

## ProFin

A multi purpose shark fin antenna for UHF, GNSS, GPS, 2G/3G/4G and dual WiFi 2.4 + 5.0 GHz

- In-built UHF antenna available.
- In-built 4G antenna (698 - 960 MHz and 1710 - 2700 MHz).
- GNSS antenna for GPS L1, Glonass, Beidou and Galileo.
- Dual WiFi 2.4 and 5.0 GHz.
- Supports external whip.
- No diplexer needed.

### DESCRIPTION

- The ProFin provides antennas for multiple technologies.
- The ProFin covers UHF, GNSS, GPS L1, 2G/3G/4G cellular bands, dual WiFi 2.4 and 5.0 GHz and an optional whip.
- The ProFin can support antenna whip in the range 66 - 6000 MHz.
- All ProFin configurations are prepared for external whip.
- Easily removable whip for car wash.
- Full hemispherical coverage for the GNSS and GPS.
- Built-in high gain, low noise amplifier.
- Right-Hand Circular Polarization (RHCP).
- 3 - 15 VDC for GPS supply.
- DC supply via GPS RF-connector.



Shown with optional external whip.

### ORDERING DESIGNATIONS - MOUNT MATRIX



### SPECIFICATIONS FOR IN-BUILT ANTENNAS

ELECTRICAL		
MODEL	ProFin	
ANTENNA TYPE	Mobile Shark Fin Style Antenna	
FREQUENCY	UHF	380-470 MHz (in three models)
	WIFI	2300-2500 MHz 5000-6000 MHz
	4G	698-960 MHz 1710-2700 MHz
IMPEDANCE	Nom. 50 Ω	
RADIATION	Omni-directional	
POLARIZATION	Vertical	
SWR	380 - 470 MHz	≤ 2
	698 - 960 MHz	≤ 2.5
	1710 - 2700 MHz	≤ 2
	2300 - 2500 MHz	≤ 2
	5000 - 6000 MHz	≤ 2
GAIN	Varies over frequency (see gain table and plots)	
MAX. POWER	25 W for built-in UHF and 4G antenna 100 W for whip	
MECHANICAL		
MATERIALS	Reinforced PA, Zamak 5	
ANTENNA COLOUR	Black (RAL 9005)	
TEMP. RANGE	-50° C → +75° C	
CONNECTOR	GNSS	SMA-male
	GPS	SMA-male
	4G	SMA-male
	WIFI	SMA-male
	UHF	SMA-male
	WHIP	SMA-male
RECOMMENDED INSTALL. TORQUE	4 ± 0.5 Nm	
DIMENSIONS (H x L)	Approx. 76 x 142.5 mm / 2.99 x 5.61 in.	
WEIGHT	Approx. 260 g / 0.57 lb.	
ROOF THICKNESS	Max. 3 mm / 0.12 in.	
MOUNTING	ø18.5 mm / 0.8 in. dia. hole	
	Max roof curvature: 2.0 mm/0.08 in. (on 142 mm)	

### SPECIFICATIONS FOR GNSS ANTENNA

TYPE	PRODUCT NO.	DESCRIPTION	2G/3G/4G 698 - 960 1710 - 2700 MHz	WIFI 2300 - 2500 5000 - 6000 MHz	GNSS	GPS L1	IN-BUILT ANTENNA		
							380 - 410 MHz	410 - 450 MHz	430 - 470 MHz
ProFin G1	132000230	4G, WIFI,GNSS	◆	◆	◆				
ProFin G2	132000231	4G, WIFI,GNSS,GPS	◆	◆	◆	◆			
ProFin G1- 395	132000232	4G, WIFI,GNSS,UHF 380-410 MHz	◆	◆	◆		◆		
ProFin G1- 430	132000233	4G, WIFI,GNSS,UHF 410-450 MHz	◆	◆	◆			◆	
ProFin G1- 450	132000234	4G, WIFI,GNSS,UHF 430-470 MHz	◆	◆	◆				◆
ProFin G2- 395	132000236	4G, WIFI,GNSS,GPS,UHF 380-410 MHz	◆	◆	◆	◆	◆		
ProFin G2- 430	132000237	4G, WIFI,GNSS,GPS,UHF 410-450 MHz	◆	◆	◆	◆		◆	
ProFin G2- 450	132000238	4G, WIFI,GNSS,GPS,UHF 430-470 MHz	◆	◆	◆	◆			◆

We recommend not to use the in-built UHF antenna in combination with an external whip, since its performance will be degraded.

#### ORDERING DESIGNATIONS - WHIP MATRIX

TYPE	DESCRIPTION	FM 88- 108 MHz	VHF 144..175 MHz	UHF 380..470 MHz	UHF (Gain) 380..470 MHz
<a href="#">MP-SS-S/FM whip</a>	Stainless steel whip with shock spring.	◆			
<a href="#">MP-SS-S/150 whip</a>	Stainless steel whip with shock spring. (adjustable by customer)	◆	◆		
<a href="#">MP-B/450/...whip</a>	Flexible whip (0 dB acc. to TIA-329.2-C)			◆	
<a href="#">MP-SS/450-4/...whip</a>	Stainless steel collinear whip (4 dB acc. to TIA-329.2-C)				◆
<a href="#">MP-G-S/150/450/.../...whip</a>	Flexible whip with shock spring (factory adjusted)		◆	◆	
<a href="#">MP-G-S/450/FM/...whip</a>	Flexible whip with shock spring (factory adjusted)	◆		◆	

For more information we refer to the corresponding whip datasheets. The in-built antennas can be used without an external ground-plane, but with degraded electrical performance.

