

Cobham Antenna Systems

Microwave Antennas

Specialist Antenna Design and Manufacture

CATALOGUE 2012

The most important thing we build is trust

COBHAM



DEFENCE
ANTENNAS



SECURITY
ANTENNAS



SATELLITE
COMMUNICATION
ANTENNAS



COMMERCIAL
ANTENNAS



Cobham Antenna Systems

Microwave Antennas

Antennas for WiFi and PMR at airports



Unmanned vehicle and ground control antennas



PMR & TETRA

Omni
Wide Band

CELLULAR

DAS
Multiband

SECURITY

Covert
Tracking

Hidden Device Detection

SURVEILLANCE

Video Surveillance

Cellular Monitoring & Intercept
COFDM



Cover photograph antennas:

1 - Directional C-Band FPA26-47V/1147

2 - Omni with Integral GPS OA2-0.45V-GPS/1685

3 - Ultra Wideband Omni XPO2V-0.8-6.0-GF/1441

4 - Omni 5.8GHz OA6-5.8L/1756

5 - Omni 14.9GHz RCO4-148.1447

6 - Prototype Omni Blade

7 - Multi Sector MSA6-15-46L/879

MISSILE

Conformal Antennas
Fuse Programming
Ground and Airborne
Telemetry
Command and Control
Override & Abort

WLAN

Directional
Omni
Dual Band
Aesthetic

TACTICAL COMMS

Link16
Point to Point Links
Point to Multipoint Networks
Man-Pack

Antennas for
Defence
Security
Satellite
Commercial

RADAR

Portable and Fixed
Stripline and Waveguide
FMCW and Pulse
Reflectometer



Kent Police
security field trials



London St Pancras
International rail
station



Broadband base
station in Stuttgart

BROADCAST

COFDM
Ku-Band

WiMAX & LTE

Base Station
Subscriber
MIMO
Whitespace

ELECTRONIC WARFARE

IED Countermeasures
Wide Band Spiral and Omni
Direction Finding
High Power

UNMANNED SYSTEMS

Data Links
Control Links
Robotics

SATELLITE

Ground Based
Mobile Satcom
L-Band
Hemi Omni

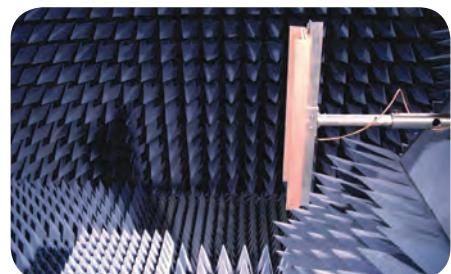
RFID

Zonal Coverage
Portal Coverage
Road Tolling

Cobham Antenna Systems (Microwave Antennas) is a specialist in the design and manufacture of microwave antennas for defence, security, satellite and civil applications, worldwide.

- Customer focused antenna design from initial concept to production
- Proven expertise and knowledge of all aspects of RF performance
- More than 1200 existing antenna designs provide cost effective solutions
- Appropriate mechanical design to meet the specified environment
- Approved supplier to major international defence and commercial organisations
- Mil standard qualification available
- ISO9001 certified company

Antenna on test



Cobham Antenna Systems

Microwave Antennas

Weather buoy



World Rally
Championship
race car



CAPABILITY

Examples of the applications for which our antennas have been used, demonstrating capability

ABOUT US

Page

Antenna Development Projects and Test Range

PRIMARY SPECIFICATION

APPLICATIONS

DEFENCE Unmanned Systems

Page

Ground Control

General explanation of the technical terms used to define the performance of all antennas

Tactical Communications

5

Link16

6

C-Band

9

Electronic Warfare, IED Countermeasures

10

Radar

11

Missile

11

12

SATELLITE

ANTENNA TYPES DEFINED

SECURITY &
SURVEILLANCE

20

Tactical Communications, Body Worn

13

DIRECTIONAL

Frequency

18

Gain

18

Bandwidth

18

Cross Polar

18

Sidelobes

18

HPBW

19

Polarisation

19

Return Loss & VSWR

19

SECTOR

Flat panel

21

Helix

22

Ultra Wideband

23

OMNI

Sector

24

Multi-Sector

25

Blade

25

Vertical polarisation

26

Dipole

27

Circular polarisation

28

Hemi

28

Ultra Wideband

29

Multi-stacked

29

Blade

30

CATALOGUE - ANTENNA LISTING

Flat Panel

Group 1 100MHz to 1GHz

32

Group 2 1GHz to 2GHz

41

Group 3 2GHz to 3GHz

57

Group 4 3GHz to 4GHz

73

Group 5 4GHz to 6GHz

80

Group 6 6GHz and over

89

Ultra Wideband - All

94

Multi Sector - All

98

Blade - All

100

Combiners and Dividers, Mounting Kits

102

Sector

Hemi Omni



Cobham Antenna Systems

Microwave Antennas

Specialist antennas in production



British manufacturer - part of the antenna construction laboratory



About Us

This brochure includes a summary of the main applications for which our antennas can be used.

We constantly develop antennas for new and emerging markets and applications. If you cannot see what you need, please contact us.

With more than 1500 antenna designs available, our flat panel, sector, omni, hemi omni and ultra wideband antennas are used in locations as diverse as UAVs, helicopters, aircraft, missiles, race cars, railway systems, TV cameras, weather buoys and satellites.

The company's production, development and testing facilities are based in one UK location which ensures fast transition from design to production.

Our antennas are supplied to some of the largest organisations and companies worldwide.

All antennas are tested throughout development to ensure they meet quoted specifications and comply with relevant legislation.

Environmental testing can be carried out to recognised standards.

- Our reputation is based on our customer focused design, supplying high performance antennas from 100MHz to 40GHz
- Single UK location
- Proven expertise in all aspects of RF performance
- More than 1500 antenna designs
- Appropriate mechanical design to meet the specified environment
- Approved supplier to international commercial and defence organisations
- Mil standard qualification is available
- ISO9001 certification

European Antennas Ltd (formed in 1991) trading as Cobham Antenna Systems, Microwave Antennas, part of Cobham plc since 1999.

Engineering

Combining comprehensive knowledge and experience with the latest software design tools, the engineering team design antennas to meet customer's specific requirements.



Sales

Our experienced sales team has an understanding of a many applications and markets which, when combined with their significant technical knowledge ensures that customers are offered the right antennas.



Catalogue

Our catalogue includes a wide range of antennas including high gain, multi-layer printed circuit arrays, directional, sector, ultra wideband spirals, collinear omnis and multi-octave bicones in various off-the-shelf designs.



Antenna Development Programmes

Unique and individual development programmes are undertaken for customers in order to meet specific needs.



ISO9001 Certification 9263

Antenna Development

CW doppler radar
for QinetiQ



Omni antenna mounted
beneath gondola for scientific
experiment conducted by the
Swedish Space Corporation



Antenna Development Projects

Our key resource is our highly skilled and experienced engineering team. With years of design and development of antennas, they will design an antenna to meet the specific requirements of our customers.

New Product Design

Where we do not have an existing antenna we are able to offer a full design service.

Our engineering team has a wide range of modelling software to assist their knowledge and experience in the development of new products. This allows us to predict the performance of an antenna at an early stage of the development programme.

Our manufacturing and engineering workshops allow the efficient production of antenna prototypes which are then tested in our near field spherical anechoic test chamber. It is our normal practice to manufacture a prototype as part of a development programme.

Our engineering and technical staff work closely with customers to develop an antenna solution, quickly and cost effectively.

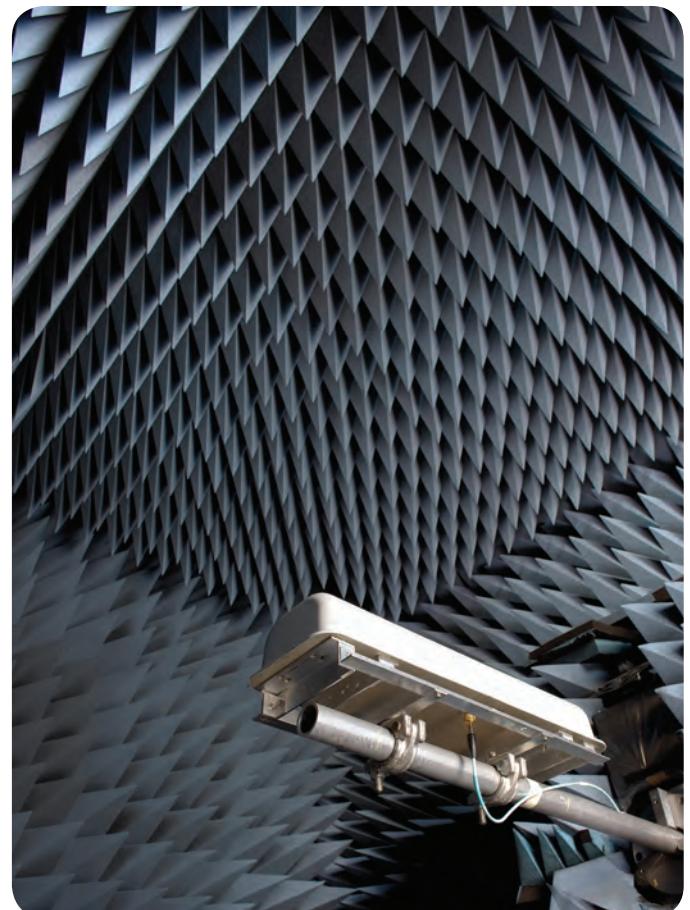
Product Modification

If one of our many standard antenna designs (as listed in this brochure) does not quite meet a customer's exact requirements we can modify the product. This may include a change of connector type, flying lead rather than connector, a slight frequency retune, or an alternative colour.

We are able to make cost effective adjustment such as these, in a short timescale, in order to meet requirements.

To find out more please telephone +44 1638 732177 or email newmarket.sales@cobham.com

Monitoring antennas under test



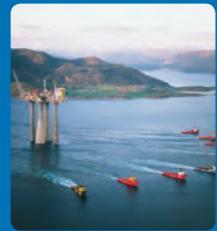
An antenna under test in our on-site spherical near field test chamber.

FMCW radar antenna array tested to ensure guaranteed performance between five antennas in the specially designed framework



Engineering, Technology and Testing

GPS positioning
Troll A platform

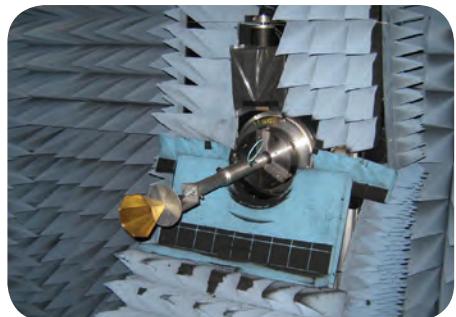


Spherical Near-field Test Range

Measurement Capabilities

Frequency Range	0.4 to 40 GHz
Max Antenna Dimension	1.5m
Max Antenna Mass	50 kg
Max Antenna Directivity	40dBi
Measurement Method	Multi-frequency spherical near-field
Measurement Platform	PNA-X network analyser
Measurement Time	Depending on antenna specification and frequency

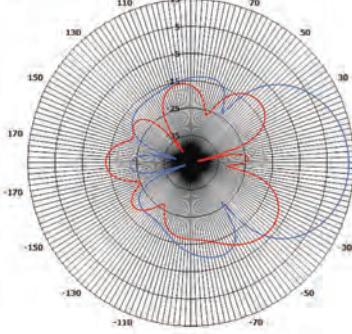
Antenna under test



Data Extraction Capabilities

- Far-field gain over full 3D surface
- Far-field axial ratio over full 3D surface
- Far-field phase over full 3D surface
- Performance data in Cartesian or polar formats
- Text files of performance over full 3D surface
- Holographic back projection to antenna surface
- Near-field raw data

Polar Spreadsheet



The on-site spherical near-field test facility is an example of our commitment to enhancing development facilities and technical support service to customers.

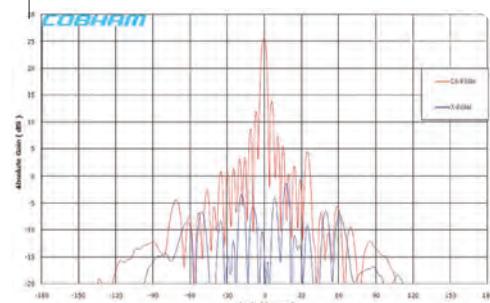
Radiation pattern data is provided to verify specifications and to ensure compliance with stringent radiation pattern envelopes where necessary. The far field radiation pattern of the antenna can be calculated in any direction, in any polarisation, circular or linear, at any angle.

Operating within 0.4GHz to 40GHz, there is full dynamic range performance down to 0.8GHz, and sufficient sensitivity to test antennas in the lower frequency range.

Test times depend on antenna size in wavelengths and the number of measurement frequencies. Gain measurements can be provided as well as directivity.

An additional benefit is the ability to perform back projections on to a given plane within the measurement sphere. A holographic back projection on to the aperture of the antenna highlights material defects that might affect antenna performance, and enables them to be resolved at the design stage. It is possible to determine the affects of coupling within a circuit that may cause amplitude, phase corruption within an array or if there is unwanted radiation off the feed circuit.

X-Y Spreadsheet

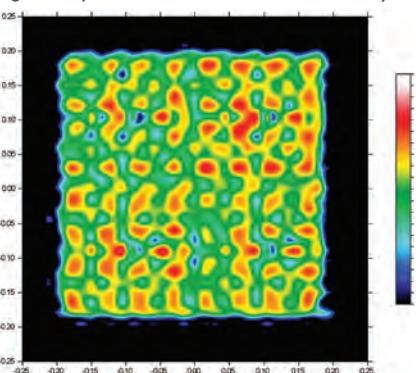


Environmental Testing Capabilities

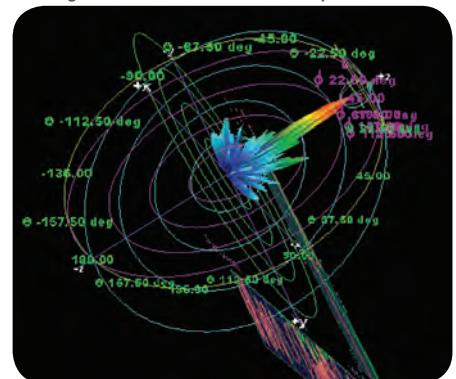
- Vibration
- Shock – gravity
- Bounce
- Bench handling – impact
- Life testing
- Centrifugal
- Seismic
- Temperature
- Humidity
- Altitude
- Ingress
- Sand and dust
- Salt corrosion
- Susceptibility to fluids
- Sunlight



Hologram Amplitude of an X-band 8x8 element array



3D image of antenna far field radiation pattern



Applications - Defence

Unmanned Systems, Control Centre

Blade antennas installed on
Boeing prototype X-48B
Blended Wing Body UAV



Unmanned Systems

Unmanned Systems provide operational functions for airborne and remote ground surveillance, video transmission, border patrol and tactical systems. In all cases uninterrupted communication to the control centre is vital.

Competing performance and cost criteria are an important consideration when selecting the antenna. Standard, cost-effective, entry-level, high performance antennas are available that are already used on Unmanned Systems in extreme environments.

The correct antenna is critical to ensure system performance, battery-life and transmission range. Included in our range are:

- High gain collinear, vertically polarised, omni antennas installed in aerodynamic structures
- Common Data Link (CDL) Ku-band omni antennas have circular polarisation and up to 4dBiC gain
- Spiral antennas, phase and amplitude matched, for direction finding
- Directional antennas for communication between airborne towed target and the towing aircraft

Brochure available for
Unmanned Airborne Systems
antennas



SBA-38/919
Blade
3.80-4.00GHz

SBA-900/1249
Blade
0.90-0.93GHz

SA9-120-1.3V/1445
Sector, 9dBi, 120°
1.20-1.45GHz



Control Centre Antennas

Cobham Antenna Systems, Microwave Antennas provides antennas for both control centre and remote platform.

The control centre antenna usually provides the higher gain part of the link and may be a medium to high gain omni antenna, medium gain sector or high gain directional antenna.

A directional antenna is likely to require a two-axis steering system. A less complex but compact multi-sector antenna array provides intermediate range coverage for communicating with a remote platform. This type of arrangement can be used for quick deployment, tactical applications.

Cobham Antenna Systems, Microwave Antennas has a range of multi-sector array please contact us for assistance.

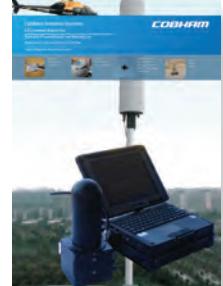
Airborne or Ground based platforms

Control Data Link

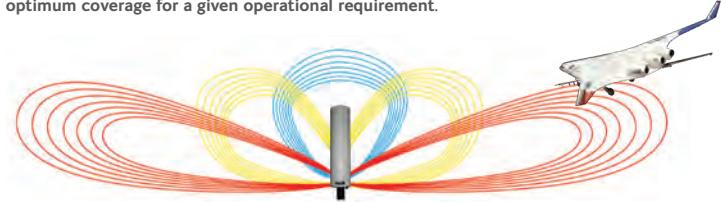
Robotics



Brochure available on
Ground Control Systems
antennas



A single, multiple element antenna comprising several omni or omni and sectors can be designed to provide optimum coverage for a given operational requirement.



Applications - Defence

Tactical Communications,
Link16, C-Band

Link16 antennas

Omni antennas
on armoured
vehicles

Tactical Communications

Antennas for tactical communications cover a wide variety of systems that are used by convoys, airborne vehicles, soldiers and control centres.

Link16

The Link16 protocol uses frequency bands that cover 960-1215MHz. Our range of extended performance broadband omni antennas has been designed for use in Link16 terrestrial and naval systems communicating with airborne platforms. All Link16 antennas are rugged, designed for extremes of weather and temperature, and have been tested under theatre conditions without affecting the performance or inhibiting mission requirements.

Extended range and operation can be achieved by using sector antennas in a diversity application.

XVO7-960-1215/1120, the
Link16 omni antenna180° sector antenna
with 9dBi gain has been
designed for Link16120° Sector for Link16
SA9-180-0.96-1.22V/1814XPO3V-500-1300/034
Omni
0.50-1.30GHz

Link16

JTIDS

JTRS

MIDS

Common Data Link

Point to Point Links

Point to Multipoint Networks

C-Band (4.4 to 6.0GHz)

Directional

Directional antennas provide gain from 7dBi to 26dBi. They are usually slim flat panels and may be mounted on a wall or mast and painted to blend in with the surroundings. Low wind loading and robust construction allow our antennas to be used in demanding military environments.

Omni-Directional

Our tough omni antennas are rugged enough for deployment on vehicles as well as fixed installations.

Sector and Multi-Sector Antennas for Base Stations

Sector antennas have narrow elevation beams and can be designed with null-fill, electrical downtilt and sidelobe suppression. Clearly defined, wide, azimuth coverage ranges from 30° to 210° in the horizontal plane with profiled vertical coverage.

Multi-sector arrays provide high gain, wide area coverage and are contained in a single radome.

MSA6-15-46L/879

Multi-Sector Antenna with
5 sectors and 1 overhead

FPA20-47V/1323

Directional antenna

Brochure available for
C-Band antennasSA17-60-4.7V/1419
Sector
4.40-5.00GHzVOA8-47/1170
Omni
4.40-5.00GHzFPA21-10A-47R/591
Directional
4.40-4.85GHz

Applications - Defence

Electronic Warfare

Narrow band body worn antenna attached to webbing for convenience and reliable coverage for foot patrol



Remote controlled bomb disposal



Electronic Warfare

IED Countermeasures

Effective countermeasures for field operations are becoming mandatory as commercially available RF products continue to be used by insurgents to set off IEDs, 'the road side bomb'.

Denying use of the RF spectrum to the enemy is critical for the protection of convoys, individual vehicles, and the dismounted soldier who is vulnerable to this form of covert and lethal attack.

As RF sources and amplifiers used for jamming are developed to cover wider bands at higher power, it is important that antennas are developed in parallel. The antennas must cover all specified bands) and peak gain must be on the horizon at all frequencies. They must be small enough to be used by foot soldiers but rugged for vehicle applications; high efficiency extends battery life.

We have a portfolio of ultra wideband omni antennas from 100MHz to 18GHz to cover all of the bands in which high power amplifiers currently operate. Multi-stack omni arrangements have been developed as well as specific antennas with high gain for cellular band countermeasures.

Antennas are being developed in conjunction with radio/HPA manufacturers to meet these demanding RF requirements to provide wide area safe zones for military personnel.



Brochure available for
Electronic Warfare (EW)
antennas

XPO2V-1650-3000/1354
Omni UWB
1.65-3.00GHz

XPO2V-1.0-6.0/1442
Omni UWB
1.00-6.00GHz

Two PSA0218L/1333 phase
matched cavity-backed
spirals 2.0 - 18.0GHz



Directional Antennas

Directional, ultra wideband, high power, vertical and circular polarised antennas are available. This range is expanding with new developments to meet customers' deployment requirements.



High Power Planar Spiral Antennas

The reflector-backed spiral has no absorber to can handle up to 100Watts, fully efficiently, with up to 8dBi peak gain, giving an impressive level of EIRP for Countermeasures. The reflector-spiral antenna provides circular polarisation which can have benefits where the polarisation of the threat signal is unknown.

Ultra Wideband
100MHz to 18GHz

Directional Planar
Spiral

Omni-Directional
High Power

Direction Finding

Jamming

Applications - Defence

Radar

MARK Resources
HSTAT High Speed
Target Acquisition and
Tracking radar system



Conformal antennas
for missiles



Radar

There are a wide variety of radar systems operating across the RF spectrum and they all work on the principle of a high power pulse or CW transmitted RF signal being reflected from the 'target' and usually being received by the same (or nearby) antenna.

We have developed antennas for radar in Stripline and Waveguide for CW Doppler, FMCW, fixed beam pulse, and reflectometer arrays.

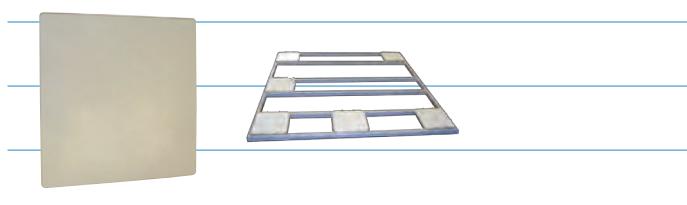
The antenna characteristics are critical to the system performance in order to resolve the target image.

Sophisticated modelling techniques combined with 20 years of experience in the design of microwave antennas will provide customers with an efficient, reliable antenna that meets their exact requirements. The company's near-field spherical anechoic test chamber supplies accurate patterns and 3-D images to demonstrate compliance with customers' specifications.

Brochure available for
antennas designed for
Radar Systems



FPA29-105V/1246
Directional



Reflectometer array

Portable and Fixed

Stripline and
Waveguide

FMCW

Pulse

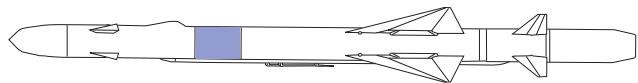
Missile



Antennas can be conformal
to avoid compromising
aerodynamics

- Conformal Antennas
- Fuse Programming
- Ground and Airborne
- Telemetry
- Command and Control
- Override and Abort

Conformal 'wrap-around' telemetry antenna for missile



An S-band antenna (2.3GHz, 20MHz bandwidth) has been developed to transmit telemetry data from a missile.

Other types include patch and omni antenna that may be integrated into fins and wing tips.



SBA-2.3V/1470
Blade
2.00-2.50GHz

HDA-1275/1148
Blade
1.20-1.35GHz



Applications - Satellite

Satellite image of the fires raging across California taken by UK-DMC satellite, which carries the nadir antenna for a GPS reflectometry experiment



Positioning TROLL - high gain directional antennas provide Inmarsat data links for differential GPS.

Photograph courtesy of Shell Norske



Satellite

Fixed installations

High gain directional antennas can be pointed at the correct azimuth and elevation angles so that peak gain is directed towards the satellite for fixed installations. They can be located anywhere within the satellite footprint.

Suitable for SCADA applications.

Ground Based and Mobile Satcom

Inmarsat

Surrey Satellite Technology Ltd

Directional antennas for Meteosat

Iridium

Passive and Active GPS antennas

Thuraya

1.52 to 1.66GHz

Satellite/GPS integrated antennas for Thuraya satphone docking units and SM2500 module



The FPA15-1.6L/1535 panel antenna can be used to operate the Thuraya IP unit at its maximum data rate.

High gain directional antenna

This antenna has 21dBiC gain, right-hand circular polarisation and measures 896x896x16mm.

Photograph courtesy of Hughes.



Data Collection Platforms and Weather Ships

Rugged, hemi-omni antenna withstands a hostile environment to provide meteorological data using a 402MHz satellite up-link.

Photograph courtesy of the Met Office.



Satellite/GPS integrated antennas for use with Thuraya satphone and SM2500 module

A choice of antennas provides connectivity within Thuraya satellite coverage, used for land mobile and fixed installations. Integration of GSM antenna also possible.

Integral active GPS antenna for fast GPS acquisition and ease of installation.

Rugged, light weight, fully sealed.

Mobile/Portable

Passive vehicle antenna for low elevation. Suitable for mobile applications. Hemi omni antenna, HOA2-159L-GPS/1548 mounted on vehicle in Australia.



Photograph courtesy of Optus.

Nadir antenna

For Surrey Satellite Technology's UK-DMC satellite this L-band antenna has high gain, 10° offset from bore-site and was designed to help avoid RF interference.

Photograph courtesy of SSTL.



HOA2-1.6L/1404
Hemi Omni

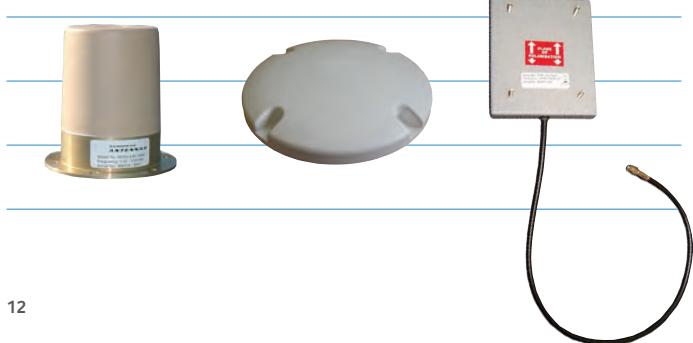
FPA8-1.6RL/1563
Directional

FPA7-1.6V/1510
Directional

LPA7-1.6L-GPS/1459
Directional

LPA7-1.6L/1405
Directional

HOA20159L-GPS/1548
Hemi Omni



Applications - Security and Surveillance

Body Worn - Tactical Communications



Front line, video surveillance utilising helmet mounted antennas

Body Worn - Tactical Communications

Communication between personnel on the ground and the control centre is vital in today's military and security world.

Constant voice, data and video exchange allows tactical decisions to be made in the control centre and passed to those in the field.

Front Line, Live Video Surveillance

A light weight, directional antenna was designed for integration within the Body Worn Video Wireless Solution providing four live video feeds and GPS data. This system was used at a Rock Festival by Police foot patrol and mounted officers and for full scale public order situations.



Body-Worn
TETRA
PMR
Military
Police



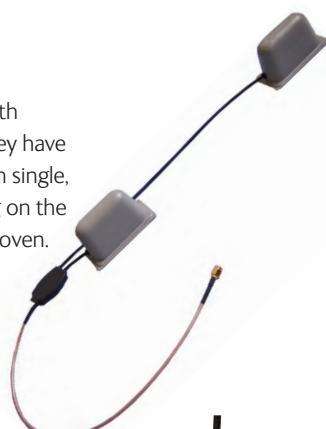
Battlefield Communications

Reliable radio communications are crucial in theatre. Slim, light weight man-pack/body-worn antennas provide an improved signal pattern for a greater all round coverage and are less intrusive and more comfortable for the wearer. Circular polarisation may alleviate the problem of polarisation mismatch when soldiers are in different orientations with respect to each other.

