SPACEBRIDGE
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SBAF-Type 98cm and 1.2m Ku and Ka-bands TxRx Class I Antenna Systems

These rugged antenna systems are rugged commercial-grade antennas, suitable for the most demanding applications to be used with SpaceBridge 3W Ku-band or Ka-band Transceivers

Key Features

- Fine azimuth and elevation adjustment features.
- Meets or exceeds regulatory agency requirements.
- Integrated with SB 3W and 4W Ku and Ka-band transceivers via mounting bracket.
- Can be provided with the following options:
  - Tri-mast to fit any surface
  - 2x30m RG-6 color coded coaxial cables
  - 4' x 4' Non-Pen Mount (98cm antennas)

1.2 m

98 cm

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Technical Specifications

Model #	SBAF120U	SBAF098A
Frequency range	Ku-band	Ka-band
Class	Class I	Class I

Mechanical		
Effective aperture	120cm	98cm
Platform geometry/optics	One-piece offset feed prime focus	One-piece offset feed prime focus
Pointing	Fixed	Fixed
Azimuth range	360° continuous (±5° fine adjustment)	360° continuous (±5° fine adjustment)
Elevation range	5° - 90° continuous	5° - 90° continuous
Material	SMC	Steel
Mast pipe interface diameter	73.2mm or 76mm	60.3mm
Effective aperture	120cm	98cm
Platform geometry/optics	One-piece offset feed prime focus	One-piece offset feed prime focus

Environmental		
Wind operational	56km/h	56km/h
Wind survival	201km/h	201km/h
Temperature range	-50°C to +80°C	-50°C to +60°C
Humidity	0 – 100% (non-condensing)	0 – 100% (non-condensing)
Atmosphere	720 hours STM B-117 (salt fog test)	720 hours STM B-117 (salt fog test)
Solar radiation	360 BTU/h/ft²	360 BTU/h/ft²

RF			
Frequency range (GHz)	Tx	13.75 – 14.50	28.00 – 30.00
	Rx	10.70 – 12.75	17.80 – 20.20
Gain	Tx	43.3dB @ 14.3GHz	47.2dB @ 30.0GHz
	Rx	41.8dB @ 12.00GHz	44.0dB @ 20.2GHz
Gain variation		±0.3 dB	±0.2 dB
Polarization		Linear orthogonal	Circular RH or LH
Sidelobe compliance		29 - 25 Log Θ dB -3.5 dB 32-25 Log Θ dB -10 dB (averaged)	100 λ/D < Θ < 20° 20° < Θ < 26.3° 26.3° < Θ < 48° 48° < Θ < 180°
VSWR	Tx	1.3:1	1.3:1
	Rx	1.3:1	1.3:1
Isolation	Tx	90dB	90dB
	Rx	40dB	80dB
Cross pol 1dB beamwidth	Tx	30dB	25dB
	Rx	30dB	22dB
Noise temperature (@ elevation angle)		48K @ 10° 35K @ 20° 30K @ 30°	44K @ 30°