

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

BESCHREIBUNG

- The ProEdge provides antennas for multiple technologies in fixed or mobile end-point device applications.
- 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) up to two WiFi 6E 2.4/4.9-7.2 GHz.
- Optional GNSS antenna for GPS L1, Glonass, Beidou and Galileo.
- 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 2-in-1, 3-in-1, 4-in-1 or 5-in-1.
- DC supply via GNSS RF-connector.
- ECE R118.02 approved cable.
- IP69 Ingress protection.
- IK10 rated enclosure.



SPEZIFIKATIONEN

| Elektrisch DE         |                                |               |               |               |
|-----------------------|--------------------------------|---------------|---------------|---------------|
| Modell                | ProEdge                        |               |               |               |
| Frequenz              | 617 - 960 MHz                  | 1.7 - 2.7 GHz | 3.4 - 3.8 GHz | 4.9 - 7.2 GHz |
| Antennentyp           | Mobile Disk Style Antenna      |               |               |               |
| Max. Eingangsleistung | 25 W                           |               |               |               |
| Polarisation          | Vertikal                       |               |               |               |
| Impedanz              | 50 Ω                           |               |               |               |
| Isolierung *          | > 5 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) |               |               |               |

| Mechanisch DE       |                                        |
|---------------------|----------------------------------------|
| Beachtung           | ECE R118.02 approved cables            |
| Anschlussyp         | RG 316 / RG 178, SMA(m) (all antennas) |
| Materialien         | ASA, Zamak 5                           |
| Installationsmoment | 4 ± 0.5 Nm                             |
| Farbe               | Black (RAL 9005) or White (RAL 9010)   |
| Länge               | 209 mm                                 |
| Breite              | 79 mm                                  |
| Höhe                | 69 mm                                  |
| Gewicht             | Approx. 550 g.                         |
| Montage             | 18.5 mm                                |

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.

| GNSS-Antenne                       |                                                       |
|------------------------------------|-------------------------------------------------------|
| Kreuz Polar Diskriminierung (GNSS) | > 10 dB (typ.)                                        |
| Frequenz (GNSS)                    | 1559 - 1609 MHz (GPS L1, Glonass, Beidou and Galileo) |
| Polarisierung (GNSS)               | RH Rundschreiben                                      |
| Impedanz (GNSS)                    | 50 Ω                                                  |

| GNSS LNA                        |                                                      |
|---------------------------------|------------------------------------------------------|
| Gewinn (GNSS LNA)               | 25 dB ±3 dB                                          |
| Lärmfigur (GNSS LNA)            | < 3.5 dB : 1559 - 1610 MHz<br>Typ. 2.0 dB @ 1575 MHz |
| Attenuation Aus Band (GNSS LNA) | > 25 dB, 0 - 1525 MHz<br>> 25 dB, 1640 - 3000 MHz    |
| P1dB (GNSS LNA)                 | > 6 dBm                                              |
| VSWR (GNSS LNA)                 | < 2.0:1                                              |
| Spannungsversorgung (GNSS LNA)  | 3 - 15 V DC                                          |
| Stromaufnahme (GNSS LNA)        | 20 mA                                                |

| Umwelt                    |                  |
|---------------------------|------------------|
| Betriebstemperaturbereich | -50 °C to +75 °C |
| IP Schutzklasse           | IP69             |
| Aufprallschutz            | IK10             |

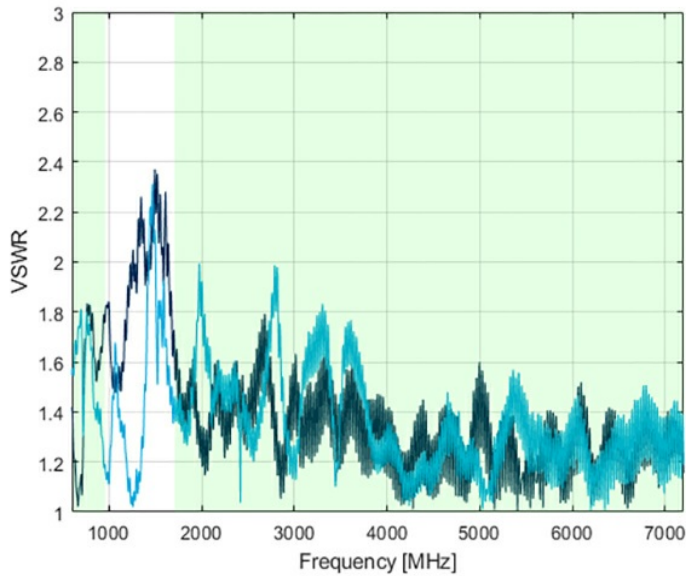
ORDERING DESIGNATIONS

Use the guide below to make the name of the ProEdge you would like to buy.