Body Worn Sector Antennas

These antennas are wide band, with wide-angle sectoral coverage. They have high gain and can be configured in single, double or quad format depending on the radio. They are robust and field proven.

DHDA-2.4V/1448
Dual Sector Antenna



Narrow Band Patch Antennas

Narrow band directional patch antennas are ideal for covert, security applications. This type of antenna is extremely slim, 2 to 4mm in depth and may be sewn into clothing or webbing.

DPA1-2.3V/1610
Dual Narrow Band Patch Antenna



Wide Band Patch Antennas

Wide band patch antennas are ideal for covert, security applications. Slightly deeper in construction than narrow band antennas, these can still be disguised within clothing, webbing and baggage. They are directional in coverage.

DPA2-2.3V/1611
Dual Wide Band Patch Antenna



Wire Style Antennas

These antennas are suitable for lower frequency, covert applications and may be hidden within clothing. Singly, they provide predominantly 180° coverage and can be used in pairs for optimum 360° coverage.



Applications - Security and Surveillance

Security



Vehicle mount
antennas

Security

Small, discreet and robust, our antennas are used for covert and overt systems within security and surveillance applications around the world. For obvious reasons it is not possible to divulge these applications.

Practical, efficient and cohesive communications between staff, wherever they are, and central control is essential.

Our antennas are used within many types of applications including surveillance, unmanned vehicles, IED Countermeasures, video transmission, COFDM, PMR and Tetra systems.

- High speed data and video links between helicopter and base station for real time monitoring, long distance links
- ISM band
- Switch sector base stations for tracking and covert surveillance
- Remote monitoring via CCTV motion and perimeter protection, PIR, RF intruder detection and covert systems.
- Inter-communication between operators and command for protection of security patrols, control of traffic, visitor access, building entry and facility monitoring in docks, warehouses or airports.

Suffolk Air Operations Unit
EC135 helicopter. Photo
courtesy of Eurocopter



Applications include mobile and fixed systems in metropolitan areas, rail stations, airports, sports arenas, shopping malls and other large building complexes

IED Countermeasures

Counter Terror

Surveillance

COFDM

UAVs

Video Transmission

PMR and Tetra

Covert

Tagging

Telemetry



Directional antenna with
right circular polarisation
FPA16-3.4R/1658
3.35 to 3.45 GHz

Directional antennas with narrow beams reduce the possibility of intercept

High gain sector antennas for point-to-mobile systems

Data and video streaming

Optimised system performance by selection of transmit and receive, fixed and mobile antennas

Data transmission for real-time, informed, decision-making

Antennas can be mounted on cameras for ENG (Electronic News Gathering)

Long distance links

Discreet designs for covert operations

Example Frequencies

0.9GHz	Cellular intercept
1.2 - 1.4GHz	Data and video links
1.394GHz ±5MHz	Video for security & CCTV
1.5GHz	Military telemetry
2.3-2.5GHz	Video links
2.42 - 2.48GHz	ISM band
3.6 - 4.0GHz	Race Car telemetry
4.4 - 4.8GHz	Helicopter links
10.0GHz	Secure comms link

SA9-120-1.3V/1560

Sector

1.15-1.45GHz

<p

Applications - Security and Surveillance

COFDM

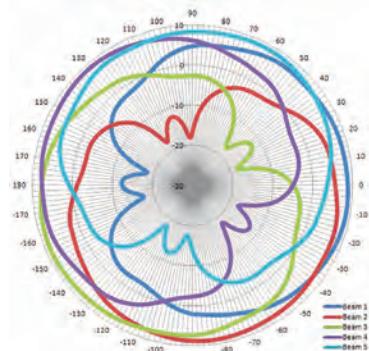
Sports stadia



Multi Sector Antenna for COFDM

A miniature 6-way Multi Sector antenna in the 2.0-2.7GHz band is available for use with COFDM (Coded Orthogonal Frequency Division Multiplexed) radios. Each sector has up to 9dBi peak gain and azimuth beamwidths of 120° providing a high level of overlap, ensuring that even localized transient fading (as associated with use in mobile applications) is eliminated.

The sixth antenna is up-looking to provide complete hemispherical coverage. This increases the practical applications and maximizes operational flexibility for the antenna for rapid deployment as well as temporary and fixed installations.



Azimuth patterns showing
9dBi peak gain, 120°
beamwidth and high level of
overlap for the five sector
antennas

Airports

Rail Stations

Underground Train
Networks

Government Buildings

Military Compounds

Stadia

Perimeter Monitoring

Vehicles

Helicopters

Ground Stations

Front line video
surveillance

Body worn camera and
helmet mounted antenna
system - full scale public
order training exercise



High gain, circular
polarised omni antenna
in the 2.4GHz band,
alleviates the need for
expensive airborne
tracking systems. They
can be mounted in (or on)
vehicles for mobile WLAN



'Mini' Multi sector,
MSA6-2.4V/1795, 2 to
2.7GHz, gain 8dBi and
8.5dBi overhead



6-way, circular polarised,
switch sector antenna
used to track and receive
video and telemetry from
helicopters over London

COFDM provides significant benefits over conventional analogue microwave transmissions, especially in high multi-path environments such as dense urban areas. It is possible to virtually eliminate Fade even in Non Line of Sight (NLOS) situations, through the use of spatial antenna diversity schemes.

COFDM systems are being used for National Security, Police and Military applications where the integrity of video and data links is maintained

Model MSA6-2.4V/1795 has five sectors and one overhead antenna and is contained within a rugged housing which is 6.5" Ø (155mm) x 12" tall (300mm).

SA12-80-1.4V/1716 high
gain sector antenna,
1.35 - 1.45GHz



MSA5-2.4V/1681 4-way
plus 1 overhead sector
antenna, 2.30 - 2.55GHz



SA19-30-5.1DS/1616
19dBi gain sector antenna,
5.00 - 5.15GHz



Applications - Security and Surveillance

Airport Terminals, Security, Perimeter, PMR, Tetra

Airports - Terminals, Security, Perimeter, PMR, Tetra

There are a wide variety of communication systems operating across the RF spectrum, from low frequency PMR and Tetra systems, to Perimeter protection, WiFi communications

Cobham Antenna Systems, Microwave Antennas has developed many antennas that are being used in airports around the world.

Ensuring RF signals do not conflict with avionics and NATC services are paramount. Cobham's antennas are fully tested with antenna characteristics critical to the system performance.

Sophisticated modelling techniques combined with 20 years of experience in the design of microwave antennas will provide customers with an efficient, reliable antenna that meets their exact requirements. The company's near-field spherical anechoic test chamber supplies accurate patterns and 3-D images to demonstrate compliance with customers' specifications.

A wideband omni-directional antenna (XPO2V-150-600/148, 0.150 to 0.600GHz and 2dBi gain), provide PMR and Tetra coverage within the airport complex.



XPO2V-150-600/148

Designed for Cellular DAS, suitable for PMR and Tetra applications.

Frequency 150 to 600 MHz

Gain 2dBi

HPBW 360° x 80°

High power rating 250W



Omni antenna, OA1-0.42V/1316, was designed for communication within an airport car park.

At this low frequency antennas would normally be very large. This antenna was designed to meet height restrictions whilst maintaining high specification beam patterns.



OA1-0.42V/1316

Designed for PMR and Tetra applications and suitable for Cellular DAS

Frequency 380 to 470 MHz

Gain 1dBi

HPBW 360° x 85°

Power rating 50W



Commercial

COFDM, ENG, Cellular, PMR, TETRA, RFID, WLAN, WiMAX, LTE

Sector antenna WLAN coverage in Sydney



RFID for tracking valuable goods



COFDM Electronic News Gathering (ENG)

A range of transmit antennas can be mounted on to a video camera, as well as being used for digital and video uplinks from ground station or mobile vehicle to helicopter.

These robust, small, discreet antennas makes them ideal for outside broadcast applications in the most demanding of locations such as on safari or mountaineering.

Video communications are now an essential part of many sporting activities so these light weight, small antennas are ideal.



Photo from P4 Productions

Cellular

Our antennas are used as microcell base stations in dense RF locations and for GSM based data communications systems.

There are single band antennas, plus dual and tri-band antennas for GSM900, GSM1800, PCS1900 and 3G. Ultra wideband antennas cover these frequencies as well as WiFi hotspots and WLAN for Distributed Antenna Systems (DAS).

This wide range of antennas includes sector base stations, omnidirectional and directional panel antennas with a variety of gain, polarisation and beam patterns.



Discreet appearance

PMR and TETRA

Antennas have been designed to cover PMR and Tetra bands. Installations include discreet locations in the prestigious St Pancras International railway station and London Heathrow Airport Terminals.

In each case designs had to conform to strict RF specifications while meeting architect approval and fitting within demanding structures.



Omni antennas at airport for PMR and TETRA

RFID

This range of omni and directional RFID antennas covers the 433MHz and 868MHz frequencies, plus 915MHz and 2.5GHz for non-European installations.

Zonal Coverage
Portal Coverage
Covert
Road Tolling
Traffic management



RFID road tolling

WLAN

Omni, sector and directional antennas are available in 2.4GHz, 2.5GHz and 5.8GHz bands. Dual band antennas allow simple upgrade paths between protocols. Dual slant 45° polarisation antennas provide diversity. Multiple antennas can be designed to be housed in a single radome to aid architect approval. Used for metropolitan and rural WiFi networks, point-to-point and point-to-multipoint and COFDM systems.

Directional
Omni
Dual Band
Aesthetic



Cargo monitoring at Port of Felixstowe

VECTORs for WiMAX and LTE

Vector antennas meet RF standards required for WiMAX, LTE, WLAN and WiFi, providing flexibility across a range of frequency bands.

The range includes high gain sector (30°, 60°, 90°, 120° azimuth coverage), directional and omni antennas.

All are available with vertical polarisation. Base station antennas can be supplied with horizontal, dual polar or ±45° polarisation.



Brochure for Vector antennas for WiMAX and LTE

Antenna Primary Specification

Frequency, Gain, Bandwidth, Cross Polar, Sidelobes

Omni antenna VOA4-
1400/1130
page 54



FREQUENCY

Most antennas are designed to operate efficiently within 10% bandwidth. $2.5\text{GHz} \pm 5\%$ means a frequency of 2.375 to 2.625 GHz, a 250MHz bandwidth.

At 10GHz a 10% bandwidth antenna will operate from 9.5 to 10.5GHz.

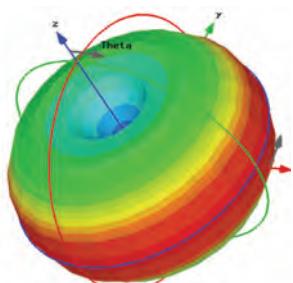
Always specify the frequency band or centre frequency plus bandwidth. L-band or S-band is not sufficient.

BANDWIDTH

The bandwidth of an antenna is the range of frequency where the antenna is operating effectively. Typically our non-wideband antennas have a nominal 10% bandwidth. This may increase or decrease depending on the antenna and performance required.

It is important to specify the exact bandwidth required. Specifying L-band for example is not sufficient. L-band covers 1 - 2 GHz, much larger than a 10% bandwidth.

3D Plot of low gain omni antenna



GAIN

Antennas passively increase the radiated power by concentrating RF energy into certain directions. The gain of an antenna is a measure of its directionality.

Gain is usually expressed in dBi or dB relative to an isotropic source (equal in all directions). Antennas are not 100% efficient and have internal losses. The gain of an antenna includes these losses:

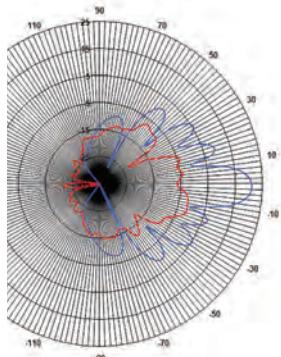
$$\text{Gain} = \text{Directivity} - \text{Internal losses}$$

Gain is the additional signal strength that the antenna provides in one direction at the expense of signal strength in other directions.

An antenna is normally a passive device providing gain by directing the energy to a required pattern.

The result is a higher signal strength in one direction and lower in other directions.

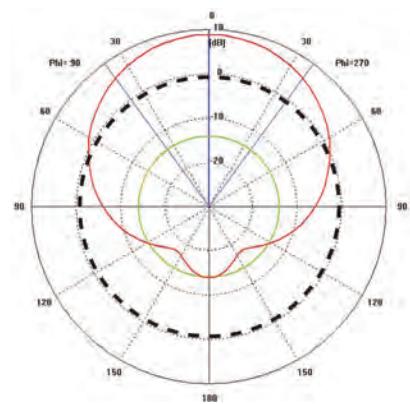
Measured pattern of directional antenna



CROSS POLAR

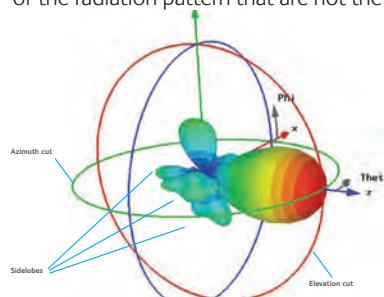
Antennas are never perfectly polarised. Cross polar is a measure of how much energy is in the plane perpendicular to the E-plane or opposite hand of circular polarisation. It is typically quoted relative to the peak gain of the antenna and can be in the range -15 to -50dB..

Shows gain relative to isotropic pattern of antenna



SIDELOBES

In antenna engineering side lobes are the lobes of the radiation pattern that are not the main



beam. An antenna radiation pattern is more commonly called a beam pattern. The power density in the side lobes is generally much less than that in the main beam. Sidelobe levels are measured in dBs relative to the peak of the main beam.

It is possible to control sidelobe levels, if necessary, depending on the application.

Antenna Primary Specification

HPBW Half Power Beam Width, Polarisation, Return Loss, VSWR

Directional flat panel antenna
FPA20-47V/1323
page 82



Sector antenna SA15-120-
58V/983, 120°
page 85



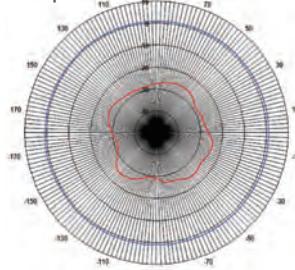
HPBW Half Power Beam Width

Omni

A dipole is the simplest omni-directional antenna. It has 360° azimuth coverage; the energy is squeezed from top and bottom to provide gain on the horizon.

The elevation pattern is measured by taking a vertical cut through the beam. The antenna's beamwidth is defined by the angle over which the radiated energy falls to half its peak level. This is known as the Half Power Beam Width (HPBW), or the -3dB point. This beamwidth will apply to the elevation pattern whilst the azimuth beam will be 360°.

Omni azimuth pattern

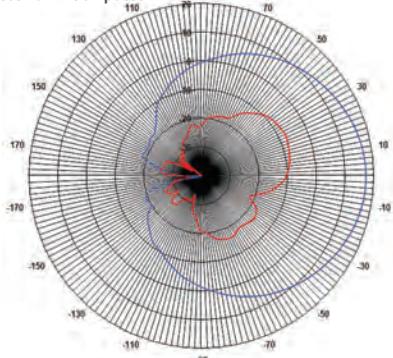


Directional and Sector

Energy is directed from vertical and horizontal sides to produce a directional lobe or sector beam.

For directional and sector antennas azimuth and elevation HPBW are specified separately.

Sector azimuth pattern



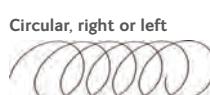
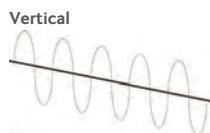
POLARISATION

All electromagnetic radiation is polarised. The figures below show the electric (E) vector in a propagating wave for various types of polarisation.

The polarisation of an antenna describes the orientation of its electrical field or E-Plane. The polarisation of an antenna can be linear or circular.

Linear polarisation is usually vertical or horizontal. Dual polar antennas can produce both vertical and horizontal polarisations via separate ports. A further extension of this are dual slant antennas; these are essentially the same as dual vertical and horizontal antennas but with the polarisations rotated by 45°.

Circular polarisation is produced when the E-plane of the antenna spins. Depending on the direction of spin the polarisation is right or left hand.



RETURN LOSS and VSWR

Return Loss

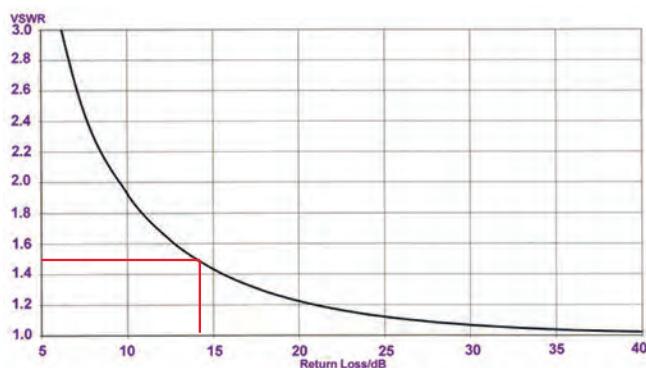
This is the amount of signal that is reflected by the antenna at the connector. This is expressed either as the relative level of the return signal in dB, or in terms of the Voltage Standing Wave Ratio (VSWR) present on the input to the antenna as a result of the reflection. Return loss and VSWR are related as shown in the graph and table.

Return Loss Reference Formulae

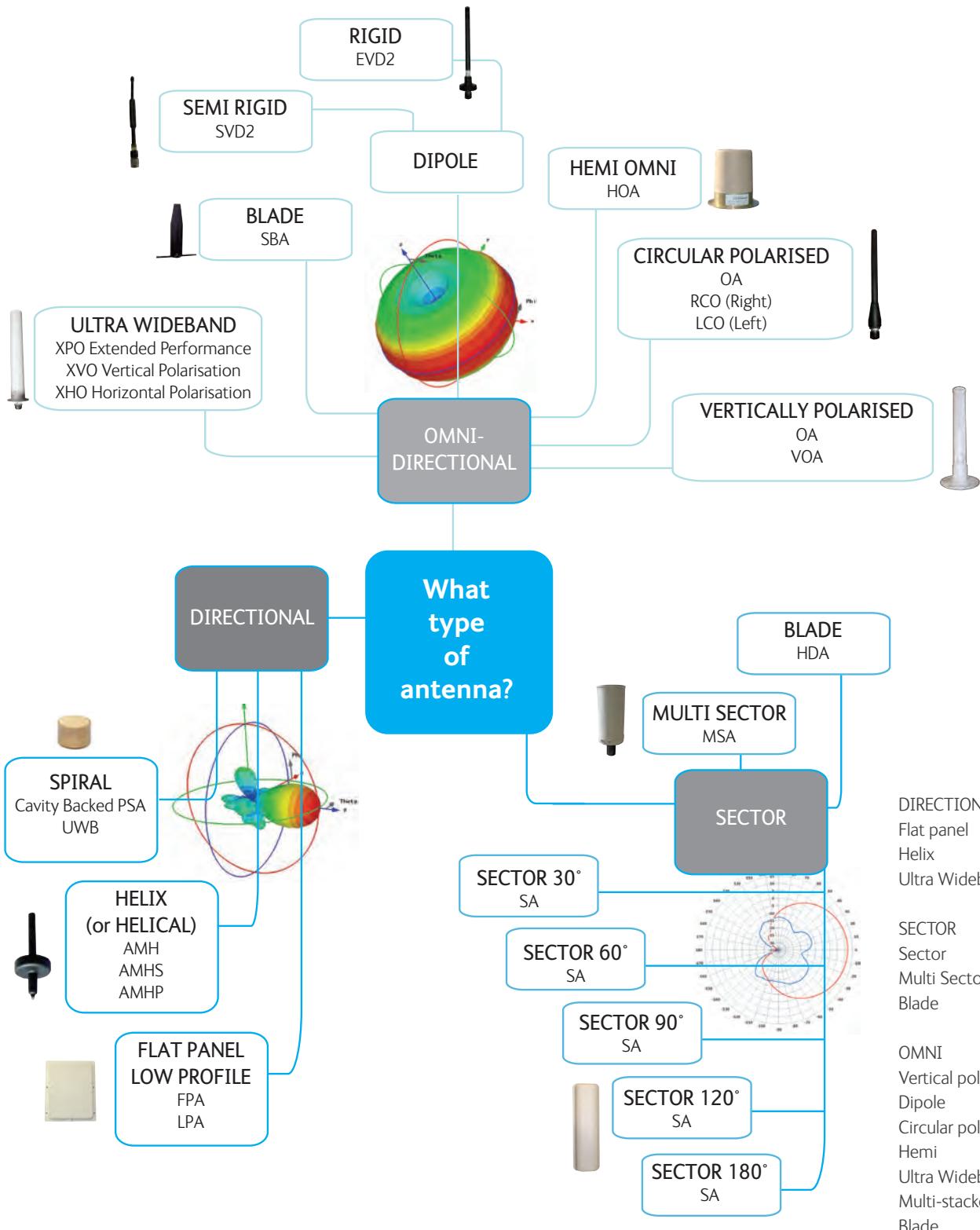
$$RL = 20 \log_{10} \left(\frac{VSWR - 1}{VSWR + 1} \right) \text{dB}$$

VSWR	Return Loss	Transmitted Power
1.3:1	17.7dB	98.3%
1.5:1	14.0dB	96%
2.0:1	9.5dB	89%
2.5:1	7.4dB	82%
3.0:1	6.0dB	75%

A VSWR of 1.5 is equivalent to a return loss of -14dB. The graph below shows the relationship between VSWR and return loss.



Antenna Types



Antenna Types

DIRECTIONAL Flat Panel Antennas

FPA, LPA series

Directional, Flat Panel

A directional antenna radiates in one direction giving increased gain. The gain of the antenna is determined by its area (aperture) and the frequency of operation. We use as many patch elements necessary to cover the area. The more elements the higher the gain and the smaller the HPBW.

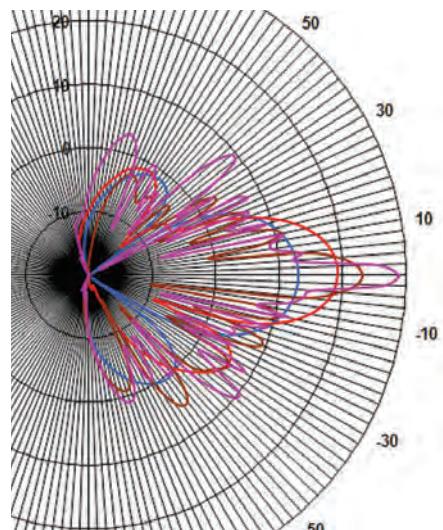
Flat panel antennas can have high gain with narrow azimuth and elevation radiation patterns.

If the application requires a robust, discreet antenna mounted flat against a wall, or on a mast where a smaller antenna would be beneficial, this type of flat panel provides the best option. They can be painted to blend in with the surroundings even when situated in a prominent position such as in St Pancras International Station. Unless you know what you're looking for, you will not see it.

Low wind loading and robust construction enable our antennas to be mounted in the most demanding of environments such as the Channel Tunnel Rail Link where trains travel through tunnels at speeds of up to 150 miles per hour.



- Low profile
- Directional
- Gain up to 32dBi
- Frequency range from VHF/UHF to 28GHz
- Single and multi-layered microstrip technology for bandwidths up to 15%
- Polarisation can be circular, linear or dual slant
- High isolation dual polar solutions available
- More efficient than parabolic dishes



FPA3-0.8-6.0R/1329
p57



FPA5-0.9R/9406
p36



FPA17-2.2V/1371
p58



LPA7-29V/1149
p60



FPA20-47V/1323
p80



FPA23-69V/1267
page 89



Antenna Types

DIRECTIONAL Helix

AMH series

Directional, Helix

These antennas are a traditional way of producing circular polarisation for a directional application, over a broad bandwidth, typically 25%.

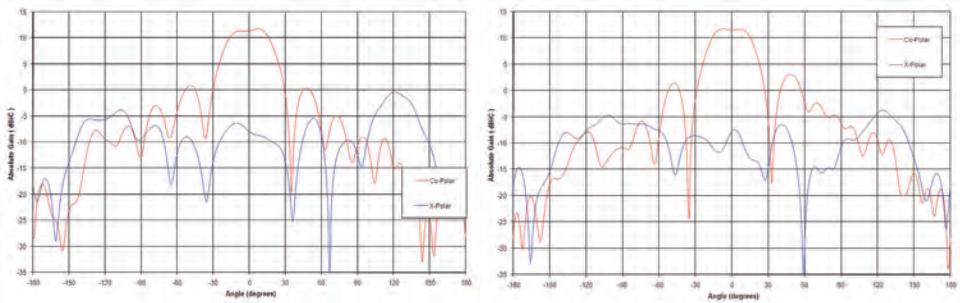
Applications include outside broadcast and video surveillance where circular polarisation helps mitigate the effects of multi-path in a highly reflective environment.



AMHP12-860R/009
page 36

- Frequencies up to 4GHz
- Gain up to 17dBiC
- Hand held, pole mount or shrouded
- Good axial ratio, right or left circular polarisation
- N-type connectors and maximum VSWR of 1.5:1
- Light weight, low wind loading
- Optional mounting kits available

AMH12-2.1R/1188 azimuth and elevation radiation patterns



AMHS17-25R/023



AMHP14-2150R/453



AMH12-2.1R/1188



AMHP13-13R/045



AMHP12-860R/009



AMHP12-24R/118



Antenna Types

DIRECTIONAL Planar Spiral

PSA series

Planar spiral antenna
PSA-7530/170
page 43



Directional, Ultra Wideband

Cavity-backed Spiral

- Very wideband: 0.5 to 4GHz, 2 to 18GHz
- Can be used stand-alone or as part of a DF (Direction Finding) array
- Phase and/or amplitude matched to provide accurate DF
- Gain 0 to 5dBiC
- Circular polarisation
- HPBW 50° to 90° across the band



PSA0218R/1278
page 95

High Power Planar Spiral

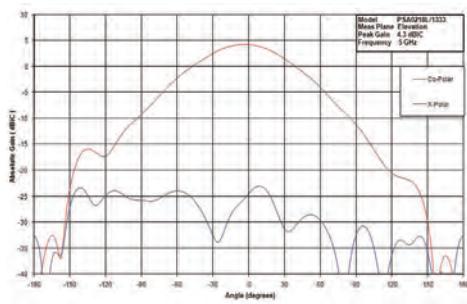
- High power and ultra wideband
- Directional, with gain up to 8dBiC
- Circular polarisation provides better chance of jamming
- Flat panel can be disguised if necessary
- Bi-directional option



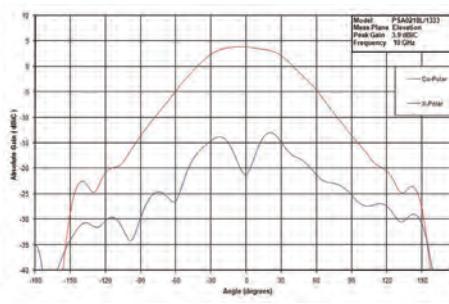
PSA-50200-LP/1211
p94

PSA0218L/1333 planar spiral antenna radiation patterns demonstrating consistency over wideband

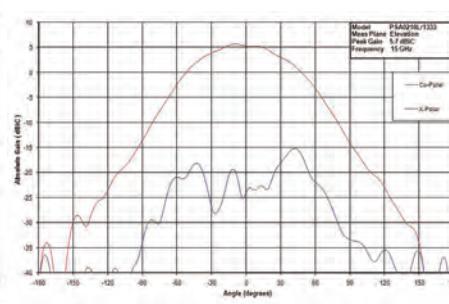
5GHz



10GHz



15GHz



FPA3-0.8-6.0R/1329

p94



PSA0218R/1360

p95



PSA0218R/1278

p89



PSA-7530/170

p57



PSA0818R/1308

p90



BDPSA-50800-D2/1160

p94



Antenna Types

SA14-120-3.4V/9313
page 79



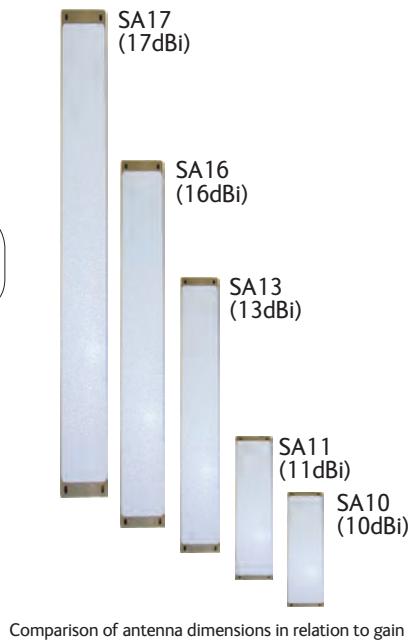
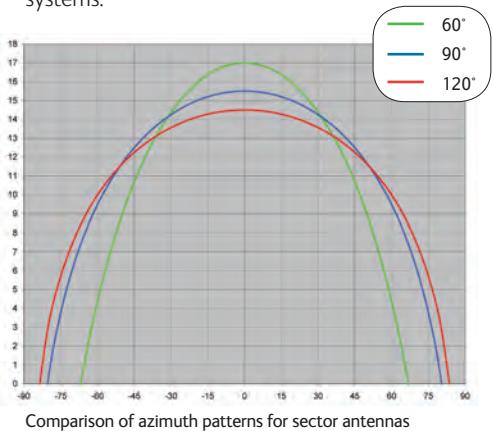
SECTOR Antennas

SA series

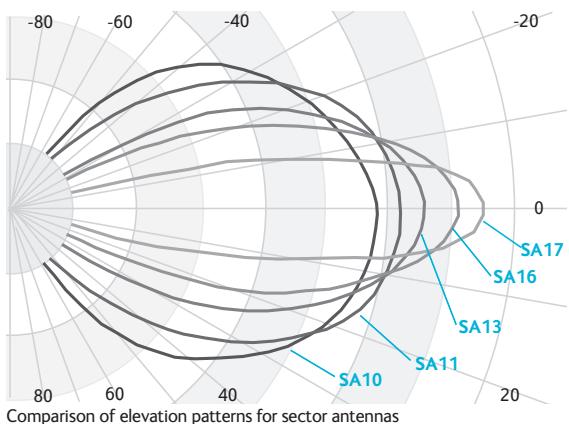
SECTOR

Sector antennas are normally used as part of a base station. They usually have narrow profiled elevation patterns and clearly defined, wide, azimuth coverage from 30° to 210°.

