



**EBDS**

WIRELESS & ANTENNAS



**PANORAMA  
ANTENNAS**

## **PMR & Critical Communications**

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PRODUCT CATALOGUE

# Over 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 over 75 years experience in delivering world-class antenna products, Panorama's current product range reflects our unparalleled expertise in providing high-quality performance antennas.



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# Multifunction

Antenna Solutions



## Great White 5G



- 2x2 MiMo 5G/4G
- 617-960 / 1427-6000MHz
- Optional Integrated GPS/GNSS
- Up to 6x6 MiMo WiFi 2.4/5.0-7.2GHz
- ECE R118 Compliant Cables
- IP69K & IK10 Rated

The Great White 5G 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	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

\*\*Antenna only part number shown above.

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



## MAKO® 5G Dome



- 4x4 MiMo 5G/4G
- 617-960 / 1427-6000MHz
- Optional Integrated GPS/GNSS
- Up to 6x6 MiMo WiFi 2.4/5.0-7.2GHz
- ECE R118 Compliant Cables
- IP69K & IK10 Rated

The Mako 5G dome range provides effective 4x4 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
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

\*\*Antenna only part number shown above.

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



## MAKO® Dome



- 4x4 MiMo 5G/4G
- 698-960/1710-3800MHz
- Optional integral GPS/GNSS
- Optional up to 4x4 MiMo WiFi 2.4 / 5.0-7.2GHz
- Low profile, rugged housing
- Ground plane independent

The LGM[X]M4 enables multiple antenna functions to be fitted using a single hole. Designed for use with 4G Cat 18/20 and 5G devices that require a 4x4 4G/LTE MiMo antenna system.

Part no.	MiMo 4G/5G	GPS/ GNSS	MiMo WiFi
LPMM4-7-38	4x4		
LGMM4-7-38	4x4	●	
LGMDM4-7-38-24-58	4x4	●	2x2
LGMTM4-7-38-24-58	4x4	●	3x3
LGMQM4-7-38-24-58	4x4	●	4x4

\*Part numbers refer to the white version only  
 \*\*Antenna only part number shown above.  
 For antenna with full cable kit parts, contact your sales representative

## MiMo Dual Sharkee® 5G



- 4x4 MiMo 4G/5G
- 617-960 / 1427-6000MHz
- Integral GPS/GNSS
- Optional up to 6x6 MiMo WiFi 2.4/5.0-7.2GHz
- ECE R118 Compliant Cables
- Mounting stud for comms whip (GPSD4)

The MiMo Dual Sharkee® 5G 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	●	2x2
GPSD4-6-60-T	4x4	●	3x3
GPSD4-6-60-Q	4x4	●	4x4
SHKG4-6-60	4x4	●	
SHKG4-6-60-D	4x4	●	2x2
SHKG4-6-60-T	4x4	●	3x3
SHKG4-6-60-Q	4x4	●	4x4

\*Part numbers refer to the black version only  
 \*\*Antenna only part number shown above.  
 \*\*\* GPSD4 products include external whip option  
 For antenna with full cable kit parts, contact your sales representative



## 4G/5G MiMo Sharkee® 5G



- 2x2 MiMo 5G/4G LTE
- 617-960 / 1427-6000MHz
- Optional Integrated GPS/GNSS
- Up to 4x4 MiMo WiFi 6e 2.4/5.0-7.2GHz
- 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 shark fin housing. The 6-60 brings extended 5G frequency range to the Sharkee® family.

Part no.	MiMo 4G/5G	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 only part number shown above.

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

## SHK[G] MiMo Sharkee®



- Covers 698-960/1710-3800MHz
- 2x2 MiMo 5G/4G/3G/2G
- Optional 2x2 or 3x3 MiMo WiFi 2.4/5GHz
- 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	2x2		
SHKG-7-27	2x2	•	
SHKG-7-27-S24-58	2x2	•	1x1
SHKG-7-27-24-58	2x2	•	2x2
SHKG-7-27-T24-58	2x2	•	3x3
SHKGW-7-27*	2x2	•	
SHKGW-7-27-24-58*	2x2	•	2x2

\*White version

\*\*Antenna only part number shown above.

