



**PMR & Critical  
COMMUNICATIONS**



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.

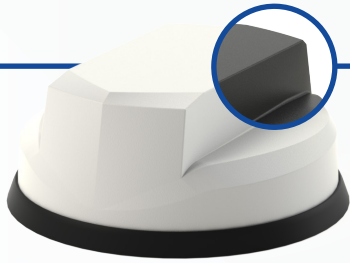
### Associations

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)



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## Great White® 5G

### FEATURES

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

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

| Part no.         | GPS/<br>GNSS | MiMo<br>LTE | MiMo<br>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

Multifunction Antenna

## 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.

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| Part no.          | GPS/<br>GNSS | MiMo<br>LTE | MiMo<br>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

Multifunction Antenna

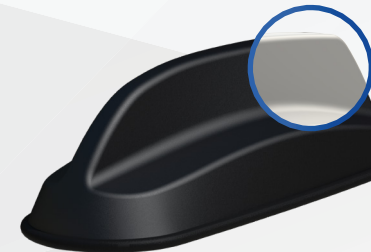
## SHK MiMo Sharkee®

### 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.

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| Part no.         | GPS/<br>GNSS | MiMo<br>LTE | MiMo<br>WiFi |
|------------------|--------------|-------------|--------------|
| SHK-7-27         |              | 2x2         |              |
| SHKG-7-27        | ●            | 2x2         |              |
| SHKG-7-27-24-58  | ●            | 2x2         | 2x2          |
| SHKG-7-27-T24-58 | ●            | 2x2         | 3x3          |

Multifunction Antenna

**IP66  
RATED**



## GPSD MiMo Sharkee®

### FEATURES

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

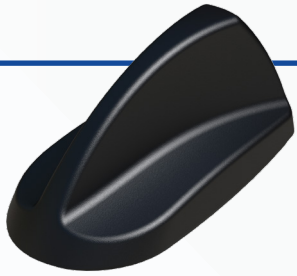
The GPSD range has a sharkfin housing with a built in whip mounting boss and can support a range of Panorama Antennas' VHF/ UHF whips.

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/<br>GNSS | MiMo<br>LTE | MiMo<br>WiFi |
|-----------------|--------------|-------------|--------------|
| GPSD-7-27       | ●            | 2x2         |              |
| GPSD-7-27-24-58 | ●            | 2x2         | 2x2          |

Multifunction Antenna

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## GPSB Sharkee®

### FEATURES

- 4G/3G/2G LTE
- Dualband 2.4/5GHz WiFi
- Integrated GPS/GNSS
- OEM Style Sharkfin housing

The GPSB 'Sharkee' is an automotive multi-function antenna, which has a mounting stud for a whip antenna. A wide range of whips (single, dual or tri-band) are available for VHF/UHF and 700/800MHz band operation.

The GPSB reduces visual impact and only requires a single 19mm (3/4") hole, which results in reduced installation time/cost whilst helping to maintain vehicle resale value.

| Part no. | GPS/<br>GNSS | LTE | WiFi |
|----------|--------------|-----|------|
| GPSB     | •            | •   | •    |

Multifunction Antenna

## GPS/GNSS & Whip Combination

### FEATURES

- Flexible VHF/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 VHF/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'.

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

Multifunction Antenna

## 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       |

Multifunction Antenna



## 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/<br>GNSS | MiMo<br>LTE | MiMo<br>WiFi | WiFi |
|-------------------|--------------|-------------|--------------|------|
| BATM-7-38         |              | 2x2         |              |      |
| BATGM-7-38        | •            | 2x2         |              |      |
| BATGM-7-38-24-58  | •            | 2x2         |              | •    |
| BATGM2-7-38-24-58 | •            | 2x2         | 2x2          |      |

Multifunction Antenna



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## 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 Length |
|---------------|-------------|--------------|
| 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')   |

Cellular Antenna for Mobile Router

## 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.

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

Multifunction Antenna

## GPS / GNSS Antennas

### FEATURES

Active GPS/GNSS element (26dB LNA)

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.

