01170 07 17070 00 770707 000770 17077 007 7707 07



LTE Cellular & WiFi

PRODUCT CATALOGUE

#### 75 Years of Experience

Panorama Antennas is a privately owned family business, now in its third generation, and 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 the company into the manufacturing of communication antennas.

Throughout the 1970s and 80s, Panorama evolved to become the first specialised 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 revolutionising 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 remain 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 75 years experience in delivering world-class antenna products, Panorama's current product range reflects our unparalleled expertise in providing high-quality performance antennas.





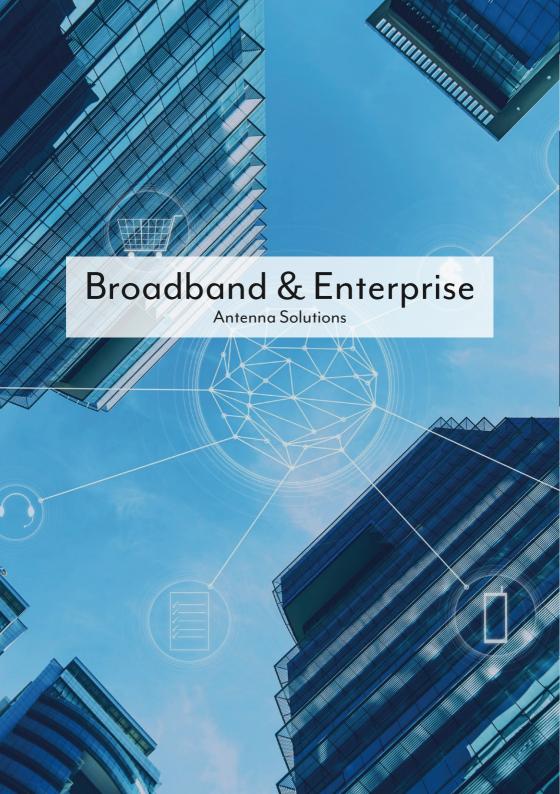






### Content

Broadband & Enterprise Antenna Solutions	4
IoT Antenna Solutions	9-1-
DAS Antenna Solutions	15-1
Mobility Antenna Solutions	18-2
<b>WiFi</b> Antenna Solutions	27-29
Accessories	30-3



#### **Broadband & Enterprise**





DMM-6-60

### Portable MiMo LTE Antenna







- · 2x2 MiMo 5G/4G/3G/2G
- 698-3800MHz and 617-6000MHz versions
- · Two omni-directional wideband elements
- · Desk stand, screen clip & window mount options
- · 2m (6'6") 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.

698-3800MHz		
Part no.	MiMo LTE	Connector
DMM-7-38-2SP	2×2	SMA Male
DMM-7-38-2TS9	2×2	TS9 Male

617-6000MHz		
Part no.	MiMo LTE	Connector
DMM-6-60-2SP	2×2	SMA Male



PWB-BC3G-38-RSMAP

PWB-6-60-RSMAP

### 5G LTE Paddle Antenna





- · Covers 5G/4G/3G/2G
- 698-3800MHz and 617-6000MHz versions
- · Easy to install plug and play solution
- · 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.

698-3800MHz	
Part no.	Connector
PWB-BC3G-38-RSMAP	Right Angle SMA Male
PWB-BC3G-38-RFDI	Right Angle FAKRA D
FWB-BC3G-36-RFDJ	Right Angle PARKA D
617-6000MHz	
Part no.	Connector
PWB-6-60-RSMAP	Right Angle SMA Male
PWB-6-60-REDI	Right Angle FAKRA D



### Medium Gain MiMo LTE Antenna







- 2x2 MiMo 5G/4G/3G/2G LTE
- 698-960 / 1710-3800MHz
- · Two wideband elements with medium gain
- · Optional Integrated GPS/GNSS
- · 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.

