



EBDS

WIRELESS & ANTENNAS



**PANORAMA
ANTENNAS**

**Utilities &
Smart Metering**

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.



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 (The Critical Communications Association)**
- **British Safety Council**
- **B-APCO (British Association of Public Communication Officers)**

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The background features a vibrant night cityscape with illuminated buildings and streets. Overlaid on this is a digital graphic of a globe, where the continents are represented by a grid of small, glowing blue dots. A network of white lines connects various points across the globe, suggesting global connectivity and data flow. The overall color palette is dominated by deep blues and bright whites, creating a high-tech, futuristic atmosphere.

Mobile Data

Antenna Solutions



Great White® 5G MiMo Antenna



- 2x2 MiMo 5G/4G LTE
- 617-960 / 1710-6000MHz
- Optional Integrated GPS/GNSS
- Up to 6x6 MiMo WiFi 2.4/5.0GHz
- ECE I18.03 Compliant Cables
- IP69K & 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.	MiMo LTE	GPS/ GNSS	MiMo WiFi
LPMM-6-60	2x2		
LGMM-6-60	2x2	●	
LGMDM-6-60-24-58	2x2	●	2x2
LGMTM-6-60-24-58	2x2	●	3x3
LGMQM-6-60-24-58	2x2	●	4x4
LGMHM-6-60-24-58	2x2	●	6x6

*Part numbers refer to the white version only

** Part number represents antenna only. Please contact your local sales representative for kit part numbers with full cable assemblies supplied

MAKO® 5G MiMo Antenna



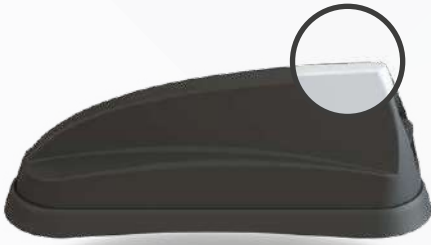
- 4x4 MiMo 5G/4G LTE
- 617-960 / 1710-6000MHz
- Optional Integrated GPS/GNSS
- Up to 6x6 MiMo WiFi 2.4/5.0GHz
- ECE I18.03 Compliant Cables
- IP69K & IK10 Rated

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. Available in Black or White. Optional GPS/GNSS module incorporates advanced filtering.

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

*Part numbers refer to the white version only

** Part number represents antenna only. Please contact your local sales representative for kit part numbers with full cable assemblies supplied



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
- ECE I18.03 Compliant Cables

The SHKG Sharkee® range has become a byword for industry leading technology in a discrete OEM sharkfin housing. The 6-60 brings 5G capability to the Sharkee® family.

Part no.	MiMo LTE	GPS/ GNSS	MiMo WiFi	External Whip
GPSD-6-60	2x2	•		•
GPSD-6-60-DW	2x2	•	2x2	•
GPSD-6-60-TW	2x2	•	3x3	•
GPSD-6-60-QW	2x2	•	4x4	•
SHKG-6-60	2x2	•		
SHKG-6-60-DW	2x2	•	2x2	
SHKG-6-60-TW	2x2	•	3x3	
SHKG-6-60-QW	2x2	•	4x4	

*Part numbers refer to the black version only
 ** Antenna kit supplied with 5m / 17ft of cable assembly with SMA male (cellular & GNSS) and reverse polarity SMA male (WiFi).
 ***Other lengths cables and connectors available upon request.



4x4 MiMo 4G/5G Sharkfin Antenna



- 4x4 MiMo 4G/5G LTE
- 617-960 / 1710-6000MHz
- Integrated GPS/GNSS
- Optional up to 6x6 MiMo WiFi
- 2.4/5.0-7.2GHz
- 5m / 16ft cables

The 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 include up to four active GPS/GNSS antennas.