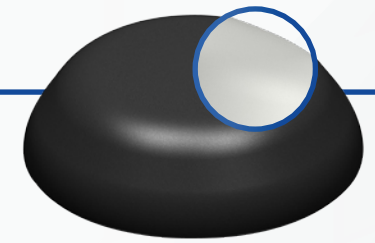
The GPSP offers a permanent, panel mounted option, whilst the GPSME provides the convenience and flexibility of a temporary, no holes solution with a tough magnetic fixing.

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 |

GPS/GNSS Antennas



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## Low Profile UHF Antenna

### FEATURES

- 380-520 (Banded) / 800MHz
- Rugged design for heavy duty applications
- Easy installation
- Ground plane Independent

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

\*LG versions available with GPS/GNSS  
\* White version upon request

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

\*Part numbers refer to the black version only

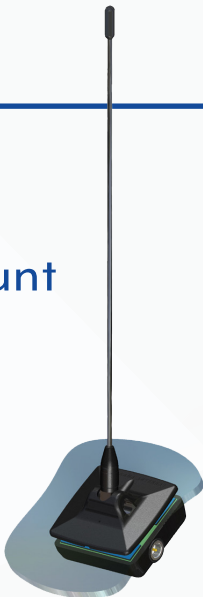
Special Application Antenna

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## Glass Mount Antenna

### FEATURES

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



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 ¼ 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         |
| GM455    | 445-470         |
| GMG-S5   | 806-870         |

Special Application Antenna

## Half-Wave UHF Antenna

### FEATURES

- 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.



| Frequency (MHz) |         | 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 |

Special Application Antenna

## UHF Marine Antenna

### FEATURES

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

The NA Series antenna fits standard 1"x14TPI marine mounting systems. Can also be supplied with custom extension coaxial cable sets to meet the customer's specific installation requirements.



#### Ratchet Mount NDRS-SL

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

| Frequency (MHz) |         | 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 |

Special Application Antenna

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## Heavy Duty SiSo Transit Antenna

### FEATURES

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

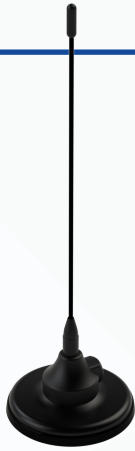
The TRNC series antenna has been designed specifically to meet railway engineering standards and features a DC grounded radiating element.

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

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

Special Application Antenna

# Magnetic Mount Antenna



## FEATURES

- 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.

| Frequency (MHz) |         | 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 |

Special Application Antenna

# UHF / VHF Elevated Antenna

## FEATURES

- Mast mount
- VHF, UHF and Tri-Band versions
- Ideal for fixed radio terminal applications
- Quick assembly and installation

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.

### UHF Versions

|           |                |
|-----------|----------------|
| 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) |

### VHF Versions

|        |         |
|--------|---------|
| 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 |

### Tri-Band Versions

|                |                             |
|----------------|-----------------------------|
| BSV-I55-S4-821 | 145-174 / 420-480 / 764-894 |
| BSV-I55-U1-B1  | 150-160 / 410-470 / 746-806 |
| BSV-I55-U1-S1  | 150-160 / 410-470 / 806-870 |



Special Application Antenna

# Rapid Deployment Clip Dipole

(CDV/CDU Series)

## FEATURES

- 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.

### Frequency (MHz)

|         |         |
|---------|---------|
| CDV-E3  | 67-74   |
| CDV-E4  | 74-81   |
| CDV-E5  | 81-88   |
| CDV-H3  | 132-143 |
| CDV-JRC | 139-157 |
| CDV-H4  | 141-151 |
| CDV-H5  | 149-159 |
| CDV-H6  | 156-162 |
| CDV-H7  | 162-174 |
| CDV-K5  | 174-192 |
| CDV-K6  | 192-208 |
| CDV-K7  | 208-225 |

|         |         |
|---------|---------|
| CDU-S1  | 380-400 |
| CDU-S2  | 410-430 |
| CDU-TET | 380-430 |
| CDU-U1  | 410-470 |
| CDU-T2  | 420-456 |
| CDU-U   | 430-472 |
| CDU-U2  | 450-512 |



Special Application Antenna

# Rapid Deployment 1/2 Wave

(CD Series)

## FEATURES

- 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.

