A 2x2 MiMo LTE and WIFI multi purpose antenna for 2G/3G/4G/5G, CBRS and WIFI 6E 2.4/4.9-7.2 GHz with optional GNSS

DESCRIPTION

- The ProConnect provides antennas for multiple technologies in fixed or mobile end-point device applications, using either Cellular or WiFi connectivity.
- Ideal for Industrial robotics and telemetry, smart metering, autonomous vehicles, smart cities and automated parking, backup and remote terminal data connections.
- In-built 2x2 MiMo antenna for use with LTE/4G (617 - 960 MHz and 1710 - 3800 MHz) or WiFi 6E 2.4/4.9-7.2 GHz.
- Optional GNSS antenna for GPS L1, Glonass, Beidou and Galileo.
- The ProConnect covers 4G, GNSS inc. 5G cellular bands, WIFI 2.4/5.8 and 7.2 GHz.
- Full hemispherical coverage for the GNSS antennas.
- Built-in high gain, low noise amplifier.
- Right-Hand Circular Polarization.
- 3 - 15 V DC for GNSS supply.
- Can be configuered as 2in1, 3in1, 4in1 or 5in1.
- DC supply via GNSS RF-connector.
- ECE R118.02 approved cable.
- IP69 Ingress protection.
- IK10 rated enclosure.
- 5 m AP 195 Extension cables available.(P5 version)

SPECIFICATIONS

Electrical				
Model	ProConnect			
Frequency	617 - 960 MHz	1.7 - 2.7 GHz	3.4 - 3.8 GHz	4.9 - 7.2 GHz
Antenna Type	Mobile Disk Style Antenna			
Max. Input Power	25 W			
Polarisation	Vertical			
Impedance	50 Ω			
Isolation	> 6 dB	> 15 dB	> 25 dB	> 30 dB
VSWR	< 2.5:1	< 2.0:1	< 2.0:1	< 2.0:1
EMC	Full protection (EN 301 489-1)			

Mechanical	
Compliance	ECE R118.02 approved cables
Connection(s)	RG316 / RG178, SMA(m) (all antennas)
Materials	ASA, Zamak 5
Installation Torque	5 ±0.5 Nm
Colour	Black (RAL 9005) or White (RAL 9010)
Dimensions	ø 120 mm / 4.72 in.
Height	60 mm / 2.36 in.
Weight	Approx. 550 g. / 1.2 lb.
Mounting	18.5 mm / 0.8 in. dia. hole

GNSS Antenna	
Cross Polar Discrimination (GNSS)	> 10 dB (typ.)
Frequency (GNSS)	1559 - 1609 MHz (GPS L1, Glonass, Beidou and Galileo)
Polarisation (GNSS)	RH Circular
Impedance (GNSS)	50 Ω

GNSS LNA	
Gain (GNSS LNA)	25 dB ±3 dB
Noise Figure (GNSS LNA)	< 3.5 dB : 1559 - 1610 MHz Typ. 2.0 dB @ 1575 MHz
Attenuation Out Of Band (GNSS LNA)	> 25 dB, 0 - 1525 MHz > 25 dB, 1640 - 3000 MHz
P1dB (GNSS LNA)	> 6 dBm
VSWR (output) (GNSS LNA)	< 2.0:1
Supply Voltage (GNSS LNA)	3 - 15 V DC
Current Consumption (GNSS LNA)	20 mA

Environmental	
Operating temperature range	-50 °C to +75 °C
Ingress Protection	IP69
Impact Protection	IK10

ORDERING DESIGNATION

Use the guide below to assign the name of the ProConnect you would like to order.

Model Name	Cover colour	Mount option	No. of GNSS	No. of LTE	No. of WIFI antennas	Cable length	Connectors on GNSS	Connectors on LTE	Connectors WIFI
ProConnect	-W (White) -B (Black)	-TH (Through hole)	Blank (No GNSS) -G1 (1 x GNSS)	-L2 (2x LTE antennas)	Blank (No WIFI) -W1 (1x WIFI antenna) -W2 (2x WIFI antenna)	Blank (approx. 0.3 m / 1 ft. cable length) -P5 (5 m / 16.4 ft. cable length) *-P5U (5 m / 16.4 ft. cable length)	-S (SMA-M) -FAKRA (on request)	/S (SMA-M) /FAKRA (on request)	Blank (no WIFI) /S (SMA-M) /RP-S (Reverse Polarity SMA-M) /FAKRA (on request))
Naming Example									
ProConnect	-W	-TH	-G1	-L2	-W2	-P5	-S	/S	/RP-S

