

Broadband Side-by-Side Antennas

Polarization: Dual $\pm 45^\circ$

Electrical Downtilt: Adjustable

Horizontal beamwidth: 65°

Broadband

Tilt range: 10°

Applications

This innovative range of broadband side-by-side variable tilt antennas are cross polarized, available in 65° horizontal beamwidths for use in the following systems:

DCS1800 (1710-1785, 1805-1880MHz)

PCS (1850-1910, 1930-1990MHz)

UMTS (1920-1980, 2110-2170MHz)

This antenna arrangement allows for two high performance variable tilt antennas to be mounted side-by-side in a single radome. This configuration provides an easy upgrade path for the addition of 3G as both antennas can be optimized separately. These high performance antennas have excellent upper sidelobe suppression, VSWR and front to back ratio. The antennas are available in a variety of gain options from 14.7 to 19.0 dBi.

The antennas are covered by a fiberglass radome with continuously adjustable electrical downtilt over the range of 0° to 10° for each antenna. Four 7-16 connectors mounted at the bottom and is designed for use with our APM40 global mount / APM70-3C cluster kit. As with all our variable tilt antenna range they can be upgraded using our OPTIMIZER RT system for remote tilt control.

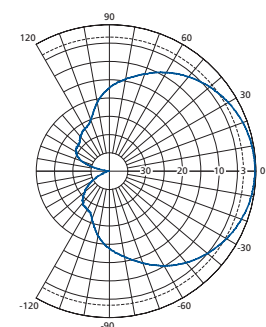
A combination of fixed and variable tilt antennas in the side-by-side configuration are available upon request.

Features & Benefits

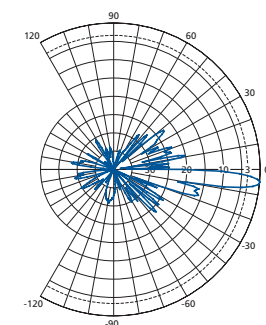
- Constant performance across frequency band for all tilt values
- Side by side constructions allow independent tilt control of each antenna half
- High gain
- High suppression of all upper sidelobes (typically < -20 dB)
- Electrical downtilt in field adjustable in the range of 10° for each antenna
- At least 30 dB isolation between polarization's
- At least 30 dB isolation between band
- Stable horizontal and vertical beamwidths
- Slanted DP antenna allows air combining, thus 3dB saving in power budget
- Effective polarization diversity ensured by high cross polar discrimination
- Broadband design
- Low wind load
- Optional remote tilt – can be retrofitted



APX*DWV-*DWV* Series



Horizontal Pattern



Vertical Pattern

Broadband Side-by-Side Antennas

APX13DWV-13DWV-C

Horizontal Beamwidth, deg 65

Gain, dBi 15.1

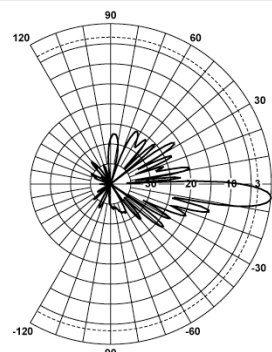
Electrical Downtilt, deg 2-12 , 2-12

ELECTRICAL SPECIFICATIONS

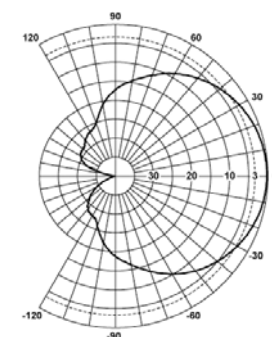
Frequency Range, MHz	1710-1900	1900-2170
Horizontal Beamwidth, deg	68	63
Vertical Beamwidth, deg	15.3	13.6
Gain, dBi (dBd)	14.7 (12.6)	15.1 (13.0)
Upper Sidelobe Suppression, dB	>18 all (Typically >20)	
Front-To-Back Ratio, dB	> 28	
VSWR	< 1.5:1	
Isolation between Ports, dB	> 30	
Isolation Between Bands, dB	> 30	
Maximum Power Input, W	300	
Polarization	Dual pol +/-45°	
3rd Order IMP @ 2 x 38 dBm, dBc	> 160	
7th Order IMP @ 2x46 dBm, dBc	> 170	

