	10	DA10-107**2H	DAX10-107**2H	UXA10-107**2H
	3.7	12	DA12-107**5H	DAX12-107**5H	UXA12-107**2H
12.7 to 13.25	0.6	2	SU2-127**2H	SUX2-127**2H	
	1.2	4	SU4-127**2H	SUX4-127**2H	UXA4-127**2H
	1.8	6	SU6-127**2H	SUX6-127**2H	UXA6-127**2H
	2.4	8	DA8-127**2H	DAX8-127**2H	UXA8-127**2H
	3.0	10	DA10-127**2H	DAX10-127**2H	UXA10-127**2H
14.2 to 15.35	0.6	2	SU2-142**2H	SUX2-142**2H	UXA2-142**2H
	1.2	4	SU4-142**2H	SUX4-142**2H	UXA4-142**2H
	1.8	6	SU6-142**2H	SUX6-142**2H	UXA6-142**2H
	2.4	8	DA8-142**2H	DAX8-142**2H	UXA8-142**2H
17.7 to 19.7	0.6	2	SU2-190**2H	SUX2-190**2H	UXA2-190**2H
	1.2	4	SU4-190**2H	SUX4-190**2H	UXA4-190**2H
	1.8	6	SU6-190**2H	SUX6-190**2H	UXA6-190**2H
21.2 to 23.6	0.6	2	SU2-220**2H	SUX2-220**2H	UXA2-220**2H
	1.2	4	SU4-220**2H	SUX4-220**2H	UXA4-220**2H
	1.8	6	SU6-220**2H	SUX6-220**2H	UXA6-220**2H
24.25 to 26.5	0.6	2	SU2-250**2H	SUX2-250**2H	
	1.2	4	SU4-250**2H	SUX4-250**2H	

This table summarizes the main RFS Harsh Areas Line antenna models.

Additional antenna variants and customized versions are also available. For example:

- RFS PrimeLine antenna models can be upgraded with our specialized epoxy paints and corrosion-resistant hardware so you can bring ultra-high performance and the highest XPD levels to the harshest environments.
- RFS can develop customized Harsh Areas Line antennas to meet requirements for specific projects or specific wind, humidity, ice, snow, volcanic ash or pollution challenges. An antenna ice shield is also available in North America.

** : these 2 digits indicates the antenna revision index and the flange option – see the RFS naming structure on page 20 for more details.

To confirm proper ordering models, please contact your RFS representative.

