

## 38 GHz Point to Multipoint Sector Hub Antenna

### Facts & Features

- Flat (Uniform) Azimuth Pattern Coverage
- Superior Azimuth Sidelobe Suppression (improved sector-to-sector isolation)
- Shaped Elevation Pattern (continuous coverage to -45° below the horizon)
- Ultra Low Crosspolarization.
- Compact Design
- Highly Efficient
- Azimuth Half Power Beamwidths (22.5, 45, 90 degrees)
- Innovative UltraMount™ Brackets
- Minimal Wind Loading
- Easy ODU Attachment
- Rugged, Lightweight Design
- Stainless Steel Hardware
- Meets or exceeds EIA-195-C and EIA-222-F standards



38.60 - 40.00 GHz

**WavShapr38™** antennas are the latest generation of point-to-multipoint sector hub antenna systems. With an extremely flat amplitude within the azimuth coverage region and extensive sidelobe suppression outside the sector, both system performance and frequency reuse are significantly improved. Uniform power density is provided by a highly controlled cosecant<sup>2</sup>(θ) elevation pattern throughout a 45 degree down tilt. **WavShapr38™** antennas are broadband, highly efficient and provide excellent cross-polarization isolation and front-to-back ratio. **WavShapr38™** antennas are a unique low profile, rugged, attractive and outperform traditional sector antennas.

### Electrical Specifications

Frequency GHz	Model Number	Polarization	Elevation HPBW	Azimuth 3 dB HPBW	XPD dBrel	Regulatory Standard	Gain dBi	VSWR max.	(R.L. dB)
<b>22 Degree - WavShapr38™ - Point-to-Multipoint - Sector Hub Antenna</b>									
38.60 - 40.00	WS22V-380	Vertical	6.0	22.5	Note 1.	Note 1.	22.0	1.50	(14.0)
<b>45 Degree - WavShapr38™ - Point-to-Multipoint - Sector Hub Antenna</b>									
38.60 - 40.00	WS45V-380	Vertical	6.0	45.0	Note 1.	Note 1.	19.0	1.50	(14.0)
<b>90 Degree - WavShapr38™ - Point-to-Multipoint - Sector Hub Antenna</b>									
38.60 - 40.00	WS90V-380	Vertical	6.0	90.0	Note 1.	Note 1.	16.0	1.50	(14.0)

#### NOTE:

1. Complies with ETSI EN 301 215-2 Class CS-1 and CS-2 azimuth sidelobe and cross polarization specifications.  
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**WavShapr™** is a trademark of the Endgate Corp.  
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# WavShapr38™ Specifications