Part no.	GPS/ GNSS	Cable & Connector
WMMG-7-38-5SP		5m (17') SMA Male
WMMG-7-38-03NJ		0.3m (1') N-Female
WMMGG-7-38-5SP	•	5m (17') SMA Male



### High Gain Directional MiMo LTE Antenna









- 2x2 MiMo 5G/4G/3G/2G LTE
- 698-960 / 1710-3800MHz
- · Cross polarised, High gain elements
- · Optional Integrated GPS/GNSS
- · 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 use in rural and edge of cell areas. It has 2 cross polarised elements 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.	GPS/ GNSS	Connector
WMM8G-7-38-5SP		5m (17') SMA Male
WMM8G-7-38-03NJ		0.3m (1') N-Female
WMM8GG-7-38-5SP	•	5m (17') SMA Male











- 2x2 MiMo Omnidirectional Antenna for 4G/5G
- · 617-960 / 1710-6000MHz
- · Optional Integrated GPS/GNSS
- · Suitable for wall, mast and marine mount applications

The BSM-6-60 antenna is a 2x2 MiMo 4G/5G medium gain omni-directional antenna solution. The antenna covers 617-960 / 1710-6000MHz and is certified to IP67 so suitable for indoor or outdoor use. Supplied with integral low loss cable assemblies the antenna is suitable for wall or mast mounting and marine mount using optional SAB-315 adaptor (page 30). BSGM-6-60 versions include an active GPS/GNSS antenna.

	CDC/	
Part no.	GPS/ GNSS	Connector
BSM-6-60-5SP		5m (17') SMA Male
BSM-6-60-5FKJ		5m (17') FAKRA D
BSM-6-60-5NP		5m (17') N-Male
BSM-6-60-05NJ		0.5m (1.6') N-Female
BSGM-6-60-5SP	•	5m (17') SMA Male
BSGM-6-60-5NP	•	5m (17') N-Male
BSGM-6-60-5FKJ	•	5m (17') FAKRA D
BSGM-6-60-05NJ	•	0.5m (1.6') N-Female



### Omnidirectional 4x4 MiMo 4G/5G Antenna







- 4x4 MiMo 4G/5G
- · 617-960/1427-6000MHz
- Optional Integrated GPS/GNSS
- · Mast, Wall or Desk Mount & Integral low loss cables

The DWMM4[G]-6-60 Antenna Provides a 4x4 MiMo Solution for Global 4G/5G Networks from 617-6000MHz. Incorporating four separately fed ultra wideband elements in a single housing, the antenna is suitable for a wide range of fixed site main and failover applications.

GPS/ GNSS	Connector
	5m (17') SMA Male
	5m (17') FAKRA D
	5m (17') N-Male
	0.5m (1.6') N-Female
•	5m (17') SMA Male
•	5m (17') FAKRA D
•	5m (17') N-Male
•	0.5m (1.6') N-Female



# Directional 4x4 MiMo 4G/5G Antenna







- · 4x4 MiMo High Gain Directional Antenna for 4G/5G LTE
- · 617-960 / 1710-6000MHz
- · Optional Integrated GPS/GNSS (WMM4GG)
- Supports New Generation CAT 18/20 Devices
- · Suitable for wall or mast mounting

The WMM4G-6-60 is a high gain directional 4x4 MiMo antenna for 4G and 5G networks. It incorporates four pairs of wideband element assemblies in a single housing and is designed to support fixed site 4G CAT18/20 & 5G client devices. It offers 6dBi peak gain for 617- 960MHz and 9dBi peak gain for 1710-6000MHz.

Part no.	GPS/ GNSS	Cable & Connector
WMM4G-6-60-05NJ		0.5m (1.6') N-Female
WMM4G-6-60-5SP		5m (17') SMA Male
WMM4G-6-60-5FKJ		5m (17') FAKRA D
WMM4G-6-60-5NP		5m (17') N-Male
WMM4GG-6-60-05NJ	•	0.5m (1.6') N-Female
WMM4GG-6-60-5SP	•	5m (17') SMA Male
WMM4GG-6-60-5FKJ	•	5m (17') FAKRA D
WM-IN2582-10		10m (33') SMA Male
WM-IN2582-15		15m (50') SMA Male



# Directional 2x2 MiMo 4G/5G Antenna







IP66

- · 2x2 MiMo 4G/5G
- · 617-960/1427-6000MHz
- · Optional Integrated GPS/GNSS (WMM2GG)
- · Mast, Wall or Desk Mount & Integral low loss cables

The WMM2G-6-60 is a high gain directional 2x2 MiMo antenna for Global 4G/5G Networks from 617-6000MHz. Incorporating two separately fed ultra wideband elements in a single housing, the antenna is suitable for a wide range of fixed site main and failover applications.

