

A 4x4 MIMO LTE and 4x4 or 6x6 MIMO WIFI multi purpose 'Disk' antenna for GNSS, 2G/3G/4G/5G and WIFI 6E 2.4/4.9-7.2 GHz

DESCRIPTION

- Can be configured as 9-in-1, 10-in-1, 11-in-1, and 12-in-1
- In-built 4x4 MIMO LTE antenna (617 - 960 MHz and 1710 - 3800 MHz)
- Up to 6x6 MIMO WIFI 6E 2.4/4.9-7.2 GHz
- GNSS antenna for GPS L1, Glonass, Beidou and Galileo.
- No diplexer needed.
- The ProNexus provides antennas for multiple technologies and multiband routers.
- The ProNexus 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.
- DC supply via GNSS RF-connector.
- ECE R118.02 approved cable.
- IP69 Ingress protection.
- IK10 rated enclosure.



SPECIFICATIONS

Electrical	
Model	ProNexus
Frequency	4G/5G 4x4 MIMO: 617 - 960 MHz, 1710 - 3800 MHz WIFI 4x4 or 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 - 3800 MHz) WiFi 7 dBi (2.4/5.8/7.2 GHz)
Isolation	>10 dB for 617 - 960 MHz >20 dB for 1710 - 3800 MHz >15 dB for WiFi
Correlation Coefficient	< 0.2 for 617 - 960 MHz < 0.02 for 1710 - 3800 MHz < 0.02 for WiFi
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) (all antennas)
Materials	ASA, Zamak 5
Installation Torque	4 ±0.5 Nm
Colour	Black (RAL 9005) / Traffic White (RAL 9010)
Dimensions	208 mm x 166 mm x 69 mm/ 8.19 in. x 6.5 in. x 2.7 in. (Approx)
Max. Roof Thickness	3 mm / 0.12 in.
Weight	1.04kg / 2.3 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 VDC
Current Consumption (GNSS LNA)	20 mA
Environmental	
Operating temperature range	-50°C to +75°C
Ingress Protection	IP69K
Impact Protection	IK10

ORDERING DESIGNATIONS

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

Model Name	Cover colour	No. of GNSS	No. of LTE antennas	No. of WIFI antennas	Cable length	Connectors on GNSS	Connectors on LTE	Connectors WIFI
ProNexus	-W (White) -B (Black)	-G1 (1 x GNSS) -G2 (2 x GNSS)	-L4	-W1 (1x WIFI antenna) -W2 (2x WIFI antenna) -W3 (3x WIFI antenna) -W4 (4x WIFI antenna) -W5 (5x WIFI antenna) -W6 (6x WIFI antenna)	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	-W	-G2	-L4	-W6	-P5	-S	/S	/RP-S

ProNexus-W-G2-L4-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	2.0		
	900	3.0	-1.7	-1.0
	1800	4.0	-3.6	-2.0
	2500	6.0	-4.1	-2.0
	3600	6.0	-3.2 -2.5	-1.0 0.0
WIFI	2400	7.0	-1.0	-2.0
	5500	7.0	-3.0	-3.0
	7200	9.0	-2.4	-2.0