#### WHIP MODELS

ELECTRICAL General specifications	
ANTENNA TYPE	Active patch antenna
FREQUENCY	1559 - 1609 MHz (GPS L1, Glonass, Beidou and Galileo)
IMPEDANCE	Nom. 50 Ω
POLARISATION	Circular right-hand
COVERAGE	Hemispherical
GAIN	28 dBic in axial direction (typ.)
CROSS-POLARISATION ATT.	> 10 dB (typ.)
SELECTIVITY	> 25 dB down @ 0 - 1540 MHz > 27 dB down @ 1625 - 3000 MHz
BUILT-IN AMPLIFIER	
GAIN	26 dB (typ.)
NOISE FIGURE	1.6 dB (typ.)
P 1dB	Approx. +7 dBm
SWR (output)	≤ 2.0
SUPPLY VOLTAGE	3 - 15 VDC
CURRENT CONSUMPTION	Approx. 20 mA

#### SPECIFICATIONS FOR GPS ANTENNA

ELECTRICAL General specifications	
ANTENNA TYPE	Active patch antenna
FREQUENCY	1575 MHz
IMPEDANCE	Nom. 50 Ω
LNA GAIN	22 dB ± 2 dB
NOISE FIGURE	Max. 1.5 dB (typical 1.1 dB)
SUPPLY VOLTAGE	3 - 15 VDC
CURRENT CONSUMPTION	< 12 mA
MECHANICAL (Whip)	
MATERIALS	See Whip data sheets
COLOUR	Black (RAL 9005)
MOUNTING	On the ProFin mount

#### GAIN TABLE FOR IN-BUILT ANTENNAS

TYPE	FREQUENCY (MHz)	AVERAGE PEAK GAIN (dBi)	AVERAGE GAIN H-PLANE (dBi)	AVERAGE GAIN H-PLANE (dBq) *
UHF element	400	-3.0	-7.0	-6.5
	700	4.0	-1.5	-1.0
	900	4.0	-1.0	-0.5
	1800	5.0	-1.0	0.0
2G/3G/4G element	2500	9.0	1.0	1.5
	2400	5.0	-2.0	-2.0
WIFI element	5500	6.0	-2.0	-3.0

\* According to TIA-329.2-C



ACCESSORIES - CABLES

TYPE	PRODUCT NO.
5m ProFin Cable Kit	132000243
All cables below: RG 58	
1m SMA(f)-N(m)	130002409
2m SMA(f)-N(m)	130002410
3m SMA(f)-N(m)	130002411
4m SMA(f)-N(m)	130002412
5m SMA(f)-N(m)	130002413
1m SMA(f)-BNC(m)	130002414
2m SMA(f)-BNC(m)	130002415
3m SMA(f)-BNC(m)	130002416
4m SMA(f)-BNC(m)	130002417
5m SMA(f)-BNC(m)	130002418
1m SMA(f)-TNC(m)	130002419
2m SMA(f)-TNC(m)	130002420
3m SMA(f)-TNC(m)	130002421
4m SMA(f)-TNC(m)	130002422
5m SMA(f)-TNC(m)	130002423
1m SMA(f)-SMA(m)	130002424
2m SMA(f)-SMA(m)	130002425
3m SMA(f)-SMA(m)	130002426
4m SMA(f)-SMA(m)	130002427
5m SMA(f)-SMA(m)	130002428

#### CABLES

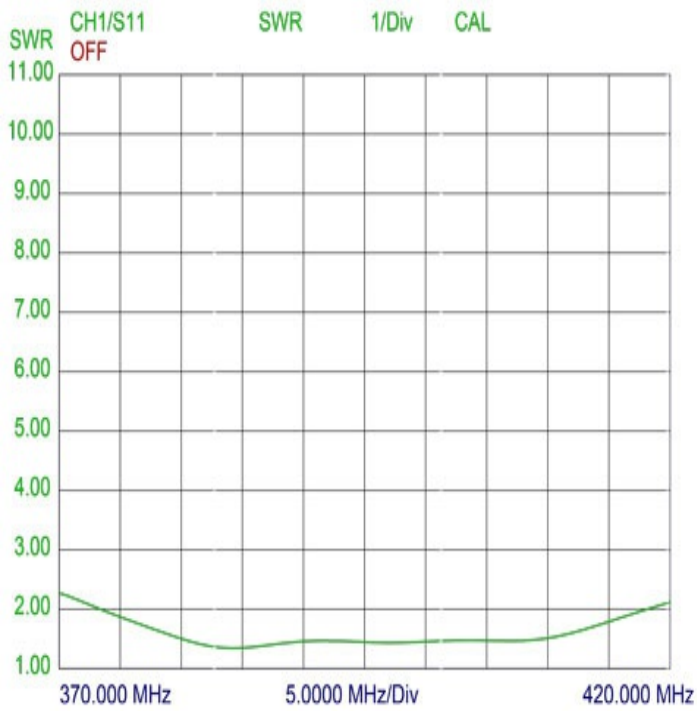


5m ProFin Cable Kit.  
6 pcs. RG 174 cables in one cable bundle (ø9 mm).  
Provides ease of installation.