Part no.	GPS/ GNSS	Cable & Connector
WMM2G-6-60-05NJ		0.5m (1.6') N-Female
WMM2G-6-60-5SP		5m (17') SMA Male
WMM2G-6-60-5NP		5m (17') N-Male
WMM2GG-6-60-05NJ	•	0.5m (1.6') N-Female
WMM2GG-6-60-5SP	•	5m (17') SMA Male





### Low Profile Panel Mount Antenna





IP66 RATED

- · Cost effective 2G/3G/4G/5G antenna
- · 617-960 / 1710-6000MHz
- · Integral ultra-low loss cable
- · Robust, discrete design

The LPB-6-60 is supplied with integral CS29 ultra-low loss coaxial cable and is available with various length and connectors fitted. This antenna is an ideal omni-directional solution for use in industrial and domestic environments with cellular modems/ routers and IoT & M2M wireless connectivity applications.

Part no.	Cable & Connector
LPB-6-60-05SP	0.5m (1'6") SMA Male
LPB-6-60-1SP	1m (3') SMA Male
LPB-6-60-2SP	2m (6'6") SMA Male
LPB-6-60-5SP	5m (17') SMA Male



## M2M & IoT SiSo LTE Antenna





IP66

- · 2G/3G/4G LTE
- · 698-2700MHz
- · Discrete, 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.	Cable & Connector
LPW-BC3G-26-2SP	2m (6'6") SMA Male
LPW-BC3G-26-2RSMAP	2m (6'6") R/A SMA Male*
LPW-BC3G-26-2FAKZJ	2m (6'6") FAKRA Z

\*R/A = Right Angle



### 4G/5G Bracket Mount Antenna







- · Cost Effective 2G/3G/4G/5G antenna
- · 617-960 / 1710-6000MHz
- · Wall or mast mount
- · Integral ultra-low loss cable

The B4BE-6-60 antenna is a cost effective omni-directional multi-band antenna for 5G/4G/3G and 2G devices from 617-960/1710-6000MHz and is suitable for external or internal installation. The omni-directional radiation pattern allows easy placement of the antenna in an elevated positon.

Part no.	Cable & Connector	
B4BE-6-60-05SP	0.5m (1'6") SMA Male	
B4BE-6-60-2SP	2m (6'6") SMA Male	
B4BE-6-60-5SP	5m (17') SMA Male	



LPBFM-6-60-2SP

MAR-7-21-2SP

### 4G/5G Magnetic Mount Antenna





- · Magnetic mount for 'no hole' installation
- · 617-960 / 1710-6000MHz range (LPBEM)
- · Covers 5G/4G/3G/2G LTE

The LPBEM-6-60 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.	Cable & Connector
LPBEM-6-60-2SP	2m (6'6") SMA Male
LPBEM-6-60-5SP	5m (17') SMA Male
MAR-7-21-2SP	2m (6'6") SMA Male



### **Bracket Mount** 2G/3G/4G Antenna





- · Discrete Slim Profile
- 2G/3G/4G Functionality
- · Ground Plane Independent

The Panorama B2BE-BC3G-26 is a low cost, but effective antenna solution for M2M and IoT applications and is suitable for use in challenging environments. The antenna covers 698-960/1710-2700MHz and the efficient element design ensures a high first time connection rate and an ongoing, robust communications link even in many low coverage areas.

Part no.	Cable & Connecto	
B2BE-BC3G-26-5SP	5m (17') SMA Male	



## 4G/5G loT SiSo Antenna







- · High Performance SiSo IoT Antenna
- · 698-960MHz & 1427-4200MHz
- · Adhesive/Screw Mount (Panel Mount on request)
- · Optional active GPS/GNSS antenna (Panel Mount version only)
- · Integral FR rated RG174 cable with SMA or FAKRA connector

The LP[G]A[P] series is a high performance SiSo antenna for IoT applications, including ticket machines and destination boards. It covers all the main cellular bands up to 4200MHz, providing future proof function. The standard version has a flat base with adhesive and/or screw mounting with a panel mount version available on request.

The integral RG174 cable is FRZH type and available with SMA or right angle FAKRA connector.

Part no.	GPS/ GNSS	Cable & Connector
LPA-7-42-2SP		2m (6.6') SMA Male
LPA-7-42-2RFDJ		2m (6.6') R/A FAKRA D
LPAP-7-42-2SP		2m (6.6') SMA Male
LPAP-7-42-2RFDJ		2m (6.6') R/A FAKRA D
LGAP-7-42-2SP	•	2m (6.6') SMA Male
LGAP-7-42-2RFDJ	•	2m (6.6') R/A FAKRA D

<sup>\*</sup>R/A = Right Angle



### MiMo 4G/5G + WiFi Panel Mount









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

The LPAM / LGAM range has a compact housing and is ideal for vending machines, payment terminals and other M2M type applications. It can be fitted on a metal or plastic mounting panel.

