



AWL4001

Common Name 24 Port (12P/12P) Lower and Upper Mid Band Curved Panel Antenna

1695-2690MHz	12	Fixed	13.0	65°
3300-4200MHz	12	Fixed	14.8	65°
Frequency	Ports	Tilt	Gain	Beamwidth

PRODUCT INFORMATION

The AWL4001 panel antenna is intended to offer 24 Ports on the Lower and Upper Mid Band Spectrums. The antenna has twelve ports covering Lower Mid Band 1695 – 2690 MHz and twelve ports covering Upper Mid Band 3300 – 4200 MHz. The high port count support multiple radios to achieve the best coverage and highest data rates across LTE and 5G NR bands.

One AWL4001 panel serves as a single sector. Three panels can be wrapped around existing infrastructure to provide a middle of pole canister solution as well as pole top or sidearm mounted. Three AWL4001 panels mounted around a center pole forms into a concealed canister with a 22 inch diameter. There are a number of mounting options with shroud kits available, making deployments on lamp posts, utility poles, walls and other vertical structures possible.



APPLICATION

Alpha Wireless multiband small cell provides flexible coverage solutions whilst in an ultra-compact radome design. This small cell modular antenna system can be configured as a single-, dual-, or tri-sector. Three panels can be wrapped around existing infrastructure to provide a middle-of-pole canister solution. The high port count for each sector in Lower and Upper Mid Bands is for ultimate data throughput in 4G and 5G applications. The antenna is designed to be installed in an urban environment where low visual impact is required.

FEATURES

- Allows 4x4 MIMO on dual bands for multiple radios across Mid band and C band.
- Fits within 650mm (25.6") height restriction.
- Three curved panels around a pole form a 22 inch canister.
- Visually appealing design that blends with the Streetscape.
- Middle of pole, pole top and side-arm mounting options.
- Compact design - Low visual impact.

STANDARD & CERTIFICATIONS

Certification	BS EN ISO 9001:2015
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The parameters in this specification follow the definitions and recommendations per NGMN P-Basta, Release 9.6.

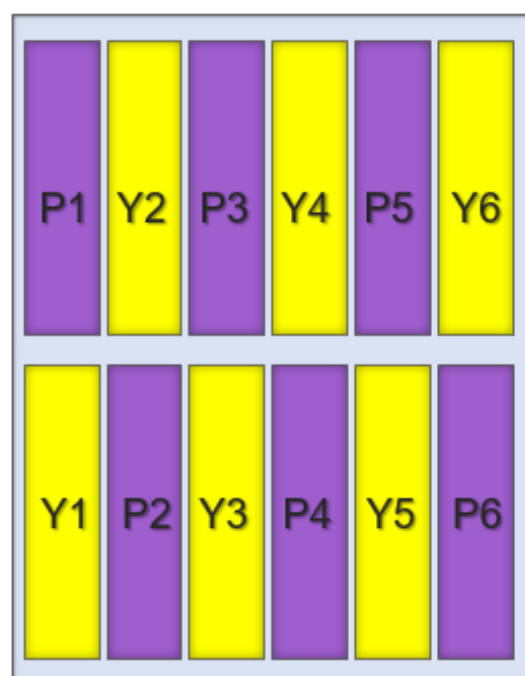
TECHNICAL SPECIFICATION

Electrical Specifications			Lower Mid band				Upper Mid Band		
Frequency Range	MHz		1695-1995	1920-2170	2170-2500	2500-2690	3300-3500	3500-3800	3800-4200
Connector			12 Ports				12 Ports		
Polarisation	Degree		+/- 45° Slant Linear						
Gain	Basta	dBi	12.1±0.5	12.7±0.5	13.1±0.5	13.1±0.5	14.3±0.5	14.8±0.5	15.0±0.5
	Max	dBi	12.6	13.2	13.6	13.6	14.8	15.3	15.5
Azimuth Beamwidth	Degree		68	69	68	64	62	64	66
Elevation Beamwidth	Degree		28	25	22	19	15.5	14.5	13.5
Electrical Downtilt	Degree		2, 4, or 6				2, 4, or 6		
Electrical Downtilt Deviation	Degree <		2				1.5		
Impedance	Ohms		50						
VSWR	<		1.5						
Return Loss	dB >		14						
Intraband Isolation	dB >		25				25		
Network-to-Network Isolation	dB >		28				28		
Interband Isolation	dB >		28				28		
Passive Intermodulation	dBc <		-153				-153		
Cross-Polar Discrimination	dB >		16	16	16	16	16	16	16
Maximum Effective Power Per Port	W		150				100		
Maximum total input power	W		3,000						