HARSH AREAS LINE **ANTENNAS**

Frequency	Polariza-tion	Model Number	Diameter		Gain			3 dB-BW	VSWR	RL.	X-Pol	IPI	F/B	ETSI RPE Class	US FCC 101 Cat	Fine Adjust.		Operational Windspeed		Survival Windspeed		Net Weight	
					Low	Mid	High									Az	Elev						
GHz			m	ft	dBi	dBi	dBi	deg		dB	dB	dB	dB			deg	deg	km/h	mph	km/h	mph	kg	lb
3.6 to 4.2	Single	DA8-36**2H	2.4	8	36.5	37.2	37.8	2.3	1.06	30.7	30		60	2		± 5	± 5	190	118	252	155	180	396
		DA10-36**2H	3.0	10	38.4	39.1	39.7	1.8	1.06	30.7	30		62	2		± 5	± 5	190	118	252	155	290	638
		DA12-36**5H	3.7	12	40.0	40.7	41.3	1.5	1.06	30.7	30		63	2	B	± 5	± 5	190	118	252	155	420	924
	Dual	DAX8-36**2H	2.4	8	36.5	37.2	37.8	2.3	1.08	28.3	30	35	60	2		± 5	± 5	190	118	252	155	180	396
		UXA8-36**2H	2.4	8	36.5	37.2	37.8	2.3	1.08	28.3	40	45	66	3		± 5	± 5	190	118	252	155	180	396
		UXA10-36**2H	3.0	10	38.4	39.1	39.7	1.8	1.06	30.7	40	45	67	3	B	± 5	± 5	190	118	252	155	290	638
		DAX10-36**2H	3.0	10	38.4	39.1	39.7	1.8	1.06	30.7	30	35	62	2		± 5	± 5	190	118	252	155	290	638
		DAX12-36**5H	3.7	12	40.0	40.7	41.3	1.5	1.06	30.7	30	35	63	2	B	± 5	± 5	190	118	252	155	420	924
		UXA12-36**2H	3.7	12	40.0	40.7	41.3	1.5	1.06	30.7	40	45	70	3	A	± 5	± 5	190	118	252	155	420	924
4.4 to 5.0	Single	DA8-44**2H	2.4	8	38.5	39.1	39.6	1.8	1.06	30.7	30		65	2		± 5	± 5	190	118	252	155	180	396
		DA10-44**2H	3.0	10	40.4	41.0	41.5	1.5	1.06	30.7	30		67	2		± 5	± 5	190	118	252	155	290	638
		DA12-44**5H	3.7	12	42.0	42.6	43.1	1.2	1.06	30.7	30		68	2		± 5	± 5	190	118	252	155	420	924
	Dual	DAX8-44**2H	2.4	8	38.2	38.8	39.6	1.8	1.06	30.7	30	35	64	2		± 5	± 5	190	118	252	155	180	396
		UXA8-44**2H	2.4	8	38.2	38.8	39.6	1.8	1.06	30.7	40	45	66	3		± 5	± 5	190	118	252	155	180	396
		DAX10-44**2H	3.0	10	40.1	40.7	41.2	1.5	1.06	30.7	30	35	66	2		± 5	± 5	190	118	252	155	290	638
		UXA10-44**2G	3.0	10	40.1	40.7	41.2	1.5	1.06	30.7	40	45	68	3		± 5	± 5	190	118	252	155	290	638
		DAX12-44**5H	3.7	12	41.7	42.3	42.8	1.2	1.06	30.7	30	35	67	2		± 5	± 5	190	118	252	155	420	924
		UXA12-44**2H	3.7	12	41.7	42.3	42.8	1.2	1.06	30.7	40	45	69	3		± 5	± 5	190	118	252	155	420	924
5.725 to 6.875	Dual	UXA6-W57**2H	1.8	6	38.1	38.9	39.7	2.0	1.08/1.5	28.3/14	40	45	69	3	A	± 5	± 5	190	118	252	155	110	242
		UXA8-W57**2H	2.4	8	40.6	41.4	42.2	1.5	1.08/1.5	28.3/14	40	45	77	3	A	± 5	± 5	190	118	252	155	180	396
		UXA10-W57**2H	3.0	10	42.5	43.4	44.1	1.1	1.08/1.5	28.3/14	40	45	79	3	A	± 5	± 5	190	118	252	155	290	638
5.725 to 7.125	Dual	UXA6-U57**2H	1.8	6	38.1	39.0	40.0	1.7	1.12/1.5	25.0/14	40	45	69	3	A	± 5	± 5	190	118	252	155	110	242
		UXA8-U57**2H	2.4	8	40.6	41.6	42.6	1.3	1.12/1.5	25.0/14	40	45	77	3	A	± 5	± 5	190	118	252	155	180	396
		UXA10-U57**2H	3.0	10	42.5	43.4	44.4	1.1	1.12/1.5	25.0/14	40	45	79	3	A	± 5	± 5	190	118	252	155	290	638
5.925 to 6.475	Single	SU4-59**2H	1.2	4	34.9	35.3	35.6	2.8	1.15	23.1	30		62	3		± 15	± 15	252	155	252	155	45	99
		SU6-59**2H	1.8	6	38.3	38.8	39.1	1.9	1.15	23.1	30		64	3	A	± 5	± 5	190	118	252	155	95	209
		DA8-59**2H	2.4	8	41.2	41.6	42.0	1.5	1.06	30.7	30		66	2	A	± 5	± 5	190	118	252	155	180	396
		DA10-59**2H	3.0	10	43.0	43.4	43.7	1.2	1.06	30.7	30		69	2	A	± 5	± 5	190	118	252	155	290	638
		DA12-59**5H	3.7	12	44.8	45.1	45.4	0.9	1.06	30.7	30		70	2	A	± 5	± 5	190	118	252	155	420	924
