

QuadMini

Omni-Directional 4x4 MIMO Low Profile Antenna

Designed by WAVEFORM in the USA

SKU: ANT-4-660-UF-SM

A QuadMini Antenna

B Pole Bracket & 6x Zip Ties

D 5x Velcro Ties

E 6x Wall Screws & Anchors

F 6x Thumb Screws

G 4x Suction Cups



600 to 6000 MHz



4G and 5G Support



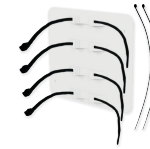
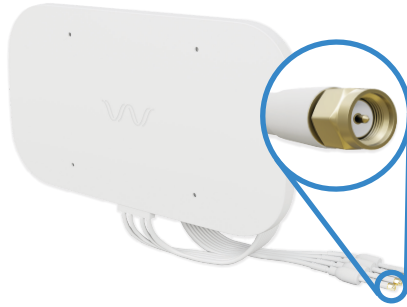
Average 5.2 dBi Gain



Indoor/Outdoor Rated



SMA-Male Connectors, with integrated weatherproofing



C Desktop Bracket



Specifications:

Electrical:

Freq. Range	600-900 MHz	1700-2700 MHz	3500-4200 MHz	5000-6000 MHz
Gain (Avg. Peak)	2.5 dBi ± 0.8 dB	5.3 dBi ± 0.4 dB	5.4 dBi ± 0.3 dB	5.8 dBi ± 0.4 dB
Azimuth Beamwidth	360 deg [Omni-Directional]			
Elevation Beamwidth	360 deg [Omni-Directional]			
VSWR	≤ 1.8	≤ 2.4	≤ 1.9	≤ 1.8
MIMO Isolation (Peak)	35.1 dB	45.0 dB	40.9 dB	79.2 dB
Efficiency (Peak)	86 %	80 %	67 %	64 %
Input Imped.	50 Ω			
Polarization	4x4 Cross-Polarized, ± 45 deg			
Antenna Type	Omni-Directional			
Power Rating	50 W (Peak)			

Mechanical (Antenna):

Antenna	Radome Color	White (RAL 9003)
	Radome Material	ASA (UV Stabilized)
	Dimensions (w x h x d)	32.6 x 18.0 x 1.5 cm (12.8 x 7.1 x 0.6 in)
Cable	Connector	SMA-Male
	Type	Ultraflex LMR195
	Jacket Color	White
	Jacket Material	TPE
	Length	1.0 m (3.3 ft)
Cable Boot	Bending Radius	50 mm (1.9 in) [Repeat] 25 mm (1.0 in) [Install]
	Material	Silicone Rubber
Net Weight	0.64 kg (1.41 lbs)	

Mechanical (Accessories):

Wall Bracket	Material	PA6+30%GF
	Dimensions (w x h x d)	17.8 x 22.4 x 10.0 cm (7.0 x 8.8 x 3.9 in)
Pole Bracket	Material	PA6+30%GF
	Dimensions (w x h x d)	17.8 x 15.0 x 2.0 cm (7.0 x 5.9 x 0.8 in)
Zip Ties	Dimensions (l x w x h)	203 x 4.3 x 1.2 mm (8.0 x 0.17 x 0.05 in)
	Material	304 Stainless Steel
Wall Screws	Dimensions	Size-#7 x 5 cm (2.0 in)
	Material	Yellow PA66
Wall Anchors	Dimensions (l x di.)	40 x Ø 6.0 mm (1.6 x Ø 0.24 in)
	Material	PVC [Suction Cup] 304 Stainless Steel [Screw]
Suction Cups	Suction Cup Dims. (h x di.)	10 x Ø 42 mm (0.4 x Ø 1.7 in)
	Screw Dims.	M4 x 8 mm
	Material	316 stainless steel
Thumb Screws	Dimensions	M4 x 8 mm
	Material	PP [Hooks], Nylon [Loops]
Velcro Ties	Dimensions	150 mm (5.9 in)

Environmental:

Protection Class	IP65
Impact Rating	IK08
Rated Wind Velocity	200 kph (125 mph)
UV Rated?	Yes
Operating Temp	-40 to +65 deg C (-40 to +150 deg F)
Lightning Protection	DC Ground



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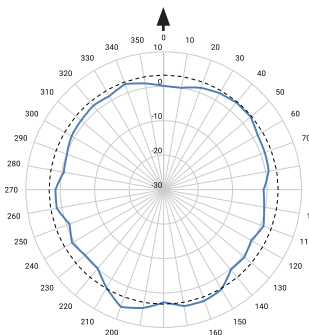
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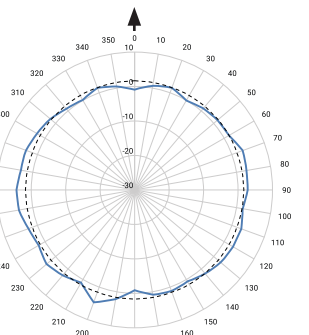
Omni-Directional 4x4 MIMO Low Profile Antenna