### Frequency (MHz)

|       |         |
|-------|---------|
| CD390 | 380-400 |
| CD420 | 410-430 |
| CD433 | 430-450 |
| CD458 | 445-470 |
| CD800 | 806-870 |
| CD900 | 870-960 |

Special Application Antenna



## 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<br>2m (6.6') Cable Length |
| MAR-7-21-2SP   | SMA Male<br>2m (6.6') Cable Length |

Cellular Antenna for Mobile Router

## Internal SiSo LTE Antenna

### FEATURES

4G/3G/2G LTE  
698-2700MHz  
Simple adhesive pad fitment  
Can be fitted on glass or plastic panel

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



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

Cellular Antenna for Mobile Router

## Low Profile Internal MiMo WiFi

### FEATURES

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

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



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

Public Safety & 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 |

WiFi Antenna for Mobile Router





## Dipole Antenna

### FEATURES

- 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 or UHF bands and requires tuning during installation to achieve optimal VSWR match. The antenna feed incorporates a 'Bazooka' balun to improve the frequency stability.

| 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         |

Covert Antenna

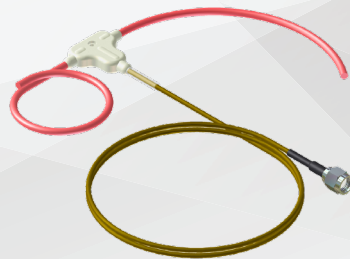
## Bodyworn Dipole

### FEATURES

- Dipole antenna
- Tuning optimised to individuals body
- Flexible wire elements
- Features fully molded 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-H4  | 141-151         | BWDT-S4  | 450-470         |
| BWDT-H5  | 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         |          |                 |

Covert Antenna

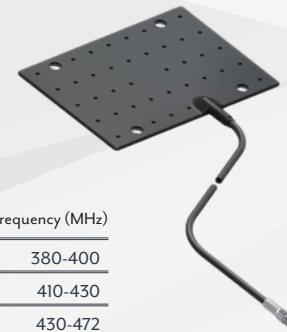
## Bumper Antenna

### FEATURES

- 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.

For optimum performance two bumper antennas can be used, one at the front of the vehicle and one at the rear, to help create a more omni-directional pattern around the vehicle and enable better network coverage. The BMP2 kits come complete with a power divider and 2 bumper mount antennas.



| Part no.    | Frequency (MHz) |              |
|-------------|-----------------|--------------|
| BMP1-S1     | 380-400         |              |
| BMP1-S2     | 410-430         |              |
| BMP1-U      | 430-472         |              |
| BMP1-S4     | 450-470         |              |
| BMP1-7-27   | 700-2700        |              |
|             |                 | Dual Version |
| BMP2-DPD-S1 |                 | 380-400      |
| BMP2-DPD-S2 |                 | 410-430      |
| BMP2-DPD-S4 |                 | 450-470      |

Covert Antenna

IP65  
RATED



## Internal On Glass Antenna

### FEATURES

- 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-S4    | 450-470         | EF-S5    | 806-870         |

Covert Antenna



## Offset Dipole

### FEATURES

- 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.

| 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)  |

InBuilding Antenna

## High-gain UHF Directional

### FEATURES

- 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  | 380-400         |
| WM8-U2   | 450-520         |

**IP65  
RATED**

| Circularly Polarised | Frequency (MHz) | Polarisation |
|----------------------|-----------------|--------------|
| WM8LCP-TET-NJ        | 380-430         | RHCP         |
| WM8LCP-TET-NJ        | 380-430         | LHCP         |