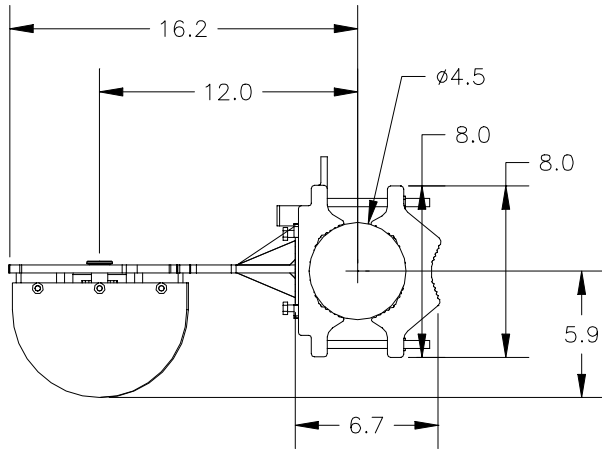
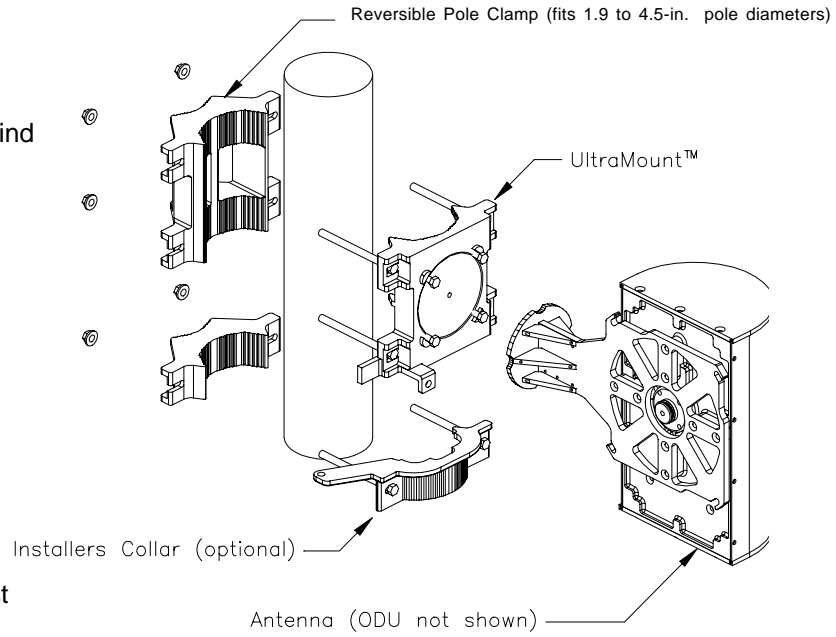
Models	WS90(*)-380	WS45(*)-380	WS22(*)-380
<b>Electrical</b>			
Frequency Range (GHz)	38.60 - 40.00	38.60 - 40.00	38.60 - 40.00
Polarization	Vertical	Vertical	Vertical
VSWR	<1.5:1	<1.5:1	<1.5:1
Cross Polarization Isolation (dBrel)	ETSI EN 301 215-2 Class Class CS-1 and CS-2	ETSI EN 301 215-2 Class Class CS-1 and CS-2	ETSI EN 301 215-2 Class Class CS-1 and CS-2
Max. RF Input Power (watts)	<10	<10	<10
F/B ratio (dBrel)	ETSI EN 301 215-2 Class Class CS-1 and CS-2	ETSI EN 301 215-2 Class Class CS-1 and CS-2	ETSI EN 301 215-2 Class Class CS-1 and CS-2
Azimuth 1 dB Beamwidth (deg)	90° ±10%	45° ±10%	22.5° ±10%
Elevation 3 dB Beamwidth (deg)	6° ±10%	6° ±10%	6° ±10%
Antenna Gain, max. (dBi)	>16.0	>19.0	>22.0
Sidelobe Suppression (dBrel)	ETSI EN 301 215-2 Class Class CS-1 and CS-2	ETSI EN 301 215-2 Class Class CS-1 and CS-2	ETSI EN 301 215-2 Class Class CS-1 and CS-2
Elevation Pattern, nominal	Csc <sup>2</sup> from 3 dB BW to 45 degrees below horizon	Csc <sup>2</sup> from 3 dB BW to 45 degrees below horizon	Csc <sup>2</sup> from 3 dB BW to 45 degrees below horizon
Output Flange Type	WR-28	WR-28	WR-28
<b>Mechanical</b>			
Antenna Size DxWxH (in)	6.0 x 8.1 x 13.3	6.0 x 8.1 x 13.3	6.0 x 8.1 x 13.3
Shipping Volume LxWxH, mm (in)	19 x 19 x 21 (470 x 470 x 533)	19 x 19 x 21 (470 x 470 x 533)	19 x 19 x 21 (470 x 470 x 533)
Weight (antenna w/o Ice, kg (lbs) <sup>2</sup> )	5.4 (12)	5.4 (12)	5.4 (12)
Storage Temp. (deg)	-40°C to +70°C	-40°C to +70°C	-40°C to +70°C
Operational Temp. (deg)	-40°C to +70°C	-40°C to +70°C	-40°C to +70°C
Altitude, m (ft)	5,000 (16,400)	5,000 (16,400)	5,000 (16,400)
<b>Adjustments</b>			
Elevation, Fine (deg)	±20	±20	±20
Elevation, Coarse (deg)	±180	±180	±180
Azimuth, Fine (deg)	±20	±20	±20
Azimuth, Coarse (deg)	±180	±180	±180
Pole Diameter mm (in)	48 (1.9) –112 (4.5)	48 (1.9) –112 (4.5)	48 (1.9) –112 (4.5)
<b>Windloading</b>			
Operational, Km/h (mph)	145 (90)	145 (90)	145 (90)
Survival, Km/h (mph)	200 (125)	200 (125)	200 (125)