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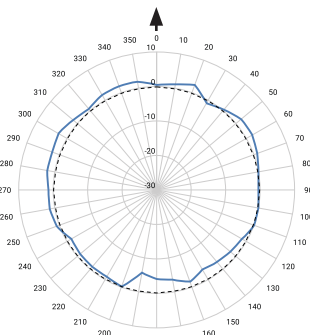
600-900 MHz



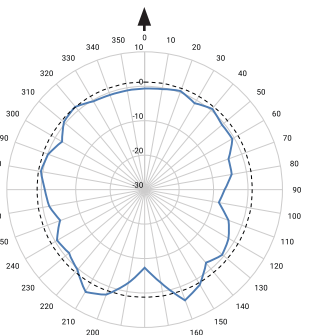
1700-2700 MHz



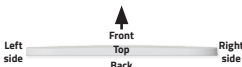
3500-4200 MHz



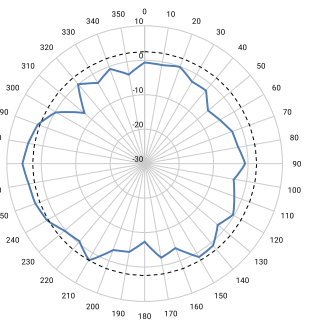
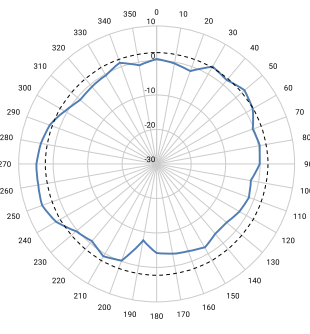
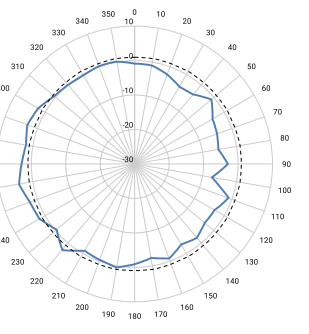
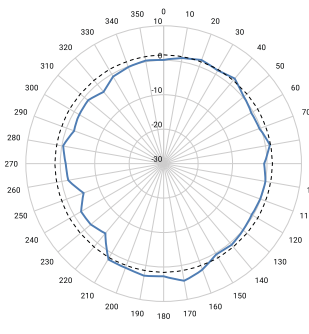
5000-6000 MHz



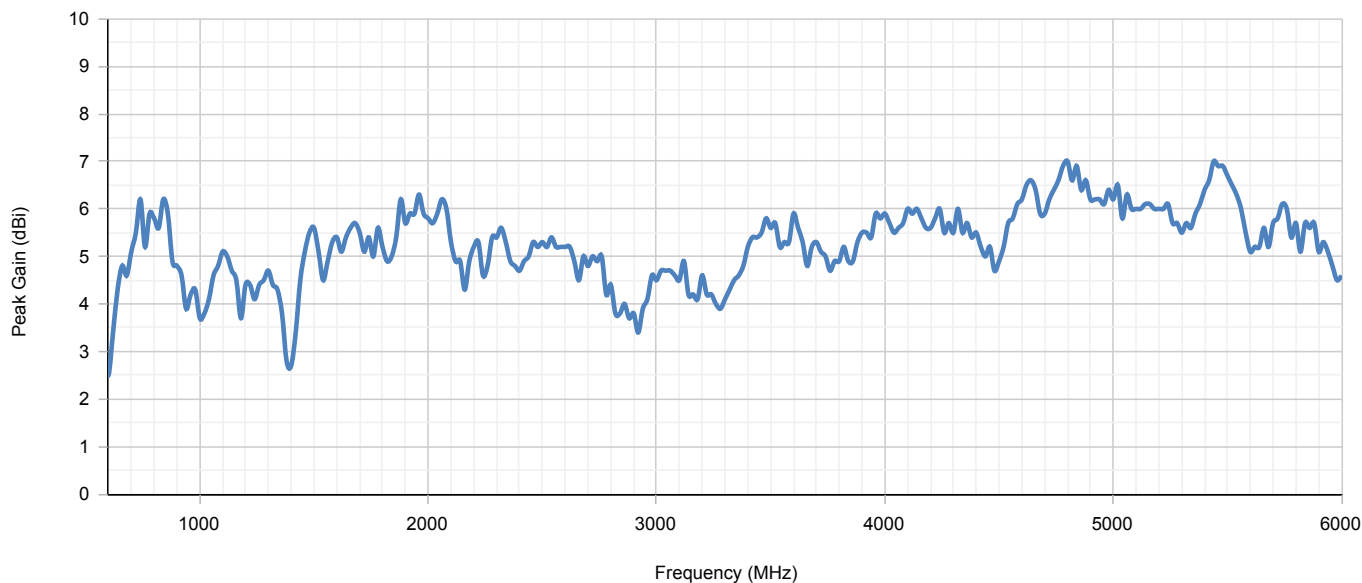
Azimuth Plane
"Top-down view"



