DATASHEET COMBINATION ANTENNAS

Smarteq™ LPCA 450 LTE and 5G Low Profile Combination Antenna

LPCA 450 wide / LPCA 450 wide MIMO LTE

710761, 710782

Description

Low profile antenna with a single port 450 MHz and 5G FR1 frequencies in the Smarteq™ LPCA rugged antenna platform designed to support a wide range of applications.

Optional second 5G port

Technologies

- LTE 450 MHz bands
- B31, B72, B73 (450-470 MHz)
- B87, B88 (410-430 MHz)
- Cellular 5G (698-960/1710-5950MHz)
- Tetra

Features

- Single port 380-470MHz and 5G (698-960/1710-5950MHz)
- Low profile, height 50mm
- Rugged
- IP67
- Cable approved acc ECE-R118
- Designed in Sweden

PCTEL an Amphenol company

Smarteq™ LPCA 450 LTE and 5G Low Profile Combination Antenna

LPCA 450 wide / LPCA 450 wide MIMO LTE

The Smarteq™ LPCA 450 LTE and 5G is a rugged, low profile combination antenna designed for use in telematics applications. The antenna is the perfect choice in applications requiring reliable 450 LTE and 5G communication such as power stations, buses, heavy vehicles, ambulances, forest machines and other M2M applications.

Available Models

- **LPCA 450 wide (710761)** – single cable (contains a single antenna element combining LTE450 MHz and 5G antenna)
- **LPCA 450 wide MIMO LTE (710782)** – two cables (contains two antenna elements: LPCE 450 wide and 5G antenna)

Features

- 380-470 MHz + 5G
- Rugged
- IP67
- Cable approved acc ECE-R118

Applications

- Power stations
- Buses
- Heavy Vehicles
- Ambulances
- Forest Machines
- M2M

Certifications

SPECIFICATIONS

Smarteq™ LPCA 450 LTE and 5G Low Profile Combination Antenna

LPCA 450 wide / LPCA 450 wide MIMO LTE

Selection of LPCA Models

Part Number	Description	Connector Type
710761	**LPCA 450 wide:** single cable (contains a single antenna element combining LTE450 MHz and 5G antenna)	SMA-M (450+5G)
710782	**LPCA 450 wide MIMO LTE:** two cables (contains two antenna elements: LPCE 450 wide and 5G antenna)	SMA-M (450+5G), SMA-M (5G)

Electrical Specifications (All Models)

	Frequency Ranges				
Main 450 + 5G (Free Space)	380-470 MHz	698-790 MHz	790-960 MHz	1710-2690 MHz	3400-5950 MHz
Peak Gain	2.53 dBi	2 dBi	3 dBi	7.5 dBi	7.9 dBi
Efficiency	85%	69%	53%	78%	75%
VSWR	≤ 2.1:1	≤ 3:1	≤ 4:1	≤ 2:1	≤ 2:1
Nominal Impedance	50Ω				
Polarization	Linear				
Max. Power	10W				
Main 450 + 5G (1m Ground Plane)					
Peak Gain	1.7 dBi	3 dBi	4.2 dBi	4.8 dBi	3 dBi
Efficiency	45%	63%	49%	52%	25%
VSWR	≤ 6:1	≤ 3:1	≤ 4:1	≤ 2:1	≤ 2:1
Nominal Impedance	50Ω				
Polarization	Linear				
Max. Power	10W				

	Frequency Ranges			
Secondary 5G (Free Space)	698-790 MHz	790-960 MHz	1710-2690 MHz	3400-5950 MHz
Peak Gain	1.8 dBi	3 dBi	6.8 dBi	5 dBi
Efficiency	68 %	78 %	80%	75 %
VSWR	≤ 4:1	≤ 3:1	≤ 2.6:1	≤ 4.4:1
Nominal Impedance	50Ω			
Polarization	Linear			
Max. Power	10W			
Secondary 5G (1m Ground Plane)				
Peak Gain	4.5 dBi	4.8 dBi	6.8 dBi	8 dBi
Efficiency	88%	88%	80%	72%
VSWR	≤ 3:1	≤ 4:1	≤ 2:1	≤ 2:1
Nominal Impedance	50Ω			
Polarization	Linear			
Max. Power	10W			

Mechanical and Environmental Specifications (All Models)

Dimensions (L x W x H)	280 x 120 x 50mm	
Installation	Hole mount, Ø19mm; Installation thickness ≤ 6mm	
Connector	SMA Male SMA Male	450+5G 5G
Cable	RG316 0,5 m RG316 0,5 m	450+5G 5G
Color	Black, Green	
IP Class	IP67	
Temperature (Storage / Operating)	-40°C to +85°C / -40°C to +85°C	

CONTACT US

For more information about this product contact your sales representative or visit

> pctel.com/antenna-products

Solving Complex Wireless Challenges

PCTEL, an Amphenol company, is a leading global provider of wireless technology solutions, including purpose-built Industrial IoT devices, antenna systems, and test and measurement products. Trusted by our customers for decades, we solve complex wireless challenges to help organizations stay connected, transform, and grow.

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