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# LTE & Cellular

PRODUCT CATALOGUE

### **Over 70 Years of Experience**

Panorama Antennas is a privately owned family business, now in its third generation, and is a leading designer and manufacturer of antennas for wireless communication. Established in London in 1947, Panorama started life as a manufacturer of consumer products and buoyed by huge demand in 1952, began manufacturing TV components and antennas. With the transistor radio trend of the 1960s, Panorama's expert knowledge swiftly led us into the manufacturing of communication antennas.

Throughout the 70s and 80s, Panorama evolved to become the first specialized communication antenna manufacturer in the UK, developing a range of cellular antennas to coincide with the launch of the mobile phone network in Britain. 1990 was a year of huge change as Panorama found itself revolutionizing cellular glass mount antenna technology, filing a patent application for the first ever solid state coupling circuit. Through creating a new benchmark for quality in the production of components and leading technology development, Panorama has grown side by side with the cellular telecommunications industry.

Today Panorama produces antennas for the world's leading communication companies and has grown to include over 100 staff in 5 international sales offices, as well as operating 4 fully owned subsidiaries. Manufacturing, design and development are located in London less than a mile from the original factory. Our network of international sales representatives means that all customers get the attention and advice they require, providing local support on a global scale.

### Antennas For Next Generation

Panorama's constant cutting-edge research ensures that our antennas meet the demands of the very latest technology. With over 70 years' experience in delivering world-class antenna products, Panorama's current product range reflects our unparalleled expertise in providing high-quality performance antennas.



### Quality As Standard

#### Quality Assurance

In 1989, Panorama Antennas became the first antenna manufacturer in Europe to gain ISO 9000 certification. Panorama currently holds the ISO 9001-2015 certificate for quality assurance.

#### **Environmental Management System**

Panorama has attained ISO 14001:2015 International standard for effective environmental management system (EMS)

#### Patents

Panorama Antennas currently holds several patents and registered designs both in Europe and worldwide.

#### **RoHS** Compliance

All of the products that Panorama Antennas manufactures are 100% RoHS 3 compliant. Investment in advanced technology enables Panorama to test materials supplied to us ensuring that no non-compliant material is passed on to the customer.

#### REACH

REACH (Registration, Evaluation, Authorisation and Restriction of Chemicals, EC 1907/2007) is the European Union's chemical regulation that came into force on 1 June 2007 and has been phased in over an 11 year period. Panorama Antennas wholeheartedly supports the objective of REACH to enhance public health and safety and the protection of the environment. Panorama is committed to meeting REACH requirements and can provide information about substances in accordance with the requirements.

#### Associations

Panorama Antennas is currently a member of the following professional associations:

- Federation of Communication Services
- TCCA (TETRA & Critical Communications Association)
- British Safety Council
- B-APCO (British Association of Public Communication Officers)



## Portable MiMo LTE Antenna

### FEATURES

2x2 MiMo 5G/4G/3G/2G LTE Two omni-directional wideband elements Desk stand, screen clip & window mount options 2m (6<sup>°</sup>.5") cable supplied

The DMM offers a lightweight and stylish solution for your wireless broadband connection. It can improve your connection in challenging coverage areas with it's unique 'X' design.

Part no.	Termination	MiMo LTE
DMM-7-38-2SP	SMA Male	2×2
DMM-7-38-2TS9	TS9 Male	2×2
DMM-7-38-2CRC9	CRC9 Male	2×2

Router | Hotspot

### 5G LTE Paddle Antenna

### FEATURES

Covers 5G/4G/3G/2G LTE 698-3800MHz and 600-6000MHz versions Easy to install plug and play solution Articulated right angled SMA Male connector Ground plane independent

A wideband antenna with articulated right-angled connector, ideal for modems and terminals. Covering all 5G, 4G, 3G & 2G frequencies, the PWB enhances the performance of the most advanced terminals on the market today. As an easy to install, plug and play antenna, it is ideal for any cellular LTE modem or router.