*Only available in the US (Extension cables are not ECE R118.02 rated)

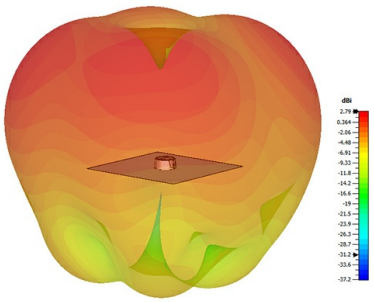
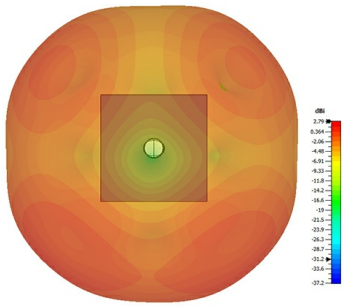
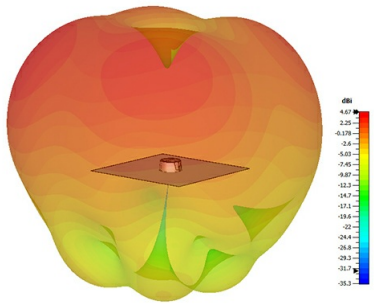
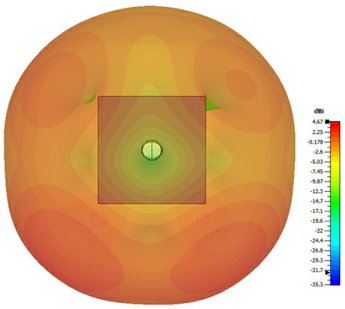
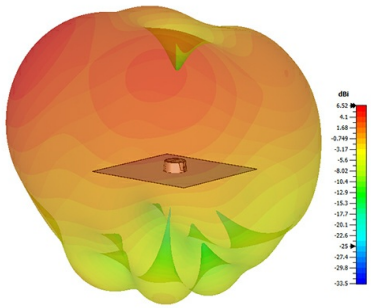
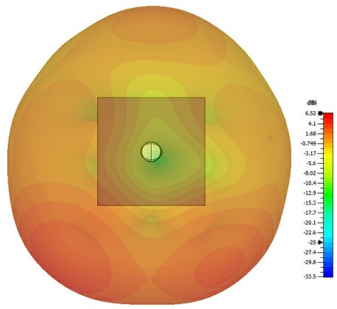
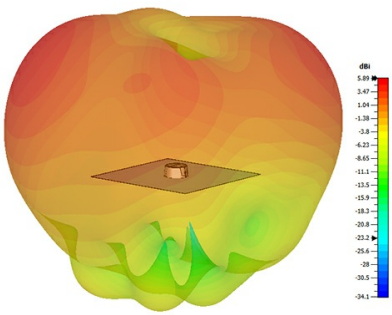
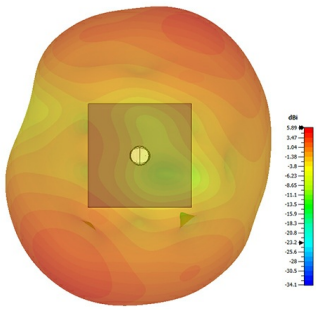
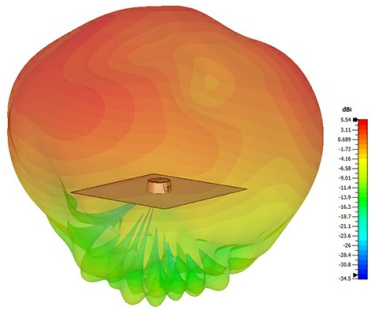
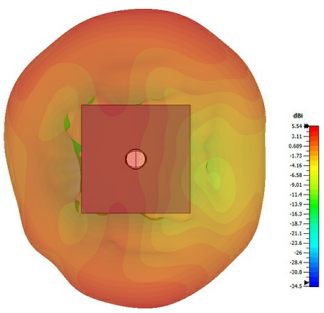
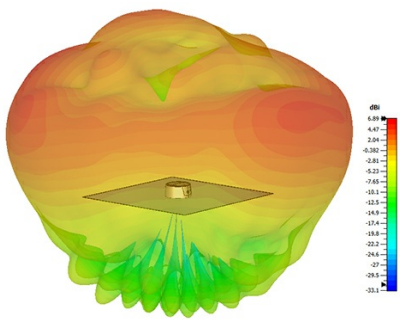
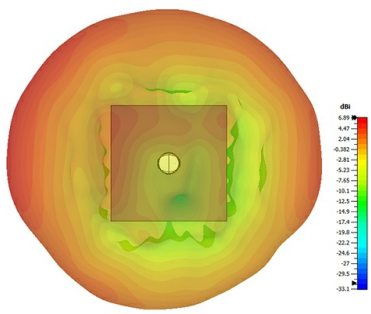
ProConnect-W-TH-G1-L2-W2-P5-S/S/RP-S

