

# QuadMini

## Omni-Directional 4x4 MIMO Low Profile Antenna

Designed by WAVEFORM in California

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



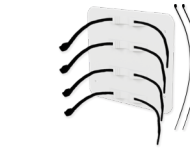
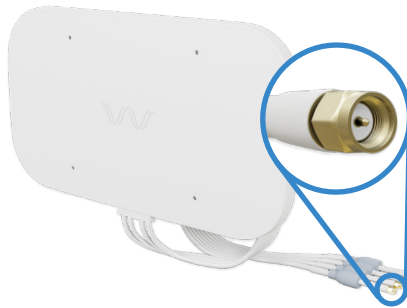
Average 5.2 dBi Gain



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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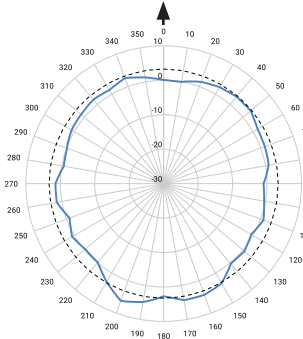
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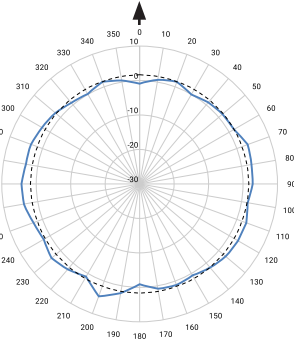
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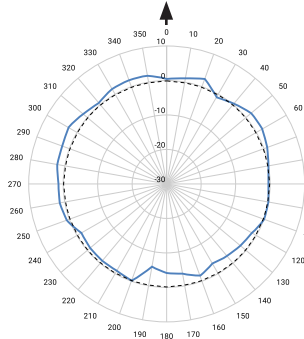
600-900 MHz



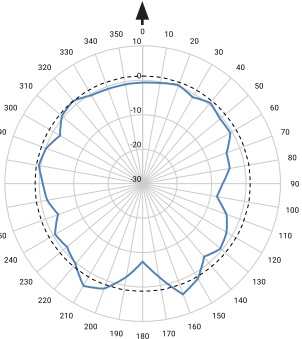
1700-2700 MHz



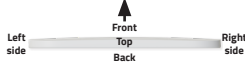
3500-4200 MHz



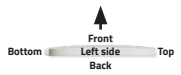
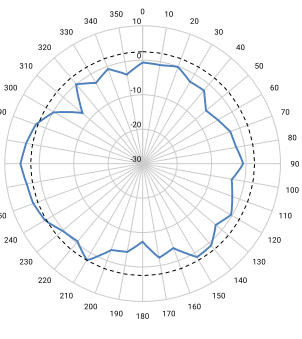
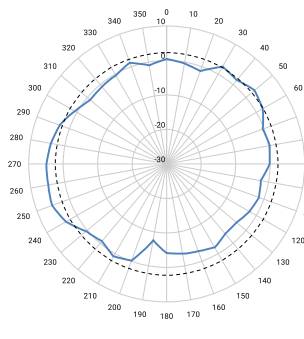
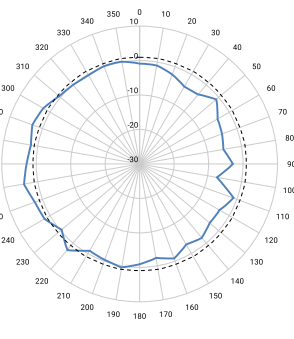
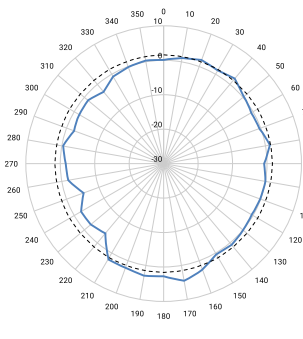
5000-6000 MHz