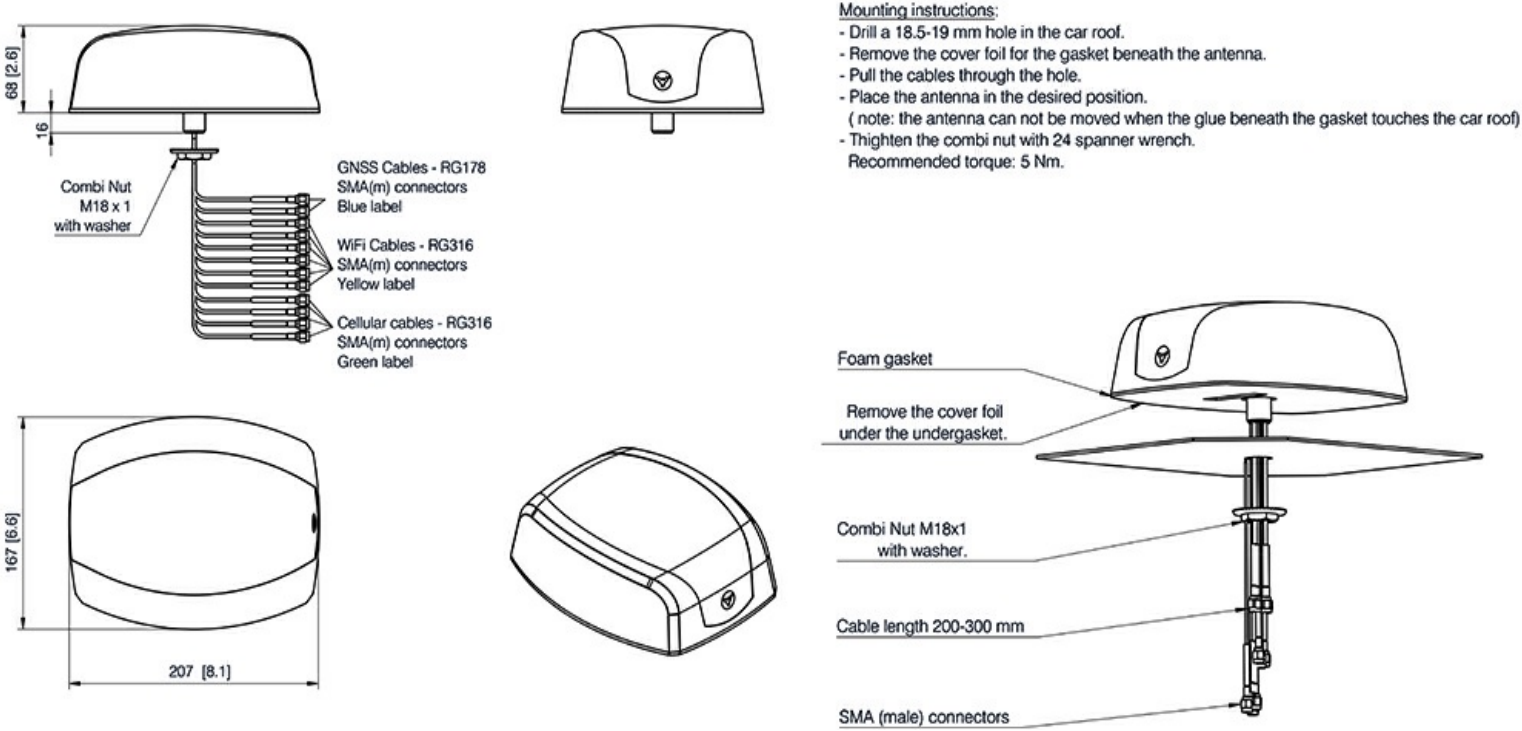
FAKRA CONNECTORS



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

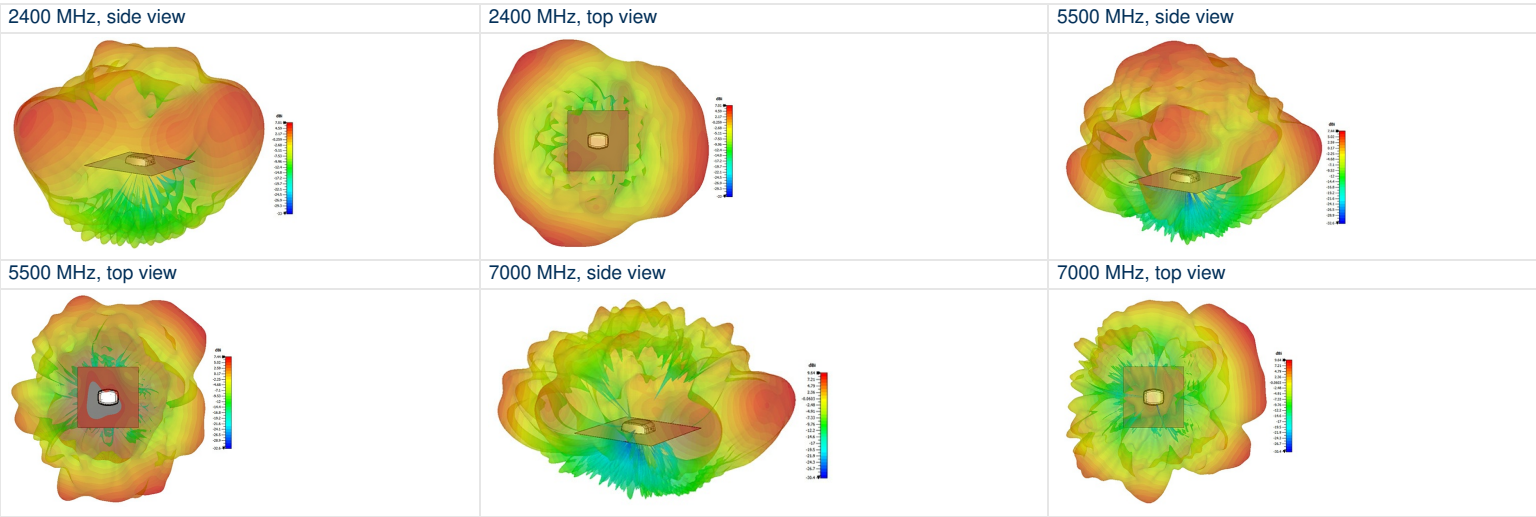


EU AND UK DECLARATION OF CONFORMITY

Hereby Amphenol Procom declare that the product type ProNexus is in compliance with EU Directive 2014/53/EU and the UK Radio Equipment Regulations 2017 (S.I. 2017 No. 1206).

