



PANORAMA  
ANTENNAS

## Transportation



PRODUCT CATALOGUE

**IP69K  
RATED**



## Great White 5G

### FEATURES

2x2 MiMo 5G/4G/3G/2G LTE  
617-960 / 1710-6000MHz  
Optional Integrated GPS/GNSS  
Up to 6x6 MiMo WiFi 2.4/5.0GHz  
UN118 Cables  
IK10 Rated

The LPMM/LGMM range provides effective 2x2 MiMo, LTE and WiFi operation with excellent isolation and low correlation coefficient. Available in Black or White. Optional GPS/GNSS module incorporates advanced filtering.

Part no.	GPS/ GNSS	MiMo LTE	MiMo WiFi
LGMHM-6-60-24-58	●	2x2	6x6
LGMQM-6-60-24-58	●	2x2	4x4
LGMTM-6-60-24-58	●	2x2	3x3
LGMDM-6-60-24-58	●	2x2	2x2
LGMM-6-60	●	2x2	
LPMM-6-60		2x2	

\*Part numbers refer to the white version only

Bus & Tram

## 5G Dome Antenna

### FEATURES

4x4 MiMo 5G/4G LTE  
617-960 / 1710-6000MHz  
Integrated GPS/GNSS  
Up to 6x6 MiMo WiFi 2.4/5.0GHz  
UN118 Cables  
IK10 Rated

The LPMM4/LGMM4 enables multiple antenna functions to be fitted using a single hole mount. Designed for use with Advance Pro routers that require a 4x4 5G/4G/LTE MiMo antenna system. Available in Black or White. Optional GPS/GNSS module incorporates advanced filtering.

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Part no.	GPS/ GNSS	MiMo LTE	MiMo WiFi
LGMHM4-6-60-24-58	●	4x4	6x6
LGMQM4-6-60-24-58	●	4x4	4x4
LGMTM4-6-60-24-58	●	4x4	3x3
LGMDM4-6-60-24-58	●	4x4	2x2
LGMM4-6-60	●	4x4	
LPMM4-6-60		4x4	

\*Part numbers refer to the white version only

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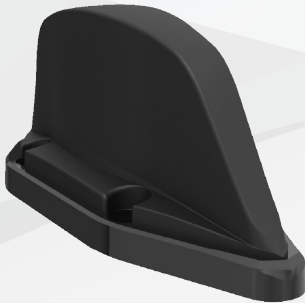
# Heavy Duty MiMo Transit Antenna

## FEATURES

- 2x2 MiMo 5G/4G/3G/2G LTE
- 698-6000MHz
- Standard rail four hole fixing
- Optional integrated GPS/GNSS antenna
- Fully rail industry certified

The TRNM is a new generation train antenna designed to meet the most stringent railway standards. It provides coverage for all cellular, LTE and WiFi frequencies for various applications.

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Part no.	GPS/ GNSS	MiMo LTE
TRNM-7-60		2x2
TRNMG-7-60	•	2x2

Train & Tram

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# Heavy Duty SiSo Transit Antenna

## FEATURES

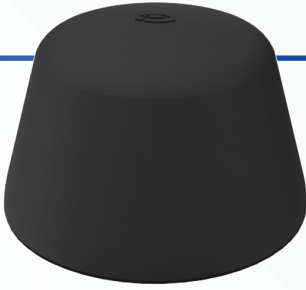
- 5G/4G/3G/2G LTE or UHF
- 698-6000MHz or 380-520MHz (Banded)
- Standard rail four hole fixing
- Optional integrated GPS/GNSS antenna
- Fully rail industry certified

The TRNC series antenna has been designed specifically to meet railway engineering standards and features a DC grounded radiating element.

The TRNC antenna has a heavy duty cast aluminium base and is housed in a high impact, flame retardant radome moulded in Ultem which provides ingress protection to IP69K.

Part no.	GPS/ GNSS	LTE	WiFi	UHF
TRNC-7-60		•	•	
TRNCG-7-60	•	•	•	
TRNC-TET/S4				•
TRNCG-TET/S4	•			•

Train & Tram



# The Fez Antenna

## FEATURES

4G/3G/2G LTE

698-2700MHz

Optional 1x or 2x2 MiMo WiFi

Optional integrated GPS/GNSS antenna

Ground plane independent

The Fez antenna series is a range of low profile antennas incorporating a combination of wideband cellular element covering 700-2700MHz frequencies along with an active GPS/GNSS antenna and a single or dual band WiFi element all in a robust compact housing.