Sector antennas are used in WiMAX/LTE, WLAN, WiFi, cellular and other communication systems.

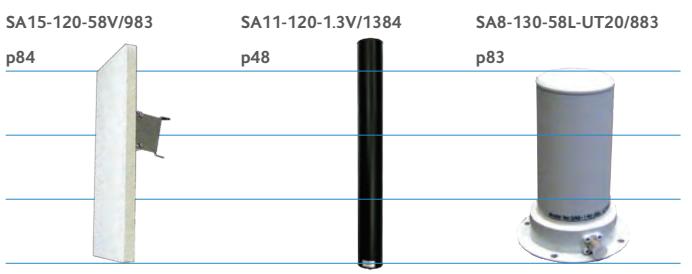


- Low profile
- Azimuth coverage from 30° to 210°
- Polarisation can be:
 - Vertical
 - Horizontal
 - Dual Vertical & Horizontal
 - Right Circular
 - Left Circular
 - Dual Circular
 - Dual ±45°
- Gain up to 20dBi dependent on beamwidth
- Multi-sector arrays provide high gain and 360° coverage
- Elevation patterns can be designed with null-fill, electrical downtilt and sidelobe suppression



VECTOR Antenna Series - Specification

Flat Panel	Omni-directional	Base Station Sector
2.3 to 2.7GHz	2.3 to 2.7GHz	2.3 to 2.7GHz
4.9 to 5.9GHz	3.3 to 3.8GHz	3.3 to 3.8GHz
Gain: up to 23dBi	4.9 to 5.9GHz	4.9 to 5.9GHz
Polarisation: Vertical or Horizontal, Dual Polar, Dual Slant	Gain: up to 11dBi	Gain: up to 19dBi
	Polarisation: Vertical	Polarisation: Vertical or Horizontal, Dual Polar, Dual Slant



Antenna Types

SECTOR Antennas

Multi Sector MSA, Series , Blade HDA Series

MULTI-SECTOR

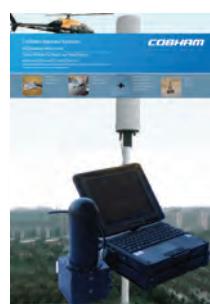


MSA6-5.5V/1783
Multi-Sector antenna, 5
sector antennas and 1
overhead. Shown with
and without radome



MSA6-15-46L/879
p99

- Frequencies from 1 to 16GHz
- Up to 10 sectors, with or without overhead
- Vertical or circular polarised sectors
- Overhead (up-looking) antennas usually have circular polarisation
- Fully sealed, or with space for customer electronics
- Radiation pattern and distance analysis undertaken for Ground-to-Air systems (fly-by analysis) to ensure complete coverage within flight area.



Leaflet available
Ground Control
Centre applications,
predominantly Multi-
Sectors

SECTOR Blade

- Blade antennas can be as little as 2mm thick
- For more demanding applications they may be housed in protective radomes
- Aerodynamic
- Light weight
- Can be omni-directional or sectoral, depending on the application requirements

Where a shorter but fully efficient antenna is required, a range of printed circuit (blade) antennas are available.



HDA-0.38/1811 blade
p37

HDA-1.3V/1880
p48

HDA-2.4V/1423
p51

p99

SA7-QUAD-24R/284
p98

MSA3-5.5V/1891
p99

HDA-0.38/1811 blade
p37

HDA-1.3V/1880
p48

HDA-2.4V/1423
p51

p99

SA7-QUAD-24R/284
p98

MSA3-5.5V/1891
p99

HDA-0.38/1811 blade
p37

HDA-1.3V/1880
p48

HDA-2.4V/1423
p51

p99

SA7-QUAD-24R/284
p98

MSA3-5.5V/1891
p99

HDA-0.38/1811 blade
p37

HDA-1.3V/1880
p48

HDA-2.4V/1423
p51

p99

SA7-QUAD-24R/284
p98

MSA3-5.5V/1891
p99

HDA-0.38/1811 blade
p37

HDA-1.3V/1880
p48

HDA-2.4V/1423
p51

p99

SA7-QUAD-24R/284
p98

MSA3-5.5V/1891
p99

HDA-0.38/1811 blade
p37

HDA-1.3V/1880
p48

HDA-2.4V/1423
p51

p99

SA7-QUAD-24R/284
p98

MSA3-5.5V/1891
p99

HDA-0.38/1811 blade
p37

HDA-1.3V/1880
p48

HDA-2.4V/1423
p51

p99

SA7-QUAD-24R/284
p98

MSA3-5.5V/1891
p99

HDA-0.38/1811 blade
p37

HDA-1.3V/1880
p48

HDA-2.4V/1423
p51

p99

SA7-QUAD-24R/284
p98

MSA3-5.5V/1891
p99

HDA-0.38/1811 blade
p37

HDA-1.3V/1880
p48

HDA-2.4V/1423
p51

p99

SA7-QUAD-24R/284
p98

MSA3-5.5V/1891
p99

HDA-0.38/1811 blade
p37

HDA-1.3V/1880
p48

HDA-2.4V/1423
p51

p99

SA7-QUAD-24R/284
p98

MSA3-5.5V/1891
p99

HDA-0.38/1811 blade
p37

HDA-1.3V/1880
p48

HDA-2.4V/1423
p51

p99

SA7-QUAD-24R/284
p98

MSA3-5.5V/1891
p99

HDA-0.38/1811 blade
p37

HDA-1.3V/1880
p48

HDA-2.4V/1423
p51

p99

SA7-QUAD-24R/284
p98

MSA3-5.5V/1891
p99

HDA-0.38/1811 blade
p37

HDA-1.3V/1880
p48

HDA-2.4V/1423
p51

p99

SA7-QUAD-24R/284
p98

MSA3-5.5V/1891
p99

HDA-0.38/1811 blade
p37

HDA-1.3V/1880
p48

HDA-2.4V/1423
p51

p99

SA7-QUAD-24R/284
p98

MSA3-5.5V/1891
p99

HDA-0.38/1811 blade
p37

HDA-1.3V/1880
p48

HDA-2.4V/1423
p51

p99

SA7-QUAD-24R/284
p98

MSA3-5.5V/1891
p99

HDA-0.38/1811 blade
p37

HDA-1.3V/1880
p48

HDA-2.4V/1423
p51

p99

SA7-QUAD-24R/284
p98

MSA3-5.5V/1891
p99

HDA-0.38/1811 blade
p37

HDA-1.3V/1880
p48

HDA-2.4V/1423
p51

p99

SA7-QUAD-24R/284
p98

MSA3-5.5V/1891
p99

HDA-0.38/1811 blade
p37

HDA-1.3V/1880
p48

HDA-2.4V/1423
p51

p99

SA7-QUAD-24R/284
p98

MSA3-5.5V/1891
p99

HDA-0.38/1811 blade
p37

HDA-1.3V/1880
p48

HDA-2.4V/1423
p51

p99

SA7-QUAD-24R/284
p98

MSA3-5.5V/1891
p99

HDA-0.38/1811 blade
p37

HDA-1.3V/1880
p48

HDA-2.4V/1423
p51

p99

SA7-QUAD-24R/284
p98

MSA3-5.5V/1891
p99

HDA-0.38/1811 blade
p37

HDA-1.3V/1880
p48

HDA-2.4V/1423
p51

p99

SA7-QUAD-24R/284
p98

MSA3-5.5V/1891
p99

HDA-0.38/1811 blade
p37

HDA-1.3V/1880
p48

HDA-2.4V/1423
p51

p99

SA7-QUAD-24R/284
p98

MSA3-5.5V/1891
p99

HDA-0.38/1811 blade
p37

HDA-1.3V/1880
p48

HDA-2.4V/1423
p51

p99

SA7-QUAD-24R/284
p98

MSA3-5.5V/1891
p99

HDA-0.38/1811 blade
p37

HDA-1.3V/1880
p48

HDA-2.4V/1423
p51

p99

SA7-QUAD-24R/284
p98

MSA3-5.5V/1891
p99

HDA-0.38/1811 blade
p37

HDA-1.3V/1880
p48

HDA-2.4V/1423
p51

p99

SA7-QUAD-24R/284
p98

MSA3-5.5V/1891
p99

HDA-0.38/1811 blade
p37

HDA-1.3V/1880
p48

HDA-2.4V/1423
p51

p99

SA7-QUAD-24R/284
p98

MSA3-5.5V/1891
p99

HDA-0.38/1811 blade
p37

HDA-1.3V/1880
p48

HDA-2.4V/1423
p51

p99

SA7-QUAD-24R/284
p98

MSA3-5.5V/1891
p99

HDA-0.38/1811 blade
p37

HDA-1.3V/1880
p48

HDA-2.4V/1423
p51

p99

SA7-QUAD-24R/284
p98

MSA3-5.5V/1891
p99

HDA-0.38/1811 blade
p37

HDA-1.3V/1880
p48

HDA-2.4V/1423
p51

p99

SA7-QUAD-24R/284
p98

MSA3-5.5V/1891
p99

HDA-0.38/1811 blade
p37

HDA-1.3V/1880
p48

HDA-2.4V/1423
p51

p99

SA7-QUAD-24R/284
p98

MSA3-5.5V/1891
p99

HDA-0.38/1811 blade
p37

HDA-1.3V/1880
p48

HDA-2.4V/1423
p51

p99

SA7-QUAD-24R/284
p98

MSA3-5.5V/1891
p99

HDA-0.38/1811 blade
p37

HDA-1.3V/1880
p48

HDA-2.4V/1423
p51

p99

SA7-QUAD-24R/284
p98

MSA3-5.5V/1891
p99

HDA-0.38/1811 blade
p37

HDA-1.3V/1880
p48

HDA

Antenna Types

OMNI-DIRECTIONAL Vertical Polarisation

OA and VOA series

Omni, Vertical Polarisation

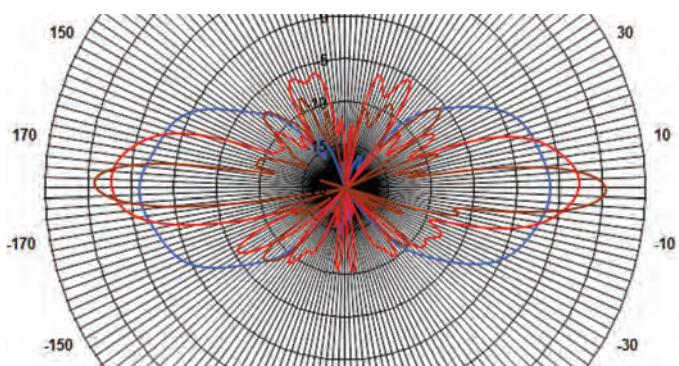
An omni antenna is defined as one that radiates 360° in the horizontal plane with peak gain, usually on the horizon.

Collinear omni antennas are centre-fed making them ground-plane independent and provide stable radiation patterns across the band. They combine light weight construction and environmental protection with rigid glass fibre radomes and aluminium mounting spigots

Higher gain omnis can be produced by stacking and feeding more elements. This has the effect of reducing the elevation beamwidth.

By adjusting phase and amplitude to each element, sidelobes can be controlled and the elevation beam can be shaped to provide other features such as null-fill or electrical tilt.

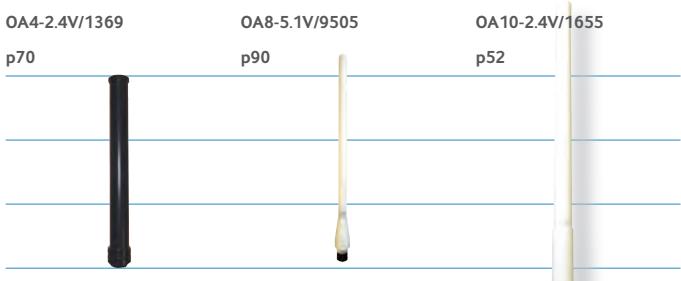
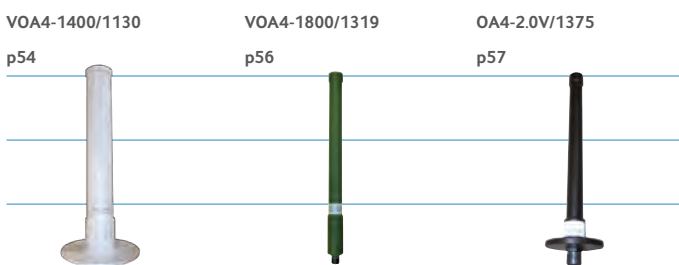
- **VOA and OA series**
- **Gain up to 11dBi**
- **Frequencies up to 18GHz**
- **Centre fed to ensure peak gain remains on the horizon**
- **Stable, ground-plane independent radiation patterns**
- **Light weight but rugged, for harsh environments**
- **For special applications horizontally polarised high gain omnis can be developed**



Left to right:
OA2-2.4V/1392 page 70
VOA7-36/1146 page 81
OA4-2.5V/1542 page 70

Elevation patterns for omni antennas, illustrates gain versus beamwidth performance

- OA4 - 4dBi
- OA7 - 7dBi
- OA10 - 10dBi



Antenna Types

OMNI-DIRECTIONAL Dipole

Rugged EVD2 series, Slim Semi Rigid SVD2, Rugged Flexible FVD2 series

Rugged dipole antenna for UAV EVD2-2450-D3/1129
page 72



Omni - Dipole

Traditional dipole and monopole antennas have omni-directional coverage; 360° coverage in azimuth and typically 80° coverage in elevation.

They can be slim, rugged, or flexible, with approximately 2dBi gain. Rugged dipoles typically have N-type (F) connectors.

Short monopole omni antennas, requiring ground plane are designated OA1.

Left to right
EVD2-3.2/1401 page 80
SVD2-2300/427 page 69

EVD2-2460/086
page 72



EVD2-1300/1395



EVD2-1600/530



SVD2-7790/1243



EVD2-2450-D3/1129



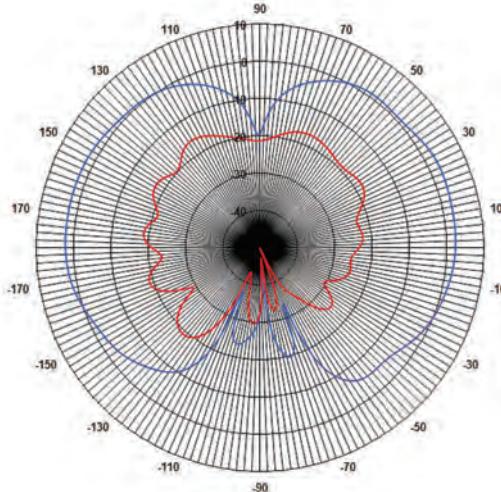
FVD2-2.8/1528



SVD2-3350/1126



Typical elevation radiation pattern for 2dBi gain dipole



- Vertical polarisation
- Gain 2dBi with elevation HPBW 80°
- Frequencies 300MHz to 12GHz
- SVD2 are slim and semi rigid finished in an abrasion resistant rubberised coating; most have SMA connectors
- EVD2 rugged dipoles have rigid glass fibre radome, most have N-type connectors
- FVD2 are rugged and flexible.

Antenna Types

OMNI-DIRECTIONAL Circular Polarisation
OA, RCO and LCO series

HEMI-OMNI
HOA series

Omni, Circular Polarisation

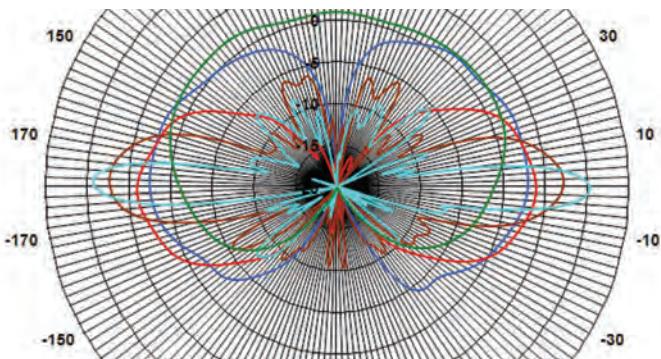
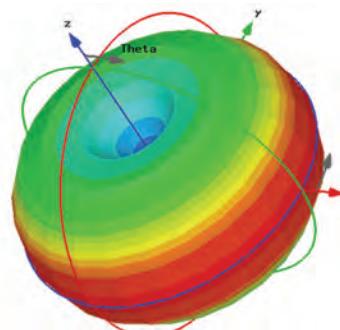
Many applications benefit from circular polarisation to optimise performance, in particular ground to airborne applications.

Circular polarised omni antennas are available with:

- Frequencies 400MHz to 14GHz
- Left or right circular polarisation
- Good axial ratios
- Bandwidths up to 15%

Elevation patterns for circular polarised omni and hemi-omnis illustrating the relationship between peak gain and angular coverage

- RCO3 - 3dBiC
- RCO5 - 5dBiC
- RCO7 - 7dBiC
- RCO10 - 10dBiC
- HOA2 - Hemi Omni



RCO3-1394/394
p53

HOA3-1.5RL/1436
p58

HOA2-1.6L/1404
p58



HOA2-159L-GPS/1486 page 58



HOA2-159L-GPS/1577
p58

LCO5-3450-M01/1434
p80

HOA4-1.6RL/9802
p58



Antenna Types

OMNI-DIRECTIONAL Ultra Wideband

XPO series, OA(X-Y) series and Multi-stacked

Omni antenna with high power rating XPO2V-0.8-6.0GF/1441 page 88



Ultra Wideband Omni

- Frequencies from 100MHz to 18GHz
- Ground plane independent
- Vertically polarised
- Elevation HPBW typically 30° to 60°
- Typically 0 to 2dBi gain across the band
- Excellent azimuth patterns
- High power
- Peak gain on horizon across all bands

Left to right

XPO2V-2.0-18.0/1397

page 85

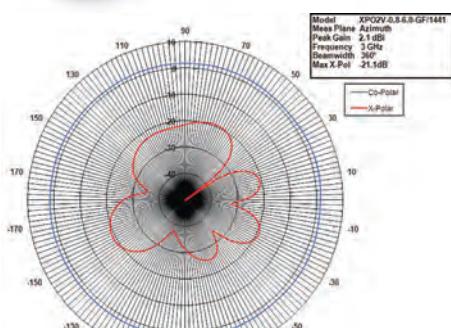
XPO2V-0.8-6.0GF/1441

page 84



Azimuth pattern, showing extremely low ripple of less than 1dB with typically 2dBi gain

XPO2V-0.8-6.0GF/1441 at 3GHz



XPO2V-500-1300/1351

p84



XPO2V-880-2175/1350

p84



XPO2V-1150-1650/1036

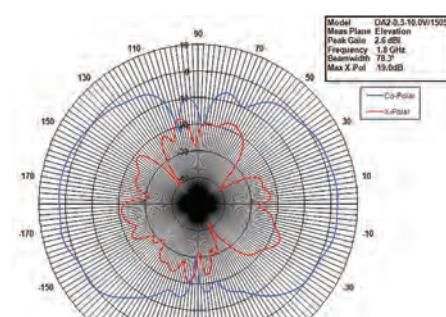
p85



Multi-stacked Omni

Wideband omni antennas can be 'stacked' so that several antennas may be designed into a single housing, for ultra wideband frequencies. More importantly they require only a single mounting point on any vehicle.

- New feed-through technology allows multiple antennas to be co-located
- Ultra wideband omnis in a single package, for example 100MHz to 6GHz with two connectors
- Overlapping frequencies for multiple applications and operational scenarios
- High isolation between bands (17dB min)
- 200W per band simultaneously
- Multiple omni antennas, but only one fixing location on a vehicle
- Similar footprint to existing designs
- Good return loss across all bands



XPO2V-880-2175/1060

p84



XPO2-15-600/148

p84



Typical elevation pattern illustrating 70° beamwidth with peak gain on the horizon across the frequency band

OA2-0.3-10.0V/1505 at 1.8GHz

Multi-stacked Omni

Antenna Types

OMNI-DIRECTIONAL Blade

SBA Series (Omni)

Blade Omni

Where a shorter but fully efficient antenna is required, a range of printed circuit (blade) antennas are available.

Blade monopoles, which require ground plane, offer very short alternatives to the blade dipole.



Left to right

SBA-2.3V/1470 (omni) page 55

SBA-900/1249 (omni) page 28



- Blade antennas can be as little as 2mm thick
- For more demanding applications they may be housed in protective radomes
- Aerodynamic
- Light weight
- Specification as for dipole antenna
- Coverage can be omni-directional or sectoral, depending on the application requirements
- Suitable for Bodyworn applications

5dBi gain omni-directional antennas in aerofoil (blade style) radome

SBA-2295/1299

p55



SBA-0.5V/1829/

p38



SBA-1480/1297

p40



SBA-38/919

p79



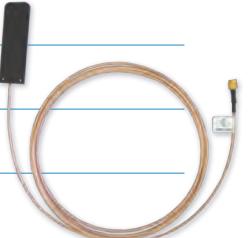
SBA-0.4V/1469

p38



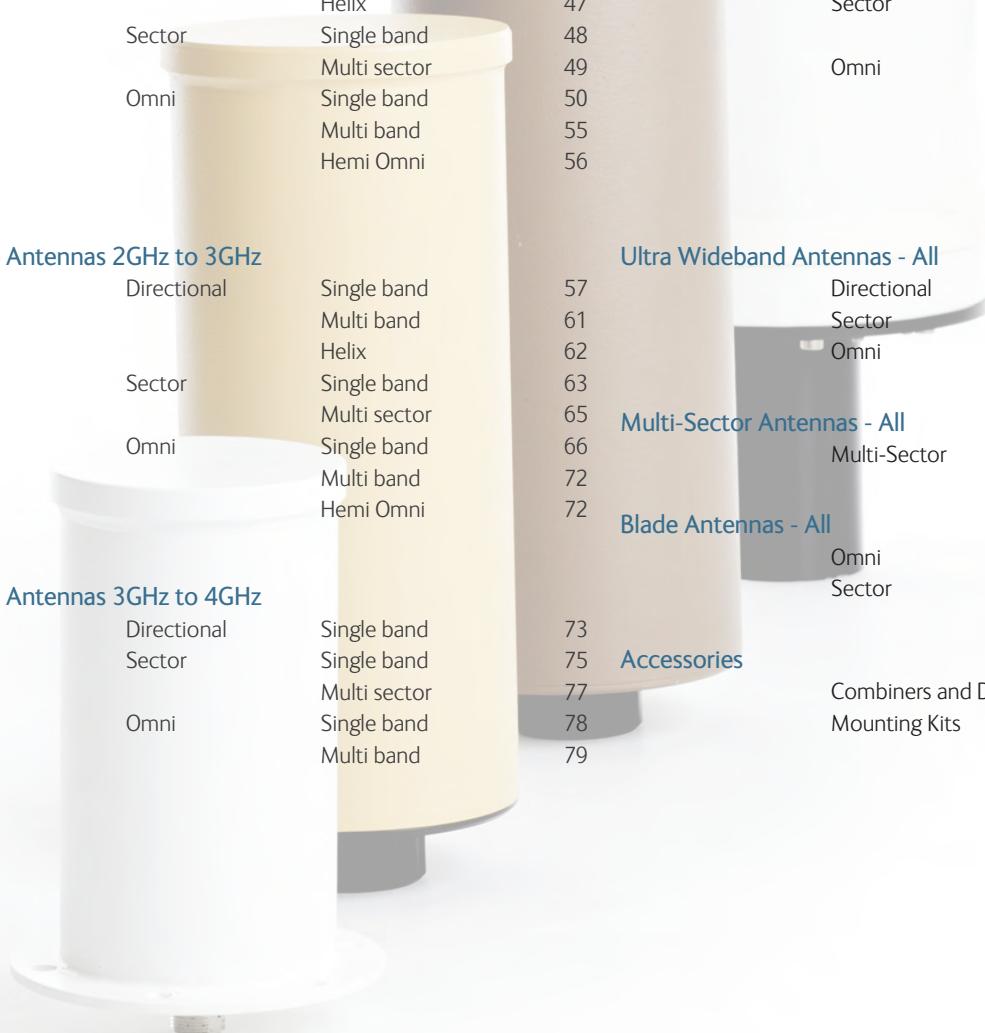
SBA-2450-2400-RG316/1173

p58



ANTENNA Catalogue Index

ANTENNA LISTINGS		Page		Page
Group 1 Antennas 100MHz to 1GHz			Group 5 Antennas 4GHz to 6GHz	
Directional	Single band	32	Directional	Single band
	Multi band	34		Multi band
	Helix	36		Helix
	Vector RFID	36	Sector	Single band
Sector	Single band	37		Multi sector
	Vector RFID	37	Omni	Single band
Omni	Single band	38		Multi band
	Multi band	40		
	Hemi Omni	40		
Group 2 Antennas 1GHz to 2GHz			Group 6 Antennas 6GHz and above	
Directional	Single band	41	Directional	Single band
	Multi band	44		Helix
	Helix	47	Sector	Single band
Sector	Single band	48		Multi sector
	Multi sector	49	Omni	Single band
Omni	Single band	50		
	Multi band	55		
	Hemi Omni	56		
Group 3 Antennas 2GHz to 3GHz			Ultra Wideband Antennas - All	
Directional	Single band	57	Directional	94
	Multi band	61	Sector	95
	Helix	62	Omni	96
Sector	Single band	63		
	Multi sector	65	Multi-Sector Antennas - All	
Omni	Single band	66	Multi-Sector	98
	Multi band	72		
	Hemi Omni	72	Blade Antennas - All	
Group 4 Antennas 3GHz to 4GHz			Omni	100
Directional	Single band	73	Sector	101
Sector	Single band	75	Accessories	
	Multi sector	77	Combiners and Dividers	102
Omni	Single band	78	Mounting Kits	103
	Multi band	79		



