

PCTEL Heavy Duty Omnidirectional Base Station Platform



The PCTEL BOA omnidirectional base station antennas consist of a linear array, encapsulated in a heavy duty fiberglass radome with a thick walled 6061-T6 aluminum mounting base. The rugged and robust design makes these antennas ideal for deployment in harsh environments where long term reliability and durability cannot be compromised. This platform is ideal for industrial wireless applications in the SCADA, Utility Smart Grid, Positive Train Control, Remote Monitoring, Precision Agriculture, and Military/Defense markets.

Features

- UV stable gray fiberglass radome
- Versatile mounting brackets included
- Black, hard coat anodized finish on antenna base and mounting brackets
- Galvanized Mounting Hardware
- Movable drain plug for upright or inverted mounting
- DC grounded for ESD protection
- Stable pattern and gain performance with no field tuning required



BOA9025 and BAM1005 mount



BOA2175 and MMK5 mount

STANDARD CONFIGURATION

Model	Connector	Mount
BOA9025	N Female bulkhead	BAM1005 mast mount included
BOA9028	N Female bulkhead	BAM1005 mast mount included
BOA90211	N Female bulkhead	MMK5 mast mount included
BOA4409	N Female bulkhead	MMK5 mast mount included
BOA4357	N Female bulkhead	BAM1005 mast mount included
BOA2177	N Female bulkhead	MMK5 mast mount included
BOA2175	N Female bulkhead	MMK5 mast mount included

ELECTRICAL SPECIFICATIONS - RF ANTENNA

Model	Frequency Range	Gain	VSWR	Elevation Half Power Beamwidth	Average Power	Nominal Impedance
BOA9025	902-928 MHz	5.1 dBi / 3 dBd	< 1.5	25°	250 watts	50 ohms
BOA9028	902-928 MHz	8.1 dBi / 6 dBd	< 1.5	13°	250 watts	50 ohms
BOA90211	902-928 MHz	11.1 dBi / 9 dBd	< 1.5	6°	250 watts	50 ohms
BOA4409	440-460 MHz	9.1 dBi / 7 dBd	< 1.7	11°	250 watts	50 ohms
BOA4357	430-470MHz	7.1 dBi / 5 dBd	< 1.7	18°	250 watts	50 ohms
BOA2177	217-222 MHz	7.1 dBi / 5 dBd	< 2.0	18°	250 watts	50 ohms
BOA2175	215-225 MHz	5 dBi / 3 dBd	< 2.0	18°	250 watts	50 ohms

MECHANICAL & ENVIRONMENTAL SPECIFICATIONS

Model	Dimensions	Weight	Housing Material	Rated Wind	Temperature Range
BOA9025	2 OD x 55 in (5 x 139.7 cm)	5.0 lbs	Fiberglass	125 mhp	-40°C to +85°C
BOA9028	2 OD x 68 in (5 x 172.7 cm)	6.0 lbs	Fiberglass	125 mhp	-40°C to +85°C
BOA90211	2 OD x 122 in (5 x 309.9 cm)	10.0 lbs	Fiberglass	125 mhp	-40°C to +85°C
BOA4409	2 OD x 151 in (5 x 383.5 cm)	12 lbs	Fiberglass	125 mhp	-40°C to +85°C
BOA4357	2 OD x 83 in (5 x 210.8 cm)	7.0 lbs	Fiberglass	125 mhp	-40°C to +85°C
BOA2177	2 OD x 151 in (5 x 383.5 cm)	12 lbs	Fiberglass	125 mhp	-40°C to +85°C
BOA2175	2 OD x 122 in (5 x 309.8 cm)	10 lbs	Fiberglass	125 mhp	-40°C to +85°C

PCTEL Heavy Duty Omnidirectional Base Station Platform



The BOA omnidirectional base station antenna design utilizes a linear array, encapsulated in a heavy duty fiberglass radome with a thick walled mounting base for reliable, long term use. This rugged design withstands harsh environments making the antennas ideal for Industrial Wireless and Military applications. The antennas in this series are DC grounded for ESD protection of radio components.