#### 698-960 / 1710-3800MHz 617-960 / 1710-6000MHz

Part no.	Termination
PWB-BC3G-38-RSMAP	Right Angle SMA Male
PWB-6-60-RSMAP	Right Angle SMA Plug

#### Router

### Medium Gain MiMo LTE Antenna

#### FEATURES

2x2 MiMo 5G/4G/3G/2G LTE 698-960 / 1710-3800MHz Two wideband elements with high gain at 1710-3800MHz Durable housing for indoor or outdoor use Suitable for mast, wall & desk mounting

The WMMG-7-38 antenna is a wide beam width, medium gain 2x2 MiMo antenna which incorporates two separately fed wideband, cross polarised elements in a rugged, weather resistant housing.

#### IP65 RATED



Part no.	Terminatio
WMMG-7-38-5SP	2x SMA Male
WMMG-7-38-5F	2x FME Female

#### Router

## High Gain Directional MiMo LTE Antenna

### FEATURES

2x2 MiMo 5G/4G/3G/2G LTE 698-3800MHz Cross polarised, High gain elements Rugged housing – External / internal use Mast, wall or desk top mounting

The WMM8G-7-38 is a high gain, directional 2x2 MiMo antenna suitable for external or internal use. It has 2 cross polarised elements for 700-3800MHz with effective isolation and low correlation coefficient value. It features a rugged, sealed housing with integral 'twinned' ultra-low loss coax cables, pre-fitted with sma plugs for simple installation.

Part no.	Termination	
WMM8G-7-38-5SP	2x SMA Male	
WMM8G-7-38-03NJ	2× N Female	



## Panel Mount M2M Antenna

#### FEATURES

Covers 5G/4G/3G/2G LTE 698-3800MHz Low Profile, compact design High impact resistant housing 600MHz version available

The Panorama LPB low profile antenna range has been designed to perform in harsh environments with a robust high impact radome only 82mm (3.2") high. When installed on a 400 x 400mm (15.7" x 15.7") ground plane, the LPB covers global LTE and cellular frequencies in the range 698-960MHz and 1710-3800MHz, making it an extremely versatile product.

Part no.	Termination	Cable Lengtl
LPB-7-27-05SP	SMA Male	0.5m (1.6')
LPB-7-27-2SP	SMA Male	2m (6.6')
LPB-7-27-2F	FME Male	2m (6.6')
LPB-7-27-5SP	SMA Male	5m (16.4')
LPB-7-27-5F	FME Male	5m (16.4')

Vehicle | IoT

### M2M & Metering Antenna

#### FEATURES

Covers 4G/3G/2G LTE 698-2700MHz Low profile, vandal & tamper proof design Simple adhesive pad or screw fix installation Suitable for poor coverage areas Ground plane independent

The Panorama LPW provides a robust, effective antenna solution for M2M and smart metering applications. The integral coaxial cable can be routed through the rear of the antenna for maximum protection.



Part no.	Termination
LPW-BC3G-26-2SP	SMA Male
LPW-BC3G-26-2RSMAP	Right angle SMA Male
LPW-BC3G-26-2FAKZJ	FAKRAZ Female

#### loT | M2M

### Bracket Mount M2M Antenna

### FEATURES

Cost effective 5G/4G/3G/2G LTE antenna 698-960 / 1710-3800MHz range Easy Installation Wall or Mast mounting Compact & fully weatherproof design

The B4BE antenna's omni-directional design provides simple installation in an elevated or external location to achieve optimum network signal. The integral ultra-low loss coaxial cable is available in various length configurations. Careful choice of materials and excellent design ensures a long service life and reduced whole life cost.



Part no.	Colour	Cable Length
B4BEW-7-27-05SP	White	0.5m (1.6')
B4BEW-7-27-5SP	White	5m (16' 4")
B4BE-7-27-05SP	Black	0.5m (1.6')
B4BE-7-27-5SP	Black	5m (16' 4")

loT | M2M



## Magnetic Mount Antenna

### FEATURES

Magnetic mount for 'no hole' installation 698-960 / 1710-2700MHz range Covers 4G/3G/2G LTE

The LPBEM-7-27 is a new generation, high performance magnetic mount antenna that covers all global cellular & LTE frequencies.

