

AllDisc Combi Antenna

4 in 1: MIMO LTE / 5G, WiFi 6E, GNSS+



AllDisc Combi MIMO antenna platform can be configured to support several antenna systems; Cellular MIMO 2x2 LTE / 5G, GPS/GLONASS/Galileo or MIMO Wifi-6E in a low profile casing with durable design IP6K9K. It is ground plane independent and enables flexible and easy installation, making it perfect for fleet management, track and trace, navigation, cargo handling and V2X. Dual feed GNSS antenna enables excellent Axial ratio and gain. Pre-filtered LNA ensures functionality in a combination antenna. The superior RF performance enables high connectivity and throughput. The AllDisc has been successfully tested for durability according to Volkswagen automotive test standards.

Features

- 5G and Wifi 6E
- Cellular Main: 617-960 / 1710-2690MHz and 3300-3800MHz
- Cellular Secondary/ WIF-6E: 1427-7200MHz
- GNSS: GPS, Galileo, Glonass, BeiDou
- LNA gain 30dB with pre-filter
- IP6K9K class
- Approved according to ECE-R118
- Designed in Sweden with design registration

Applications

- Public safety
- Track and trace
- Fleet management
- Navigation / Positioning
- V2X
- Cargo/load handling

Specifications

Electrical

Cellular Main LTE/5G

Frequency band [MHz]	617 – 698	698 – 960	1710 – 2690	3300 - 3800
VSWR* (typical)	$\leq 3 :1$	$\leq 2.7 :1$	$< 2.1 :1$	$< 1.9 :1$
Peak gain* [dBi]	1dBi	5.5dBi	4.5dBi	6.5dBi
Antenna efficiency*	~40%	~65%	~77%	~66%
Isolation Port 1 to 2	12 dB	16 dB	25 dB	30 dB
Correlation factor	<0.04			
Impedance	50 Ω			
Polarization	Linear			
Radiation characteristics	Omnidirectional			
Max power (ambient temp. of 25°C)	10W			
DC short	Yes			
Impedance	50 Ω			
Polarization	Vertical			

2x Cellular Secondary / Wifi 6E

Frequency band [MHz]	1427-1510	1710-2690	3300-5000	4900-7200
VSWR* [typical]	2:1	2:1	2:1	2:1
Peak gain' [dBi]	4,5	6	6.5	9,5
Antenna efficiency*	70%	75%	70%	70%
Isolation Port 1 to 2				
Correlation factor	<0.04			
Impedance	50 Ω			
Polarization	Linear			
Radiation characteristics	Omnidirectional			
Max power (ambient temp. of 25°C)	10W			
Impedance	50 Ω			
Polarization	Vertical			

GNSS

Frequencies	1559 - 1610MHz	
Impedance	50Ω	
Polarization	RHCP	
VSWR	< 2.0:1	
Gain Passive (peak gain)	1585MHz	4,5dBic
	GPS	3.0dBic
	GLONASS	2.0dBic
	BEIDOU	1.5dBic
	GALILEO	2.0dBic
Gain Active	30 ± 1dB	
Noise figure	< 2.5dB with pre-filter	(1.2dB no pre-filter)
Out of band rejection	< 960MHz	> 60dB
	> 1710MHz	> 60dB
Compression point	-20 dBm	
Supply Voltage	2.4-6V	
Current Consumption	8-10mA	

Mechanical

Dimension (dxh)	138 x 55mm	
Installation	Hole mount with center screw	
	Hole dimension Ø19mm	
	Installation thickness ≤ 8.5mm	
	Min. installation radius 2000mm	
Cable	RG316	
Weight	~200g	
IP class	IP6K9K	
Temperature	Storage	-40°C to +85°C
	Operating	-40°C to +85°C

Part number	Radio System	Cable length (m)	Connector	Code
710679	LTE Main	0.20	FAKRA-m	D
	GNSS+	0.25		C
	LTE Sec / WIFI 6E	0.30		I
	LTE Sec / WIFI 6E	0.35		I
710680	LTE Main	0.20	FAKRA-m	D
	LTE Sec / WIFI 6E	0.30		I
	LTE Sec / WIFI 6E	0.35		I
710681	LTE Main	0.20	FAKRA-m	D
	LTE Sec / WIFI 6E	0.30		I

Accessories

Part number

710452	Alldisc Bracket White
710598	Slitted nut
710206	Extension nut

Extension cables

Part number	Cable LL58	Connector	Gender	Code
710606	2.5m	FAKRA/SMA	Female/Male	Z/
710608	2.5m	FAKRA	Female/Female	D
710609	2.5m	FAKRA	Female/Female	C
710610	2.5m	FAKRA	Female/Female	I
710607	5.0m	FAKRA/SMA	Female/Male	Z/
710611	5.0m	FAKRA	Female/Female	D
710612	5.0m	FAKRA	Female/Female	C
710613	5.0m	FAKRA	Female/Female	I

Other

RoHS compliant

REACH compliant

Certified according to 2014/53/EU Radio Equipment Directive (RED)

Type approval: E5 (ECE R10.5)

Smarteq reserves the right to change specifications without prior notice.