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



## GPSD MiMo Sharkee®



- Covers 698-960/1710-3800MHz
- 2x2 MiMo 5G/4G/3G/2G
- Integral GPS/GNSS antenna
- Optional 2x2 MiMo WiFi 2.4/5GHz
- 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	•	2x2	•

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



## 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 4G/5G	GPS/ GNSS	SiSo WiFi	External Whip
GPSB5G	•	•	•	•

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





## GPS/GNSS & Whip Combination



- Integrated GPS/GNSS
- Single 15mm hole mount
- Whip mounting stud for VHF, UHF or 7/800MHz whip

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 VHF,UHF, and 7/800MHz types.

Part no.	Whip
GPSK-TET	380-430MHz
GPSK-S4	450-470MHz
GPSK-S5	806-870MHz
GPSK-C3G	900, 1800, 1900, 2100MHz
GPSK-W24	2400MHz

\*Kits available to suit all TETRA terminals.



## The BAT Covert MiMo Antenna



- 2x2 MiMo 5G/4G
- 617-960 / 1427-6000MHz
- Optional Integral GPS/GNSS
- Optional SiSo or 2x2 MiMo WiFi 5.0-7.2GHz
- 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	2x2			
BATGM-7-60	2x2	•		
BATGM-7-60-S24-58	2x2	•	•	
BATGM-7-60-24-58	2x2	•		2x2



## 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 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
GPSCOF-7-27-24-58	3m (10') FAKRA



## The Fez 5G Antenna



- 5G/4G/3G/2G
- 617-960 / 1427-6000MHz SiSo element
- Optional 2x2 or 4x4 MiMo WiFi 2.4 / 5.0-7.2GHz
- 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	•	•		2x2
LGE-6-60-QW	•	•		4x4

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



## GPS / GNSS Antennas



### • GPS / GNSS Antennas (L1 Band)

Vehicle positioning is an intrinsic part of vehicle and fleet management and is achieved by use of GPS/GNSS technology. An effective antenna with high performance filtering is required to provide reliable operation.

The GPSP offers a permanent, panel mounted option, whilst the GPSME provides the convenience and flexibility of a temporary, no holes solution with a tough magnetic fixing.

The GPSSV type is ideal for covert installation and is supplied with both adhesive and hook/loop pad fixings. A 3m coax cable is supplied as standard, but a version with a 30cm fly lead is available which can be used with an extension coax cable where required.

Part no.

GPSME | GPSSV | GPSP

## GPS25 Antenna



- GPS/GNSS L1/L2/L5
- 37dB gain LNA
- Compact, robust housing (Mag or Panel)
- Integral FR rated RG174 coaxial cable

The GPS25 is a high-performance L1/L2/L5 band GPS/GNSS antenna with ~37dB gain LNA and excellent filtering. The antenna is housed within a low profile, robust enclosure and is suitable for use with GPS, GLONASS, Galileo and BeiDou systems requiring high accuracy for navigation, RTK and other precision applications.

The GPS25MS has a magnetic base for temporary mounting, and an adhesive pad. GPS25P is a panel mount version for permanent installation. The antenna is supplied with integrated FR rated RG174 coaxial cable (Complaint with UN ECE R118) and is available with a variety of connectors.

Part no.

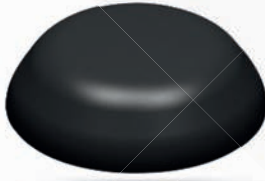
Cable & Connector

GPS25MS-6SP	SMA Male
GPS25MS-6FAKCJ	FAKRAC
GPS25P-6SP	SMA Male
GPS25P-FAKC5	FAKRAC



# Special Application

Antenna Solutions



## Low Profile UHF Antenna

**UHF IP65 RATED**

- 380-520 (Banded) / 800MH
- Rugged design for heavy duty applications
- Easy installation
- Suitable to fit on plastic or metal

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

\*\*\* Standard tuning free space - request for mouning on ground plane.



## 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 capacitive couples through glass and its high positioning gives it good performance and near omni-directional radiating pattern similar to a roof-mounted 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	156-174
GM390	380-400
GM420	410-430
GM435	425-455
GM-455	445-470



## 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	430-450	HM-S5	806-870
HM-451	438-472	HM-D	896-960

\* Footer indicating GPS/GNSS version

### Ratchet Mount NDRS-SL

Constructed from polished stainless steel, Panorama's NDRS-SL Ratchet Mount is designed to endure the harshest marine environments.



