



EBDS
WIRELESS & ANTENNAS



**PANORAMA
ANTENNAS**

Covert Antennas

PRODUCT CATALOGUE

75 Years of Experience

Panorama Antennas is a privately owned family business, now in its third generation, and leading designer and manufacturer of antennas for wireless communication. Established in London in 1947, Panorama started life as a manufacturer of consumer products and buoyed by huge demand in 1952, began manufacturing TV components and antennas. With the transistor radio trend of the 1960s, Panorama's expert knowledge swiftly led the company into the manufacturing of communication antennas.

Throughout the 1970s and 80s, Panorama evolved to become the first specialised communication antenna manufacturer in the UK, developing a range of cellular antennas to coincide with the launch of the mobile phone network in Britain. 1990 was a year of huge change as Panorama found itself revolutionising cellular glass mount antenna technology, filing a patent application for the first ever solid state coupling circuit. Through creating a new benchmark for quality in the production of components and leading technology development, Panorama has grown side by side with the cellular telecommunications industry.

Today Panorama produces antennas for the world's leading communication companies and has grown to include over 100 staff in 5 international sales offices, as well as operating 4 fully owned subsidiaries. Manufacturing, design and development remain located in London less than a mile from the original factory. Our network of international sales representatives means that all customers get the attention and advice they require, providing local support on a global scale.

Antennas for Next Generation

Panorama's constant cutting-edge research ensures that our antennas meet the demands of the very latest technology. With 75 years experience in delivering world-class antenna products, Panorama's current product range reflects our unparalleled expertise in providing high-quality performance antennas.



RoHS
COMPLIANT



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

VHF UHF Download Datasheet

- 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.



UHF Bumper Antenna

UHF Download Datasheet

- 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.



Internal On-Glass UHF Antenna

UHF IP65 RATED Download Datasheet

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

The EF 'easy fit' antenna provides an effective low-visibility 'no-hole' solution.

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



EF-BC3G-26 EF-6-60

Internal On-Glass LTE/Cellular Antenna

5G Download Datasheet Download Datasheet

- 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. The EF-6-60 covers the complete range 617-6000MHz for use on all 5G LTE bands worldwide.



Antenna Combiner HPDPD-550

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

Part no.	Frequency (MHz)
BMP-S1-5F	380-400
BMP1-S2-5F	410-430
BMP1-U-5F	430-472
BMP1-S4-5F	450-470
BMP1-7-27-5F	700-2700
BMP2-DPD-S1-5F*	380-400
BMP2-DPD-S2-5F*	410-430
BMP2-DPD-S4-5F*	450-470

*Dual unit with combiner

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

Part no.	Connector
EF-BC3G-3SP	SMA Plug
EF-BC3G-26-3FAKRAD	FAKRA D Jack
EF-IN2307 (2x2 MiMo Kit)	TS-9 Plug
EF-6-60-3SP	SMA Male



The BAT Covert MiMo Antenna



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

The Panorama BAT range is an ideal 2x2 MiMo 4G/5G antenna for Covert installations with full 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



Internal LTE/GNSS Puck Antenna



- 4G/3G/2G LTE
- 698-2700MHz SiSo
- Integral GPS/GNSS
- Windscreen or dashboard mount
- Adhesive pad fixing
- 'Either way up' mounting system

The GPSC series is a combined cellular/LTE + active GPS/GNSS antenna for internal or covert installation. This discrete antenna is an ideal solution for tracking or navigation systems and offers much improved performance over device embedded antennas.

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



Internal Stingray SiSo Antenna



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

This internal antenna offers a "3 in 1" solution ideal for telematics or other vehicle communications, where the antenna needs to be fitted discretely or for a "no hole" installation. The compact housing incorporates antennas for LTE / Cellular, Dual Band WiFi and GPS/GNSS. Meeting the requirements of UN ECE R118, the antenna is suitable for use in M3 Category Transportation vehicles. The antenna housing is UV resistant and flame retardant, while the integrated coax cables are flame retardant, low smoke specification.

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



Internal On-Glass WiFi Antenna



- 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.	Cable & Connector
EF-24-58-3RPSP	3m (10') Rev Pol SMA
EF-24-58-3SP	3m (10') SMA Male



Internal GPS/GNSS Antenna



- 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-35P	SMA Male

Coming Soon



GPSB5G 5G Sharkee®



- 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



3dB Gain UHF Flexible Whip



- 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



AFM AFBQ

VHF & UHF 1/4 Wave Flexible Whip



- OEM bee-sting style
- Wideband 1/4 wave
- Flexible overmoulded base

The AFBQ is a rugged VHF 1/4 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



1/4 Wave Ultra Flexible Whip

UHF VHF  [Download Datasheet](#)

- 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



Tri-Band Whips

UHF VHF  [Download Datasheet](#)

- 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.	Frequency (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



Ultra-flexible UHF Portable Antenna

UHF

- Radio specific 1/4 wave whip
- Ultra-flexible multi strand wire whip
- Fully moulded connector
- Ideal for covert/bodyworn applications

This antenna features an ultra-flexible 1/4 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



Bodyworn Dipole

VHF UHF  [Download Datasheet](#)

- 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

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