	Dual	SUX4-59**2H	1.2	4	34.1	34.5	34.8	2.8	1.15	23.1	30	35	60	3		± 5	± 5	190	118	252	155	45	99
		UXA4-59**2H	1.2	4	34.1	34.5	34.8	2.8	1.10	26.4	38	42	60	3	2	± 5	± 5	190	118	252	155	45	99
		SUX6-59**2H	1.8	6	38.1	38.6	38.9	1.9	1.15	23.1	30	35	64	3		± 5	± 5	190	118	252	155	95	209
		UXA6-59**2H	1.8	6	38.3	38.7	39.0	1.9	1.06	30.7	40	45	69	3	A	± 5	± 5	190	118	252	155	110	242
		DAX8-59**2H	2.4	8	40.9	41.3	41.7	1.5	1.06	30.7	30	35	67	2	A	± 5	± 5	190	118	252	155	180	396
		UXA8-59**2H	2.4	8	40.9	41.3	41.7	1.5	1.06	30.7	40	45	71	3	A	± 5	± 5	190	118	252	155	180	396
		DAX10-59**2H	3.0	10	42.9	43.2	43.5	1.2	1.06	30.7	30	35	69	2	A	± 5	± 5	190	118	252	155	290	638
		UXA10-59**2H	3.0	10	42.9	43.2	43.5	1.2	1.06	30.7	40	45	74	3	A	± 5	± 5	190	118	252	155	290	638
		DAX12-59**5H	3.7	12	44.6	44.8	45.2	0.9	1.06	30.7	30	35	71	2	A	± 5	± 5	190	118	252	155	420	924
		UXA12-59**2H	3.7	12	44.6	44.8	45.2	0.9	1.06	30.7	40	45	76	3	A	± 5	± 5	190	118	252	155	420	924
5.925 to 6.875	Dual	UXA6-W59**2H	1.8	6	38.4	39.1	39.7	1.9	1.08	28.3	40	45	69	3	A	± 5	± 5	190	118	252	155	110	242
		UXA8-W59**2H	2.4	8	40.9	41.6	42.2	1.4	1.08	28.3	40	45	77	3	A	± 5	± 5	190	118	252	155	180	396
		UXA10-W59**2H	3.0	10	42.9	43.5	44.1	1.0	1.08	28.3	40	45	73	3	A	± 5	± 5	190	118	252	155	290	638
		UXA12-W59**2H	3.7	12	44.6	45.1	45.7	0.8	1.08	28.3	40	45	75	3	A	± 5	± 5	190	118	252	155	420	924
6.425 to 7.125	Single	SU4-65**2H	1.2	4	35.6	36.0	36.5	2.5	1.15	23.1	30		61	3		± 15	± 15	252	155	252	155	45	99
		SU6-65**2H	1.8	6	39.2	39.7	40.1	1.7	1.15	23.1	30		65	3	A	± 5	± 5	190	118	252	155	95	209
		DA8-65**2H	2.4	8	41.9	42.3	42.8	1.3	1.06	30.7	30		66	2	A	± 5	± 5	190	118	252	155	180	396
		DA10-65**2H	3.0	10	43.7	44.1	44.6	1.0	1.06	30.7	30		69	2	A	± 5	± 5	190	118	252	155	290	638
		DA12-65**5H	3.7	12	45.3	45.8	46.2	0.8	1.06	30.7	30		70	2	A	± 5	± 5	190	118	252	155	420	924
	Dual	SUX4-65**2H	1.2	4	34.8	35.3	35.7	2.5	1.15	23.1	30	35	61	3		± 5	± 5	190	118	252	155	45	99
		UXA4-65**2H	1.2	4	34.8	35.3	35.7	2.5	1.10	26.4	38	42	61	3	2	± 5	± 5	190	118	252	155	45	99
		SUX6-65**2H	1.8	6	39.0	39.5	39.9	1.7	1.15	23.1	30	35	65	3		± 5	± 5	190	118	252	155	95	209
		UXA6-65**2H	1.8	6	39.2	39.7	40.1	1.7	1.06	30.7	40	45	69	3	A	± 5	± 5	190	118	252	155	110	242
		DAX8-65**2H	2.4	8	41.8	42.2	42.7	1.3	1.06	30.7	30	35	68	2	A	± 5	± 5	190	118	252	155	180	396
		UXA8-65**2H	2.4	8	41.8	42.2	42.7	1.3	1.06	30.7	40	45	71	3	A	± 5	± 5	190	118	252	155	180	396
		DAX10-65**2H	3.0	10	43.5	43.9	44.4	1.0	1.06	30.7	30	35	70	2	A	± 5	± 5	190	118	252	155	290	638
		UXA10-65**2H	3.0	10	43.5	43.9	44.4	1.0	1.06	30.7	40	45	74	3	A	± 5	± 5	190	118	252	155	290	638
		DAX12-65**5H	3.7	12	45.1	45.6	46.0	0.8	1.06	30.7	30	35	71	2	A	± 5	± 5	190	118	252	155	420	924
		UXA12-65**2H	3.7	12	45.1	45.6	46.0	0.8	1.06	30.7	40	45	76	3	A	± 5	± 5	190	118	252	155	420	924
7.125 to 7.75	Dual	UXA4-71**2H	1.2	4	35.7	36.1	36.4	2.2	1.10	26.4	38	42	62	3		± 5	± 5	190	118	252	155	45	99
		UXA6-71**2H	1.8	6	39.9	40.3	40.6	1.5	1.06	30.7	40	45	68	3		± 5	± 5	190	118	252	155	110	242
		UXA8-71**2H	2.4	8	42.4	42.8	43.1	1.1	1.06	30.7	40	45	72	3		± 5	± 5	190	118	252	155	180	396
		UXA10-71**2H	3.0	10	44.4	44.7	45.1	0.9	1.06	30.7	40	45	74	3		± 5	± 5	190	118	252	155	290	638
		UXA12-71**21H	3.7	12	46.0	46.4	46.8	0.7	1.06	30.7	40	45	76	3		± 5	± 5	190	118	252	155	420	924

