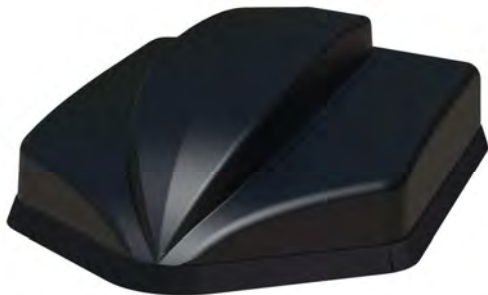


MiMo UHF/LTE 2x GNSS Sharkfin Antenna

GPSD2S4-7-38-[X]

PANORAMA ANTENNAS



Low Profile Sharkfin Style Design
2x2 LTE MiMo 698-960/1710-3800MHz
2x2 UHF LTE 450-470MHz
Up to 4x4 MiMo Dual Band WiFi
Up to 2x GPS or GPS/GNSS Active Antennas
Mounting for Optional Whip

The low profile sharkfin style GPSD2S4-7-38-[X] provides 2x2 MiMo functionality across 698-960/1710-3800MHz and 2x2 MiMo functionality across 450-470MHz. The flexible platform allows the main elements to be combined with a number of other functions including 2x GPS or GPS/GNSS active antennas and up to 4x4 MiMo WiFi 2.4/5.0GHz. The whip position allows for additional functionality depending on the whip selected.

The antenna is designed to be panel mounted and can be fitted on a conductive or non-conductive panel*. It is supplied with integrated flame retardant RG174 cables (Compliant to UN ECE 118 and EN45545-2)** and a robust weatherproof radome the antenna is suitable for many environments and applications.

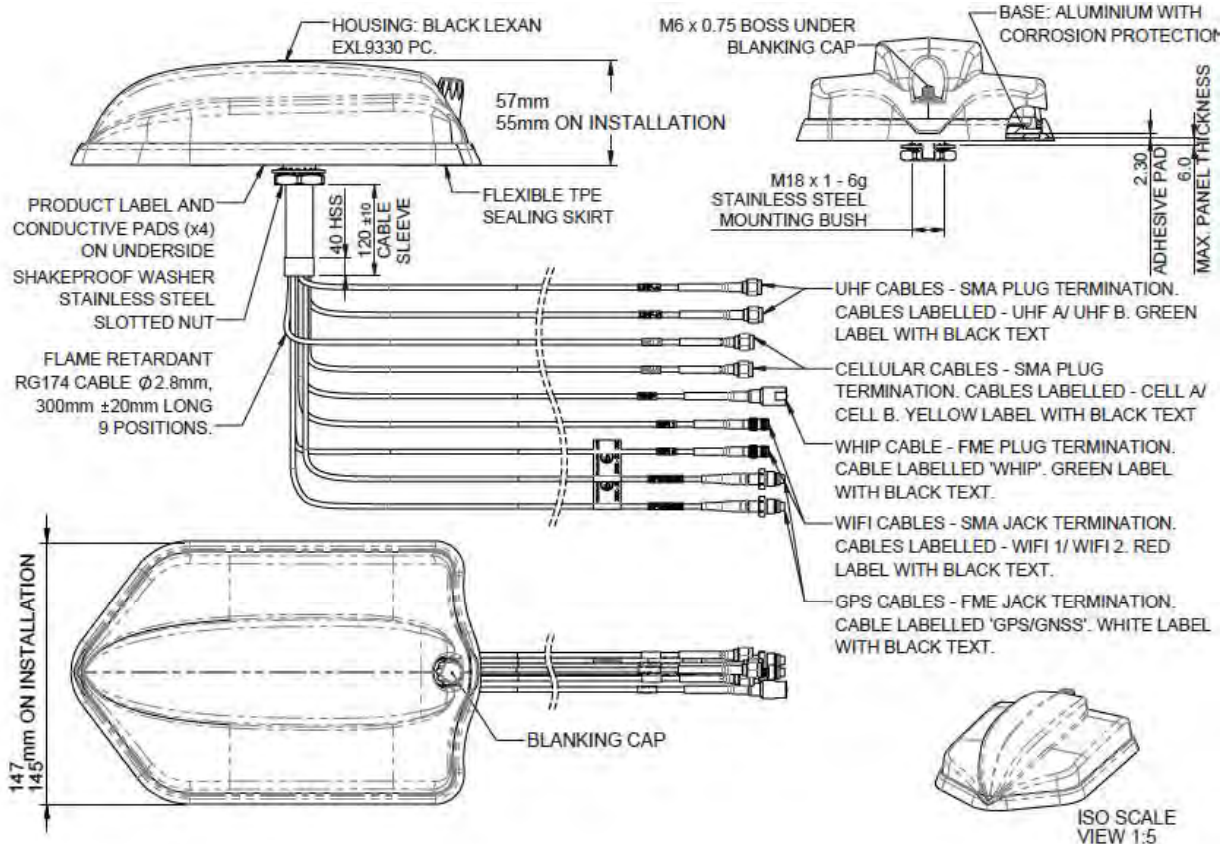
Variants have one or two integrated GPS/GNSS modules supporting GPS only with 22dB LNA gain or Glonass, Galileo and Compass with 26dB LNA gain. The antenna is available with a black or white radome.

