

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 single or dual 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 configured as 2in1, 3in1, 4in1 or 5in1.
- DC supply via GNSS RF-connector.
- ECE R118.02 approved cable.
- IP69 Ingress protection.
- IK10 rated enclosure.



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	4 ±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 DESIGNATIONS

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

Model Name	Cover color	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)	-G1 (1 x GNSS) *-G2 (2 x GNSS)	-L2 (2x LTE antennas)	Blank (No WIFI) -W1 (1x WIFI antenna) -W2 (2x WIFI antenna) Not an option	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) /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
ProConnect	-B	-TH	-G2	-L2			-S	/S	

*When choosing 2 No of GNSS, then no WIFI option

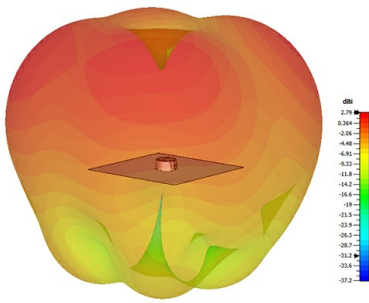
ProConnect-W-TH-G1-L2-W2-P5-S/S/RP-S
ProConnect-B-TH-G2-L2-S/S

GAIN TABLE

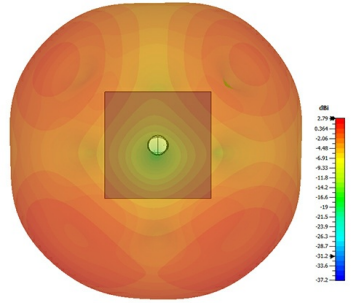
Element	Frequency (MHz)	Peak Gain (dBi)	Average Gain H-Plane (dBi)	Average Gain H-Plane (dBq)
4G/5G/WIFI	650	1.0	-3.5	-2.0
	750	3.9	-1.5	-0.7
	900	4.1	-2.0	-1.0
	1800	5.4	-3	-2.0
	2400	6.9	-1.5	-0.5
	2600	7.7	-2.0	-0.5
	3600	7.5	-1.0	0.0
	5500	7.1	-3.0	-1.7
	7100	8.9	-2.0	-0.5