| Modell Name    | Cover color              | No. of GNSS            | No. of LTE            | No. of WIFI antennas                                               | Cable length                                                                  | Connectors on LTE                 | Connectors WIFI                                                                        | Connectors on GNSS                |
|----------------|--------------------------|------------------------|-----------------------|--------------------------------------------------------------------|-------------------------------------------------------------------------------|-----------------------------------|----------------------------------------------------------------------------------------|-----------------------------------|
| ProEdge        | -W (White)<br>-B (Black) | Blank<br>-G1 (1x GNSS) | -L2 (2x LTE antennas) | Blank (No WIFI)<br>-W1 (1x WIFI antenna)<br>-W2 (2x 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) | Blank (no WIFI)<br>/S (SMA-M)<br>/RP-S (Reverse Polarity SMA-M)<br>/FAKRA (on request) | /S (SMA-M)<br>/FAKRA (on request) |
| Naming Example |                          |                        |                       |                                                                    |                                                                               |                                   |                                                                                        |                                   |
| ProEdge        | -B                       | -G1                    | -L2                   | -W2                                                                | -P5                                                                           | -S                                | /RP-S                                                                                  | /S                                |

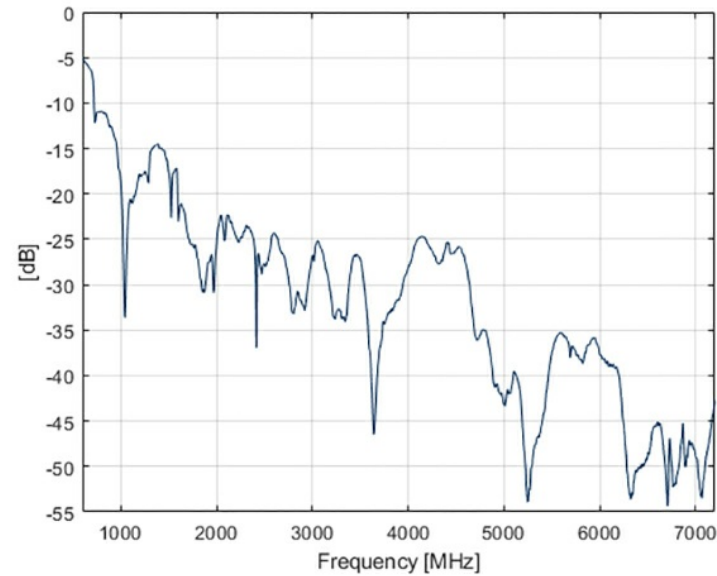
ProEdge-B-G1-L2-W2-P5-S/RP-S/S

TYPICAL VSWR CURVE 4G/5G/WIFI PORT 1 & 2



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

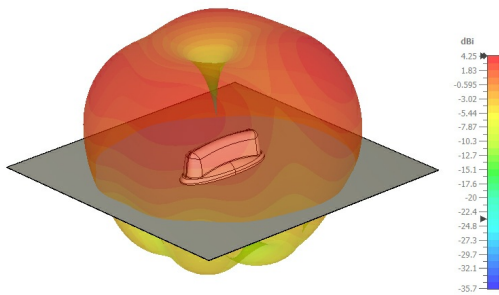
TYPICAL ISOLATION CURVE 4G/5G/WIFI BETWEEN PORT 1 & 2



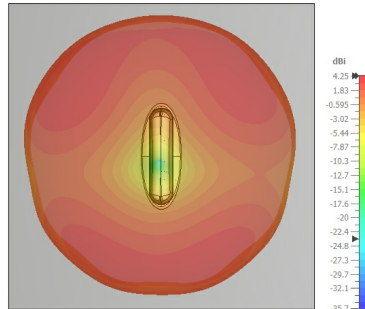
\* Measured with 5 m [196.85 in.] of LMR 195 cable on a 600 x 600 mm [23.6 x 23.6 in.] groundplane.