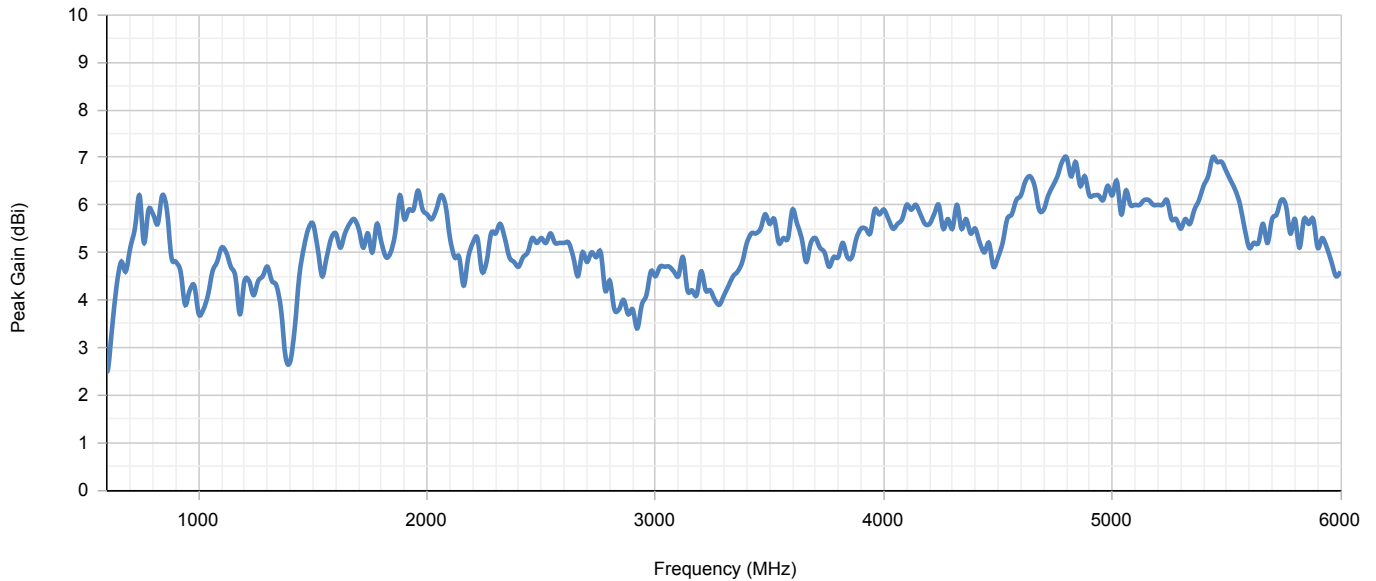
Azimuth Plane  
"Top-down view"



Elevation Plane  
"Side-on view"



Antenna Peak Gain (dBi) by Frequency (Mhz)