Features

- UV Stable, Black Fiberglass Radome (0.625" diameter)
- Black Chrome Plated Mounting Base
- DC Grounded Design
- Fully Sealed IP67* Design
- Type N Male or Female connector options



BOA24004NF

STANDARD CONFIGURATION

Model	Connector	Mount
BOA24004NF	N Female	BAM1009 or BAM1011-HCA mast mounts sold separately (all models)
BOA24006NF	N Female	
BOA24006NM	N Male	
BOA24008NF	N Female	
BOA24008NM	N Male	
BOA24008DT12NF	N Female	
BOA24008DT12NM	N Male	
BOA24008DT7NF	N Female	
BOA24008DT7NM	N Male	
BOA51004NF	N Female	
BOA51004NM	N Male	
BOA58006NF	N Female	
BOA58010NF	N Female	
BOA58010NM	N Male	

ELECTRICAL SPECIFICATIONS - RF ANTENNA

Model	Frequency Range	Nominal Gain	VSWR	Elevation Half Power Beamwidth	Maximum Power	Nominal Impedance
BOA24004NF	2.4-2.5 GHz	4 dBi	< 1.5:1	42°	40 watts	50 ohms
BOA24006NF	2.4-2.5 GHz	6 dBi	< 1.5:1	28°	40 watts	50 ohms
BOA24006NM	2.4-2.5 GHz	6 dBi	< 1.5:1	28°	40 watts	50 ohms
BOA24008NF	2.4-2.5 GHz	8 dBi	< 1.5:1	15°	40 watts	50 ohms
BOA24008NM	2.4-2.5 GHz	8 dBi	< 1.5:1	15°	40 watts	50 ohms
BOA24008DT12NF	2.4-2.5 GHz	8 dBi	< 1.5:1	15°	40 watts	50 ohms
BOA24008DT12NM	2.4-2.5 GHz	8 dBi	< 1.5:1	15°	40 watts	50 ohms
BOA24008DT7NF	2.4-2.5 GHz	8 dBi	< 1.5:1	15°	40 watts	50 ohms
BOA24008DT7NM	2.4-2.5 GHz	8 dBi	< 1.5:1	15°	40 watts	50 ohms
BOA51004NF	5.1-5.9 GHz	4 dBi	< 1.5:1	42°	20 watts	50 ohms
BOA51004NM	5.1-5.9 GHz	4 dBi	< 1.5:1	42°	20 watts	50 ohms
BOA58006NF	5.7-5.8GHz	6 dBi	< 1.5:1	28°	20 watts	50 ohms
BOA58010NF	5.7-5.8GHz	10 dBi	< 1.5:1	10°	20 watts	50 ohms
BOA58010NM	5.7-5.8GHz	10 dBi	< 1.5:1	10°	20 watts	50 ohms