HARSH AREAS LINE **ANTENNAS**

Frequency	Polariza-tion	Model Number	Diameter		Gain			3 dB-BW	VSWR	RL.	X-Pol	IPI	F/B	ETSI RPE Class	US FCC 101 Cat	Fine Adjust.		Operational Windspeed		Survival Windspeed		Net Weight	
					Low	Mid	High									Az	Elev						
GHz			m	ft	dBi	dBi	dBi	deg		dB	dB	dB	dB			deg	deg	km/h	mph	km/h	mph	kg	lb
7.125 to 8.5	Single	SU2-W71**2H	0.6	2	30.8	31.3	31.9	4.3	1.20	20.8	30		55	2		± 23	± 30	190	118	252	155	15	33
		SU4-W71**2H	1.2	4	36.2	36.9	37.6	2.2	1.15	23.1	30		63	3		± 15	± 15	252	155	252	155	45	99
		SU6-W71**2H	1.8	6	40.0	40.8	41.6	1.5	1.15	23.1	30		67	3		± 5	± 5	190	118	252	155	95	209
		DA8-W71**2H	2.4	8	42.6	43.3	44.1	1.1	1.10	26.4	30		68	2		± 5	± 5	190	118	252	155	180	396
		DA10-W71**2H	3.0	10	44.6	45.3	46.1	0.9	1.10	26.4	30		70	2		± 5	± 5	190	118	252	155	290	638
		DA12-W71**5H	3.7	12	46.2	47.0	47.7	0.7	1.10	26.4	30		71	2		± 5	± 5	190	118	252	155	420	924
	Dual	SUX4-W71**2H	1.2	4	36.1	36.8	37.5	2.2	1.19	21.2	30	35	63	3		± 5	± 5	190	118	252	155	45	99
		SUX6-W71**2H	1.8	6	39.8	40.6	41.4	1.5	1.19	21.2	30	35	67	3		± 5	± 5	190	118	252	155	95	209
		DAX8-W71**2H	2.4	8	42.4	43.1	43.9	1.1	1.10	26.4	30	35	68	2		± 5	± 5	190	118	252	155	180	396
		DAX10-W71**2H	3.0	10	44.4	45.1	45.9	0.9	1.10	26.4	30	35	70	2		± 5	± 5	190	118	252	155	290	638
		DAX12-W71**5H	3.7	12	46.0	46.7	47.5	0.7	1.10	26.4	30	35	71	2		± 5	± 5	190	118	252	155	420	924
7.725 to 8.5	Dual	UXA4-78**2H	1.2	4	36.8	37.2	37.6	2.1	1.08	28.3	38	42	62	3		± 5	± 5	190	118	252	155	45	99
		UXA6-78**2H	1.8	6	40.6	41.1	41.4	1.5	1.06	30.7	40	45	70	3		± 5	± 5	190	118	252	155	110	242
		UXA8-78**2H	2.4	8	43.1	43.6	43.9	1.1	1.06	30.7	40	45	73	3		± 5	± 5	190	118	252	155	180	396
		UXA10-78**2H	3.0	10	45.1	45.5	45.9	0.9	1.06	30.7	40	45	76	3		± 5	± 5	190	118	252	155	290	638
		UXA12-78**2H	3.7	12	46.7	47.1	47.5	0.7	1.06	30.7	40	45	77	3		± 5	± 5	190	118	252	155	420	924
10.3 to 10.7	Single	SU2-103**2H	0.6	2	33.4	33.6	33.8	3.2	1.20	20.8	30		59	3		± 30	± 23	190	118	252	155	15	33
		SU4-103**2H	1.2	4	39.6	39.8	39.9	1.6	1.15	23.1	32		65	3	A	± 15	± 15	252	155	252	155	35	77
		SU6-103**2H	1.8	6	43.2	43.4	43.5	1.0	1.15	23.1	32		70	3	A	± 5	± 5	190	118	252	155	95	209
		DA8-103**2H	2.4	8	45.7	45.9	46.0	0.8	1.08	28.3	30		68	2	A	± 5	± 5	190	118	252	155	180	396
		DA10-103**2H	3.0	10	47.6	47.8	47.9	0.7	1.08	28.3	30		70	2	A	± 5	± 5	190	118	252	155	290	638
		DA12-103**5H	3.7	12	49.0	49.2	49.3	0.5	1.08	28.3	30		71	2	A	± 5	± 5	190	118	252	155	420	924
	Dual	SUX4-103**2H	1.2	4	39.5	39.7	39.8	1.6	1.20	20.8	32	35	65	3		± 5	± 15	190	118	252	155	35	77
		UXA4-103**2H	1.2	4	39.5	39.7	39.8	1.7	1.10	26.4	40	45	69	3	A	± 5	± 15	190	118	252	155	40	88
		SUX6-103**2H	1.8	6	43.1	43.3	43.4	1.0	1.20	20.8	32	35	70	3	A	± 5	± 5	190	118	252	155	95	209
		UXA6-103**2H	1.8	6	43.1	43.3	43.4	1.0	1.08	28.3	40	45	73	3	A	± 5	± 5	190	118	252	155	110	242
		DAX8-103**2H	2.4	8	45.6	45.8	45.9	0.8	1.10	26.4	30	35	68	2	A	± 5	± 5	190	118	252	155	180	396
		UXA8-103**2H	2.4	8	45.6	45.8	45.9	0.8	1.08	28.3	40	45	76	3	A	± 5	± 5	190	118	252	155	180	396
		DAX10-103**2H	3.0	10	47.5	47.7	47.8	0.7	1.10	26.4	30	35	70	2	A	± 5	± 5	190	118	252	155	290	638
		UXA10-103**2H	3.0	10	47.5	47.7	47.8	0.7	1.08	28.3	40	45	78	3	A	± 5	± 5	190	118	252	155	290	638
		DAX12-103**5H	3.7	12	48.9	49.1	49.2	0.5	1.10	26.4	30	35	71	2	A	± 5	± 5	190	118	252	155	420	924
		UXA12-103**2H	3.7	12	48.9	49.1	49.2	0.5	1.08	28.3	40	45	78	3	A	± 5	± 5	190	118	252	155	420	924
10.7 to 11.7	Single	SU2-107**2H	0.6	2	33.8	34.2	34.6	3.1	1.20	20.8	30		60	2		± 23	± 30	190	118	252	155	15	33
		SU4-107**2H	1.2	4	40.1	40.5	40.9	1.5	1.15	23.1	32		66	3	A	± 15	± 15	252	155	252	155	35	77
		SU6-107**2H	1.8	6	43.7	44.0	44.5	1.0	1.15	23.1	32		70	3	A	± 5	± 5	190	118	252	155	95	209
		DA8-107**2H	2.4	8	46.1	46.4	46.9	0.8	1.06	30.7	30		71	2	A	± 5	± 5	190	118	252	155	180	396
		DA10-107**2H	3.0	10	48.0	48.4	48.6	0.7	1.06	30.7	30		71	2	A	± 5	± 5	190	118	252	155	290	638
		DA12-107**5H	3.7	12	49.4	49.8	50.0	0.5	1.06	30.7	30		71	2	A	± 5	± 5	190	118	252	155	420	924
	Dual	SUX4-107**2H	1.2	4	40.0	40.4	40.8	1.5	1.20	20.8	32	35	66	3	A	± 5	± 15	190	118	252	155	35	77
		UXA4-107**2H	1.2	4	40.0	40.4	40.8	1.5	1.08	28.3	40	45	70	3	A	± 5	± 15	190	118	252	155	40	88
		SUX6-107**2H	1.8	6	43.6	43.9	44.4	1.0	1.20	20.8	32	35	70	3	A	± 5	± 5	190	118	252	155	95	209
		UXA6-107**2H	1.8	6	43.5	43.8	44.3	1.0	1.06	30.7	40	45	73	3	A	± 5	± 5	190	118	252	155	110	242
		DAX8-107**2H	2.4	8	45.9	46.2	46.7	0.8	1.06	30.7	30	35	69	2	A	± 5	± 5	190	118	252	155	180	396
		UXA8-107**2H	2.4	8	45.9	46.2	46.7	0.8	1.06	30.7	40	45	75	3	A	± 5	± 5	190	118	252	155	180	396
		DAX10-107**2H	3.0	10	47.8	48.2	48.4	0.7	1.06	30.7	30	35	70	2	A	± 5	± 5	190	118	252	155	290	638
		DAX12-107**5H	3.7	12	49.2	49.6	49.9	0.5	1.06	30.7	30	35	72	2	A	± 5	± 5	190	118	252	155	420	924
		UXA10-107**2H	3.0	10	47.8	48.2	48.4	0.7	1.06	30.7	40	45	77	3	A	± 5	± 5	190	118	252	155	290	638
		UXA12-107**2H	3.7	12	49.2	49.6	49.9	0.5	1.06	30.7	40	45	78	3	A	± 5	± 5	190	118	252	155	420	924
12.7 to 13.25	Single	SU2-127**2H	0.6	2	35.2	35.4	35.6	2.7	1.20	20.8	32		62	3		± 23	± 30	190	118	252	155	15	33
		SU4-127**2H	1.2	4	41.3	41.5	41.7	1.4	1.20	20.8	32		67	3	B	± 15	± 15	252	155	252	155	35	77
		SU6-127**2H	1.8	6	44.9	45.1	45.3	0.9	1.20	20.8	32		72	3	A	± 5	± 5	190	118	252	155	95	209
		DA8-127**2H	2.4	8	47.6	47.7	47.9	0.7	1.08	28.3	30		71	2	A	± 5	± 5	190	118	252	155	180	396
		DA10-127**2H	3.0	10	49.4	49.5	49.7	0.6	1.08	28.3	30		71	2	A	± 5	± 5	190	118	252	155	290	638
	Dual	SUX2-127**2H	0.6	2	35.1	35.3	35.5	2.7	1.25	19.1	32	35	65	3		± 23	± 30	190	118	252	155	15	33
		SUX4-127**2H	1.2	4	41.3	41.5	41.7	1.4	1.25	19.1	32	35	67	3	B	± 5	± 15	190	118	252	155	35	77
		UXA4-127**2H	1.2	4	41.3	41.4	41.6	1.4	1.10	26.4	40	45	67	3	A	± 5	± 15	190	118	252	155	40	88
		SUX6-127**2H	1.8	6	44.8	45.0	45.2	0.9	1.25	19.1	32	35	72	3	A	± 5	± 5	190	118	252	155	95	209
		UXA6-127**2H	1.8	6	45.0	45.1	45.3	0.9	1.10	26.4	40	45	73	3	A	± 5	± 5	190	118	252	155	110	242
		DAX8-127**2H	2.4	8	47.4	47.5	47.7	0.7	1.10	26.4	30	35	70	2	A	± 5	± 5	190	118	252	155	180	396
		UXA8-127**2H	2.4	8	47.4	47.5	47.7	0.7	1.10	26.4	40	45	75	3	A	± 5	± 5	190	118	252	155	180	396
		DAX10-127**2H	3.0	10	49.2	49.3	49.5	0.6	1.10	26.4	30	35	71	2	A	± 5	± 5	190	118	252	155	290	638
		UXA10-127**2H	3.0	10	49.2	49.3	49.5	0.6	1.10	26.4	40	45	76	3	A	± 5	± 5	190	118	252	155	290	638