Catalogue

Group 1 - 100MHz to 1GHz

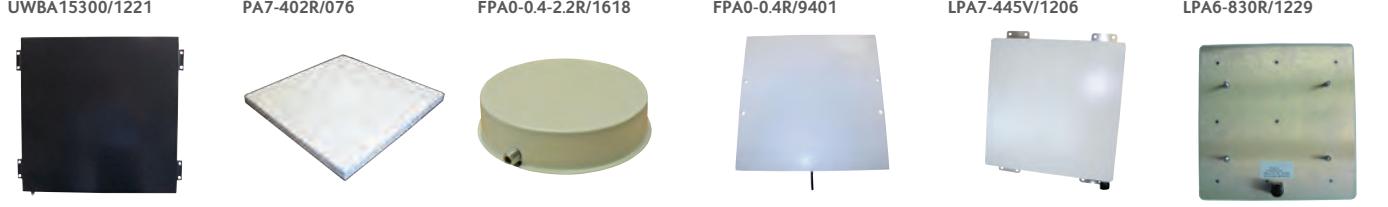
Directional

Model	Frequency GHz	Gain dBi	Beamwidth az°	el°	Polarisation	Dimensions mm	Connector/Cable	Photo
-------	------------------	-------------	------------------	-----	--------------	------------------	-----------------	-------

DIRECTIONAL

DIRECTIONAL - SINGLE BAND including ULTRA WIDEBAND

UWBA15300/1221	0.15 - 3.00	Request datasheet	Right Circular	705x671x37	N(F)	▲		
PES-200-1000-NC/581	0.20 - 1.00	2	n/a	n/a	Circular	560x372x35	N(F)	
PA5-2344L/701	0.2344	5	90	90	Left Circular	80x65x2	SMA(F)	
LPA7-390R/418	0.38 - 0.39	7	70	70	Right Circular	477x477x31	SMA(F)	
LPA7-390R/1326	0.38 - 0.40	7.8	67	73	Right Circular	477x477x33	N(F)	
PA7-402R/076	0.40 - 0.404	7	70	70	Right Circular	477x477x31	N(F)	▲



FPA0-0.4-2.2R/1618	0.40 - 2.20	-15 to -6 (0.4-0.5) -6 to 0.03 (0.5-1) +3 to +9 (1-2.2)	50	100	Right Circular	48x220 Ø	N(F)	▲
FPA7-0.41R/1805	0.4072 - 0.4172	7	70	70	Right Circular	477x477x31	BNC(F)	
LPA7-412R/535	0.4072 - 0.4172	7	70	70	Right Circular	477x477x31	SMA(F)	
LPA7-432R/419	0.427 - 0.437	7	70	70	Right Circular	477x477x31	SMA(F)	
FPA0-433R/1324	0.433	0	80	80	Right Circular	325x325x41	BNC(M) 1m cable	
FPA0-0.4R/9401	0.433	0	80	80	Right Circular	325x325x41	BNC(M) 1m cable	▲
FPA0-0.4R/9403	0.433	0	80	80	Right Circular	585x585x3	BNC(M) 1m cable	
FPA4-0.4R/9408	0.433	4	57	56.5	Right Circular	594x594x3.2	N(F)	
FPA4-0.4R/9402	0.433	4	47	48	Right Circular	725x725x3	N(F)	
LPA7-450R/527	0.44 - 0.45	7	70	70	Right Circular	477x477x31	SMA(F)	
FPA8-0.5V/1538	0.44 - 0.47	8.4	73	65	Vertical	530x450x50	N(F)	
LPA7-455V/1206	0.44 - 0.47	8.4	73	65	Vertical	450x450x52	716(F)	▲
PSA7530L/1147	0.50 - 3.00	1 (0.5) 4 to 6 (1-3)	70	90	Left Circular	57x246 Ø	SMA(F) 90°	
PSA75301R/170	0.50 - 3.00	1 (0.5) 4 to 6 (1-3)	70	90	Right Circular	57x246 Ø	SMA(F) 90°	
PSA-50200-LP/1211	0.50 - 3.00	8	70	60	Right Circular	490x365x30	N(F)	
PSA-50200-LP/1421	0.50 - 3.00	8	70	60	Right Circular	490x365x31	N(F)	
BDPSA5-50800-D2/1160	0.50 - 8.00	5	80	70	Circular	488x356x22	SMA(F) x2	
BDFPA-0.6-4.0-RL/1313	0.60 - 4.00	4.5	75	75	Circular	280x227x50	N(F) 1m cable	
FPA-0.6-6.0R/1562	0.60 - 6.00	1 to 6	70	70	Circular	50x219 Ø	N(F)	
FPA7-0.64R/1752	0.615 - 0.665	8.8	67	64	Right Circular	370x370x29	N(M)	
FPA7-0.77R/1753	0.745 - 0.795	8	67	68	Right Circular	300x300x29	N(F)	
LPA6-830R/1229	0.80 - 0.86	8	70	70	Right Circular	240x240x28	N(F)	
PSA-8025R/707	0.80 - 2.50	4.5 to 8	65	65	Right Circular	48x220 Ø	N(F)	
FPA3-0.8-6.0R/1329	0.80 - 6.00	4.5	80	80	Right Circular	50X219 Ø	N(F)	
FPA3-0.8-6.0L/1812	0.80 - 6.00	4.5	80	80	Left Circular	50x219 Ø	N(F)	above

Group 1 - 100MHz to 1GHz

Directional

Model	Frequency GHz	Gain dBi	Beamwidth az°	Beamwidth el°	Polarisation	Dimensions mm	Connector/Cable	Photo
LPA7-820L/420	0.815 - 0.825	6	78	74	Left Circular	300x246x20	SMA(F)	
LPA7-845R/489	0.82 - 0.87	7	60	60	Right Circular	300x246x20	SMA(F)	
LPA7-856L/930	0.82 - 0.87	7	60	60	Left Circular	300x246x20	SMA(F)	
LPA7-845V/937	0.82 - 0.87	8.5	78	62	Vertical	300x246x20	SMA(F)	
FPA7-0.9R/1793	0.824 - 0.96	7.5	73	77	Right Circular	198x198x20	N(F)	
LPA7-869R/1097	0.84 - 0.90	7	70	70	Right Circular	300x245x20	SMA(F) 0.3m cable	
FPA13-0.9VH/1387	0.86 - 0.91	13.4	39	38	Dual V&H	480x480x11	SMA(F) x2	▲
FPA7-0.9H/1732	0.86 - 0.93	7.7	72	73	Horizontal	295x241x20	TNC(F)	▲
FPA2-0.9R/9405	0.868	1.5	85	75	Right Circular	170x170x3	BNC(M) 1 cable	
FPA5-0.9R/9406	0.868	5.2	46	46	Right Circular	390x390x3	BNC(M) 1 cable	
FPA13-0.9VH/1387								
FPA7-0.9H/1732								
LPA7-900L/938								
FPA7-0.9V/9001								
LPA7-900V/525								
								
FPA13-900V-SMA/326	0.87 - 0.96	13	40	40	Vertical	477x477x31	SMA(F)	
FPA13-900V-NF/928	0.87 - 0.96	13	40	40	Vertical	477x477x31	N(F)	
LPA7-900R/286	0.87 - 0.96	7	80	80	Right Circular	300x246x20	SMA(F)	
LPA7-900V-502/288	0.87 - 0.96	8	70	60	Vertical	300x246x20	N(M) 90° 0.55m cable	
LPA7-900L/938	0.87 - 0.96	7	80	80	Left Circular	300x246x20	SMA(F)	▲
FPA7-0.9V/9001	0.87 - 0.96	7.7	80	70	Vertical	170x170x26	SMA(F)	▲
LPA7-900V/525	0.87 - 0.96	7	70	60	Vertical	300x246x20	SMA(F)	▲
LPA7-900R/526								
LPA7-915V/1134								
LPA7-900V-503/770								
LPA7-900L/1393								
FPA15-916H/1159								
								
LPA7-900R/526	0.87 - 0.96	7	80	80	Right Circular	300x246x20	SMA(F)	▲
LPA7-915V/1134	0.87 - 0.96	7.7	80	70	Vertical	170x168x27	SMA(F)	▲
FPA7-0.9V/1831	0.87 - 0.96	7.7	80	70	Vertical	170x170x27	SMA(F)	
LPA7-900V-503/770	0.87 - 0.96	8	70	60	Vertical	300x246x20	N(M) 0.5m cable	▲
FPA13-915R/1233	0.87 - 0.96	13	40	40	Right Circular	477x477x31	N(F)	
FPA13-0.9R/1612	0.879 - 0.96	13	40	40	Right Circular	477x477x31	N(F)	
LPA7-900V-702/580	0.88 - 0.96	7	70	55	Vertical	300x246x20	MCX 2m cable	
LPA7-900L/1393	0.88 - 0.96	7	80	80	Left Circular	300x246x20	N(F)	▲
LPA7-900V-701/363	0.88 - 0.96	8	70	55	Vertical	300x246x20	N(M) elbow 0.3m cable	
FPA15-916H/1159	0.90 - 0.93	15.4	24	31	Horizontal	762x559x17	N(F)	▲
PA5-915V/370	0.91 - 0.92	5	76	76	Vertical	180x180x2	SMA(F)	

Catalogue

Group 1 - 100MHz to 1GHz

Directional

Model	Frequency GHz	Gain dBi	Beamwidth az°	el°	Polarisation	Dimensions mm	Connector/Cable	Photo
								

DIRECTIONAL - MULTIBAND

FPA13-900V-LPA7-455V/1205	0.44 - 0.47 0.87 - 0.93	8.5 12.4	39 68	37.5 67	Vertical	850x450x50	716(F)	
DLPA4-850R-1945R/1071	0.80 - 0.89 1.89 - 1.99	4 5	80 60	60 45	Right Circular	286x160x24	SMA(M)90° 3m cable x2	
DLPA5-850R-1945R/1070	0.80 - 0.89 1.89 - 1.99	6 8	80 60	60 45	Right Circular	286x160x24	SMA(M) 90° 0.3m cable x2	
DLPA5-850R-1945R/1189	0.805 - 0.895 1.895 - 1.99		80 60	60 45	Right Circular	286x160x24	SMA(M) 5m cable x2	
DLPA4-850R-1945R/1216	0.805 - 0.895 1.895 - 1.99	3 3.5	80 60	60 45	Right Circular	286x160x24	SMA(M)90° 5m cable x2	
DLPA7-892R-1850R/1522	0.82 - 0.96 1.71 - 1.99		75 53	65 53	Right Circular	298x198x25	N(F) x2	
DFPA9-0.9L-1.9L/1823	0.824 - 0.96 1.71 - 1.99		67 60	55 43	Left Circular	359x246x25	N(F) x2	
DLPA7-892R-1850R/1290	0.824 - 0.96 1.71 - 1.99		75 53	65 53	Right Circular	298x198x25	SMA(F) x2	
DFPA9-0.9L-1.9L/1591	0.824 - 0.96 1.71 - 1.99		71 54	63 44	Left Circular	300x240x22	N(F) x2	
FPA-0.8-2.2R/1730	0.87 - 0.96 1.71 - 2.17		71	73	Right Circular	387x235x176	N(F)	
DLPA4-915R-1800R/936	0.87 - 0.96 1.71 - 1.88		40 5.2	80 60	Right Circular	286x160x24	SMA(M) 5m cable x2	
DLPA4-915R-1800R/1215	0.87 - 0.96 1.71 - 1.88		40 5.2	80 60	Right Circular	286x160x24	SMA(M) 5m cable x2	
LPA7-900-1800-DF2/900	0.87 - 0.96 1.71 - 1.88		6	80	80	Vertical	339x225x25	N(F) 0.3m cable x2

FPA13-900V-LPA7-455V/1205	DFPA9-0.9L-1.9L/1823	DLPA7-892R-1850R/1290	FPA-0.8-2.2R/1730		DLPA4-915R-1800R/936	DLPA4-915R-1800R/1215		
								
DLPA5-915R-1800R/1217								
0.87 - 0.96 1.71 - 1.88								
6.4 8.5								
80 60								
60 50								
Right Circular								
286x160x24								
SMA(M) 0.3m cable x2								
DLPA5-915R-1800R/880								
0.87 - 0.96 1.71 - 1.88								
6.4 8.5								
80 60								
60 50								
Right Circular								
286x160x24								
SMA(M) 0.3m cable x2								
DLPA7-915R-1800R-TNC/1136								
0.87 - 0.96 1.71 - 1.88								
7.9 8.9								
80 55								
70 70								
Right Circular								
256x175x24								
TNC(F) TNC(M)								
above								
LPA7-900-1800-DF/1408								
0.88 - 0.96 1.71 - 1.88								
6								
80								
80								
Vertical								
339x225x25								
SMA(F) x2								
LPA7-900-1800-DF/629								
0.88 - 0.96 1.71 - 1.88								
6								
80								
80								
Vertical								
339x225x25								
SMA(F) x2								
LPA7-900-1800-FL/654								
0.88 - 0.96 1.71 - 1.88								
6								
80								
80								
Vertical								
339x225x25								
SMA(M) 0.3m cable								
LPA7-900-1800-NF/694								
0.88 - 0.96 1.71 - 1.88								
6								
80								
80								
Vertical								
339x225x25								
N(F) 0.3m cable								
LPA7-900V-1800V/609								
0.88 - 0.96 1.71 - 1.88								
6								
80								
80								
Vertical								
339x225x25								
N(F)								

LPA7-TRI-COM/684



Group 1 - 100MHz to 1GHz

Directional

Model	Frequency GHz	Gain dBi	Beamwidth az°	Beamwidth el°	Polarisation	Dimensions mm	Connector/Cable	Photo
LPA7-900-1800-DF-FL/653	0.88 - 0.96 1.71 - 1.88	6	80	80	Vertical	339x225x25	SMA(M) 0.3m cable x2	
LPA7-900V-1800V-P1/604	0.88 - 0.96 1.71 - 1.88	6	80	80	Vertical	339x225x25	SMA(F)	
LPA6-TRI-FL-D4/957	0.87 - 0.96 1.71 - 1.88 1.92 - 2.175	6	80	80	Vertical	339x225x25	SMA(F) 2m LSHJ cable x3	▲
LPA7-TRI-FL-D1/768	0.87 - 0.96 1.71 - 1.88 1.92 - 2.175	6	80	80	Vertical	339x225x25	SMA(M) 1m LSZHJ cable x3	
FPA6-TRI/1671	0.88 - 0.96 1.71 - 1.88 1.92 - 2.175	6	79	5	Vertical	339x225x25	SMA(F) 2.75m LSHJ cables x3	▲
LPA7-TRI-COM/684	0.88 - 0.96 1.71 - 1.88 1.92 - 2.175	7	75	60	Vertical	339x225x42	SMA(F)	above
LPA7-TRI-FL-D3/956	0.88 - 0.96 1.71 - 1.88 1.92 - 2.175	7	80	80	Vertical	339x225x25	SMA(F) 1m LSZHJ cable x3	
LPA7-TRI-SMA/651	0.88 - 0.96 1.71 - 1.88 1.92 - 2.175	6	80	80	Vertical	339x225x25	SMA(F) x3	▲
LPA7-TRI-FL-D2/1005	0.88 - 0.96 1.71 - 1.88 1.92 - 2.175	6	80	80	Vertical	339x225x25	N(F) 0.3m cable LSZHJ x3	▲
LPA6-TRI-FL-D4/957	FPA6-TRI/1671	LPA7-TRI-SMA/651	LPA7-TRI-FL-D2/1005		FPA7-TRI/1589			
 LPA6-TRI-FL-D2/955	 FPA6-TRI/1671	 LPA7-TRI-SMA/651	 LPA7-TRI-FL-D2/1005		 FPA7-TRI/1589			
LPA6-TRI-FL-D2/955	0.88 - 0.96 1.71 - 1.88 1.92 - 2.175	6	80	80	Vertical	339x225x25	SMA(M) 2m LSZHJ cable x3	
LPA7-TRI-FL/652	0.88 - 0.96 1.71 - 1.88 1.92 - 2.175	6	80	80	Vertical	339x225x25	SMA(M) 0.3m LSZHJ cable x3	
FPA7-TRI-R/1589	0.88 - 0.96 1.71 - 1.88 1.92 - 2.175	8.5	70	60	Right Circular	339x225x25	N(F) x3	▲
FPA7-TRI-R/1873	0.88 - 0.96 1.71 - 1.88 1.92 - 2.175	8.5	70	60	Right Circular	339x225x25	N(F) x3	
FPA7-TRI-R/1695	0.88 - 0.98 1.71 - 1.88 1.92 - 2.175	8.5	70	60	Right Circular	358x246x25	N(F) x3	
LPA7-TRI-DS2450-DS5500/1090	0.88 - 0.96 1.71 - 1.88 1.92 - 2.175 2.40 - 2.50 5.25 - 5.85	7	60	60	Vertical Vertical Dual ±45° Dual ±45° Dual ±45°	358x246x25 339x225x42	SMA(F) x7	

Catalogue

Group 1 - 100MHz to 1GHz

FPA4-0.4R/9408 antenna
mounted in ceiling



Directional

Model	Frequency GHz	Gain dBi	Beamwidth az°	el°	Polarisation	Dimensions mm	Connector/Cable	Photo
-------	------------------	-------------	------------------	-----	--------------	------------------	-----------------	-------

DIRECTIONAL - HELIX

AMHP12-860R/009	0.75 - 0.95	9.5	55	55	Right Circular	699x154 Ø	N(F)	▲
-----------------	-------------	-----	----	----	----------------	-----------	------	---

AMHP12-860R/009



DIRECTIONAL - for RFID

FPA0-0.4R/9401	0.433	0	80	80	Right Circular	325x325x41	BNC(M) 1m cable	▲
FPA0-0.4R/9403	0.433	0	80	80	Right Circular	585x585x3	BNC(M) 1m cable	
FPA4-0.4R/9408	0.433	4	57	56.5	Right Circular	594x594x3	N(F)	above
FPA4-0.4R/9402	0.433	4	47	48	Right Circular	725x725x3	N(F)	
FPA2-0.9R/9405	0.868	1.5	85	75	Right Circular	170x170x3	BNC(M) 1m cable	▲
FPA5-0.9R/9406	0.868	5.2	46	46	Right Circular	390x390x3	BNC(M) 1m cable	▲

FPA0-0.4R/9401



FPA2-0.9R/9405



FPA5-0.9R/9406



SA4-0.4V/9404

Group 1 - 100MHz to 1GHz

Sector



Model	Frequency GHz	Gain dBi	Beamwidth az°	Beamwidth el°	Polarisation	Dimensions mm	Connector/Cable	Photo
-------	------------------	-------------	------------------	------------------	--------------	------------------	-----------------	-------

SECTOR

SECTOR

SA7-180-0.36V/1572	0.34 - 0.38	6.6	173	35	Vertical	1090x386x3	N(F)	
SA7-150-435V/1041	0.40 - 0.47	4 to 7	150	40	Vertical	900x300x3	N(F)	▲
SA13-60-0.9V/1462	0.902 - 0.928	13	73	16.5	Vertical	1000x250x30	N(F)	▲
SA9-180-0.96-1.22V/1814	0.96 - 1.215	9	180	20	Vertical	1228x250 Ø	N(F)	▲
SA13-120-0.96-1.22V/1694	0.96 - 1.22	13	110	9	Vertical	1650x155 Ø	N(F)	▲

SA7-150-435V/1041

SA13-60-0.9V/1462

SA9-180-0.96-1.22V/1814



SECTOR - BLADE Antennas

HDA-368/1025 blade	0.36 - 0.37	0 to 2	140	90	Mixed	161x125x1	SMA(F)	
HDA-0.38/1811 blade	0.369 - 0.389	0	64	126	Linear	202x52x2	SMA(M) 1m cable	▲
HDA-462/517 blade	0.462	0 to 2	n/a	n/a	Mixed	130x100x1	SMA(M) 1m cable	
HDA-0.9V/1798 blade	0.87 - 0.69	0 to 2	360	80	Vertical	35x25x7	SMA(M) 1.5m cable	

HDA-0.38/1811 blade



SECTOR - for RFID

SA4-0.4V/9404	0.40 - 0.45	5	160	57.5	Vertical	408x273x18	BNC(M) 1m cable	above
SA4-0.9V/9407	0.82 - 0.92	4	180	75	Vertical	203x136x2	OPTIONS	

Catalogue

Group 1 - 100MHz to 1GHz

Omni



Model	Frequency GHz	Gain dBi	Beamwidth az°	Beamwidth el°	Polarisation	Dimensions mm	Connector/Cable	Photo
-------	------------------	-------------	------------------	------------------	--------------	------------------	-----------------	-------

OMNI

OMNI - SINGLE BAND including ULTRA WIDEBAND and BLADE Antennas

OA2-0.1-0.5V/1534	0.136 - 0.50	0 (<200) 3 (>200)	360	60	Vertical	855x104 Ø	N(F)	
OA2-0.1-0.5V/1872	0.136 - 0.50	-3 to 0 (<200) 0 to +3 (>200)	360	60	Vertical	855x104 Ø	N(F)	
OA2-0.15-0.60V/1663	0.15 - 0.60	2	360	80	Vertical	806x156 Ø	N(F)	
OA2-0.15-0.60V/1664	0.15 - 0.60	2	360	80	Vertical	806x156 Ø	N(F)	
XPO2V-150-600/148	0.15 - 0.60	2	360	80	Vertical	806x156 Ø	N(F)	
OA2-0.23V/1862	0.227 - 0.233	2	360	75	Vertical	775x25 Ø	N(F)	
OA2-0.2V/1446	0.23 - 0.24	2	360	75	Vertical	757x162 Ø	N(F)	
OA2-0.2V/1516	0.233 - 0.239	2	360	75	Vertical	752x25 Ø	N(F)	
OA2-0.2-0.8V/1556	0.25 - 0.825	-0.6 to 4.7	360	60	Vertical	585x79 Ø	N(F)	
XPO3V-300-600/83	0.30 - 0.60	3	360	80	Vertical	500x96 Ø	N(F)	▲
OA2-0.3-1.0V/1530	0.30 - 1.00	2	360	60	Vertical	472x104 Ø	N(F)	
OA2-0.3-10.0V/1667	0.30 - 10.00	2	360	65	Vertical	306x162 Ø	N(F)	
OA2-0.3-10.0V/1668	0.30 - 10.00	2	360	65	Vertical	306x162 Ø	N(F)	
OA2-0.3-10.0V/1505	0.30 - 10.00	2	360	65	Vertical	306x162 Ø	N(F)	
EVD2-320/116	0.315 - 0.325	2	360	80	Vertical	584x25 Ø	N(F)	
OA2-0.33V/1866	0.32 - 0.33	2	360	75	Vertical	585x25 Ø	N(F)	
SBA-0.35V/1856 blade	0.342 - 0.36	2	360	74	Vertical	204x30, 40x40	SMA(F)	
OA2-0.35V/1889	0.344 - 0.354	2	360	75	Vertical	544x26 Ø	N(F)	
SBA-0.36V/1573 blade	0.344 - 0.374	0 to 2	360	80	Vertical	160x32x40	SMA(F)	
OA4-0.36V/1879	0.35 - 0.37	4.5	360	26	Vertical	1608x57 Ø	TNC(F)	
OA2-0.4V/1604	0.38 - 0.40	2	360	75	Vertical	650x36 Ø	N(F)	
OA1-0.42V/1316	0.38 - 0.47	1	360	85	Vertical	239x395 Ø	N(F) 1m cable	▲
OA2-0.45V-GPS/1685	0.40 - 0.50	0 to 2	360	80	Vertical	675x138 Ø	N(F), TNC(F)	▲

XPO3V-300-600/083	OA1-0.42V/1316	OA2-0.45V-GPS/1685	SVD2-0.4V/1700	SVD2-450/536	SBA-0.5V/1829 blade
SVD2-0.4V/1700	0.402 - 0.418	2	360	80	Vertical
SBA-0.4V/1469 blade	0.415 - 0.435	2.4	360	80	Vertical
EVD2-415/552	0.416 - 0.424	2	360	110	Vertical
EVD2-0.4/1477	0.416 - 0.434	2	360	110	Vertical
SVD2-410/1101	0.42 - 0.42	2	360	80	Vertical
SVD2-435/523	0.425 - 0.445	2	360	80	Vertical
OA2-0.45V/1770	0.433 - 0.463	2	360	70	Vertical
SVD2-450/536	0.436 - 0.453	2	360	80	Vertical
SBA-0.5V/1829 blade	0.45 - 0.465	2	360	90	Vertical
OA4-0.5V/1849	0.45 - 0.47	5	360	33	Vertical
EVD2-458/058	0.453 - 0.463	2	360	80	Vertical

VOA7-850/041



OA4-0.9V/1640



VOA4-918/052



VOA4-918/1318



Group 1 - 100MHz to 1GHz

Omni

Model	Frequency GHz	Gain dBi	Beamwidth az°	Beamwidth el°	Polarisation	Dimensions mm	Connector/Cable	Photo
OA2-0.46V/1809	0.453 - 0.463	2	360	80	Vertical	452x28 Ø	TNC(M)	▲
OA4-0.48V/1887	0.47 - 0.49	5	360	32	Vertical	1228x57 Ø	TNC(F)	
XPO3V-500-1300-LP/586	0.50 - 1.30	1 to 2	360	80	Vertical	275x108 Ø	N(F)	
XPO2V-500-1300/1351	0.50 - 1.30	1 to 2	360	80	Vertical	326x108 Ø	N(F)	
XPO3V-500-1300/034	0.50 - 1.30	1 to 2	360	80	Vertical	333x108 Ø	N(F)	
EVD2-785/847	0.735 - 0.835	2	360	80	Vertical	306x25 Ø	N(F)	
EVD2-0.8/1650	0.735 - 0.835	2	360	80	Vertical	323x26 Ø	N(M)	
SBA-0.8V/1780 blade	0.76 - 0.83	0	360	60	Vertical	90x44 Ø	TNC(F)	
VOA7-830-UT12/1228	0.80 - 0.86	6	360	18.5	Vertical	1228x57 Ø	N(F)	
OA2-0.8-6.0V/1665	0.80 - 6.00	2	360	75	Vertical	143x108 Ø	N(F)	
OA2-0.8-6.0V/1666	0.80 - 6.00	2	360	75	Vertical	143x108 Ø	N(F)	
XPO2V-0.8-6.0-GF/1441	0.80 - 6.00	2	360	75	Vertical	143x108 Ø	N(F)	
XPO2V-0.8-6.0/1485	0.80 - 6.00	2	360	75	Vertical	143x79 Ø	N(F)	
OA2-0.46V/1809	0.81 - 0.87	2	360	80	Vertical	244x25 Ø	N(F)	
VOA7-850/041	0.825 - 0.875	6 to 7	360	25	Vertical	1005x57 Ø	N(F)	above
SVD2-870/524	0.835 - 0.905	2	360	80	Vertical	193x12 Ø	SMA(F)	
EVD2-0.87V/1848	0.84 - 0.90	2	360	80	Vertical	248x26 Ø	N(F)	
OA2-0.85-6.0V/1699	0.84 - 6.00	1	360	60	Vertical	170x60 Ø	N(F)	▲
FVD2-0.9V/1635	0.869 - 0.96	0	360	80	Vertical	462x26 Ø	N(M)	
EVD2-915/1284	0.87 - 0.96	2	360	80	Vertical	262x26 Ø	N(M)	▲
EVD2-915/260	0.87 - 0.96	2	360	80	Vertical	248x25 Ø	N(F)	▲
SVD2-915-NM90/791	0.87 - 0.96	2	360	80	Vertical	203x12 Ø	N(M) 90°	
SVD2-915/1559	0.87 - 0.96	2	360	80	Vertical	230x12 Ø	TNC(M)	▲
SVD2-915/432	0.87 - 0.96	2	360	80	Vertical	190x12 Ø	SMA(M)	▲
OA4-0.9V/1452	0.87 - 0.96	4	360	40	Vertical	705x57 Ø	N(F)	
OA4-0.9V/1640	0.87 - 0.96	4	360	39	Vertical	633x54 Ø	QN(M)	above
VOA4-918/052	0.87 - 0.96	4	360	40	Vertical	705x57 Ø	N(F)	above
VOA4-918/1318	0.87 - 0.96	4	360	40	Vertical	705x57 Ø	N(F)	above
OA4-0.9V/1520	0.87 - 0.96	4.5	360	45	Vertical	605x57 Ø	N(F)	
OA4-0.9V/1844	0.87 - 0.96	4.9	360	35	Vertical	705x57 Ø	N(F)	
VOA7-915/151	0.87 - 0.96	7	360	20	Vertical	1208x57 Ø	N(F)	p40
XPO2V-880-2175/1355	0.88 - 2.175	2.5	360	50	Vertical	221x50 Ø	N(F)	
XPO2V-880-2175/1350	0.88 - 2.175	2.5	360	50	Vertical	345x36 Ø	N(F)	
OA2-0.9-2.2V1830	0.88 - 2.175	2	360	50	Vertical	262x31 Ø	QN(M)	p40
OA2-0.8-2.2V/1726	0.88 - 2.175	2.5	360	50	Vertical	345x36 Ø	N(F)	
XPO2V-880-2175/1060	0.88 - 2.175	2.5	360	50	Vertical	221x50 Ø	N(F)	
XPO2V-880-2175/1321	0.88 - 2.175	2.5	360	50	Vertical	221x50 Ø	N(F)	

