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 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 configuered 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.

SPECIFICATIONS

Electrical				
Model	ProEdge			
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 *	> 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)			

Mechanical	
Compliance	ECE R118.02 approved cables
Connection(s)	RG 316 / RG 178, SMA(m) (all antennas)
Materials	ASA, Zamak 5
Installation Torque	4 ± 0.5 Nm
Colour	Black (RAL 9005) or White (RAL 9010)
Length	209 mm / 8.23 in.
Width	79 mm / 3.11 in.
Height	69 mm / 2.7 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

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.

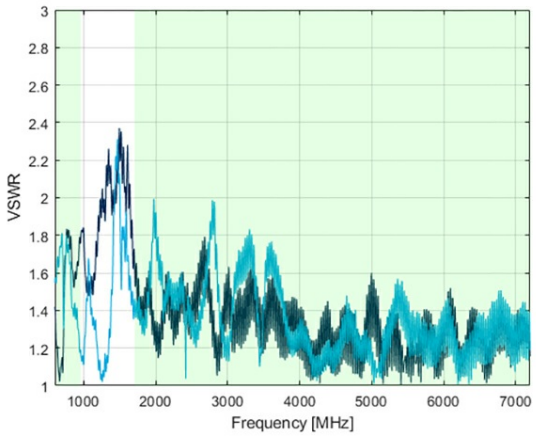
ORDERING DESIGNATIONS

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

Model 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) -B (Black)	Blank -G1 (1x GNSS)	-L2 (2x LTE antennas)	Blank (No WIFI) -W1 (1x WIFI antenna) -W2 (2x 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)	Blank (no WIFI) /S (SMA-M) /RP-S (Reverse Polarity SMA-M) /FAKRA (on request)	/S (SMA-M) /FAKRA (on request)
Naming Example								
ProEdge	-B	-G1	-L2	-W2	-P5	-S	/RP-S	/S

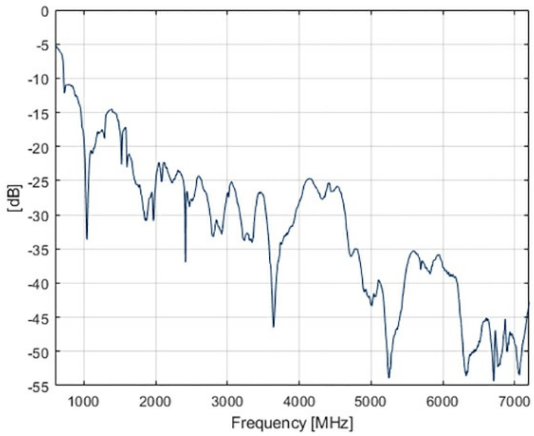
ProEdge-B-G1-L2-W2-P5-S/RP-S/S

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.

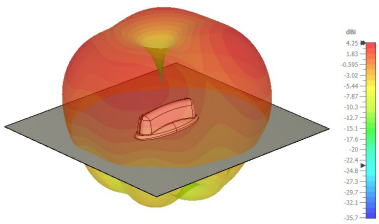
TYPICAL ISOLATION CURVE 4G/5G/WIFI BETWEEN PORT 1 & 2



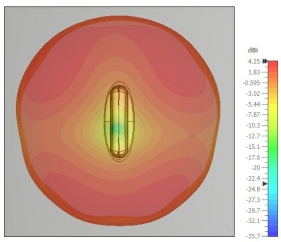
* Measured with 5 m [196.85 in.] of LMR 195 cable on a 600 x 600 mm [23.6 x 23.6 in.] groundplane.

TYPICAL RADIATION PATTERNS (650 - 2100 MHZ)