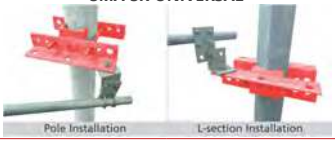
HARSH AREAS LINE **ANTENNAS**

Frequency	Polarization	Model Number	Diameter		Gain			3 dB-BW	VSWR	RL.	X-Pol	IPI	F/B	ETSI RPE Class	US FCC 101 Cat	Fine Adjust.		Operational Windspeed		Survival Windspeed		Net Weight	
					Low	Mid	High									Az	Elev						
GHz			m	ft	dBi	dBi	dBi	deg		dB	dB	dB	dB			deg	deg	km/h	mph	km/h	mph	kg	lb
14.2 to 15.35	Single	SU2-142**2H	0.6	2	36.2	36.5	36.8	2.3	1.20	20.8	32		62	2		± 23	± 30	190	118	252	155	15	33
		SU4-142**2H	1.2	4	42.2	42.5	42.8	1.2	1.20	20.8	32		70	3	B	± 15	± 15	252	155	252	155	35	77
		SU6-142**2H	1.8	6	45.7	46.0	46.3	0.8	1.20	20.8	32		73	2		± 5	± 5	190	118	252	155	95	209
		DA8-142**2H	2.4	8	48.3	48.5	48.8	0.6	1.10	26.4	30		70	1		± 5	± 5	190	118	252	155	180	396
	Dual	SUX2-142**2H	0.6	2	36.2	36.5	36.8	2.3	1.20	20.8	32	35	62	2		± 23	± 30	190	118	252	155	15	33
		UXA2-142**2H	0.6	2	36.3	36.5	36.8	2.3	1.13	24.3	36	40	64	3		± 30	± 30	190	118	252	155	15	33
		SUX4-142**2H	1.2	4	42.1	42.4	42.7	1.2	1.20	20.8	32	35	70	2		± 5	± 15	190	118	252	155	35	77
		UXA4-142**2H	1.2	4	42.3	42.5	42.8	1.2	1.10	26.4	36	40	70	3		± 5	± 15	190	118	252	155	40	88
		SUX6-142**2H	1.8	6	45.6	45.9	46.2	0.8	1.20	20.8	32	35	74	3		± 5	± 5	190	118	252	155	95	209
		UXA6-142**2H	1.8	6	45.8	46.0	46.3	0.8	1.10	26.4	38	40	75	3		± 5	± 5	190	118	252	155	110	242
		DAX8-142**2H	2.4	8	48.3	48.5	48.8	0.6	1.10	26.4	30	35	69	2		± 5	± 5	190	118	252	155	180	396
		UXA8-142**2H	2.4	8	48.3	48.5	48.8	0.6	1.10	26.4	38	40	76	3		± 5	± 5	190	118	252	155	180	396
17.7 to 19.7	Single	SU2-190**2H	0.6	2	38.1	38.6	39.1	1.9	1.20	20.8	32		62	2		± 23	± 30	190	118	252	155	15	33
		SU4-190**2H	1.2	4	44.1	44.6	45.1	0.9	1.20	20.8	32		71	3	B	± 15	± 15	252	155	252	155	35	77
		SU6-190**2H	1.8	6	47.5	48.0	48.5	0.7	1.20	20.8	32		75	3	A	± 5	± 5	190	118	252	155	95	209
	Dual	SUX2-190**2H	0.6	2	38.0	38.5	39.0	1.9	1.25	19.1	32	35	62	2	A	± 23	± 30	190	118	252	155	15	33
		UXA2-190**2H	0.6	2	37.8	38.3	38.7	1.9	1.13	24.3	36	40	66	3	A	± 30	± 30	190	118	252	155	15	33
		SUX4-190**2H	1.2	4	44.0	44.5	45.0	0.9	1.20	20.8	32	35	67	2	A	± 5	± 15	190	118	252	155	35	77
		UXA4-190**2H	1.2	4	44.0	44.5	44.9	0.9	1.13	24.3	36	40	72	3	A	± 5	± 15	190	118	252	155	40	88
		SUX6-190**2H	1.8	6	47.4	47.9	48.4	0.7	1.20	20.8	32	35	76	3	A	± 5	± 5	190	118	252	155	95	209
		UXA6-190**2H	1.8	6	47.5	48.0	48.4	0.7	1.13	24.3	36	40	76	3	A	± 5	± 5	190	118	252	155	110	242
21.2 to 23.6	Single	SU2-220**2H	0.6	2	39.5	40.0	40.5	1.6	1.25	19.1	32		66	2	A	± 23	± 30	190	118	252	155	15	33
		SU4-220**2H	1.2	4	45.6	46.1	46.6	0.8	1.20	20.8	32		72	3	A	± 15	± 15	252	155	252	155	35	77
		SU6-220**2H	1.8	6	49.0	49.5	50.0	0.5	1.20	20.8	32		75	2	A	± 5	± 5	190	118	252	155	95	209
	Dual	SUX2-220**2H	0.6	2	39.5	40.0	40.5	1.6	1.25	19.1	32	35	66	2	A	± 23	± 30	190	118	252	155	15	33
		UXA2-220**2H	0.6	2	39.5	40.0	40.5	1.6	1.15	23.1	36	40	66	3	A	± 30	± 30	190	118	252	155	15	33
		SUX4-220**2H	1.2	4	45.5	46.0	46.5	0.8	1.20	20.8	32	35	72	3	A	± 5	± 15	190	118	252	155	35	77
		UXA4-220**2H	1.2	4	45.5	46.0	46.4	0.8	1.13	24.3	36	40	72	3		± 5	± 15	190	118	252	155	40	88
		SUX6-220**2H	1.8	6	48.9	49.4	49.9	0.5	1.20	20.8	32	35	75	2	A	± 5	± 5	190	118	252	155	95	209
		UXA6-220**2H	1.8	6	49	49.5	49.9	0.5	1.13	24.3	36	40	76	3		± 5	± 5	190	118	252	155	110	242
24.25 to 26.5	Single	SU2-250**2H	0.6	2	40.5	40.8	41.3	1.4	1.25	19.1	32		67	2	B	± 23	± 30	190	118	252	155	15	33
		SU4-250**2H	1.2	4	46.8	47.2	47.6	0.7	1.2	20.8	32		73	3	A	± 15	± 15	252	155	252	155	35	77
	Dual	SUX2-250**2H	0.6	2	40.5	40.8	41.3	1.4	1.25	19.1	32	35	67	2	B	± 23	± 30	190	118	252	155	15	33
		SUX4-250**2H	1.2	4	46.7	47.1	47.5	0.7	1.25	19.1	32	35	73	3	A	± 5	± 15	190	118	252	155	35	77