Catalogue

Group 1 - 100MHz to 1GHz

Omni

MHA3-402R-S1/007
on weather buoy
Photo The Met Office



Model	Frequency GHz	Gain dBi	Beamwidth az°	el°	Polarisation	Dimensions mm	Connector/Cable	Photo
-------	------------------	-------------	------------------	-----	--------------	------------------	-----------------	-------

SBA-900/1249 blade	0.902 - 0.928	0 to 2	360	100	Vertical	25x77x3, 44 Ø	TNC(F)	▲
EVD2-960-1215/004	0.96 - 1.215	2	360	80	Vertical	281x26 Ø	N(F)	▲
EVD2-960-1215/628	0.96 - 1.215	2	360	80	Vertical	292x25 Ø	N(M)	▲
OA7-1090V/1328	0.96 - 1.215	7	360	16.5	Vertical	1040x180 Ø	N(F)	▲
XVO7-960-1215/1120 Link16	0.96 - 1.215	7	360	16.5	Vertical	1029x79 Ø	N(F)	below
XPO4-960-1215/1425 Link16	0.96 - 1.215	4.5	360	33	Vertical	620x79 Ø	N(F)	below
OA2-0.1-6.0V/1794	1.00 - 6.00	1	360	80	Vertical	213x80 Ø	N(F)	



OMNI - MULTIBAND

OA2-0.1-6.0V/1692	0.10 - 0.50							
	0.50 - 6.00	0	360	80	Vertical	1250x140 Ø	N(F) x2	▲
DEVD2-900V-1800V-502/605	0.88 - 0.96	0						
	1.71 - 1.88	2	360	75	Vertical	87x100 Ø	SMA(F) x2	
DEVD2-900V-1800V-502-D1/1003	0.88 - 0.96	0						
	1.71 - 1.88	2	360	75	Vertical	87x100 Ø	N(F) 0.3m cable x2	
DEVD2-900V-1800V-502-D2/1004	0.88 - 0.96	0						
	1.71 - 1.88	2	360	75	Vertical	87x100 Ø	SMA(F) x2	
TEVD2-900-1800-2050/1016	0.88 - 0.96							
	1.71 - 1.88							
	1.92 - 2.17	2	360	80	Vertical	87x100 Ø	SMA(F) x3	
7EVD2-900-5850/1091	0.88 - 0.96	1						
	1.71 - 1.88	2						
	1.92 - 2.17	2						
	2.40 - 2.50	2						
	5.25 - 5.85	2	360	100	Vertical	103x220 Ø	SMA(F) x7	



HEMI OMNI

*All Hemi Omni Antennas feature 360° Azimuth. Elevation measurements are cuts at various positions in the radiation pattern.

MHA3-402R-S1/007	0.40 - 0.404	3	360	160	Right Circular	410x108 Ø	N(F)	
MHA3-402L/1207	0.40 - 0.404	3	360	160	Left Circular	410x108 Ø	N(F)	
MHA3-406R-S1/979	0.404 - 0.408	3	360	160	Right Circular	406x108 Ø	N(F)	
DHOA2-9-18R-D1/1151	0.87 - 0.96	4.5	360	105				
	1.71 - 1.88	4	360	140	Right Circular	311x165x121	SMA(F) x2	▲



Group 2 - 1GHz to 2GHz

Directional

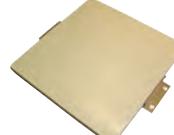
Model	Frequency GHz	Gain dBi	Beamwidth az°	Beamwidth el°	Polarisation	Dimensions mm	Connector/Cable	Photo
-------	------------------	-------------	------------------	------------------	--------------	------------------	-----------------	-------

DIRECTIONAL

DIRECTIONAL - SINGLE BAND

UWBA15300/1221	0.15 - 3.00	Request datasheet			Right Circular	705x671x37	N(F)	▲
PSA7530L/1147	0.50 - 3.00	1 (0.5) 4 to 6 (1-3)	70	90	Left Circular	57x246 Ø	SMA(F) 90°	
PSA75301R/170	0.50 - 3.00	1 (0.5) 4 to 6 (1-3)	70	90	Right Circular	57x246 Ø	SMA(F) 90°	▲
PSA-50200-LP/1211	0.50 - 3.00	8	70	60	Right Circular	490x365x30	N(F)	
PSA-50200-LP/1421	0.50 - 3.00	8	70	60	Right Circular	490x365x31	N(F)	
BDPSC-50800-D2/1160	0.50 - 8.00	5	80	70	Circular	488x356x22	SMA(F) x2	▲
BDFPA-0.6-4.0-RL/1313	0.60 - 4.00	4.5	75	75	Circular	280x227x50	N(F) 1m cable	▲
FPA-0.6-6.0R/1562	0.60 - 6.00	1 to 6	70	70	Circular	50x219 Ø	N(F)	
PSA-8025R/707	0.80 - 2.50	4.5 to 8	65	65	Right Circular	48x220 Ø	N(F)	
FPA3-0.8-6.0R/1329	0.80 - 6.00	4.5	80	80	Right Circular	50x219 Ø	N(F)	
FPA3-0.8-6.0L/1812	0.80 - 6.00	4.5	80	80	Left Circular	50x219 Ø	N(F)	▲
PSA10401L/1169	1.00 - 4.00	4 to 6	90	90	Left Circular	42x150 Ø	N(F)	

UWBA15300/1221	PSA75301R/170	BDPSA-50800-D2/1160	BDFPA-0.6-4.0-RL/1313	FPA3-0.8-6.0L/1812				
								
PSA1040R/1366	1.00 - 4.00	-5 to +7.5	75	75	Right Circular	80x100 Ø	SMA(F)	
PSA10401R/643	1.00 - 4.00	4 to 6	90	90	Right Circular	76x150 Ø	N(F)	
LR14-SD2-11/531	1.05 - 1.20	14	35	35	Vertical	399x140x13	N(F) cable	
LPA7-1150R/877	1.10 - 1.20	7	70	70	Right Circular	23x166 Ø	SMA(F)	▲
FPA7-1.15R/1754	1.125 - 1.175	8	64	65	Right Circular	200x200x22	N(F)	
FPA13-12V/308	1.13 - 1.23	13	40	40	Vertical	334x334x16	N(F)	▲
FPA14-12R/792	1.198 - 1.258	13.75	31	31	Right Circular	419x385x21	N(F)	
LPA7-1250VH/247	1.20 - 1.30	2 x 7	80	80	Dual V&H	23x158 Ø	SMA(F) x2	
FPA14-13V/430	1.24 - 1.34	14	40	40	Vertical	334x334x16	N(F)	
LR14-SD2-13/108	1.24 - 1.34	14	35	35	Vertical	399x140x13	N(F) 0.3m cable	
LPA7-13L/607	1.24 - 1.34	7	80	80	Left Circular	23x158Ø	SMA(F)	▲
FPA14-13R/182	1.24 - 1.35	14	40	40	Right Circular	334x334x16	N(F)	
LPA7X-13R/318	1.25 - 1.35	7	80	80	Right Circular	31x170 Ø	SMA(F)	
LPA7-1350R/878	1.30 - 1.40	8	80	70	Right Circular	19x166 Ø	SMA(F)	▲
FPA14-1.4V/1450	1.30 - 1.47	14	40	35	Vertical	334x334x28	N(F)	
FPA14-1385V/1105	1.30 - 1.47	14	40	35	Vertical	334x334x27	N(F)	▲

LPA7-1150R/877	FPA13-12V/308	LPA7-13L/607	LPA7-1350R/878	FPA14-1385V/1105
				

Catalogue

Group 2 - 1GHz to 2GHz

Directional



Model	Frequency GHz	Gain dBi	Beamwidth az°	Beamwidth el°	Polarisation	Dimensions mm	Connector/Cable	Photo
FPA14-14R/319	1.32 - 1.44	14	40	40	Right Circular	334x334x16	N(F)	
LPA7X-14R/317	1.32 - 1.44	7	80	80	Right Circular	31x170 Ø	SMA(F)	
PA5-1360R/1098	1.35 - 1.37	5	80	70	Right Circular	127x106x11	SMA(F)	
FPA14-1435/169	1.35 - 1.52	14	40	40	Vertical	334x334x16	N(F)	above
FPA17-1435V/348	1.35 - 1.52	16 to 17	20	40	Vertical	340x680x23	N(F)	above
FPA171-435H/349	1.35 - 1.52	16 to 17	20	40	Horizontal	340x680x23	N(F)	
FPA14-1450R/666	1.35 - 1.55	14	40	40	Right Circular	334x334x16	N(F)	
LPA7X-1450R/201	1.35 - 1.55	7	80	80	Right Circular	31x150 Ø	N(F)	▲
LPA7-1394R/393	1.36 - 1.44	7	80	80	Right Circular	23x132 Ø	SMA(F)	
FPA7-1.4V/1776	1.36 - 1.44	8	80	72	Vertical	22x132 Ø	N(F)	
LPA7-1394V-TNC(F)/501	1.36 - 1.44	8	86	72	Vertical	23x132 Ø	TNC(F)	
LPA7-1394V/285	1.36 - 1.44	8	86	72	Vertical	23x132 Ø	SMA(F)	
LPA7-14V/276	1.42 - 1.52	7	90	70	Vertical	21x138 Ø	SMA(F)	
LPA7-1475RL/1254	1.45 - 1.49	8.5	70	60	Dual Circular	220x160x20	N(F) x2	
LPA7X-1450R/201	FPA13-16RL/1089	LPA7-1550L-502/960	FPA15-1.6L-GPS/1535	LPA7-1.6L/1405	FPA14-1590L/1265			
FPA13-15R-D1/1037	1.45 - 1.60	13	35	35	Right Circular	300x300x19	N(F)	
FPA13-15R/107	1.45 - 1.60	13	35	35	Right Circular	300x300x19	N(F)	
FPA13-15R-SMA/576	1.45 - 1.60	13	40	40	Right Circular	300x300x19	SMA(M)	
LPA7-15R-D3/839	1.45 - 1.60	7	80	80	Right Circular	21x138 Ø	SMA(F)	
LPA7-15R/248	1.45 - 1.60	7	80	80	Right Circular	21x138 Ø	SMA(F)	
FPA13-16RL/1089	1.45 - 1.66	11@1.45 13@1.525	35	35	Dual Circular	300x300x11	SMA(F) x2	▲
PA5-1500R/056	1.48 - 1.52	5	100	100	Right Circular	110x92x2	SMA(F)	
LPA7-15R-D2/668	1.50 - 1.62	7	80	80	Right Circular	23x132 Ø	SMA(F)	
FPA19-15L/1352	1.52 - 1.56	17.8	20	20	Left Circular	600x600x18	N(F)	
FPA19-15R/153	1.52 - 1.56	17.8	20	20	Right Circular	600x600x18	N(F)	
LPA7-1550R-D2/380	1.52 - 1.58	7	80	80	Right Circular	38x132 Ø	TNC	
LPA7-1550L-502/960	1.52 - 1.60	7	80	80	Left Circular	22x132 Ø	SMA(F)	▲
LPA7-1550R-502/242	1.52 - 1.60	7	80	80	Right Circular	22x132 Ø	TNC	
FPA14-1.6R/1252	1.52 - 1.66	14	27	27	Right Circular	380x380x10	N(F)	
FPA15-1.6L-GPS/1535	1.52 - 1.66	>15	22	32	Left Circular	427x317x12	Sat SMB(M) 0.2m cable GPS SMA(M) 0.2m cable	▲
LPA7-1.6L/1405	1.52 - 1.66	6.3	71.6	72.5	Left Circular	22x133 Ø	SMA(M) 2.5m cable	▲
FPA7-1.6V/1510	1.52 - 1.66	6.4	84	65	Vertical	120x100x18	SMA(M) 0.5m cable	above
FPA8-1.6RL/1563	1.52 - 1.66	7	67	65	Dual Circular	22x132 Ø	N(F) x2	above
LPA7X-16R-D1/1049	1.52 - 1.66	8	65	70	Right Circular	30x170 Ø	N(M)	
LPA7-16RL/1311	1.52 - 1.66	8	70	70	Dual Circular	172x172x18	SMA(F) x2	
LPA7X-16R-D2/1178	1.52 - 1.66	8	65	70	Right Circular	30x170 Ø	N(F)	
LPA7X-16R/341	1.52 - 1.66	8	65	70	Right Circular	31x170 Ø	SMA(F)	
FPA14-1590L/1265	1.525 - 1.6605	14	27	27	Left Circular	380x380x10	N(F)	▲

Group 2 - 1GHz to 2GHz

Directional

FPA17-16R/1275



FPA17-RBGAN/1281



FPA13-18V/583



Model	Frequency GHz	Gain dBi	Beamwidth az°	Beamwidth el°	Polarisation	Dimensions mm	Connector/Cable	Photo
FPA17-1.6L/1426	1.525 - 1.6605	15	22	22	Left Circular	500x500x12	N(F) Sat TNC(F) GPS	▲
FPA17-1.6R/1359	1.525 - 1.6605	17	22	22	Right Circular	500x500x12	N(F)	
FPA21-16L/1258	1.525 - 1.6605	>21	11	11	Left Circular	896x896x16	N(F) IP65	
FPA21-16R/1127	1.525 - 1.6605	>21	11	11	Right Circular	896x896x16	N(F) IP65	▲
FPA17-16R/L1096	1.525 - 1.6605	Rx15.6, Tx15.9 Rx15.7, Tx16	18	35	Dual Circular	572x305x10	N(F) x2	
FPA17-16R/1275	1.525 - 1.6605	Rx15.1, Tx15.2	22	22	Right Circular	500x500x12	N(F)	above
FPA17-RBGAN/1281	1.525 - 1.6605	Rx16, Tx16.3	17	29	Right Circular	572x305x10	N(F)	above
FPA11-15L/1023	1.57442 - 1.57642	12	75	25	Left Circular	360x110x18	SMA(F)	
FPA9-1.7V/1761	1.60 - 1.73	8.3	70	54	Vertical	22x133 Ø	SMA(F)	
FPA13-18R/1523	1.60 - 1.95	13	35	35	Right Circular	265x265x23	N(F)	▲
FPA13-18R/1180	1.60 - 1.95	13	35	35	Right Circular	265x265x23	TNC(F)	
FPA17-1.6L/1426								
FPA21-16R/1127								
FPA13-18R/1523								
LPA7-17R/136								
FPA5-1.7V/1747								
FPA14-1775V/1241								
PA5-1660V/1116	1.65 - 1.67	5	90	90	Vertical	110x100x2	SMA(F)	
LPA7-17R/136	1.65 - 1.75	7	80	80	Right Circular	16x121 Ø	SMA(F)	▲
FPA5-1.7V/1747	1.67 - 1.69	5	90	84	Vertical	2x110 Ø	SMA(M) 0.25m cable	▲
FPA13-18V-D1/954	1.71 - 1.88	13	40	35	Vertical	403x225x26	N(F) 0.5m cable	
FPA13-18V/583	1.71 - 1.88	13	40	35	Vertical	339x225x26	N(F) 0.3m cable	above
FPA14-1.8V/1629	1.70 - 1.88	15	30	30	Vertical	330x330x28	N(F)	
FPA14-1775V/1241	1.70 - 1.88	15	30	30	Vertical	330x330x28	TNC(F)	▲
FPA16-18R/1144	1.71 - 1.88	15.5	36	18	Right Circular	546x236x38	N(F)	▲
FPA16-18V/923	1.71 - 1.88	16	18	36	Vertical	546x236x38	N(F)	▲
LPA7-18V-503/656	1.71 - 1.88	7	80	80	Vertical	23x132 Ø	N(F) 0.3m cable	
LPA7-18V-D1/658	1.71 - 1.88	7	80	80	Vertical	23x132 Ø	SMA(F) 1m cable	
FPA9-1.8V/9002	1.71 - 1.88	8	73	62	Vertical	22x132 Ø	SMA(F)	
LPA7-1800V/1226	1.71 - 1.88	9.2	70	60	Vertical	170x170x27	SMA(F)	▲
LPA7-18V-502/451	1.71 - 1.88	7	60	80	Vertical	22x132 Ø	SMA(F)	▲
LPA7-18V/132	1.70 - 1.90	7	60	80	Vertical	16x121 Ø	SMA(F)	▲
LPA7-18R/421	1.72 - 1.82	7.5 to 8	75	75	Right Circular	17x121 Ø	SMA(F)	▲
FPA8-1.9V/1762	1.84 - 1.99	9.1	70	54	Vertical	170x170x27	SMA(F)	
FPA13-19V-D1/670	1.85 - 2.00	13	40	40	Vertical	334x334x16	SMA(F) 90°	

FPA16-18R/1144	FPA16-18V/923	LPA7-1800V/1226	LPA7-18V-502/451	LPA7-18V/132	LPA7-18R/421

Catalogue

Group 2 - 1GHz to 2GHz

Directional



Model	Frequency GHz	Gain dBi	Beamwidth az°	Beamwidth el°	Polarisation	Dimensions mm	Connector/Cable	Photo
FPA13-19V/229	1.85 - 2.00	13	40	40	Vertical	334x334x16	N(F)	
LPA7-19V/252	1.85 - 2.00	7	80	80	Vertical	17x121 Ø	SMA(F)	
DLPA5-1945R/1202	1.89 - 1.99	4.8	62.5	53.3	Right Circular	286x160x24	SMA(M), 5m cable x2	
FPA12-2.1V/1924	1.90 - 2.30	13.5	35	35	Vertical	240x240x29	N(F)	
LPA7-2.1R/1710	1.90 - 2.30	7	75	75	Right Circular	17x122 Ø	N(F)	
LPA7-21R/1388	1.90 - 2.30	7	75	75	Right Circular	17x121 Ø	SMA(F)	above
LPA7-21R/422	1.90 - 2.30	7.7	78	70	Right Circular	17x121 Ø	SMA(F)	▲
FPA7-2.0DS/1652	1.92 - 2.17	7.5	65	65	Dual slant ±45°	99x99x15	SMA() 90° 0.3m cable x2	▲
LPA7-21R/422	FPA7-2.0DS/1652	FPA7-2.0DS/1750	DLPA7-2050-DS45/1107	LPA7-2050V/912	FPA13-2050R/1056			
FPA9-2.0V/9003	1.92 - 2.17	8.6	70	60	Vertical	22x132 Ø	SMA(F)	
FPA7-2.0DS/1750	1.92 - 2.175	6	65	65	Dual slant ±45°	99x99x15	QMA x2	▲
FPA7-2.0DS/1824	1.92 - 2.175	6	65	65	Dual slant ±45°	99x99x15	QMA 90° x2	
FPA7-2.0DS/1825	1.92 - 2.175	6	65	65	Dual slant ±45°	99x99x15	QMA x2	
DLPA7-2050-DS45/1107	1.92 - 2.175	7.5	65	65	Dual slant ±45°	100x100x9	SMA(M) 90°x2	▲
LPA7-2050V/912	1.92 - 2.175	7.8	70	60	Vertical	22x132 Ø	SMA(M) 0.5m cable	▲
FPA13-2050R/1056	1.99 - 2.11	10	50	40	Right Circular	195x163x11	SMA(F)	▲

DIRECTIONAL - MULTIBAND

DLPA4-850R-1945R/1071	0.80 - 0.89	4	80	60				
	1.89 - 1.99	5	60	45	Right Circular	286x160x24	SMA(M)90° 3m cable x2	
DLPA5-850R-1945R/1070	0.80 - 0.89	6	80	60				
	1.89 - 1.99	8	60	45	Right Circular	286x160x24	SMA(M) 90° 0.3m cable x2	
DLPA5-850R-1945R/1189	0.805 - 0.895		80	60				
	1.895 - 1.99	4	60	45	Right Circular	286x160x24	SMA(M) 5m cable x2	
DLPA4-850R-1945R/1216	0.805 - 0.895	3	80	60				
	1.895 - 1.99	3.5	60	45	Right Circular	286x160x24	SMA(M)90° 5m cable x2	
DLPA7-892R-1850R/1522	0.82 - 0.96		75	65				
	1.71 - 1.99	8	53	53	Right Circular	298x198x25	N(F) x2	
DFPA9-0.9L-1.9L/1823	0.824 - 0.96		67	55				
	1.71 - 1.99	8.5	60	43	Left Circular	359x246x25	N(F) x2	▲
DFPA9-0.9L-1.9L/1823								



DLPA7-892R-1850R/1290 LPA6-TRI-FL-D4/957



Group 2 - 1GHz to 2GHz

Directional

Model	Frequency GHz	Gain dBi	Beamwidth az°	Beamwidth el°	Polarisation	Dimensions mm	Connector/Cable	Photo
DLPA7-892R-1850R/1290	0.824 - 0.96 1.71 - 1.99	8	75 53	65 53	Right Circular	298x198x25	SMA(F) x2	above
DFPA9-0.9L-1.9L/1591	0.824 - 0.96 1.71 - 1.99	8.5	71 54	63 44	Left Circular	300x240x22	N(F) x2	
DLPA4-915R-1800R/936	0.87 - 0.96 1.71 - 1.88	4 5.2	80 60	60 50	Right Circular	286x160x24	SMA(M) 5m cable x2	▲
DLPA4-915R-1800R/1215	0.87 - 0.96 1.71 - 1.88	4 5.2	80 60	60 50	Right Circular x2	286x160x24	SMA(M) 5m cable x2	▲
DLPA4-915R-1800R/936	DLPA4-915R-1800R/1215	DLPA5-915R-1800R/880	DLPA7-915R-1800R-TNC/1136	FPA-0.8-2.2R/1730	FPA6-TRI/1671			
LPA7-900-1800-DF/1408	0.88 - 0.96 1.71 - 1.88	6	80	80	Vertical	339x225x25	SMA(F) x2	
LPA7-900-1800-DF/629	0.88 - 0.96 1.71 - 1.88	6	80	80	Vertical	339x225x25	SMA(F) x2	
LPA7-900-1800-DF2/900	0.87 - 0.96 1.71 - 1.88	6	80	80	Vertical	339x225x25	N(F) 0.3m cable x2	
LPA7-900-1800-FL/654	0.88 - 0.96 1.71 - 1.88	6	80	80	Vertical	339x225x25	SMA(M) 0.3m cable	
LPA7-900-1800-NF/694	0.88 - 0.96 1.71 - 1.88	6	80	80	Vertical	339x225x25	N(F) 0.3m cable	
LPA7-900V-1800V/609	0.88 - 0.96 1.71 - 1.88	6	80	80	Vertical	339x225x25	N(F)	
LPA7-900-1800-DF-FL/653	0.88 - 0.96 1.71 - 1.88	6	80	80	Vertical	339x225x25	SMA(M) 0.3m cable x2	
LPA7-900V-1800V-P1/604	0.88 - 0.96 1.71 - 1.88	6	80	80	Vertical	339x225x25	SMA(F)	
DLPA5-915R-1800R/1217	0.87 - 0.96 1.71 - 1.88	6.4 8.5	80 60	60 50	Right Circular	286x160x24	SMA(M) 0.3m cable x2	
DLPA5-915R-1800R/880	0.87 - 0.96 1.71 - 1.88	6.4 8.5	80 60	60 50	Right Circular	286x160x24	SMA(M) 0.3m cable x2	▲
DLPA7-915R-1800R-TNC/1136	0.87 - 0.96 1.71 - 1.88	7.9 8.9	80 55	70 70	Right Circular	256x175x24	TNC(F) TNC(M)	▲
FPA-0.8-2.2R/1730	0.87 - 0.96 1.71 - 2.17	6.5	71	73	Right Circular	387x235x176	N(F)	▲
LPA7-TRI-FL-D1/768	0.87 - 0.96 1.71 - 1.88 1.92 - 2.175	6	80	80	Vertical	339x225x25	SMA(M) 1m LSHJ cable x3	
FPA6-TRI/1671	0.88 - 0.96 1.71 - 1.88 1.92 - 2.175	6	79	57	Vertical	339x225x25	SMA(F) 2.75m LSHJ cables x3	▲
LPA6-TRI-FL-D4/957	0.88 - 0.96 1.71 - 1.88 1.92 - 2.175	6	80	80	Vertical	339x225x25	SMA(F) 2m LSHJ cable x3	above

Catalogue

Group 2 - 1GHz to 2GHz

Directional

Model	Frequency GHz	Gain dBi	Beamwidth az°	el°	Polarisation	Dimensions mm	Connector/Cable	Photo
LPA7-TRI-COM/684	0.88 - 0.96 1.71 - 1.88 1.92 - 2.175	7	75	60	Vertical	339x225x42	SMA(F)	above
LPA7-TRI-FL-D3/956	0.88 - 0.96 1.71 - 1.88 1.92 - 2.175	7	80	80	Vertical	339x225x25	SMA(F) 1m LSZHJ cable x3	
LPA7-TRI-SMA/651	0.88 - 0.96 1.71 - 1.88 1.92 - 2.175	6	80	80	Vertical	339x225x25	SMA(F) x3	▲
LPA7-TRI-FL-D2/1005	0.88 - 0.96 1.71 - 1.88 1.92 - 2.175	6	80	80	Vertical	339x225x25	N(F) 0.3m cable LSZHJ x3	▲
LPA6-TRI-FL-D2/955	0.88 - 0.96 1.71 - 1.88 1.92 - 2.175	6	80	80	Vertical	339x225x25	SMA(M) 2m LSZHJ cable x3	
LPA7-TRI-FL/652	0.88 - 0.96 1.71 - 1.88 1.92 - 2.175	6	80	80	Vertical	339x225x25	SMA(M) 0.3m LSZHJ cable x3	
FPA7-TRI-R/1589	0.88 - 0.96 1.71 - 1.88 1.92 - 2.175	8.5	70	60	Right Circular	339x225x25	N(F) x3	▲
LPA7-TRI-COM/684	LPA7-TRI-SMA/651	LPA7-TRI-FL-D2/1005	FPA7-TRI/1589	4DLPA7-13V-29V/1417	LPA7-1.6L-GPS/1459			
FPA7-TRI-R/1873	0.88 - 0.96 1.71 - 1.88 1.92 - 2.175	8.5	70	60	Right Circular	339x225x25	N(F) x3	
FPA7-TRI-R/1695	0.88 - 0.98 1.71 - 1.88 1.92 - 2.175	8.5	70	60	Right Circular	358x246x25	N(F) x3	
LPA7-TRI-DS2450-DS5500/1090	0.88 - 0.96 1.71 - 1.88 1.92 - 2.175 2.40 - 2.50 5.25 - 5.85	7	60	60	Vertical Vertical Dual ±45° Dual ±45° Dual ±45°	339x225x42	SMA(F) x7	
4DLPA7-13V-29V/1417	1.25 - 1.35 2.70 - 3.10	8.5	78.5	65	Vertical	650x225x20	SMA(F) x8	▲
LPA7-1.6L-GPS/1459	1.52 - 1.66 1.62 - 1.66 1.56 - 1.59	7	70	70	Left Circular	37x132 Ø	N(F) x 2	▲