RADIATION PATTERNS (CELLULAR ANTENNAS). 650 MHZ - 2100 MHZ

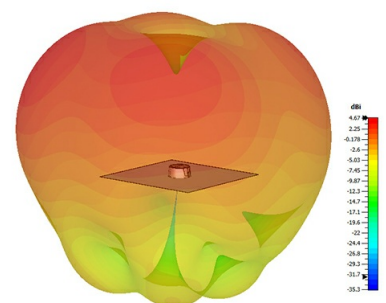
650 MHz, side view



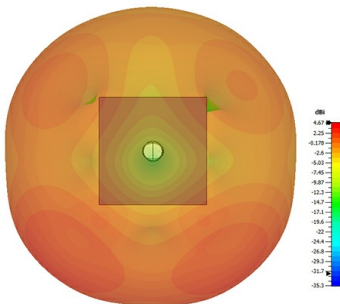
650 MHz, top view



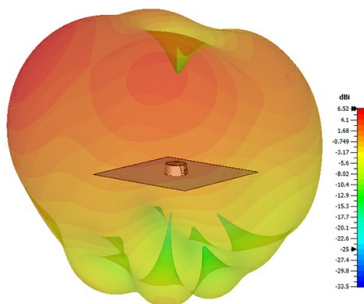
700 MHz, side view



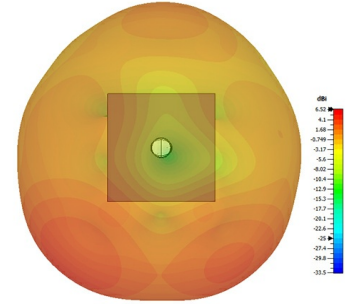
700 MHz, top view



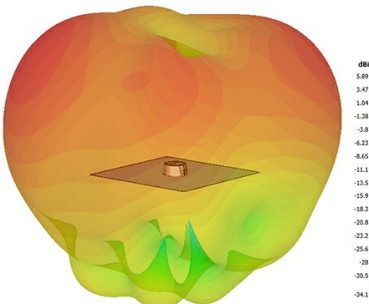
800 MHz, side view



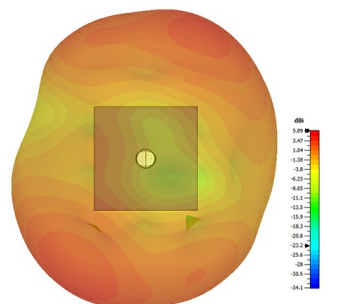
800 MHz, top view



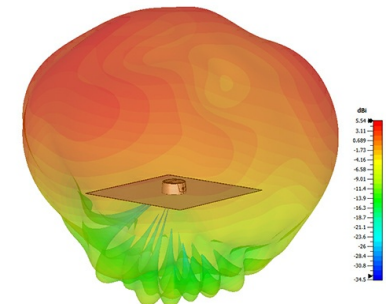
900 MHz, side view



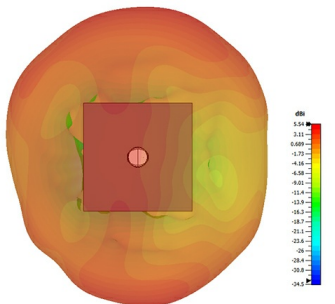
900 MHz, top view



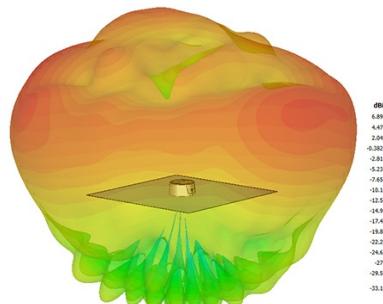
1800 MHz, side view



