8x8 MIMO LTE and 6x6 MIMO WIFI multi-purpose mobile antenna for GNSS, LTE (617 - 7200 MHz) and WIFI 6E 2.4/4.9-7.2 GHz

DESCRIPTION

- The ProNexus Plus is the world's first 8x8 MIMO mobile antenna covering up to 7.2 GHz. A next-generation 8x8 MIMO antenna for fixed and mobile applications, masterfully engineered for 5G and Gigabit Class LTE routers. This cutting-edge antenna redefines the standards for speed and connectivity within the smallest footprint, enabling maximization of spectral efficiency and minimizing installation costs by reducing the need for additional antennas.
- The worlds first 8x8 MIMO LTE and 6x6 MIMO WIFI - No diplexer needed.
- In-built 8x8 MIMO LTE antenna (617 - 960 MHz and 1710 - 7200 MHz) With 6x6 MIMO WiFi 6E (2.4/4.9-7.2 GHz), GNSS antenna for GPS L1, Glonass, Beidou and Galileo.
- The ProNexus Plus provides antennas for multiple technologies and multiband routers.
- The ProNexus Plus covers 4G, GNSS inc. 5G cellular bands, WIFI 2.4/5.8 and 7.2 GHz.
- Full hemispherical coverage for the GNSS antennas.
- Right-Hand Circular Polarization.
- Built-in high gain, low noise amplifier.
- 3 - 15 V DC for GNSS supply.
- DC supply via GNSS RF-connector.
- ECE R118.02 approved cable.
- IP69 Ingress protection.
- IK10 rated enclosure.

SPECIFICATIONS

Electrical	
Model	ProNexus Plus
Frequency	4G/5G 8x8 MIMO: 617 - 960 MHz, 1710 - 7200 MHz WIFI 6x6 MIMO: 2400 - 2500 MHz, 4900 - 7200 MHz
Antenna Type	Mobile Disk Style Antenna
Max. Input Power	25 W
Polarisation	Vertical
Impedance	50 Ω
Gain (peak)	4G/5G 3dBi (617 - 960 MHz) 4G/5G 7dBi (1710 - 7200 MHz) WiFi 7 dBi (2.4/5.8/7.2 GHz)
Isolation *	>10 dB for 617 - 960 MHz >15 dB for 1710 - 7200 MHz >15 dB for WiFi elements
VSWR *	< 2.5:1 for 617 - 960 MHz < 2.0:1 for 1710 - 3800 MHz < 2.0:1 for 2400 - 2500 MHz < 2.0:1 for 4900 - 7200 MHz
EMC	Full protection (EN 301 489-1)

Mechanical	
Compliance	ECE R118.02 approved cables
Connection(s)	SMA(m) / RP-SMA(m)
Materials	ASA, Zamak 5
Installation Torque	4 ± 0.5 Nm
Colour	Black (RAL 9005) or White (RAL 9010)
Dimensions	Approx. 208 x 166 x 69 mm / 8.19 x 6.5 x 2.7 in.
Max. Roof Thickness	3 mm / 0.12 in.
Weight	Approx. 1.13 kg / 2.5 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	IP69K
Impact Protection	IK10

NOTE

* Measured with 5 m [196.85 in.] of LMR 195 cable on a 600 x 600 mm [23.6 x 23.6 in.] groundplane.

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ORDERING DESIGNATIONS

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

Model Name	Cover color	No. of GNSS	No. of LTE	No. of WIFI antennas	Cable length	Connectors on GNSS	Connectors on LTE	Connectors WIFI
ProNexus Plus	-W (White) -B (Black)	-G1	-L8 (8x LTE antennas)	-W4 (4x WIFI antenna) -W6 (6x WIFI antennas)	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)	/S (SMA-M) /RP-S (Reverse Polarity SMA-M) /FAKRA (on request)
Naming Example								
ProNexus Plus	-B	-G1	-L8	-W6	-P5	-S	/S	/RP-S

