

A 2x2 MiMo LTE and WIFI multi purpose shark fin antenna for GNSS, GPS, 2G/3G/4G/5G and dual WIFI 2.4/5.8 GHz

BESCHREIBUNG

- Can be configured as 5in1, 6in1 and 7in1
- In-built 2x2 MiMo LTE antenna (617-960 MHz and 1710-3800 MHz)
- 2x2 MiMo Dual WiFi 2.4 and 5.8 GHz.
- GNSS antenna for GPS L1, Glonass, Beidou and Galileo.
- Modell available with optional antenna for GPS L1.
- Supports external whip.
- No diplexer needed.
- The ProFin Plus provides antennas for multiple technologies.
- The ProFin Plus covers , 4G, GNSS, GPS L1, inc. 5G cellular bands, dual WIFI 2.4 and 5.8 GHz and an optional whip.
- The ProFin Plus can support antenna whip in the range 66 - 520 MHz.
- All ProFin Plus configurations are prepared for external whip.
- Easily removable whip for car wash.
- Full hemispherical coverage for the GNSS and GPS (optional).
- Built-in high gain, low noise amplifier.
- Preselector filter ensures high GNSS/GPS amplifier blocking level for out-of-band signals.
- Right-Hand Circular Polarization.
- 3 - 15 V DC for GNSS/GPS supply.
- DC supply via GNSS or GPS RF-connector.
- ECE R118.02 approved cable.

SHOWN WITH OPTIONAL EXTERNAL WHIP.



Mechanisch DE	
Beachtung	ECE R118.02 approved cable
Antennenfarbe	Schwarz (RAL 9005)
Anschlussstyp	SMA(m) (all antennas)
Materialien	Reinforced PA, Zamak 5
Installationsmoment	4 ± 0.5 Nm
Abmessungen	ca. 83 x 173 mm
Maximale Dachdicke	3 mm
Peitschenanschluss	M5
Höhe	ca. 66 mm
Gewicht	ca. 0.35 kg
Montage	18.5 mm / 0.8 in. dia. hole Max roof curvature: 2.0 mm / 0.08 in. (on 173 mm)

Umwelt	
Betriebstemperaturbereich	-50 °C to +75 °C
Wasserbeständigkeit	IP67

GPS-Antenne	
P1dB (GPS-Verstärker)	ca. 7 dBm
Lärmfigur (GPS-Verstärker)	< 1.5 dB (typ. 1.1 dB)
Gewinn (GPS-Verstärker)	22 dB ± 2 dB
Selektivität (GPS-Verstärker)	> 25 dB down @ 0 - 1535 MHz > 25 dB down @ 1635 - 3000 MHz
VSWR (GPS-Verstärker)	< 2.0:1
Frequenz (GPS)	1575 MHz
Stromversorgung (GPS)	3 - 15 V DC
Stromaufnahme (GPS-Verstärker)	< 12 mA
Polarisierung (GPS)	RH Circular
Impedanz (GPS)	50 Ω

GNSS-Antenne	
P1dB (GNSS-Verstärker)	ca. 7 dBm
Lärmfigur (GNSS-Verstärker)	1.6 dB (typ.)
Kreuz Polar Diskriminierung (GNSS)	> 10 dB (typ.)
Gewinn (GNSS-Verstärker)	28 dB (typ.) ic in axial direction (typ.)
Selektivität (GNSS-Verstärker)	> 25 dB down @ 0 - 1540 MHz > 27 dB down @ 1625 - 3000 MHz
VSWR (GNSS-Verstärker)	< 2.0:1
Frequenz (GNSS)	1559 - 1609 MHz (GPS L1, Glonass, Beidou and Galileo)
Stromversorgung (GNSS)	3 - 15 V DC
Stromaufnahme (GNSS-Verstärker)	ca. 20 mA
Polarisierung (GNSS)	RH Rundschreiben
Impedanz (GNSS)	50 Ω