Elevation Plane
"Side-on view"



Antenna Peak Gain (dBi) by Frequency (MHz)



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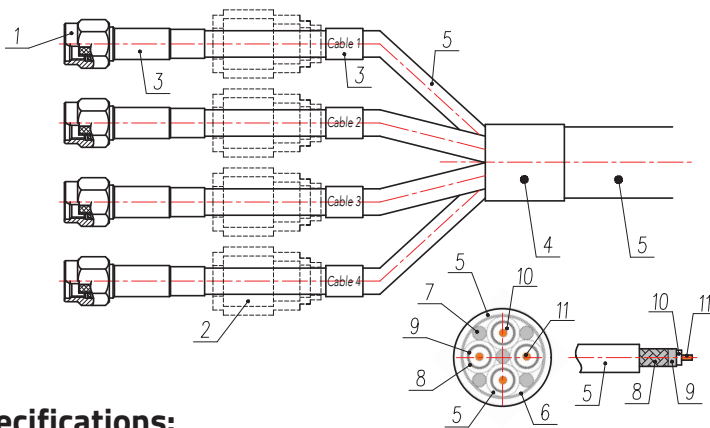
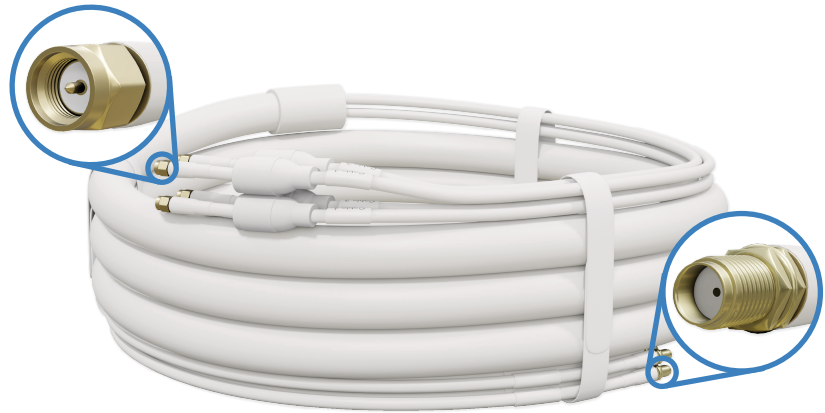
UltraFlex-Quad

Designed by WAVEFORM in the USA

SKU: 195Q-SFM-xx

Features:

- Four SMA-Female to SMA-Male ultraflex LMR195 cables grouped into one highly flexible cable.
- Integrated Weatherproof boots offer a fortified outdoor SMA connection.
- 0 MHz to 6000 MHz



#	Description	Material
1	SMA Body	Gold-Plated Brass
2	Weatherproof Boot	Silicone Rubber
3	Heatshrink	PVC
4	Cable Molding	Solid TPE
5	Cable Jacket (Group & Individ.)	TPE
6	Inter-cable Sheath	Clear PET
7	Inter-cable Filler	PP Lattice
8	Outer Conductor (#1)	Tinned Copper Braid
9	Outer Conductor (#2)	Bonded Aluminum Foil
10	Dielectric	PE Foam
11	Inner Conductor	Bare Copper