## UHF Marine Antenna

### UHF

- Various UHF frequencies
- Optional GPS/GNSS
- Ratchet mount option
- Constructed from marine grade materials
- Optional GPS element

The NA Series antenna fits standard 1" x 1/4" TPI marine mounting systems. Can also be supplied with custom extension coaxial cable sets to meet the customer's specific installation requirements.

Part no.	Frequency (MHz)	Part no.	Frequency (MHz)
NA-S1-GPS	380-400	NA-S1	380-400
NA-S2-GPS	410-430	NA-S2	410-430
NA-440-GPS	430-450	NA-440	430-450
NA-S4-GPS	450-470	NA-S4	450-470
NA-S5-GPS	806-870	NA-S5	806-870



## Heavy Duty SiSo Transit Antenna

**UHF**    **IP69K  
RATED**

- 5G/4G/3G/2G LTE, GSM-R or UHF
- 698-6000MHz or 380-520MHz (Banded)
- Optional integrated GPS / GNSS
- 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.	LTE/ GSM-R	GPS/ GNSS	WiFi	UHF
TRNC-7-60	•			•
TRNCG-7-60	•	•	•	
TRNC-TET/S4				•
TRNCG-TET/S4		•		•



## 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



## Rapid Deployment Clip Dipole

### VHF UHF

- Rugged construction
- Fast installation
- Moulded in coaxial cable

The 'Clip Dipole' range is designed for quick and easy assembly and installation on remote sites. An ideal product for temporary use at a public or sports event.

Part no.	Frequency (MHz)	CDV-I52	UK SAR
CDV-E3	67-74	CDV-K5	174-192
CDV-E4	74-81	CDV-K6	192-208
CDV-E5	81-88	CDV-K7	208-225
CDV-H3	132-143	CDU-S1	380-400
CDV-JRC	139-157	CDU-S2	410-430
CDV-H4	141-151	CDU-TET	380-430
CDV-H5	149-159	CDU-U1	410-470
CDV-H6	156-162	CDU-T2	420-456
CDV-H7	162-174	CDU-U	430-472
		CDU-U2	450-512



## Rapid Deployment Clip 1/2 Wave

### UHF

- Groundplane independent
- Fast 'clip on' installation
- Moulded coaxial cable

The performance and scope of portable equipment can often be considerably improved by elevating the antenna to a more effective height. Clip antennas provide an easy way to do this. The CD series features a rugged single end fed 1/2 wave element. The jaws of the spring clip are moulded in nylon and are adjustable for any angle. The clip mount features a fully moulded coaxial connection for weather protection and resilience.

Part no.	Frequency (MHz)
CD390	380-400
CD420	410-430
CD433	430-450
CD458	445-470
CD800	806-870
CD900	870-960





## UHF / VHF Elevated Antenna

### VHF UHF

- Mast mount
- VHF, UHF and 800MHz
- Ideal for fixed radio terminal applications
- Quick assembly and installation
- N socket.

Quick and easy to assemble and deploy in the field, this is a unique antenna solution that is ideal where coverage needs to be improved.



## Tri-band Elevated antenna

### UHF

- Groundplane independent
- Mast mount
- N Socket

Quick and easy to assemble and deploy in the field, this is a unique antenna solution that is ideal where coverage needs to be improved.

#### VHF Versions

Part no.	Frequency (MHz)
BSV-E3	67-74
BSV-E4	74-81
BSV-E5	81-88
BSV-H3	132-143
BSV-H4	141-151
BSV-H5	149-159
BSV-H6	156-162
BSV-H7	162-174
BSV-152	UK SAR

#### UHF Versions

Part no.	Frequency (MHz)
BSU-TET	380-430
BSU-TETG5	380-430 (5dBi)
BSU-UT	406-472
BSU-U	430-472
BSU-S4	450-470
BSU-W	470-512
BS800	804-870 (5dBi)

#### Part no.

#### Frequency (MHz)

BSV-155-S4-821	145-174 / 420-480 / 764-894
BSV-155-U1-B1	150-160 / 410-470 / 746-806
BSV-155-U1-S1	150-160 / 410-470 / 806-870

The background of the image shows a person's hands holding a smartphone, with a laptop keyboard visible in the lower-left corner. A network diagram consisting of interconnected nodes and lines is overlaid on the top right portion of the image. A white rectangular box is centered in the middle of the image, containing the text 'Cellular & WiFi' and 'Antenna Solutions'.