InBuilding Antenna

## Ceiling Mount UHF Antenna

### FEATURES

- 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-S4-03NJ | 450-470         |

InBuilding Antenna



## Bracket Mount

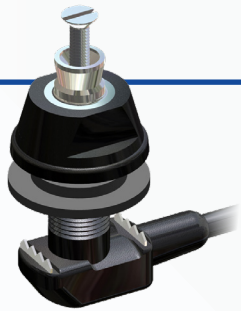
### FEATURES

- 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         |

InBuilding Antenna



## M8 & M8A

### FEATURES

- 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           |

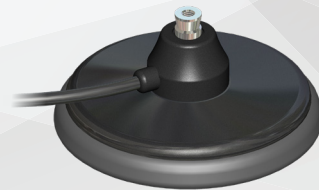
Modular Base

## MMR

### FEATURES

- 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")   |

Modular Base

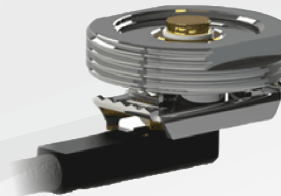
## NMO Panel Mount Base

### FEATURES

- Panel mount
- Suitable for various whips
- 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.

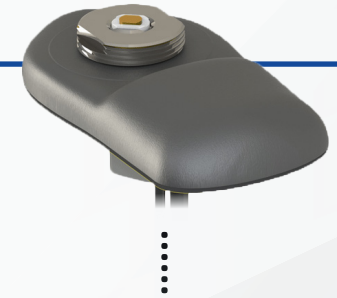
This quality panel mount is made from nickel plated brass to resist corrosion, and the earthing teeth are stainless steel to provide excellent earthing with every installation.



### SAB-181

The NMO fitting can be converted to Panorama modular stud with the SAB-181 accessory. This allows use with the full modular antenna range. The fitting can be used with both products.

Modular Base



## Panel Mount Base With GPS

### FEATURES

- Panel mount
- Rugged low profile design
- NMO fitting
- Interchangeable whips

The GPSNMO is a GPS combination antenna that features a low-profile NMO mount and a high-performance GPS element with 26dB gain LNA.

This base fits on panels up to 6.5mm thick with a single hole, and is supplied with 5m length cables.



Modular Base

AQB  
Non-Hinged



AQHB  
Hinged



## Rigid 1/4 Wave

### FEATURES

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

The AQB & AQHB are Panorama's standard single frequency 1/4 wave rigid whips. These antennas feature a 17-7 PH stainless steel rod with a plated brass terminal protected by black nylon moulding.

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

Modular Whips

## High-gain Whips

### FEATURES

- 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.



ACUB



A5GH



ACUHB

| Non-Hinged | Hinged    | Frequencies (MHz) |
|------------|-----------|-------------------|
| A5GM-TET   | A5GH-TET  | 380-430           |
| A5GM-S4    | A5GH-S4   | 450-470           |
| ACUB-S1    | ACUHB-S1  | 380-400           |
| ACUB-S2    | ACUHB-S2  | 410-430           |
| ACUB-U     | ACUHB-U   | 430-472           |
| ACUB-460   | ACUHB-460 | 450-470           |
|            | ACUHB-W   | 470-512           |

Modular Whips

## Medium Gain Whips

### FEATURES

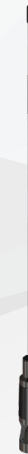
- Gain whips
- Rugged construction
- Hinged base and removable whip

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.

AVGHB  
5dBi Gain



AUGHB  
3.5 dBi Gain



| Frequencies (MHz) |         | Frequencies (MHz) |         |
|-------------------|---------|-------------------|---------|
| AVGHB-H4          | 141-151 | AUGHB-S1          | 380-400 |
| AVHGB-H5          | 149-159 | AUGHB-S2          | 410-430 |
| AVGHB-H6          | 156-162 | AUGHB-TET         | 380-430 |
| AVGHB-H7          | 162-174 | AUGHB-U           | 430-472 |

Modular Whips

## VHF Wideband Antenna



### FEATURES

- 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.      | Frequencies (MHz) |
|---------------|-------------------|
| AVWB-SM-39-68 | 138-169           |
| AVWB-SM-51-74 | 151-174           |

Modular Whips



## VHF ¼ Wave Flexible Whip



### FEATURES

- 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.