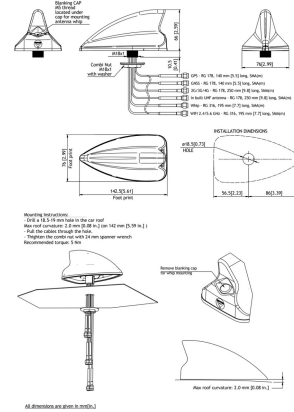
#### ACCESSORIES - ADAPTORS

TYPE	PRODUCT NO.
SMA(f)-N(m)	130002429
SMA(f)-BNC(m)	130002430
SMA(f)-TNC(m)	130002431
SMA(f)-SMB(m)	130002432

TYPICAL SWR CURVE INBUILT-UHF \*

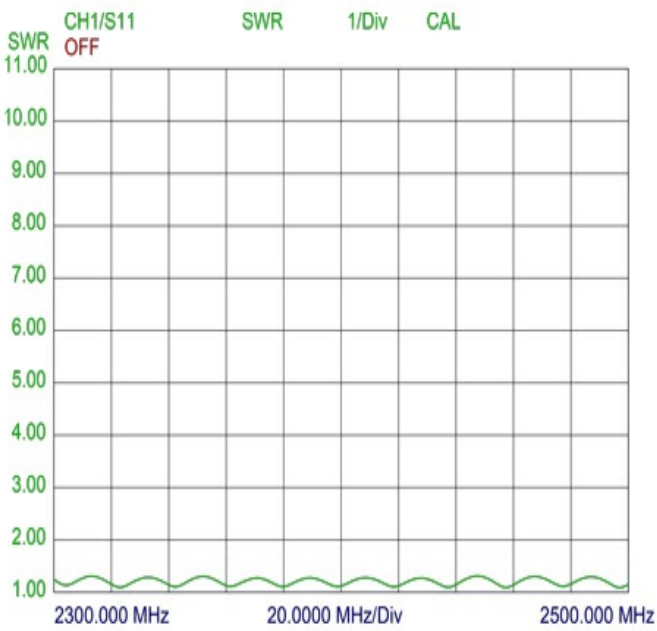


MOUNTING DETAILS



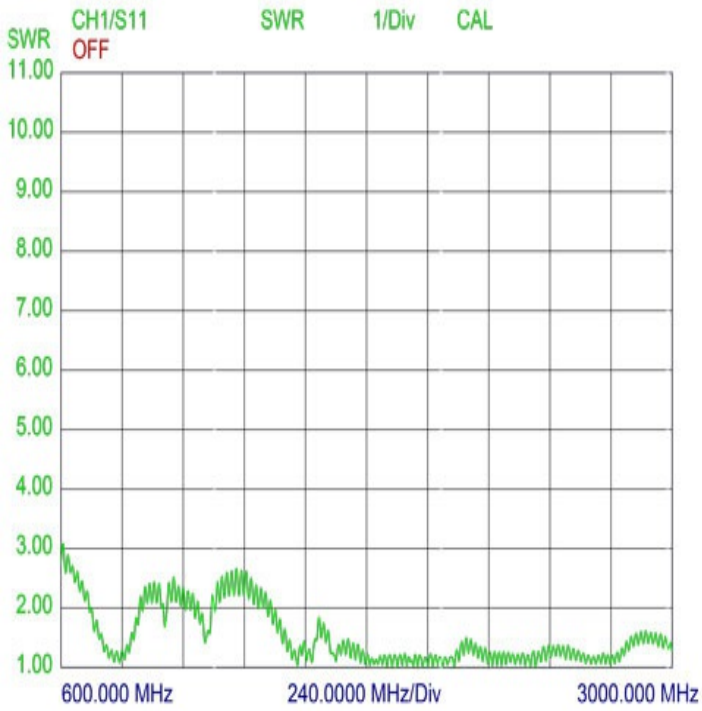
**Important: The whip should always be dismantled during car wash.**

TYPICAL SWR CURVE WIFI 2.4 GHZ \*

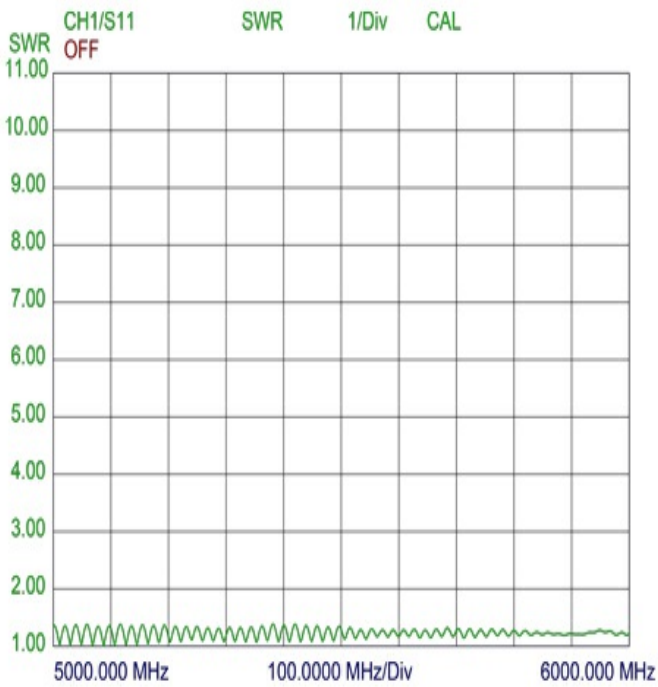


\* SWR measured with no whip and 5 m (197 in.) of RG58 cable on a 1000 x 1000 mm (39 in. x 39 in.) ground plane.