SPEZIFIKATIONEN

Elektrisch DE	
Modell	ProFin Plus
Frequenz	4G/5G 2x2 MiMo : 617 - 960 MHz, 1710 - 3800 MHz WIFI 2x2 MiMo : 2400 - 2500 MHz, 5000 - 6000 MHz
Antennentyp	Mobile Shark Fin Style Antenna
Max. Eingangsleistung	25 W for 4G/5G and WIFI 100 W for whip
Polarisation	Vertikal
Impedanz	50 Ω
Gewinn (max.)	4G/5G 4dBi (617 - 960 MHz) 4G/5G 7dBi (1710 - 3800 MHz) WiFi 6 dBi (2.4 GHz & 5.8 GHz)
Isolierung	(With 5m RG58) >10 dB for 617 - 960MHz >20 dB for 1710 - 3800MHz >25 dB for WiFi
Korrelationskoeffizient	< 0.4 for 617 - 700 MHz < 0.25 for 700 - 960 MHz < 0.1 for 1710 - 3800 MHz
VSWR	< 2.2:1 for 617 -960 MHz < 2.0:1 for 1710 - 3800 MHz < 2.0:1 for 2400 - 2500 MHz < 2.0:1 for 5000 - 6000 MHz

BESTELLUNG

Modell	Produkt Nr	Beschreibung
ProFin Plus G1-L2-W2-S/S/S/S	130002476	2 x 4G/5G, 2 x WiFi, GNSS,whip (not included)
ProFin Plus G2-L2-W2-S/S/S/S	132000269	2 x 4G/5G, 2 x WiFi, GNSS, GPS (L1),whip (not included)
Accessories - Whips		
MP-SS-S/FM whip	132000244	Stainless steel whip with shock spring.
MP-SS-S/DAB whip	132000260	Stainless steel whip with shock spring.
Accessories - Cables		
3m SMA(f)-BNC(m)	130002416	RG 58 A/U-L cable
4m SMA(f)-BNC(m)	130002417	RG 58 A/U-L cable
5m SMA(f)-BNC(m)	130002418	RG 58 A/U-L cable
3m SMA(f)-TNC(m)	130002421	RG 58 A/U-L cable
4m SMA(f)-TNC(m)	130002422	RG 58 A/U-L cable
5m SMA(f)-TNC(m)	130002423	RG 58 A/U-L cable
3m SMA(f)-SMA(m)	130002426	RG 58 A/U-L cable
4m SMA(f)-SMA(m)	130002427	RG 58 A/U-L cable
5m SMA(f)-SMA(m)	130002428	RG 58 A/U-L cable
Accessories - Adaptors		
SMA(f)-N(m)	130002429	
SMA(f)-BNC(m)	130002430	
SMA(f)-TNC(m)	130002431	
SMA(f)-SMB(m)	130002432	
SMA(f)-QMA(m)	130002522	

NOMENCLATURE

Use the guide below to configure the ProFin Plus you would like to order.

Modell Name	No. of GNSS	No. of LTE antennas	No. of WIFI antennas	Cable length(m)	Connectors on LTE	Connectors on WIFI	Connectors on GNSS
ProFin Plus	G1 G2	-L2	-W2	Blank (approx. 0.3 m / 1 ft cable length) -P5 (5 m / 16.4 ft cable length)	-S (SMA-M) -FAKRA (on request)	/S (SMA-M) /RP-S (Reverse Polarity SMA-M) /FAKRA (on request)	/S (SMA-M) /FAKRA (on request)
Naming Example							
ProFin Plus	G1	-L2	-W2	-P5	-S	/S	/S

Example

ProFin Plus G1-L2-W2-P5-S/S/S

FAKRA CONNECTORS



Amphenol RF FAKRA connectors are available for this product in standard key code configurations. Please contact us with configuration details for availability.