Note : P5 Extension cables are not attached to the Pig-tails.

GAIN TABLE

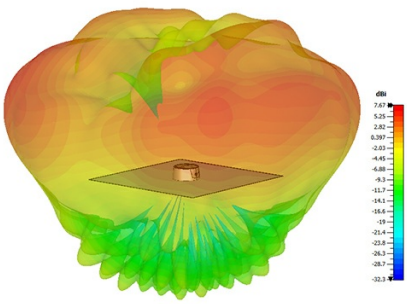
Element	Frequency (MHz)	Peak Gain (dBi)	Average Gain H-Plane (dBi)	Average Gain H-Plane (dBq)
4G/5G/WIFI	650	1.0	-3.5	-2.0
	750	3.9	-1.5	-0.7
	900	4.1	-2.0	-1.0
	1800	5.4	-3	-2.0
	2400	6.9	-1.5	-0.5
	2600	7.7	-2.0	-0.5
	3600	7.5	-1.0	0.0
	5500	7.1	-3.0	-1.7
	7100	8.9	-2.0	-0.5

RADIATION PATTERNS (CELLULAR ANTENNAS) 650 MHZ - 2100 MHZ

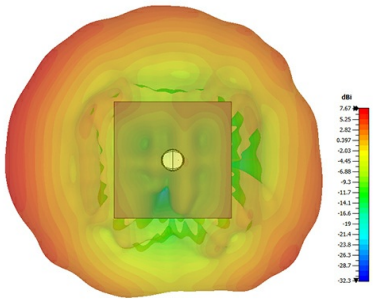
650 MHz, side view	650 MHz, top view	700 MHz, side view
		