The MAR-7-21 is a whip type compact magnetic cellular antenna for temporary mount use. It covers six of the main GSM/LTE bands supporting 2G, 3G and 4G technologies. The stylish flexible design of the antenna whip gives a discreet appearance and resistance to damage.

Part no.	Termination
LPBEM-7-27-2SP	SMA Male 2m (6.6') Cable Length
MAR-7-21-2SP	SMA Male 2m (6.6') Cable Length

Vehicle | IoT | M2M

### IP66 RATED

### MiMo LTE IoT Antenna

#### FEATURES

2x2 MiMo 5G/4G/3G/2G LTE 698-3800MHz frequencies Optional integrated GPS/GNSS Low profile and weatherproof housing Robust and cost effective M2M & IOT solution Magnetic version available

The LP[G]AM-BC3G-26 range has been designed to provide MiMo Cellular/LTE 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	Magnetio
LPAM-BC3G-26		٠	
LGAM-BC3G-26	٠	٠	
LPAMM-BC3G-26		٠	•
LGAMM-BC3G-26	٠	٠	•

loT | M2M

## MiMo LTE & WiFi IoT Antenna

#### FEATURES

2x2 MiMo 5G/4G/3G/2G LTE 2x2 MiMo 2.4/5.0GHz Optional integrated GPS/GNSS Low Profile Design Robust, cost effective solution

The L[G]PAM has a compact housing that contains 2x2 MiMo antenna function for 5G/4G/3G/2G and 2x2 MiMo antenna function for 2.4/5.0GHz WiFi.This antenna range is ideal for vending machines, payment terminals and other M2M type applications.

IP66



Part no.	GPS/ GNSS	MiMo LTE	MiMo WiFi
LGAM-7-27-24-58	٠	٠	٠
LPAM-7-27-24-58		٠	٠

#### loT | M2M

## Low PIM MiMo LTE Ceiling Antenna

#### FEATURES

2x2 MiMo 5G/4G/3G/2G LTE 617-6000MHz Flame retardant materials Low PIM (>-150dBc) Meets UL94-V0 Requirements

The CMM-6-60 range has been designed to provide 2x2 MiMo coverage for 4G & 5G networks in a low profile package. The compact, robust low-profile housing contains two antenna elements with effective isolation and correlation covering 617-960/1710-6000MHz.



Part no.	Termination
CMM-6-60-05NJ	2x N Female
CMM-6-60-054310 2	2x 4.3-10 Female

In-Building

# Low PIM SiSo LTE Ceiling Antenna

### FEATURES

5G/4G/3G/2G LTE 617-6000MHz Low profile antenna Flame retardant materials Low PIM (>-150dBc) Meets UL94-V0 Requirements

The CMSLP-6-60 range has been designed to provide omni-directional coverage for 4G & 5G networks in a low profile package. The compact, robust low-profile housing contains an efficient low PIM element covering 617-960/1710-6000MHz.

The antenna is designed to be ceiling mounted and can be fitted on a conductive or nonconductive panel.

Part no.	Termination
CMSLP-6-60-05NJ	N Female
CMSLP-6-60-054310J	4.3-10 Female

In-Building



## Low PIM SiSo LTE Ceiling Antenna

### FEATURES

#### 5G/4G/3G/2G LTE 698-6000MHz Discrete ceiling mount design Low PIM (>-150dBc) & SAR 'Touchsafe' rated (EN50385:2002) Suitable for standard or thick ceiling panels

A compact ceiling antenna that provides optimal InBuilding or DAS coverage for all network requirements. Within the flame retardant housing is a high-efficiency wideband element capable of supporting 5G, 4G, 3G & 2G LTE and WiFi networks from 698-960MHz and 1710-6000MHz. Suitable for indoor use, the antenna only requires one hole for installation but offers additional screw fixing holes located beneath a rotating valance.

