

# Smarteq™ SmartDisc™ Combi GNSS+ Low Profile Antenna

LTE 2G/3G/4G and GNSS Combination Antenna

710685, 710691, 710692, 710810, 710831, 710832, 710833



## Description

Low-profile, combination antenna that delivers reliable RF performance.

## Technologies

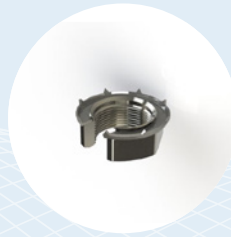
- LTE 2G/3G/4G: 698-960MHz/1710-2690MHz
- GNSS: 1559-1610MHz (GPS, Galileo, Glonass, Beidou)

## Features

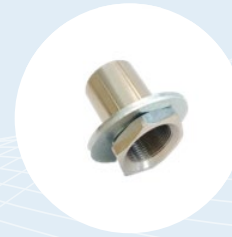
- Pre-filter LNA with dual-feed GNSS antenna
- IP67 class
- Cable approved acc ECE-R118
- Designed in Sweden



710452 – Bracket



710598 –Slitted nut

710206 – Extension nut  
(for installation thickness 25-50mm)

## Smarteq™ SmartDisc™ Combi GNSS+ Low Profile Antenna

### LTE 2G/3G/4G and GNSS Combination Antenna

The Smarteq™ SmartDisc™ Combi GNSS+ is a combination antenna supporting LTE 2G/3G/4G and GNSS (GPS/Galileo/Glonass/Beidou) offering high precision connectivity all over the world. It features a low-profile enclosure with a durable design. The antenna can be mounted on metal or non-conductive materials enabling flexible and easy installation. The Smarteq™ SmartDisc™ Combi GNSS+ antenna is ideal for vehicle and load-handling equipment utilizing fleet management, smart city, and mobile gateways. The dual-feed GNSS antenna enables excellent Axial ratio and gain, and pre-filtered LNA ensures functionality in this combination antenna.

#### Features

- LTE 2G/3G/4G: 698-960MHz/1710-2690MHz
- GNSS: 1559- 1610MHz (GPS, Galileo, Glonass, and Beidou)
- Pre-filter LNA with dual-feed GNSS antenna
- IP67 class
- Cable approved acc ECE-R118
- Optional: Isolated version with plastic thread and nut  
Long thread version
- Designed in Sweden

#### Applications

- Off-highway Vehicle
- ECU/Gateway
- M2M
- Public Safety
- Smart Metering
- Smart City
- EV-charging
- Vending machines
- Parking meters

#### Certifications



## SPECIFICATIONS



# Smarteq™ SmartDisc™ Combi GNSS+ Low Profile Antenna

## LTE 2G/3G/4G and GNSS Combination Antenna

### Standard Configurations

Model	Elements	Cable	Connector	Housing Color
710685	LTE GNSS+	0.50m RG316 0.50m RG316	FAKRA-m/D FAKRA-m/C	Black
710691	LTE GNSS+	0.50m RG316 0.50m RG316	SMA-m SMA-m	Black
710692	LTE GNSS+	2.5m RG316 2.5m RG316	SMA-m SMA-m	Black
710810	LTE GNSS+	1.20m RG316 0.65m RG316	SMA-m SMA-m	Black
710831	LTE GNSS+	0.20m RG316 0.30m RG316	FME-m SMA-m	Black
710832	LTE GNSS+	0.20m RG316 0.30m RG316	FME-m SMA-m	White
710833	LTE GNSS+	0.50m RG316 0.50m RG316	SMA-m SMA-m	White

Several options are available upon request in terms of adhesive installation, cable plugs, cable type, cable length, connectors etc. Please reach out to us for further information.