A magnetic mount version is also available.

Part no.	GPS/ GNSS	Magnetic Base	Cable
LPAM-7-27-24-58			3m (10')
LPAM-7-27-24-58-1S			1m (3')
LPAMM-7-27-24-58-1S		•	1m (3')
LPAMM-7-27-24-58-3		•	3m (10')
LGAM-7-27-24-58	•		3m (10')
LGAMM-7-27-24-58-1	•	•	1m (3')
LGAM-7-27-24-58-1S	•		1m (3')
LGAMM-7-27-24-58-3	•	•	3m (10')

\*Antenna supplied with SMA Male (LTE & GNSS) and Reverse Polarity SMA (WiFi)



### MiMo LTE Panel Mount







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

The LPAM / LGAM range has been designed to provide 2x2 MiMo LTE / Cellular antenna function for IOT and M2M applications. The compact, robust low-profile housing is weatherproof and contains two cellular LTE antenna elements with effective isolation. A magnetic mount version is also available.

Part no.	GPS/ GNSS	Magnetic Base	Cable & Connector
LPAM-BC3G-26-1SP			1m (3') SMA Male
LPAMM-BC3G-ISP		•	1m (3') SMA Male
LGAM-BC3G-26-ISP	•		1m (3') SMA Male
LGAMM-BC3G-26-1SP	•	•	1m (3') SMA Male
LPAM-BC3G-26-3SP			3m (10') SMA Male
LPAMM-BC3G-3SP		•	3m (10') SMA Male
LGAM-BC3G-26-3SP	•		3m (10') SMA Male
LGAMM-BC3G-26-3SP	•	•	3m (10') SMA Male





#### Ultra Low Profile Puck Antenna





IP66 IK07

- · Low Profile 'Puck' Design 4G/5G
- · 698-960/1710-3800MHz
- · Optional WiFi & GPS/GNSS function
- · IP66 ingress & IK07 impact certified
- · Mount on Non Conductive (Plastic) Panel

The Panorama LP[G]P-7-38-[24-58] range is designed to provide a cost effective, robust, ultra low profile antenna for M2M and IoT installations. Ideal for applications where low visibility to reduce risk of vandalism is required.

Part no.	LTE WiFi	GPS/ GNSS	Cable & Connector
LPP-7-38-1SP	•	1m	(3') SMA Male
LGP-7-38-1SP	•	• 1m	(3') SMA Male
LPP-7-38-24-58-1SP	• •	1m	(3') SMA Male
LGP-7-38-24-58-1SP	• •	• 1m	(3') SMA Male

\*WiFi cable has Reverse Polarity SMA

#### Low Profile LTE Antenna





- 5G/4G/3G/2G
- · 698-3800MHz
- · Optional 2.4 / 5.0GHz WiFi
- · Optional integral GPS/GNSS
- · Ground plane independent
- Meets IK10, IP69K, UL94-V0, ECE R118, 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 & Connector	
LP-7-38-1SP	1m (3') SMA Male	
LP-7-38-3SP	3m (10') SMA Male	
LP-7-38-IFAK	1m (3') FAKRA D	
LG-7-38-1SP	1m (3') SMA Male	
LG-7-38-3SP	3m (10') SMA Male	
LG-7-38-24-58-ISP	1m (3') SMA Male	
LG-7-38-24-58-3SP	3m (10') SMA Male	

<sup>\*</sup>WiFi cable has Reverse Polarity SMA





# Low PIM SiSo LTE Ceiling Antenna



- 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.	Connector
CMSLP-6-60-05NJ	N-Female
CMSLP-6-60-054310J	4.3-10 Female



# Low PIM MiMo LTE Ceiling Antenna





- 2x2 MiMo 5G/4G/3G/2G LTE
- · 617-6000MHz
- · Low profile antenna
- · 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.	Connector
CMM-6-60-05NJ	N-Female
CMM-6-60-054310	4.3-10 Female





#### Ultra-Low Profile SiSo UHF/Cellular





- · Covers 380-3800MHz
- · Ultra Low Profile Omni-directional Ceiling Antenna
- · Flame Retardant Housing
- · Low PIM Design

The CMSLP-038-4 range has been designed to provide SiSo UHF/3G/4G & 3.8GHz 5G function for DAS networks in an ultra low profile package. The compact, robust low-profile housing contains a highly efficient antenna element covering 380-520/617-960/1710-3800MHz. At < 22mm (0.85") deep the antenna is extremely discreet and ideal for low height clearance deployment locations.