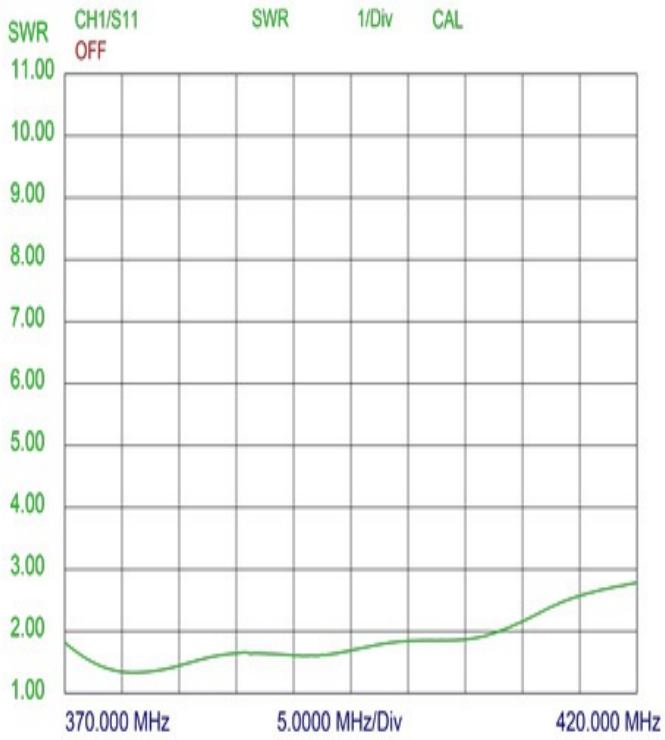
TYPICAL SWR CURVE 2G / 3G / 4G \*



TYPICAL SWR CURVE WIFI 5.6 GHZ \*

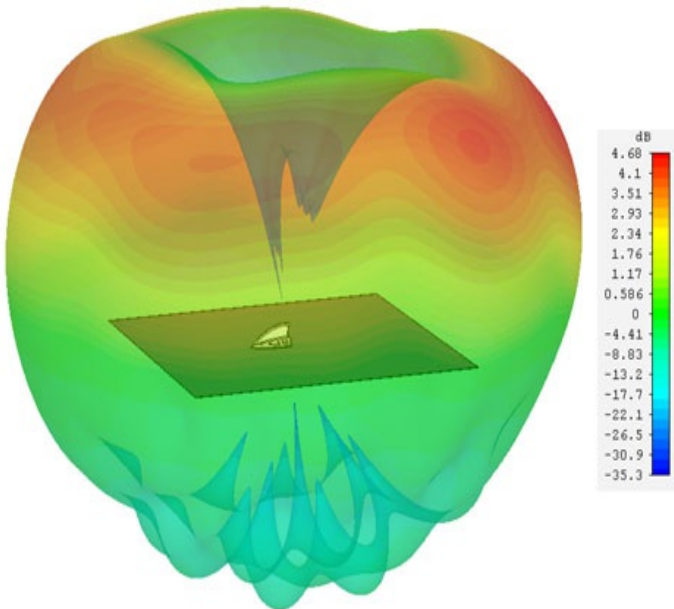


TYPICAL SWR CURVE INBUILT-UHF WITH WHIP \*\*



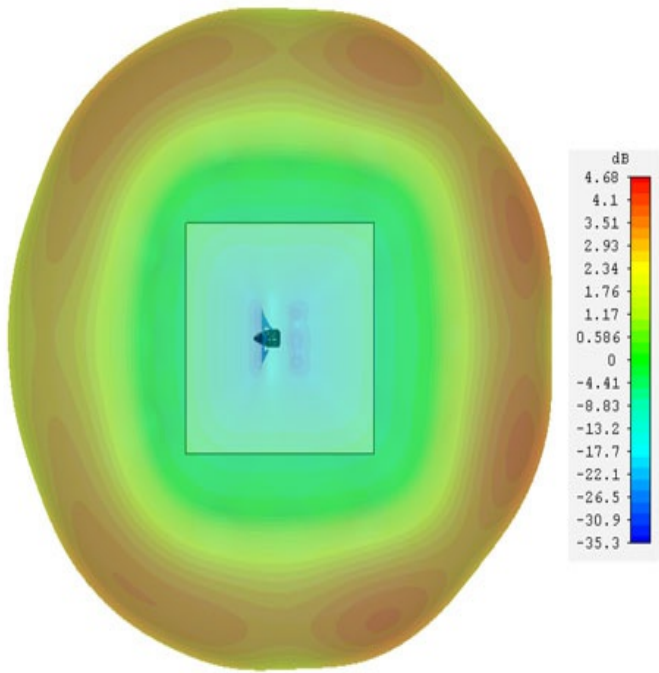
\*\* SWR measured with collinear whip and 5 m (197 in.) of RG58 cable on a 1000 x 1000 mm (39 in. x 39 in.) ground plane.