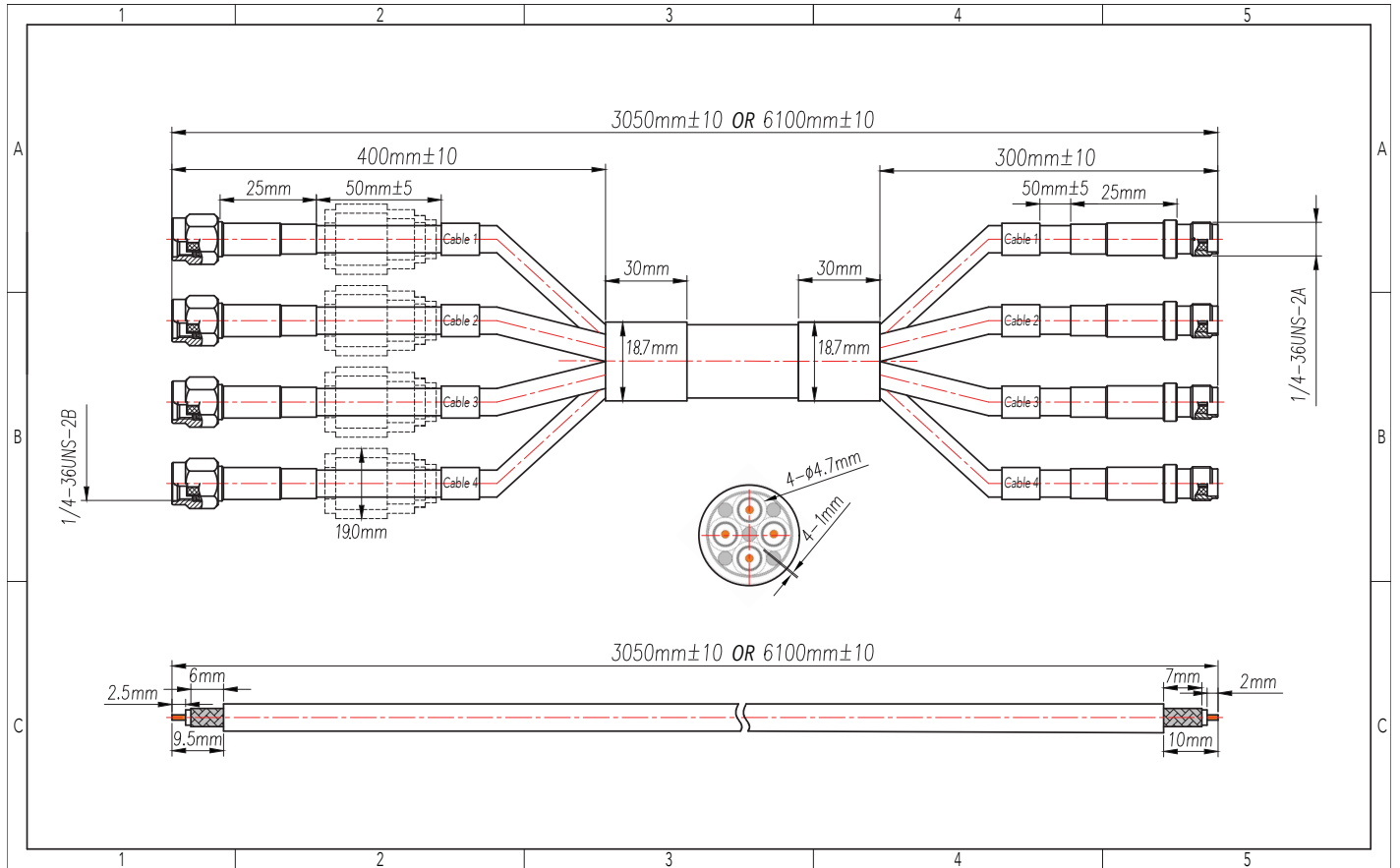
Specifications:

Electrical:		RF Attenuation (per 10 ft):		Mechanical:		
Input Impedance	50 Ω	600 MHz	0.9 dB	Cable (Whole)	Jacket Color	White (RAL 9016)
Frequency Range	0 - 6000 MHz	900 MHz	1.1 dB		Type	LMR195
VSWR	≤ 1.5	1800 MHz	1.6 dB		Length	3.05 m (10 ft) 6.10 m (20 ft)
Capacitance	83.3 pF/m	2100 MHz	1.7 dB		Diameter	13.4 mm (0.53 in) [Group] 18.7 mm (0.74 in) [Mold] 4.7 mm (0.19 in) [Indiv.]
Velocity	75 %	2500 MHz	1.9 dB			Bending Radius
Shielding	> 90 dB	3000 MHz	2.1 dB	Male Cable End	Connector Type	SMA-Male
Voltage	1000 V max (Working) 3000 V rms (Withstand)	4000 MHz	2.4 dB		Connector Diam.	7.9 mm (0.31 in)
	Contact Resist. (Cables)	$\leq 24.9 \Omega/\text{km}$ (Center) $\leq 16.1 \Omega/\text{km}$ (Outer)	5000 MHz		2.8 dB	Cable Length
Contact Resist. (Connectors)	$\leq 3.0 \text{ m}\Omega$ (Center) $\leq 2.5 \text{ m}\Omega$ (Outer)	6000 MHz	3.0 dB	Female Cable End	Connector Type	SMA-Female
	Insulation Resist.	$\geq 1000 \text{ m}\Omega$	Environmental: Protection Class IP66 (w/ Boots) Burial Rated? No UV Rated? Yes Operating Temperature -40 to +85 deg C (-40 to +185 deg F)		Connector Diam.	7.0 mm (0.28 in)
Power Rating	2.5 kW (Peak)	Net Weight			0.58 kg (1.28 lbs) [10 ft] 1.13 kg (2.50 lbs) [20 ft]	