TECHNICAL SPECIFICATION

Mechanical Specifications		
Dimensions	mm (in)	650 (25.6) x 475 (18.7) x 180 (7.1) - Antenna
Volume	l (ft ³)	66.5 (2.35)
Packing Size (LxWxD)	mm (in)	711 (28) x 508 (20) x 305 (12)
Net Weight (antenna)	kg (lb)	9.5 (21)
Shipping Weight	kg (lb)	10 (22)
Connector Type (Female)	-	4.3-10
Connector Position	-	Bottom
Connector Quantity	-	24 (12 Ports Lower Mid Band and 12 Ports Upper Mid Band)
Windload Frontal (at Rated Wind Speed: 150km/h)	N (lbf)	260 (59)
Windload Lateral (at Rated Wind Speed: 150km/h)	N (lbf)	90 (20)
Survival Wind Speed	km/h (mph)	241 (150)
Radome Material	-	uPVC
Radome Colour	RAL	7035 (light grey)
Product Compliance Environmental	-	RoHS
Lightning Protection	-	DC Grounded
Cold Temperature Survival	Celsius (Fahrenheit)	-40 (-40)
Hot Temperature Survival	Celsius (Fahrenheit)	70 (158)

Array Layout and RET Information

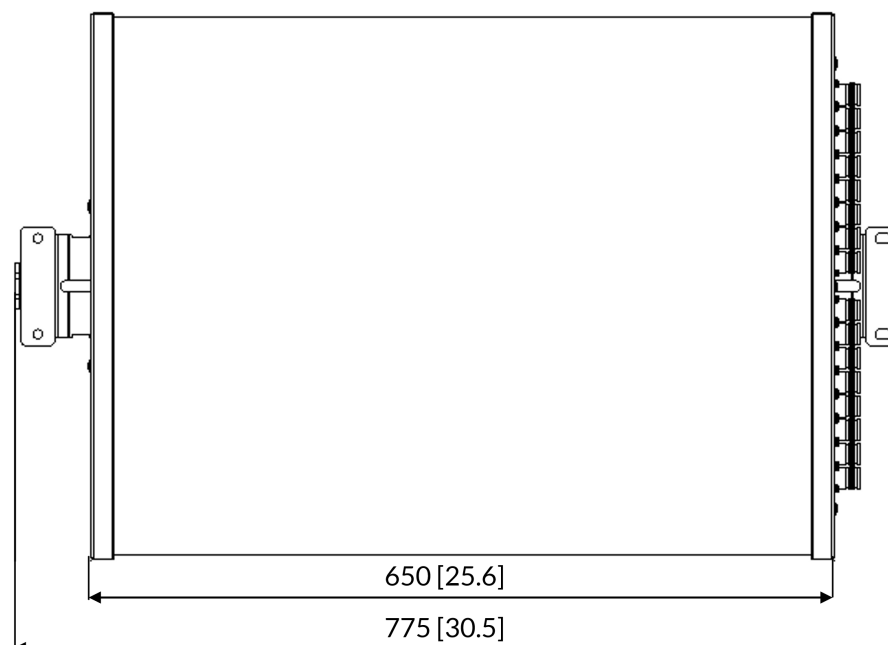
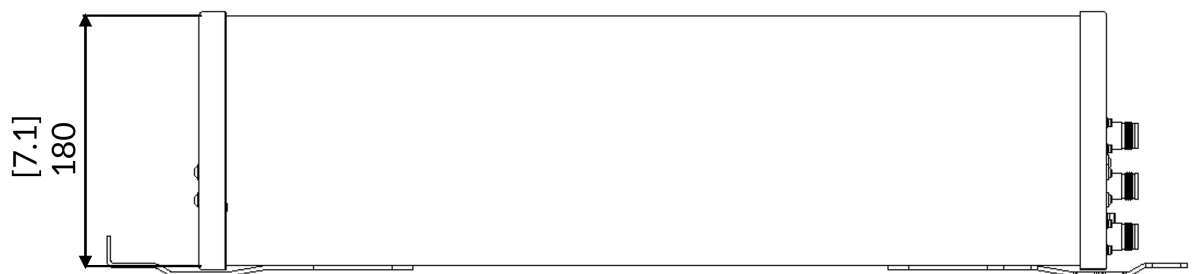
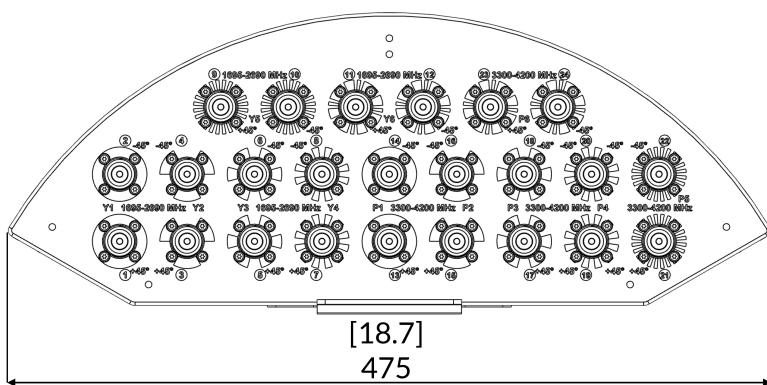
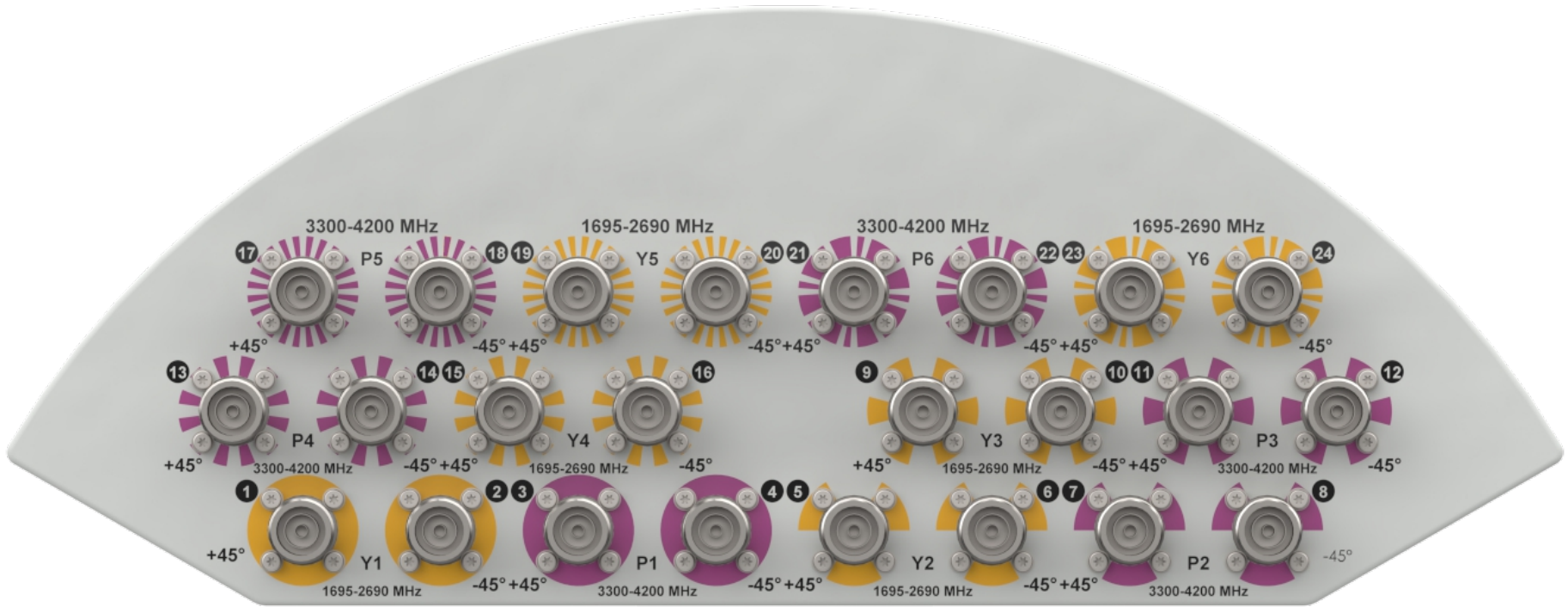


Note: Coloured box sizes do not represent antenna sizes.