Group 2 - 1GHz to 2GHz

Directional



Model	Frequency GHz	Gain dBi	Beamwidth az°	Beamwidth el°	Polarisation	Dimensions mm	Connector/Cable	Photo
FPA13-1800V-2050V/767	1.71 - 1.88 1.92 - 2.17	12	35	35	Vertical	464x250x25	SMA(M) 1m cable x2	▲
DFPA15-1.8R-2.5R/1391	1.79 - 1.87 2.48 - 2.58	14	30	30	Right Circular	600x350x27	N(F) x2	▲
FPA8-2.4R-5.5R/1893	2.40 - 2.50 5.10 - 5.90	7.4 10	88 40	72 43	Right Circular	168x85x15	N(F) x2	▲

FPA13-1800V-2050V/767



DFPA15-1.8R-2.5R/1391



FPA8-2.4R-5.5R/1893



DIRECTIONAL - HELIX

AMHH8-13R/030	1.00 - 1.40	8 to 10	60	60	Right Circular	365x156 Ø	N(F)
AMHP13-13L/909	1.00 - 1.50	13	40	40	Left Circular	757x188 Ø	N(F)
AMHP13-13R/045	1.00 - 1.50	13	40	40	Right Circular	758x74 Ø	N(F)
AMHP10-15R/390	1.30 - 1.70	10	50	50	Right Circular	496x156 Ø	N(F)
AMHH10-15R/008	1.30 - 1.70	10 to 13	40	40	Right Circular	358x155 Ø	N(F)
AMHS14-15L/1186	1.30 - 1.70	13 to 15	35	35	Left Circular	665x80 Ø	N(F)
AMHS14-15R/028	1.30 - 1.70	13 to 15	35	35	Right Circular	665x80 Ø	N(F)
AMH16-16L-02/855	1.52 - 1.66	16	30	30	Left Circular	1005x155 Ø	N(F)
AMH16-16R-02/082	1.52 - 1.66	16	30	30	Right Circular	1040x156 Ø	N(F)
AMH12-2.1R/1672	1.70 - 2.50	10.7	35	35	Right Circular	364x127 Ø	TNC(F)
AMH12-2.1R/1188	1.70 - 2.50	10.7	35	35	Right Circular	381x127 Ø	TNC(F)

AMHP13-13R/045



AMH16-16R-02/082



AMH12-2.1R/1188



Catalogue

Group 2 - 1GHz to 2GHz

Sector

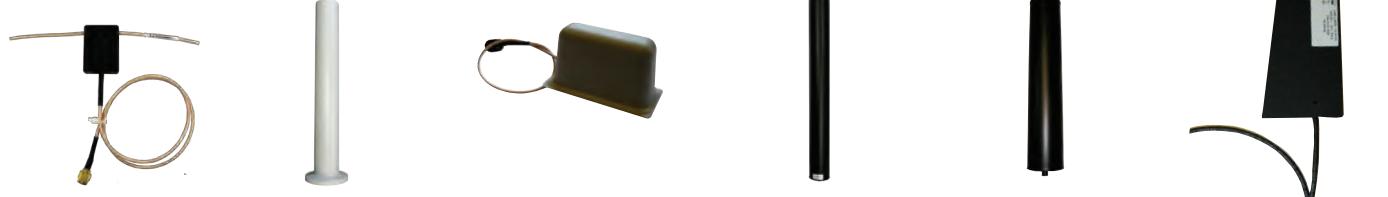


Model	Frequency GHz	Gain dBi	Beamwidth az°	el°	Polarisation	Dimensions mm	Connector/Cable	Photo
-------	------------------	-------------	------------------	-----	--------------	------------------	-----------------	-------

SECTOR

SA9-180-0.96-1.22V/1814 Link16	0.96 - 1.215	9	180	20	Vertical	1228x250 Ø	N(F)	
SA13-120-0.96-1.22V/1694 Link16	0.96 - 1.22	13	110	9	Vertical	1650x155 Ø	N(F)	
HDA-1.3V/1880 blade	1.00 - 1.50	0-1	Request datasheet		Vertical	35x25	SMA(M) 0.5 cable	
SA13-60-1.03V/1416	1.03 ±25MHz	13.4	76	18	Vertical	870x217x25	N(F)	
HDA-1.2V/1545 blade	1.15 - 1.26	1.3	120	100	Vertical	82x38x47	SMA(M) 0.25m cable	
SA11-100-1.3V/1607	1.15 - 1.40	10	108	24	Vertical	694x95 Ø	TNC(F)	
SA11-120-1.3V/1384	1.15 - 1.40	11.5	120	16	Vertical	870x98 Ø	N(F)	
SA11-120-1.3V/1733	1.15 - 1.40	11.5	120	16	Vertical	870x98 Ø	TNC(F)	

HDA-1.3V/1880 [SA9-180-0.96-1.22V/1814](#) [HDA-1.2V/1545](#) [SA11-120-1.3V/1384](#) [SA9-120-1.3V/1560](#) [HDA-1275/1561](#)



SA9-120-1.3V/1560	1.15 - 1.45	9	120	36	Vertical	490x98 Ø	TNC(F)	
SA9-200-1.3V/1578	1.15 - 1.45	9	200	18	Vertical	870x98 Ø	TNC(F)	
HDA-1275/1561 blade	1.20 - 1.35	4	75	175	Horizontal	120x75x2	TNC(M) 1m LMR195 cable	
HDA-1275/1148 blade	1.20 - 1.35	4	75	175	Horizontal	120x74x1	SMA(M) 90°	
HDA-1275/1274 blade	1.20 - 1.35	4	75	175	Horizontal	120x74x1	SMA(M) 90°	
SA9-120-1.3V/1445	1.20 - 1.45	9	120	36	Vertical	490x98 Ø	N(M)	
SA10-13R/126	1.24 - 1.34	10	80	40	Right Circular	290x126x23	SMA(F)	
HDA-1.3V/1632 blade	1.26 - 1.40	2	170	80	Vertical	82x38x47	SMA(M) 0.3mm cable	
HDA-1.3V/1488 blade	1.26 - 1.40	5	120	70	Vertical	81x37x46	SMA(M)	
HDA-1394-SMA/903 blade	1.35 - 1.43	2	360	80	Vertical	82x38x44	SMA(M) 0.68m cable	
HDA-1394-SMA90/785 blade	1.35 - 1.43	2	360	80	Vertical	82x38x44	SMA(M) 90° 0.14m cable	
DHDA-1.4V/1680	1.35 - 1.45	1	160	80	Vertical	81x46	SMA(M)	
DHDA-1.4V/1816	1.35 - 1.45	1	160	80	Vertical	81x46, x2	SMA(M) 0.65m cable	
SA12-80-1.4V/1716	1.35 - 1.45	11.5	79	27	Vertical	450x160x11	N(M)	
SA12-80-1.2V/1896	1.35 - 1.45	11.5	79	27	Vertical	450x160x11	N(M)	above
SA10-90-1.4V/1250	1.35 - 1.525	9.5	89	35	Vertical	370x360x156	N(F)	

HDA-1275/1148 [SA9-120-1.3V/1445](#) [HDA-1.3V/1632](#) [HDA-1.3V/1488](#) [SA12-80-1.4V/1716](#) [SA10-90-1.4V/1250](#)



SA10-1394R-701/412	1.39 - 1.40	10	70	40	Right Circular	399x140x14	SMA(M) 0.5m cable	
SA10-1394V-701/582	1.39 - 1.40	10.25	75	35	Vertical	399x140x14	TNC(M) 0.5mm cable	
SA10-70-1.4V/1506	1.39 - 1.40	10.25	75	35	Vertical	399x140x14	N(F)	
SA10-1394V-701/413	1.39 - 1.40	10.25	76	33	Vertical	399x140x14	SMA(M) 0.5 cable	
SA10-15R/221	1.40 - 1.50	10	80	40	Right Circular	272x126x21	N(F)	
SA13-15L/965	1.40 - 1.50	13	80	20	Left Circular	532x126x21	N(F)	

SA2-120-1940V/1027



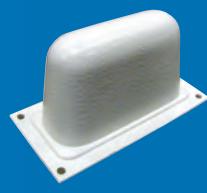
SA16-19V/230



SA13-2050V/496



HDA-2050/913



Group 2 - 1GHz to 2GHz

Sector

Model	Frequency GHz	Gain dBi	Beamwidth az°	Beamwidth el°	Polarisation	Dimensions mm	Connector/Cable	Photo
SA13-15R/212	1.40 - 1.50	13	80	20	Right Circular	532x126x21	N(F)	
SA16-15R/512	1.42 - 1.55	16	60	10	Right Circular	1154x191x15	SMA(F)	
SA12-120-1.7V /1609	1.50 - 1.80	11.4	112	16.9	Vertical	870x98 Ø	TNC(F)	▲
SA9-200-1.7V/1897	1.50 - 1.80	9	200	17	Vertical	870x98 Ø	TNC(F)	
HDA-1.6V/1682 blade	1.55 - 1.70	3.5	123	70	Vertical	81x37x46	SMA(M) 0.25m cable	
SA11-18R-702/340	1.71 - 1.88	10	70	30	Right Circular	399x140x14	N(M) 0.5m cable	
SA10-18V-502/289	1.71 - 1.88	10	80	40	Vertical	300x246x20	N(M) 90° 0.55m cable	
SA10-18V/181	1.71 - 1.88	10	80	40	Vertical	286x117x21	N(F)	▲
SA11-18R/665	1.71 - 1.88	11	75	25	Right Circular	399x140x14	N(F) cable	
SA16-18-DS45/973	1.71 - 1.88	15	70	9	Dual ±45°	1053x126x26	716(F) x2	
HDA-1800-502-D2/655 blade	1.71 - 1.88	3	140	70	Mixed	90x46x45	N(F) 0.5m cable	
HDA-1800-502-D4/1002 blade	1.71 - 1.88	3	140	70	Vertical	90x46x45	N(F) 0.3m cable	
HDA-1800-502-D3/1001 blade	1.71 - 1.88	3	142	72	Vertical	90x46x44	N(F) 0.3m cable	
SA12-120-1.7V /1609	SA10-18V/181	SA1-120-1940V/1027	SA11-18R-701/254	SA17-18DS-45/345	HDA-1800-502/381			
SA10-18V/382	1.71 - 1.88	10	70	40	Vertical	399x140x13	N(F) 0.5m cable	
SA11-18R-701/254	1.71 - 1.88	11	75	25	Right Circular	399x140x13	N(M) 90° cable	▲
SA17-18DS-45/345	1.71 - 1.88	16.5	65	8	Dual ±45°	1100x200x15	716(F) x2	▲
SA17-18V/417	1.71 - 1.88	17	70	9	Vertical	1204x140x21	N(F)	
HDA-1800-502/381 blade	1.71 - 1.88	3	142	72	Mixed	90x46x44	N(F) 0.5m cable	▲
HDA-1800-2050/769 blade	1.71 - 1.88							
	1.92 - 2.175	2	140	70	Dual V&H	180x46x43	SMA(M) 1m cable x2	
HDA-1.9V/1797 blade	1.71 - 2.17	0 to 1			Vertical	35x45	SMA(M)	
SA2-120-1940V/1027	1.71 - 2.17	4	140	80	Vertical	114x44x71	N(F) 1m cable	above
SA11-19R-702/351	1.85 - 1.99	11	70	30	Right Circular	399x140x14	N(M) cable	
SA16-19V/230	1.85 - 1.99	16	75	10	Vertical	782x150x20	N(F)	above
SA18-30-19V/499	1.85 - 1.99	19	30	8	Vertical	1050x374x15	N(F)	
SA10-19V-701/434	1.88 - 1.90	10	75	32	Vertical	399x140x14	N(M) cable	
SA10-40-1910V/471	1.89 - 1.92	10	50	85	Vertical	399x140x14	TNC(F)	
SA13-2050V/496	1.92 - 2.175	12	70	20	Vertical	399x140x14	N(F) 1.2m cable	above
HDA-2050-D2/1030 blade	1.92 - 2.175	4.5	150	80	Vertical	90x46x44	SMA(M) 0.5m cable	
HDA-2050/913 blade	1.92 - 2.175	4.5	150	80	Vertical	90x46x44	SMA(M) 0.5m cable	above

MULTI-SECTOR

MSA5-1400/1131	1.31 - 1.43	12 sector	88	19	Vertical			
		6.5 overhead	57	56	Right Circular	735x197 Ø	SMA(F)	
MSA5-1.4V/1782	1.395 - 1.525	11.5 sector	80	19	Vertical			
		4.4 overhead	87	87	Right Circular	758x197 Ø	SMA(F)	
MSA5-1.5V/1645	1.43 - 1.52	12 sector	84	17.6	Vertical			
		7.5 overhead	66	67	Right Circular	733x197 Ø	SMA(F)	

Catalogue

Group 2 - 1GHz to 2GHz

Omni

Model	Frequency GHz	Gain dBi	Beamwidth az°	el°	Polarisation	Dimensions mm	Connector/Cable	Photo
-------	------------------	-------------	------------------	-----	--------------	------------------	-----------------	-------

OMNI

OMNI - SINGLE BAND including ULTRA WIDEBAND and BLADE

OA2-0.3-10.0V/1667	0.30 - 10.00	2	360	65	Vertical	306x162 Ø	N(F)	
OA2-0.3-10.0V/1668	0.30 - 10.00	2	360	65	Vertical	306x162 Ø	N(F)	
OA2-0.3-10.0V/1505	0.30 - 10.00	2	360	65	Vertical	306x162 Ø	N(F)	
XPO3V-500-1300-LP/586	0.50 - 1.30	1 to 2	360	80	Vertical	275x108 Ø	N(F)	
XPO2V-500-1300/1351	0.50 - 1.30	1 to 2	360	80	Vertical	326x108 Ø	N(F)	▲
XPO2V-500-1300/1351	XPO3V-500-1300/034	OA2-0.85-6.0V/1699	OA2-0.9-2.2V/1830			XPO2V-880-2175/1060	XPO2V-880-2175/1321	
								
XPO3V-500-1300/034	0.50 - 1.30	1 to 2	360	80	Vertical	333x108 Ø	N(F)	
OA2-0.8-6.0V/1665	0.80 - 6.00	2	360	75	Vertical	143x108 Ø	N(F)	
OA2-0.8-6.0V/1666	0.80 - 6.00	2	360	75	Vertical	143x108 Ø	N(F)	
XPO2V-0.8-6.0-GF/1441	0.80 - 6.00	2	360	75	Vertical	143x108 Ø	N(F)	
XPO2V-0.8-6.0/1485	0.80 - 6.00	2	360	75	Vertical	143x79 Ø	N(F)	above
OA2-0.85-6.0V/1699	0.84 - 6.00	1	360	60	Vertical	170x60 Ø	N(F)	▲
XPO2V-880-2175/1355	0.88 - 2.175	2.5	360	50	Vertical	221x50 Ø	N(F)	above
XPO2V-880-2175/1350	0.88 - 2.175	2.5	360	50	Vertical	345x36 Ø	N(F)	
OA2-0.9-2.2V/1830	0.88 - 2.175	2	360	50	Vertical	262x31 Ø	QN(M)	▲
OA2-0.8-2.2V/1726	0.88 - 2.175	2.5	360	50	Vertical	345x36 Ø	N(F)	
XPO2V-880-2175/1060	0.88 - 2.175	2.5	360	50	Vertical	221x50 Ø	N(F)	▲
XPO2V-880-2175/1321	0.88 - 2.175	2.5	360	50	Vertical	221x50 Ø	N(F)	▲
EVD2-960-1215/004	0.96 - 1.215	2	360	80	Vertical	281x26 Ø	N(F)	▲
EVD2-960-1215/628	0.96 - 1.215	2	360	80	Vertical	292x25 Ø	N(M)	▲
OA7-1090V/1328	0.96 - 1.215	7	360	16.5	Vertical	1040x180 Ø	N(F)	▲
XVO7-960-1215/1120 Link16	0.96 - 1.215	7	360	16.5	Vertical	1029x79 Ø	N(F)	page 40
XPO4-960-1215/1425 Link16	0.96 - 1.215	4.5	360	33	Vertical	620x79 Ø	N(F)	page 40
OA1-1.3V/1834	1.00 - 1.50	1.7	360	80	Vertical	73x14 Ø	SMA(M)	▲
OA1-1.5V/1630	1.00 - 2.00	2.7	360	67	Vertical	70x195 Ø	SMA(F)	▲
OA2-1.0-6.0V/1794	1.00 - 6.00	1	360	80	Vertical	213x80 Ø	N(F)	▲
XPO2V-1.0-6.0/1442	1.00 - 6.00	2	360	70	Vertical	134x80 Ø	N(F)	above
XPO2V-1.0-6.0/1512	1.00 - 6.00	2	360	70	Vertical	134x80 Ø	N(F)	above
V0A5-1030-UT12/1327	1.02 - 1.04	5	360	41	Vertical	663x57 Ø	N(F)	

EVD2-960-1215/004	EVD2-960-1215/628	OA7-1090V/1328	OA1-1.3V/1834	OA1-1.5V/1630	OA2-1.0-6.0V/1794
					

Group 2 - 1GHz to 2GHz

Omni



Model	Frequency GHz	Gain dBi	Beamwidth az°	Beamwidth el°	Polarisation	Dimensions mm	Connector/Cable	Photo
OA1-1.0V/1656	1.03 - 1.09	1.5	360	88	Vertical	68x16 Ø	BNC(M)	▲
OA2-1.3V/1430	1.05 - 1.56	2	360	80	Vertical	185x32 Ø	TNC(F)	▲
VOA7-1090-UT2/1227	1.06 - 1.12	7	360	19	Vertical	1048x50 Ø	N(F)	
VOA4-1090-UT15-ZF/262	1.08 - 1.10	4	360	40	Vertical	608x57 Ø	N(F)	▲
VOA5-1090-UT12-FT/1292	1.08 - 1.10	5.7	360	36.5	Vertical	634x60 Ø	TNC(F)	▲
EVD2-1080-1320-TNC-D1/698	1.08 - 1.32	2	360	80	Vertical	292x16 Ø	TNC(M)	
EVD2-1080-1320-TNC/562	1.08 - 1.32	2	360	80	Vertical	292x15 Ø	TNC(M)	
EVD2-1.2V/1742	1.15 - 1.27	2	360	70	Vertical	250x45 Ø	N(F)	
SBA-1.3V/1885 blade	1.15 - 1.35	0.2	360	70	Vertical	53x25, 44 Ø	TNC(F)	
OA2-1.3V/1843	1.15 - 1.40	1.7	360	70	Vertical	217x28 Ø	TNC(M)	
OA2-1.3V/1346	1.15 - 1.40	2	360	70	Vertical	185x32 Ø	TNC(F)	
OA4-1.3V/1536	1.15 - 1.40	3.8	360	36.5	Vertical	380x25 Ø	TNC(M)	▲
OA4-1.3V/1731	1.15 - 1.40	3.8	360	36.5	Vertical	384x45 Ø	N(F)	▲
OA1-1.3V/1656	OA2-1.3V/1430	VOA4-1090-UT15-ZF/262	VOA5-1090-UT12-FT/1292	OA4-1.3V/1536	OA4-1.3V/1731			
OA4-1.3V/1822	1.15 - 1.40	3.8	360	36.5	Vertical	383x27 Ø	N(M)	
XPO2V-1150-1650/1036	1.15 - 1.65	2	360	70	Vertical	250x25 Ø	N(M)	▲
SVD2-1200/845	1.17 - 1.23	2	360	80	Vertical	207x12 Ø	SMA(M)	
VOA4-1270/037	1.22 - 1.32	4	360	40	Vertical	608x57 Ø	N(F)	▲
SVD2-1270/074	1.24 - 1.30	2	360	80	Vertical	212x20 Ø	N(M)	
EVD2-1300-N(M)/1214	1.24 - 1.34	2	360	80	Vertical	240x26 Ø	N(M)	
EVD2-1300/018	1.24 - 1.34	2	360	80	Vertical	241x26 Ø	N(F)	
SVD2-1300/137	1.24 - 1.34	2	360	80	Vertical	158x12 Ø	SMA(M)	▲
EVD2-1300-short/019	1.24 - 1.38	2	360	80	Vertical	170x26 Ø	N(F)	
SVD2-1297-TNC(M)90/502	1.247 - 1.347	2	360	80	Vertical	160x15 Ø	TNC(M) 90°	above
SVD2-1300-HDSMA/321	1.25 - 1.35	2	360	80	Vertical	155x12 Ø	SMA(M)	
SVD2-1.3V/1724	1.25 - 1.40	2	360	80	Vertical	184x16 Ø	SMA(M) 90°	
OA8-1.3V/1835	1.25 - 1.40	8	360	12.5	Vertical	1280x57 Ø	N(F)	
EVD2-1300/1395	1.27 - 1.35	2	360	70	Vertical	220x45 Ø	N(F)	▲
SVD2-1.4V/1396	1.29 - 1.41	2	360	80	Vertical	175x12 Ø	SMA(M)	
SVD2-1350-TNC(M)90/1424	1.30 - 1.40	2	360	80	Vertical	166x11 Ø	TNC(M) 90°	
RCO3-1394/394	1.30 - 1.45	3	360	80	Right Circular	179x115 Ø	SMA(M)	▲
SBA-1.4V/1765 blade	1.31 - 1.49	0	360	90	Vertical	30x2x120	SMA(F)	
SVD2-1380-HDSMA/320	1.32 - 1.44	2	360	80	Vertical	153x11 Ø	SMA(M)	▲
XPO2V-1150-1650/1036	VOA4-1270/037	SVD2-1300/137	EVD2-1300/1395	RCO3-1394/394	SVD2-1380-HDSMA/320			



Catalogue

Group 2 - 1GHz to 2GHz

Omni

SBA-1480/1297
blade antenna on the
Cranfield Aerospace
prototype of the
Boeing X-48B



Model	Frequency GHz	Gain dBi	Beamwidth az°	el°	Polarisation	Dimensions mm	Connector/Cable	Photo
VOA7-1373/1088	1.33 - 1.41	7	360	20	Vertical	755x57 Ø	N(F)	
VOA7-1373/361	1.33 - 1.415	7	360	20	Vertical	908x57 Ø	N(F)	
FVD2-1394/647	1.34 - 1.43	2	360	80	Vertical	200x20 Ø	N(M)	
EVD2-1400-NM/1264	1.35 - 1.43	2	360	80	Vertical	222x26 Ø	N(M)	
EVD2-1400-D1/1340	1.35 - 1.45	2	360	80	Vertical	207x29 Ø	N(F)	▲
EVD2-1400/329	1.35 - 1.45	2	360	80	Vertical	218x26 Ø	N(F)	▲
SVD2-1.4V/1443	1.35 - 1.45	2	360	80	Vertical	188x12 Ø	N(M)	▲
SVD2-1394-SMA(M)/1307	1.35 - 1.45	2	360	80	Vertical	170x12 Ø	SMA(M)	
SVD2-1394-SMA90/784	1.35 - 1.45	2	360	80	Vertical	156x10 Ø	SMA(M) 90°	
SVD2-1394-TNC(M)/282	1.35 - 1.45	2	360	80	Vertical	174x12 Ø	TNC(M)	▲
EVD2-1400-D1/1248	1.35 - 1.45	2	360	80	Vertical	220x45/13 Ø	N(F)	▲
OA4-1.4V/1444	1.35 - 1.45	4	360	37	Vertical	757x36/162 ²	N(M)	
OA4-1.4V/1515	1.35 - 1.45	5	360	37	Vertical	390x26 Ø	N(M)	
OA8-1.4V/1251	1.35 - 1.525	9	360	12.5	Vertical	1208x57 Ø	N(F)	
OA2-1.5V/1345	1.35 - 1.70	2	360	70	Vertical	185x32 Ø	TNC(F)	▲
EVD2-1400/1340	EVD2-1400/329	SVD2-1.4V/1443			SVD2-1394-TNC(M)/282	EVD2-1400-D1/1248	OA2-1.5V/1345	
VOA4-1400/1130	1.36 - 1.55	5	360	40	Vertical	360x150 Ø	N(F)	▲
OA4-1.4V/1451	1.36 - 1.55	5	360	40	Vertical	360x50/150 Ø	N(F)	
OA4-1.4V/1483	1.36 - 1.55	5	360	40	Vertical	525x57 Ø	N(F)	▲
DVOA4-1454/314	1.37 - 1.52	4	360	40	Vertical	908x57 Ø	N(F) x2	
EVD2-1450/124	1.40 - 1.50	2	360	60	Vertical	205x26 Ø	N(F)	▲
EVD2-1.5V/1646/LDS	1.40 - 1.52	2	360	70	Vertical	200x45/19 Ø	N(F)	
EVD2-1.5V/1646	1.40 - 1.525	2	360	70	Vertical	205x45/13 Ø	N(F)	
OA4-1.5V/1693	1.40 - 1.525	4	360	38	Vertical	451x31 Ø	N(F)	
FVD2-1500-D1/1139	1.40 - 1.60	2	360	80	Vertical	295x26 Ø	N(M)	
OA4-1.6V/1669	1.40 - 1.70	4	360	38	Vertical	330x28 Ø	TNC(M)	▲
SBA-1470/702 blade	1.42 - 1.52	0 to 1	360	80	Vertical	100x67x12	SMA(F)	
EVD2-1500/002	1.42 - 1.54	2	360	80	Vertical	205x26 Ø	N(F)	▲
EVD2-1.5/1432	1.429 - 1.52	2	360	80	Vertical	205x25 Ø	N(F)	
OA6-1.44V/1508	1.43 - 1.45	7	360	19.5	Vertical	858x57 Ø	N(F)	▲
SVD2-1.5V/1657	1.43 - 1.52	2	360	80	Vertical	163x12 Ø	SMA(M)	
SBA-1480/1297 blade	1.43 - 1.52	2	360	80	Vertical	120x22x2	SMA(F)	above