# Cellular & WiFi

Antenna Solutions



## 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



## 4G/5G Bracket Mount Antenna



**IP66  
RATED**

- 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 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



LPBEM-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



EF-BC3G-26



EF-6-60

## Internal SiSo Cellular Antenna



- 5G/4G/3G/2G
- 698-2700MHz
- 600-6000MHz (EF-6-60 Version)
- Simple adhesive pad fitment
- Can be fitted on glass or plastic panel

The EF antenna is a low cost single 5G/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.	Cable & Connector
EF-BC3G-26-3SP	3m (10') SMA Male
EF-6-60-3FAKDJ	3m (10') FAKRA D Jack
EF-6-60-3SP	3m (10') SMA Male



## Ultra Low Profile MiMo WiFi



- 4x4 MiMo WiFi 6e Antenna
- Ultra Low Profile
- Meets IP69K and IK10

The LPM4[X]-24-72-[VAR] range has been designed to provide an optimised antenna solution for applications requiring 4x4 MiMo capability. The compact, robust low-profile housing contains four elements covering WiFi 6e frequencies from 2396-7125MHz with optimised isolation and low correlation co-efficient.

Part no.	MiMo WiFi
LPM4[X]-24-72-[VAR]	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-24-58-3FJ	3m (10') FAKRA I



# Covert Antenna

Antenna Solutions



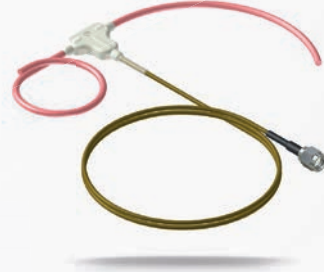
## Vehicle Dipole Antenna

### VHF UHF

- Dipole construction
- Covert bumper mounting
- Flexible wire elements for easy positioning

The covert vehicle dipole antenna is specifically designed for installations where the presence of an antenna must be undetectable. This specialist antenna is available in versions for VHF and UHF bands and requires tuning during installation to achieve optimal VSWR match.

Part no.	Frequency (MHz)
VCD-VL-5F	68-88
VCD-VH-5F	130-175
VCD-SI-5F	380-400
VCD-S2-5F	410-430
VCD-S4-5F	450-470



## Bodyworn Dipole Covert Antenna

### VHF UHF

- Dipole antenna
- Covert bumper mounting
- Flexible wire elements for easy positioning
- Rugged moulded T piece

This antenna can be incorporated in clothing or body armour/stab vests and should be oriented with elements on a vertical plane. Once in position, the antenna can be tuned to achieve the optimum VSWR/match.

Part no.	Frequency (MHz)	Part no.	Frequency (MHz)
BWDT-H3	132-143	BWDT-T2	420-450
BWDT-H5	141-151	BWDT-S4	450-470
BWDT-H4	149-159	BWDT-495	470-520
BWDT-H6	156-162	BWDT-815	806-870
BWDT-H7	162-174	BWDT-24	2400
BWDT-TET	380-430		



## UHF Bumper Antenna

### UHF

- Fully covert application
- Mounted behind plastic bumper
- Flexible construction
- Does not require any tuning

The Panorama Bumper Mount Antenna is designed for covert operations and other applications which require a vehicle antenna that is effectively invisible. Mounted in the vehicle's bumper, installation requires no drilling and is invisible from the outside of the car. A dual element version (BMP2) is available.

Part no.	Frequency (MHz)	Dual Version
BMPI-S1	380-400	
BMPI-S2	410-430	
BMPI-U	430-472	
BMPI-S4	450-470	
BMPI-7-27	700-2700	
BMP2-DPD-S1		380-400
BMP2-DPD-S2		410-430
BMP2-DPD-S4		450-470



## Internal On-Glass UHF Antenna

### UHF IP65 RATED

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

The EF 'Easyfit' antenna provides an effective low visibility solution ideal for permanent or temporary installation. Available for UHF and 7/800MHZ and bands.

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

\* comes supplied with 3m (10ft) or 5m (17ft) of coax and a range of connectors to suit.





