



## Covert Antennas

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





## Vehicle 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 and UHF bands and requires tuning during installation to achieve optimal VSWR match.



#### Antenna Combiner

To optimise the performance of the Vehicle Dipole Antenna and Bumper Antenna. Connects two antennas to one radio.

Part no.	Frequency (MHz)
VCD-VL-5F	68-88*
VCD-VH-5F	130-175*
VCD-S1-5F	380-400
VCD-S2-5F	410-430
VCD-S4-5F	450-470

\*Tuned to frequency

## Bumper Antenna

### FEATURES

- Single or Dual patch
- Mounted behind plastic bumper
- Flexible construction
- Does not require 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.



Part no.	Frequency (MHz)
BMP-S1-5F	380-400
BMPI-S2-5F	410-430
BMPI-U-5F	430-472
BMPI-S4-5F	450-470
BPMI-7-27-5F	700-2700
BMP2-DPD-S1-5F*	380-400
BMP2-DPD-S2-5F*	410-430
BMP2-DPD-S4-5F*	450-470

\*Dual unit with combiner

## Internal On-Glass UHF Antenna

### FEATURES

- Semi covert window mount antenna
- Install with no vehicle damage
- Flexible moulding for curved glass
- Integrated sealed coaxial cable

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 and is ideal for temporary installation in short-term use vehicles.



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



## Internal On-Glass WiFi Antenna

### FEATURES

- Compact dipole antenna
- 2.4/5GHz Design
- Integral sealed coaxial cable
- Standard or reverse polarity SMA plug

The EF-24-58 antenna is 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. Ideal for connection to an in-vehicle router, the antenna can provide a 2.4GHz or 5GHz wireless hot spot function.

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

On Vehicle Antenna



## MiMo Bat

### FEATURES

- Window or Dash Mount
- MiMo 5G/4G/3G/2G functionality
- Optional SiSo or 2x2 MiMo WiFi
- Optional GPS/GNSS

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 2.4/5GHz WiFi and a GPS/GNSS antenna. It can be fitted on any non-conductive surface and with integral 3m (10') low loss cables, is an easy, quick, 'plug and play' solution which meets requirements of UN ECE 118.01, making it suitable for transportation vehicles.

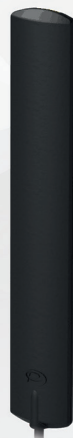
Part no.	MiMo LTE	GPS/GNSS	WiFi	MiMo WiFi
BATM-7-60	2x2			
BATGM-7-60	2x2	•		
BATGM-7-60-S24-58	2x2	•		•
BATGM-7-60-24-58	2x2	•	2x2	

## On-Glass Cellular LTE

### FEATURES

- Multi-band LTE / Cellular element
- 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 Plug
EF-BC3G-26-3FAKRAD	FAKRA D Jack
EF-IN2307 (2x2 MiMo Kit)	TS-9 Plug

## Stingray Internal Antenna

### FEATURES

- Dashboard or windshield mount
- Cellular, WiFi and GPS/GNSS included
- Suitable for M3 category vehicles (UN ECE Reg 118)
- Available with SMA or FAKRA connectors

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 R118, the antenna is suitable for use in M3 Category vehicles (Transportation).



Part no.	LTE	GPS/GNSS	WiFi	MiMo WiFi
GPSCO-7-27-24-58	•	•	•	
GPSCO-24-58			•	
RAYM2-24-58				•
RAY-7-27-24-58	•		•	



## Windscreen Mount Cellular & GPS Antenna

### FEATURES

- Windscreen mount
- Adhesive pad fixing
- Combined GPS & GG Cellular

The GPSCO makes it easy to get around, allowing GPS and Cellular / LTE coverage improvements in one small oval device.

Mounting the antenna is simple thanks to its adhesive pad and its unique design. The antenna will still perform even on vertical windscreens making it ideal for use on heavy goods vehicles (HGV's) and lighter vehicles alike.

Part no.	Frequency (MHz)
GPSCO-7-27	698-960 1710-2700

On Vehicle Antenna



## GPS/GNSS Antenna

### FEATURES

#### Active GPS/GNSS element (26dB LNA)

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.	Connector
GPSSV-3SP	SMA Male

## Sharkfin Antenna Base

### FEATURES

OEM shark fin styling  
Multi-function or single whip mount base options  
Can be used with VHF/UHF or multi-band whips

The GPSB 'Sharkee' shark fin has internal antennas for SiSo LTE, Dual Band WiFi, GPS/GNSS and an external whip mount. The FINB has the same shark fin style housing, but only features an external whip mount. Both have a whip mount to suit a large range of our single or multi-band whips. These bases are suitable for a covert or discrete installation.



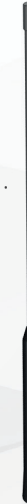
Part no.	LTE	GPS	WiFi	Whip
FINB				•
GPSB	•	•	•	•

## 3dB 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 spring 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 such as the GPSD, GPSB and FINB.



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

## VHF & UHF ¼ Wave Flexible Whip

### FEATURES

OEM bee-sting style  
Wideband ¼ wave  
Flexible overmoulded base

AFM



The AFBQ is a rugged VHF ¼ wave whip for use on FINB & 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.	Frequency (MHz)
AFBQ-H4A	138-155
AFBQ-H6A	155-174
AFBQ-H5	149-159
AFBQ-H7	162-174
AFM-TET	380-430
AFM-U	430-472
AFM-U2	450-512
AFM-835	762-870

On Vehicle Antenna

## ¼ Wave Ultra Flexible Whip

### FEATURES

- 1/4 wave whip
- Thin wire for low visibility
- Ultra-flexible, Nickel Titanium
- Suitable for GPSD, GPSB and FINB bases

This antenna features a nickel titanium wire, which gives ultra-flexible function and provides a high level of damage resistance without compromising RF performance. The thin diameter provides low visibility of the whip, making for a more discrete solution, where a comms whip is required.

Part no.	Frequency (MHz)
AFNT-H4A	138-155
AFNT-H6A	155-174
AFNT-TET	380-430
AFNT-U	430-472
AFNT-U2	450-512



## Bodyworn Dipole

### FEATURES

- Dipole antenna
- Tuning can be optimised to individual user
- 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)
BWDT-H3	132-143
BWDT-H4	141-151
BWDT-H5	149-159
BWDT-H6	156-162
BWDT-H7	162-174
BWDT-TET	380-430
BWDT-T2	420-450
BWFT-S4	450-470
BWDT-495	470-520
BWFT-815	806-870

## 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. The durable, ultra-flexiwire design with moulded connector makes it ideal for covert and body worn radio use.



Part no.	Frequency (MHz)	Compatibility
SFQ-SRP2-TET	380-430	Sepura SRH/SRP
SFQ-SC21-TET	380-430	Sepura SC21
SFQ-MT8-TET	380-430	Motorola MTP850

## 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, the ADPT 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.



Non Vehicle

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