Part no.	Termination
CM-7-60-NJ	N Female
CM-7-60-4310	4.3-10 Female

In-Building

## Low PIM MiMo LTE Ceiling Antenna

#### FEATURES

2x2 MiMo 5G/4G/3G/2G LTE 698-6000MHz Discrete ceiling mount design Low PIM (>-150dBc) & SAR 'Touchsafe' rated (EN50385:2002) Concealed screw fixings

The CMMG-7-60-NJ ceiling antenna has low PIM performance and is ground plane independent. The CMMG has a discrete styled flame retardant housing which is simple to install using the 2 N type connectors, with the option of additional concealed screw fixing - making it suitable for installation on standard or thick ceiling panels.



CMMG-7-60-NJ 2x N Female

#### In-Building

## Low PIM MiMo LTE Panel Antenna

### FEATURES

2x2 MiMo 4G/3G/2G LTE 698-2700MHz Flexible Plenum rated cable Ideal wall mount solution Rugged, weather resistant housing Meets UL746C and UL94-V0 requirements

The WMMLP8G-7-27 is a directional high gain 2x2 MiMo wall mount antenna with low PIM performance. The antenna incorporates two separately fed wideband elements in a single housing and offers 6dBi peak gain 698-960MHz and 9dBi peak gain at 1710-2700 MHz.



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In-Building

IP65 RATED

## High Gain Directional SiSo LTE Antenna

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FEATURES

Covers 4G/3G/2G LTE 698-2700MHz Mast or wall mount Weather proof housing Low PIM & SAR 'Touchsafe' rated

The WM8 series is a high gain directional antenna with low PIM performance. Ideal for use as a donor antenna for InBuilding applications, it supports multi-service and multi-operator wireless systems. The antenna covers 4G, 3G & 2G technologies with max. 8dBi gain and has a N socket connector. The antenna has a sealed, impact resistant, UV light stable and flame retardant plastic enclosure, and supplied with mounting hardware to suit wall or mast mounting installation.

Termination
N Female

In-Building

## 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 •

In-Building | Transportation

## 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	3×3
CM4-24-58	4x4

In-Building | Transportation

## Internal On-Glass WiFi Antenna

### FEATURES

Dual band 2.4 / 5.0GHz WiFi Compact dipole antenna Integral sealed coaxial cable Ideal for connection to in-vehicle router

The EF-24-58 antenna is a flexible dipole type, suitable for covert or discrete installations. The antenna is supplied with an adhesive pad and can be fixed on a vehicle window glass or plastic trim panel.



Part no.	Termination
EF-24-58-3SP	SMA Male
EF-24-58-3RPSP	Reverse Polarity SMA Male

Vehicle Router

## WiFi Paddle Antenna

### FEATURES

Dual Band 2.4 / 5.0GHz WiFi Suitable for routers and terminals Articulated connector

The PWB-24-58 antenna is a ground plane independent, efficient antenna covering 2.4 / 5.0GHz WiFi bands and is fitted with an articulated reverse polarity SMA plug.

Ideal for use where only a device mounted WiFi antenna is required, the PWB-24-58 offers a flexible solution with an aesthetic paddle styling and is compatible with most router devices.

Part no.	Termination
PWB-24-58-RSMAP	SMA Plug
PWB-24-58-RSMARV	SMA Plug (Rev. Pol.)

Router



## **GPSD** MiMo Sharkee®

### FEATURES

#### 2x2 MiMo 5G/4G/3G/2G LTE Integrated GPS/GNSS Optional 2x2 MiMo WiFi 2.4/5.0GHz

The GPSD range has a sharkfin housing with a built in whip mounting boss and can support a range of Panorama Antennas' VHF/ UHF whips.

Requiring only a single hole fixing, the GPSD reduces vehicle damage, visual impact and cost of installation, whilst protecting vehicle resale value.

Part no.	GPS/ GNSS	MiMo LTE	MiMo WiFi
GPSD-7-27	•	2x2	
GPSD-7-27-24-58	•	2x2	2x2

Vehicle | Router

### SHK MiMo Sharkee<sup>®</sup>

#### **FEATURES**

2x2 MiMo 5G/4G/3G/2G LTE Optional 2x2 or 3x3 MiMo WiFi **Optional Integrated GPS/GNSS** Available in Black or White

The SHK range provides multiple functions in a single hole mounting, reducing vehicle damage, install time and visual impact. The SHK has OEM sharkfin styling and allows fast installation of multiple antennas. Available in Black or White.