<sup>2</sup>Does not include the weight of the UltraMount™ (2.2kg/4.8 lbs).

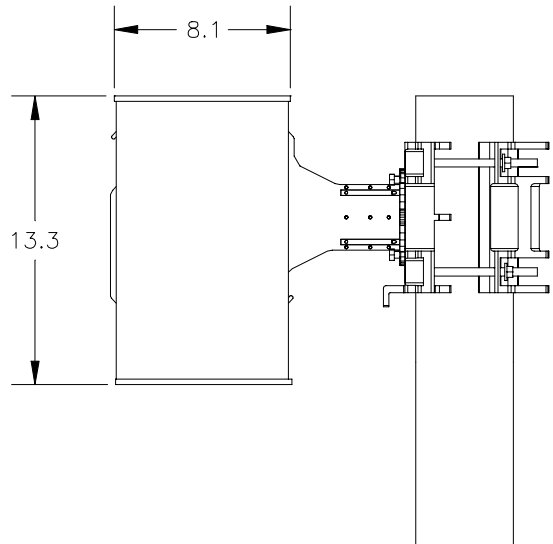
# UltraMount™

## Features

- Designed with the Installer in Mind
- One Standard Tool Required
- Minimal Assembly Required
- Light Weight
- Stainless Steel Hardware
- Fast, Easy and Intuitive to Use and Adjust
- Extremely Accurate Fine Adjust (Minimal Backlash)



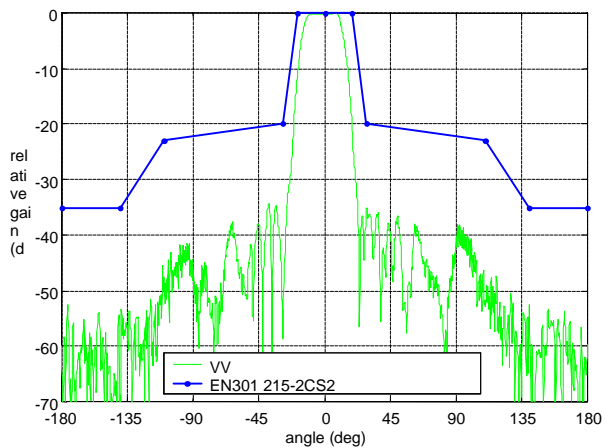
**Top View**



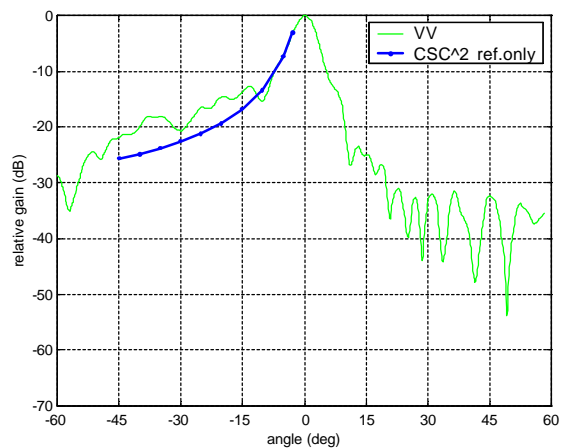
**Front View**

All dimensions in inches.  
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 Patents Pending.