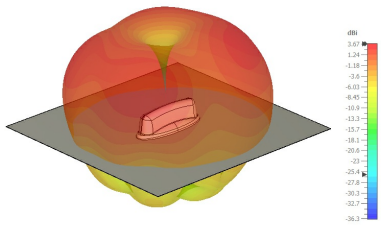
650 MHz, side view



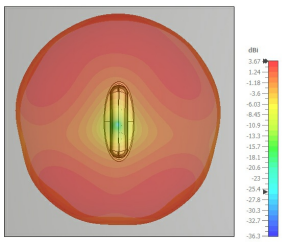
650 MHz, top view



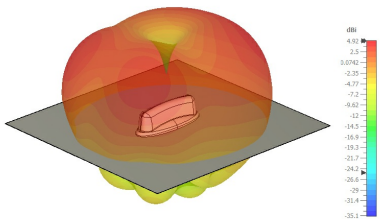
700 MHz, side view



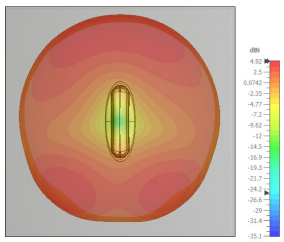
700 MHz, top view



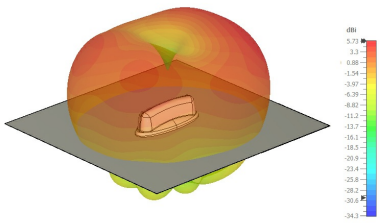
800 MHz, side view



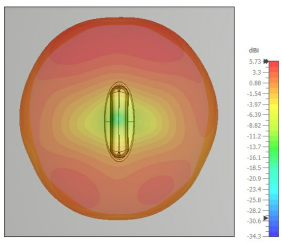
800 MHz, top view



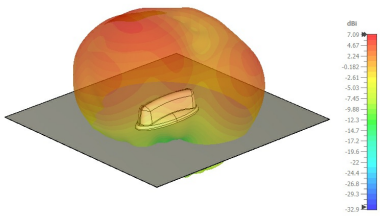
900 MHz, side view



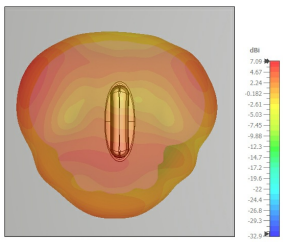
900 MHz, top view



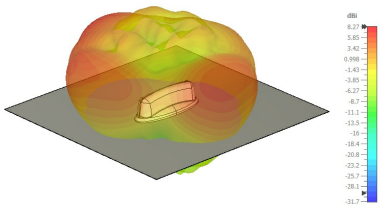
1800 MHz, side view



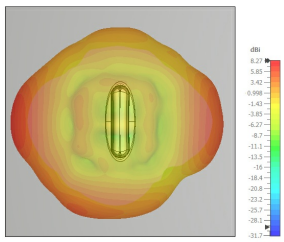
1800 MHz, top view



2100 MHz, side view

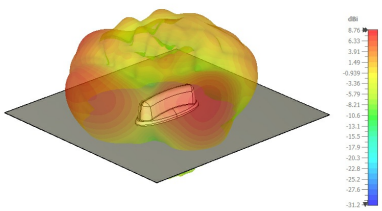


2100 MHz, top view

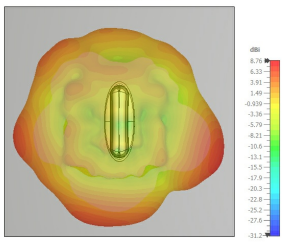


TYPICAL RADIATION PATTERNS (2600 - 7000 MHZ)

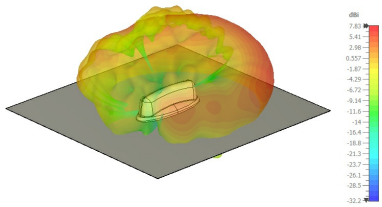
2600 MHz, side view



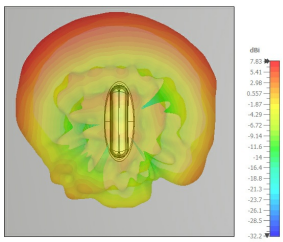
2600 MHz, top view



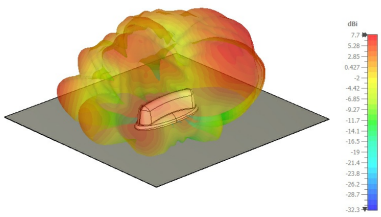
3600 MHz, side view



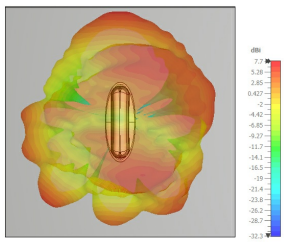
3600 MHz, top view



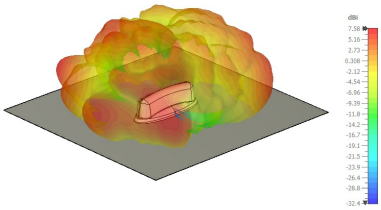
5000 MHz, side view



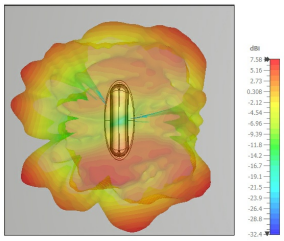
5000 MHz, top view



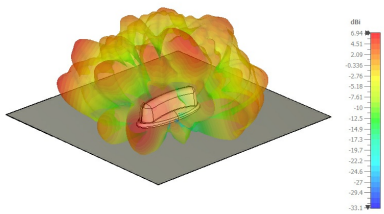
6000 MHz, side view



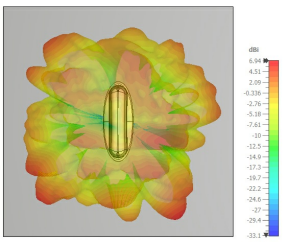
6000 MHz, top view



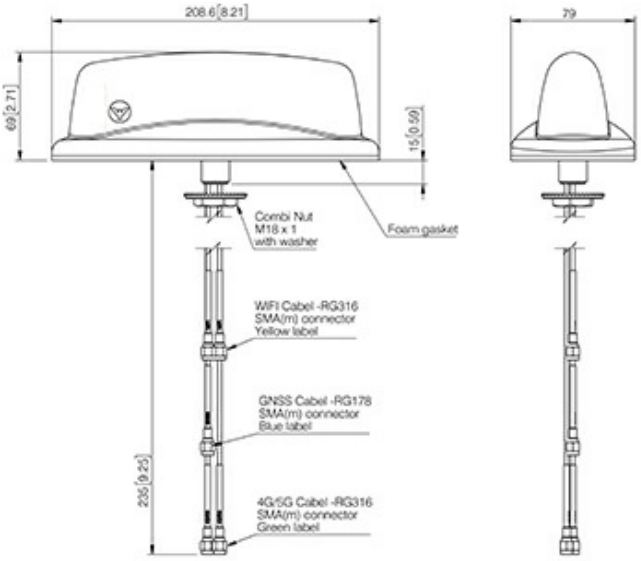
7000 MHz, side view



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.
- Thighten the combi nut with 24 mm spanner wrench.

Recommended torque: 5 Nm.

All dimensions are given in mm[in.]