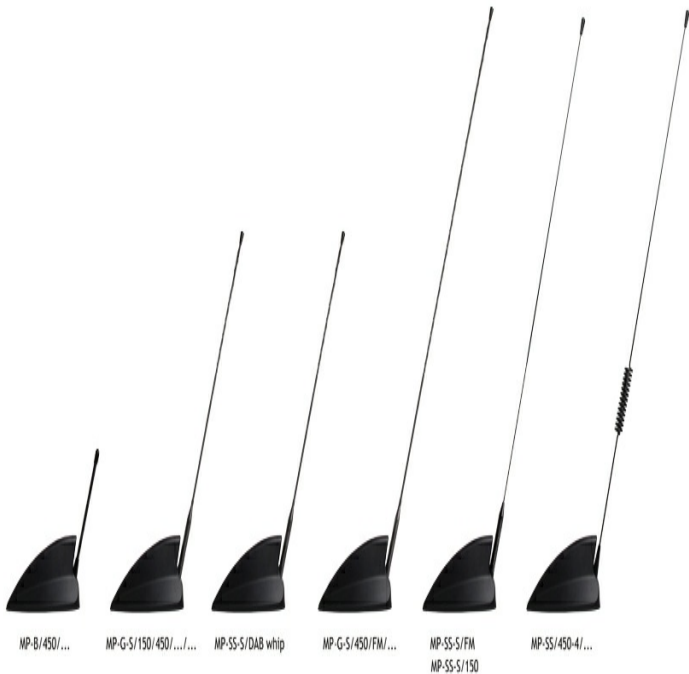
FAKRA Connectors - RF Connectors | Amphenol RF

ORDERING DESIGNATIONS - WHIP MATRIX

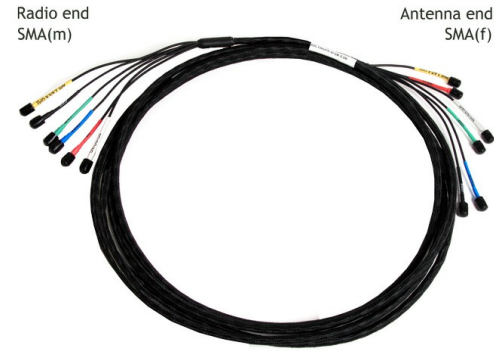
TYPE	DESCRIPTION	FM 88-108 MHz	VHF 144..240 MHz	UHF 380..470 MHz	UHF (Gain) 380..470 MHz
MP-SS-S/FM whip	Stainless steel whip with shock spring.	◆			
MP-SS-S/150 whip	Stainless steel whip with shock spring.	◆	◆		
MP-SS-S/DAB whip	Stainless steel whip with shock spring.	◆	◆		
MP-B/450/...whip	Flexible whip (0 dB acc. to TIA-329.2-C)			◆	
MP-SS/450-4/...whip	Stainless steel collinear whip (4 dB acc. to TIA-329.2-C)				◆
MP-G-S/150/450/.../...whip	Flexible whip with shock spring (factory adjusted)		◆	◆	
MP-G-S/450/FM/... whip	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 MODELLS



ACCESSORIES - CABLES



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

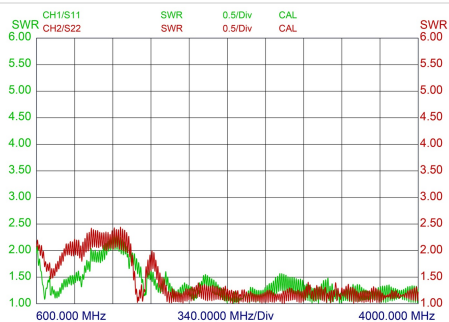
GAIN TABLE FOR IN-BUILT ANTENNAS

TYPE	FREQUENCY (MHz)	AVERAGE PEAK GAIN (dBi)	AVERAGE GAIN H-PLANE (dBi)	AVERAGE GAIN H-PLANE (dBq) *
4G/5G	650	4.0		
	900	5.0	-1.0	-1.0
	1800	6.0	-2.0	-1.0
	2500	7.0	-2.0	-1.0
	3600	7.0	-1.0	0.0
			7.0	-1.0
WIFI	2400	6.0	-3.0	-2.0
	5500	7.0	-2.0	-3.0