* Performance will vary depending on the mounting surface.- whip selected may require a ground plane.

** Except for 2x GPS 3x & 4x WIFI versions where GPS uses PTFE cable.

Technical Drawing

GPSD2S4-7-38-D Shown



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MiMo UHF/LTE 2x GNSS Sharkfin Antenna

GPSD2S4-7-38-[X]

PANORAMA ANTENNAS

Product Data

Part No.			GPSD2S4W-7-38-Q	GPSD24-7-38-Q	GPSD2S4W-7-38-T	GPSD2S4-7-38-T
Electrical Data						
Frequency Range (MHz)	Low LTE Elements	2x 450-470				
	High LTE Elements	2x 698-960/1710-3800				
	WiFi Elements	4x 2.4/4.9-6GHz		3 x 2.4/4.9-6GHz		
Peak Gain: Isotropic : All Elements Fedi	Low LTE Elements	450-470MHz	-2dBi			
	High LTE Elements	698-960MHz	2			
		1710-3800MHz	5			
	WiFi Elements	2.4GHz	4			
		4.9-6.0GHz	6			
Typical Isolation *	Low LTE Elements	>12dB				
	High LTE Elements	>10dB				
	Wifi Elements	>20dB				
Correlation Co-efficient	Low LTE Elements	<0.3				
	High LTE Elements	<0.1				
	WiFi Elements	<0.1				
Nominal Impedance		50Ω				
GPS Data						
Frequency Range (MHz)		2 x 1575				
VSWR		<2.0:1 ± 4MHz				
Gain: LNA		22dB				
Operating Voltage		3 - 5V DC				
Typcal Current (mA)		15				
Mechanical Data						
Dimensions (mm)	Height	55 (2.1")				
	Width	145 (5.7")				
	Length	225 (8.85")				
Operating Temp		-40°/ +80°C (-40° / +176°F)				
Colour		White	Black	White	Black	
Mounting Data						
Mounting type		Panel mount				
Max panel thickness (mm)		7 (0.27")				
Mounting hole (mm)		19 (3/4")				
Cable Data		All Comms Cables			GPS Cables	
Cables	Type	RG174 -FR (UN ECE 118 Compliant)			PTFE	
	Diameter (mm)	2.8 (0.1")			1.8 (0.07)	
	Length (m)	0.3 (1')			0.3 (1')	
Terminations						
Low LTE Elements		SMA (m)				
High LTE Elements		SMA (m)				
WiFi Elements		SMA (f)				
GPS Elements		FME (f)				

* Measured on a 1x1m (3' x 3') groundplane with 5m (16') of cable.

