

# LPCA-MIMO Family

## Low Profile Combination Antenna

The antenna family has 4 different versions:

- 1) LPCA MIMO 2G/3G/4G
- 2) LPCA MIMO 2G/3G/4G + WiFi
- 3) LPCA MIMO 2G/3G/4G + GNSS
- 4) LPCA MIMO 2G/3G/4G + WiFi + GNSS



LPCA-MIMO offer excellent RF performance in a discreet rugged, low profile design for use in telematics applications. The antenna platform is configurable enabling adaption to your antenna system need. LPCA-MIMO standard configuration contains two cellular band antennas designed for 698-960/1710-2690MHz functionality and could be configured with a LNA equipped GPS/Glonass antenna. Secondly, WiFi antenna enabling gateway or diagnostic functionality. LPCA-MIMO antenna platform is designed to support multi system solutions for; heavy vehicles, ambulances, forest machines or Internet On Board services

- 2xMIMO, 2G/3G/4G antenna
- Rugged, Low profile, height 50mm
- Configurable antenna platform
- Optional WiFi antenna
- Optional GPS/Glonass antenna with LNA
- IP67
- Cable approved acc ECE-R118

## Specifications

### Electrical

#### Cellular

Frequency band [MHz]	698 – 730	730 – 960	1710 – 2170	2500 – 2700
VSWR (typical)*	$\leq 3 : 1$	$\leq 2.7 : 1$	$< 2.1 : 1$	$< 1.9 : 1$
Peak gain*	4dBi	5.5dBi	6.5dBi	6.5dBi
Antenna efficiency*	~70%	~80%	~81%	~81%
Isolation Port 1 to 2	12 dB	16 dB	25 dB	30 dB
Correlation factor	<0.04			
Impedance	50Ω			
Polarization	Linear			
Radiation characteristics	Omnidirectional			
Max power (ambient temp. of 25°C)	10W			
DC short	Yes			

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Smarteq, based in Stockholm, Sweden, is a leading developer of antennas and antenna systems for increased availability. Smarteq aims towards the market segments industry, energy and vehicles.

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### GPS/Glonass

Frequency	1575.42MHz 1598 - 1610MHz
Impedance	50Ω
Polarization	RHCP
VSWR	≤ 2:1
Passive gain @ zenith	-3.5dBic @ fc (on 50x50mm ground plane)
Active gain	30 ± 2 dB
Noise figure	1.2dB
Supply voltage	2.5 - 6V
Typical current consumption	15 - 25mA

### WiFi

Frequencies	2400-2485MHz / 4915-5875MHz
Impedance	50Ω
Polarization	Vertical
Radiation characteristics	Omni
VSWR	1.5:1 *
Gain	2.15dBi *
Max power	10W

### Mechanical

Dimensions (L x W x H)	280 x 120 x 50mm		
Installation	Hole mount, Ø19mm Installation thickness ≤ 6mm		
Cable length/type	Cellular	215mm, RG316	
	GPS	265mm, RG316	
	WiFi	165mm, RG316	
Connector	Cellular	FAKRA (m)	Code D
	GPS	FAKRA (m)	Code C
	WiFi	FAKRA (m)	Code I
IP class	IP67		
Temperature	Storage / Operating	-40°C to +85°C	
RoHS compliant			
Certified according to 2014/53/EU Radio Equipment Directive (RED)			

\*Measurements are made on Ø1m ground plane and 0,5m cable.

**Smarteq reserves the right to change specifications without prior notice**

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