**IP66** RATED



Part no.	GPS/ GNSS	MiMo LTE	MiMo WiFi
SHK-7-27		2×2	
SHKG-7-27	٠	2×2	
SHKG-7-27-24-58	•	2x2	2×2
SHKG-7-27-T24-58	•	2x2	3x3

Vehicle | Router

## Great White<sup>®</sup> 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 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	
LPMM-6-60		2x2		
LGMM-6-60	٠	2x2		
LGMDM-6-60-24-58	٠	2x2	2x2	
LGMTM-6-60-24-58	٠	2x2	3×3	
LGMQM-6-60-24-58	٠	2x2	4x4	
LGMHM-6-60-24-58	•	2x2	6×6	
*Part numbers refer to the white version only				

Vehicle | Router

**IP69K** RATED

## 5G Dome Antenna

### **FEATURES**

4x4 MiMo 5G/4G LTE 617-960 / 1710-6000MHz **Optional 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.

Part no.	GPS/ GNSS	MiMo LTE	MiMo WiFi
LPMM4-6-60		4x4	
LGMM4-6-60	٠	4x4	
LGMDM4-6-60-24-58	٠	4x4	2x2
LGMTM4-6-60-24-58	٠	4x4	3×3
LGMQM4-6-60-24-58	٠	4x4	4x4
LGMHM4-6-60-24-58	٠	4x4	6×6
*Part numbers refer to the white version only			

Vehicle | Router

#### IP69K RATED

## 4x4 MiMo LTE Dome

#### FEATURES

4x4 MiMo 5G/4G LTE 698-960/1710-3800MHz Optional integrated GPS/GNSS Optional up to 4x4 MiMo WiFi 2.4 / 5.0GHz Low profile, rugged housing Ground plane independent

The LGMQM4 enables multiple antenna functions to be fitted using a single hole. Designed for use with Advance Pro routers that require a 4x4 4G/LTE MiMo antenna system. Can be supplied with 2x2, 3x3 or 4x4 MiMo for 2.4/5GHz WiFi and GPS/GNSS antenna.

Part no.	GPS/ GNSS	MiMo LTE	MiMo WiFi
LGMM4-7-38	٠	4x4	
LGMDM4-7-38-24-58	٠	4x4	2x2
LGMTM4-7-38-24-58	٠	4x4	3×3
LGMQM4-7-38-24-58	٠	4x4	4x4

Vehicle

### Low Profile LTE Antenna

#### FEATURES

5G/4G/3G/2G LTE 698-3800MHz Optional 2.4 / 5.0GHz WiFi Optional integrated GPS/GNSS Ground plane independent Meets IK10, IP69K, UL94-V0, UN118.03, UL746C

The LP-7-38 antenna series is a range of very low profile antennas incorporating a combination of wideband cellular element covering 4G/5G frequencies along with an optional active GPS/ GNSS patch with 26dB LNA gain and an optional dual band WiFi element all in a robust compact housing.



Part no.	Cable	Termination
LP-7-38-1SP	1m/3ft	SMA Male
LP-7-38-3SP	3m/9ft	SMA Male
LP-7-38-1FAK	1m/3ft	FAKRA D Jack

Vehicle | IoT

## The Fez LTE Antenna

### FEATURES

4G/3G/2G LTE 698-2700MHz Optional 1x or 2x2 MiMo WiFi 2.4 / 5.0GHz Optional integrated GPS/GNSS 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		٠		
LGE-7-27	•	٠		
LGE-7-27-24-58	•	٠	٠	
LGEM-7-27-24-58	•	٠		2x2

Vehicle | IoT



#### IP69K RATED

## LTE Puck Style Antenna

### FEATURES

5G/4G/3G/2G LTE 698-3800MHz Low profile puck design Ground plane independent Optional 2.4 / 5.0GHz WiFi Optional integrated GPS/GNSS

The LPP-7-38 antenna series is a range of very low profile antennas incorporating a combination of wideband cellular element covering 4G/5G frequencies along with an optional active GPS/ GNSS patch with 26dB LNA gain and an optional dual band WiFi element all in an ultra compact housing.