MECHANICAL SPECIFICATIONS

Dimensions - HxWxD, mm (in)	700 x 330 x 80 (27.5 x 13 x 3.15)
Survival Wind Speed, km/h (mph)	200 (125)
Max Wind Loading Area, m² (ft²)	0.64 (6.6)
Rated Wind Speed, km/h (mph)	160 (100)
Maximum Thrust @ Rated Wind, N (lbf)	787 (177)
Front Thrust @ Rated Wind, N (lbf)	787 (177)
Reflector Material	Aluminum
Radiating Element Material	Brass
Radome Material	Fiberglass
Radome Color	Light Grey RAL7035
Weight w/o Mtg Hardware, kg (lb)	18.0 (39.6)
Packing Dimensions - HxWxD, m (ft)	0.86 x .42 x .21 (2.81 x 1.37 x 0.69)
Packing Dimensions, HxWxD, mm (in)	860 x 420 x 210 (33.8 x 16.5 x 8.3)



Vertical Pattern



Horizontal Pattern

APX13DWV-13DWVT-C

Horizontal Beamwidth, deg 65

Gain, dBi 15.4

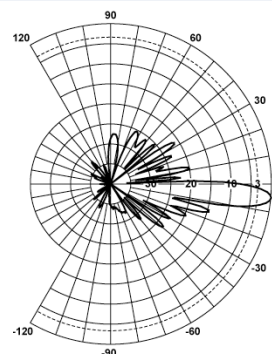
Electrical Downtilt, deg 0-10 , 0-10

ELECTRICAL SPECIFICATIONS

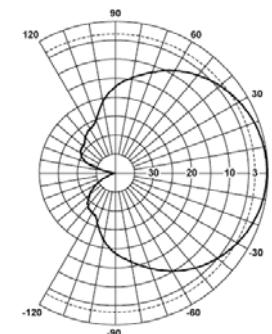
Frequency Range, MHz	1710-1900	1900-2170
Horizontal Beamwidth, deg	68	63
Vertical Beamwidth, deg	15.3	13.6
Gain, dBi (dBd)	14.9 (12.8)	15.4 (13.3)
Upper Sidelobe Suppression, dB	>18	
Front-To-Back Ratio, dB	> 28	
VSWR	< 1.5:1	
Isolation between Ports, dB	> 30	
Isolation Between Bands, dB	> 30	
Maximum Power Input, W	300	
Polarization	Dual pol +/-45°	
3rd Order IMP @ 2 x 38 dBm, dBc	> 160	
7th Order IMP @ 2x46 dBm, dBc	> 170	

MECHANICAL SPECIFICATIONS

Dimensions - HxWxD, mm (in)	700 x 330 x 80 (27.5 x 13 x 3.15)
Survival Wind Speed, km/h (mph)	200 (125)
Max Wind Loading Area, m² (ft²)	0.64 (6.6)
Rated Wind Speed, km/h (mph)	160 (100)
Maximum Thrust @ Rated Wind, N (lbf)	787 (177)
Front Thrust @ Rated Wind, N (lbf)	787 (177)
Reflector Material	Aluminum
Radiating Element Material	Brass
Radome Material	Fiberglass
Radome Color	Light Grey RAL7035
Weight w/o Mtg Hardware, kg (lb)	18.0 (39.6)
Packing Dimensions - HxWxD, m (ft)	0.86 x .42 x .21 (2.81 x 1.37 x 0.69)
Packing Dimensions, HxWxD, mm (in)	860 x 420 x 210 (33.8 x 16.5 x 8.3)