## TYPICAL RADIATION PATTERNS (650 - 2100 MHz)

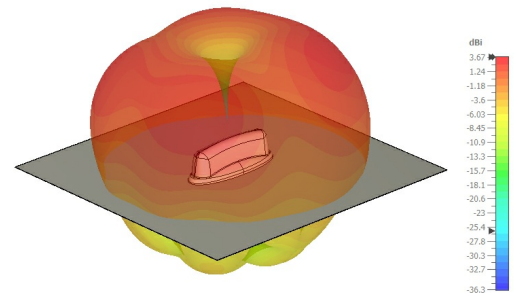
650 MHz, side view



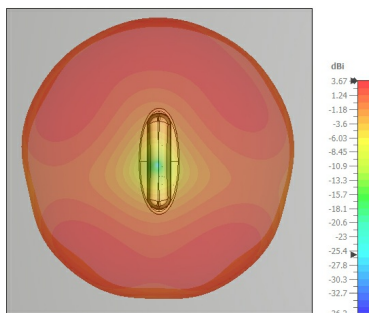
650 MHz, top view



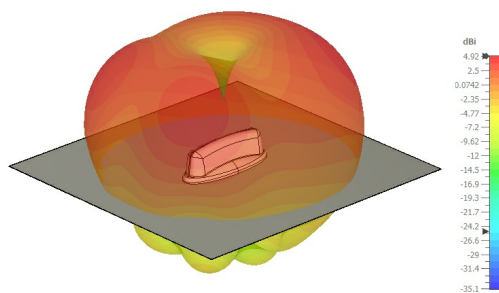
700 MHz, side view



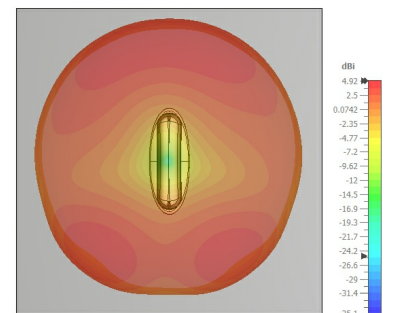
700 MHz, top view



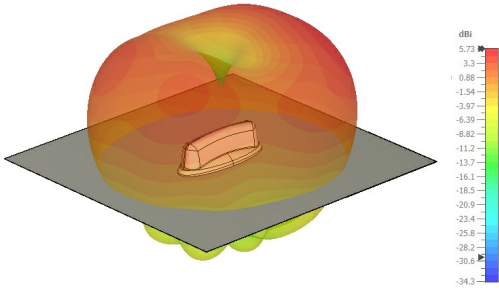
800 MHz, side view



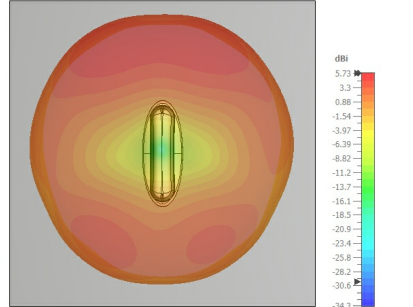
800 MHz, top view



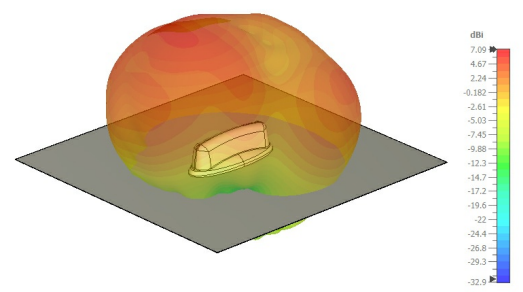
900 MHz, side view



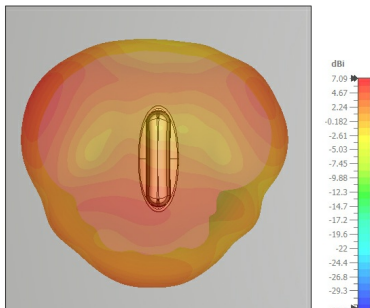
900 MHz, top view



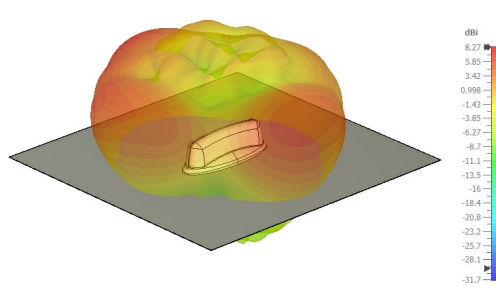