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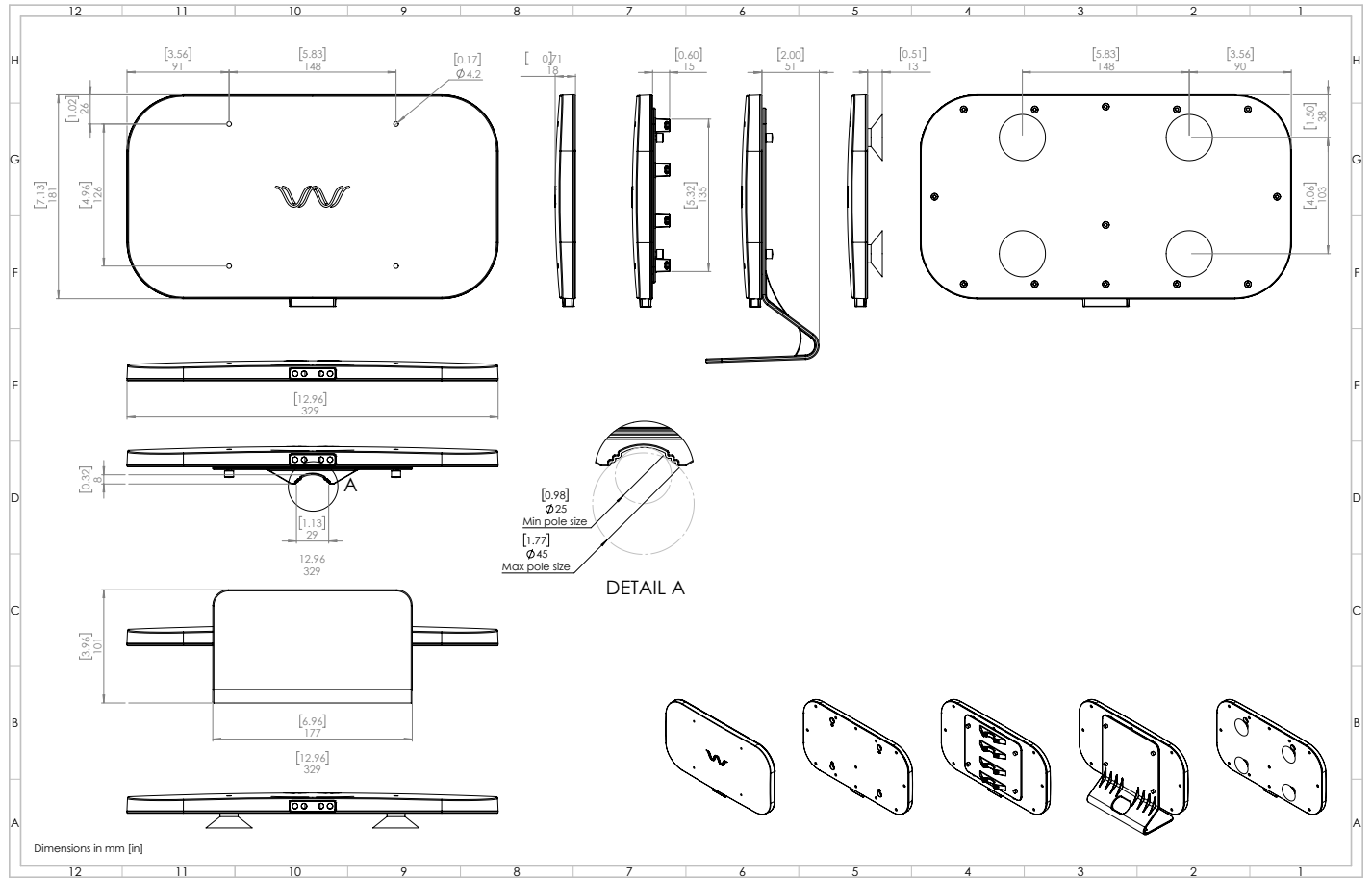
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Omni-Directional 4x4 MIMO Low Profile Antenna

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## Dimensions:



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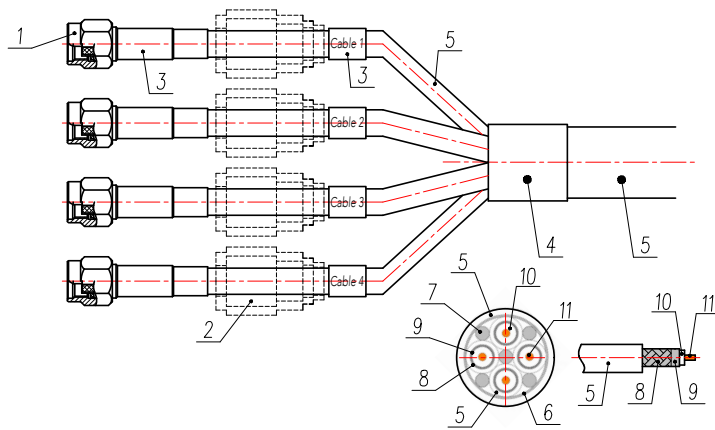
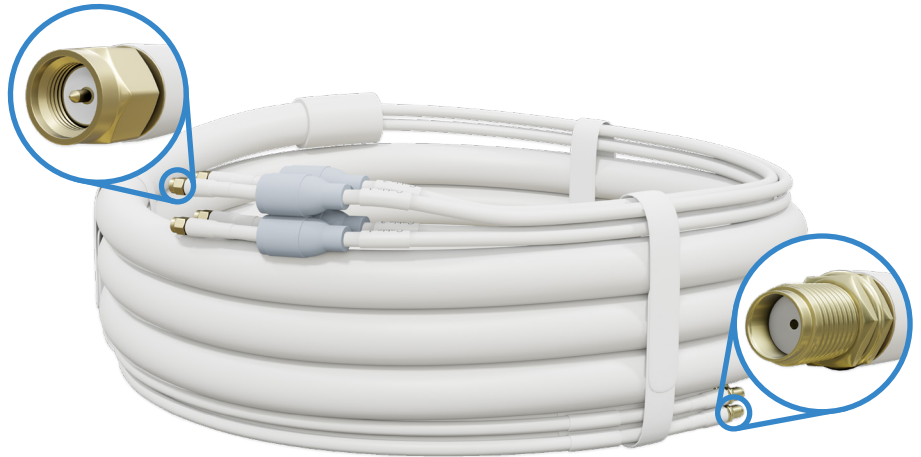
# UltraFlex-Quad