# InBuilding Antenna

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## Offset Dipole Wall Mount Antenna

### 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 antenna for fixed terminals.

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-S4	450-470 (2dBi)
ODP-SIG6-4B	380-400 (6dBi)
ODP-S2G6-4B	410-430 (6dBi)
ODP-S4G6-4B	450-470 (6dBi)



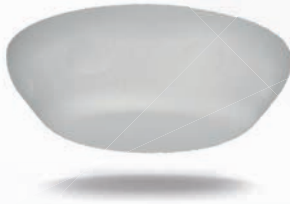
## High-gain UHF Directional

### UHF

- 8dBi peak gain
- Directional panel antenna
- Wall or mast mount

The WM8-TET is a directional panel antenna. The heavy duty ASA radome is resistant to weathering and suitable for outdoor use in challenging environments. The enclosure is vented by a high performance GORE® gland which allows it to breathe while keeping moisture and contaminants out, further increasing service life.

Part no.	Frequency (MHz)
WM8-TET	380-450
WM8-U2	450-520



## Ceiling Mount UHF Antenna

### UHF

- Easy installation
- In building UHF coverage
- Suitable for airports and stadiums

The Panorama UHF ceiling antenna can be used to provide network coverage in large buildings for the public services. Used in airports, large campus sites and shopping centres, the antenna can help to reduce holes in coverage and improve signal strength.

Part no.	Frequency (MHz)
CM-S1-08NJ	380-400
CM-S2-08NJ	410-430
CM-S4-08NJ	450-470



## 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)
BM390	380-400
BM420	410-430
BM451	430-472
BM460	450-470
BM-S5	806-872
BM900	890-960

An aerial night view of a city skyline, likely Hong Kong, with numerous skyscrapers illuminated. Overlaid on the image are several glowing blue arcs that represent signal paths or network connections, creating a futuristic and technological atmosphere. The arcs originate from various points on the buildings and converge towards the center of the image.

# Modular Base

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## Panel Mount

- Panel mount
- Rugged design
- Modular stud fitting
- Interchangeable whips

The M8 is the “industry standard” panel mount base. It incorporates stainless steel earthing teeth and a fully moulded construction with high quality coaxial cable for low loss and long term reliability. The base is easy to fit and can be installed from above or below the panel. With the modular stud fitting, almost any antenna in the Panorama range can be fitted to the base.

Part no.	Panel Thickness
M8	0-4mm
M8A	4-6mm



## Magnetic Mount

- Temporary mount
- Rugged magnetic mount
- Modular stud fitting

The MMR is large secure magnetic base for professional use that supports a full range of antenna whips. It features a fully moulded construction with high quality coaxial cable.

Part no.	Cable Length
MMR-5	5m (16.5")



## NMO Panel Mount Base

- Panel mount
- Suitable for various whips (NMO)
- Stainless steel earthing teeth

The Panorama 'NMO' 3/4 inch panel mount antenna base combines compatibility with NMO style antennas with rugged engineering and high quality construction. This quality panel mount is made from nickel plated brass to resist corrosion, and the earthing teeth are stainless steel to provide excellent earthing with every installation.

Part no.	Cable & Connector
MNMOM-5	5.2m (17'') CS23
MNMOM-5F	5.2m (17'') CS23
MNMOM-5MP	5.2m (17'') CS23
MNMOM-10F	10m (32.5'') CS23



## GPS NMO Combi Panel Mount

- Panel mount
- Rugged low profile design
- NMO whip mount
- Integral GPS/GNSS

The GPSNMO is a GPS/GNSS combi antenna featuring a low-profile NMO mount and a high-performance GNSS antenna with 30dB gain LNA. Suitable for panels up to 6.5mm thick using a single hole, it is supplied with 5m length cables.

Part no.	Cable & Connector
GPSNMO	5m (16.5'') CS23 & RG 174
GPSNMO-FF	0.3m (11'') CS23 & RG 174



## Rigid 1/4 Wave

### VHF UHF

- 1/4 wave whip
- Removable for car wash
- Hinged & non-hinged versions

The AQ[H]B series is a slim design 1/4 wave whip for VHF, UHF & 7/800MHz. Available in hinged and non-hinged versions.