UltraFlex-Quad

Designed by WAVEFORM in the USA

Dimensions:



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Coax Window Entry Cable (Twin & Quad)

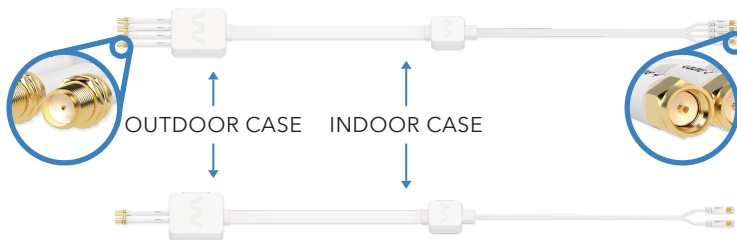
Designed by WAVEFORM in the USA

SKU: 113WP-SFM-x-V2

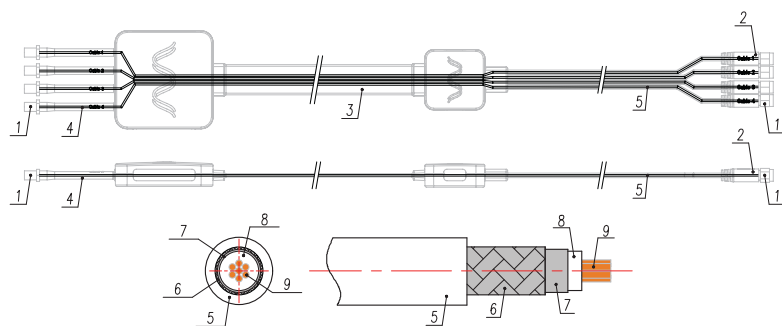
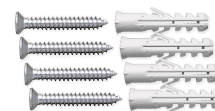
Features:

- Quad-cable or Twin-cable variants
- Ultra-thin 245 mm (9.6 in) section for placement in a window.
- Adjustable cable directions
- 0 MHz to 6000 MHz

A 1x Coax Window Entry Cable (Quad or Twin)



B 4x Wall Screws & Anchors



#	Description	Material
1	SMA-Bodies	Gold-Plated Copper
2	Heatshrink	PE & EVA
3	Cable Cover (Flat)	Silicone 70A
4	Cable Cover (Outdoor)	TPE
5	Cable Jacket (Indiv.)	FEP
6	Outer Conductor (#1)	Tinned Copper Braid
7	Outer Conductor (#2)	Bonded Aluminum Foil
8	Dielectric	FEP
9	Inner Conductor	Silver-Plated Copper

Specifications:

Electrical:

Input Impedance	50 Ω
Frequency Range	0 - 6000 MHz
VSWR	≤ 2.0
Capacitance	98.0 pF/m
Velocity	70 %
Shielding	> 100 dB
Voltage	300 V max (Working) 1500 V rms (Withstand)
Contact Resist. (Cables)	≤ 571 Ω/km (Center) ≤ 258 Ω/km (Outer)
Contact Resist. (Connectors)	≤ 3 mΩ (Center) ≤ 2 mΩ (Outer)
Insulation Resist.	≥ 5000 MΩ/km

RF Attenuation:

600 MHz	0.84 dB
900 MHz	0.95 dB
1800 MHz	1.3 dB
2100 MHz	1.4 dB
2500 MHz	1.5 dB
3000 MHz	1.7 dB
4000 MHz	2.1 dB
5000 MHz	2.5 dB
6000 MHz	2.8 dB

Mechanical (Cables):

Cable (Whole)	Jacket Color	White (P179-1C)
	Type	Low-loss RG1.13
	Length	70 cm (27.5 in)
Outdoor Cables	Conn. Type	SMA-Female
	Conn. Diam.	7.0 mm (0.28 in)
	Dimensions	50.0 x Ø 5.0 mm (2.0 x Ø 0.2 in)
Center Cable	Bending Radius	40.0 mm (1.6 in) [Repeat] 80.0 mm (3.1 in) [Install]
	Dimensions	245 x 20 x 2.3 mm (9.7 x 0.8 x 0.1 in)
Indoor Cables	Conn. Type	SMA-Male
	Conn. Diam.	7.9 mm (0.31 in)
	Dimensions	300 x Ø 4.0 mm (12.0 x Ø 0.16 in)
Net Weight	Bending Radius	8.0 mm (0.3 in) [Repeat] 6.0 mm (0.2 in) [Install]
	Weight	113 g (4.0 oz) [Quad] 90 g (3.2 oz) [Twin]

