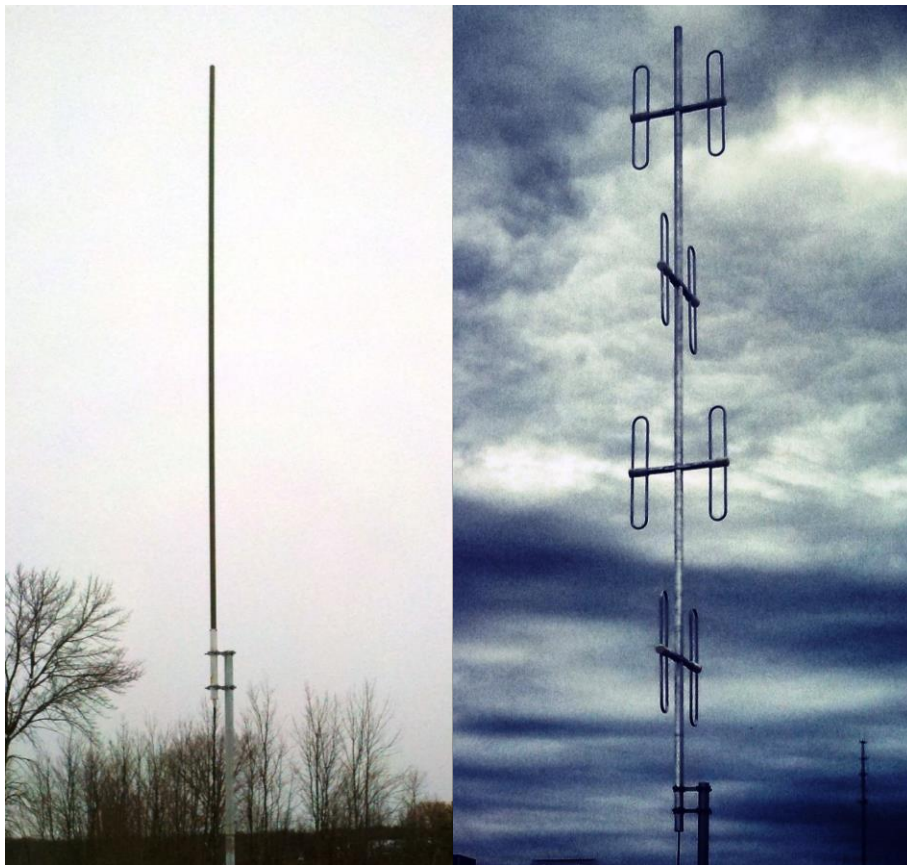
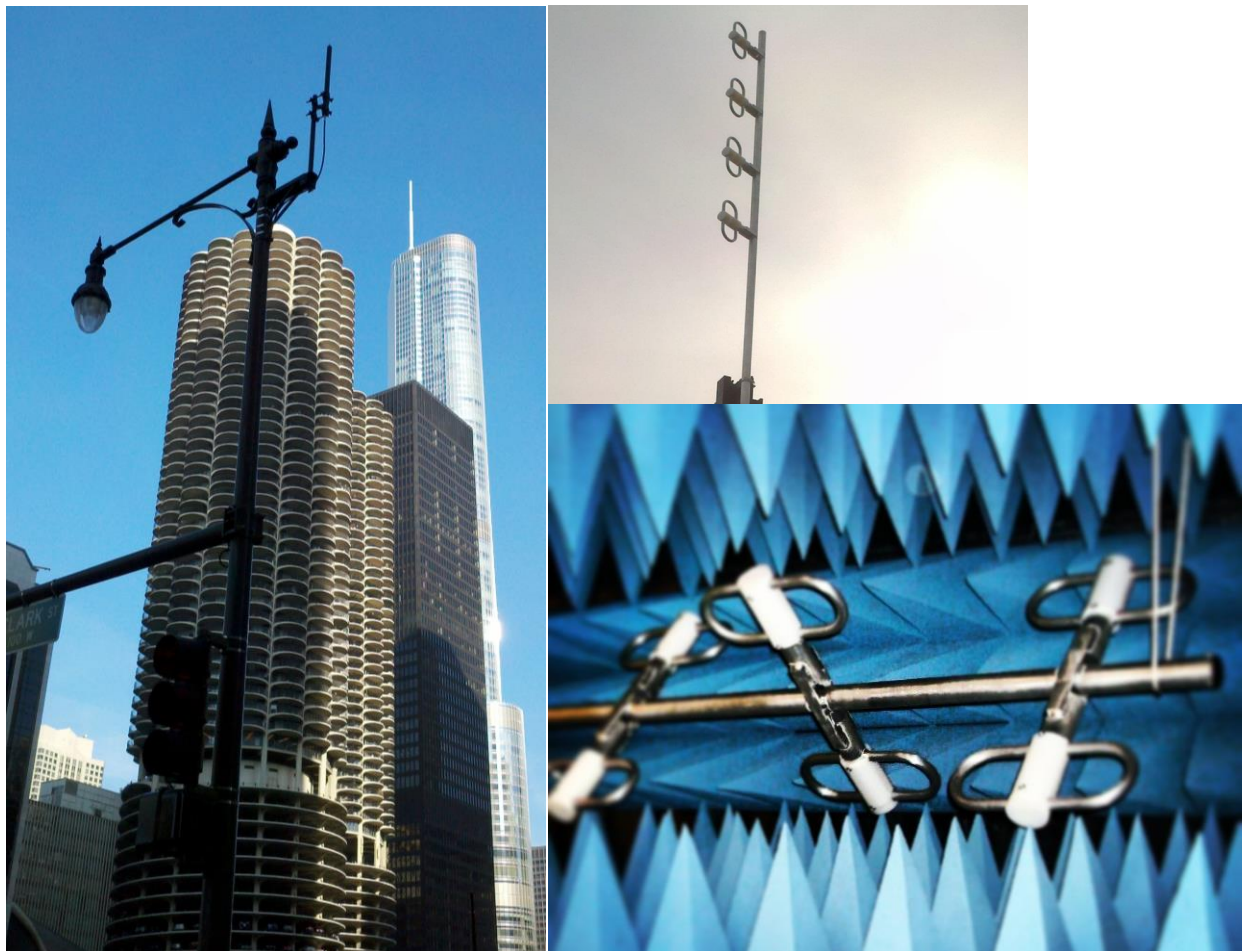