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MECHANICAL & ENVIRONMENTAL SPECIFICATIONS

Model	Dimensions	Weight	Housing Material
BOA24004NF	.825 OD x 10.1 L in (2.09 x 25.65 cm)	0.33 lbs (151 gram)	Black UV Stable Pultruded Fiberglass (0.625" diameter)
BOA24006NF	.825 OD x 15.0 L in (2.09 x 38.1 cm)	0.38 lbs (176 gram)	Black UV Stable Pultruded Fiberglass (0.625" diameter)
BOA24006NM	.825 OD x 14.8 L in (2.09 x 37.5 cm)	0.30 lbs (134 gram)	Black UV Stable Pultruded Fiberglass (0.625" diameter)
BOA24008NF	.825 OD x 19.4 L in (2.09 x 49.3 cm)	0.45 lbs (203 gram)	Black UV Stable Pultruded Fiberglass (0.625" diameter)
BOA24008NM	.825 OD x 19.1 L in (2.09 x 48.5 cm)	0.35 lbs (161 gram)	Black UV Stable Pultruded Fiberglass (0.625" diameter)
BOA24008DT12NF	.825 OD x 25.4 L in (2.09 x 64.5 cm)	0.52 lbs (235 gram)	Black UV Stable Pultruded Fiberglass (0.625" diameter)
BOA24008DT12NM	.825 OD x 25 L in (2.09 x 63.5 cm)	0.40 lbs (182 gram)	Black UV Stable Pultruded Fiberglass (0.625" diameter)
BOA24008DT7NF	.825 OD x 25.4 L in (2.09 x 64.5 cm)	0.52 lbs (235 gram)	Black UV Stable Pultruded Fiberglass (0.625" diameter)
BOA24008DT7NM	.825 OD x 25 L in (2.09 x 63.5 cm)	0.42 lbs (192 gram)	Black UV Stable Pultruded Fiberglass (0.625" diameter)
BOA51004NF	.825 OD x 5.5 L in (2.09 x 13.9 cm)	0.27 lbs (124 gram)	Black UV Stable Pultruded Fiberglass (0.625" diameter)
BOA51004NM	.825 OD x 5.3 L in (2.09 x 13.5 cm)	0.18 lbs (82 gram)	Black UV Stable Pultruded Fiberglass (0.625" diameter)
BOA58006NF	.825 OD x 7.29 in (2.09 x 18.5 cm)	0.30 lbs (134 gram)	Black UV Stable Pultruded Fiberglass (0.625" diameter)
BOA58010NF	.825 OD x 17.9 L in (2.09 x 45.5 cm)	0.43 lbs (194 gram)	Black UV Stable Pultruded Fiberglass (0.625" diameter)
BOA58010NM	.825 OD x 17.6 L in (2.09 x 19.3 cm)	0.33 lbs (152 gram)	Black UV Stable Pultruded Fiberglass (0.625" diameter)

MECHANICAL & ENVIRONMENTAL SPECIFICATIONS, continued

Model	Rated Wind	Bending Moment at Rated Wind	Lateral Thrust at Rated Wind	Equivalent Flat Plate Area	Temperature Range
BOA24004NF	125 mph	0.97 lbf-ft	2.31 lbf	0.03 ft ²	-40°C to + 85°C
BOA24006NF	125 mph	2.13 lbf-ft	3.41 lbf	0.04 ft ²	-40°C to + 85°C
BOA24006NM	125 mph	2.07 lbf-ft	3.36 lbf	0.04 ft ²	-40°C to + 85°C
BOA24008NF	125 mph	4.24 lbf-ft	5.25 lbf	0.05 ft ²	-40°C to + 85°C
BOA24008NM	125 mph	4.14 lbf-ft	5.19 lbf	0.05 ft ²	-40°C to + 85°C
BOA24008DT12NF	125 mph	7.16 lbf-ft	6.81 lbf	0.07 ft ²	-40°C to + 85°C
BOA24008DT12NM	125 mph	7.04 lbf-ft	6.74 lbf	0.07 ft ²	-40°C to + 85°C
BOA24008DT7NF	125 mph	7.16 lbf-ft	6.81 lbf	0.07 ft ²	-40°C to + 85°C
BOA24008DT7NM	125 mph	7.04 lbf-ft	6.74 lbf	0.07 ft ²	-40°C to + 85°C
BOA51004NF	125 mph	0.30 lbf-ft	1.31 lbf	0.02 ft ²	-40°C to + 85°C
BOA51004NM	125 mph	0.27 lbf-ft	1.25 lbf	0.02 ft ²	-40°C to + 85°C
BOA58006NF	125 mph	0.51 lbf-ft	1.70 lbf	0.02 ft ²	-40°C to + 85°C
BOA58010NF	125 mph	3.57 lbf-ft	4.83 lbf	0.05 ft ²	-40°C to + 85°C
BOA58010NM	125 mph	3.48 lbf-ft	4.76 lbf	0.05 ft ²	-40°C to + 85°C