Mechanical (Cases & Accessories):

Cases	Material	ASA
	Outdoor Case Dims.	65 x 65 x 15 mm (2.6 x 2.6 x 0.6 in)
	Indoor Case Dims.	40 x 40 x 15 mm (1.6 x 1.6 x 0.6 in)
Covers	Material	TPE
Wall Screws	Material	Galvanized Steel
	Spec.	Size-#7 x 3.0 cm (1.18 in)
Wall Anchors	Material	PP
	Dims.	30 x Ø 6.0 mm (1.2 x Ø 0.24 in)

Environmental:

Protection Class	IP65
Impact Rating	IK05
Burial Rated?	No
UV Rated?	Yes
Operating Temperature	-40 to +80 deg C (-40 to 176 deg F)



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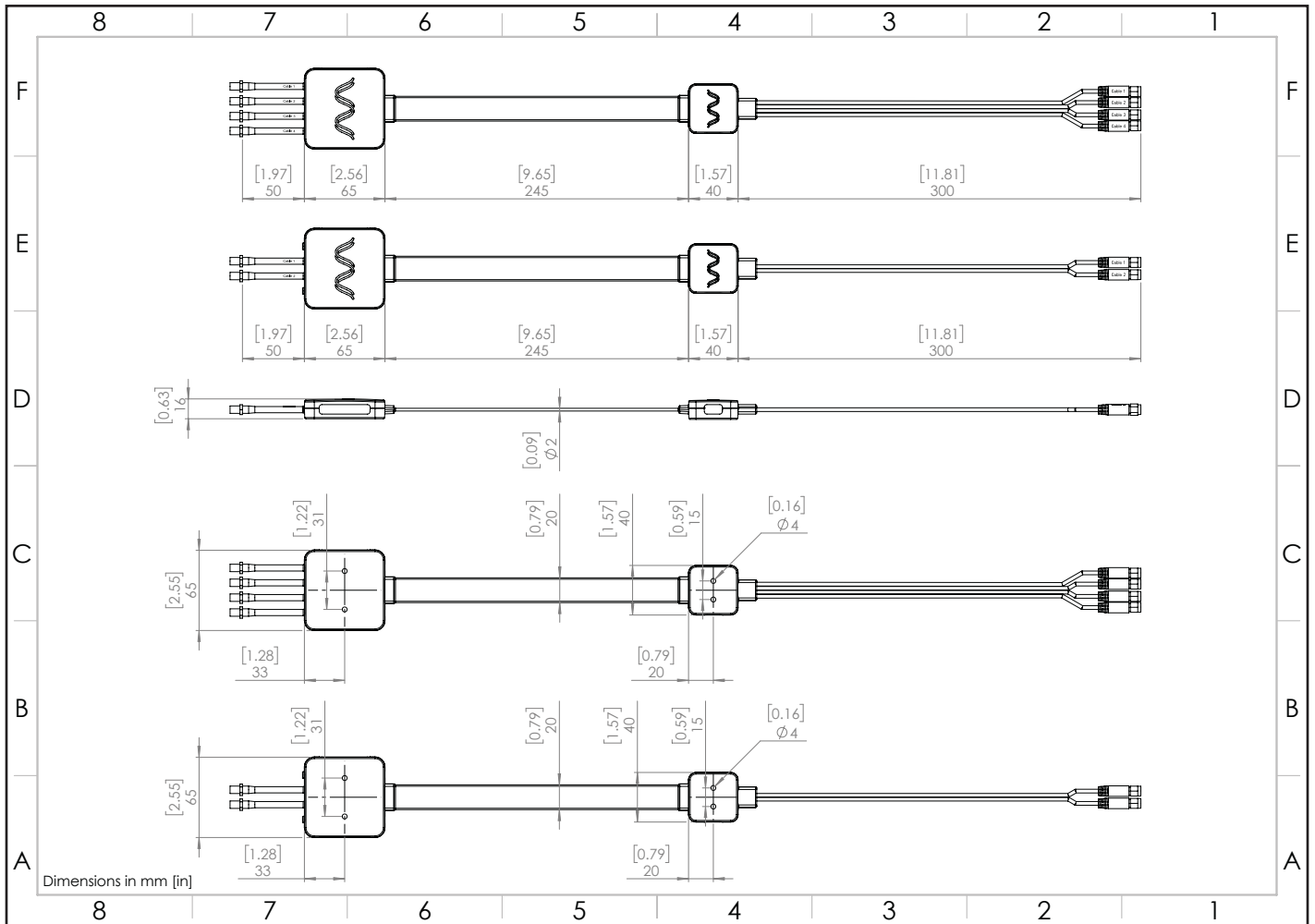
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Coax Window Entry Cable (Twin & Quad)

