

## 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)
- > 4x4 or 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.



### SPECIFICATIONS

| Electrical              |  |
|-------------------------|--|
| Model                   | ProNexus   |
| Frequency               | 4G/5G 4x4 MIMO: 617 - 960 MHz, 1710 - 3800 MHz<br>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)<br>4G/5G 7dBi (1710 - 3800 MHz)<br>WiFi 7 dBi (2.4/5.8/7.2 GHz)                             |
| Isolation               | >10 dB for 617 - 960 MHz<br>>20 dB for 1710 - 3800 MHz<br>>15 dB for WiFi  |
| Correlation Coefficient | < 0.2 for 617 - 960 MHz<br>< 0.02 for 1710 - 3800 MHz<br>< 0.02 for WiFi   |
| VSWR                    | < 2.5:1 for 617 - 960 MHz<br>< 2.0:1 for 1710 - 3800 MHz<br>< 2.0:1 for 2400 - 2500 MHz<br>< 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<br>Typ. 2.0 dB @ 1575 MHz  |
| Attenuation Out Of Band (GNSS LNA) | > 25 dB, 0 - 1525 MHz<br>> 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   |

**ORDERING DESIGNATIONS**

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


| Model Name            | Cover color              | No. of GNSS                      | No. of LTE antennas | No. of WIFI antennas                            | Cable length  | Connectors on LTE                 | Connectors WIFI   | Connectors on GNSS                |
|-----------------------|--------------------------|----------------------------------|---------------------|---|---|-----------------------------------|---|-----------------------------------|
| ProNexus              | -W (White)<br>-B (Black) | -G1 (1 x GNSS)<br>-G2 (2 x GNSS) | -L4                 | -W4 (4x WIFI antenna)<br>-W6 (6x WIFI antennas) | Blank (approx. 0.3 m / 1 ft cable length)<br>-P5 (5 m / 16.4 ft cable length) | -S (SMA-M)<br>-FAKRA (on request) | /S (SMA-M)<br>/RP-S (Reverse Polarity SMA-M)<br>/FAKRA (on request) | /S (SMA-M)<br>/FAKRA (on request) |
| <b>Naming Example</b> |                          |                                  |                     |   |   |                                   |   |                                   |
| ProNexus              | -W                       | -G2                              | -L4                 | -W6   | -P5   | -S                                | /RP-S   | /S                                |

ProNexus-W-G2-L4-W6-P5-S/RP-S/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                       | -1.0                       |
| WIFI  |                 | 6.0             | -2.5                       | 0.0                        |
|       | 2400            | 7.0             | -1.0                       | -2.0                       |
|       | 5500            | 7.0             | -3.0                       | -3.0                       |
|       | 7200            | 9.0             | -2.4                       | -2.0                       |

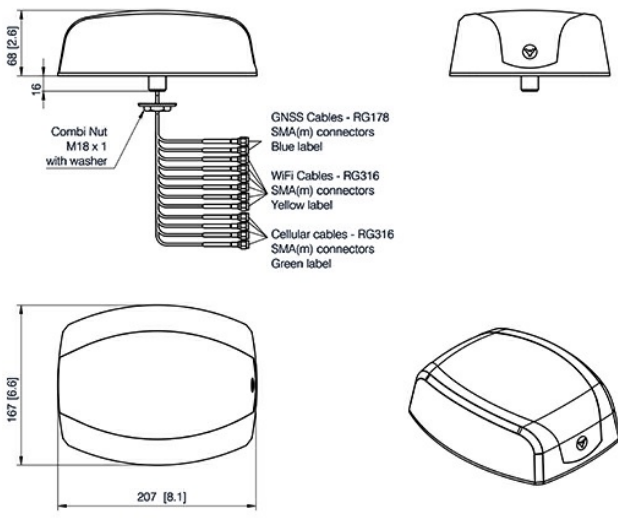
**FAKRA CONNECTORS**



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**



**Mounting instructions:**

- 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 spanner wrench.
- Recommended torque: 5 Nm.

Labels in diagram:  
 - Foam gasket  
 - Remove the cover foil under the undergasket.  
 - Combi Nut M18x1 with washer.  
 - Cable length 200-300 mm  
 - SMA (male) connectors

**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 (CELLULAR ANTENNAS)