3D GAIN PLOT SIDE VIEW  
4G-element 700 MHz

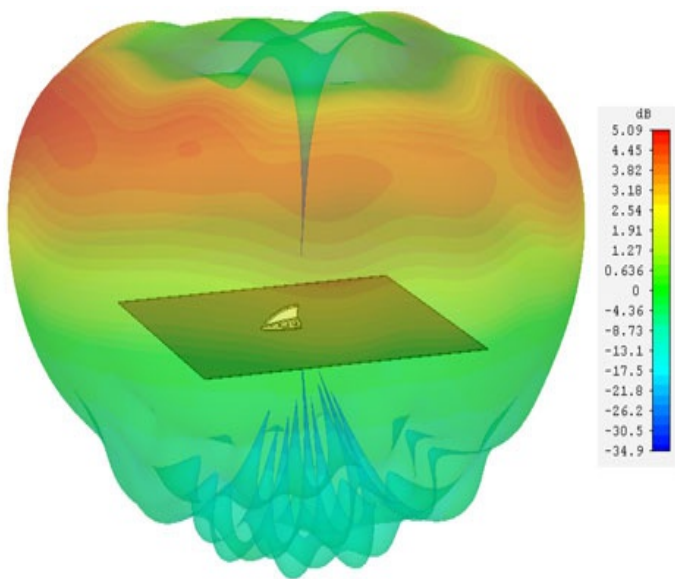


3D GAIN PLOT TOP VIEW  
4G-element 700 MHz

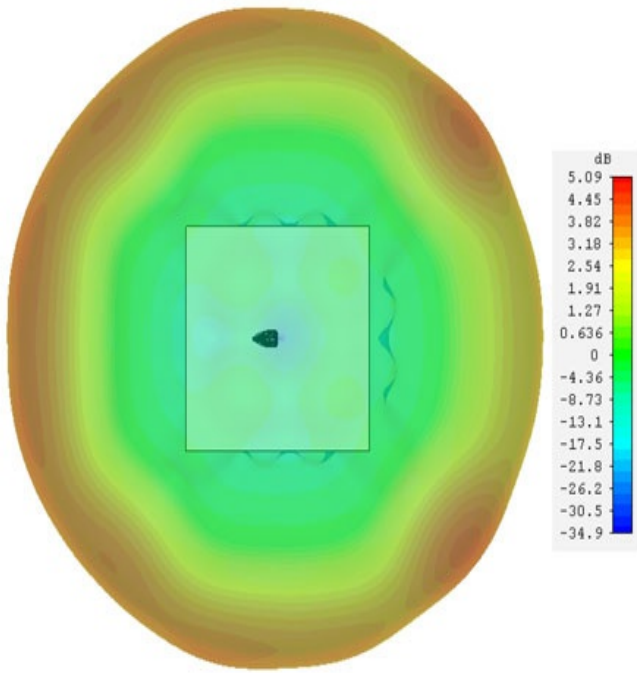




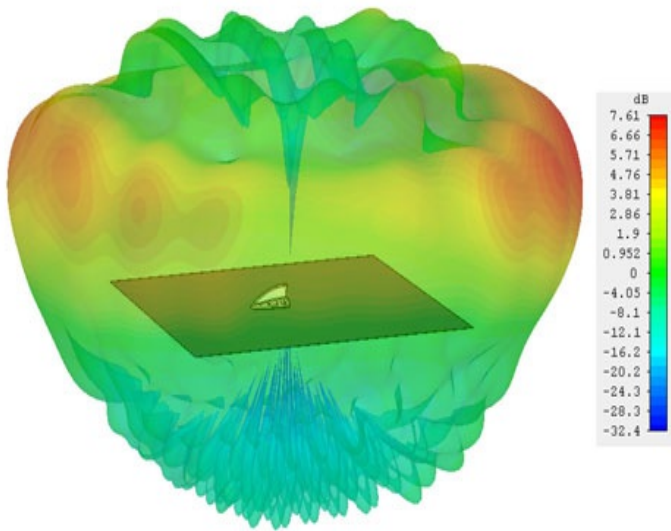
4G-element 900 MHz



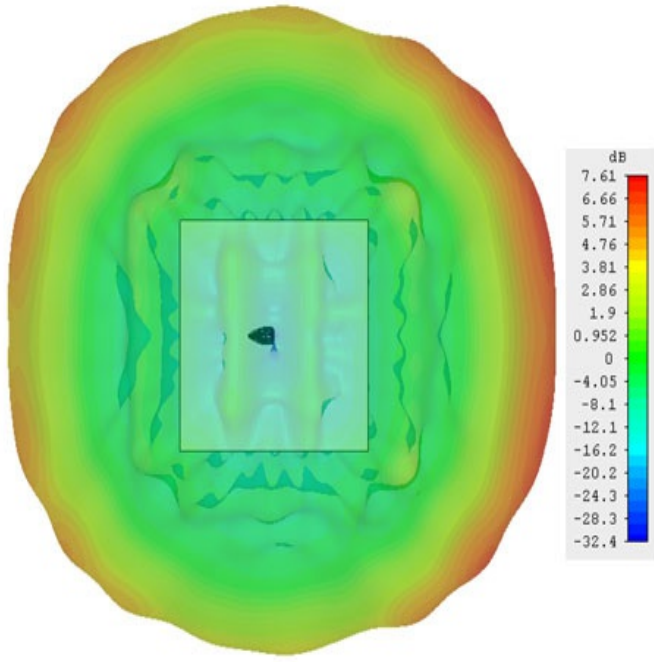
4G-element 900 MHz



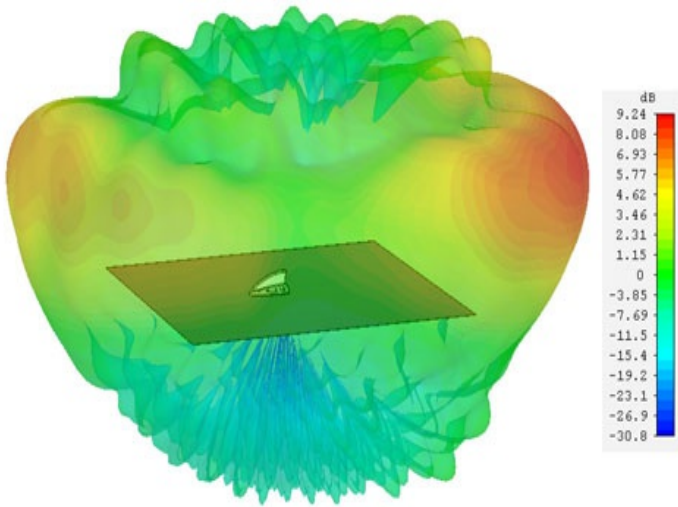