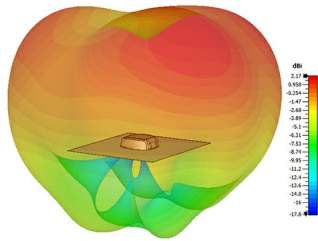
The full text of the Declaration of Conformity is available at:
<http://amphenolprocom.com/images/shop/catalog/pdf-for-catalogues/Declaration-of-Conformity-ProNexus.pdf>

RADIATION PATTERNS (WIFI ANTENNAS)

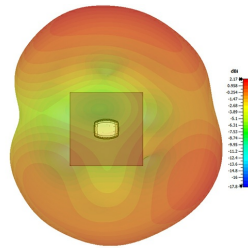


RADIATION PATTERNS (CELLULAR ANTENNAS)

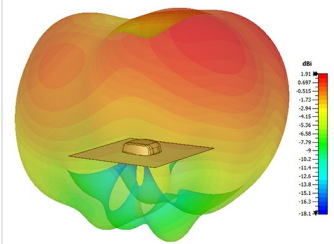
650 MHz, side view



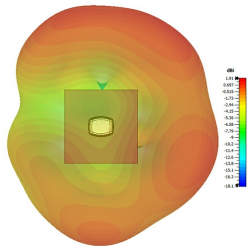
650 MHz, top view



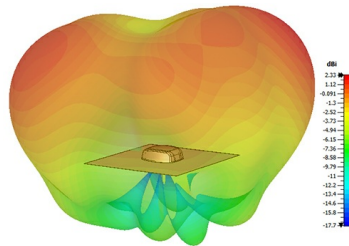
700 MHz, side view



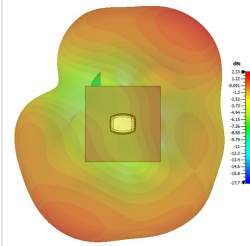
700 MHz, top view



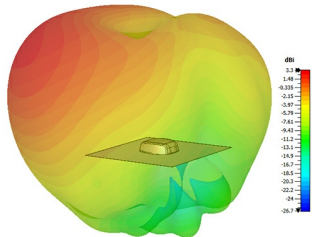
800 MHz, side view



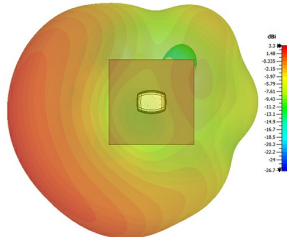
800 MHz, top view



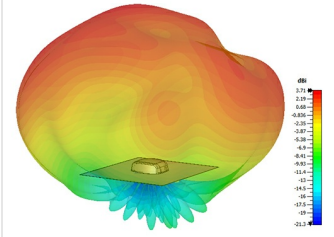
900 MHz, side view



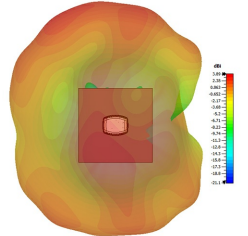
900 MHz, top view



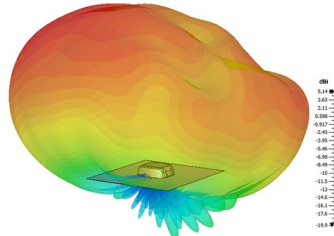
1800 MHz, side view



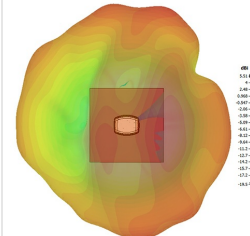
1800 MHz, top view



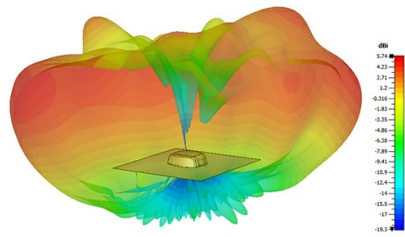
2100 MHz, side view



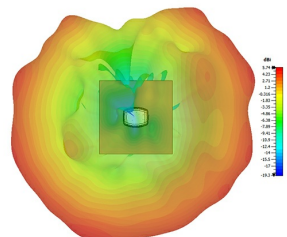
2100 MHz, top view