Part no.	Connector
CMSLP-038-4-05NJ	N-Female
CMSLP-038-4-054310	4.3-10 Female

# High Gain Directional SiSo LTE Antenna





- · Covers 4G/3G/2G
- · 698-2700MHz
- · Mast or wall mount
- · Weather proof housing
- · Low PIM (>-150dBc) & 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 is supplied with mounting hardware to suit wall or mast mounting installation.

Part no.	Connector
WM8-BADEP3G-26-NJ	N-Female







### **GPSD MiMo** Sharkee®







- Covers 698-960/1710-3800MHz
- 2x2 MiMo 5G/4G/3G/2G
- · Integral GPS/GNSS antenna
- · Optional 2x2 MiMo WiFi
- · Mounting stud for comms whip

The GPSD range provides multiple functions in a OEM style sharkfin housing with a single hole mounting, reducing vehicle damage, install time and visual impact. Available in Black or White.

Part no.	MiMo 4G/5G	GPS/ GNSS	MiMo WiFi	External Whip
GPSD-7-27	2x2			•
GPSD-7-27-24-58	2x2	•	2×2	•

<sup>\*</sup>Antenna only part number shown above.

For antenna with full cable kit parts, contact your sales representative



### SHK[G] MiMo Sharkee®







- 2x2 MiMo 5G/4G/3G/2G
- Covers 698-960/1710-3800MHz · Optional 2x2 or 3x3 MiMo WiFi
- · Optional Integral GPS/GNSS

The SHK [G] range provides multiple functions in a OEM style sharkfin housing with a single hole mounting, reducing vehicle damage, install time and visual impact. Available in Black or White.

Part no.	MiMo 4G/5G	GPS/ GNSS	MiMo WiFi
SHK-7-27	2×2		
SHKG-7-27	2×2	•	
SHKG-7-27-S24-58	2x2	•	1×1
SHKG-7-27-24-58	2x2	•	2×2
SHKG-7-27-T24-58	2x2	•	3×3
SHKGW-7-27*	2x2	•	
SHKGW-7-27-24-58*	2×2	•	2×2

<sup>\*</sup>White version

For antenna with full cable kit parts, contact your sales representative

<sup>\*\*</sup>Antenna only part number shown above.





#### **GPSB5G**







- Covers 698-960/1710-3800MHz
- · SiSo 5G/4G/3G/2G
- · Integral GPS/GNSS antenna
- · SiSo WiFi 2.4/5GHz
- · Mounting stud for comms whip

The GPSB5G is an OEM style, shark fin antenna with three internal antenna systems, GPS/GNSS, 2G/3G/4G/5G cellular, dualband WiFi and an optional whip mounting for VHF or UHF whips. Requiring only a single hole fixing, the GPSB5G reduces vehicle damage, cost of installation and visual impact whilst protecting vehicle re-sale value.

Part no.	SiSo	GPS/	SiSo	External
	4G/5G	GNSS	WiFi	Whip
GPSB5G	•	•	•	•

\*Antenna only part number shown above. For antenna with full cable kit parts, contact your sales representative

### 4G/5G MiMo Sharkee® 5G









- · 2x2 MiMo 5G/4G LTE
- · 617-960 / 1710-6000MHz
- · Optional Integrated GPS/GNSS
- · Up to 4x4 MiMo WiFi 2.4/5GHz
- · External Whip option (GPSD)
- · ECE R118 Compliant Cables

The GPSD/SHK[G] Sharkee® range has become a byword for industry leading technology in a discrete OEM sharfin housing. The 6-60 brings extended frequency 5G capability to the Sharkee® family.

Part no.	MiMo 4G/5G	GPS/ GNSS	MiMo WiFi	External Whip
GPSD-6-60	2×2	•		•
GPSD-6-60-DW	2×2	•	2×2	•
GPSD-6-60-TW	2×2	•	3×3	•
GPSD-6-60-QW	2×2	•	4×4	•
SHKG-6-60	2×2	•		
SHKG-6-60-DW	2×2	•	2×2	
SHKG-6-60-TW	2×2	•	3×3	
SHKG-6-60-QW	2×2	•	4×4	

<sup>\*</sup>Part numbers refer to the black version only

For antenna with full cable kit parts, contact your sales representative

<sup>\*\*</sup>Antenna only part number shown above.