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

Combination Base Whip

## 5dBi Gain Flexible Whips

### FEATURES

- 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. | Frequencies (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           |

Combination Base Whip

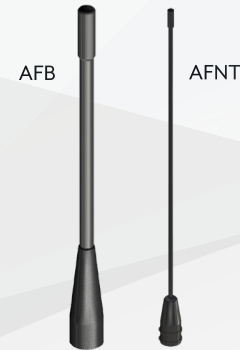
## ¼ Wave Flexible Whips

### FEATURES

- 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 type features a nickel titanium wire for ultra flexibility and low visibility.



|                   |         | Frequencies (MHz) |         |
|-------------------|---------|-------------------|---------|
|                   |         | AFB-S1            | 380-400 |
|                   |         | AFB-S2            | 410-430 |
| Frequencies (MHz) |         | AFB-TET           | 380-430 |
| AFNT-H4A          | 138-155 | AFB-U             | 430-472 |
| AFNT-H6A          | 155-174 | AFB-UT            | 406-472 |
| AFNT-TET          | 380-430 | AFB-S4            | 450-470 |
| AFNT-U430         | 450-470 | AFB-W             | 470-520 |
| AFNT-U2           | 450-512 |                   |         |

Combination Base Whip



## Tri-Band Whips

### FEATURES

- Tri band function
- Flexible rod with wound element
- Fits Panorama GPS combination bases

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.        | Frequencies (MHz)           |
|-----------------|-----------------------------|
| ASF-C-155-U2-B1 | 150-160 / 450-512 / 745-806 |
| ASF-C-155-U2-S5 | 150-160 / 450-512 / 806-876 |
| ASF-155-S4-821  | 150-160 / 450-470 / 764-896 |

\*Base sold separately

Combination Base Whip

## VHF / UHF Diplexer

### FEATURES

Allows dual band antenna to be used with 2 radios or dual band radio with separate VHF and UHF antennas

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.



| Part no.    | Frequencies (MHz) |          |
|-------------|-------------------|----------|
| DPX-210-270 | VHF               | 50-210   |
|             | UHF               | 270-1000 |

Accessories

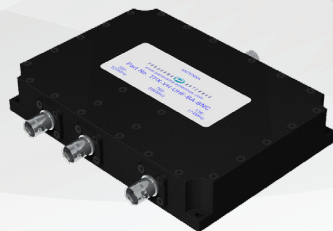
## VHF / UHF / 7-800MHz Triplexer

### FEATURES

Low insertion loss, high port-to-port isolation  
Use one antenna for 3 radios or vice versa  
VHF, UHF, 7/800MHz

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. Each port provides a low insertion loss passband for the respective frequency range. The unit is available with TNC female connector type on each port

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. | Frequencies (MHz) |         |
|----------|-------------------|---------|
|          | TPX-VH-UHF-BA-TNC | VHF     |
| UHF      |                   | 380-520 |
| 7/800    |                   | 760-896 |

Accessories

## VHF / UHF With 7-800MHz Diplexer

### FEATURES

Use one antenna for 2 radios  
Splits VHF & UHF from 7/800MHz & cellular  
Easy to install

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 has low loss characteristics and is perfect for splitting a single antenna to a VHF or UHF radio and a 7/800MHz radio.