## IP66 RATED

Part no.	GPS/GNSS	LTE	WiFi	MiMo WiFi
LPE-7-27		●		
LGE-7-27	●	●		
LGE-7-27-24-58	●	●	●	
LGEM-7-27-24-58	●	●		2x2

Bus

# Low Profile UHF Antenna

## FEATURES

380-520 (Banded) / 800MHz

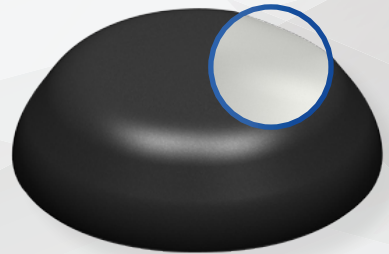
Rugged design for heavy duty applications

Easy installation

Ground plane Independent

The Panorama low profile UHF antenna range has been designed to perform under extreme pressure. The radome is designed to withstand high impacts while maintaining its functionality.

## IP65 RATED



Part no.	Frequency (MHz)
LP390	380-400
LP420	410-430
LP440	430-450
LP460	450-470
LPL-S5	806-870

\*LG versions available with GPS/GNSS

\* White version upon request

Bus

# VHF Low Profile Antenna

## FEATURES

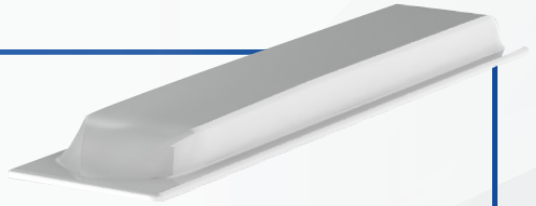
- 140-200MHz (Banded)
- Rugged design
- Heavy duty application
- Efficient omni-directional radiation pattern
- Ground plane independent

The VHF Low Profile Antenna range can be tuned to operate at any frequency between 140-200MHz and is the perfect solution for bus and tram networks. An active GPS/GNSS gain can be incorporated as an option.



Part no.	Frequency (MHz)
LPV	140-200 (Tuned)

Bus



# Low Profile Multi-function VHF Antenna

## FEATURES

- 2x2 MiMo 5G/4G/3G/2G LTE 698-6000MHz
- 2x2 MiMo WiFi 2.4/5.0GHz 136-208MHz (Banded)
- Integrated GPS/GNSS
- Rugged design
- Heavy duty application
- Ground plane independent

The LG[X][VAR]-7-60-[X]W supports VHF with wide bandwidth as well as 2x2 MiMo wideband LTE/ Cellular, 2x2 MiMo WiFi and GPS/GNSS. The antenna can be supplied with 1 or 2 24mm (1") threaded mounting bushes.

Part no.	GPS/ GNSS	MiMo LTE	MiMo WiFi	VHF
LG[X][VAR]-7-60-[X]W	•	2x2	2x2	•

Bus



# Low Profile Internal MiMo WiFi

## FEATURES

- Up to 4x4 MiMo WiFi 2.4/5.0GHz
- Ceiling mount
- Low profile, robust housing
- EN50155, EN45545-2 & UN ECE 118.01

The CM(x)-24-58 range provides a compact, robust internal WiFi antenna with up to 4x4 MiMo function. It is ground plane independent and has integral ultra-low loss coax cables with pre-fitted connectors. The antenna compliance ensures that it is suitable for use in buildings, railway rolling stock and other transportation modes.

Part no.	MiMo WiFi
CM2-24-58	2x2
CM3-24-58	3x3
CM4-24-58	4x4

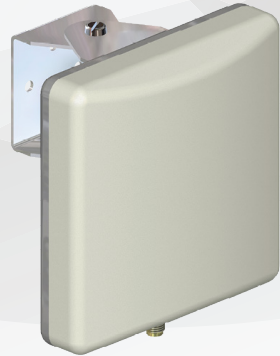
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# SiSo WiFi Panel Antenna

## FEATURES

- Covers 2.4 & 5GHz for WiFi
- High gain directional antenna
- Ideal WiFi coverage extender

The W24-58-CP-9 is a dual band WiFi antenna covering 2.4 & 5GHz bands. The antenna can be used internally or externally and has 60° beam width in both azimuth and elevation planes.