PTC Railroad Antenna Products



Alive Telecom developed their Railroad antenna product line specifically for the PTC Communications application. Alive utilizes High Frequency Solid Simulation (HFSS) by Ansoft for software modeling and design of antenna elements and arrays before a single piece of metal is cut. Alive has two in house anechoic test chambers for engineering development and manufacturing test. All antennas piece parts and finished goods are manufactured 100% in the United States. Welding, brazing and soldering processes are completed in house by certified Alive Telecom employees to maintain 100% reliability. Alive relies on years of experience in both the Broadcast and Public Safety market to best serve the Railroad Industry. We understand these antennas just like any critical communications have to be installed and never be thought of again.





9850 W. 190th STREET • SUITE F • MOKENA, IL 60448
(708) 478-6886 • www.alivetele.com

COMPANY OVERVIEW

Alive Telecommunications is a growing global supplier of equipment, systems and services for the communications market. Alive provides exceptional services and products to the telecommunications industry and our customers. We are committed to providing the highest level of professionalism, service response, and quality workmanship to achieve long-term growth in the industry.

Alive Telecommunications is a company that is dedicated to their customers and their commitments. With the ever-changing world of telecommunications, we offer the support that is needed to help guide our customers in the right direction tailored to their own specific requirements. We pride ourselves on having the experience and knowledge to offer custom products and services that we stand behind.

Our specialties include, but are not limited to: broadcast antennas, public safety antennas, rooftop installation, testing services, and in-building antennas and system design. Alive has the expertise to evaluate all business opportunities within the telecommunications market. We do not limit our abilities, but prefer to accommodate our customers, and work with them to provide the necessary requirements for their needs.

COMPANY HISTORY

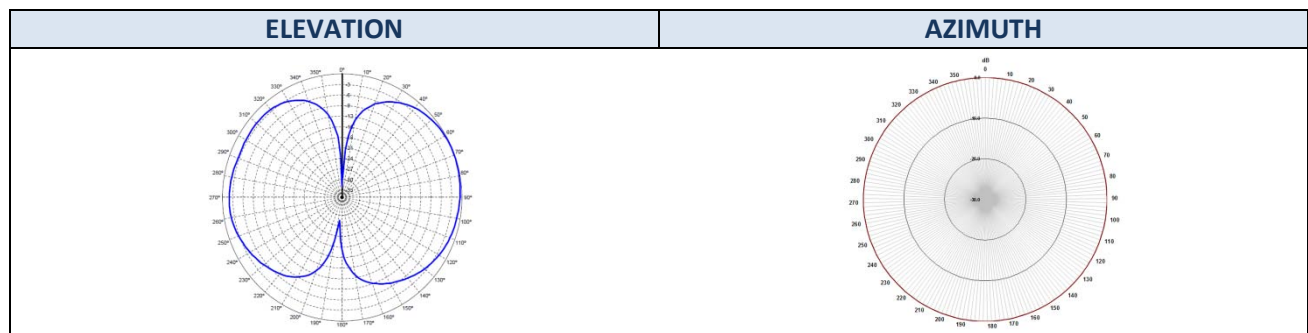
Alive Telecommunications was founded in April of 2001, by Dan Barton. Dan had a vision of a company that could address the ever-changing telecommunications market. Previously employed by a leader in the industry, Dan wanted to use his knowledge and experience as a lead Engineer with a multitude of ideas, to benefit the growing industry. Dan saw that there was a need for a business that could overcome obstacles, and provide assistance in all aspects of telecommunications.

In the beginning, Alive Telecom concentrated on field services and consulting. From there it quickly began to emerge as a respected broadcast antenna manufacturer. Since 2002, Alive Telecommunications provided U.S.A. made, broadcast equipment and antennas within the United States, as well as internationally. In 2005, Alive began to broaden their focus on other markets including, Public Safety and In-Building Solutions. Alive Telecommunications has the capability of complete system design, implementation, and maintenance of an in-building system.



Electrical Specifications	
Frequency Range	217-225 MHz
Gain	Unity, 0dBd
Nominal Impedance	50 Ω
VSWR (Return loss)	< 1.5:1 (14dB)
Peak Instantaneous Power	25 kW
Power Input	250 W
Horizontal Beamwidth	Omni +/-0.5 dB
Vertical Beamwidth	80°
Input	N male

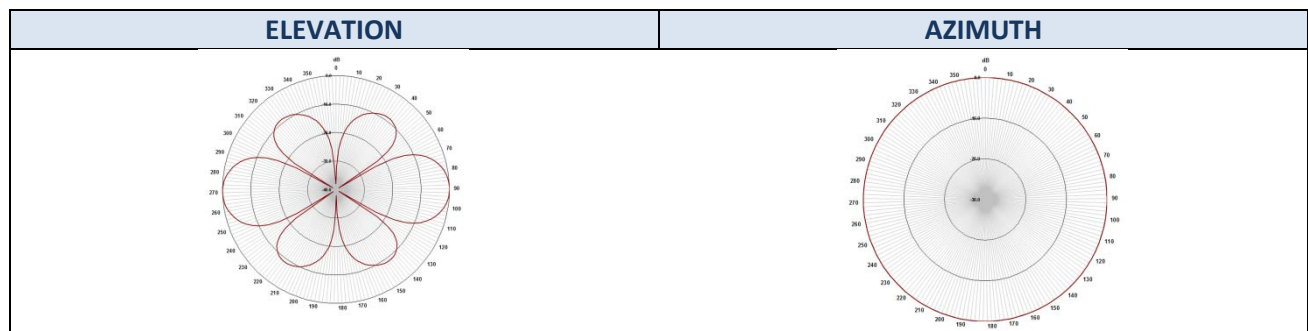
Mechanical Specifications		
Configuration	Collinear Dipole	
Length	44"	
Radome Diameter	2.00"	
Weight	7 lbs	
Shipping Weight	12 lbs	
Shipping Dimensions	H	3"
	W	3"
	L	47"
Projected Area	0.7ft ² (no ice), 1.0ft ² (with ice)	
Lateral Thrust @ 100mph	18 lbs	
Mounting Area	20.00" x 2.375" diam. Aluminum	
Suggested Clamps (not included)	PLMTKIT	
Wind Gust Rating	>150 mph (with or without ice)	