† Peak Gain simulated in CST Microwave Studio on a 600x600mm (2'x2') without cable loss)

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MiMo UHF/LTE 2x GNSS Sharkfin Antenna

GPSD2S4-7-38-[X]

PANORAMA ANTENNAS

Part No.

GPSD2S4W-7-38-D

GPSD2S4-7-38-D

GPSD2S4W-7-38-S

GPSD2S4-7-38-S

Electrical Data

Frequency Range (MHz)	Low LTE Elements	2x 450-470	
	High LTE Elements	2x 698-960/1710-3800	
	WiFi Elements	2x 2.4/4.9-6GHz	1x 2.4/4.9-6GHz
Peak Gain: Isotropic : All Elements Fed:	Low LTE Elements	450-470MHz	-2dBi
	High LTE Elements	698-960MHz	2
		1710-3800MHz	5
		2.4GHz	4
	WiFi Elements	4.9-6.0GHz	6
Typical Isolation*	Low LTE Elements	>12dB	
	High LTE Elements	>10dB	
	Wifi Elements	>20dB	-
Correlation Co-efficient	Low LTE Elements	<0.3	
	High LTE Elements	<0.1	
	WiFi Elements	<0.1	-
Nominal Impedance		50Ω	

GPS/GNSS Data

Frequency Range (MHz)	2x 1562-1612			
VSWR	<2.0:1 ± 4MHz			
Gain: LNA	26dB			
Out of band rejection	>40dB (@ > +/- 100MHz f)			
Operating Voltage	3 - 5V DC			
Typical Current (mA)	<20			

Mechanical Data

Dimensions (mm)	Height	55 (2.1")		
	Width	145 (5.7")		
	Length	225 (8.85")		
Operating Temp		-40° / +80°C (-40° / +176°F)		
Colour	White	Black	White	Black

Mounting Data

Mounting type	Panel mount			
Max panel thickness (mm)	7 (0.27")			
Mounting hole (mm)	19 (3/4")			

Cable Data

All Cables	Type	RG174 -FR (UN ECE 118 Compliant)		
	Diameter (mm)	2.8 (0.1")		
	Length (m)	0.3 (1')		

Terminations

Low LTE Elements	SMA (m)
High LTE Elements	SMA (m)
WiFi Elements	SMA (f)
GNSS Elements	FME (f)

* Measured on a 1x1m (3' x 3') groundplane with 5m (16') of cable.

† Peak Gain simulated in CST Microwave Studio on a 600x600mm (2'x2') without cable loss)

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MiMo UHF/LTE 2x GNSS Sharkfin Antenna

GPSD2S4-7-38-[X]

PANORAMA ANTENNAS

Part No.		
	GPSD2S4W-7-38	GPSD2S4-7-38
Electrical Data		
Frequency Range (MHz)	Low LTE Elements	2x 450-470
	High LTE Elements	2x 698-960/1710-3800
Peak Gain: Isotropic : All Elements Fedi	Low LTE Elements	450-470MHz -2dBi
	High LTE Elements	698-960MHz 2
	High LTE Elements	1710-3800MHz 5
Typical Isolation *	Low LTE Elements	>12dB
	High LTE Elements	>10dB
Correlation Co-efficient	Low LTE Elements	<0.3
	High LTE Elements	<0.1
Nominal Impedance		50Ω
GPS/GNSS Data		
Frequency Range (MHz)		2x 1562-1612
VSWR		<2.0:1 ± 4MHz
Gain: LNA		26dB
Out of band rejection		>40dB (@ > +/- 100MHz f)
Operating Voltage		3 - 5V DC
Typical Current (mA)		< 20
Mechanical Data		
Dimensions (mm)	Height	55 (2.1")
	Width	145 (5.7")
	Length	225 (8.85")
Operating Temp		-40°/ +80°C (-40° / +176°F)
Colour	White	Black
Mounting Data		
Mounting type		Panel mount
Max panel thickness (mm)		7 (0.27")
Mounting hole (mm)		19 (3/4")
Cable Data		
All Cables	Type	RG174 -FR (UN ECE 118 Compliant)
	Diameter (mm)	2.8 (0.1")
	Length (m)	0.3 (1')
Terminations		
Low LTE Elements		SMA (m)
High LTE Elements		SMA (m)
GNSS Elements		FME (f)