700 MHz, top view	**800 MHz, side view**	**800 MHz, top view**
		
900 MHz, side view	**900 MHz, top view**	**1800 MHz, side view**
		
1800 MHz, top view	**2100 MHz, side view**	**2100 MHz, top view**
		

RADIATION PATTERNS (CELLULAR ANTENNAS) 2600 MHZ - 7000 MHZ

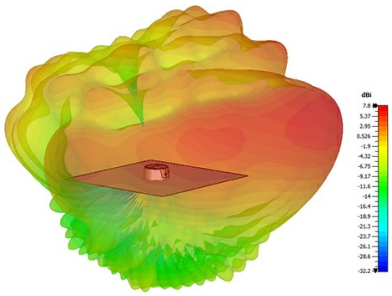
2600 MHz, side view



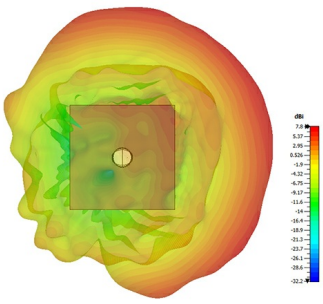
2600 MHz, top view



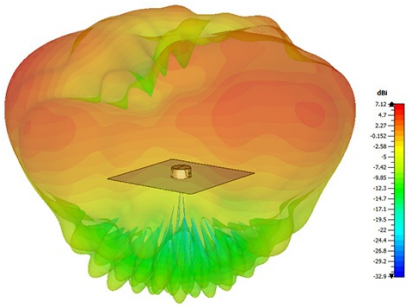
3600 MHz, side view



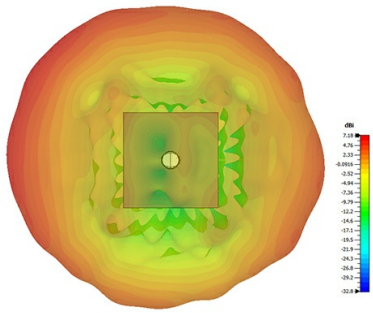
3600 MHz, top view



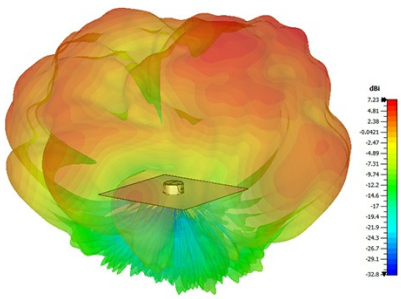
WIFI 2400 MHz, side view



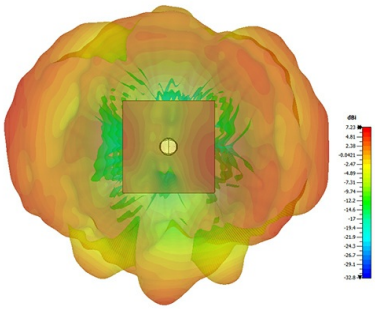
WIFI 2400 MHz, top view



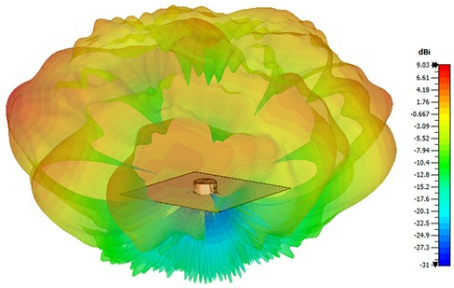
WIFI 5500 MHz, side view



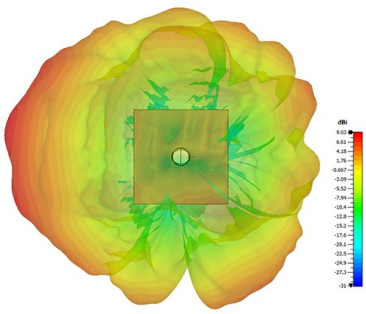
WIFI 5500 MHz, top view



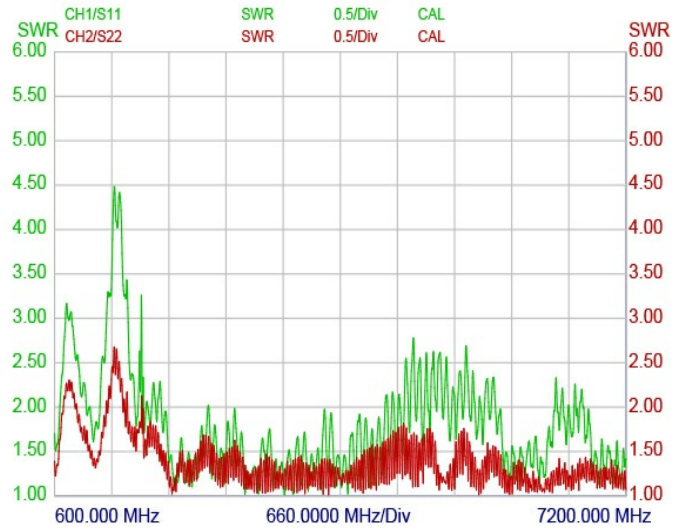
WIFI 7000 MHz, side view



WIFI 7000 MHz, top view



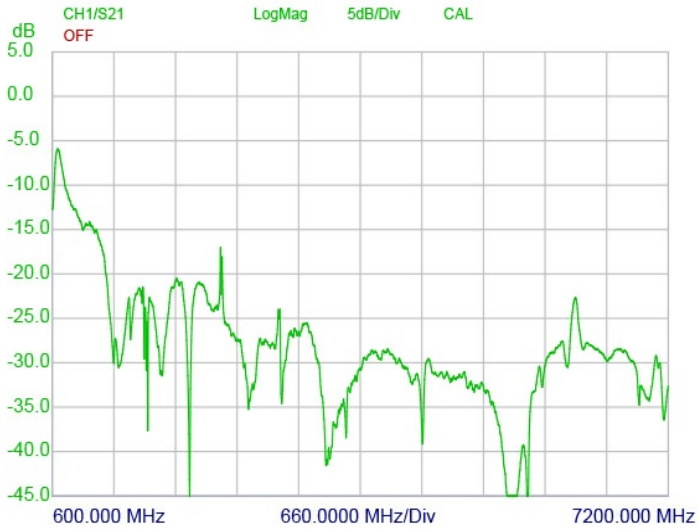
VSWR 4G/5G ELEMENTS*



*Green trace measured with 1m [39.4 in.] of RG58 cable.