ProNexus Plus-B-G1-L8-W6-P5-S/S/RP-S

GAIN TABLE

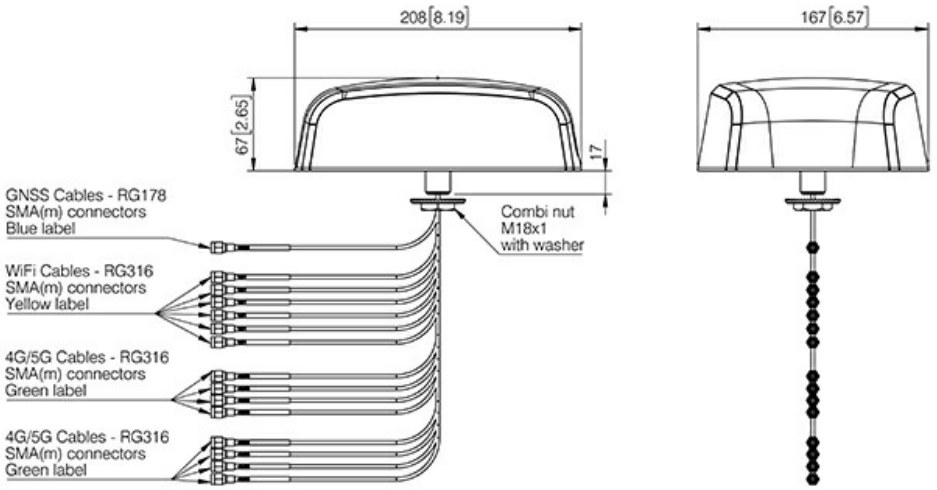
TYPE	FREQUENCY (MHz)	PEAK GAIN (dBi)	AVERAGE GAIN H-PLANE (dBi)	AVERAGE GAIN H-PLANE (dBq)
4G/5G	650 900 1800 2500 3600	2.0 3.0 4.0 6.0 6.0	-1.7 -3.6 -4.1 -3.2 -2.5	-1.0 -2.0 -2.0 -1.0 0.0
WIFI	2400 5500 7200	7.0 7.0 9.0	-1.0 -3.0 -2.4	-2.0 -3.0 -2.0

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

MECHANICAL OUTLINE



Mounting instrutions:
- Drill a 18.5-19mm 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 spanner wrench.
Recommended torque: 5 Nm.

All dimensions are given in mm[in.]

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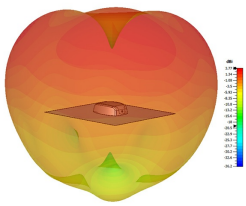
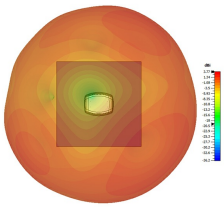
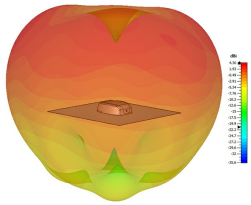
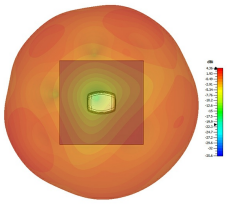
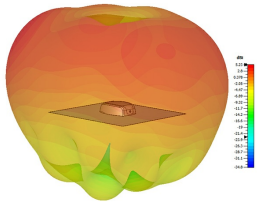
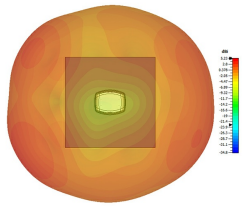
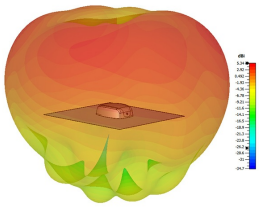
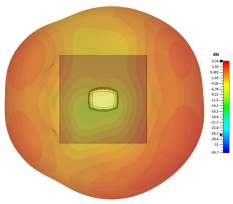
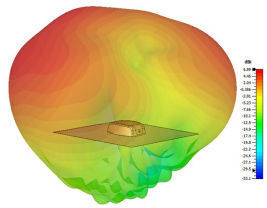
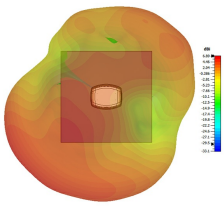
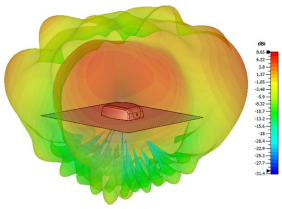
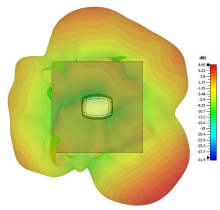
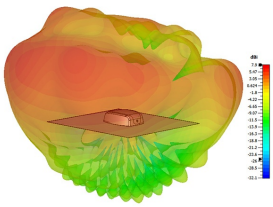
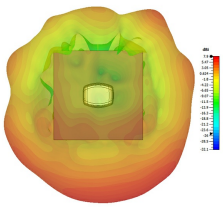
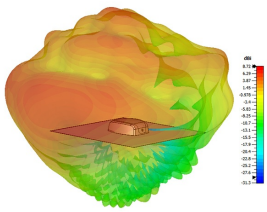
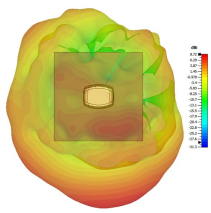
RADIATION PATTERNS (CELLULAR ANTENNAS)