Designed by WAVEFORM in the USA

Dimensions:



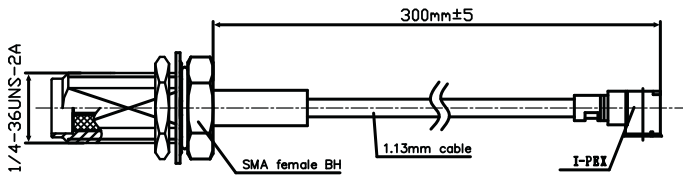
SMA-Female to U.FL Pigtail Adapter

Designed by WAVEFORM in the USA

SKU: PTA-SMAF-UFL-V2

Features:

- SMA-Female to U.FL-Female connector
- 0-6000 MHz Frequency Support
- 50 Ω Impedance
- 1.13 mm diameter cable type



Section Description	Material	Plating
SMA Body	Brass	Gold
I-PEX UFL Body	Brass	Gold
Inner Conductor	Steel	Silver & Copper
Dielectric	PTFE	N/A
Outer Conductor	Copper Braid	Silver
Jacket	FEP	Nickel

Specifications:

Electrical:

Input Impedance	50 Ω
Frequency Range	0 - 6000 MHz
VSWR	≤ 1.15 (Straight) ≤ 1.25 (Right Angle)
Capacitance	95.6 pF/m
Velocity	70 %
Voltage	335 V max (Working) 1000 V rms (Withstand)
Insertion Loss	< 0.7 dB @ 6000 MHz
Contact Resistance	≤ 3 m Ω (Center) ≤ 2 m Ω (Outer)
Insulation Resistance	≥ 5000 M Ω

Mechanical:

Jacket Color	Black
Cable Type	1.13mm
Cable Diameter	1.13 mm (0.05 in.)
Cable Length	30 cm (12 in.)
Bending Radius	4 mm (0.15 in.)
Connector A Type	SMA-Female Bulk-head
Connector A Angle	Straight
Connector A Diameter	7.0 mm (0.27 in.)
Connector B Type	U.FL-Female
Connector B Angle	Right-Angle
Connector B Diameter	2.0 mm (0.08 in.)
Net Weight	15 g (0.5 oz)

Environmental:

Burial Rated?	No
UV Rated?	No
Operating Temp.	-40 to +85 deg C



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UltraPole: The Universal Antenna Mount (Base Kit)

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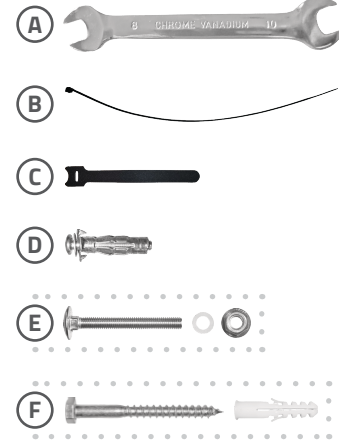
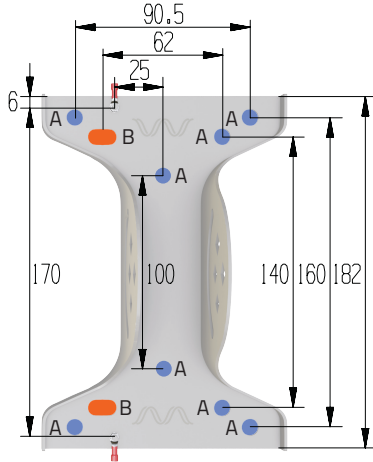
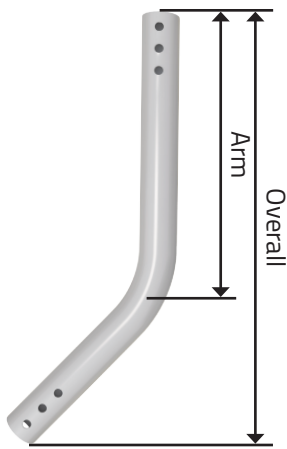
SKU: WF-UPM-Base

Features:

- Made of galvanized carbon steel for corrosion protection
- 90° of free pivoting with 3 lockable pivot positions (0°, 45°, 90°)
- Integrated ground terminals
- Easy to install
- **Net weight:** 1.2 kg (2.7 lbs)



Specifications:



J-Pole:

Color	Industrial Grey (RAL7035)
Material	Galvanized Carbon Steel
Thickness	2.0 mm (0.1 in.)
Diameter	38 mm (1.5 in.) O.D. 34 mm (1.4 in.) I.D.
Overall Length	42.0 cm (16.5 inch)
Arm Length	26.7 cm (10.5 inch)
Coating	Matte Powder Coat
Weight	0.8 kg (1.8 lbs)
Quantity	1