Electrical Specifications	
Frequency Range	217-225 MHz
Gain	2.5 dBd
Nominal Impedance	50 Ω
VSWR (Return loss)	< 1.5:1 (14dB)
Down Tilt	0°
Peak Instantaneous Power	25 kW
Power Input	500 W
Horizontal Beamwidth	Omni +/-0.5 dB
Vertical Beamwidth	30°
Input	N Male

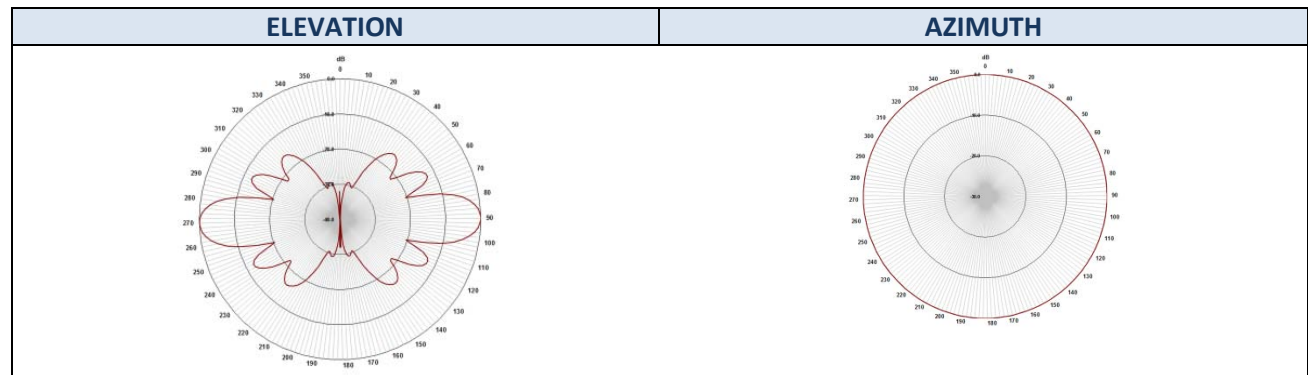
Mechanical Specifications	
Configuration	Collinear Dipole
Length	68"
Radome Diameter	2.00"
Weight	12 lbs
Shipping Weight	20 lbs
Shipping Dimensions	H 3"
	W 3"
	L 72"
Projected Area	0.9ft ² (no ice), 1.3ft ² (with ice)
Lateral Thrust @ 100mph	45 lbs
Mounting Area	20.00" x 2.375" diam. Aluminum
Suggested Clamps (not included)	PLMTKIT
Wind Gust Rating	>150 mph (with or without ice)





Electrical Specifications	
Frequency Range	217-226 MHz
Gain	6 dBd
Nominal Impedance	50 Ω
VSWR (Return loss)	< 1.5:1 (14dB)
Down Tilt	0°
Peak Instantaneous Power	25 kW
Power Input	500 W
Vertical Beamwidth	20°
Horizontal Beamwidth	Omni +/-0.5dB
Input	N-Male

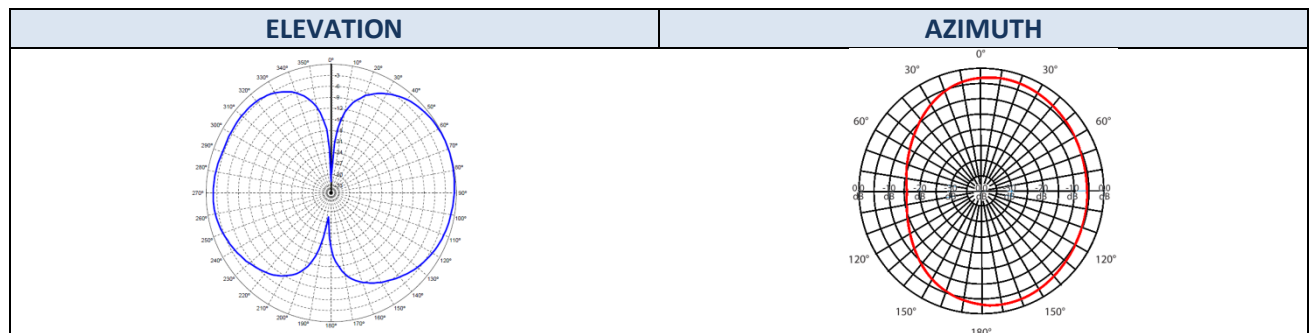
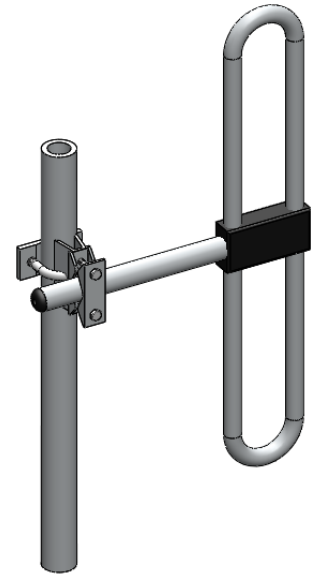
Mechanical Specifications		
Configuration	Collinear Dipole	
Length	184"	
Weight	32 lbs	
Radome Diameter	2.00"	
Shipping Weight	60 lbs	
Shipping Dimensions	H	3.00"
	W	3.00"
	L	187"
Projected Area	2.1ft ² (no ice), 2.96ft ² (with ice)	
Lateral Thrust @ 100mph	85 lbs	
Torque @ 100mph ft-lbs	400	
Mounting Area	24.00" x 2.375" diam. Aluminum	
Suggested Clamps (not included)	PLMTKIT-1	
Wind Gust Rating (mph)	150 mph (ice or without ice)	





