



*PANORAMA
ANTENNAS*

Next Generation Critical
Communications (NGCC)
Poutama Whai Tikanga Pāpāho
Antenna Product Guide

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 140 staff in 4 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 the next generation

Panorama's constant cutting-edge research ensures 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.

The New Zealand NGCC Public Safety Network

The New Zealand NGCC Public Safety Network is the new communications system for New Zealand's frontline emergency services. It is made up of three parts; secure digital mobile radio, prioritised cellular voice and data services with nationwide roaming and personal alert services.

This single nationwide secure digital radio service, and multi-network priority roaming cellular broadband capability will replace existing systems and legacy analogue services. Tait Systems NZ will deliver the land mobile radio network while Hourua a joint venture of Spark and One NZ will provide the cellular services.

Cellular services will offer high bandwidth data services, voice and text where coverage is available while secure digital radio will provide voice and messaging services in many areas where cellular service is not available. The goal of the new network is to enhance the capabilities of first responders and to keep them and the public safer.

Panorama is well positioned to offer fit for purpose antenna solutions for the New Zealand public safety network. With a range of 4x4 and 2x2 MiMo 4G/5G solutions combined with GPS/GNSS and WiFi functions Panorama can supply industry leading antennas for mobile and fixed site applications. Our Sharkee® range of antennas offers unmatched capability to combine 4G/5G MiMo and land mobile radio in a single sleek OEM style sharkfin antenna for an all-in-one single hole installation.

Panorama's existing relationships with the carriers One.NZ and Spark, and the router and radio manufacturers Tait Communications, Semtech (formerly Sierra Wireless) and Ericsson Enterprise Wireless (formerly Cradlepoint) mean that we can ensure compatibility and performance while our network of regional distributors and resellers including it-iQ Ltd, Powertec Wireless Technology, SnapperNet & TechData ANZ offer excellent product availability and local support.

Complete 4x4 MiMo 5G Solutions

Complete 4x4 MiMo 5G Solutions

Mako® 5G Dome



The Mako® 5G dome enables multiple antenna functions to be fitted using a single-hole mount. Designed for use with routers that require a 4x4 5G/4G MiMo antenna system. Optional GPS/GNSS module incorporates advanced filtering. Available in black or white.

**IK10
RATED**

**IP69K
RATED**

Features

- 4x4 MiMo 4G/5G
- 617-960/1470-6000MHz
- Optional integrated GPS/GNSS
- Optional up to 6x6 MiMo WiFi 6e 2.4/5.0GHz

Benefits

- Ready to install kits with 5m/17ft extension cables available
- Improves connection and data rates for 4G/5G routers
- Panel mount , single hole installation
- Doesn't require a metal ground plane
- Available in black or white



Magnetic mount:

SAB-225

- No hole installation
- Ideal for temporary use
- Fits all dome antennas

Kits include 5m/17ft cables:

Kits include 5m/17ft cables:	GPS/GNSS	MiMo 4G/5G	MiMo WiFi
11 in 1 Dome			
LG-IN2447-LC (Black)	•	4x4	6x6
LG-IN2447-W-LC (White)			
9 in 1 Dome			
LG-IN2446-LC (Black)	•	4x4	4x4
LG-IN2446-W-LC (White)			
7 in 1 Dome			
LG-IN2445-LC (Black)	•	4x4	2x2
LG-IN2445-W-LC (White)			
5 in 1 Dome			
LG-IN2444-LC (Black)	•	4x4	
LG-IN2444-W-LC (White)			
4 in 1 Dome			
LP-IN2443-LC (Black)		4x4	
LP-IN2443-W-LC (White)			

MiMo Dual Sharkee® 5G



The MiMo Dual Sharkee® 5G is a dual sharkfin-style antenna combining 4G/5G, GPS/GNSS, and WiFi. It features a 4x4 MiMo antenna for 4G/5G, dual-band WiFi with up to 6x6 MiMo supporting WiFi 6e/7, and up to 4x active GPS/GNSS antennas. Versions are available with a whip position to support secure voice communications.