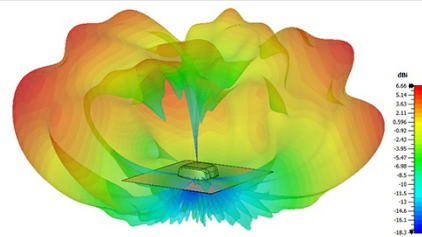
2600 MHz, side view



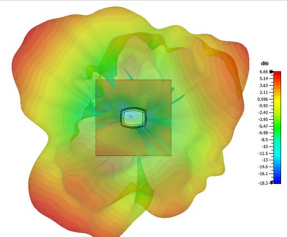
2600 MHz, top view



3600 MHz, side view

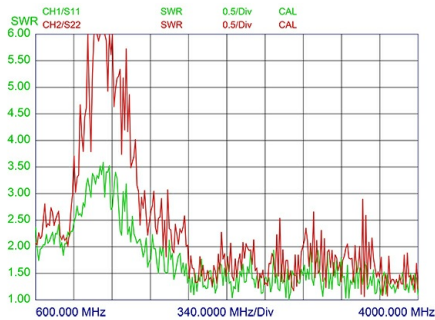


3600 MHz, top view



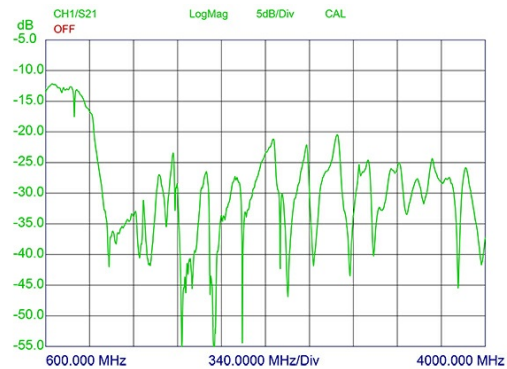
PERFORMANCE CURVES

Typical VSWR 4G/5G Elements*



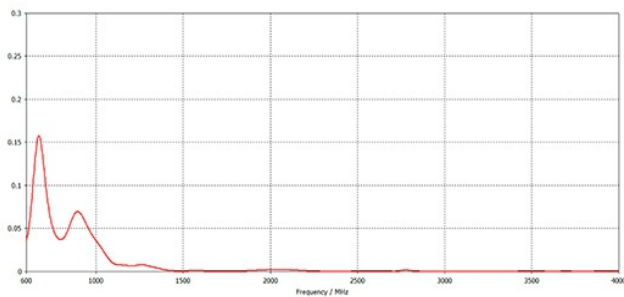
*Red trace measured with 1m (39.4 In.) of RG58 cable. Green trace measured with 3m (118 In.) of RG58 cable on a 600 x 600 mm (23.6 x 23.6 In.) groundplane.

Typical Isolation 4G/5G Elements*



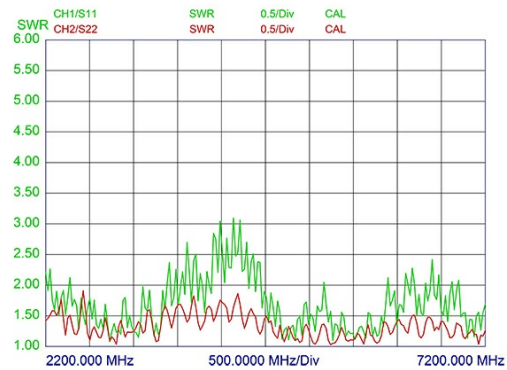
*Measured with no additional cable, on a 600 x 600 mm (23.6 x 23.6 In.) groundplane.

Envelope Correlation Coefficient 4G/5G Elements*



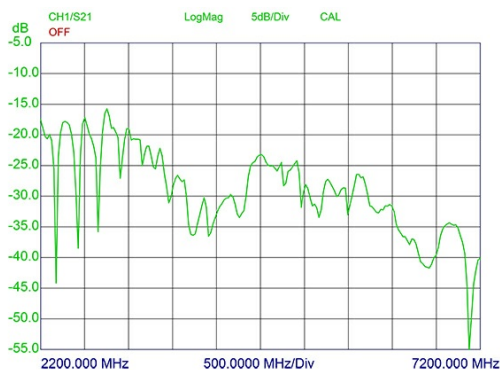
*Simulated in free space with no additional cable.

Typical VSWR WiFi Elements*



*Green trace measured with 1m (39.4 In.) of RG58 cable. Red trace measured with 3m (118 In.) of RG58 cable on a 600 x 600 mm (23.6 x 23.6 In.) groundplane.

Typical Isolation WiFi Elements*



*Measured with no additional cable, on a 600 x 600 mm (23.6 x 23.6 In.) groundplane.