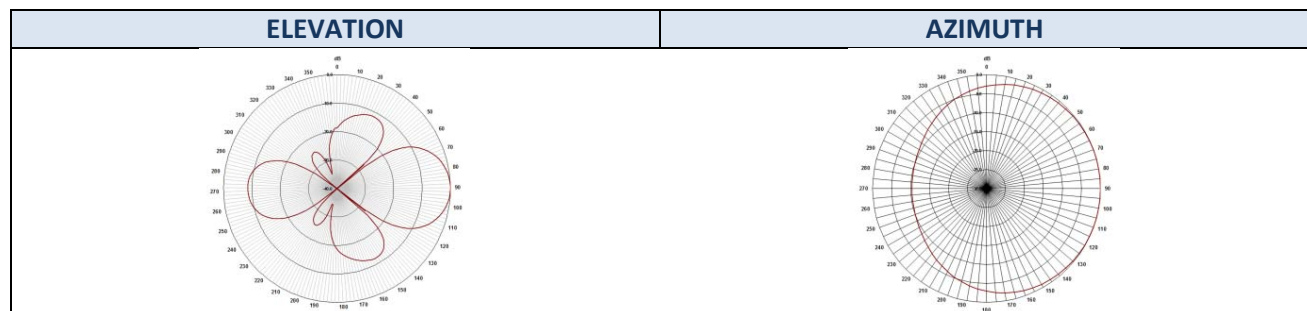
Electrical Specifications	
Frequency Range	210-252 MHz
Gain dBd	2 dBd
Nominal Impedance	50 Ω
VSWR (Return loss)	< 1.5:1 (14dB)
Down Tilt	N/A
Peak Instantaneous Power	25 kW
Power Input	400 W
Vertical Beamwidth	78°
Horizontal Beamwidth	160°
Input	N-Male

Mechanical Specifications	
Configuration	Welded Aluminum
Length	23.00"
Weight	8 lbs
Shipping Weight	15 lbs
Shipping Dimensions	H 4.5"
	W 24"
	L 24"
Projected Area	0.17ft ² (no ice), 0.36ft ² (with ice)
Lateral Thrust @ 100mph	20 lbs
Torque @ 100mph ft-lbs	1.9
Mounting Area	8" x 1.50" SCH40 Aluminum
Suggested Clamps (not included)	PLMTKIT-S
Wind Gust Rating	>150 (with or without ice)



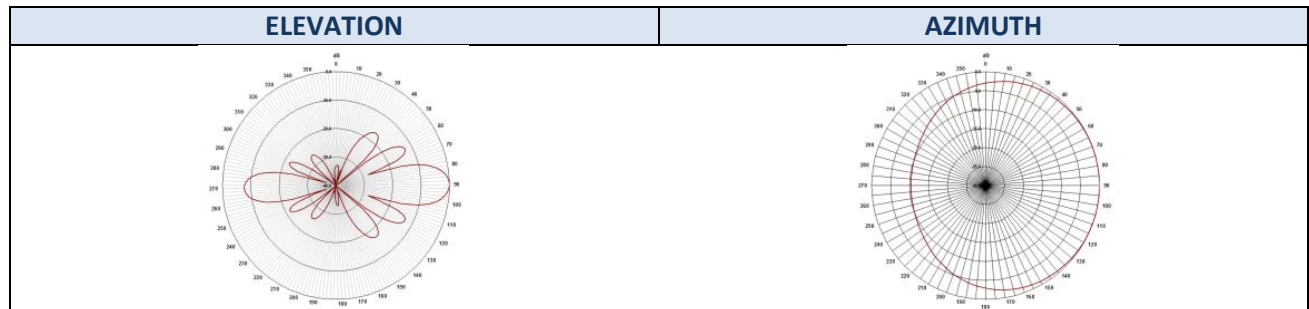


Electrical Specifications	
Frequency Range	205-252 MHz
Nominal Gain	5 dBd
Impedance	50 Ω
VSWR (Return loss)	< 1.5:1 (14 dB)
Passive IM 3 rd order (2x20W)	-150 dBc
Peak Instantaneous Power	25 kW
Down Tilt	0°
Power Input	500 W
Vertical Beamwidth	37°
Horizontal Beamwidth	N/A
Input	N-Male 12" pigtail
Mechanical Specifications	
Configuration	2 dipoles (2 bays) Single Sided Single section support
Length	138.00"
Weight	19 LBS
Shipping Weight	48 LBS
Shipping Dimensions	H 4.5"
	W 19.5"
	L 144"
Projected Area	4.0ft ² (no ice), 6.7ft ² (with ice)
Lateral Thrust @ 100mph	43 lbs
Torque @ 100 mph ft-lbs	406
Mounting Area	20.00" x 2.375" diam. aluminum
Suggested Clamps (not included)	PLMTKIT
Wind Gust Rating	149 (no ice), 114 (with ice)





Electrical Specifications	
Frequency Range	205-240 MHz
Gain	8.5 dBd
Nominal Impedance	50 Ω
VSWR (Return loss)	< 1.5:1 (14dB)
Peak Instantaneous Power	25 kW
Power Input	500 W
Vertical Beamwidth	17°
Horizontal Beamwidth	180°
Input	N-Male 12" pigtail
Mechanical Specifications	
Configuration	4 dipoles (4 bays) Single section support
Length	240.00"
Weight	35 lbs
Shipping Weight	65 LBS
Shipping Dimensions	H 4.5"
	W 19.5"
	L 247"
Projected Area	8.0ft ² (no ice), 12.4ft ² (with ice)
Lateral Thrust @ 100mph	197 lbs
Torque @ 100mph ft-lbs	1700
Mounting Area	24.00" x 2.375" diam. aluminum
Suggested Clamps (not included)	PLMTKIT-1
Wind Gust Rating	150 mph (no ice)
	125 mph (with ice)