WIND SPEED AND SWAY BAR SELECTION GUIDE

A perimeter sway bar and sway bar connecting kit are available to complement your RFS Harsh Areas Line antennas:

- An optional perimeter sway bar provides added assurance in case mistakes are made during installation
- A universal sway bar tower connecting kit allows sway bars to be attached to pipes or L-structures without drilling a hold in the pipe or structure.

Sizes (ft)	2	4 (< 10 GHz)	4 (>=10GHz)	6	8	10	12
Model (Prefix)	SU/SUX/UXA	SUX/DAX/UXA	SU/DA/SUX DAX/UXA	SU/DA/SUX DAX/UXA	DA/UA/DAX UDA/UXA	DA/UA/DAX UDA/UXA	DA/UA/DAX UDA/UXA
Wind Speed km/h (mph)	252 (155)	252 (155)	252 (155)	252 (155)	252 (155)	252 (155)	252 (155)
Sway Bar Qty	0	1	1	1	1	1	1
Additional Perimeter Sway Bar	-	-	**SMA-SK-4** 	**SMA-SK-60-2000A** 	**SMA-SK-60-3000A**  8 ft offset	 10 ft offset	 12 ft offset
Sway Bar Tower Fixation Kit	-	**SMA-SK-UNIVERSAL**  Pole Installation L-section Installation		**SMA-SKO-UNIV-L**  Pole Installation L-section Installation			

UNDERSTANDING RFS ANTENNAS
E-BAND PORTFOLIO

COMPACT ANTENNAS FOR HIGH CAPACITY APPLICATIONS ON SHORT DISTANCES

Designed for: Small cell, front haul and traditional short-distance backhaul applications in urban environments where extremely high capacity is needed

Installed on: Rooftop poles, towers, and smart poles

CompactLine®Easy E-Band antennas feature:

- **Extreme stability** in high winds to ensure survivability in winds up to 320km/h (SB1) and 250km/h (SC2)
- **Compliance with ETSI EN 302217 Range 7**, Class 3 and FCC
- A compact mounting system simplifies installation time and effort
- Both 1ft and 2ft size options in both single- and dual-polarizations

InvisiLine® E-Band antennas feature:

- **The smallest antenna design available** to reduce zoning complexity, minimize visual impact and simplify installation
- **A large beamwidth** for easy alignment and gain that should be compatible with more than 50% of E-band links
- **Compliance with ETSI EN 302217 Range 7**, Class 3
- **Excellent electrical performance** with optimized beamwidth and gain
- **Multi-band capabilities** to increase flexibility
- 0.1 m (0.4 ft) reflector size
- 5 kg (11 lb) weight
- **Customer-specific mount integrations**, if required

E-BAND **ANTENNAS**

Frequency	Polarization	Model Number	Diameter		Gain			3 dB-BW	VSWR	RL.	X-Pol	IPI	F/B	ETSI RPE Class	US FCC 101 Cat	Fine Adjust.		Operational Windspeed		Survival Windspeed		Net Weight	
					Low	Mid	High									Az	Elev						
GHz			m	ft	dBi	dBi	dBi	deg		dB	dB	dB	dB			deg	deg	km/h	mph	km/h	mph	kg	lb
71.0 - 86.0	Single	SFA04-W800	0.1	0.4	38.0[1]	38.3[1]	38.5[1]	2.0	1.50	14.0	25		56[1]	3		±15	±20	252	155	320	198	5	11
					39.3[2]	39.5[2]	39.8[2]						57[2]										
		SB1-W800	0.3	1	43.1	44.6	45.7	0.8	1.50	14.0	27		63	3		± 15	± 20	224	139	320	198	6	13
		SB1-W800-FCC	0.3	1	43.1	44.6	45.7	0.8	1.50	14.0	27		63	3	A	± 15	± 20	224	139	320	198	6	13
		SC2-W800	0.6	2	49.8	50.9	51.9	0.5	1.50	14.0	27		68	3	A	± 15	± 20	120	75	252	155	9	20
	Dual	SBX1-W800	0.3	1	41.1	42.6	43.7	0.8	1.67	12.0	25	30	63	3		± 15	± 20	224	139	320	198	6	13
		SBX1-W800-FCC	0.3	1	41.1	42.6	43.7	0.8	1.67	12.0	25	30	63	3	A	± 15	± 20	224	139	320	198	6	13
		SCX2-W800	0.6	2	47.8	48.9	49.9	0.5	1.67	12.0	25	30	68	3	A	± 15	± 20	120	75	252	155	9	20