# 4x4 MiMo 4G/5G **Dual Fin Antenna**









- 4x4 MiMo 4G/5G
- · 617-960 / 1710-6000MHz
- · Integral GPS/GNSS
- Up to 6x6 MiMo WiFi 2.4/5.0-7.2GHz
- · ECE R118 Compliant Cables
- · Mounting stud for comms whip (GPSD4)

The SHK/GPS[X]D4[X]-6-60[-X] is an advanced 4G/5G, GPS/GNSS and WiFi antenna with a dual sharkfin style housing. The housing contains a 4x4 MiMo antenna function for 4G/5G, up to 6x6 MiMo dual-band WiFi, which supports WiFi 6e. It can also include up to four active GPS/GNSS antennas.

Part no.	MiMo 4G/5G	GPS/ GNSS	MiMo WiFi
GPSD4-6-60	4x4	•	
GPSD4-6-60-D	4x4	•	2×2
GPSD4-6-60-T	4×4	•	3×3
GPSD4-6-60-Q	4×4	•	4x4
SHKG4-6-60	4×4	•	
SHKG4-6-60-D	4x4	•	2×2
SHKG4-6-60-T	4x4	•	3×3
SHKG4-6-60-Q	4x4	•	4×4

<sup>\*</sup>Part numbers refer to the black version onl

For antenna with full cable kit parts, contact your sales representative



### 2x2 MiMo 4G/5G Dome Antenna









- 2x2 MiMo 5G/4G
- · 617-960 / 1710-6000MHz
- Optional Integrated GPS/GNSS
- Up to 6x6 MiMo WiFi 2.4/5.0-7.2GHz
- · ECE R118 Compliant Cables
- · IP69K & IK10 Rated

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

Part no.	MiMo 4G/5G	GPS/ GNSS	MiMo WiFi
LPMM-6-60	2x2		
LGMM-6-60	2×2	•	
LGMDM-6-60-24-58	2×2	•	2×2
LGMTM-6-60-24-58	2x2	•	3×3
LGMQM-6-60-24-58	2x2	•	4×4
LGMHM-6-60-24-58	2×2	•	6×6

<sup>\*</sup>Part numbers refer to the white version only

For antenna with full cable kit parts, contact your sales representative

<sup>\*\*</sup>Antenna only part number shown above.

<sup>\*\*</sup>Antenna only part number shown above.



## MAKO® 5G 4x4 MiMo Dome









- 4x4 MiMo 5G/4G
- · 617-960 / 1710-6000MHz
- · Optional Integral GPS/GNSS
- Up to 6x6 MiMo WiFi 2.4/5.0GHz
- · ECE R118 Compliant Cables
- · IP69K & 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. Optional GPS/GNSS module incorporates advanced filtering. Available in Black or White.

Part no.	MiMo 4G/5G	GPS/ GNSS	MiMo WiFi
LPMM4-6-60	4x4		
LGMM4-6-60	4x4	•	
LGMDM4-6-60-24-58	4x4	•	2×2
LGMTM4-6-60-24-58	4x4	•	3×3
LGMQM4-6-60-24-58	4×4	•	4×4
LGMHM4-6-60-24-58	4x4	•	6×6

<sup>\*</sup>Part numbers refer to the white version only

For antenna with full cable kit parts, contact your sales representative



### 4x4 MiMo 4G/5G Low Profile Dome









- · 4x4 MiMo 5G/4G
- · 698-960/1710-3800MHz
- · Optional integral 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. Available in Black or White.

Part no.	MiMo 4G/5G	GPS/ GNSS	MiMo WiFi
LPMM4-7-38	4x4		
LGMM4-7-38	4×4	•	
LGMDM4-7-38-24-58	4×4	•	2×2
LGMTM4-7-38-24-58	4×4	•	3×3
LGMQM4-7-38-24-58	4x4	•	4×4

<sup>\*</sup>Part numbers refer to the white version only

<sup>\*\*</sup>Antenna only part number shown above.

<sup>\*\*</sup>Antenna only part number shown above.

For antenna with full cable kit parts, contact your sales representative





### The Fez 5G Antenna









IP69K RATED

- · 5G/4G/3G/2G
- · 617-6000MHz SiSo element
- · Optional 2x2 or 4x4 MiMo WiFi
- · Optional integral GPS/GNSS antenna
- · Ground plane independent

The Fez 5G antenna series is a range of low profile antennas that features a wideband cellular element covering 617-6000MHz with option to include an active GPS/GNSS antenna and up to four dualband WiFi 6e elements all in a robust compact housing.