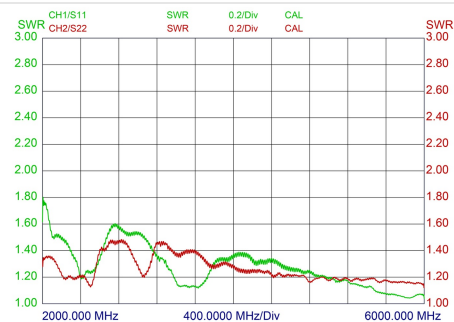
* According to TIA-329.2-C

TYPICAL VSWR CURVES

Typical VSWR Curves 2 x 4G/5G *

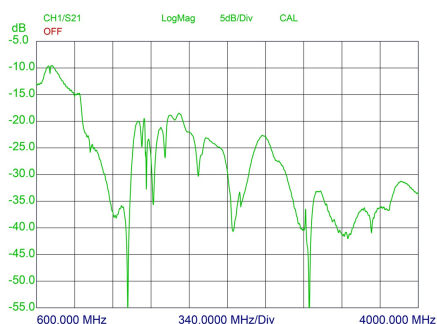


Typical VSWR Curves 2 x WIFI 2.4/5.8 GHz *

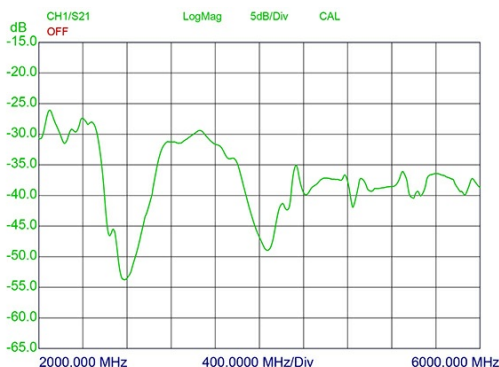


Typical Isolation Curves

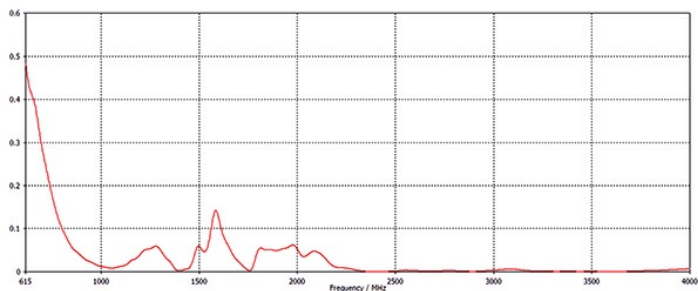
Isolation 2 x 4G/5G *



Isolation 2 x WIFI 2.4/5.8 GHz *



Correlation Coefficient 4G/5G**



* Measured with no whip and 5 m (197 in.) of RG 58 cable on a 500 x 500 mm (19.6 in. x 19.6 in.) ground plane.

** Simulated in free space with no whip, no ground plane and no additional cable.

EU UND UK KONFORMITÄTSERKLÄRUNG

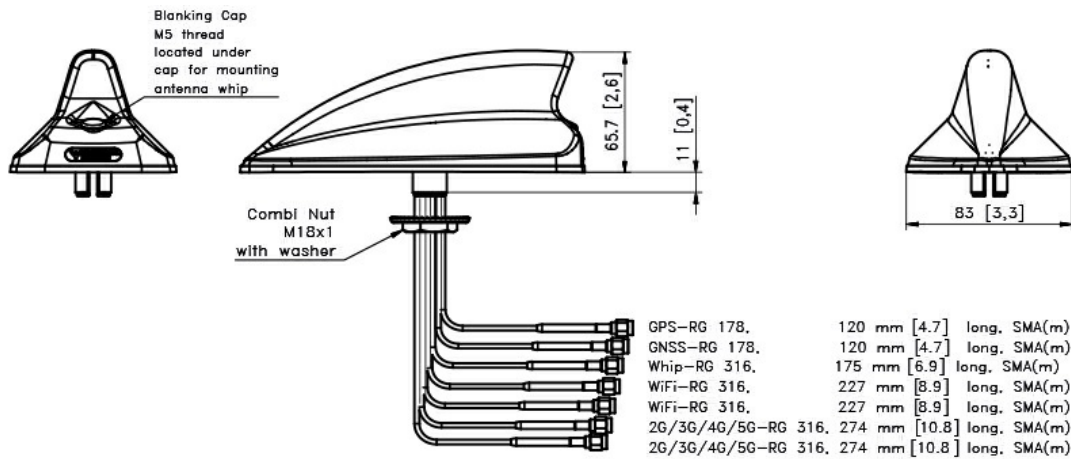
Amphenol Procom erklärt hiermit, dass das Produkt ProFin Plus die Vorgaben der EU Richtlinie 2014/53/EU erfüllt und die UK Radio Equipment Regulations 2017 (S.I. 2017 N^o 1206). Den vollständigen Text der Richtlinie finden Sie unter:

<https://amphenolprocom.com/images/shop/catalog/pdf-for-catalogues/Declaration-of-Conformity-ProFin Plus.pdf>

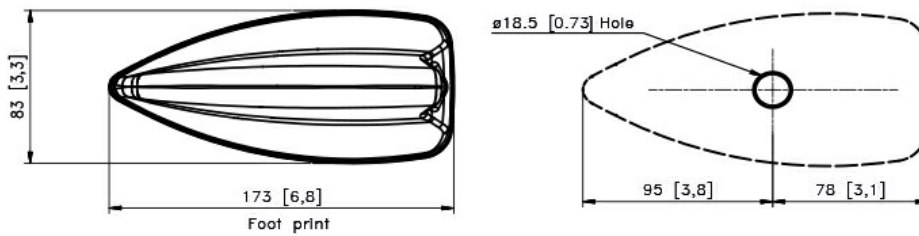
RADIATION PATTERNS

WIFI-element 2400MHz, side view	WIFI-element 2400MHz, top view	WIFI-element 5500MHz, side view	WIFI-element 5500 MHz
4G/5G-element 650 MHz, side view	4G/5G-element 650 MHz, top view	4G/5G-element 700 MHz, side view	4G/5G-element 700 MHz
4G/5G-element 800 MHz, side view	4G/5G-element 800 MHz, top view	4G/5G-element 900 MHz, side view	4G/5G-element 900 MHz
4G/5G-element 1800 MHz, side view	4G/5G-element 1800 MHz, top view	4G/5G-element 2100 MHz, side view	4G/5G-element 2100 MHz
4G/5G-element 2600 MHz, side view	4G/5G-element 2600 MHz, top view	4G/5G-element 3600 MHz, side view	4G/5G-element 3600 MHz

MOUNTING DETAILS

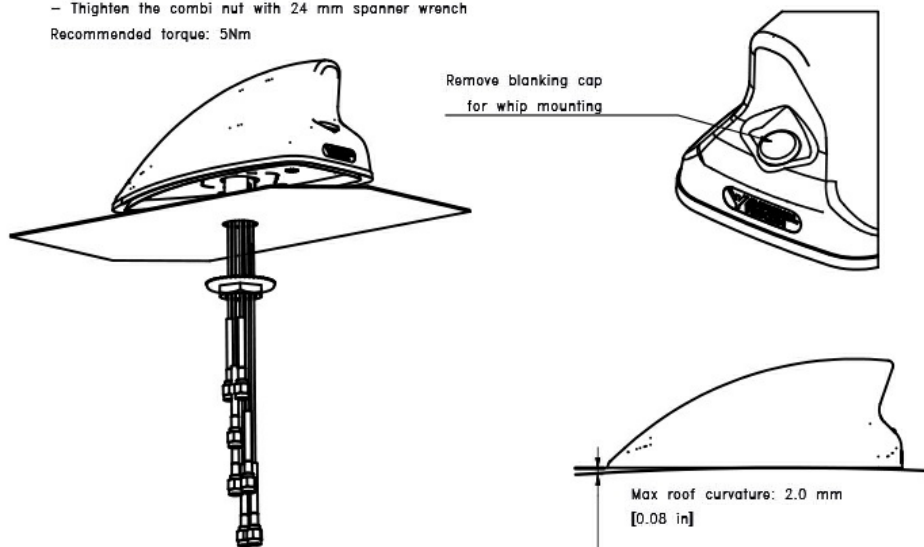


INSTALLATION DIMENSIONS



Mounting Instructions:

- Drill a 18.5-19 mm hole in the car roof
- Max roof curvature: 2.0 mm [0.08] (on 173mm)
- Pull the cables through the hole.
- Tighten the combi nut with 24 mm spanner wrench
- Recommended torque: 5Nm



All dimensions are given in mm [in.]

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