Footpad:

Color	Industrial Grey (RAL7035)
Material	Galvanized Carbon Steel
Thickness	2.1 mm (0.1 in.)
Footpad	18.2 x 12.5 x 7.7 cm (7.2 x 4.9 x 3.0 in.)
Hole A	Ø8.3 mm (Ø0.33 in.)
Hole B	14.6 x 8.3 mm (0.6 x 0.3 in.)
Ground Terminal	M3 x 10.0 mm
Coating	Matte Powder Coat
Weight	0.4 kg (0.9 lbs)
Quantity	1

Mounting Tools:

#	Part Name	Material	Dimensions	Qua.
A	Wrench	Steel	Size-8/10 mm	1
B	Zip Tie	Plastic	250 mm	4
C	Velcro Tie	Plastic	150 x 12 x 1 mm	5
D	Expansion Bolt	Steel	M6 x 52 mm	5*
	Carriage Bolt	Steel	M6 x 55 mm	
E	Washer	Plastic	M6	4*
	Flange Nut	Steel	M6	
F	Hex-Head Wood Screw	Steel	M6 x 60 mm	5*
	Anchor	Plastic	Ø10 x 50 mm	

*Includes 1x spare

UltraPole: The Universal Antenna Mount (Extension Kit)

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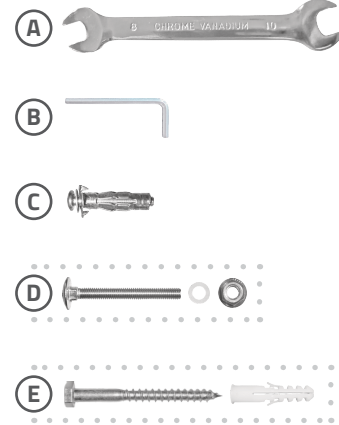
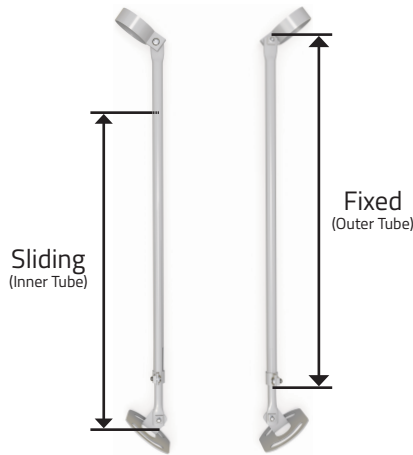
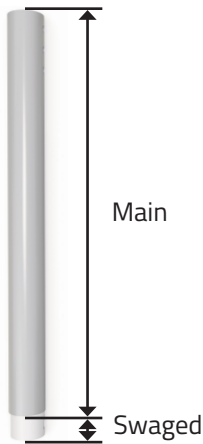
SKU: WF-UPM-Ext

Features:

- Made of galvanized carbon steel for corrosion protection
- Extends pole length by 38.4 cm
- Includes brace arm supports for heavy duty installations
- Easy to install
- **Net weight:** 1.5 kg (3.3 lbs)



Specifications:



Extension Pole:

Color	Industrial Grey (RAL7035)
Material	Galvanized Carbon Steel
Thickness	2.0 mm (0.08 in.)
Main Section	38.0 mm (1.5 in.) O.D. 34.0 mm (1.4 in.) I.D.
Swaged Section	34.0 mm (1.4 in.) O.D. 30.0 mm (1.8 in.) I.D.
Length	41.9 cm (16.5 in.)
Coating	Matte Powder Coat
Weight	0.8 kg (1.8 lbs)
Quantity	1

Brace Arms:

Color	Industrial Grey (RAL7035)
Material	Galvanized Carbon Steel
Fixed Section	32.0 x Ø12.0 mm (1.26 x Ø0.5 in.)
Sliding Section	30.0 x Ø8.0 mm (1.18 x Ø0.3 in.)
Overall Length	61.0 cm (24.0 in.) max 35.0 cm (13.8 in.) min
Footpad	5.0 x 6.0 cm (1.96 x 2.4 in.)
Coating	Matte Powder Coat
Weight	0.7 kg (1.5 lbs)
Quantity	2

Mounting Tools:

#	Part Name	Material	Size	Qua.
A	Wrench	Steel	Size-8/10 mm	1
B	Allen Wrench	Aluminum	Size-4mm	1
C	Expansion Bolt	Steel	M6 x 52 mm	5*
D	Carriage Bolt	Steel	M6 x 55 mm	2*
	Washer	Plastic	M6	
E	Flange Nut	Steel	M6	5*
	Hex-Head Wood Screw	Steel	M6 x 60 mm	
	Anchor	Plastic	Ø10 x 50 mm	

*Includes 1x spare