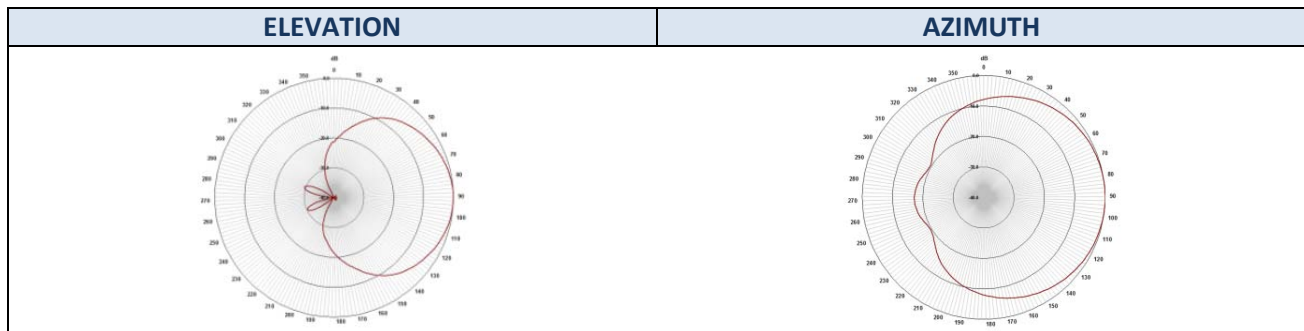
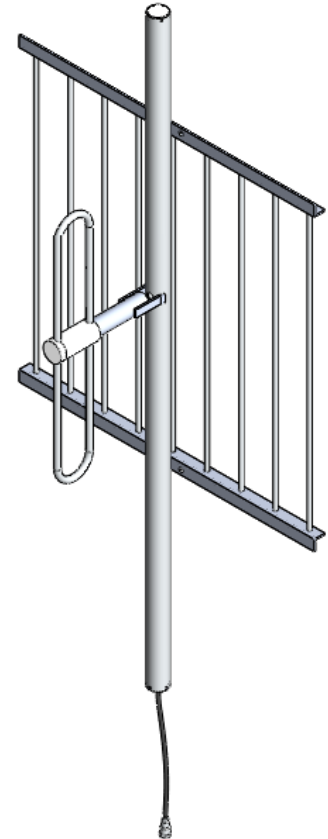


Electrical Specifications

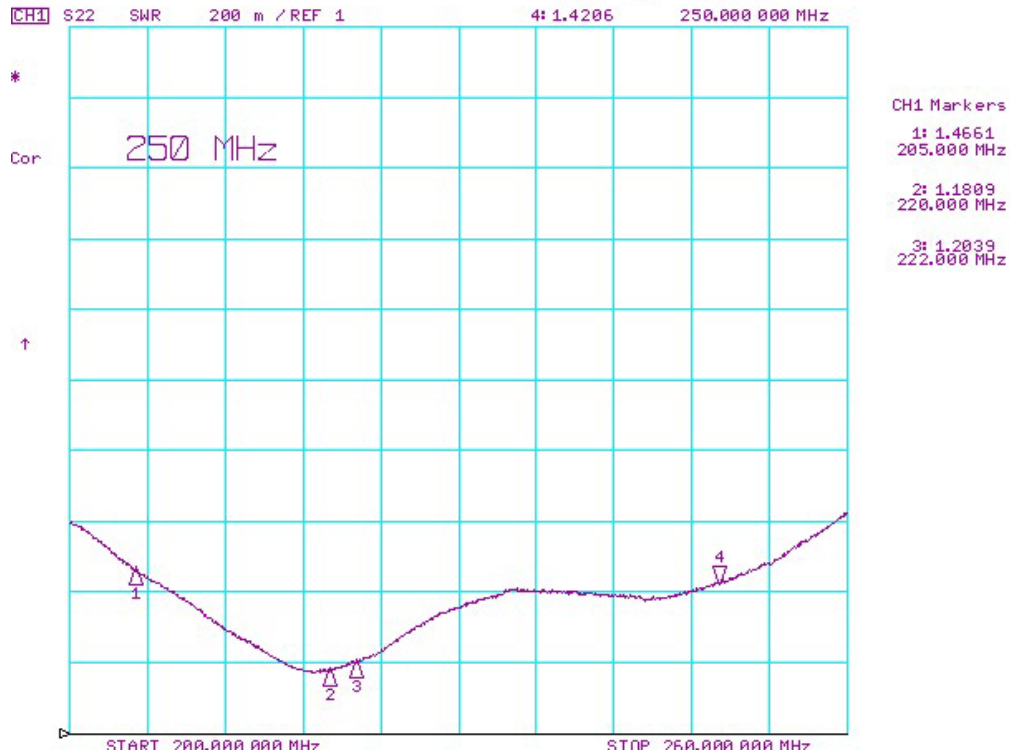
Frequency Range	205-250 MHz
Gain	7.5 dBd
Nominal Impedance	50 Ω
VSWR (Return loss)	< 1.5:1 (14dB)
Down Tilt	0°
Peak Instantaneous Power	25 kW
Power Input	500 W
Vertical Beamwidth	66°
Horizontal Beamwidth	84°
Front/Back Ratio	17dB
Input	N-Male 12" cable pigtail