4G-element 1800 MHz



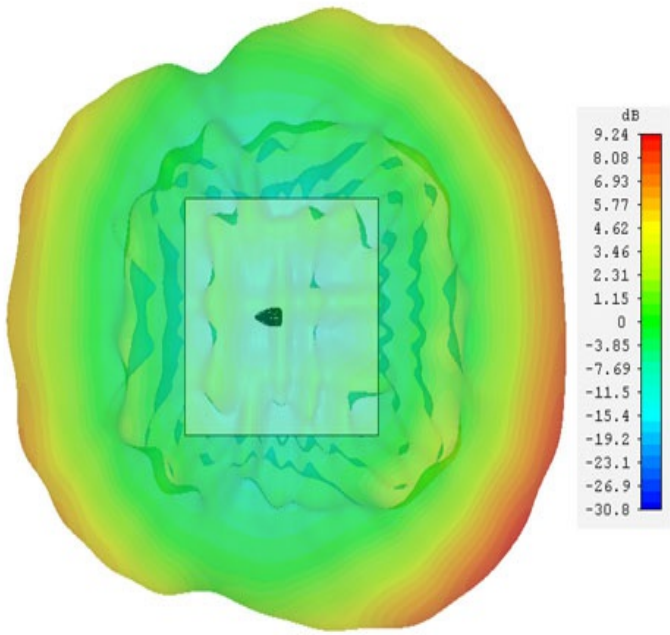
4G-element 1800 MHz



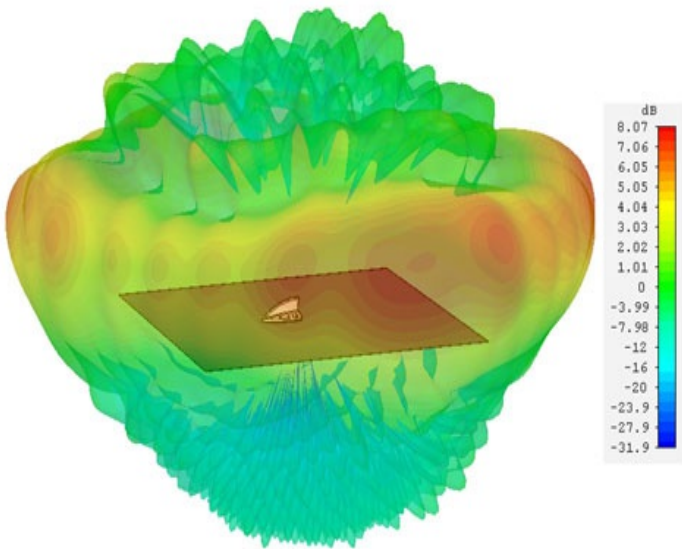
4G-element 2100 MHz



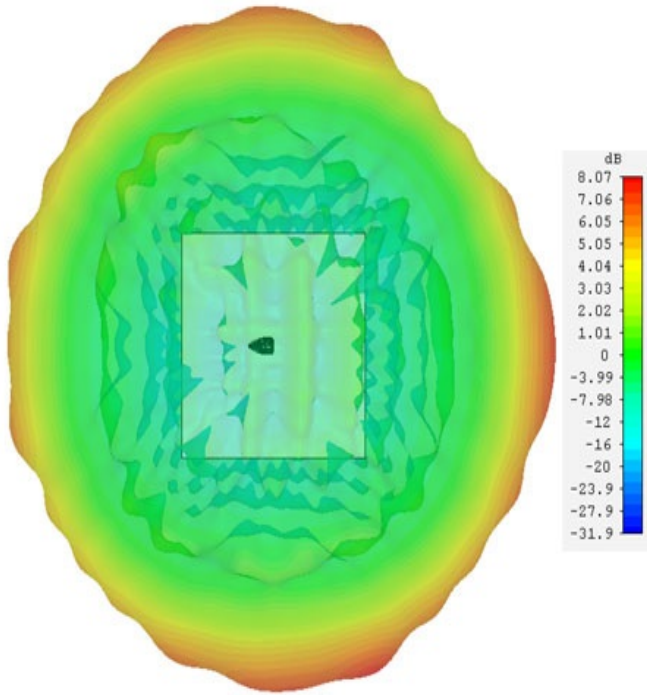
4G-element 2100 MHz



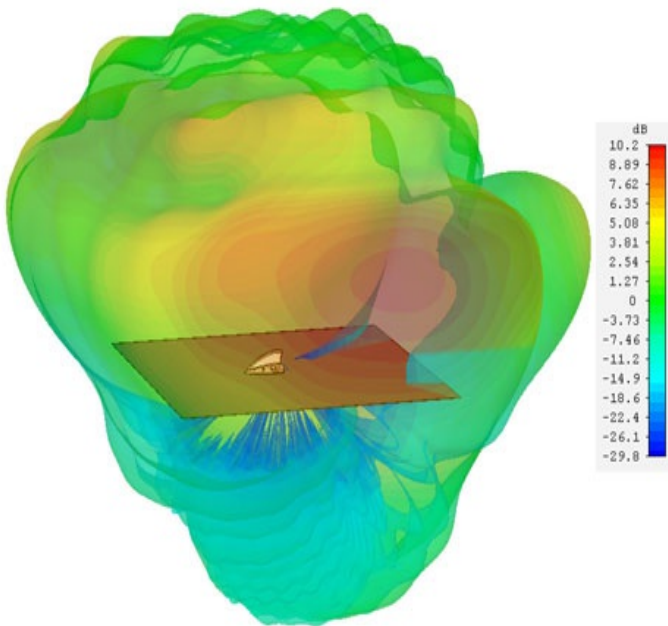
4G-element 2600 MHz



4G-element 2600 MHz

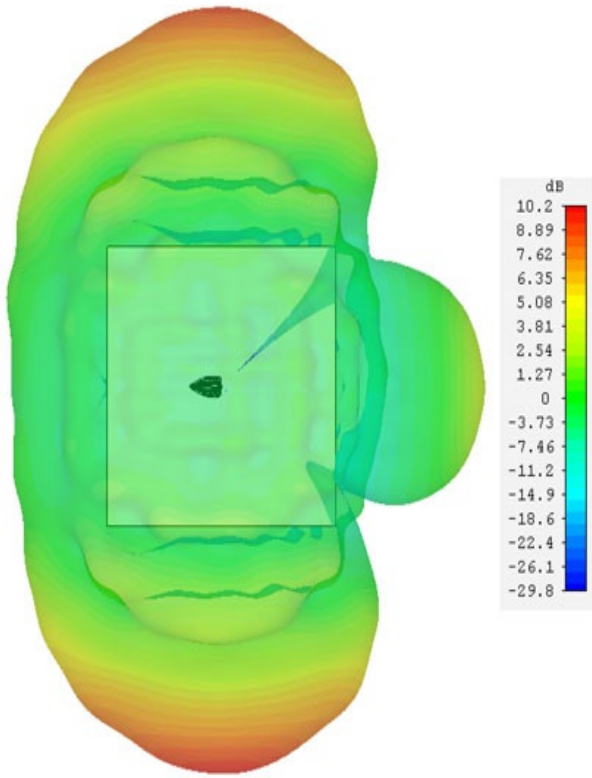