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
		
2600 MHz, side view	2600 MHz, top view	
		
3600 MHz, side view	3600 MHz, top view	
		

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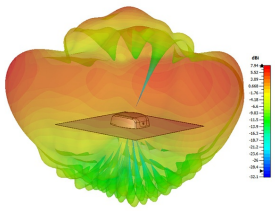
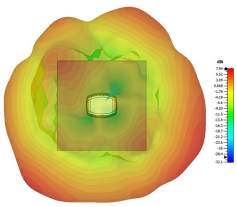
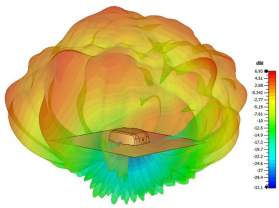
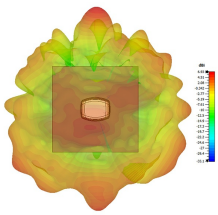
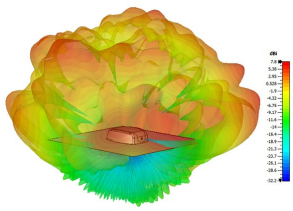
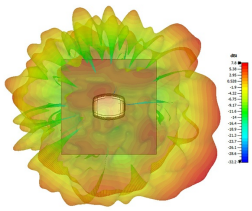
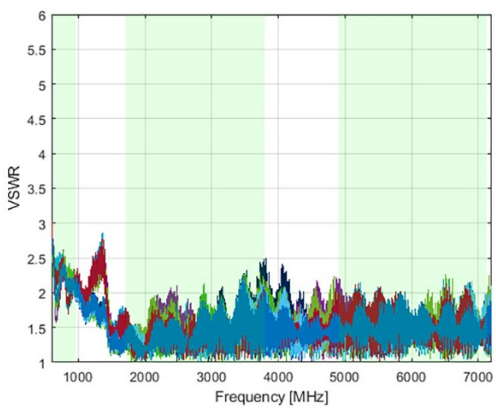
RADIATION PATTERNS (WIFI ANTENNAS)

2400 MHz, side view	2400 MHz, top view	5500 MHz, side view
		
5500 MHz, top view	**7000 MHz, side view**	**7000 MHz, top view**
		

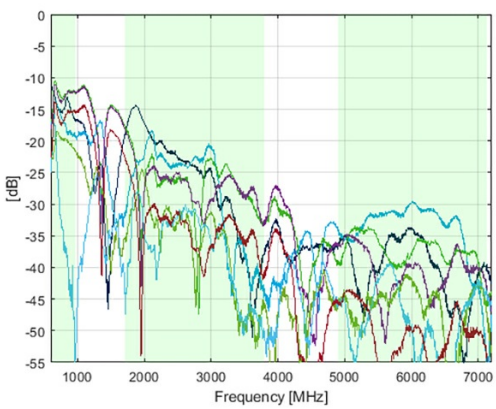
PERFORMANCE CURVES

Typical VSWR curve 4G/5G port 1 to 8



*Measured with 5 m [196.85 in.] of LMR 195 cable on a 600 x 600 mm [23.6 x 23.6 In.] groundplane.

Typical Inter-port Isolation curve 4G/5G port 1 to the other 7 ports



*Measured with 5 m [196.85 in.] of LMR 195 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 ProNexus Plus 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:
http://amphenolprocom.com/images/shop/catalog/pdf-for-catalouges/Declaration-of-Conformity-ProNexus.pdf