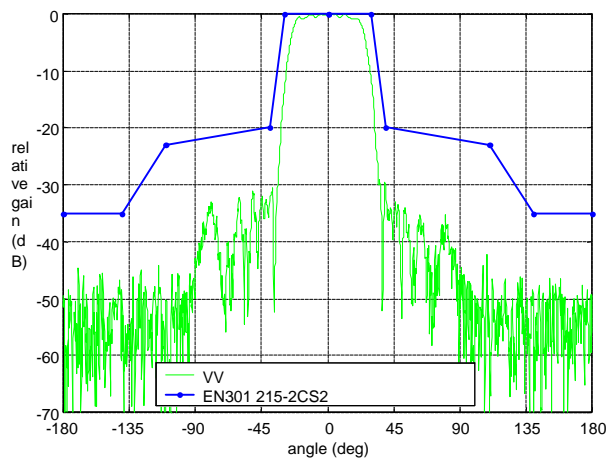
### 22.5 degree Azimuth Pattern



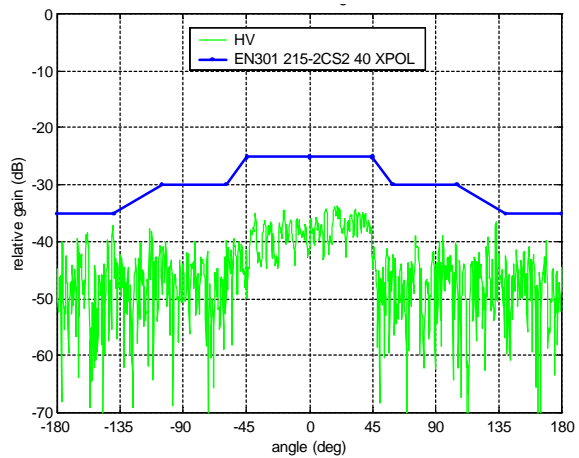
### Elevation Pattern



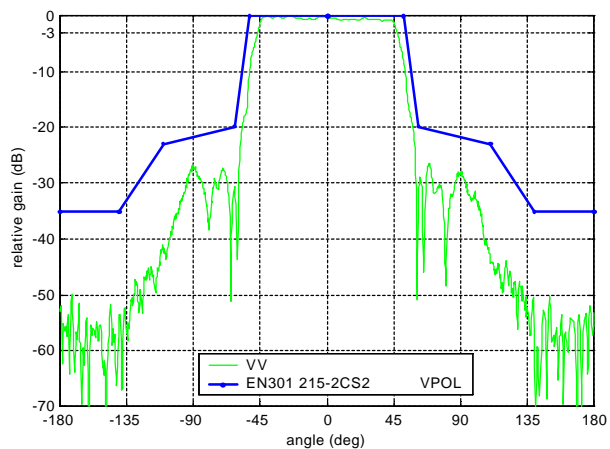
### 45 degree Azimuth Pattern



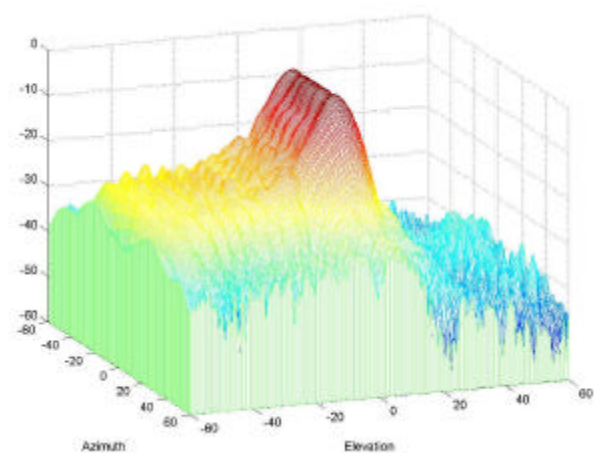
### Cross Polarization Pattern



### 90 degree Azimuth Pattern



### 3D Pattern



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