Non-Hinged	Hinged	Frequency (MHz)
AQB-H4A	AQHB-H4A	138-155
AQB-H6A	AQHB-H6A	155-174
AQB-TET	AQHB-TET	380-430
AQB-U	AQHB-U	430-472
AQB-W	AQHB-W	470-512
AQB-S5	AQHB-S5	806-870

## High-gain Whips

### VHF UHF

- High gain
- Removable for car wash
- Hinged & non-hinged versions

The A5G series is a 5dBi broadband colinear antenna. The phasing coil is over-moulded to provide a rugged antenna for demanding applications. The ACU series is a 7dBi gain antenna for use where network coverage is poor.

Non-Hinged	Hinged	Frequency (MHz)
A5GH-TET	A5GM-TET	380-470
ACUHB-S1	ACUB-S1	380-400
ACUHB-S2	ACUB-S2	410-430
ACUHB-U	ACUB-U	430-472
ACUHB-460	ACUB-460	450-470
ACUHB-W	ACUB-W	470-512

AVGHB  
5dBi Gain



AUGHB  
3.5 dBi Gain



## Gain Whips

### VHF UHF

- Gain whips
- Rugged construction
- Hinged base and removable whip

The AVGHB/AUGHB range is a durable solution for vehicle installations requiring a medium gain antenna. The antennas feature a fully encapsulated impedance matching coil and a 17-7PH stainless steel whip.

Part no.	Frequency (MHz)	Part no.	Frequency (MHz)
AUGHB-360	350-370	AVGHB-H4	141-151
AUGHB-S1	380-400	AVGHB-H5	149-159
AUGHB-S2	410-430	AVGHB-H6	156-162
AUGHB-TET	380-430	AVGHB-H7	162-174
AUGHB-U	430-472		

## VHF Wideband Antenna

### VHF

- Wideband VHF antenna
- Integrated shock mount

The AVWB is a rugged wide band VHF antenna, suitable for users who operate over the full range of VHF frequencies. The AVWB is compatible with all of the modular bases in the Panorama range. Supplied with an integrated shock mount, the antenna is protected from impact and damage in low clearance situations.

Part no.	Frequency (MHz)
AVWB-SM-39-68	138-169





# Sharkee® & GPSK Base Whips

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## VHF ¼ Wave Flexible Whip

### VHF

- OEM bee-sting style
- Wideband ¼ wave
- Flexible overmoulded base

The AFBQ is a rugged VHF ¼ wave whip for use on GPSK & GPSB base types. This antenna whip is styled to resemble an OEM 'bee sting' type design and is both discrete and durable, featuring an overmoulded shock spring and stainless steel rod.

## UHF 5dBi Flexible Whip

### UHF

- OEM bee-sting style
- High peak gain
- Flexible overmoulded construction

The AFGB offers omni-directional performance with 5dBi peak gain. The antenna whip is styled like an OEM 'bee-sting' type antenna and is both discrete and durable featuring an overmoulded coil and stainless steel rod. The antenna base is flexible for added damage resistance and can be mounted on a range of Panorama GPS combination bases.

Part no.	Frequency (MHz)
AFBQ-H4A	138-155
AFBQ-H6A	155-174
AFBQ-H5	149-159
AFBQ-H7	162-174

Part no.	Frequency (MHz)
AFGB-395	380-410
AFGB-S2	410-430
AFGB-S4	450-470
AFGB-832	760-870
AFGB-B1	745-806
AFGB-S5	806-870



## ¼ Wave Flexible Whips

### VHF UHF

- 1/4 wave whip 2dBi Gain
- Removable for car wash
- Rugged and flexible

AFB type features a multi-wire elements within a black nylon tube. AFNT features an ultra-flexible wire whip and AFM type has a fully moulded, stylish flexible construction.

## Tri-Band Whips

### VHF UHF

- Tri band function
- Flexible rod with wound element
- Fits Panorama Sharkee & GPSK base

The ASF whips are stylish, discrete and durable, featuring a flexible overmoulded base section and a black jacketed flexible wound rod element. Designed to be mounted on the GPSB, GPSD and GPSK range of bases, and used with a Panorama Triplexer.