[1] @71-76 GHz
[2] @81-86 GHz

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

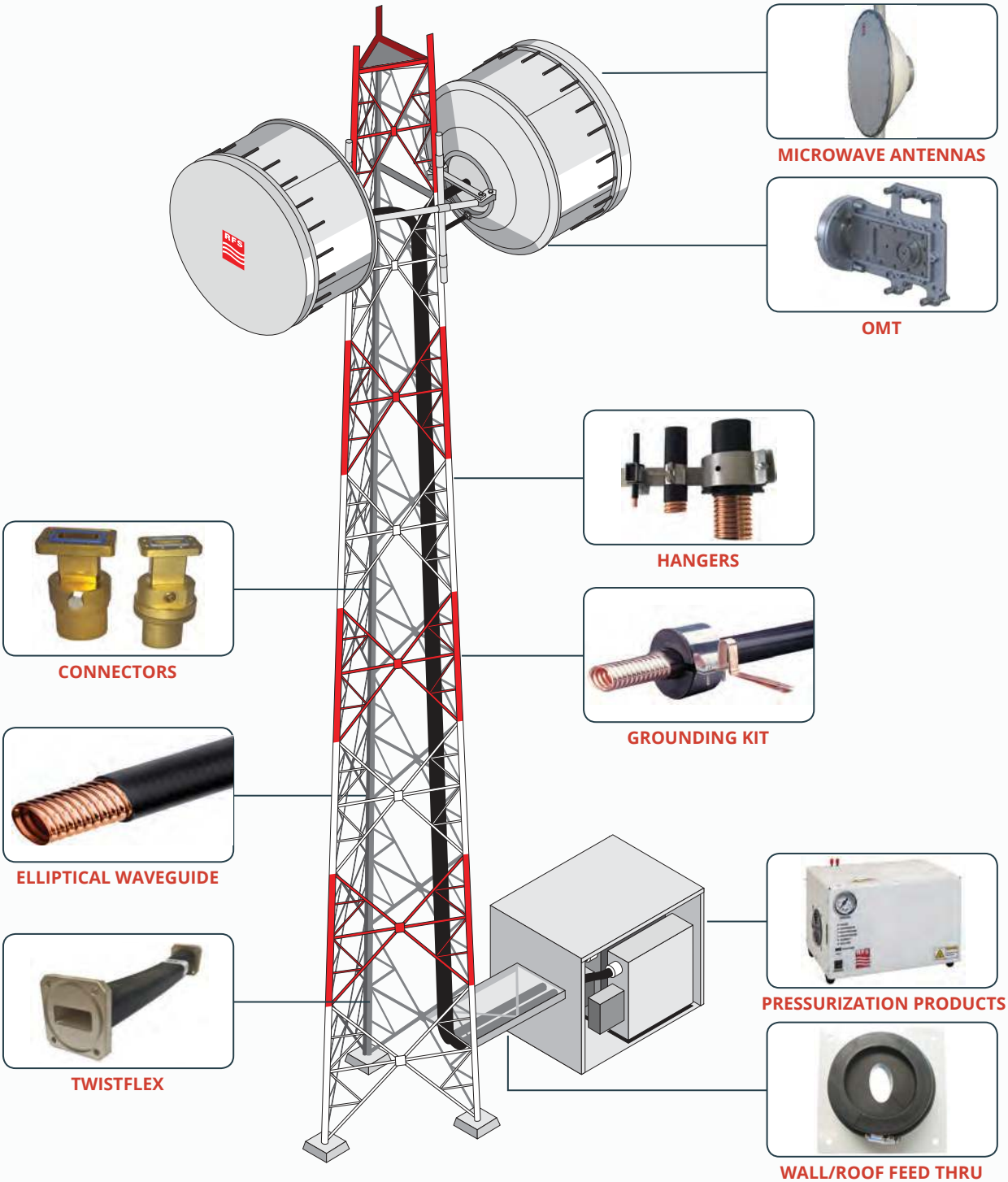
DUAL BAND **ANTENNAS**

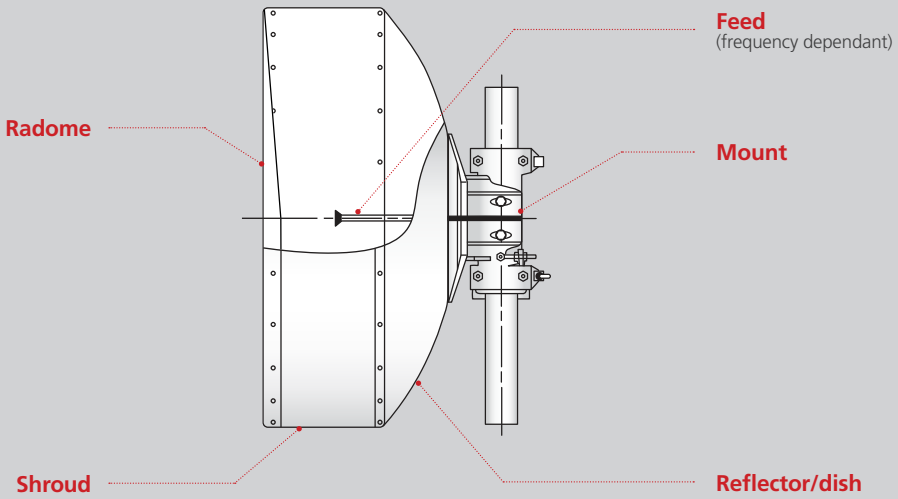
Frequency		Polarization		Diameter		RFS Antenna Code[1]
Band 1	Band 2	Band 1	Band 2			
GHz	GHz			m	ft	
14.4-15.35	71.0 - 86.0	single	single	0.6	2	DB2-142W800
14.4-15.35	71.0 - 86.0	dual	single	0.6	2	DBX2-142W800
17.7-19.7	71.0 - 86.0	single	single	0.6	2	DB2-190W800
17.7-19.7	71.0 - 86.0	dual	single	0.6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

RFS END-TO-END
MICROWAVE SITE SOLUTIONS

RFS offers a full range of waveguides, connectors, twistflex, pressurization equipment, OMTs and accessories to support your end-to-end radio link network.