Features

- 4x4 MiMo 4G/5G
- 617-960/1427-6000MHz
- Optional integrated GPS/GNSS
- Optional up to 6x6 MiMo WiFi 6e 2.4/5.0-7.2GHz
- Optional whip position

Benefits

- Single-hole mounting
- Automotive OEM sharkfin housing
- Improves connection and data rates for 4G/5G routers
- Whip position for secure voice communications
- Available in black and white



Magnetic mount:

- SAB-324-2
- Dual Sharkee® magnetic mounting adapter for temporary mounting and drive testing
- No hole installation
- Ideal for temporary use

Kits include 5m/17ft cables:	GPS/ GNSS	4G/5G MiMo	MiMo WiFi	Whip location
11 in 1 Dual Sharkee®				
GP-IN2732-LC (Black)	•	4x4	6x6	•
GP-IN2732-W-LC (White)				
9 in 1 Dual Sharkee®				
GP-IN2670-LC (Black)	•	4x4	4x4	•
GP-IN2670-W-LC (White)				
7 in 1 Dual Sharkee®				
GP-IN2680-LC (Black)	•	4x4	2x2	•
GP-IN2680-W-LC (White)				
5 in 1 Dual Sharkee®				
GP-IN2712-LC (Black)	•	4x4		•
GP-IN2712-W-LC (White)				
4 in 1 Dual Sharkee®				
FI-IN2682-LC (Black)		4x4		•
FI-IN2682-W-LC (White)				

4x4 MiMo 4G/5G Dash Mount



The BAT[X]M4 range is a discreet or covert 4x4 MiMo antenna solution for 4G/5G with the option of GPS/GNSS, and 2x2, 3x3 or 4x4 dual band 2.4/5.0-7.2GHz WiFi 6e/7. The 4G/5G antenna elements cover 617-960/1427-6000MHz to provide a robust communications link to ensure high data rates even in challenging network coverage areas.



Features

- Provides 4x4 MiMo 4G/5G
- 617-960/1427-6000MHz
- Optional integrated GPS/GNSS
- Optional up to 4x4 MiMo WiFi 6e 2.4/5.0-7.2GHz
- No holes/adhesive mount

Benefits

- Mount on or under dashboard
- Discreet covert antenna
- Low loss flame retardant cables
- UN ECE R118 compliant

Part no. – includes 3m/10ft cables	GPS/GNSS	4G/5G MiMo	MiMo WiFi
BATGM4-6-60-Q	•	4x4	4x4
BATGM4-6-60-T	•	4x4	3x3
BATGM4-6-60-D	•	4x4	2x2
BATGM4-6-60	•	4x4	
BATM4-6-60		4x4	

2x2 MiMo Alternative Solutions

2x2 MiMo Alternative Solutions

Great White® 5G

The LPMM/LGMM range provides effective 2x2 MiMo operation with excellent isolation and low correlation coefficient. Optional GPS/GNSS module incorporates advanced filtering and versions are available which support up to 6x6 WiFi 6e. Available in black or white.



**IK10
RATED**

**IP69K
RATED**



Features

- 2x2 MiMo 2G/3G/4G/5G
- 617-960/1427-6000MHz
- Optional integrated GPS/GNSS
- Optional up to 6x6 MiMo WiFi 6e 2.4/5.0-7.2GHz

Benefits

- Single-hole installation
- Doesn't require a metal ground plane
- Improves signal strength and data rates for 4G/5G routers
- Ready to install kits with 5m/17ft extension cables available
- Available in black and white



Magnetic mount:

SAB-225

- No hole installation
- Ideal for temporary use
- Fits all dome antennas

Kits include 5m/17ft
cables:

GPS/GNSS

MiMo 4G/5G

MiMo WiFi

9 in 1 Dome

LG-IN2448-LC (Black)	•	2x2	6x6
LG-IN2448-W-LC (White)			

7 in 1 Dome

LG-IN2458-LC (Black)	•	2x2	4x4
LG-IN2458-W-LC (White)			

5 in 1 Dome

LG-IN2457-LC (Black)	•	2x2	2x2
LG-IN2457-W-LC (White)			

3 in 1 Dome

LG-IN2456-LC (Black)	•	2x2	
LG-IN2456-W-LC (White)			

2 in 1 Dome

LP-IN2455-LC (Black)		2x2	
LP-IN2455-W-LC (White)			

MiMo Sharkee®

The MiMo Sharkee® range integrates 2x2 MiMo cellular with optional GPS/GNSS and up to 3x3 MiMo WiFi in a similar sleek OEM sharkfin style housing. Available in black or white.