The diplexer is compact enough to locate in a vehicle headliner and is fitted with FME (m) connectors.



| Part no.    | Frequencies (MHz) |          |
|-------------|-------------------|----------|
| DPX-500-700 | VHF/UHF           | 50-500   |
|             | 700-2500          | 700-2500 |

Accessories

## Low / High Pass Filter

### FEATURES

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.  | Frequencies (MHz) |
|-----------|-------------------|
| F-LP210-F | 0-210             |
| F-HP270-F | 270-1000          |

Accessories



## UHF Antenna Combiner

### FEATURES

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.   | Frequencies (MHz) |
|------------|-------------------|
| DBLC-TET-N | 380-430           |

Accessories

## GPS Splitter

### FEATURES

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.

The DPD-GPS allows both GPS receivers to use an optimally located antenna, thereby reducing clutter and installation costs.



| Part no. | Frequencies (MHz) |
|----------|-------------------|
| DPD-GPS  | 1562-1614         |

Accessories

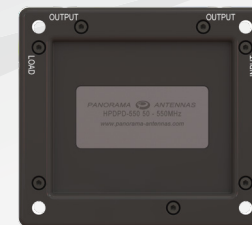
## VHF/UHF Splitter/Combiner

### FEATURES

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.  | Frequencies (MHz) |
|-----------|-------------------|
| HPDPD-550 | 50-550            |

Accessories



## MTP850 Adapter

### FEATURES

Remote antenna adaptor for Motorola MTP850 radio  
Spring loaded contact pin  
Sturdy quick release lock

A 'one of a kind product' the ADPT-85-05SJ is specifically designed for use with the Motorola MTP850 TETRA radio. With spring loaded contact pin and durable quick fit/release feature, it is both simple to connect and reliable to use. Designed for use with any antennas from Panoramas' temporary, vehicle and body worn ranges the ADPT unlocks the full potential of the MTP850 radio for covert, surveillance and other tactical applications.

Note: The standard belt clip cannot be used in conjunction with this adaptor.

Termination

|              |              |
|--------------|--------------|
| Cable Length | 50cm (19.6") |
| Cable Type   | RG316        |
| Connector    | SMA Jack (f) |

Specialist Antenna

# Ultra-flexible UHF Portable Antenna

## FEATURES

- Radio specific ¼ wave whip
- Ultra-flexible multi strand wire whip
- Fully moulded connector
- Ideal for covert/bodyworn applications

This antenna features an ultra-flexible ¼ wave whip. Tuned to match the radio characteristics, it will provide consistent performance across the full operating frequency range.

| Part no.     | Compatibility   |
|--------------|-----------------|
| SFQ-SC21-TET | Sepura SC21     |
| SFQ-SRP2-TET | Sepura SRP/SRH  |
| SFQ-MT8-TET  | Motorola MTP850 |



# 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.

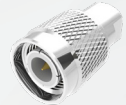
Part no. CA-BP-FP

BNC Plug (m) to FME Plug (m)



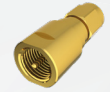
Part no. CA-TP-FP

TNC Plug (m) to FME Plug (m)



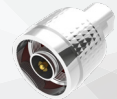
Part no. CA-SP-FP

SMA Plug (m) to FME Plug (m)



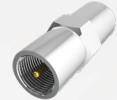
Part no. CA-NP-FP

N Plug (m) to FME Plug (m)



Part no. CA-FP-FP

FME Plug (m) to FME Plug (m)



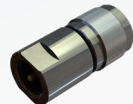
Part no. CA-PLP-FP

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 adapter (f)



# VHF / UHF Portable Antennas



MXK



PXK



MFX



MFXU



MVQ



MQ



PUG

| Description | moulded compressed helical | moulded compressed helical | moulded VHF helical | moulded UHF helical | moulded UHF quarterwave | moulded UHF quarterwave | UHF halfwave |
|-------------|----------------------------|----------------------------|---------------------|---------------------|-------------------------|-------------------------|--------------|
| Freq. (MHz) | 67-88                      | 141-225                    | 141-366             | 330-512             | 141-336                 | 330-512, 698-960        | 350-512      |

\*Various connector / radio types available. Check Panorama website.



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