Designed by WAVEFORM in California

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	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

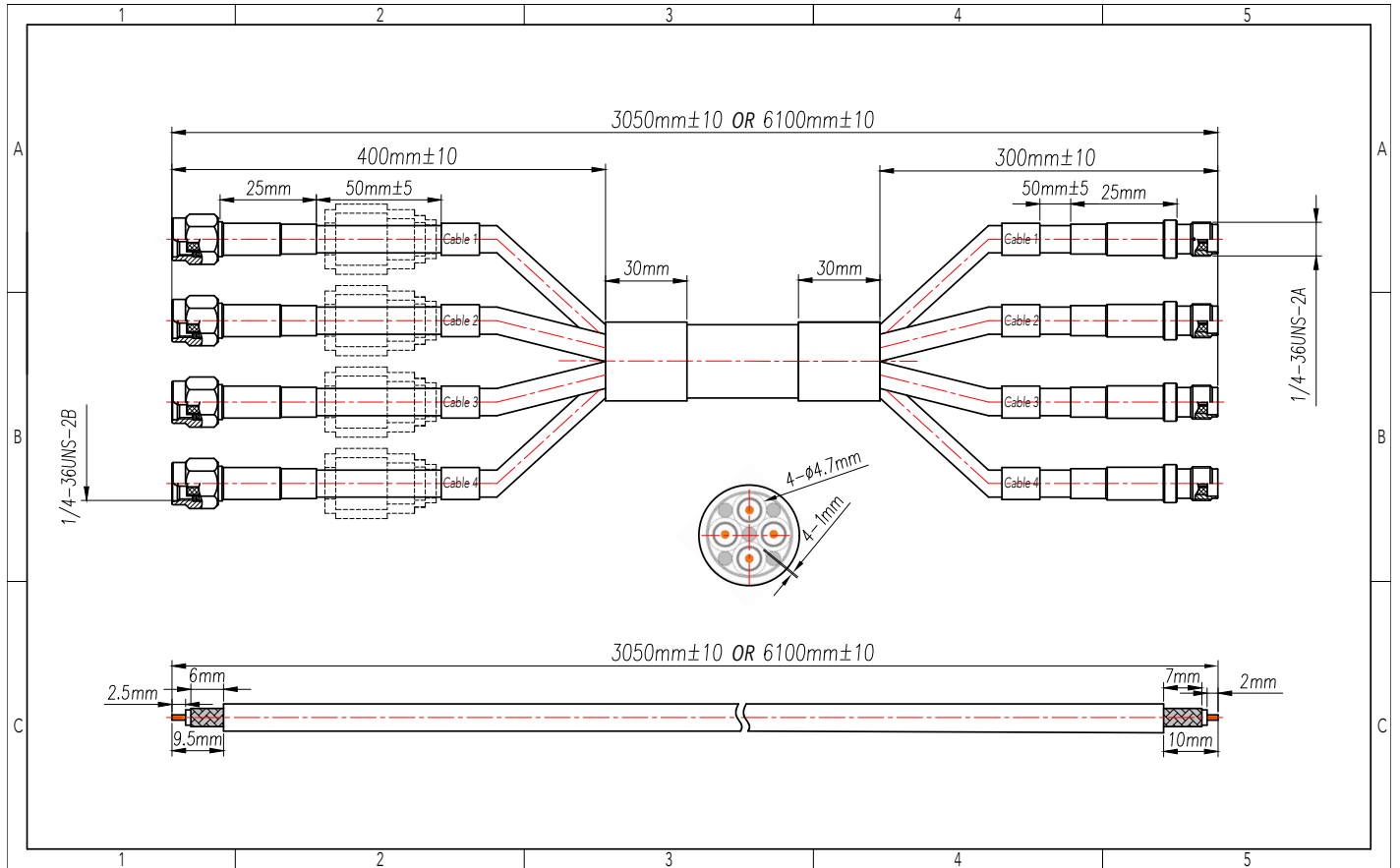
## Specifications:

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] 4.7 mm (0.19 in) [Indiv.]
Velocity	75 %	2500 MHz	1.9 dB	Bending Radius	130 mm (5.1 in) [Repeat] 65 mm (2.6 in) [Install]	
Shielding	> 90 dB	3000 MHz	2.1 dB		Male Cable End	Connector Type
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)	≤ 24.9 Ω/km (Center) ≤ 16.1 Ω/km (Outer)	5000 MHz	2.8 dB		Cable Length
Contact Resist. (Connectors)	≤ 3.0 mΩ (Center) ≤ 2.5 mΩ (Outer)	6000 MHz	3.0 dB	Female Cable End	Connector Type	SMA-Female
	Insulation Resist.	≥ 1000 mΩ			Connector Diam.	7.0 mm (0.28 in)
Power Rating	2.5 kW (Peak)				Cable Length	300 mm (12 in)
<b>Environmental:</b>				Net Weight	0.58 kg (1.28 lbs) [10 ft] 1.13 kg (2.50 lbs) [20 ft]	
Protection Class	IP66 (w/ Boots)	Operating Temperature	-40 to +85 deg C (-40 to +185 deg F)			
Burial Rated?	No	UV Rated?	Yes			

# UltraFlex-Quad

Designed by WAVEFORM in California

## Dimensions:



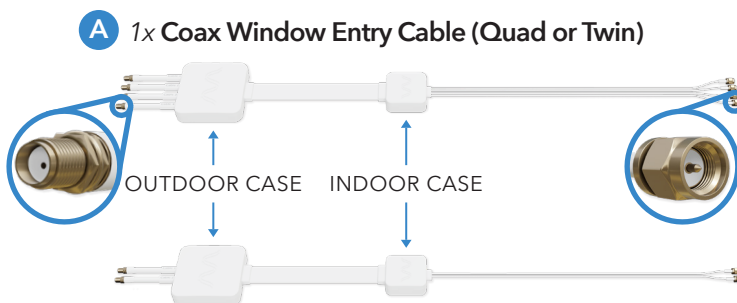
# Coax Window Entry Cable (Twin & Quad)

Designed by WAVEFORM in California

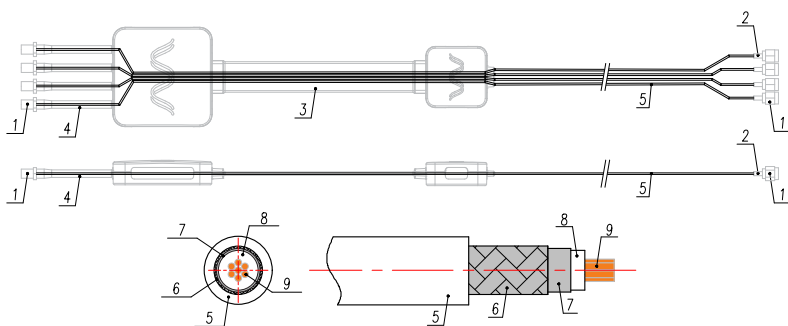
SKU: 113WP-SFM-x

## Features:

- Quad-cable or Twin-cable variants.
- Ultra-thin 300 mm (12 in) section for placement in a window.
- Adjustable cable directions
- 0 MHz to 6000 MHz



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

### 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)

### 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 (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	304 Stainless Steel
	Spec.	Size-#7 x 2.54 cm (1.0 in)
Wall Anchors	Material	PP
	Dims.	30 x Ø 6.0 mm (1.2 x Ø 0.24 in)

### Mechanical (Cables):

Cable (Whole)	Jacket Color	White (P179-1C)
	Type	Low-loss RG1.13
	Length	60 cm (2 ft)
Outdoor Cables	Conn. Type	SMA-Female
	Conn. Diam.	7.0 mm (0.28 in)
	Cable 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]
	Cable Dimensions	130 x 20 x 2.3 mm (5.1 x 0.8 x 0.09 in)
Indoor Cables	Conn. Type	SMA-Male
	Conn. Diam.	7.9 mm (0.31 in)
	Cable Dimensions	300 x Ø 1.2 mm (12 x Ø 0.05 in)
Net Weight	Bending Radius	8.0 mm (0.3 in) [Repeat] 6.0 mm (0.2 in) [Install]
		100 g (3.5 oz) [Quad] 80 g (2.8 oz) [Twin]