Mechanical Specifications

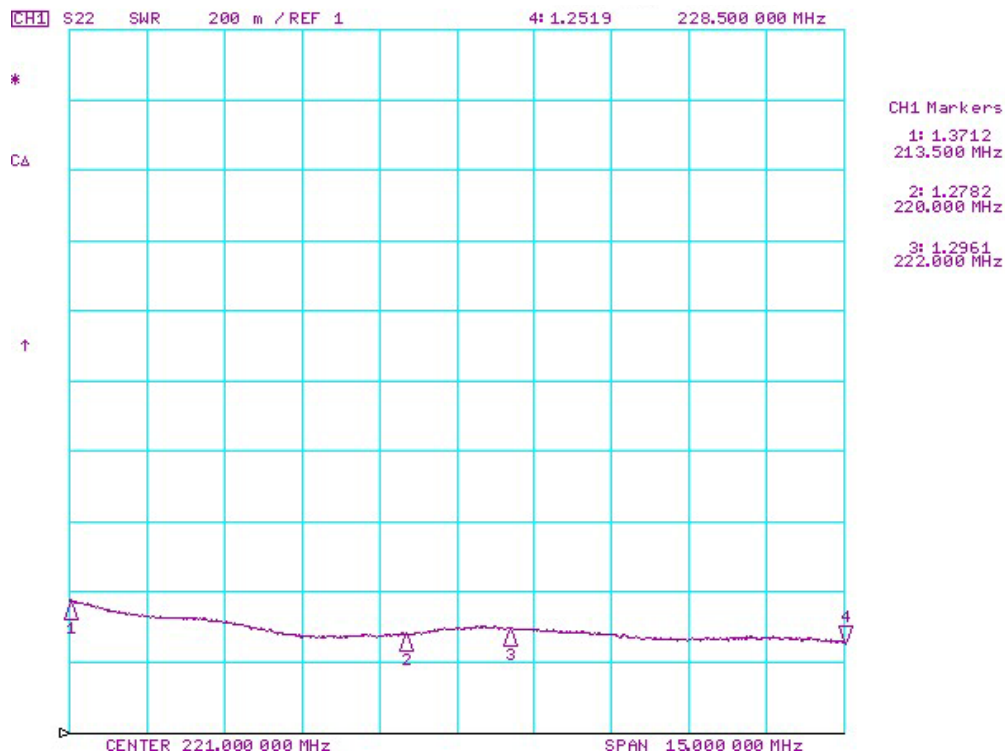
Configuration	Welded Aluminum		
Screen Length/Width	40"x50"		
Weight	34 lbs		
Shipping Weight	Screen: 26lbs	Dipole Asy: 16lbs	
Shipping Dimensions		<u>Screen</u>	<u>Dipole Assembly</u>
	H	3.00"	4.50"
	W	43.00"	19.50"
	L	53.00"	120.00"
Projected Area	11ft ² (no ice), 18ft ² (with ice)		
Lateral Thrust @ 100mph	250 (no ice), 400 (with ice)		
Torque @ 100mph ft-lbs	430 (no ice), 900 (with ice)		
Suggested Clamps (not included)	GPMTKIT		
Wind Gust Rating	>150 mph (with or without ice)		