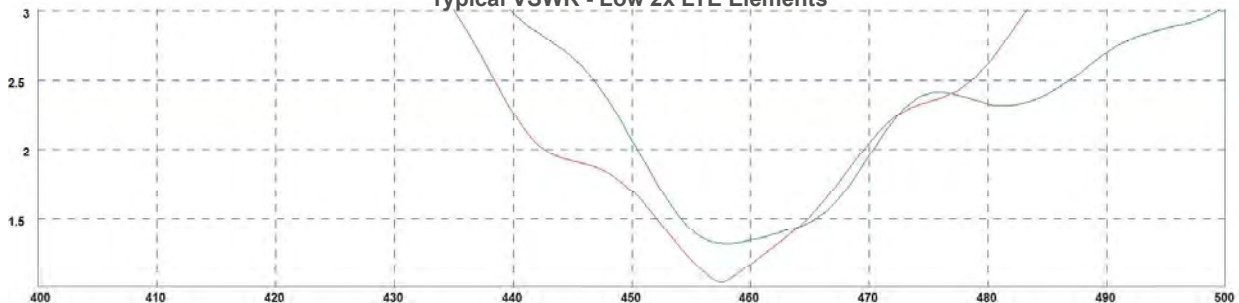
* Measured on a 1x1m (3' x 3') groundplane with 5m (16') of cable.

† Peak Gain simulated in CST Microwave Studio on a 600x600mm (2'x2' without cable loss)

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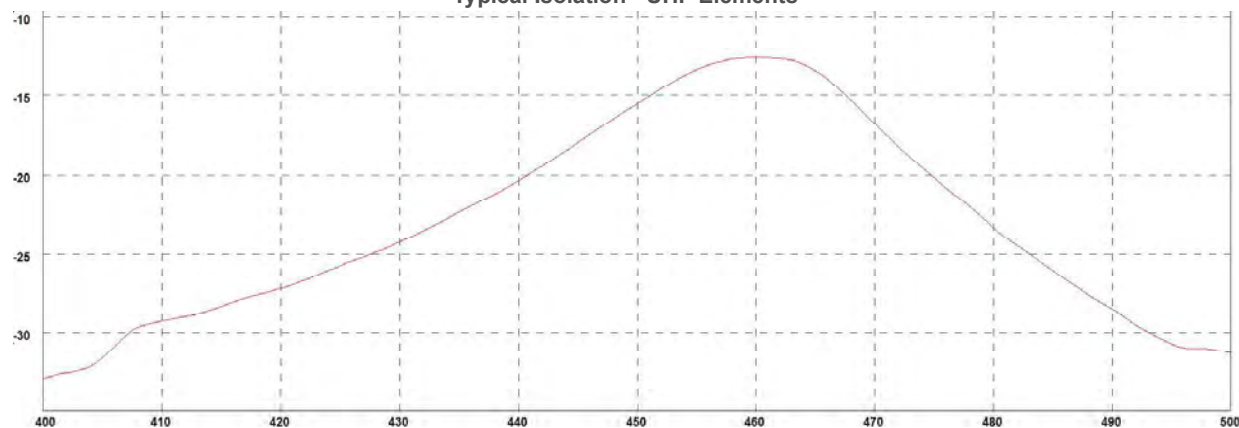
Electrical Data