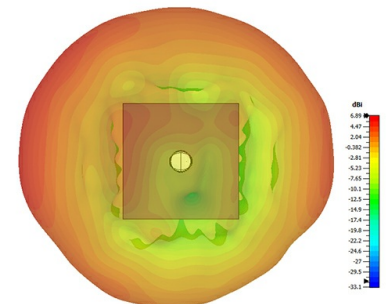
1800 MHz, top view



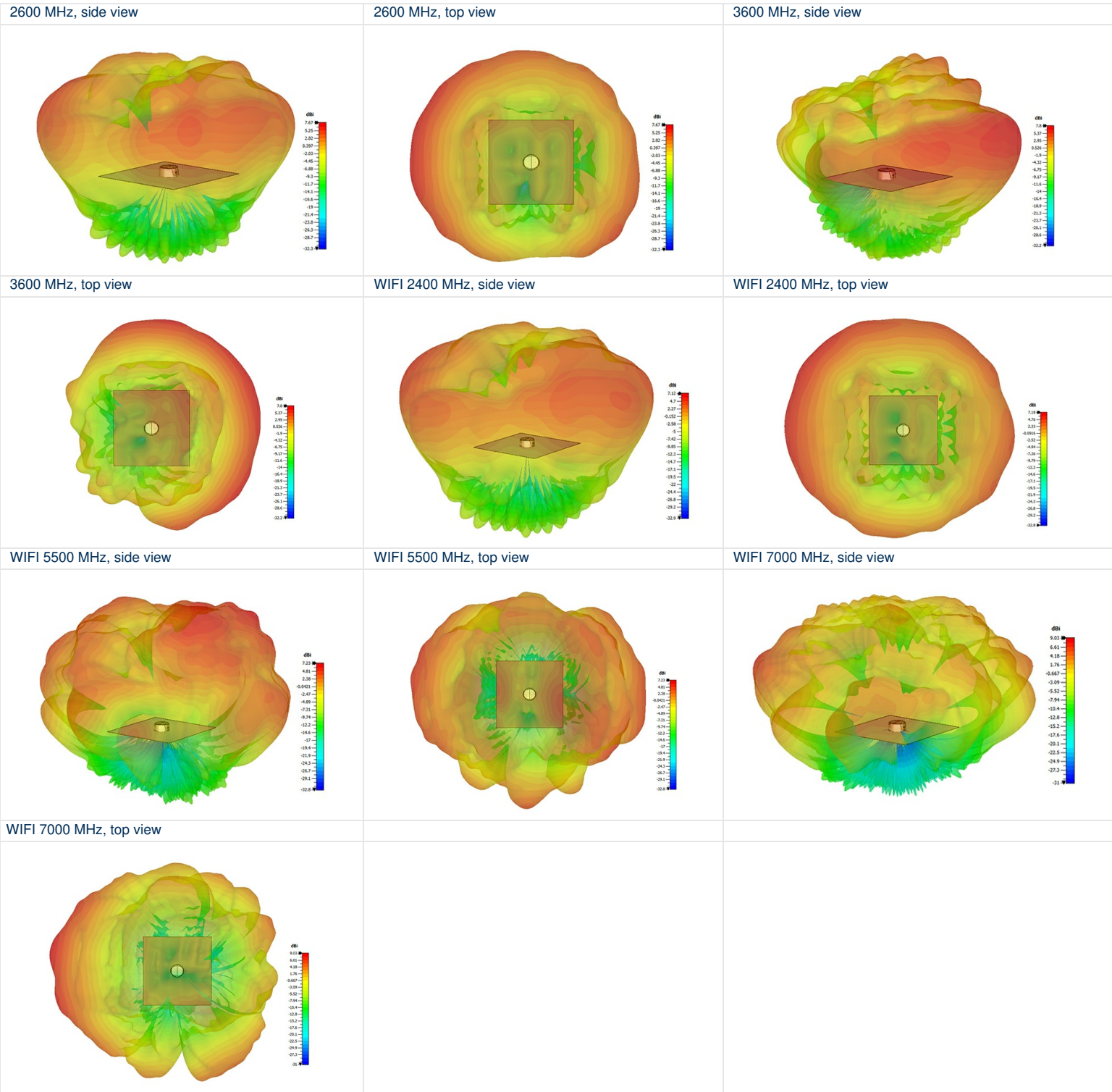
2100 MHz, side view



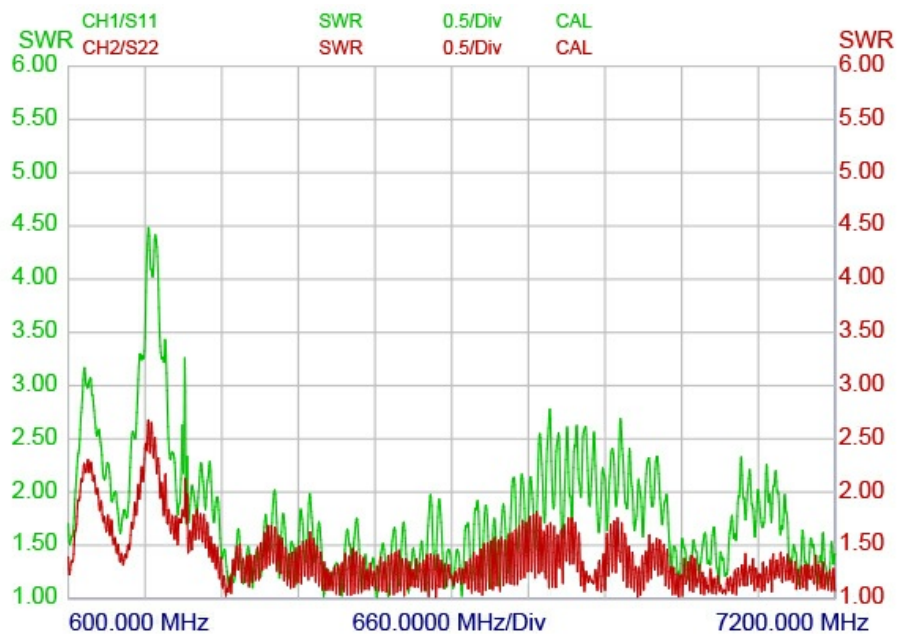
2100 MHz, top view



RADIATION PATTERNS (CELLULAR ANTENNAS) 2600 MHZ - 7000 MHZ



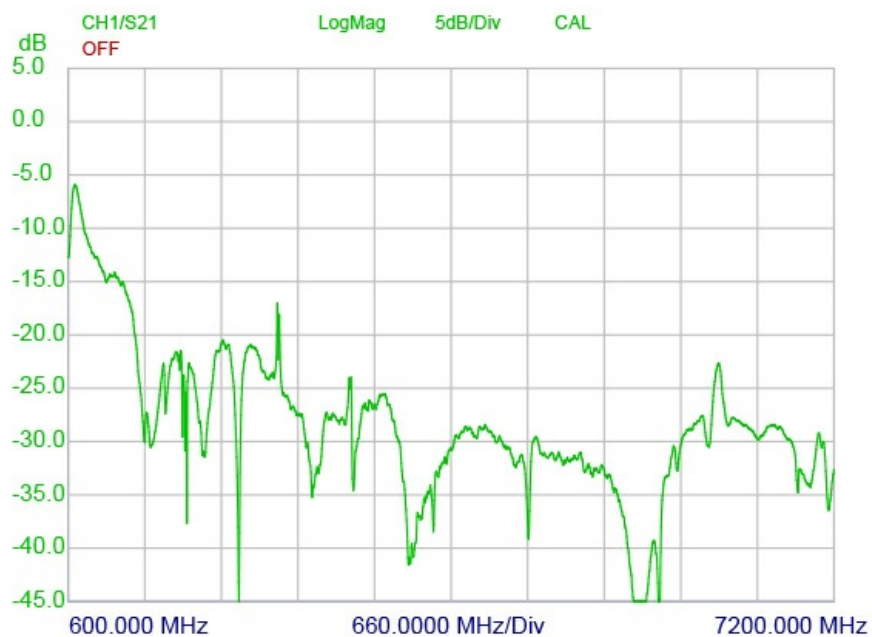
VSWR 4G/5G ELEMENTS*



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

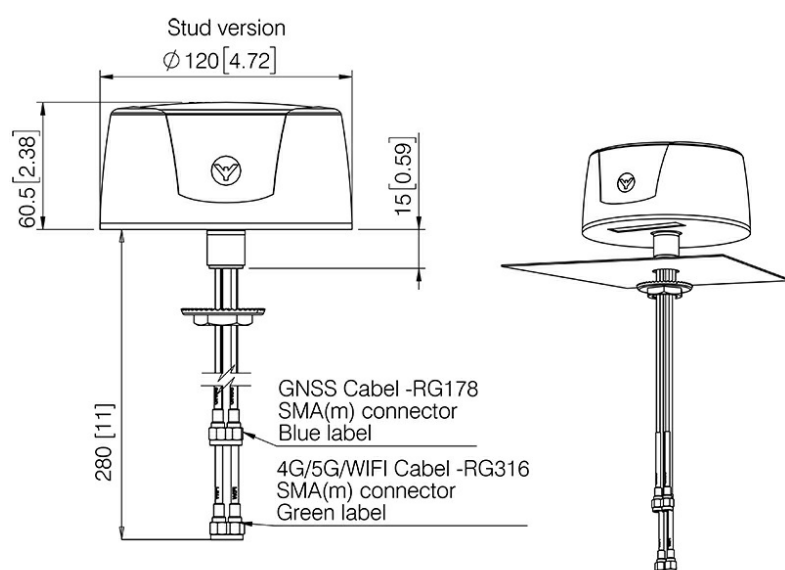
Red trace measured with 3 m [118 in.] of RG58 cable on a 600 x 600 mm [23.6 x 23.6 in.] groundplane.

TYPICAL ISOLATION 4G/5G ELEMENTS*



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

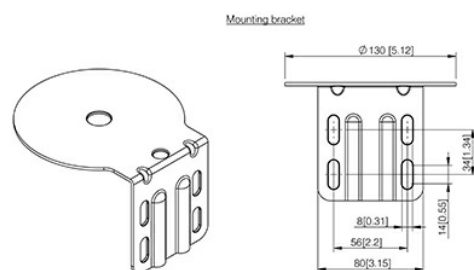
MECHANICAL OUTLINE



Mounting instructions - stud version:

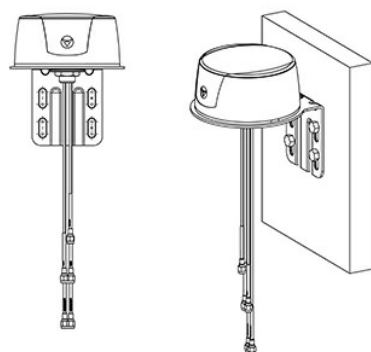
- Drill a 18.5-19 mm hole in the car roof
- Remove the cover foil for the gasket beneath the antenna.
- Pull the cables through the hole
- Place the antenna in the desired position.
(note: The antenna can not be moved when the glue beneath the gasket touches the car roof.
- Tighten the combi nut with 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.
Tighten 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.
Tighten the combi nut with 24 mm spanner wrench.
Recommended torque: 5 Nm.
Notice: Stud mounted version on bracket is not IP rated.