Features

- 2x2 MiMo 2G/3G/4G/5G
- 698-960/1710-3800MHz
- Optional integrated GPS/GNSS
- Optional 2x2 MiMo WiFi 2.4/5.0GHz

Benefits

- Single-hole mounting
- Automotive OEM sharkfin housing
- Versions available with whip position for secure voice applications
- Ready to install kits with 5m/17ft extension cables available
- Available in black or white



Sharkee® magnetic mount: SAB-224

- Fits MiMo Sharkee® antenna
- No hole installation
- Ideal for temporary use

Kits include 5m/17ft cables:	GPS/GNSS	MiMo 4G/5G	MiMo WiFi	Whip location
5 in 1 Sharkee®				
SH-IN2440-LC (Black) SH-IN2440-W-LC (White)	•	2x2	2x2	
3 in 1 Sharkee®				
SH-IN2441-LC (Black) SH-IN2441-W-LC (White)	•	2x2		
2 in 1 Sharkee®				
SH-IN2442-LC (Black)		2x2		
5 in 1 Sharkee®				
GP-IN2148 (Black)	•	2x2	2x2	•

2x2 MiMo 4G/5G Dash Mount

The BAT range is an ideal 2x2 MiMo 4G/5G antenna for discreet internal and no drill installations using the supplied adhesive pad. It can also incorporate a GPS/GNSS antenna and single or 2x2 MiMo dual band WiFi antenna(s).



Features

- 2x2 MiMo 4G/5G LTE
- 617-960/1427-6000MHz
- Optional integrated GPS/GNSS
- Optional 2x2 MiMo WiFi 2.4/5.0GHz
- No holes/adhesive mount

Benefits

- Discreet covert antenna
- For mounting on or under any non-conductive surface
- Provides robust in-vehicle connectivity
- UN ECE R118 compliant

Part no. – includes 3m/10ft cables	GPS/GNSS	MiMo 4G/5G	MiMo WiFi
BATGM-7-60-24-58	•	2x2	2x2
BATGM-7-60	•	2x2	
BATM-7-60		2x2	

Other applications

Other applications

MiMo 4G/5G Omni Antenna

The BS[G]M-6-60 antenna is a MiMo omnidirectional broadband antenna range for 4G/5G devices. It covers 617-960/1427-6000MHz and is suitable for external or internal installation. The mounting bracket enables simple wall mounting using the supplied screws and wall plugs and mast/rail mounting using the supplied clamps.

IP67
RATED







Features

- 2x2 MiMo 2G/3G/4G/5G antenna solution
- 617-960/1427-6000MHz
- Optional integrated GPS/GNSS
- Integrated coaxial cables

Benefits

- 2x2 MiMo in single enclosure
- Weather & corrosion resistant design
- Suitable for FirstNet, Frontline & ESN
- Wall, rail or mast mount
- Available with SMA plug (SP part numbers) or N Jack (NJ part numbers)



SAB-315

- 1" 14 TPI mounting adaptor
- Suitable for use with many marine mounts
- Converts BSM series to marine antenna

Part no.	GPS/GNSS	MiMo 4G/5G	Cable Length
BSM-6-60-05NJ		2x2	0.5m/1.7ft
BSM-6-60-5SP		2x2	5m/17ft
BSGM-6-60-05NJ	•	2x2	0.5m/1.7ft
BSGM-6-60-5SP	•	2x2	5m/17ft

Omnidirectional 4x4 MiMo 4G/5G

The DWMM4[G]-6-60 is a 4x4 MiMo 4G/5G antenna covering 617-960/1427-6000MHz, ideal for global networks. Its four separately fed ultra-wideband elements make it suitable for fixed site and failover applications. It includes a mounting bracket for wall or mast installation.



Features

- 4x4 MiMo 4G/5G antenna solution
- 617-960/1427-6000MHz wideband coverage
- Medium gain omnidirectional antenna
- Optional integrated GPS/GNSS
- 4G/5G LTE/NR ready
- Available with SMA plug (SP part numbers), N jack (NJ part numbers) or N plug (NP part numbers)

Benefits

- 4x4 MiMo in single enclosure
- IP66 rated
- Suitable for branch office, enterprise and failover applications
- Wall, mast or desk mount

Part no.	GPS/GNSS	MiMo 4G/5G	Cable Length
DWMM4-6-60-05NJ		4x4	0.5m/1.7ft
DWMM4-6-60-5NP		4x4	5m/17ft
DWMM4-6-60-5SP		4x4	5m/17ft
DWMM4G-6-60-5SP	•	4x4	5m/17ft

4x4 MiMo 4G/5G High Gain Directional

The WMM4G[G]-6-60 is a high-gain 4x4 MiMo antenna for 4G/5G networks. With four separately fed wideband elements, it supports client-side MiMo, offering 6dBi peak gain at 617-960MHz and 9dBi at 1710-6000MHz.