Typical VSWR - Low 2x LTE Elements*



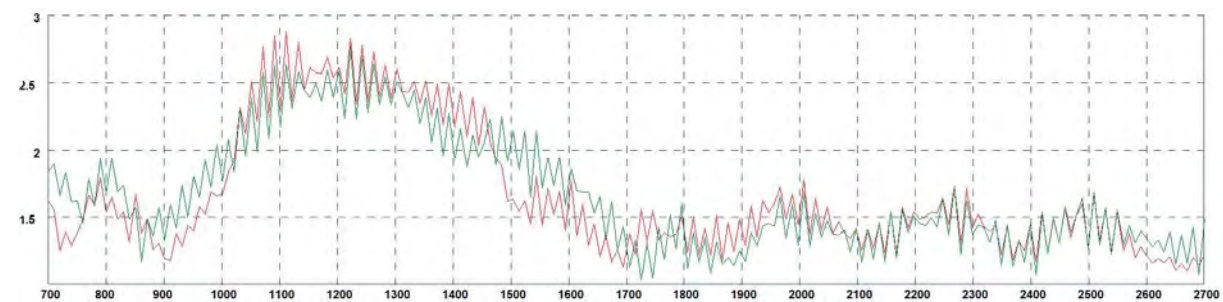
* measured with 5m (17') of CS23 cable on a 600x600mm (2'x2') groundplane

Typical Isolation - UHF Elements *



* measured without cable on a 600x600mm (2'x2') groundplane

Typical VSWR - High 2x LTE Elements*



* measured on a 600x600mm (2'x2') groundplane with 5m (17') of CS29 Cable

Typical Isolation - Cell / LTE Elements *



* measured without cable on a 600x600mm (2'x2') groundplane

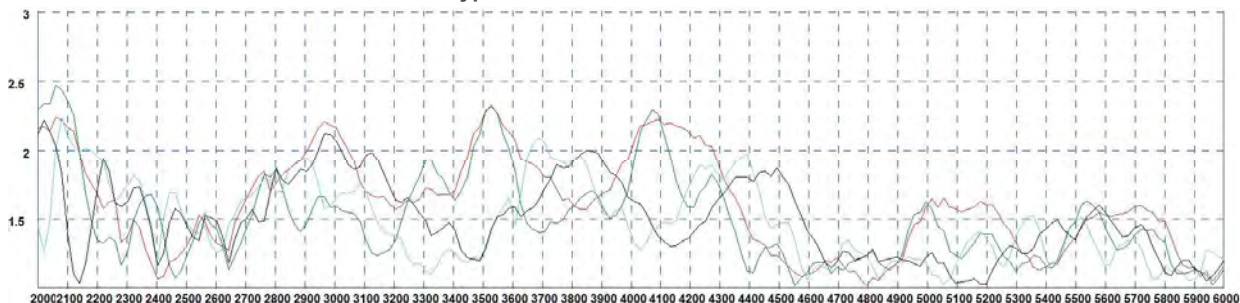
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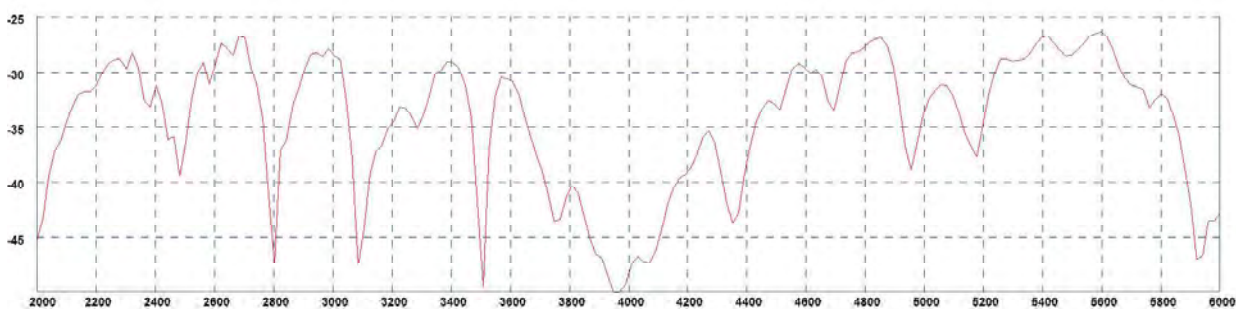
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Typical VSWR - 4x WiFi Elements *