Part no.	Frequency (MHz)	Part no.	Frequency (MHz)
AFNT-H4A	138-155	AFB-S2	410-430
AFNT-H6A	155-174	AFB-TET	380-430
AFNT-TET	380-430	AFB-U	430-472
AFNT-U430	450-470	AFB-UT	406-472
AFNT-U2	450-512	AFB-S4	450-470
AFB-S1	380-400	AFB-W	470-520

Part no.	Frequency (MHz)
ASFC-155-U2-B1	150-160 / 450-512 / 745-806
ASFC-155-U2-S5	150-160 / 450-512 / 806-876
ASF-155-S4-821	150-160 / 450-470 / 764-896

# Accessories

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DPX-210-270



DPX-500-700



## VHF / UHF Diplexer

### VHF UHF

- Dual band antenna to be used with 2 single band radios
- Two single band antennas to be used with a dual band radio
- Low insertion loss
- High port to port isolation

The Panorama VHF/UHF diplexer is housed in a compact, robust die cast case for reliability and easy mounting. The Diplexer uses a stripline design to provide low insertion loss with high port to port isolation and high power handling capability. The DPX-500-700 offers the opportunity to utilise a single multiband antenna with two radios. This conserves valuable vehicle real estate and saves on antenna installation costs. The diplexer is compact enough to locate in a vehicle headliner and is fitted with FME (m) connectors.

Part no.	Frequency (MHz)	
	DPX-210-270	VHF
UHF		270-1000
Part no.	Frequency (MHz)	
	DPX-500-700	VHF/UHF
700-2500		700-2500

## VHF / UHF / 7-800MHz Triplexer

### VHF UHF

- Tri-band antenna to be used with 3 single band radios
- Three single band antennas to be used with a Tri-band radio
- Low insertion loss
- High port to port isolation

The Panorama triplexer, TPX-VH-UHF-BA-TNC can either combine the signals from three antennas to a single multiband radio or split the signal from a tri-band antenna to three separate radios. This compact unit requires no power and can easily be installed in the roof lining of any vehicle or mounted next to the radio.

Part no.	Frequency (MHz)	
	TPX-VH-UHF-BA-TNC	VHF
UHF		380-520
	7/800	760-896



## Low / High Pass Filter

### VHF UHF

- Low insertion loss
- High out of band rejection
- F-HP270-F (High Pass Filter)
- F-LP270-F (Low Pass Filter)

The F-HP270-F offers an ideal solution for protecting UHF radios from out of band interference. The F-HP270-F can be used with the F-LP210-F to protect co-located VHF / UHF systems from interfering with each other. The filter is compact enough to locate in a vehicle headliner and is fitted with FME (m) connectors on all ports.

Part no.	Frequency (MHz)
F-LP210-F	0-210
F-HP270-F	270-1000



## UHF Antenna Combiner

### UHF

- Combines two UHF radios to one

When you can only fit one antenna on a vehicle, then this combiner is the solution providing > 26dB isolation over 380-430MHz with an antenna match at 1.2:1 and low insertion loss.

#### Technical Note:

The isolation provided by this device is dependent on the antenna VSWR. An antenna match of 1.5:1 VSWR will result in a reduction of isolation to 20dB. Higher VSWR on the antenna port will result in a further reduction in isolation between the TX ports. does not exceed 1.5:1.

Part no.	Frequency (MHz)
DBLC-TET-N	380-430



## GPS Splitter



- Reduce installation costs
- Run two GPS receivers from a single antenna
- DC block on one port

The Panorama DPD-GPS allows you to run two GPS receivers from a single antenna. The DPD-GPS splits the received signal from the antenna to two receivers while only allowing one of the receivers to feed voltage to the antenna, ensuring that the antenna is able to function correctly.

Part no.	Frequency (MHz)
DPD-GPS	1562-1614



## VHF / UHF Splitter / Combiner

### VHF UHF

- Optimise antenna performance
- Connect two antennas to one radio

The HPDPD-550 series is a range of power dividers designed to split the power from a radio to distribute it to two separate antennas. Designed to support Panorama Antennas' covert VCD (VHF) and BMP (UHF) bumper / fender mount antennas the HPDPD-550 range comes in three variants for up to 15W, 60W and 150W Input Power respectively. Covering a frequency range from 50-550MHz the HPDPD efficiently distributes power to two antennas with low insertion loss allowing users to install covert antennas at opposite ends of a vehicle to ensure maximal coverage.

Part no.	Frequency (MHz)
HPDPD-550	50-550

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