Features

- 4x4 MiMo 4G/5G antenna
- 617-960/1710-6000MHz
- Optional integrated GPS/GNSS
- 6-9dBi peak gain directional

Benefits

- Suitable for wall or mast mounting
- Ideal for “Edge of Cell” applications
- Ensures reliable connection and high data rates for fixed site applications
- Available with integrated 5m/17ft cable for easy installation

Part no.	GPS/GNSS	MiMo 4G/5G	Cable & Connector
WMM4G-6-60-05NJ		4x4	0.5m/1.7ft N-Female
WMM4G-6-60-5SP		4x4	5m/17ft SMA Male
WMM4G-6-60-5NP		4x4	5m/17ft N-Male
WMM4GG-6-60-5SP	•	4x4	5m/17ft SMA Male

Accessories

Accessories

Tri-band Whip

The ASF whips are stylish, discreet and durable, featuring a flexible overmoulded base section and a black jacketed flexible wound rod element. Designed to be mounted on the GPSB or GPSD range of bases, and can be used with a Panorama Antennas diplexer or triplexer.



VHF UHF

Features

- Tri-band function
- 138-144/450-502/806-876MHz
- Flexible rod with wound element
- Fits Panorama Sharkee® bases

Benefits

- Single whip covers three bands
- Discreet OEM beesting appearance

Part no,	Frequency (MHz)
ASFC-141-476-S5	138-144/450-502/806-876

VHF/UHF Diplexer

The DPX-210-270 provides the possibility to use a single dual or multiband antenna with two radios. This conserves valuable vehicle real estate and saves on antenna installation costs. Alternatively, it allows the connection of a dual band radio, with a single connector, to two separate single band antennas.



VHF **UHF**

Features

- Allows for a dual band antenna to connect to two mobile radios
- Allows for two single band antennas to feed into a single dual band mobile radio
- Compact, durable design suitable for any mobile application
- Covers 50-210MHz (VHF) and 270-1000MHz (UHF)
- Low insertion loss and excellent port-to-port isolation

Benefits

- Enables the user to split a dual-band antenna or use a single antenna with two radios
- Compact product for easy install
- High performance

Part no.	Frequency (MHz)
DPX-210-270	VHF: 50-210
	UHF: 270-1000

Easyfit UHF Adhesive Antenna

The EF 'Easyfit' antenna provides an effective low visibility solution ideal for permanent or temporary installation. The antenna can be installed on any non-conductive surface, such as a windshield or dashboard using the supplied acrylic adhesive pad.



**IP65
RATED** **UHF**

Features

- Centre-fed dipole design for reliable performance
- Fully over-moulded with integrated cable for durability
- Covers UHF frequencies
- No-hole, easy-to-install design
- Discreet undercover style for mounting on non-conductive surfaces

Benefits

- Excellent performance across UHF frequencies
- Ideal for covert applications
- Quick and simple no-drill installation

Part no.	Frequency (MHz)
EF-486-3F	458 – 515MHz

5/8 Wave VHF Whips

The AVG[H]B range is a durable solution for vehicle installations requiring a medium gain VHF antenna. The antenna has a fully encapsulated impedance matching coil and a 17-7PH stainless steel whip. The antenna is compatible with the full range of Panorama Antennas modular bases and incorporates a hinge to enable vertical orientation.

Features

- 3.5dBi peak gain
- Rugged construction
- Hinged base and removable whip



Part no.	Frequency (MHz)
AVGHB-H3	132-143
AVGHB-H4	141-151

Panel Mount

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 our range can be fitted to the base.



Part no.	Panel thickness (mm)	Cable length
M8	0-4mm	5m/17ft

Features

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

Rigid 1/4 Wave

The AQHB/AVHB are a slim design 1/4 wave whip for VHF, UHF and 7/800MHz. Available in hinged and non-hinged versions.



Features

- 1/4 wave whip
- Removable for car wash
- Hinged and non-hinged versions
- Compatible with M8 and MMR bases

Part no.	Frequency range (MHz)
AQHB-U2	450-512
AVHB-H3	132-143
AVHB-H4	141-151

UHF Gain Whip

The AUGHB 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.



Features

- Gain whips
- Rugged construction
- Hinged base and removable whip
- Compatible with the M8 base

Part no.	Frequency range (MHz)
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AUGHB-W	470-512
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MAKING THE CONNECTION

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