VOA4-1400/1130	OA4-1.4V/1483	EVD2-1450/124	OA4-1.6V/1669	EVD2-1500/002	OA6-1.44V/1508

			VOA10-1800/111	EVD2-1.8V/1740	VOA4-1800/131		
Model	Frequency GHz	Gain dBi	Beamwidth az° el°	Polarisation	Dimensions mm	Connector/Cable	Photo
VOA4-1500/054	1.43 - 1.57	5	360 40	Vertical	600x57 Ø	N(F)	▲
SBA-1500-502/445 blade	1.45 - 1.55	2	360 80	Vertical	72x14x126	SMA(F)	▲
SBA-1500/055 blade	1.45 - 1.55	2	360 80	Vertical	100x9x122	SMA(F)	▲
XPO7R-1500/138	1.45 - 1.55	7	360 20	Right Circular	707x158 Ø	N(F)	
EVD2-1600/1331	1.50 - 1.65	2	360 80	Vertical	188x13/127 Ø	N(F)	
EVD2-1600/530	1.50 - 1.65	2	360 80	Vertical	260x26 Ø	N(M)	▲
SVD2-1.7V/1772	1.50 - 1.85	2	360 80	Vertical	143x19 Ø	SMA(M)	
SVD2-1.7V/1773	1.50 - 1.85	2	360 80	Vertical	140x19 Ø	SMA(M) 90°	
LCO3-1700/1367	1.55 - 1.85	3	360 80	Left Circular	224x100 Ø	N(F) to IP65	
RCO3-1700/122	1.55 - 1.85	3	360 80	Right Circular	169x100 Ø	N(F) to IP65	▲
SVD2-1605-HDSMA-F1/431	1.565 - 1.645	2	360 80	Vertical	161x11 Ø	SMA(M)	
VOA10-1615/897	1.59 - 1.64	8.9 to 9.5	360 10	Vertical	1225x57 Ø	N(F)	▲
VOA4-1500/054	SBA-1500-502/445	SBA-1500/055	EVD2-1600/530	RCO3-1700/122	VOA10-1615/897		
							
EVD2-1.6/1503	1.62 - 1.66	2	360 80	Vertical	196x26 Ø	N(F)	▲
SVD2-1.7V/1620	1.62 - 1.73	2	360 80	Vertical	140x10 Ø	TNC(M) 90°	
EVD2-1700/071	1.65 - 1.75	2	360 80	Vertical	239x25 Ø	N(F)	▲
SBA-1700/154 blade	1.65 - 1.75	2	360 80	Vertical	100x25x95	SMA(F)	
VOA4-1700/176	1.65 - 1.75	4	360 40	Vertical	470x36 Ø	N(F)	
OA2-1.9V/1876	1.65 - 1.95	1	360 80	Vertical	105x14 Ø	SMA(M)	▲
OA2-1.6-3.0V/1683	1.65 - 3.00	2	360 63	Vertical	184x13 Ø	TNC(F)	▲
OA2-1.6-3.0V/1377	1.65 - 3.00	2	360 68	Vertical	186x75 Ø	N(F)	
OA2-HP-2.0V/1291	1.65 - 3.00	2	360 80	Vertical	253x25 Ø	N(F)	
XPO2V-1650-3000/140	1.65 - 3.00	2	360 80	Vertical	256x25 Ø	N(F)	
XPO2V-1650-3000/1354	1.65 - 3.00	2	360 80	Vertical	256x25 Ø	N(F)	▲
EVD2-1800/595	1.71 - 1.88	2	360 60	Vertical	180x24 Ø	N(M)	
SVD2-1800-NM90/296	1.71 - 1.88	2	360 80	Vertical	102x10 Ø	N(M) 90°	▲
SVD2-1800-SMA(M)/841	1.71 - 1.88	2	360 80	Vertical	140x10 Ø	SMA(M)	
SVD2-1800-SMAF/721	1.71 - 1.88	2	360 80	Vertical	135x7 Ø	SMA(F)	
VOA10-1800/111	1.71 - 1.88	9	360 10	Vertical	1255x57 Ø	N(F)	above
EVD2-1800-DTC/1740	1.70 - 1.90	2	360 70	Vertical	185x32 Ø	N(F)	above
EVD2-1800-DTC/1219	1.70 - 1.90	2	360 70	Vertical	185x32 Ø	TNC(F)	
VOA4-1800/131	1.70 - 1.90	4	360 40	Vertical	447x36 Ø	N(F)	above
EVD2-1.6/1503	EVD2-1700/071	OA2-1.9V/1876	OA2-1.6-3.0V/1683	XPO2V-1650-3000/1354	SVD2-1800-NM90/296		
							

Catalogue

Group 2 - 1GHz to 2GHz

Omni



Model	Frequency GHz	Gain dBi	Beamwidth az°	el°	Polarisation	Dimensions mm	Connector/Cable	Photo
VOA4-1800/1319	1.70 - 1.90	4	360	40	Vertical	445x36 Ø	N(F)	▲
VOA7-1800/150	1.70 - 1.90	8.4	360	17	Vertical	627x36 Ø	N(F)	▲
XPO2V-1710-2175/1007	1.70 - 2.17	3.5	360	50	Vertical	147x26 Ø	N(F)	
OA4-1.7-2.5V/1810	1.70 - 2.50	4	360	40	Vertical	256x50 Ø	N(F)	above
OA2-1.7-6.0V/1624	1.70 - 6.00	2	360	70	Vertical	104x35 Ø	N(F)	
EVD2-1800/017	1.71 - 1.88	2	360	80	Vertical	182x26 Ø	N(F)	
OA4-1.8V/1641	1.71 - 1.88	4.4	360	38	Vertical	392x51 Ø	QN(M)	▲
OA4-1.8V/1521	1.71 - 1.88	5	360	44	Vertical	364x36 Ø	N(F)	
OA4-1.8V/1845	1.71 - 1.88	5	360	44	Vertical	445x36 Ø	N(F)	
SBA-1790/1298 blade	1.75 - 1.82	2	360	80	Vertical	105x30x2	SMA(F)	
FVD2-2.3/1550	1.80 - 3.60	2	360	65	Vertical	323x28 Ø	N(M)	▲
FVD2-1.9V/1634	1.805 - 1.99	0	360	80	Vertical	377x26 Ø	N(M)	
VOA10-1900/232	1.85 - 1.95	10	360	10	Vertical	1008x57 Ø	N(F)	▲
EVD2-1900/087	1.85 - 1.99	2	360	80	Vertical	180x25 Ø	N(F)	
VOA4-1920/158	1.85 - 1.99	4	360	40	Vertical	345x36 Ø	N(F)	
VOA4-1920-DT/1069	1.85 - 1.99	4	360	40	Vertical	345x36 Ø	N(F)	▲
VOA4-1800/1319	VOA7-1800/150	OA4-1.8V/1641	FVD2-2.3/1550	VOA10-1900/232	VOA4-1920-DT/1069			
SVD2-1900-NM90/297	1.85 - 2.00	2	360	80	Vertical	102x10 Ø	N(M) 90°	▲
SVD2-1900/885	1.85 - 2.00	2	360	80	Vertical	107x11 Ø	SMA(M)	
SVD2-2000-NM/958	1.90 - 2.10	2	360	80	Vertical	102x11 Ø	N(M)	▲
OA3-1.9-2.7L/1558	1.90 - 2.70	2	360	100	Left Circular	122x33 Ø	N(F)	
RCO3-19-27-D1/976	1.90 - 2.70	2	360	100	Right Circular	122x101 Ø	N(F)	
RCO3-19-27/592	1.90 - 2.70	3	360	60	Right Circular	121x100 Ø	N(F)	
EVD2-2050/712	1.92 - 2.17	2	360	75	Vertical	87x100 Ø	SMA(F)	▲
SVD2-2050-SMA(M)/898	1.92 - 2.17	3.6	360	80	Vertical	117x11 Ø	SMA(M)	
OA4-2.0V/1375	1.92 - 2.17	3.6	360	40	Vertical	307x25/75 Ø	N(F)	▲
OA4-2.0V/9006	1.92 - 2.17	4.5	360	36	Vertical	365x32	N(F)	▲
OA7-2.0V/1376	1.92 - 2.17	6.3	360	21	Vertical	591x36/75 Ø	N(F)	
OA7-2.0V/9009	1.92 - 2.17	6.3	360	21	Vertical	586x36 Ø	N(F)	▲
EVD2-2050-UBI/974	1.92 - 2.17	2	Request datasheet		Vertical	160x62 Ø	SMA(M) 2.5m cable	
EVD2-1920-2175/548	1.92 - 2.175	1 to 2	360	80	Vertical	180x26 Ø	N(F)	

SVD2-1900-NM90/297	SVD2-2000-NM/958	EVD2-2050/712	OA4-2.0V/1375	OA4-2.0V/9006	OA7-2.0V/9009

Group 2 - 1GHz to 2GHz

Omni



EVD2-1920-2175-D1/1128
omni antenna on UAV

Model	Frequency GHz	Gain dBi	Beamwidth az°	Beamwidth el°	Polarisation	Dimensions mm	Connector/Cable	Photo
EVD2-1920-2175-D1/1128	1.92 - 2.175	2	360	80	Vertical	150x29 Ø	N(F)	▲above
EVD2-1920-2175-NM/669	1.92 - 2.175	1 to 2	360	80	Vertical	185x26 Ø	N(M)	
EVD2-2050-UBI/932	1.92 - 2.175	>0	360	80	Vertical	160x62 Ø	SMA(M) 1m cable	
SBA-2.0/1418 blade	1.98 - 2.01	2	360	60	Vertical	97x50x41	MCX 90° 0.1m cable	
FVD2-2050/832	1.99 - 2.11	2	360	80	Vertical	650x22 Ø	N(F)	

EVD2-1920-2175-D1/1128 OA2-0.1-6.0/1692 OA3-2.4-5.4DS/1833 DOA-2.4V-3.4V-4.7V/1869



OMNI - MULTIBAND

OA2-0.1-6.0V/1692	0.10 - 0.50							
	0.50 - 6.00	0	360	80	Vertical	1250x140 Ø	N(F) x2	▲
DEVD2-900V-1800V-502/605	0.88 - 0.96	0						
	1.71 - 1.88	2	360	75	Vertical	87x100 Ø	SMA(F) x2	
TEVD2-900-1800-2050/1016	0.88 - 0.96							
	1.71 - 1.88							
	1.92 - 2.17	2	360	80	Vertical	87x100 Ø	SMA(F) x3	
7EVD2-900-5850/1091	0.88 - 0.96	1						
	1.71 - 1.88	2						
	1.92 - 2.17	2						
	2.40 - 2.50	2						
	5.25 - 5.85	2	360	100	Vertical	103x220 Ø	SMA(F) x7	
DEVD2-900V-1800V-502-D1/1003	0.88 - 0.96	0						
	1.71 - 1.88	2	360	75	Vertical	87x100 Ø	N(F) 0.3m cable x2	
DEVD2-900V-1800V-502-D2/1004	0.88 - 0.96	0						
	1.71 - 1.88	2	360	75	Vertical	87x100 Ø	SMA(F) x2	
DEVD2-1800V-2050V/766	1.71 - 1.88							
	1.92 - 2.17	2	360	80	Vertical	87x100 Ø	SMA(F) x2	
OA3-2.4-5.4DS/1833	2.40 - 2.50							
	5.15 - 5.725	0	360	70	Dual ±45°	93x100 Ø	RP SMA(M) 1m cable x4	▲
DOA-2.4V-3.4V-4.7V/1869	2.30 - 3.50	2.0	360	70	Vertical	584x34 Ø	N(M) 90° 0.508m cable	▲
	4.40 - 5.00	6.5	360	23	Vertical		N(M) 90° 0.254m cable	



Catalogue

Group 2 - 1GHz to 2GHz

Omni

Model	Frequency GHz	Gain dBi	Beamwidth az°	el°	Polarisation	Dimensions mm	Connector/Cable	Photo
-------	------------------	-------------	------------------	-----	--------------	------------------	-----------------	-------

HEMI OMNI

*All Hemi Omni Antennas feature 360° Azimuth. Elevation measurements are cuts at various positions in the radiation pattern.

DHOA2-9-18R-D1/1151	0.87 - 0.96 1.71 - 1.88	4.5 4	360 360	105 140	Right Circular	311x165x121	SMA(F) x2	▲
HOA2-1090R/050	1.08 - 1.10	3	360	180	Right Circular	367x79 Ø	N(F)	
HOA3-15L/828	1.38 - 1.71	3	360	150	Left Circular	189x75 Ø	N(F)	
HOA3-15R/172	1.38 - 1.71	3	360	150	Right Circular	189x75 Ø	N(F)	
HOA3-15R-SMA/514	1.42 - 1.55	2	360	150	Right Circular	203x75 Ø	SMA(F)	
HOA2-15RL/980	1.45 - 1.50	4	360	150	Dual Circular	79x100 Ø	SMA(F) x2	
HOA3-1.5RL/1436	1.52 - 1.56	2.5	360	180	Dual Circular	86x108 Ø	N(F) x2	▲
HOA2-15R-701/364	1.52 - 1.58	3	360	160	Right Circular	123x132 Ø	TNC(F)	▲
HOA2-15R/872	1.52 - 1.59	2	360	160	Right Circular	203x75 Ø	SMA(F)	
HOA2-1.6L/9801	1.52 - 1.66	2.5	360	150	Left Circular	85x100 Ø	SMA(F)	▲
HOA2-1.6L-GPS-GSM/1670	1.52 - 1.66	2 to 4	360	163	Left Circular	107x110 Ø	TNC(F) x3	▲
HOA2-1.6RL/9802	1.52 - 1.66	2.5	360	155	Dual Circular	86x85 Ø	SMA(F) x2	▲

DHOA2-9-18R-D1/1151 HOA3-1.5RL/1436 HOA2-15R-701/364 HOA2-1.6L/9801 HOA2-1.6L-GPS-GSM/1670 HOA4-1.6RL/9802



HOA2-1.6L/1404	1.52 - 1.66	3	360	150	Left Circular	103x100 Ø	SMA(M) 2.5m cable	▲
HOA2-IR/1698	1.616 - 1.6265	2	360	170	Right Circular	107x83 Ø	TNC(F)	▲
HOA2-159L-GPS/1486	Sat 1.52 - 1.66 GPS 1.56 - 1.59	2 30	360	163 160	Left Circular Right Circular	107x110 Ø	TNC(F) x2	▲
HOA2-159L-GPS/1577	Sat 1.52 - 1.66 GPS 1.56 - 1.59	2 2	360	150 150	Left Circular Right Circular	127x78 Ø	TNC(F) x2	▲
HOA2-159L-GPS/1548	Sat 1.52 - 1.66 GPS 1.56 - 1.59	4 30	360	160 160	Left Circular Right Circular	127x78 Ø	TNC(F) x2	▲

HOA2-1.6L/1404 HOA2-IR/1698 HOA2-159L-GPS/1486 HOA2-159L-GPS/1577 HOA2-159L-GPS/1548



PSA75301R/170



Group 3 - 2GHz to 3GHz

Directional

Model	Frequency GHz	Gain dBi	Beamwidth az°	Beamwidth el°	Polarisation	Dimensions mm	Connector/Cable	Photo
-------	------------------	-------------	------------------	------------------	--------------	------------------	-----------------	-------

DIRECTIONAL

DIRECTIONAL - SINGLE BAND

UWBA15300/1221	0.15 - 3.00	Request datasheet			Right Circular	705x671x37	N(F)	▲
PSA7530L/1147	0.50 - 3.00	1 (0.5) 4 to 6 (1-3)			Left Circular	57x246 Ø	SMA(F) 90°	
PSA75301R/170	0.50 - 3.00	1 (0.5) 4 to 6 (1-3)			Right Circular	57x246 Ø	SMA(F) 90°	above
PSA-50200-LP/1211	0.50 - 3.00	8			Right Circular	490x365x30	N(F)	▲
PSA-50200-LP/1421	0.50 - 3.00	8			Right Circular	490x365x31	N(F)	

UWBA15300/1221	PSA-50200-LP/1211	BDPSA-50800-D2/1160	BDFPA-0.6-4.0-RL/1313	PSA-8025R/707	FPA3-0.8-6.0R/1329

BDPSA5-50800-D2/1160	0.50 - 8.00	5	80	70	Circular	488x356x22	SMA(F) x2	▲
BDFPA-0.6-4.0-RL/1313	0.60 - 4.00	4.5	75	75	Circular	280x227x50	N(F) 1m cable	▲
FPA-0.6-6.0R/1562	0.60 - 6.00	1 to 6	70	70	Circular	50x219 Ø	N(F)	
PSA-8025R/707	0.80 - 2.50	4.5 to 8	65	65	Right Circular	48x220 Ø	N(F)	▲
FPA3-0.8-6.0R/1329	0.80 - 6.00	4.5	80	80	Right Circular	50X219 Ø	N(F)	▲
FPA3-0.8-6.0L/1812	0.80 - 6.00	4.5	80	80	Left Circular	50x219 Ø	N(F)	▲
PSA10401L/1169	1.00 - 4.00	4 to 6	90	90	Left Circular	42x150 Ø	N(F)	
PSA1040R/1366	1.00 - 4.00	-5 to +7.5	75	75	Right Circular	80x100 Ø	SMA(F)	
PSA10401R/643	1.00 - 4.00	4 to 6	90	90	Right Circular	76x150 Ø	N(F)	
FPA12-2.1V/1924	1.90 - 2.30	13.5	35	35	Vertical	240x240x29	N(F)	
LPA7-2.1R/1710	1.90 - 2.30	7	75	75	Right Circular	17x122 Ø	N(F)	
LPA7-21R/1388	1.90 - 2.30	7	75	75	Right Circular	17x121 Ø	SMA(F)	▲
LPA7-21R/422	1.90 - 2.30	7.7	78	70	Right Circular	17x121 Ø	SMA(F)	▲
FPA7-2.0DS/1652	1.92 - 2.17	7.5	65	65	Dual slant ±45°	99x99x15	SMA() 90° 0.3m cable x2	p44
FPA9-2.0V/9003	1.92 - 2.17	8.6	70	60	Vertical	22x132 Ø	SMA(F)	
FPA7-2.0DS/1750	1.92 - 2.175	6	65	65	Dual slant ±45°	99x99x15	QMA x2	▲
FPA7-2.0DS/1824	1.92 - 2.175	6	65	65	Dual slant ±45°	99x99x15	QMA 90° x2	
FPA7-2.0DS/1825	1.92 - 2.175	6	65	65	Dual slant ±45°	99x99x15	QMA x2	
DLPA7-2050-DS45/1107	1.92 - 2.175	7.5	65	65	Dual slant ±45°	100x100x9	SMA(M) 90°x2	▲
LPA7-2050V/912	1.92 - 2.175	7.8	70	60	Vertical	22x132 Ø	SMA(M) 0.5m cable	▲

FPA3-0.8-6.0L/1812	LPA7-21R/1388	LPA7-21R/422	FPA7-2.0DS/1750	DLPA7-2050-DS45/1107	LPA7-2050V/912

Catalogue

Group 3 - 2GHz to 3GHz

Directional



Model	Frequency GHz	Gain dBi	Beamwidth az°	Beamwidth el°	Polarisation	Dimensions mm	Connector/Cable	Photo
FPA13-2050R/1056	1.99 - 2.11	10	50	40	Right Circular	195x163x11	SMA(F)	▲
DPA3-2100R/1125 bodyworn	2.00 - 2.20	3	65	65	Right Circular	17x77 Ø	SMA(M) 90° + cables	above
FPA13-21VH/1094	2.00 - 2.25	13	32	32	Dual V&H	242x242x16	SMA(F) x2	▲
FPA13-21VH/1309	2.00 - 2.25	13	32	32	Dual V&H	242x242x19	N(F) x2	▲
PSA0218L/1501	2.00 - 18.00	0 to -2	75	75	Left Circular	45x56 Ø	SMA(F)	
PSA0218R/1142	2.00 - 18.00	0 to -2	75	75	Right Circular	40x52 Ø	SMA(F)	▲
PSA0218L/1276	2.00 - 18.00	-1(2-4) 2(4-18)	75	75	Left Circular	39x62 Ø	SMA(F)	
PSA0218R/1277	2.00 - 18.00	-1(2-4) 2(4-18)	75	75	Right Circular	65x68 Ø	SMA(F)	▲
PSA0218R/1278	2.00 - 18.00	-1(2-4) 2(4-18)	75	75	Right Circular	39x62 Ø	SMA(F)	▲
PSA0218L/1084	2.00 - 18.00	-1(2-4) 2(4-18)	75	75	Left Circular	65x68 Ø	SMA(F)	
PSA0218L/1361	2.00 - 18.00	-4(2-4) 2(6-18)	75	75	Left Circular	51x61 Ø	N(F)	
PSA0218R/1360	2.00 - 18.00	-4(2-4) 2(6-18)	75	75	Right Circular	51x61 Ø	SMA(F)	
FPA13-2050R/1056	FPA13-21VH/1094	FPA13-21VH/1309	PSA0218R/1142	PSA0218R/1277	PSA0218R/1278			
PSA0218L/1333	2.00 - 18.00	-4(2-4) 2(4-18)	75	75	Left Circular	51x61 Ø	SMA(F)	▲
PSA0218R/1362	2.00 - 18.00	-4(2-4) 2(6-18)	75	75	Right Circular	51x61 Ø	N(F)	
FPA13-2250R-N1/465	2.05 - 2.25	11	40	40	Right Circular	195x163x14	SMA(F)	
FPA13-22L-D2/1383	2.05 - 2.35	13	40	40	Left Circular	195x163x13	SMA(F)	▲
FPA13-22R-D2/198	2.05 - 2.35	12	48	44	Right Circular	163x195x13	SMA(F)	
FPA13-22R/219	2.05 - 2.35	13	40	40	Right Circular	203x170x25	N(F)	
FPA13-22VH/1449	2.10 - 2.30	14	30	30	Dual V&H	225x225x13	SMA(F) x2	
FPA13-22VH/1218	2.10 - 2.30	14	30	30	Dual V&H	225x225x13	SMA(F) x2	
FPA16-2.2L/1305	2.10 - 2.30	16.8	24	25	Left Circular	330x330x20	N(F)	
FPA17-2.2V/1371	2.10 - 2.30	16.9	24	23	Vertical	330x330x28	TNC(F)	▲
FPA18-22VH/1156	2.10 - 2.30	18	16	16	Dual V&H	480x480x11	SMA(F) x2	▲
PSA0218L/1333	FPA13-22L-D2/1383	FPA17-2.2V/1371	FPA18-22VH/1156	LPA7-23L/686	LPA7X-23R/1011			
FPA18-2.2V/1802	2.10 - 2.40	18	20	20	Vertical	367x367x15	N(F)	
LPA7-23R/685	2.10 - 2.50	6 to 8	80	80	Right Circular	13x84 Ø	SMA(F)	
LPA7-23L/686	2.10 - 2.50	7	80	80	Left Circular	13x84 Ø	SMA(F)	▲
LPA7X-23R/1011	2.10 - 2.50	5	80	80	Right Circular	25x97 Ø	N(F)	▲
LPA7-22R-D2/940	2.20 - 2.30	7	80	80	Right Circular	15x84 Ø	SMA(F)	
LPA7-22R/328	2.20 - 2.30	8.8	65	65	Right Circular	15x104 Ø	SMA(F)	above
FPA13-2.2R/1533	2.20 - 2.35	13	40	40	Right Circular	195x163x13	N(F)	above
FPA16-2.3R/1571	2.20 - 2.30	16.5	23	23.5	Right Circular	330x330x28	N(F)	above
FPA13-22L/657	2.20 - 2.35	13	40	40	Left Circular	195x163x14	SMA(F)	

Group 3 - 2GHz to 3GHz

Directional

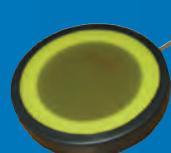
PA6-2.2V/1818



FPA8-2.3V/1601



PA6-2.3V/1600



LPA7-25R/1230



Model	Frequency GHz	Gain dBi	Beamwidth az°	Beamwidth el°	Polarisation	Dimensions mm	Connector/Cable	Photo
FPA13-22R/256	2.20 - 2.35	13	40	40	Right Circular	195x163x14	SMA(F)	
PA6-2.2V/1818 bodyworn	2.20 - 2.40	7	75	65	Vertical	9x100 Ø	SMA(M) 0.44m cable	above
FPA8-2.3V/1601	2.20 - 2.40	8.4	71	66	Vertical	100x100x14	SMA(F)	above
FPA17-2300R/1231	2.20 - 2.40	17.25	22.5	22.5	Right Circular	330x330x28	TNC(F)	▲
PA6-2.3V/1600	2.25 - 2.35	8	84	66	Vertical	13x80 Ø	SMA(M) 0.43m cable	above
DPA3-2.3V/1611 bodyworn	2.28 - 2.55	5	66.5	79	Vertical	13x79 Ø	SMA(M) 0.51m cable	▲
FPA13-2450-D1/534	2.30 - 2.45	13	40	40	Vertical	203x170x25	N(F)	▲
FPA9-2.4V/9210	2.30 - 2.50	8.8	67	60	Vertical	22x132 Ø	SMA(F)	▲
FPA13-2450V/632	2.30 - 2.60	13	40	40	Vertical	195x163x13	SMA(F)	▲
FPA13-24L-D4/894	2.30 - 2.60	13	40	40	Left Circular	195x163x13	N(F)	
FPA13-24R-D2/193	2.30 - 2.60	13	40	40	Right Circular	195x163x13	SMA(F)	
FPA13-24R-D3/241	2.30 - 2.60	13	40	40	Right Circular	195x163x13	SMA(F)	
FPA13-24R-D4/243	2.30 - 2.60	13	40	40	Right Circular	195x163x13	N(F)	▲
FPA17-2300R/1231								
DPA2-2.3V/1611								
FPA13-2450-D1/534								
FPA9-2.4V/9210								
FPA13-2450V/632								
FPA13-24R-D4/243								
FPA16-24R/577	2.30 - 2.60	16	20	40	Right Circular	368x178x13	SMA(F)	▲
FPA19-24L/822	2.30 - 2.60	19	18	18	Left Circular	367x367x15	N(F)	
FPA19-24R-D2/758	2.30 - 2.60	19	18	18	Right Circular	367x367x15	N(F)	
FPA19-24R/179	2.30 - 2.60	19	18	18	Right Circular	367x367x15	N(F)	▲
LPA7X-25R/861	2.30 - 2.70	7.7	70	70	Right Circular	26x97 Ø	N(F)	
FPA7-2.5R/1886	2.30 - 2.70	7	80	80	Right Circular	15x84 Ø	TNC(F)	▲
LPA7-25L/690	2.30 - 2.70	7	80	80	Left Circular	15x84 Ø	SMA(F)	
LPA7-25R/022	2.30 - 2.70	7	80	80	Right Circular	15x84 Ø	SMA(F)	▲
LPA7-25R/1342	2.30 - 2.70	7	80	80	Right Circular	15x84 Ø	SMA(F) nickel plated	
LPA7X-24R-501/197	2.30 - 2.70	7	80	80	Right Circular	26x97 Ø	N(F)	
FPA16-24R/577								
FPA19-24R/179								
FPA7-2.5R/1886								
LPA7-25R/022								
LPA7X-25R/046								
LPA7X-25R/046	2.30 - 2.70	7	80	80	Right Circular	26x97 Ø	N(F)	▲
FPA7-25R/1847	2.30 - 2.70	8	75	80	Right Circular	15x84 Ø	SMA(F)	▲
LPA7-25R/1230	2.30 - 2.70	8	75	80	Right Circular	15x84 Ø	N(F)	above
PA5-2350R-D1/977	2.33 - 2.37	5	80	80	Right Circular	80x65x8	SMA(M) 0.25m cable	page 60
PA5-2350R/168	2.33 - 2.37	5	90	90	Right Circular	80x65x2	SMA(F)	
PA5-2340V/461	2.332 - 2.345	5	90	90	Vertical	80x65x2	SMA(F)	
DPA1-2.3V/1610 bodyworn	2.34 - 2.36	0.5	90	90	Vertical	4x60 Ø	SMA(M) + cables	page 60
PA4-2.3V/1599	2.34 - 2.36	4	90	90	Vertical	2x60 Ø	SMA(M) 0.43m cable	