Typical Frequency Response - VSWR

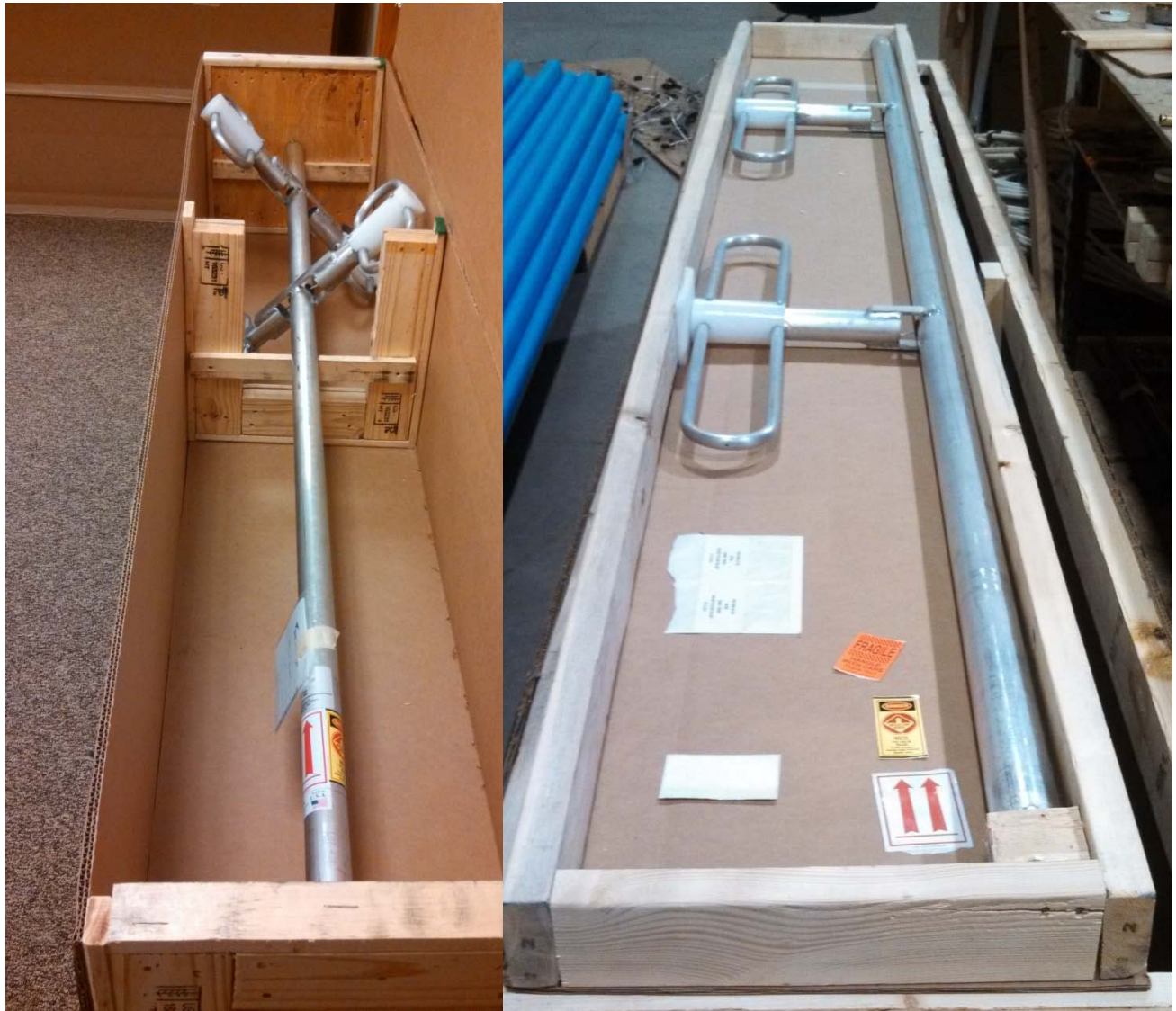


Exposed Dipole Antenna

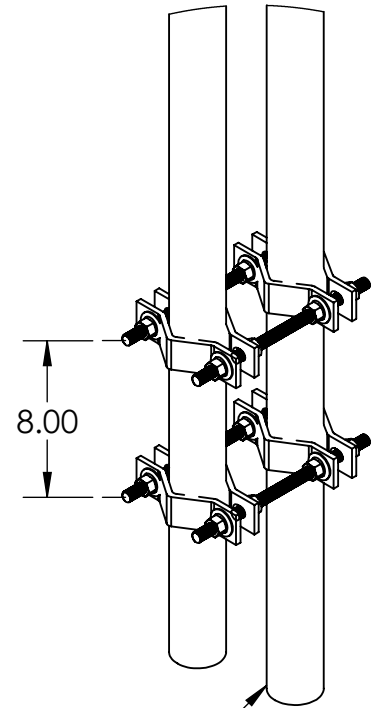
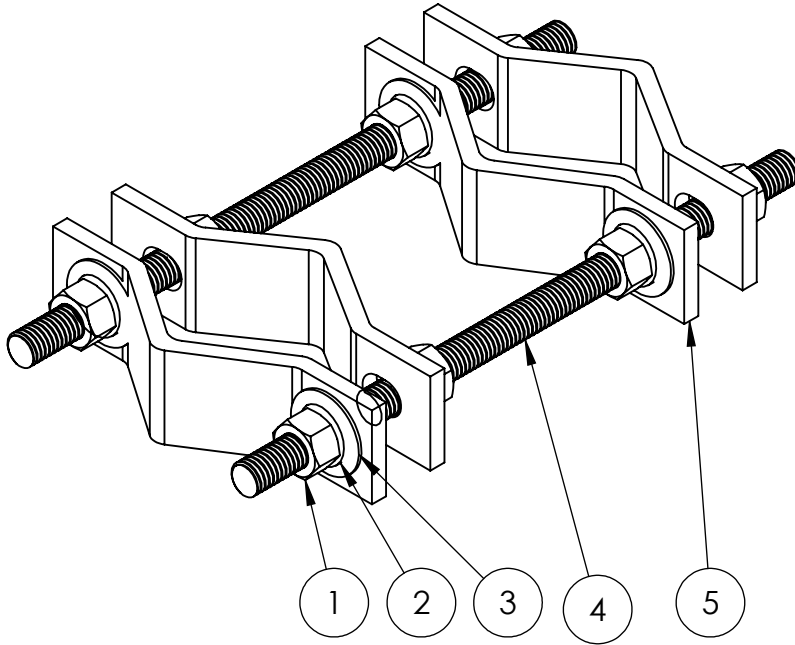


Collinear Dipole Antenna

Typical Packaging



ALIVE



Ø 2.00-Ø 4.00
SUPPORT TOWER

ITEM#	P/N	DESCRIPTION	QTY.
1	16003-1-4-21-1	0.50-13 GALV. HEX HEAD NUT	16
2	16002-2-4-15-1	0.50 GALV. LOCKWASHER	16
3	16002-1-4-15-1	0.50 GALV. FLATWASHER	16
4	16004-4-18-79	0.50-13X10.00 GALV. THRD ROD	4
5	1700	CLAMP	8

TITLE:

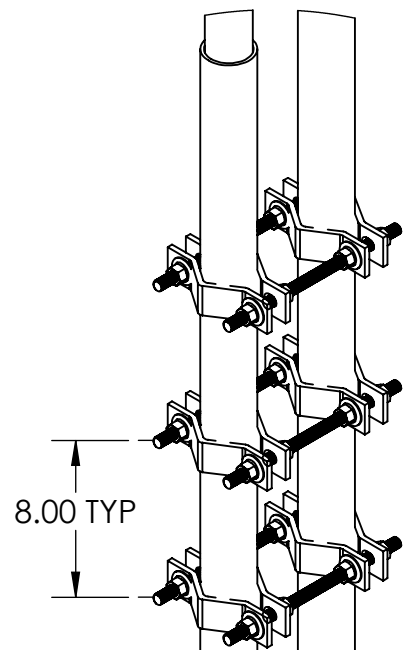
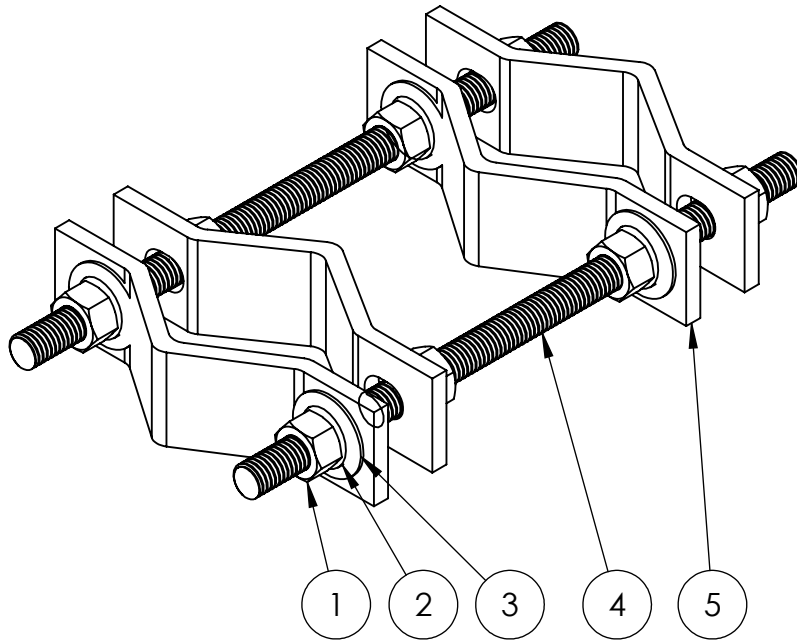
PLMTKIT - ASSEMBLY