Part no.	4G/5G	GPS/ GNSS	WiFi	MiMo WiFi
LPE-6-60	•			
LGE-6-60	•	•		
LGE-6-60-SW	•	•	•	
LGE-6-60-DW	•	•		2×2
LGE-6-60-QW	•	•		4×4

<sup>\*</sup>Antenna only part number shown above.

For antenna with full cable kit parts, contact your sales representative



### The BAT Covert MiMo Antenna









- · 2x2 MiMo 5G/4G
- · 617-960 / 1710-6000MHz
- · Optional Integral GPS/GNSS
- · Optional SiSo or 2x2 MiMo WiFi 2.4/5GHz
- · ECE R118 Compliant Cables

The Panorama BAT range is an ideal 2x2 MiMo 4G/5G antenna for Covert installations with fall back capability to 3G/2G. It can also incorporate a GPS/GNSS antenna and Single or 2x2 MiMo dual band WiFi antenna(s).

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



### Internal LTE/GNSS Puck Antenna





- 4G/3G/2G LTE
- · 698-2700MHz SiSo
- · Integral 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.	Cable & Connector
GPSC-7-27-3SP	3m (10') Male
GPSC-7-27-3FAKRA	3m (10') FAKRA D (Cell) 3m (10') FAKRA C (GPS)



### Stingray SiSo Internal Antenna









- · Cellular, WiFi and GPS/GNSS included
- · Dashboard or windshield mount
- · Suitable for M3 category vehicles (Compliant with ECE R118)

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 UN ECE R118, 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.	Cable & Connector
GPSCO-7-27-24-58	3m (10') SMA Male
GPSCOF-7-27-24-58	3m (10') FAKRA D





### Marine SiSo LTE Antenna



- · 4G/3G/2G SiSo antenna
- · 698-2700MHz
- · 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 cellular connectivity in challenging environments including marine, coastal and land based applications. The antenna is supplied with a 30cm coaxial cable with N socket connector and 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 & Connector	
NA-BC3G-26-03NJ	0.3m (1') N-Female	



### Heavy Duty SiSo Transit Antenna







IP69K

- · 5G/4G/3G/2G
- · 698-6000MHz
- · Optional integral GPS/GNSS antenna
- · Fully rail industry certified
- · IP69K rated

The TRNC[G] series antenna can be used for either Cellular or WiFi applications. It has been specifically designed to meet railway engineering standards and features a DC grounded radiating element. The 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.	Cellular/ WiFi	GPS/ GNSS
TRNC-7-60	•	
TRNCG-7-60	•	•





### Heavy Duty MiMo Transit Antenna





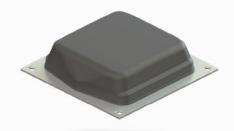




- 2x2 MiMo 5G/4G LTE
- · 698-960 / 1710-6000MHz
- · Optional Integral GPS / GNSS with surge arrestor
- · Fully Rail Industry Certified
- · IP69K rated

The TRNM[G]-7-60 2x2 MiMo antenna series is designed specifically for use on trains (under/overground), trams and buses. Incorporating two DC grounded wideband elements for 698MHz to 6000MHz, the TRNM(G) range . is versatile and future proof. The TRNM(G)-7-60 series is suitable for use with with all Cellular 4G/5G bands and 2.4/5GHz WiFi.

Part no.	MiMo 4G/5G	GPS/ GNSS
TRNM-7-60-NJ	2×2	
TRNMG-7-60-NJ	2×2	•



### 4x4 MiMo 4G/5G Transit Antenna









- · Low Profile Transit Antenna
- · 4x4 MiMo 617-960/1427-6000MHz
- · Up to 4x4 MiMo WiFi 6e
- Up to 2x GPS/GNSS L1 or 1x GPS/GNSS L1/L2/L5
- · Meets Railway Standards EN50155, EN45545-2 and EN50124-1

The TRNM[X]4-6-60[-X] MiMo antenna series is designed specifically for use on trains (under/ overground), trams and buses. Incorporating four wideband elements, covering 617MHz to 6000MHz the TRNM[X]4-6-60[-X] range is versatile and future proof.