MICROWAVE **GLOSSARY**

GAIN

The ratio of the radiation intensity in the main beam axis to the radiation intensity that would be obtained if the power accepted by the antenna were radiated isotropically. Value measured in dBi. The values are stated for the three frequencies at mid-band as well as for the bottom and top of the frequency band. The tolerance for antenna gain is ± 0.5 dB.

HALF POWER BEAM WIDTH (3 DB-BW)

The angle, relative to the main beam axis, between the two directions at which the co-polar pattern is 3 dB below the value on the main beam axis.

VOLTAGE STANDING WAVE RATIO (VSWR) OR RETURN LOSS

The voltage standing wave ratio, or return loss, characterizes the level of energy reflected by impedance mismatching along an electrical transmission line. Expressed in dB, the return loss is a logarithmic measure of the reflection coefficient. It represents the ratio of the transmitted power to the reflected power.

The stated values are guaranteed across the frequency band of operation.

RADIATION PATTERN ENVELOPE (RPE)

The envelope represents the worst values of measurements taken on the pattern test range at the three frequencies that are mid-band, bottom and top of band, in copolar and cross-polar conditions, horizontal and vertical polarized, over the full 360° of azimuth.

Since the envelope is drawn over the highest peaks of all measurements, actual interference radiation in an operational system will generally be smaller than calculated from the RPE. Tolerance on given values is 3 dB in an angular region of ±100° and 2 dB from 100° to 180°.

FRONT-TO-BACK RATIO (F/B)

The highest level of radiation relative to the main beam in an angular zone of 180° ± 40° for all antennas. Tolerance on stated values is 2 dB.

CROSS POLARIZATION DISCRIMINATION (XPD)

The difference in dB between the co-polarized main beam gain and the orthogonal signal measured within an angular zone of azimuth that is twice the maximum half power beam width of the frequency band.

INTER-PORT ISOLATION (IPI)

The ratio in dB of the power level applied to one input port of a dual-polarized antenna to the power level received in the other input port on the same antenna.

OPERATIONAL WIND SPEED

The antenna axis deflection is less than one-third of the half power beam width at the highest frequency supported. The drop in signal is only approximately 1 dB; the radio link will therefore continue to operate.

SURVIVAL WIND SPEED

The antenna sub-system will survive the specified survival wind speed without any permanent deformation or changes of shape, although realignment might be needed. An additional load of a 25 mm (1 in) radial ice layer is taken into account.

MECHANICAL, ENVIRONMENTAL & ELECTRICAL **TESTING PROCEDURES**

All RFS microwave antennas undergo extensive mechanical, environmental and radio-electrical tests during development to ensure they meet or exceed specifications.

MECHANICAL TESTS INCLUDE:

Shock & vibration tests

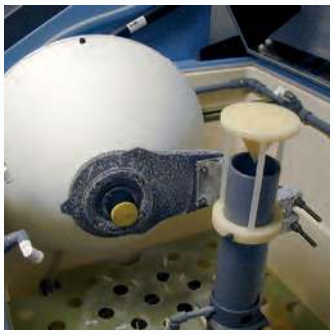
Mechanical & static wind load tests

Wind tunnel tests

Packing tests

ENVIRONMENTAL TESTS INCLUDE:

Corrosion tests



Temperature tests

Humidity tests

Rain tests

RADIO-ELECTRICAL TESTS INCLUDE:[1]

Far field radiation measurement (co-polar and cross-polar) tests

Test range for small antennas

Test range for large antennas

Return loss / VSWR measurement tests

[1] All radio-electrical tests are performed on all antenna sizes (up to or 4.6 m or 15 ft) and frequencies (up to 80 GHz).

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 • From 1 ft to 10 ft: reflector is non-split • 12 ft: reflector is split (except UXA type which is non split) • 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 • From 8 ft to 10 ft: reflector is split • 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)

* 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

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

WHY **RFS?**

HERE ARE JUST A FEW OF THE REASONS CUSTOMERS CHOOSE RFS MICROWAVE ANTENNAS

Innovative Structural Design
RFS designs antennas that minimize materials without sacrificing mechanical stability. These lightweight, yet robust antennas reduce tower loading as well as installation costs and time.

Superior Mechanical Design
RFS designs are based on advanced calculation methods, such as the finite element method. Mechanical stability and higher wind resistance reduce maintenance requirements and increase antenna life span.

Lower Total Cost of Ownership
RFS' modular designs, low maintenance requirements and long-term reliability reduce your TCO.

Simple Installation Procedures
Streamline instructions accelerate installations and reduce training requirements.

Spun Backring Design
RFS TrunkLine, PrimeLine and Harsh Area antenna dishes 1.8m (6ft) and larger are manufactured with a spun backring design for increased mechanical stability and link security.

Rear-Mounted Feeds
This style simplifies installation and is available in most models

High Performing Small Antennas
RFS' small antennas meet key radiation pattern requirements and can be used in place of larger antennas to simplify site negotiations and minimize leasing costs.

Extensive testing & qualification
With these procedures in place there are no compromises in performance or safety. Our customers have complete confidence in our microwave antennas.

Compact Packaging
By using lighter weight and more compact packaging, RFS helps you reduce transportation requirements and simplify logistics.

Optional Split-Reflector Designs
Choosing this option further reduces packaging and transportation requirements

Customized Fittings
This detail allows specific radios and hot-standby couplers to be mounted directly on the antenna, eliminating the need for a waveguide link to the radio[1].

[1] RFS CompacetLine, CompactLineEasy and SerenityLine antennas support integrated radios.

RFS has been a leader in designing and manufacturing microwave antennas for more than 35 years and has deployed several million microwave antennas around the globe. With manufacturing facilities on five continents, RFS can ensure its customers enjoy low transportation costs and short lead times.

03

RADIO FREQUENCY SYSTEMS