WIFI-element 2400 MHz

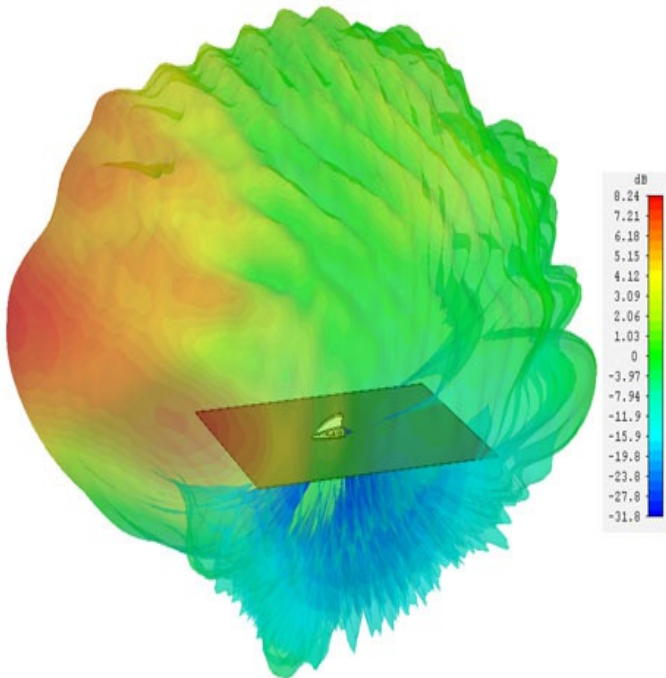


WIFI-element 2400 MHz

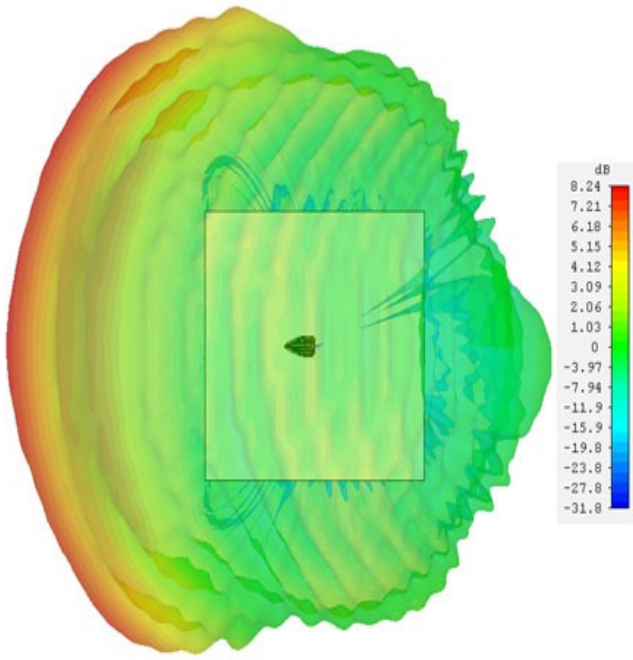




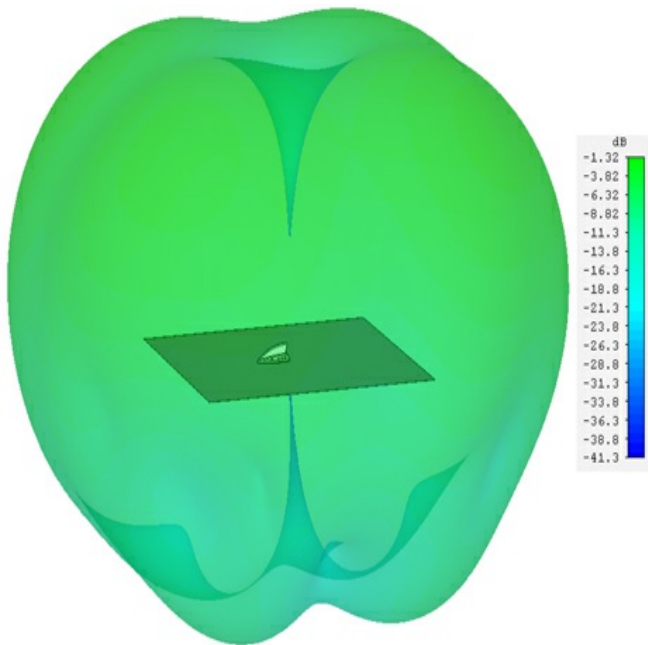
WiFi-element 5600 MHz



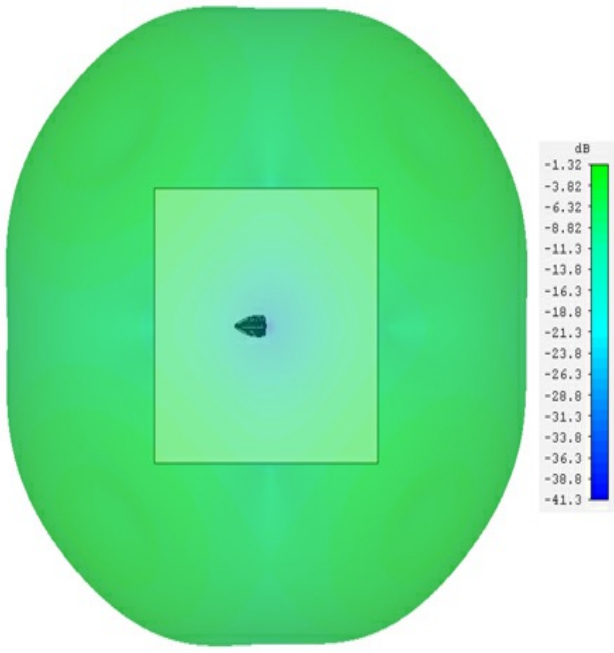
WiFi-element 5600 MHz



UHF-element 380 MHz



UHF-element 380 MHz





#### EU DECLARATION OF CONFORMITY

Hereby PROCOM A/S declare that the product type ProFin is in compliance with EU Directive 2014/53/EU.  
The full text of the EU Declaration of Conformity is available at:

[http://procom.dk/images/pdf-for-catalouges/Declaration\\_of\\_Conformity\\_ProFin\\_070218.pdf](http://procom.dk/images/pdf-for-catalouges/Declaration_of_Conformity_ProFin_070218.pdf)