Array	Frequency MHz	Ports
Y1	1695 - 2690MHz	1 - 2
Y2		3 - 4
Y3		5 - 6
Y4		7 - 8
Y5		9 - 10
Y6		11 - 12
P1	3300 - 4200 MHz	13 - 14
P2		15 - 16
P3		17 - 18
P4		19 - 20
P5		21 - 22
P6		23 - 24

TECHNICAL SPECIFICATION

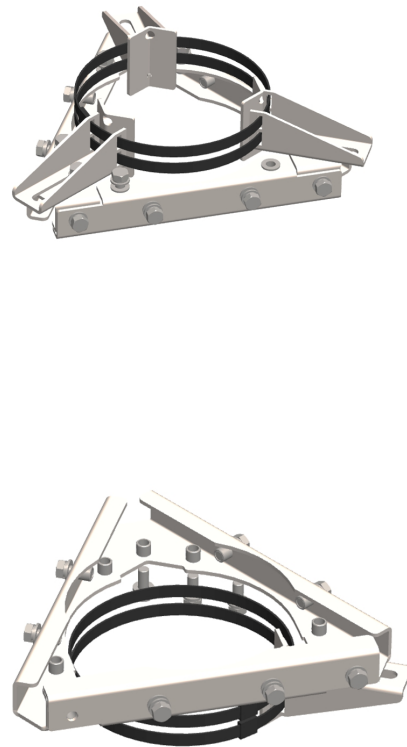
Mechanical Illustration



TECHNICAL SPECIFICATION

Mounting Bracket Kit

CL-V-222 - Pole Mount Kit for Tri-Sector Configuration (Ordered separately).



Mounting Kit Tilt Range	Mounting Kit Material	Mounting Kit Pole Diameter
0°	Stainless Steel	63mm-168mm (2.5"-6.6")

CL-V-214 - Middle of Pole, Mount and Shroud Kit for Tri-Sector Configuration (Ordered separately).

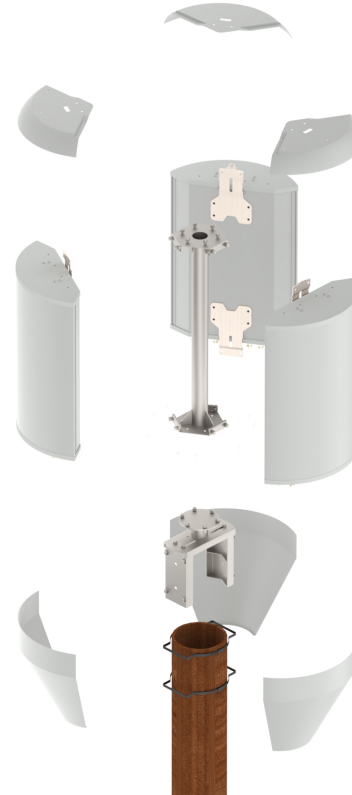


Mounting Kit Tilt Range	Mounting Kit Material	Mounting Kit Pole Diameter
0°	Stainless and Galvanized Steel	63mm-168mm (2.5"-6.6")

TECHNICAL SPECIFICATION

Mounting Bracket Kit

CL-V-215 – Top of Pole, Mount Kit and Shroud Kit for Tri-sector Configuration (Ordered separately).



Mounting Kit Tilt Range	Mounting Kit Material	Mounting Kit Pole Diameter
0°	Stainless and Galvanized Steel	152mm-203mm (6" to 8")

CL-V-216 – Stood off from Pole, Mount and Shroud Kit for Tri-Sector Configuration (Ordered separately).



Mounting Kit Tilt Range	Mounting Kit Material	Mounting Kit Pole Diameter
0°	Stainless and Galvanized Steel	152mm-254mm (6" to 10")



TECHNICAL SPECIFICATION

Ordering Info

Details

Sector Panel Configurations

The AWL4001 refers to a single panel antenna. The customer may order one, two, or three of the AWL4001 for Single-sector, Dual-sector, and Tri-sector deployments, respectively. The mount bracket and shroud kit are ordered separately.

Fixed Tilt Options

This antenna can be ordered with different Fixed Electrical Tilt values for each frequency band.

The Order Code is structured as 'AWL4001-Y yPz' in which y and z specify the Fixed Electrical Tilt options for each frequency band.

Ordering Information Select from the following order codes.

Electrical Tilt Options For Each Band		Order Code
1695-2690MHz	3300-4200MHz	
2°	2°	AWL4001-Y2P2-F
2°	4°	AWL4001-Y2P4-F
2°	6°	AWL4001-Y2P6-F
4°	2°	AWL4001-Y4P2-F
4°	4°	AWL4001-Y4P4-F
4°	6°	AWL4001-Y4P6-F
6°	2°	AWL4001-Y6P2-F
6°	4°	AWL4001-Y6P4-F
6°	6°	AWL4001-Y6P6-F

Order Code	Description

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