



sales@ara-inc.com



UAV ANTENNA SERIES PRODUCT SPOTLIGHT



More reliable Command and Control (C2) and data links are required as the use of Unmanned Aerial Vehicles (UAVs) is expected to continue growing with the deployment of expanding communication networks. These links are critical for both Terrestrial-Based Line-of-Sight (LOS) and in satellite communication links for Beyond LOS (BLOS) conditions.

ARA has extensive experience in the design and manufacture of antennas used in airborne environments. Our proven designs have tens of thousands of flight hours. This product line of antennas includes omnidirectional, directional, linear, and circularly polarized configurations for fixed-wing or rotor-wing airframes. It also includes products designed specifically for UAV applications, antennas to support airborne-to-satellite datalinks, and line-of-sight air-to-ground links. The ARA UAV product line is designed to have a smaller footprint with superior performance and ensured communications.

ARA

28 Riverside Drive, Pembroke, MA 02359
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SEAVEY DIVISION



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FEATURES

- Rugged
- Lightweight
- Proven Flight Endurance
- High Gains, Small Volume
- Made in the USA 

Revised July 2020

C-Band Models					
	0043-850A	C1729-800	C2001-800X2	0043-830R	9766-800E
Frequency (GHz)	4.0 to 5.8	4.4 to 4.9	4.4 to 5.85	5.25 to 5.85	5.25 to 5.85
Type	Blade Omni	Blade Omni	Horn	Blade Omni	Horn
Gain	3 dBi	2.0 dBi	>15 dBi	3.0 dBi	>15 dBi
Power	20 W	20 W	Max 100 W	20 W	Max 100 W
Elevation	43°	43°	30°	30°	30°
Azimuth	Omni	Omni	30°	Omni	30°
Beamwidth			30° Nominal		30° Nominal
Sidelobe			15 dBi		15 dBi Nominal
Polarization	Vertical	Vertical	Vertical	Vertical	Vertical
Return Loss	15 dB	15 dB	12 dB	15 dB	14 dB
VSWR	1.4:1	1.4:1	1.6:1	1.4:1	1.5:1
Size	1.5" x 2.5" x 1.56"	1.5" x 2.5" x 4.75"	5.5" Max Diameter 5.8" Length	1.5" x 2.5" x 4.75"	5.5" Max Diameter 3.75" length

X-Band Models				
	9653-801	9767-800	9653-811	9769-810
Frequency (GHz)	7.25 to 7.75	7.25 to 7.75	7.9 to 8.4	7.9 to 8.4
Type	Bifilar, Helix Omni	Patch Omni	Bifilar, Helix Omni	Patch Omni
Gain	3.5 dBic	6.3 dBic Nominal	3.5 dBic	5.4 dBic Nominal
Power	150 Watts CW (Max)	20 W	150 Watts CW (Max)	20 W
Elevation	83° from Nadir	87°	83° from Nadir	75°
Azimuth	Omnidirectional	Omnidirectional	Omnidirectional	Omnidirectional
Beamwidth				
Sidelobe				
Polarization	Right-Hand Circular	Left-Hand Circular	Left-Hand Circular	Right-Hand Circular
Return Loss	17 dB	17 dB	15 dB	11 dB
VSWR	1.3:1	1.3:1	1.4:1	1.7:1
Size	1.63" Diameter, 4" Length	3 1/16" Diameter	1.63" Diameter, 4" Length	3 1/16" Diameter

The data described herein is subject to licensing under the International Traffic Arms Regulations (ITAR) 22 CFR Parts 120-130. This data sheet has been released into the public domain in accordance with these regulations.

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K-Band Models					
	0120-800	0043-800	C0939-800	0349-820	0349-835
Frequency (GHz)	14.5 to 15.35	14.5 to 15.35	14.5 to 15.35	20.1 to 21.1	29.9 to 30.9
Type	Reflector	Horn	Bi-Cone	Horn Omni	Horn Omni
Gain	38 dBi min	18 dBi	3.1 dBic	0 dBi	0 dBi
Power	50 W	20 W	20 W	10 W	10 W
Elevation	2° Nominal	30° Min	./- 40°	60°	60°
Azimuth	2° Nominal	10° Min	Omnidirectional	Omnidirectional	Omnidirectional
Beamwidth	3° Vertical X 2° Horizontal Nominal				
Sidelobe	-19 dB (H-Plane) -26 dB (E-Plane)	-12 dB (H-Plane) -8 dB (E-Plane)			
Polarization	Vertical		Right-Hand Circular	Right-Hand Circular	Right-Hand Circular
Return Loss	12 dB	12 dB	13 dB	12 dB	12 dB
VSWR	1.6:1	1.6:1	1.5:1	1.6:1	1.6:1
Size	34.25" x 24.25"	5" x 3" x 3"	2.6" x 3.1"	3.6" x 4.1"	3.6" x 4.1"

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