* measured with 5m (17') of CS32 cable on a 600x600mm (2'x2') groundplane

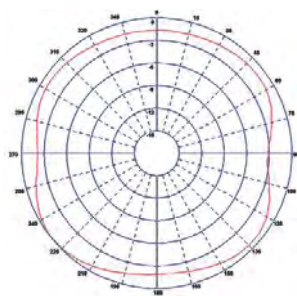
Typical Isolation -Adjacent WiFi Elements *



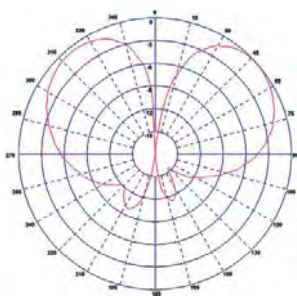
* measured without cable on a 600x600mm (2'x2') groundplane

Typical Cell Patterns

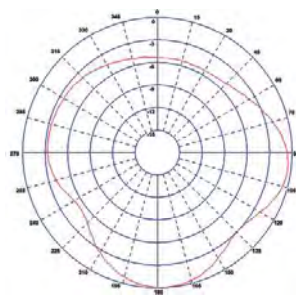
Cell Element Front 700 H Plane



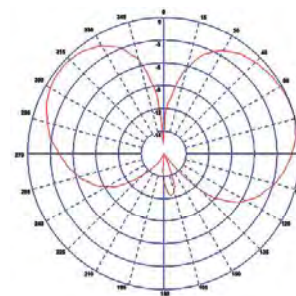
Cell Element Front 700 E Plane



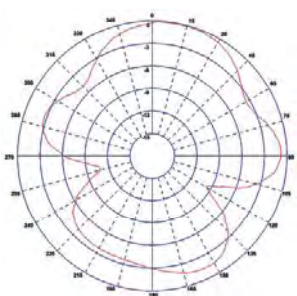
Cell Element Rear 700 H Plane



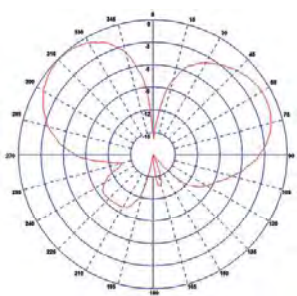
Cell Element Rear 700 E Plane



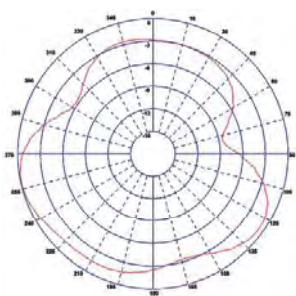
Cell Element Front 800 H Plane



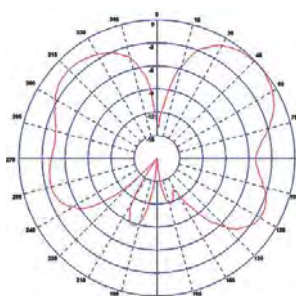
Cell Element Front 800 E Plane



Cell Element Rear 800 H Plane



Cell Element Rear 800 E Plane

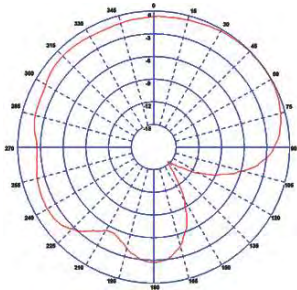


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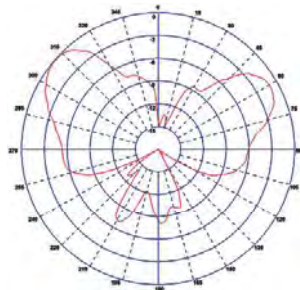
GPSD2S4-7-38-[X]

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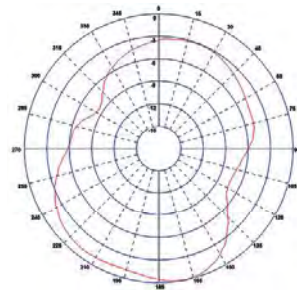
Cell Element Front 1800 H Plane