Part no.	WiFi
W24-58-CP-9	●

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# Stingray SiSo Antenna

## FEATURES

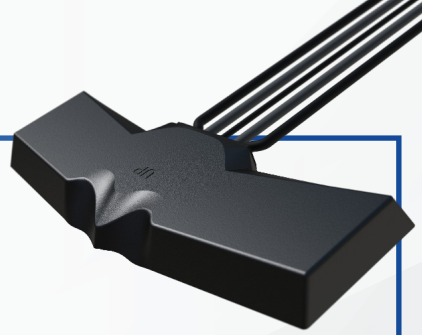
Cellular, WiFi and GPS/GNSS included  
 Dashboard or windshield mount  
 Suitable for M3 category vehicles  
 (UNECE Reg 118)

This internal antenna offers a “3 in 1” solution ideal for telematics or other vehicle communications, where the antenna needs to be fitted discretely or for a “no hole” installation. The compact housing incorporates antennas for LTE / Cellular, Dual Band WiFi and GPS/GNSS.

Meeting the requirements of UNECE Regulation R 118, the antenna is suitable for use in M3 Category vehicles (Transportation). The antenna housing is UV resistant and flame retardant, while the integrated coax cables are flame retardant, low smoke specification.



Part no.	Termination
GPSCO-7-27-24-58	SMA
GPSCOF-7-27-24-58	FAKRA



# MiMo Dash Mount

## FEATURES

2x2 MiMo 5G/4G/3G/2G LTE  
 Optional 1x or 2x2 MiMo WiFi  
 Optional integrated GPS/GNSS  
 Mount on or under dashboard

The BATG antenna is ideal for when an external antenna cannot be fitted. It includes 2x2 MiMo for LTE / Cellular, either a single or 2x2 MiMo for WiFi and a GPS/GNSS antenna. It can be fitted on any non-conductive surface and with integral low loss cables and is an easy, quick, ‘plug and play’ solution which meets requirements of UN ECE 118.01; making it suitable for transportation vehicles.

Part no.	GPS/ GNSS	MiMo LTE	MiMo WiFi	WiFi
BATM-7-60		2x2		
BATGM-7-60	●	2x2		
BATGM-7-60-S24-58	●	2x2		●
BATGM-7-60-24-58	●	2x2	2x2	

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## MiMo LTE Panel Mount

### FEATURES

- 2x2 MiMo 5G/4G/3G/2G LTE  
698-3800MHz
- Optional integrated GPS/GNSS antenna
- Robust and cost effective
- Magnetic version available
- Low profile and weatherproof housing

The LP[G]AM-BC3G-26 range has been designed to provide MiMo LTE / Cellular antenna function for IOT and M2M applications. The compact, robust low-profile housing is weatherproof and contains two antenna elements with effective isolation.

Part no.	GPS/ GNSS	MiMo LTE	Magnetic
LPAM-BC3G-26		2x2	
LGAM-BC3G-26	●	2x2	
LPAMM-BC3G-26		2x2	●
LGAMM-BC3G-26	●	2x2	●

Vending Machine | Card Machine

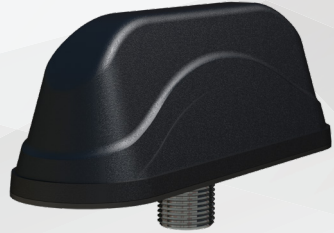
## MiMo LTE & WiFi Panel Mount

### FEATURES

- 2x2 MiMo 5G/4G/3G/2G LTE  
698-3800MHz
- 2x2 MiMo WiFi 2.4/5.0GHz
- Optional integrated GPS/GNSS
- Robust and cost effective solution
- Low profile design

The LP[G]AM-7-27-24-58 has a compact housing and is ideal for vending machines, payment terminals and other M2M type applications.

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Part no.	GPS/ GNSS	MiMo LTE	MiMo WiFi	Magnetic
LGAM-7-27-24-58	●	2x2	2x2	
LPAM-7-27-24-58		2x2	2x2	
LGAMM-7-27-24-58	●	2x2	2x2	●
LPAMM-7-27-24-58		2x2	2x2	●

Vending Machine | Card Machine



# Ultra Low Profile Cellular

## FEATURES

- Ultra low profile dual band antenna
- Mounting bush or screw fitment
- Robust, tamper proof design

The LPAB range of antennas combine ergonomic style with sophisticated engineering. The low profile housing gives a high degree of vandal resistance making it perfect for vending machines or other telemetry devices in exposed locations that require reliable communications.