1800 MHz, side view



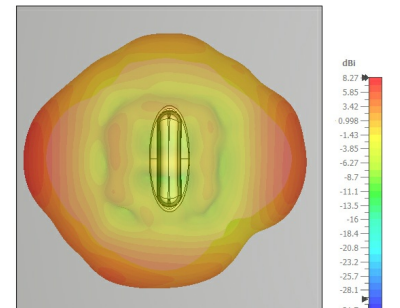
1800 MHz, top view



2100 MHz, side view

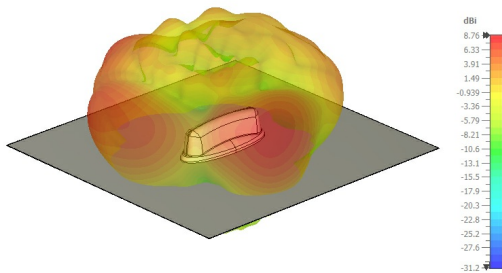


2100 MHz, top view

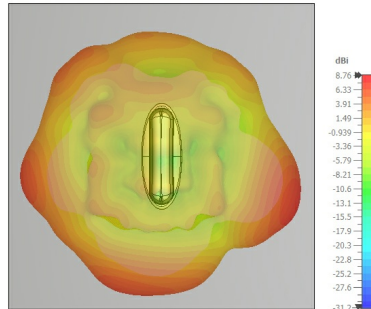


## TYPICAL RADIATION PATTERNS (2600 - 7000 MHz)

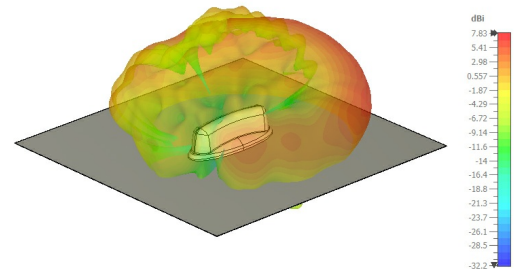
2600 MHz, side view



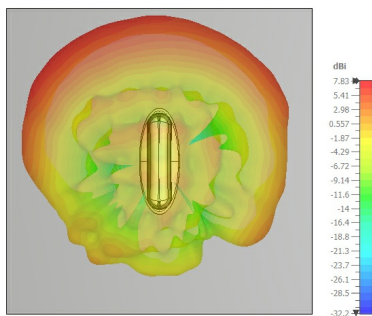
2600 MHz, top view



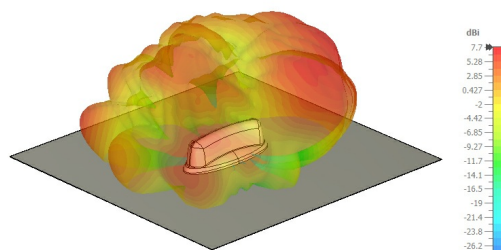
3600 MHz, side view



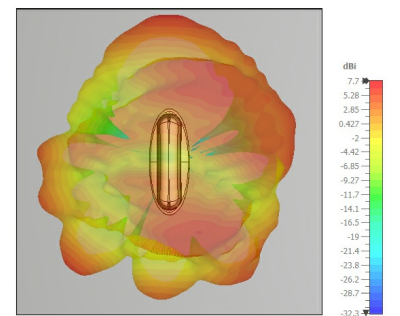
3600 MHz, top view



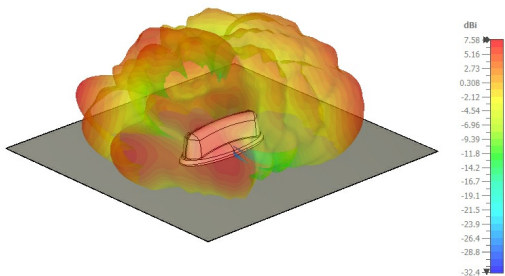
5000 MHz, side view