### Electrical Specifications – LTE on Ground Plane

Frequency Ranges	VSWR <sup>1</sup>	Average Gain <sup>2</sup>	Radiation Efficiency <sup>2</sup>	Impedance	Polarization	Radiation Pattern	Max. Power
698-790 MHz	5:1	0 dBi	25%	50Ω	Linear	Omnidirectional	10W
790-960 MHz	3.5:1	1.5 dBi	45%				
1710-2170 MHz	2:1	6 dBi	53%				
2500-2690 MHz	2:1	3.5 dBi	35%				

### Electrical Specifications – LTE in Free Space

Frequency Ranges	VSWR <sup>1</sup>	Average Gain <sup>3</sup>	Radiation Efficiency <sup>3</sup>	Impedance	Polarization	Radiation Pattern	Max. Power
698-790 MHz	5:1	-3.1 dBi	14%	50Ω	Linear	Omnidirectional	10W
790-960 MHz	3.5:1	-1 dBi	27%				
1710-2170 MHz	2:1	2 dBi	53%				
2500-2690 MHz	2:1	1.4 dBi	37%				

<sup>1</sup> Measured with 2m cable

<sup>2</sup> Measured on ground plane Ø1m and 10cm cable

<sup>3</sup> Measured in free space with 10cm cable

<sup>4</sup> Peak at zenith

## SPECIFICATIONS



# Smarteq™ SmartDisc™ Combi GNSS+ Low Profile Antenna

## LTE 2G/3G/4G and GNSS Combination Antenna

### Electrical Specifications – GNSS<sup>4</sup>

Frequency Range	1559-1610 MHz (GPS, Galileo, GLONASS, Beidou)	
Impedance	50Ω	
Polarization	RHCP	
VSWR	< 2.5:1	
Gain Passive (Peak Gain)	GPS	3.0 dBic
	Galileo	2.0 dBic
	GLONASS	1.5 dBic
	Beidou	2.0 dBic
Gain Active	30 ± 1 dB	
Noise Figure	< 2.5 dB with pre-filter	
Out-of-Band Rejection	< 960 MHz	> 60 dB
	>1710 MHz	> 60 dB
Compression Point	-20 dBm	
Supply Voltage	2.5 - 6V (voltage regulation in LNA)	
Current Consumption	8 - 10mA	

### Mechanical and Environmental Specifications

Dimensions (D x H)	98 x 27,5mm
Weight	~190g
Installation	Hole mount with center screw Installation surface thickness < 3.5mm Hole dimension Ø19mm Mounting torque 6-8Nm
Cable Length and Type	RG316
Material	PC / PBT / Aluminum alloy
Color	Black (options white available)
Operating/Storage Temperature	-40°C to +85°C
Certifications	RoHS REACH ECE-R118 certified cables
IP Class	IP67

<sup>1</sup> Measured with 2m cable

<sup>2</sup> Measured on ground plane Ø1m and 10cm cable

<sup>3</sup> Measured in free space with 10cm cable

<sup>4</sup> Peak at zenith

**ACCESSORIES**

# Smarteq™ SmartDisc™ Combi GNSS+ Low Profile Antenna

## LTE 2G/3G/4G and GNSS Combination Antenna

### Extensions Cables – FAKRA

Cable Type	Part Number	Connector 1 / 2	Gender 1 / 2	Code
<b>LL58</b>				
2,5 meter	710606	FAKRA/SMA	Female/Male	Z
	710608	FAKRA	Female/Male	D
	710609	FAKRA	Female/Male	C
	710610	FAKRA	Female/Male	I
	710668	FAKRA/RP SMA	Female/Male	I
	710727	FAKRA/SMA	Female/Male	D
	710729	FAKRA/SMA	Female/Male	C
5 meter	710617	FAKRA/SMA	Female/Male	Z
	710611	FAKRA	Female/Male	D
	710612	FAKRA	Female/Male	C
	710613	FAKRA	Female/Male	I
	710669	FAKRA/RP SMA	Female/Male	I
	710728	FAKRA/SMA	Female/Male	D
	710730	FAKRA/SMA	Female/Male	C

### Extension Cables – SMA

Cable Type	Part Number	Connector	Gender	Color
<b>LL58</b>				
3 meter	201417-1	SMA	Female/Male	White
5 meter	201417-2	SMA	Female/Male	White
	201417-7	SMA	Female/Male	Black
10 meter	201417-3	SMA	Female/Male	White
<b>Low Loss</b>				
3 meter	707220	SMA	Female/Male	Black
5 meter	710298	SMA	Female/Male	Black
10 meter	707222	SMA	Female/Male	Black

### Accessories – Other

Part Number	
710452	Angled Bracket, white
710598	Slitted nut
710206	Extension nut

**CONTACT US**

**For more information about  
this product contact your  
sales representative or visit  
> [pctel.com/antenna-products](https://pctel.com/antenna-products)**

### **Solving Complex Wireless Challenges**

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