Vertical Pattern



Horizontal Pattern



APX*DWV-*DWV* Series

1710-2170 MHz

Broadband Side-by-Side Antennas

APX16DWV-16DWVL-C

Horizontal Beamwidth, deg 65

Gain, dBi 18.0

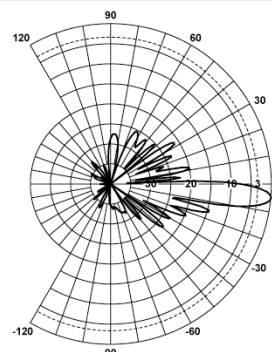
Electrical Downtilt, deg 0-10 , 0-10

ELECTRICAL SPECIFICATIONS

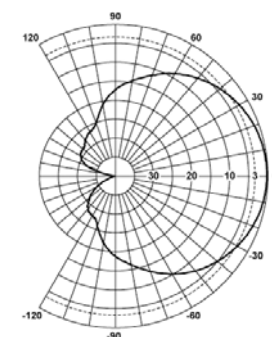
Frequency Range, MHz	1710-1900	1900-2170
Horizontal Beamwidth, deg	63	55
Vertical Beamwidth, deg	7	6.4
Gain, dBi (dBd)	17.6 (15.5)	18.0 (16.0)
Upper Sidelobe Suppression, dB	>17	>18 all (Typically >20)
Front-To-Back Ratio, dB	>28	>30
VSWR	< 1.5:1	
Isolation between Ports, dB	> 30	
Isolation Between Bands, dB	> 30	
Maximum Power Input, W	300	
Polarization	Dual pol +/-45°	
3rd Order IMP @ 2 x 38 dBm, dBc	> 160	
7th Order IMP @ 2x46 dBm, dBc	> 170	

MECHANICAL SPECIFICATIONS

Dimensions - HxWxD, mm (in)	1349 x 330 x 80 (53 x 13 x 3.15)
Survival Wind Speed, km/h (mph)	200 (125)
Max Wind Loading Area, m ² (ft ²)	0.64 (6.6)
Rated Wind Speed, km/h (mph)	160 (100)
Maximum Thrust @ Rated Wind, N (lbf)	787 (177)
Front Thrust @ Rated Wind, N (lbf)	787 (177)
Reflector Material	Aluminum
Radiating Element Material	Brass
Radome Material	Fiberglass
Radome Color	Light Grey RAL7035
Weight w/o Mtg Hardware, kg (lb)	18.0 (39.6)
Packing Dimensions - HxWxD, m (ft)	1.5 x .42 x .21 (5.08 x 1.37 x 0.69)
Packing Dimensions, HxWxD, mm (in)	1550 x 420 x 210 (61 x 16.5 x 8.3)



Vertical Pattern



Horizontal Pattern

APX17DWV-17DWV-C

Horizontal Beamwidth, deg 65

Gain, dBi 19.0

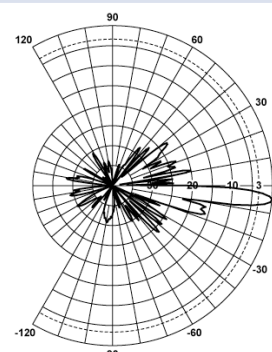
Electrical Downtilt, deg 0-10 , 0-10

ELECTRICAL SPECIFICATIONS

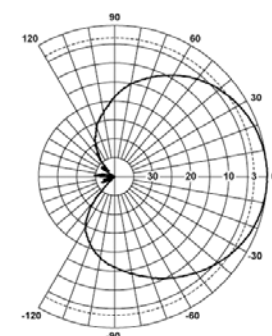
Frequency Range, MHz	1710-1900	1900-2170
Horizontal Beamwidth, deg	64	58
Vertical Beamwidth, deg	5.5	5.0
Gain, dBi (dBd)	18.8 (16.7)	19.0 (16.9)
Upper Sidelobe Suppression, dB	>17	>18 all (Typically >20)
Front-To-Back Ratio, dB	> 30	> 30
VSWR	< 1.5:1	
Isolation between Ports, dB	> 30	
Isolation Between Bands, dB	> 30	
Maximum Power Input, W	300	
Polarization	Dual pol +/-45°	
3rd Order IMP @ 2 x 38 dBm, dBc	> 160	
7th Order IMP @ 2x46 dBm, dBc	> 170	

MECHANICAL SPECIFICATIONS

Dimensions - HxWxD, mm (in)	1850 x 330 x 80 (73 x 13 x 3.15)
Survival Wind Speed, km/h (mph)	200 (125)
Max Wind Loading Area, m ² (ft ²)	0.64 (6.6)
Rated Wind Speed, km/h (mph)	160 (100)
Maximum Thrust @ Rated Wind, N (lbf)	787 (177)
Front Thrust @ Rated Wind, N (lbf)	787 (177)
Reflector Material	Aluminum
Radiating Element Material	Brass
Radome Material	Fiberglass
Radome Color	Light Grey RAL7035
Weight w/o Mtg Hardware, kg (lb)	18.0 (39.6)
Packing Dimensions - HxWxD, m (ft)	2.0 x .42 x .21 (5.08 x 1.37 x 0.69)
Packing Dimensions, HxWxD, mm (in)	2021 x 420 x 210 (61 x 16.5 x 8.3)



Vertical Pattern



Horizontal Pattern