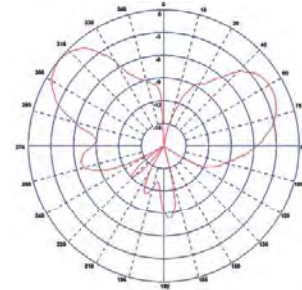
Cell Element Front 1800 E Plane



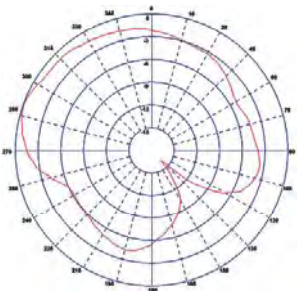
Cell Element Rear 1800 H Plane



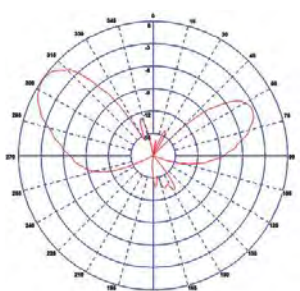
Cell Element Rear 1800 E Plane



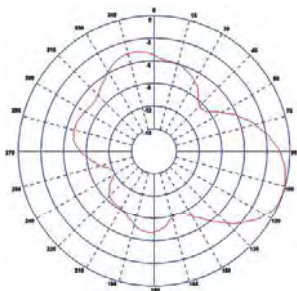
Cell Element Front 2170 H Plane



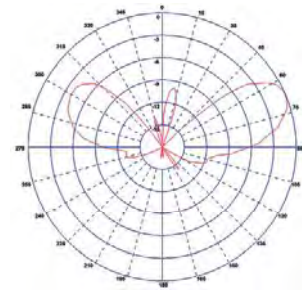
Cell Element Front 2170 E Plane



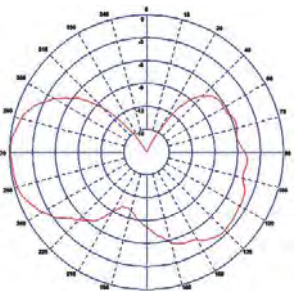
Cell Element Rear 2170 H Plane



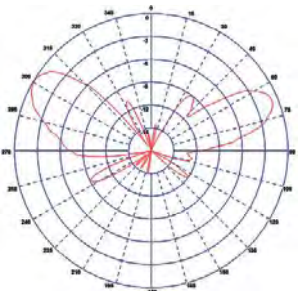
Cell Element Rear 2170 E Plane



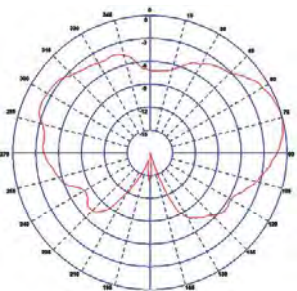
Cell Element Front 2600 H Plane



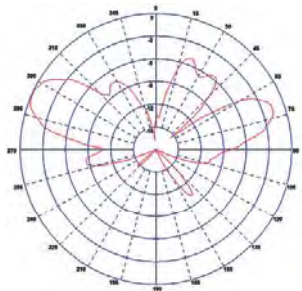
Cell Element Front 2600 E Plane



Cell Element Rear 2600 H Plane

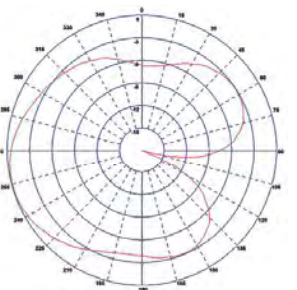


Cell Element Rear 2600 E Plane

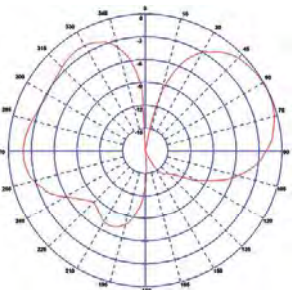


Typical UHF Patterns

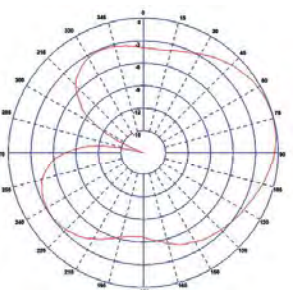
UHF Element Left 460 H Plane



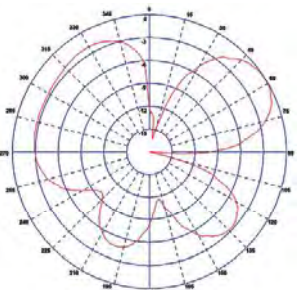