Part no.	MiMo 4G/5G	GPS/ GNSS	MiMo WiFi
TRNMG4-6-60-Q	4x4	•	4x4
TRNMG4-6-60-T	4x4	•	3×3
TRNMG4-6-60-D	4x4	•	2×2
TRNMG4-6-60-S	4×4	•	SiSo
TRNMG4-6-60	4x4	•	
TRNM4-6-60	4x4		





# WiFi 2.4/5.0GHz Easyfit Antenna



- Adhesive Mount Antenna
- · Install on Window or plastic panel
- · Dual Band WiFi 2.4/5.0GHz
- · SMA or FAKRA I connector options

EF-24-58 is an efficient and easy to install antenna for providing WiFi connectivity. The compact antenna can be easily positioned on a device plastic housing or vehicle windscreen using the supplied automotive industry grade adhesive pad. Versions are available with Rev pol SMA plug, Std SMA plug or FAKRA I jack connectors.

Part no.	Cable & Connector
EF-24-58-3RPSP	3m (10') Rev Pol SMA
EF-24-58-3SP	3m (10') SMA Male
EF-24-58-3FIJ	3m (10') FAKRA I



### WiFi Paddle Antenna



- · 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.	Connector
PWB-24-58-RSMAP	SMA Male
PWB-24-58-RSMARV	SMA Male (Rev. Pol.)

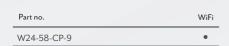


### SiSo WiFi Panel Antenna



- · Covers 2.4 & 5GHz dual band WiFi
- · SMA-Female connector
- · High gain directional antenna
- · Ideal WiFi coverage extender

The W24-58-CP-9 is a 9dBi gain 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.





### Low Profile Internal MiMo WiFi





- Up to 4x4 MiMo WiFi 2.4/5.0GHz
- · Ceiling mount Omni-directional
- · Low profile, robust housing
- · EN50155, EN45545-2 & UN ECE R118

The CM(x)-24-58 range provides a compact, robust internal WiFi antenna with 2x2, 3x3 or 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.

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

### Magnetic Mount



#### Part no. SAB-224

- · Temporary Installation
- For Sharkee Series (7-27)
- · Can be fitted anywhere on vehicle
- · Ideal for trials and drive-testing

#### For use with:

GPSD   SHK Series	•
GPSB   FINB	•

#### Part no. SAB-311

- · Temporary Installation
- · Can be fitted anywhere on vehicle
- · Ideal for trials and drive-testing

#### For use with:

GPSD4/SHK[G]4 series

#### Part no. SAB-225

- · Temporary Installation
- · For Dome antennas
- · Can be fitted anywhere on vehicle
- · Ideal for trials and drive-testing

#### For use with:

LGMM   LPMM (Great White Series)	•
LGMQM4 (9 in 1 Series)	•
LPMM4 LGMM4 (5G Mako)	•



#### Part no. SAB-254

- · Temporary Installation
- For Sharkee Series (6-60)
- · Can be fitted anywhere on vehicle
- · Ideal for trials and drive-testing

#### For use with:

GPSD-6-60 | SHKG-6-60

#### Marine Mount



#### Part no. SAB-315

· Marine Mount adaptor for BSM antenna range

#### For use with:

BSM Series

### **Bracket Mount**



#### Part no. SAB-309

- · Permanent Mounting Solution
- · Easy Installation Mast/Wall
- · Fits all Dome antennas

#### For use with:

LP[G]MM(4) series	•
LGMM   LPMM	•
LGMQM4	•
LPMM4 LGMM4 (5G Mako)	•



#### Part no. SP5-0577

- · Provides a versatile solution for wall mount applications
- · Heavy Duty and weather resistant

#### For use with:

LP[G]AM series



#### Part no. SP5-0470

- · Provides a versatile solution for wall mount applications
- · Extremely resistant and weather durable

#### For use with:

LPB/LPBE

# 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/C29FR

- · Cellular 2G/3G/4G
- · Double shielded Stranded core
- · Ultra low loss cable
- · Flame retardant jacket (C29FR)

#### Part no. C32

- · Cellular 5G / WiFi
- · Double shielded Solid core
- · Flame retardant jacket
- · Ultra low loss cable

#### Part no. C240

- · Cellular / WiFi
- · Double shielded solid core 6mm Ø cable
- · Flame retardant jacket
- · Longer cable run





Head Office - United Kingdom sales@panorama-antennas.com +44 20 8877 4444

Australia sales.apac@panorama-antennas.com +61 8 9314 1381 France sales.eu@panorama-antennas.com +33 554 070 436

Germany de.sales@panorama-antennas.com +49 2303 902 88 00 Singapore sales.sea@panorama-antennas.com +65 9155 4194

sales.nam@panorama-antennas.com +1 817-539-1888