SCALE: 1:24

DWG#: PLMTKIT

SHEET 1 OF 1

ALIVE



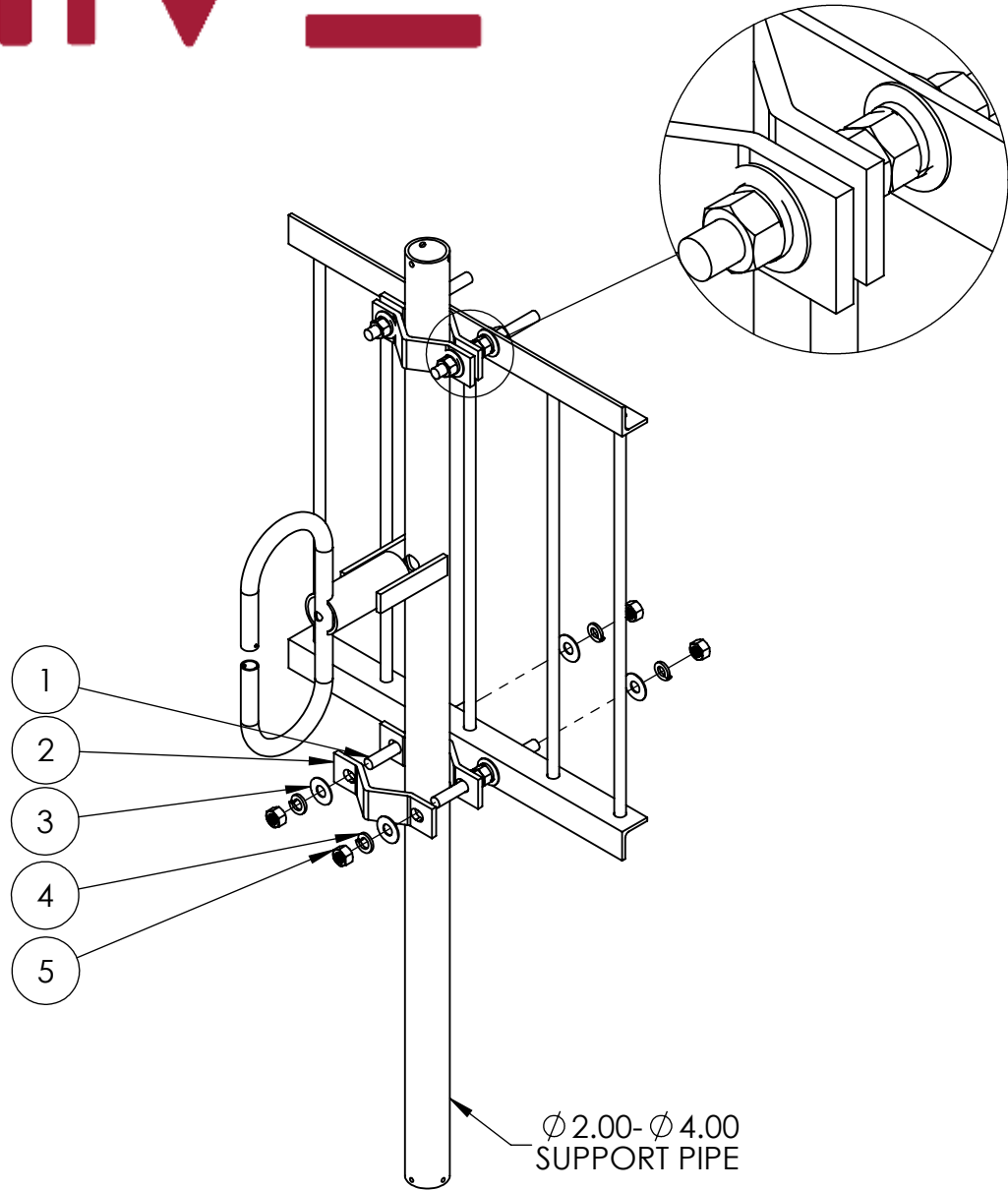
Ø 2.00-Ø 4.00 O.D.
SUPPORT TOWER

ITEM#	P/N	DESCRIPTION	QTY.
1	16003-1-4-21-1	0.50-13 GALV. HEX HEAD NUT	24
2	16002-2-4-15-1	0.50 GALV. LOCKWASHER	24
3	16002-1-4-15-1	0.50 GALV. FLATWASHER	24
4	16004-4-18-79	0.50-13X10.00 GALV. THRD ROD	6
5	1700	CLAMP	12

TITLE:
PLMTKIT-1 - ASSEMBLY

SCALE: 1:24 | DWG#: PLMTKIT-1 | SHEET 1 OF 1

ALIVE



ITEM #	P/N	DESCRIPTION	QTY.
1	16004-4-18-40	0.50-13X5.00 GALV. THRD ROD	4
2	1700	ANTENNA CLAMP PIECE	4
3	16002-1-4-15-1	0.50 GALV. FLATWASHER	16
4	16002-2-4-15-1	0.50 GALV. LOCKWASHER	16
5	16003-1-4-21-1	0.50-13 GALV. HEX HEAD NUT	16

TITLE: GPMTKIT - ASSEMBLY		
SCALE: 1:16	DWG#: GPMTKIT	SHEET 1 OF 1