Part no.	Cable	Termination
LPP-7-38-ISP	lm/3ft	SMA Male
LPP-7-38-1FAK	lm/3ft	FAKRA D Jack

Vehicle | IoT



## Internal LTE/GNSS Puck Antenna

#### FEATURES

4G/3G/2G LTE 698-2700MHz Integrated GPS/GNSS Windscreen or dashboard mount Adhesive pad fixing 'Either way up' mounting system

The GPSC series is a combined cellular/LTE + active GPS/GNSS antenna for internal or covert installation. This discrete antenna is an ideal solution for tracking or navigation systems and offers much improved performance over device embedded antennas.

Part no.	Termination
GPSC-7-27-3SP	SMA Male
GPSC-7-27-3FAKRA	FAKRA D (Cell) FAKRA C (GPS)

Vehicle | IoT | M2M

## LTE Marine Antenna

### FEATURES

4G/3G/2G LTE 698-2700MHz range Designed to withstand hostile marine environment Marine grade construction Suitable for marine or land based fixed site applications

The NA-BC3G-26 is a marine grade antenna designed to provide 4G/3G/2G LTE / cellular connectivity in challenging environments including marine, coastal and land based applications.

The antenna is supplied with two pole mount brackets, but also has the 1" 14TPI threaded ferrule to suit standard marine mounts. A stainless steel deck ratchet mount (NDRS-SL) is available as an accessory.

Part no. Cable		Termination	
NA-BC3G-26-03NJ	0.3m (1') CS29	N Female	

#### Marine | Router

## 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		

Vehicle | IoT | M2M



### 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-7-38		2x2		
BATGM-7-38	•	2x2		
BATGM-7-38-24-58	٠	2×2		٠
BATGM2-7-38-24-58	٠	2x2	2x2	

Vehicle | Router



## 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

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.

	GPS/			
Part no.	GNSS	LTE	WiFi	UHF
TRNC-7-60		٠	٠	
TRNCG-7-60	•	٠	٠	
TRNC-TET/S4				٠
TRNCG-TET/S4	•			•

Rail

### 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.

#### IP69K RATED



Part no.	GPS/ GNSS	MiMo LTE
TRNM-7-60		2x2
TRNMG-7-60	٠	2x2

Rail

## **Magnetic Mount**

Part no. SAB-224

### **FEATURES**

Easy Installation For Sharkee Series Can be fitted anywhere on vehicle Ideal for trials and drive-testing



#### FOR USE WITH

GPSD | SHK Series | GPSB | FINB

## **Magnetic Mount**

Part no. SAB-225

### FEATURES



### FOR USE WITH

LGMM   LPMM (Great White Series)	٠
LGMQM4 (9 in 1 Series)	•
LGMH	٠

Temporary Mounting

### **Coaxial Adapters**

Panorama has an extensive range of coaxial adaptors for different applications. Our most popular types are listed here – enquire if you don't see what you need.



Part no. CA-FP-FP FME Plug (m) to FME Plug (m)

Part no. CA-PLP-FP PL259 Plug (m) to FME Plug (m)

Part no. CA-MP-FP Mini-UHF Plug (m) to FME Plug (m)

Part no. CA-NP-SAJ N Plug (m) to SMA Jack (f)



## Adapter Cables

#### Part no. C74-SJ-010-TS9S

SMA (f) to TS9 Plug 10cm (3") cable length

#### Part no. C74-SJ-015-CRC9

SMA (f) to CRC9 Plug 15cm (5") cable length

## **Cable Assemblies**

Part no. C23 VHF / UHF Double shielded Panorama RG58 C/U Low loss 'Comms'\*

Part no. C29 Cellular 2G/3G/4G Double shielded - Stranded core Ultra low loss cable\*

Part no. C32 Cellular 5G / WiFi Double shielded - Solid core Flame retardant jacket Ultra low loss cable\*

\*Various Lengths & Connectors available

Extension Cables

Coaxial Adapters

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