UHF Element Left 460 E Plane



UHF Element Right 460 H Plane



UHF Element Right 460 E Plane



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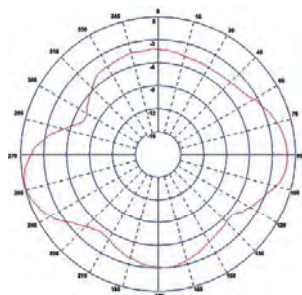
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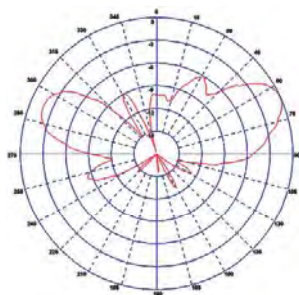
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Typical WiFi Patterns

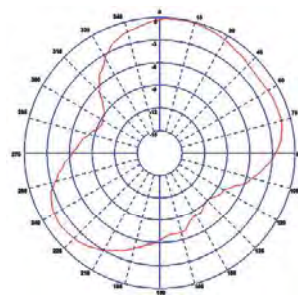
WiFi Element 1 2450 H Plane



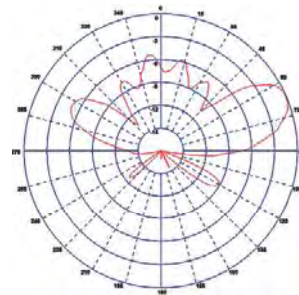
WiFi Element 1 2450 E Plane



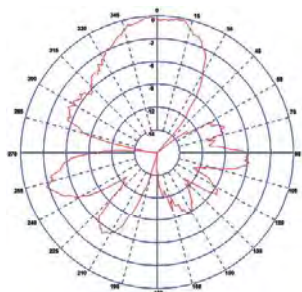
WiFi Element 2 2450 H Plane



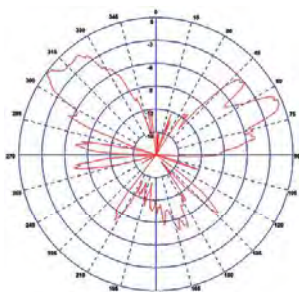
WiFi Element 2 2450 E Plane



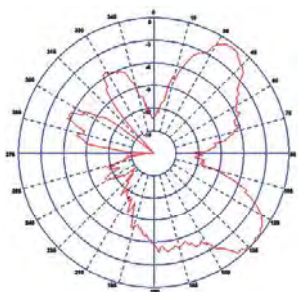
WiFi Element 1 5400 H Plane



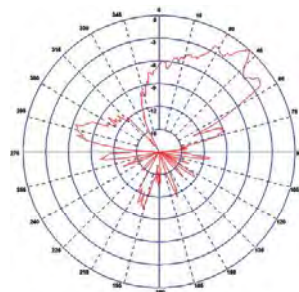
WiFi Element 1 5400 E Plane



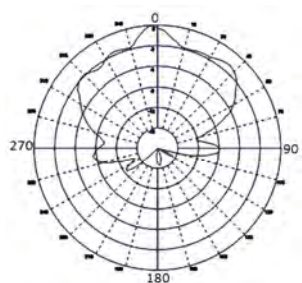
WiFi Element 2 5400 H Plane



WiFi Element 2 5400 E Plane



GPS/GNSS 1575 E Plane



Typical GPS Pattern