Part no.	MiMo LTE	GPS/ GNSS	MiMo WiFi
SHKG4-6-60*	4x4	•	
SHKG4-6-60-D*	4x4	•	2x2
SHKG4-6-60-T*	4x4	•	3x3
SHKG4-6-60-Q*	4x4	•	4x4

*Antenna only part number
 **Part numbers refer to the black version only
 *** Antenna kit supplied with 5m / 17ft of cable assembly with SMA male (cellular & GNSS) and reverse polarity SMA male (WiFi).
 ****Other lengths cables and connectors available upon request.



The Fez 5G Antenna



- 5G/4G/3G/2G LTE
- 617-6000MHz
- Optional 2x2 or 4x4 MiMo WiFi
- Optional integrated GPS/GNSS antenna
- Ground plane independent

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

Part no.	LTE	GPS/ GNSS	WiFi	MiMo WiFi
LPE-6-60	•			
LGE-6-60	•	•		
LGE-6-60-DW	•	•		2x2
LGE-6-60-QW	•	•		4x4



Covert MiMo Antenna



- 2x2 MiMo 5G/4G LTE
- 617-960 / 1710-6000MHz
- Optional Integrated GPS/GNSS
- Optional SiSo or 2x2 MiMo WiFi 2.4/5GHz
- ECE I18.03 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	2x2			
BATGM-7-60	2x2	•		
BATGM-7-60-S24-58	2x2	•	•	
BATGM-7-60-24-58	2x2	•		2x2

Mobile Voice Radio

Antenna Solutions





Glass Mount Antenna

**VHF UHF IP65
RATED**

- Excellent performance
- No hole installation
- Solid state coupling (GM versions)
- Quick and easy installation
- Windscreen or rear window mounting

The antenna capacitively couples through glass and its high positioning gives it good performance and near omni-directional radiating pattern similar to a roof-mounted $\frac{1}{4}$ wave (For GM versions). The whip can be easily removed for the car wash.

Part no.	Frequency (MHz)
AOG143	138-148
AOG151	142-160
AOG161	156-160
GM390	380-400
GM420	410-430
GM435	425-455
GM455	445-470
GMG-S5	806-870



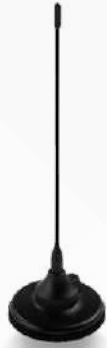
Half-Wave UHF Antenna

UHF

- Flexible whip
- Ground plane independent
- Moulded coaxial cable
- Suitable for vehicles or fixed site applications

The HM range of antennas can be mounted on any surface. The antenna is ideal for motorcycles but can also be used on other vehicles, boats or fixed sites. The HM antenna range has a rugged design with a flexible nylon covered whip. The base features a moulded cable entry and an M14 mounting bolt.

Part no.	Frequency (MHz)	Part no.	Frequency (MHz)
HM-S1	380-400	HM-S4	450-470
HM-S2	410-430	HM-480	470-490
HM-TET	380-430	HM-495	480-510
HM-433	430-440	HM-S5	806-870
HM-451	438-472	HM-D	896-960



Magnetic Mount Antenna

VHF UHF

- Available in VHF + UHF bands
- Temporary fit
- Easy removal
- Strong magnetic retention

The MD range of antennas is a popular choice for vehicles that require a temporarily fixed antenna.

The tough magnetic base will retain the antenna to the roof or boot. Available in all standard VHF and UHF bands, as well as customer-specific frequencies.

Part no.	Frequency (MHz)	Part no.	Frequency (MHz)
MD146-5	141-151	MD420-5	410-430
MD161-5	156-164	MD-TET-5	380-430
MD168-5	162-174	MD-451-5	430-472
MD390-5	380-400	MD-S5-5	806-870



Internal On-Glass Antenna

UHF IP65 RATED

- Semi covert window mount antenna
- Install with no vehicle damage
- Flexible moulding to allow fitting to curved glass

The EF 'easy fit' antennas provide an effective low-visibility 'no-hole' solution.

With their secure but easy to fit adhesive pad mountings, the EF antenna provide a huge range of possibilities for the installer and is ideal for temporary installation in short-term use vehicles.