Part no.	Frequencies (MHz)
LPAB-DE	880-960/1710-1880
LPAB-AP	824-896/1880-1990
LPAB-868-2400	868/2400
LPAB-868-3G	868/1920-2170

Vending Machine | Card Machine



# Low Profile External MiMo WiFi

## FEATURES

- Up to 4x4 MiMo WiFi 2.4/5.0GHz
- Rugged Low Profile Design
- Ground plane independent
- Optional integrated GPS/GNSS
- EN50155 certified

With up to four omni-directional dual band WIFI elements in a single housing, the LPM/LGM series is an ideal solution for WiFi modems and routers requiring MiMo connectivity.

The antenna features isolation and correlation factors for effective MiMo function.

Part no.	MiMo WiFi
LPM2-24-58	2x2
LPM3-24-58	3x3
LPM4-24-58	4x4

\*GPS version upon request

Router

# Bracket Mount SiSo LTE



## FEATURES

5G/4G/3G/2G LTE

698-3800MHz

Easy Installation

Wall or mast mounting

Compact design

The B4BE range is fully weather proof and is omni-directional, providing simple installation in an elevated or external location to achieve optimum network signal. The B4BEFR version is a UN ECE 118.01 and EN45545-2 approved antenna with a CS29 flame retardant cable.

Part no.	Colour	Cable
B4BEW-7-27-2SP	White	2 (6'5")
B4BEW-7-27-5SP	White	5 (16' 4")
B4BE-7-27-2SP	Black	2 (6'5")
B4BE-7-27-5SP	Black	5 (16' 4")
B4BEFR-7-27-2SP	Black	2 (6' 5")

Vending Machine | Card Machine

# Internal SiSo LTE Antenna

## FEATURES

4G/3G/2G LTE

698-2700MHz

Simple adhesive pad fitment

Can be fitted on glass or plastic panel

The EF-BC3G-26 antenna is a low cost single 4G/3G/2G product that can be fitted on any non-conductive surface. It is typically fitted on a window and with correct spacing, a pair can be installed to provide a covert 2x2 MiMo antenna system.



Part no.	Termination
EF-BC3G-26-3SP	SMA Male

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# M2M & IoT SiSo LTE Antenna

## FEATURES

4G/3G/2G LTE  
698-2700MHz

Low profile, vandal & tamper proof design  
Simple adhesive pad or screw fix installation  
Suitable for mounting on any surface

LPW provides a robust, effective antenna solution for M2M and IoT applications. The antenna is ground-plane independent, omni-directional and covers all cellular and LTE bands, making it a universal and versatile solution. The efficient design of the antenna ensures a reliable network connection even in poor coverage areas.



Part no.	Termination
LPW-BC3G-26-2SP	SMA Male

Vending Machine | Card Machine



# Wideband Cellular Combiner

## FEATURES

Connect two cellular devices into one antenna or connect two antennas to one cellular device

The DBLC-C3G-2N is a low cost, compact, 2 port, 3dB combiner with low insertion loss. It provides around 20dB isolation between the split ports, designed to allow two cellular devices to use a single antenna.

Part no.	Termination
DBLC-C3G-2N	N Sockets

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# Cables

We offer various extension cables and adapter cables. Our FRZH type cables are UN118.01 and EN45545-1/2 certified. The cables are flame retardant, low smoke and halogen-free. For project quantity, we can provide custom length and connector configurations.

Cable Type	Attenuation (per 10m)	Outer diameter (mm)
CS23 Type for VHF/ UHF / GPS	2.5 dB @ 400 MHz, 4 dB @ 1GHz, 5.8 dB @ 2GH	5 (0.2" in)
CS29 Type for Cellular	3dB @ 400MHz, 5dB @ 1GHz, 7.5dB @ 2GHz	5 (0.2" in)
CS32 Type - for WiFi	2.5dB @ 400 MHz, 4dB @ 1 GHz, 5.8dB @ 2GHz, 11dB @ 6GHz	10.29 (0.4" in)

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