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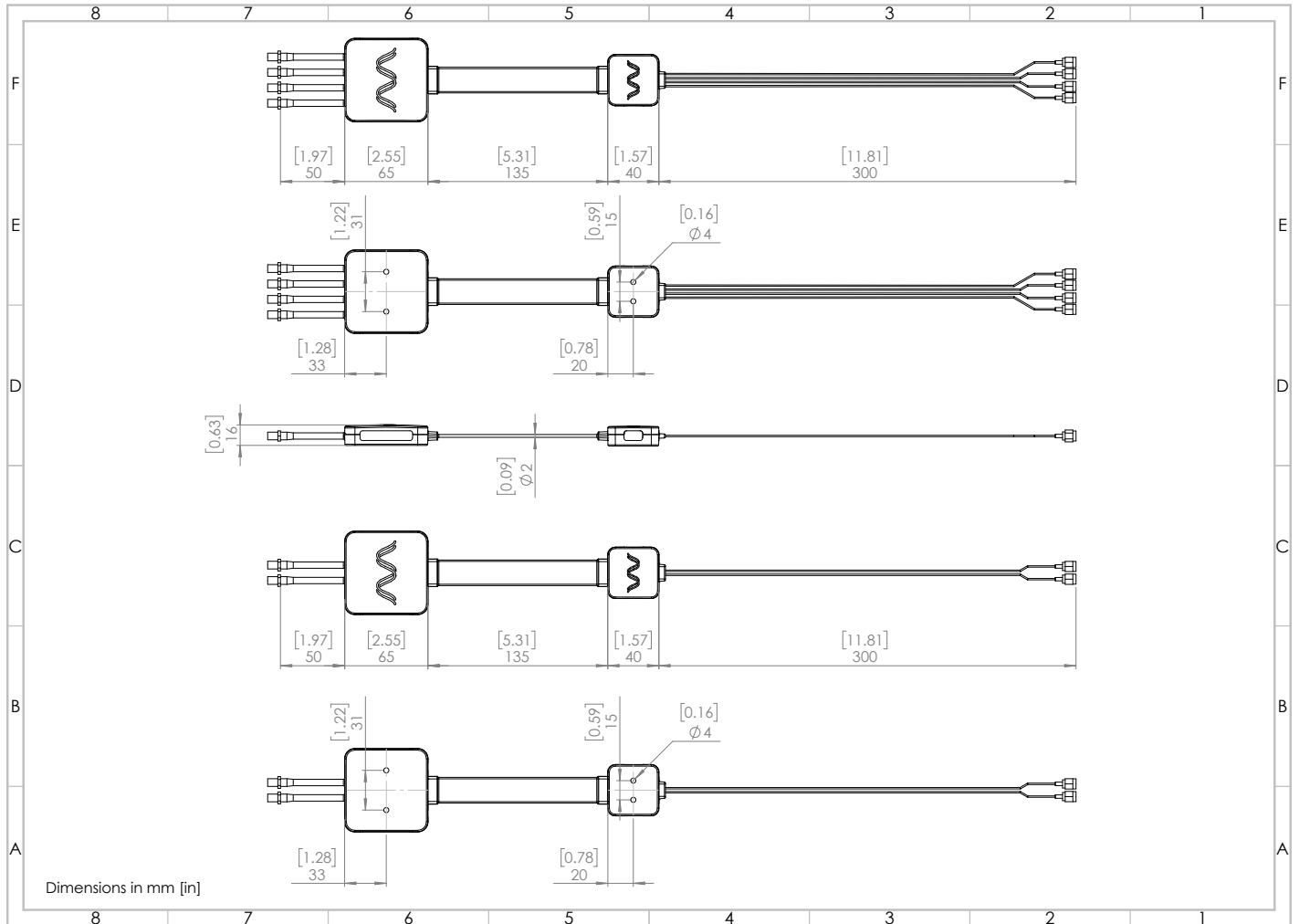
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# Coax Window Entry Cable (Twin & Quad)

Designed by WAVEFORM in California

## Dimensions:



Dimensions in mm [in]



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