Red trace measured with 3 m [118 in.] of RG58 cable on a 600 x 600 mm [23.6 x 23.6 in.] groundplane.

TYPICAL ISOLATION 4G/5G ELEMENTS*



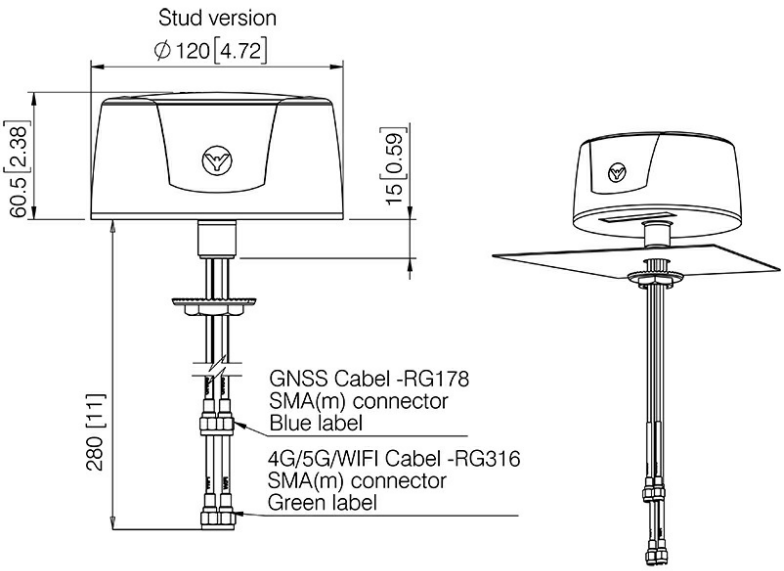
*Measured with no additional cable, on a 600 x 600 mm [23.6 x 23.6 in.] groundplane.

EU AND UK DECLARATION OF CONFORMITY

Hereby Amphenol Procom declare that the product type ProConnect is in compliance with EU Directive 2014/53/EU and the UK Radio Equipment Regulations 2017 (S.I. 2017 No. 1206).
The full text of the Declaration of Conformity is available at:

https://amphenolprocom.com/images/shop/catalog/pdf-for-catalouges/Declaration-of-Conformity-ProConnect.pdf

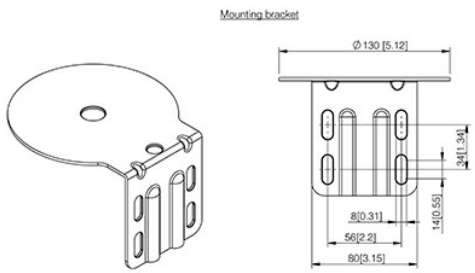
MECHANICAL OUTLINE



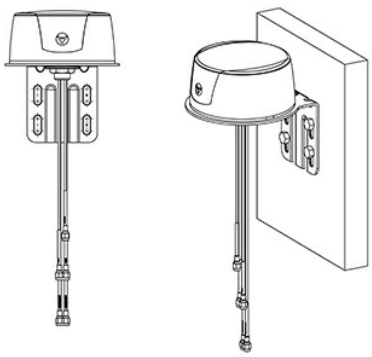
Mounting instructions - stud version:
- Drill a 18.5-19 mm hole in the car roof
- Remove the cover foil for the gasket beneath the antenna.
- Pull the cables through the hole
- Place the antenna in the desired position.
  (note: The antenna can not be moved when the glue
  beneath the gasket touches the car roof.
- Thighten the combi nut with 24 mm spanner wrench.

Recommended torque: 5 Nm.

MOUNTING ON BRACKET



Stud mounted version - Wall mounting
The stud mounted version can be mounted on a bracket for wall mounting
Thighten the combi nut with 24 mm spanner wrench.
Recommended torque: 5 Nm.
Notice: Stud mounted version on bracket is not IP rated.



Stud mounted version - Pole mounting
The stud mounted version can be mounted on a bracket for pole mast mounting
Thighten the combi nut with 24 mm spanner wrench.
Recommended torque: 5 Nm.
Notice: Stud mounted version on bracket is not IP rated.