Part no.	Frequency (MHz)	Part no.	Frequency (MHz)
EF-S1	380-400	EF-W	470-512
EF-S2	410-430	EFBAD	698-960
EF-S3	380-420	EF-S5	806-870
EF-S4	450-470		



Offset Dipole

VHF UHF

- Improves range
- Easy installation
- Light weight solution
- External & Internal use

The ODP wall mount antenna range is a simple and cost efficient way of providing an fixed antenna for fixed terminals.



Bracket Mount

UHF

- Used with fixed radio terminals
- Wall mount or mast mount
- Improves range

The bracket mount antenna range is an easy to install solution, ideal for a fixed radio terminal in an office.

Part no.	Frequency (MHz)
ODP-H5	149-159 (2dBi)
ODP-H6	156-162 (2dBi)
ODP-H7	162-174 (2dBi)
ODP-TET	380-430 (2dBi)
ODP-433	410-450 (2dBi)
ODP-HS4	450-470 (2dBi)
ODP-SIG6-4B	380-400 (6dBi)
ODP-S2G6-4B	410-430 (6dBi)
ODP-S4G6-4B	450-470 (6dBi)

Part no.	Frequency (MHz)
BM390	380-400
BM420	410-430
BM451	430-472
BM460	450-470
BM-S5	806-872
BM900	890-960



GPS/GNSS & Whip Combination



- Flexible UHF, cellular or WiFi whip
- Integrated GPS/GNSS
- Single 15mm hole mount
- Whip mounting stud

The GPSK antenna is a rugged combination base with a whip mounting stud. A wide range of antenna whips are available to fit the GPSK, including UHF, Cellular and WiFi types.

The GPSK is an ideal solution for vehicle mounted terminals and Mobile Data equipment. It can also be supplied as a complete 'plug and play' kit.

Part no.	Whip
*GPSK-TET	380-430MHz
GPSK-C3G	900, 1800, 1900, 2100MHz
GPSK-W24	2400MHz

*Other UHF bands available



Low Profile UHF Antenna



- 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.

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



Smart Metering & Remote Monitoring

Antenna Solutions



Low Profile Panel Antenna



- Cost effective 2G/3G/4G/5G coverage
- 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 antenna 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
LPBE-6-60-2SP	2m(6'6") SMA Male
LPB-6-60-5SP	5m (17')SMA Male



4G/5G Bracket Mount Antenna



- Cost Effective 2G/3G/4G/5G coverage
- 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 position.

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



Low Profile Magnetic Antenna



- Cost effective 2G/3G/4G/5G antenna
- 617-960 / 1710-6000MHz
- Magnetic Mount
- Low Profile Design - integral coaxial cable

The Panorama LPBEM-6-60 is a low cost high performance magnetic mount antenna for temporary fit applications, or where a hole mount antenna can't be used. At only 95mm (3.7") high and protected by a robust high impact radome the antenna is ideal for use in hostile environments.

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



M2M & IoT SiSo LTE Antenna



- 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



Low Profile Multifunction Puck Antenna



- Low Profile 'Puck' Design 3G/4G
- 698-960/1710-3800MHz
- Optional WiFi & GPS/GNSS function
- IP69K ingress & IK10 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, low profile antenna for M2M and IoT installations.

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

MiMo LTE & WiFi Panel Mount



- 2x2 MiMo 4G/5G LTE 698-3800MHz
- 2x2 MiMo WiFi 2.4/5.0GHz
- Optional integrated GPS/GNSS
- 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. Can be fitted on a metal or plastic mounting panel.

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

*Other cable lengths and connector types available upon request



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.

Part no.	GPS/ GNSS	Magnetic Base	Cable & Connector
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



Panel Mount 2G/3G/4G Antenna



- 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 & Connector
B2BE-BC3G-26-5SP	5m (17') SMA Male

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WIRELESS & ANTENNAS

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