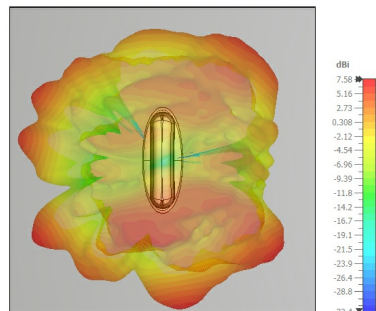
5000 MHz, top view



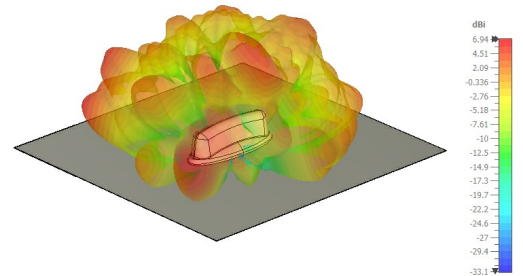
6000 MHz, side view



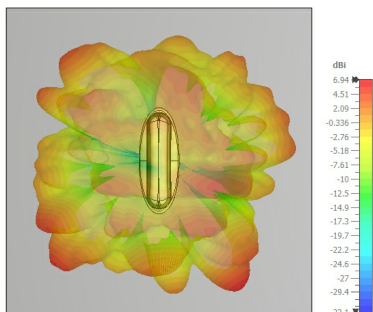
6000 MHz, top view



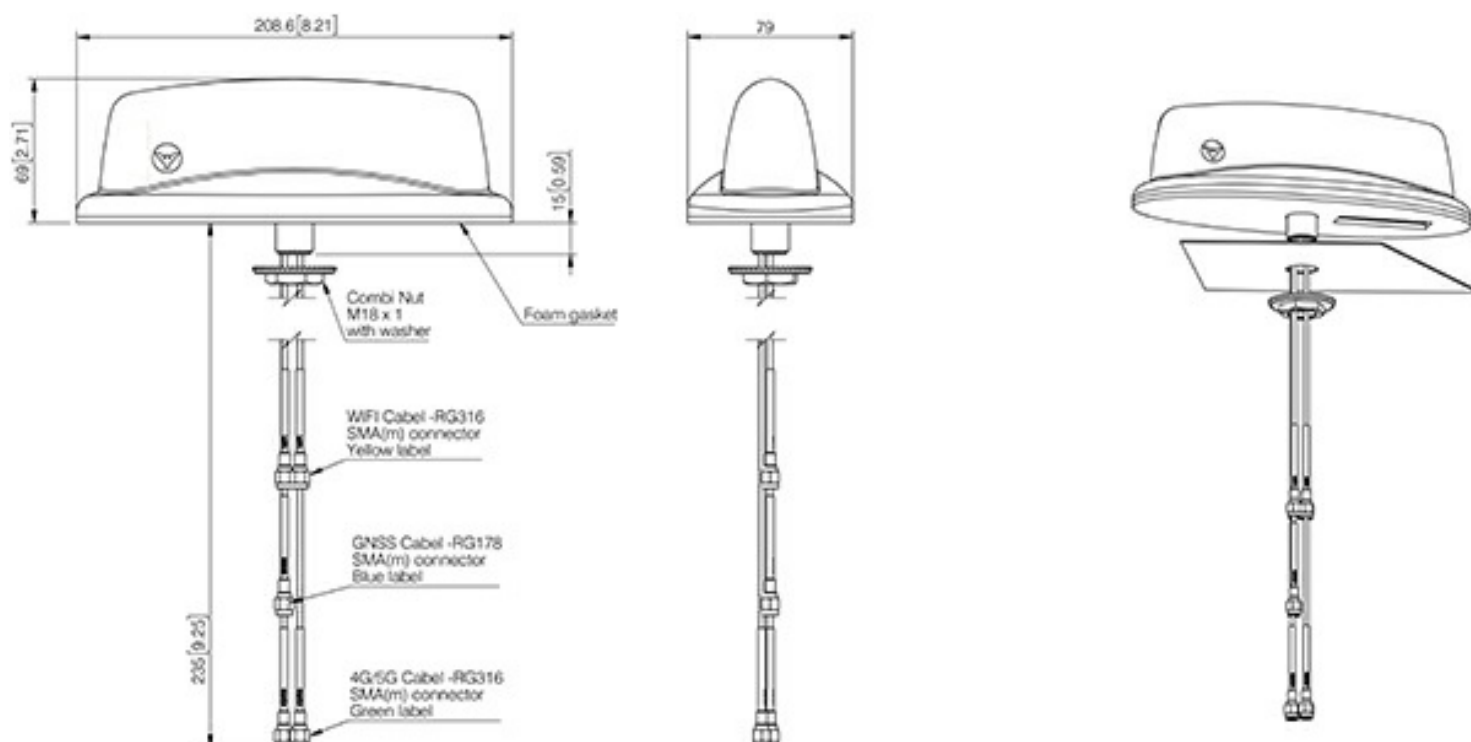
7000 MHz, side view



7000 MHz, top view



## MECHANICAL OUTLINE

Mounting instructions:

- Drill a 18.5-19 mm hole in the 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 roof.
- Tighten the combi nut with 24 mm spanner wrench.  
Recommended torque: 5 Nm.

All dimensions are given in mm[in.]

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