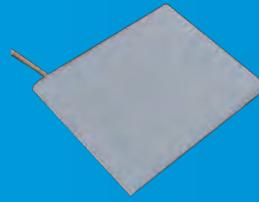
Catalogue

Group 3 - 2GHz to 3GHz

Directional

PA5-2350R-D1/977

DPA1-2.3V/1610



Model	Frequency GHz	Gain dBi	Beamwidth az°	Beamwidth el°	Polarisation	Dimensions mm	Connector/Cable	Photo
LPA7-2.4V/1273	2.34 - 2.48	8.6	73	61	Vertical	15x84 Ø	SMA(F)	▲
PA5-2370L/819	2.35 - 2.39	5	90	90	Left Circular	80x75x11	SMA(F)	
PA5-2370R/623	2.35 - 2.39	5	90	90	Right Circular	80x75x11	SMA(F)	
FPA13-24VH-D1/125	2.35 - 2.55	13	40	40	Dual V&H	159x159x12	SMA(F) x2	▲
FPA13-24VH-D2/433	2.35 - 2.55	13	40	40	Dual V&H	159x159x12	SMA(F) x2	
FPA19-24V/163	2.35 - 2.55	19	18	18	Vertical	367x367x15	N(F)	
FPA13-24L/699	2.35 - 2.60	13	40	40	Left Circular	203x170x24	N(F)	▲
FPA13-24R/044	2.35 - 2.60	13	40	40	Right Circular	203x170x24	N(F)	▲
WAA1-2355R/1008	2.355	1	360	100	Right Circular	80x96 Ø	SMA(F)	▲
PA3-2460-DS45/860	2.40 - 2.48	3	67	67	Dual ±45°	22x132 Ø	RPBNC 4m cable x2	▲
FPA19-2460-502/511	2.40 - 2.50	18	20	20	Right Circular	12x443 Ø	RPTNC 1m cable	▲
FPA19-2460R-NF/797	2.40 - 2.50	18	20	20	Right Circular	12x403 Ø	N(F)	
FPA19-2460R-SMA/790	2.40 - 2.50	17.6	20	19	Right Circular	14x400 Ø	SMA(F)	
LPA7-2.4V/1273	FPA13-24VH-D1/125	FPA13-24L/699	FPA13-24R/044	WAA1-2355R/1008	PA3-2460-DS45/860			
FPA19-2460R-503/545	2.40 - 2.50	18	20	20	Right Circular	12x443 Ø	N(F) 1m cable	
DLPA7-X-24RL/189	2.40 - 2.65	7	90	90	Dual Circular	30x97 Ø	N(F) x2	▲
FPA18-2.6L/1735	2.40 - 2.70	17.7	20	20	Left Circular	300x300x12	N(F)	▲
FPA18-2.6R/1707	2.40 - 2.70	17.7	20	20	Right Circular	300x300x12	N(F)	
FPA19-25R/120	2.40 - 2.70	19	18	18	Right Circular	367x367x15	N(F)	
FPA13-26L/692	2.40 - 2.70	13	40	40	Left Circular	203x170x25	N(F)	
FPA13-26R/091	2.40 - 2.70	13	40	40	Right Circular	203x170x24	N(F)	
FPA19-25L/691	2.40 - 2.70	19	18	18	Left Circular	367x367x15	N(F)	
PA5-2420L/886	2.42 ±20MHz	5	100	100	Left Circular	80x65x2	SMA(F)	
PA5-2420R/264	2.42 ±20MHz	5	100	100	Right Circular	80x65x2	SMA(F)	
PA3-2460-DS45/649	2.42 - 2.48	3	67	67	Dual ±45°	22x132 Ø	RPBNC 2m cable x2	
PA6-2460-DS45/1364	2.42 - 2.48	6	67	67	Dual ±45°	22x133 Ø	RP SMA(M) 1m cable x2	▲
PA6-2460-DS45-D1/1021	2.42 - 2.48	6	67	67	Dual ±45°	22x132 Ø	RPBNC 1m cable x2	▲
PA6-2460-DS45/650	2.42 - 2.48	6	67	67	Dual ±45°	22x132 Ø	RPBNC 1m cable x2	
DPA1-2467R-AQ/910	2.45 - 2.484	1.7	85	83	Right Circular	7x75 Ø	SMA(M) 0.33m cables x2	
PA5-2460R/133	2.46 ±20MHz	5	100	100	Right Circular	80x65x2	SMA(F)	
PA4-26V/967	2.50 - 2.68	5	70	55	Vertical	22x132 Ø	SMA(M) 4m cable	
FPA19-26VH/641	2.50 - 2.70	18	20	20	Dual V&H	300x300x11	SMA(F)	
LPA7-29V/1149	2.70 - 3.00	8	75	70	Vertical	12x102 Ø	SMA(F)	▲
FPA19-2460-502/511	DLPA7X-24RL/189	FPA18-2.6L/1735	PA6-2460-DS45/1364	PA6-2460-DS45-D1/1021	LPA7-29V/1149			

Group 3 - 2GHz to 3GHz

Directional

Model	Frequency GHz	Gain dBi	Beamwidth az°	Beamwidth el°	Polarisation	Dimensions mm	Connector/Cable	Photo
-------	------------------	-------------	------------------	------------------	--------------	------------------	-----------------	-------

DIRECTIONAL - MULTIBAND

LPA7-TRI-FL-D1/768	0.87 - 0.96 1.71 - 1.88 1.92 - 2.175	6	80	80	Vertical	339x225x25	SMA(M) 1m LSZHJ cable x3	
FPA6-TRI/1671	0.88 - 0.96 1.71 - 1.88 1.92 - 2.175	6	79	5	Vertical	339x225x25	SMA(F) 2.75m LSHJ cables x3	▲
LPA6-TRI-FL-D4/957	0.88 - 0.96 1.71 - 1.88 1.92 - 2.175	6	80	80	Vertical	339x225x25	SMA(F) 2m LSHJ cable x3	▲
FPA6-TRI/1671	LPA6-TRI-FL-D4/957	LPA7-TRI-COM/684	LPA7-TRI-SMA/651	LPA7-TRI-FL-D2/1005	FPA7-TRI/1589			
								
LPA7-TRI-COM/684	0.88 - 0.96 1.71 - 1.88 1.92 - 2.175	7	75	60	Vertical	339x225x42	SMA(F)	▲
LPA7-TRI-FL-D3/956	0.88 - 0.96 1.71 - 1.88 1.92 - 2.175	7	80	80	Vertical	339x225x25	SMA(F) 1m LSZHJ cable x3	
LPA7-TRI-SMA/651	0.88 - 0.96 1.71 - 1.88 1.92 - 2.175	6	80	80	Vertical	339x225x25	SMA(F) x3	▲
LPA7-TRI-FL-D2/1005	0.88 - 0.96 1.71 - 1.88 1.92 - 2.175	6	80	80	Vertical	339x225x25	N(F) 0.3m cable LSZHJ x3	▲
LPA6-TRI-FL-D2/955	0.88 - 0.96 1.71 - 1.88 1.92 - 2.175	6	80	80	Vertical	339x225x25	SMA(M) 2m LSZHJ cable x3	
LPA7-TRI-FL/652	0.88 - 0.96 1.71 - 1.88 1.92 - 2.175	6	80	80	Vertical	339x225x25	SMA(M) 0.3m LSZHJ cable x3	
FPA7-TRI-R/1589	0.88 - 0.96 1.71 - 1.88 1.92 - 2.175	8.5	70	60	Right Circular	339x225x25	N(F) x3	▲
FPA7-TRI-R/1873	0.88 - 0.96 1.71 - 1.88 1.92 - 2.175	8.5	70	60	Right Circular	339x225x25	N(F) x3	
FPA7-TRI-R/1695	0.88 - 0.98 1.71 - 1.88 1.92 - 2.175	8.5	70	60	Right Circular	358x246x25	N(F) x3	
LPA7-TRI-DS2450-DS5500/1090	0.88 - 0.96 1.71 - 1.88 1.92 - 2.175 2.40 - 2.50 5.25 - 5.85	7	60	60	Vertical Vertical Vertical Dual ±45° Dual ±45°	358x246x25 339x225x42	N(F) x3 SMA(F) x7	

Catalogue

Group 3 - 2GHz to 3GHz

Directional

Model	Frequency GHz	Gain dBi	Beamwidth az°	Beamwidth el°	Polarisation	Dimensions mm	Connector/Cable	Photo
FPA7-TRI-R/1873	0.88 - 0.96 1.71 - 1.88 1.92 - 2.175	8.5	70	60	Right Circular	339x225x	N(F) x3	▲
4DLPA7-13V-29V/1417	1.25 - 1.35 2.70 - 3.10	8.5	78.5	65	Vertical	650x225x20	SMA(F) x8	▲
FPA13-1800V-2050V/767	1.71 - 1.88 1.92 - 2.17	12	35	35	Vertical	464x250x25	SMA(M) 1m cable x2	▲
DLPA7-2.5-5.5DS/1315	2.40 - 2.50 5.15 - 5.85	7	60	60	Dual ±45°	37x132 Ø	SMA(F) x4	▲
DLPA6-2.5-5.5DS/1314	2.40 - 2.50 5.15 - 5.85	8	60	60	Dual ±45°	55x161 Ø	N(M) 0.5m cable x4	▲
FPA8-2.3-5.9R/1893	2.40 - 2.50 5.10 - 5.90	7.5	88	72		168x85x15	N(F) x2	
FPA7-2.3-5.9R/1894	2.40 - 2.50 5.10 - 5.90	6, 7	70	70	Right Circular	41x 106 Ø	N(F)	▲
DLPA6-2.5-5.5DS /1722	2.40 - 2.50 5.15 - 5.85	7	60	60	Dual ±45°	55x161 Ø	N(M) 1m cable x4	



DIRECTIONAL - HELIX

AMH12-2.1R/1188	1.70 - 2.50	10.7	35	35	Right Circular	381x127 Ø	TNC(F)	▲
AMHP14-2150R/453	2.00 - 2.30	14	40	40	Right Circular	482x155 Ø	N(F)	▲
AMHH12-24R-SMA/904	2.20 - 2.70	12 to 15	40	40	Right Circular	366x156 Ø	SMA(F)	
AMHH12-24R/115	2.20 - 2.70	12 to 15	40	40	Right Circular	357x150 Ø	N(F)	
AMHS17-25R-D1/745	2.20 - 2.70	14 to 17	30	40	Right Circular	635x159 Ø	N(F)	
AMHS17-25R/023	2.20 - 2.70	14 to 17	30	40	Right Circular	635x159 Ø	N(F)	▲
AMHP12-24R/118	2.30 - 2.70	12	40	40	Right Circular	408x152 Ø	N(F)	▲

AMH12-2.1R/1188 AMHP14-2150R/453 AMHS17-25R/023 AMHP12-24R/118



HDA-1800-2050/769 blade SA17-22V/366



Group 3 - 2GHz to 3GHz

Sector

Model	Frequency GHz	Gain dBi	Beamwidth az°	Beamwidth el°	Polarisation	Dimensions mm	Connector/Cable	Photo
-------	------------------	-------------	------------------	------------------	--------------	------------------	-----------------	-------

SECTOR

SA2-120-1940V/1027	1.71 - 2.17	4	140	80	Vertical	114x44x71	N(F) 1m cable	▲
HDA-1.9V/1797 blade	1.71 - 2.17	0 to 1	Request datasheet		Vertical	35x45	SMA(M)	
HDA-1800-2050/769 blade	1.71 - 1.88							
	1.92 - 2.175	2	140	70	Dual V&H	180x46x43	SMA(M) 1m cable x2	above
SA13-2050V/496	1.92 - 2.175	12	70	20	Vertical	399x140x14	N(F) 1.2m cable	▲
HDA-2050-D2/1030 blade	1.92 - 2.175	4.5	150	80	Vertical	90x46x44	SMA(M) 0.5m cable	
SA1-120-1940V/1027	SA13-2050V/496	HDA-2050/913 blade	SA12-180-21V/1061	SA13-2125V/1112	SA15-90-21H/1065			
								
HDA-2050/913 blade	1.92 - 2.175	4.5	150	80	Vertical	90x46x44	SMA(M) 0.5m cable	▲
SA12-180-21V/1061	2.00 - 2.30	11	180	7	Vertical	1308x229x98	N(F)	▲
SA13-120-22R/610	2.00 - 2.30	13	120	10	Right Circular	840x159x79	716(F)	
SA13-2125V/1112	2.00 - 2.30	12.5	66	21	Vertical	528x150x14	N(F)	▲
SA14-120-2150V/946	2.00 - 2.30	14	120	7	Vertical	1383x96 Ø	N(F)	
SA15-90-21H/1065	2.00 - 2.30	15	90	6	Horizontal	1228x156 Ø	N(F)	▲
SA15-90-21V/1066	2.00 - 2.30	15	90	7	Vertical	1308x96 Ø	N(F)	
SA17-22H/438	2.00 - 2.30	17	65	8	Horizontal	1140x150x13	N(F)	
SA17-22V/555	2.00 - 2.30	17	65	8	Vertical	1140x150x14	N(F)	▲
SA10-90-2.2V/1517	2.00 - 2.40	9.5	90	34	Vertical	220x120x35	SMA(M) 0.15m cable	
SA11-100-2.4V/1633	2.00 - 2.70	11.5	100	22	Vertical	474x98 Ø	TNC(F)	
SA17-22V/555	SA11-120-2.4V/1734	SA12-110-2.4V/1480	SA17-60-2.3R/1461	SA13-2370-DS45/867	DHDA-2.4V/1448			
								
SA12-110-2.4V/1734	2.00 - 2.70	12	112	17	Vertical	569x98 Ø	TNC(F)	▲
SA12-110-2.4V/1480	2.00 - 2.70	12	112	17	Vertical	569x98 Ø	TNC(F)	▲
SA9-210-2.4V/1579	2.00 - 2.70	9	210	17	Vertical	569x98 Ø	TNC(F)	
SA13-2.2L/1853	2.10 - 2.30	13	80	20	Left Circular	320x88x13	N(F)	
SA13-22R/205	2.10 - 2.30	11.5	80	20	Right Circular	320x88x13	N(F)	
SA17-22V/366	2.10 - 2.30	17	65	8	Vertical	1140x150x14	N(F)	above
SA10-23R/645	2.15 - 2.40	9	70	40	Right Circular	200x85x15	SMA(F)	
SA17-60-2.3R/1461	2.20 - 2.40	15.5	57	10	Right Circular	795x130x20	N(F)	▲
HDA-2.4V/1689 blade	2.20 - 2.70	3.4	169	85	Vertical	82x38x47	SMA(M) on 0.3m cable	
SA23-08-20-23R/475	2.25 - 2.35	21	20	8	Right Circular	1064x435x19	SMA(F)	
SA13-2370-DS45/867	2.28 - 2.46	13	70	20	Dual ±45°	330x88x13	SMA(F) x2	▲
DHDA-2.4V/1448 blade	2.28 - 2.55	1	160	78.5	Vertical	82x47x37	SMA(M) 0.4m cable	▲

Catalogue

Group 3 - 2GHz to 3GHz

Sector



Model	Frequency GHz	Gain dBi	Beamwidth az°	el°	Polarisation	Dimensions mm	Connector/Cable	Photo
HDA-2.4V/1423 blade	2.28 - 2.55	4.5	160	78.5	Vertical	82x47x37	SMA(M) 0.25m cable	above
SA16-23R-D1/549	2.30 - 2.40	16	60	10	Right Circular	732x140x10	N(F)	
SA16-23R/513	2.30 - 2.40	16	60	10	Right Circular	732x140x10	SMA(F)	
SA17-24V/556	2.30 - 2.48	17	70	8	Vertical	1140x150x14	N(F)	▲
SA15-60-2.4V/1702	2.30 - 2.50	14.7	68	11.6	Vertical	650x200x100	N(F)	
SA11-24R/411	2.30 - 2.50	11	35	72	Right Circular	199x85x35	SMA(F)	
SA12-180-24V/1046	2.30 - 2.50	12	180	7	Vertical	1168x210x98	N(F)	▲
SA13-60-2.4L/1302	2.30 - 2.50	14.2	60	17	Left Circular	400x150x12	SMA(F)	
SA13-24L/705	2.30 - 2.55	13	80	20	Left Circular	320x88x13	N(F)	
SA13-24R/200	2.30 - 2.55	13	80	20	Right Circular	320x88x13	N(F)	▲
Vector SA15-120-2.5V/9203	2.30 - 2.70	15.4	120	8	Vertical	1100x200x101	N(F)	
Vector SA17-60-2.5V/9213	2.30 - 2.70	17	64	8	Vertical	1100x200x101	N(F)	
SA10-80-24R/060	2.35 - 2.55	10	80	40	Right Circular	170x101x18	N(F)	
SA13-24V-D1/905	2.35 - 2.55	13	80	20	Vertical	320x88x13	N(F)	▲
SA13-24V/207	2.35 - 2.55	13	80	20	Vertical	320x88x13	N(F)	
SA14-2460R-NF/798	2.40 - 2.48	13	65	20	Right Circular	399x140x14	N(F)	
SA14-2460R-SMA/789	2.40 - 2.48	14.5	65	20	Right Circular	399x140x14	SMA(F)	▲
SA17-24V/556	SA12-180-24V/1046	SA13-24R/200	SA13-24V-D1/905			SA14-2460R-SMA/789	SA13-120-2450R/1031	
SA13-120-2450R/1031	2.40 - 2.50	12	150	10	Right Circular	840x159x80	N(F)	▲
SA14-24R-D1/969	2.40 - 2.50	13	65	20	Right Circular	399x139x14	SMA(M) 0.305m cable	▲
SA14-24R/410	2.40 - 2.50	13	65	20	Right Circular	399x139x14	SMA(M) 0.6m cable	
SA14-24R/521	2.40 - 2.50	13	65	20	Right Circular	399x139x14	N(F) 0.6m cable	▲
HDA-2460-SMA(M)/902 blade	2.40 - 2.50	2	120	120	Dual V&H	36x50 Ø	SMA(M) 1m cable	
HDA-2460/024 blade	2.40 - 2.50	2	120	120	Dual V&H	50x50 Ø	TNC(M) 1m cable	above
Vector SA15-90-2.5V/9202	2.40 - 2.70	15	90	10	Vertical	725x130x103	N(F)	▲
Vector SA16-60-2.5V/9201	2.40 - 2.70	16	60	10	Vertical	725x130x103	N(F)	▲
SA16-60-25V-D1/1115	2.40 - 2.70	16	60	10	Vertical	725x130x11	N(F)	
SA16-60-25V/858	2.40 - 2.70	16	60	10	Vertical	725x130x11	N(F)	▲
SA10-90-2.7V/1518	2.40 - 2.90	9.7	103	33	Vertical	220x120x35	SMA(M) 0.15m cable	
SA11-25R/1055	2.45 - 2.70	11	35	70	Right Circular	199x85x35	SMA(F)	
SA13-120-26R/600	2.50 - 2.70	11.5	120	10	Right Circular	840x159x80	716(F)	
SA13-120-26V/146	2.50 - 2.70	13	120	10	Vertical	767x80 Ø	N(F)	

SA14-24R-D1/969	SA14-24R/521	SA15-90-2.5V/9202 and SA16-60-2.5V/9201	SA16-60-25V/858

Group 3 - 2GHz to 3GHz

Sector

Model	Frequency GHz	Gain dBi	Beamwidth az°	Beamwidth el°	Polarisation	Dimensions mm	Connector/Cable	Photo
SA16-26R/599	2.50 - 2.70	16	65	12	Right Circular	630x115x10	N(F)	▲
SA17-26H/165	2.50 - 2.70	17	60	7	Horizontal	1062x100x17	N(F)	▲
SA17-60-26-DS45-DT4/1029	2.50 - 2.70	17	60	6	Dual ±45°	1135x113x12	N(F) x2	▲
SA17-26V/166	2.50 - 2.70	17	80	7	Vertical	1062x100x17	N(F)	▲

MULTI-SECTOR

MSA6-2.4V/1795	2.00 - 2.70	8 sector 8.5 overhead	140 65	35 65	Vertical Right Circular	300x156 Ø	SMA(F) x6	▲
DSA17-22V/522	2.02 - 2.28	17	65	8	Vertical	1143x334x14	N(F) x2	▲
MSA7-16-2350R/829	2.30 - 2.40	14 sector 6.5 overhead	70 60	10 53	Right Circular	813x231 Ø	N(F)	▲
MSA5-10-24R/389	2.30 - 2.50	10 sector 6 overhead	90 90	40 90	Right Circular	210x140 Ø	SMA(F) x5	▲
MSA5-24R-D1/672	2.30 - 2.50	12 sector 7 overhead	80 70	20 70	Right Circular	550x156 Ø	SMA(M) x5	▲
MSA4-24R/199	2.30 - 2.50	13	90	20	Right Circular	706x156 Ø	N(F)	▲
MSA5-24R/223	2.30 - 2.50	13 sector 7 overhead	80 80	20 80	Right Circular	706x156 Ø	N(F)	▲
MSA5-24L-ECS/1293	2.30 - 2.50	13 sector 7 overhead	90 80	20 80	Left Circular	583x156 Ø	-	▲
MSA5-24R-ECS/270	2.30 - 2.50	13 sector 7 overhead	90 80	20 80	Right Circular	706x156 Ø	-	▲
MSA5-24L-ECS/763	2.30 - 2.50	13 sector 7 overhead	90 80	20 80	Left Circular	707x156 Ø	-	▲
DSA17-24V/466	2.30 - 2.50	17	65	8	Vertical	1143x335x14	N(F) x2	▲
MSA5-2.4V/1681	2.30 - 2.55	12.5 sector 7 overhead	80 75.8	21 80.3	Vertical Right Circular	583x156 Ø	-	▲
SA7-QUAD-24R/284	2.30 - 2.68	7 sector	80	80	Right Circular	85x85x69	SMA(F) x4	▲
DSA11-6-2450R-701/563	2.40 - 2.50	11 Rx, 6 Tx	65 70	30 70	Right Circular	547x140x19	SMA(F), SMA(M) 0.5m cable	▲
DSA11-6-2450R-NF/723	2.40 - 2.50	11 Rx, 6 Tx	65 70	30 70	Right Circular	547x140x19	N(F) 0.5m cable	▲
MSA5-26L/117	2.48 - 2.68	13 sector 7 overhead	90 80	20 80	Left Circular	706x156 Ø	N(F)	▲
DSA16-26VH/640	2.50 - 2.70	15.5	65	55	Dual V&H	652x250x10	N(F) x4	▲
4SA12-26S45S45VS45/1063	2.50 - 2.70	12	75	20	Linear 2x +45°, 1x -45°, 1x Vertical	292x292x7	MCX jack x1, PCB fs x3	▲
4SA9-26S45S45VS45/1064	2.50 - 2.70	9	75	45	Linear 2x +45°, 1x -45°, 1x Vertical	292x146x7	MCX jack x1, PCB x3	▲



Catalogue

Group 3 - 2GHz to 3GHz

Omni

Model	Frequency GHz	Gain dBi	Beamwidth az°	Beamwidth el°	Polarisation	Dimensions mm	Connector/Cable	Photo
-------	------------------	-------------	------------------	------------------	--------------	------------------	-----------------	-------

OMNI

OMNI - SINGLE BAND

OA2-0.3-10.0V/1667	0.30 - 10.00	2	360	65	Vertical	306x162 Ø	N(F)	
OA2-0.3-10.0V/1668	0.30 - 10.00	2	360	65	Vertical	306x162 Ø	N(F)	
OA2-0.3-10.0V/1505	0.30 - 10.00	2	360	65	Vertical	305x161 Ø	N(F)	
OA2-0.8-6.0V/1665	0.80 - 6.00	2	360	75	Vertical	143x108 Ø	N(F)	
OA2-0.8-6.0V/1666	0.80 - 6.00	2	360	75	Vertical	143x108 Ø	N(F)	
XPO2V-0.8-6.0-GF/1441	0.80 - 6.00	2	360	75	Vertical	143x108 Ø	N(F)	page 96
XPO2V-0.8-6.0/1485	0.80 - 6.00	2	360	75	Vertical	143x79 Ø	N(F)	page 96
OA2-0.85-6.0V/1699	0.84 - 6.00	1	360	60	Vertical	170x60 Ø	N(F)	page 96
XPO2V-880-2175/1355	0.88 - 2.175	2.5	360	50	Vertical	221x50 Ø	N(F)	page 96
XPO2V-880-2175/1350	0.88 - 2.175	2.5	360	50	Vertical	345x36 Ø	N(F)	page 96
OA2-0.9-2.2V/1830	0.88 - 2.175	2	360	50	Vertical	262x31 Ø	QN(M)	page 96
OA2-0.8-2.2V/1726	0.88 - 2.175	2.5	360	50	Vertical	345x36 Ø	N(F)	
XPO2V-880-2175/1060	0.88 - 2.175	2.5	360	50	Vertical	221x50 Ø	N(F)	▲

XPO2V-880-2175/1060



OA4-1.7-2.5V/1810



FVD2-2.3/1550



SVD2-2000-NM/958



EVD2-2050/712



OA4-2.0V/1375



XPO2V-880-2175/1321

0.88 - 2.175

2.5

360

50

Vertical

221x50 Ø

N(F)

page 96

OA2-1.0-6.0V/1794

1.00 - 6.00

1

360

80

Vertical

213x80 Ø

N(F)

page 97

XPO2V-1.0-6.0/1442

1.00 - 6.00

2

360

70

Vertical

134x80 Ø

N(F)

page 97

XPO2V-1.0-6.0/1512

1.00 - 6.00

2

360

70

Vertical

134x80 Ø

N(F)

page 97

OA2-1.6-3.0V/1683

1.65 - 3.00

2

360

63

Vertical

184x13 Ø

TNC(F)

page 97

XPO2V-1650-3000/140

1.65 - 3.00

2

360

80

Vertical

256x25 Ø

N(F)

page 97

XPO2V-1650-3000/1354

1.65 - 3.00

2

360

80

Vertical

256x25 Ø

N(F)

page 97

XPO2V-1710-2175/1007

1.70 - 2.17

3.5

360

50

Vertical

147x26 Ø

N(F)

page 97

OA4-1.7-2.5V/1810

1.70 - 2.50

4

360

40

Vertical

256x50 Ø

N(F)

▲

OA2-1.7-6.0V/1624

1.70 - 6.00

2

360

70

Vertical

104x35 Ø

N(F)

page 97

FVD2-2.3/1550

1.80 - 3.60

2

360

65

Vertical

323x28 Ø

N(M)

▲

SVD2-2000-NM/958

1.90 - 2.10

2

360

80

Vertical

102x11 Ø

N(M)

▲

OA3-1.9-2.7L/1558

1.90 - 2.70

2

360

100

Left Circular

122x33 Ø

N(F)

page 97

RC03-19-27-D1/976

1.90 - 2.70

2

360

100

Right Circular

122x101 Ø

N(F)

page 97

RC03-19-27/592

1.90 - 2.70

3

360

60

Right Circular

121x100 Ø

N(F)

page 97

EVD2-2050/712

1.92 - 2.17

2

360

75

Vertical

87x100 Ø

SMA(F)

▲

SVD2-2050-SMA(M)/898

1.92 - 2.17

3.6

360

80

Vertical

117x11 Ø

SMA(M)

page 97

OA4-2.0V/1375

1.92 - 2.17

3.6

360

40

Vertical

307x25/75 Ø

N(F)

▲

OA4-2.0V/9006

1.92 - 2.17

4.5

360

36

Vertical

365x32

N(F)

page 54

OA7-2.0V/1376

1.92 - 2.17

6.3

360

21

Vertical

591x36/75 Ø

N(F)

page 54

OA7-2.0V/9009

1.92 - 2.17

6.3

360

21

Vertical

586x36 Ø

N(F)

page 54

EVD2-2050-UB/974

1.92 - 2.17

2

Request datasheet

Vertical

160x62 Ø

SMA(M) 2.5m cable

Group 3 - 2GHz to 3GHz

EVD2-2050-UBI/932 for mobile application



VOA7-2200/862 on test in the anechoic test chamber



Omni

Model	Frequency GHz	Gain dBi	Beamwidth az°	Beamwidth el°	Polarisation	Dimensions mm	Connector/Cable	Photo
EVD2-1920-2175/548	1.92 - 2.175	1 to 2	360	80	Vertical	180x26 Ø	N(F)	
EVD2-1920-2175-D1/1128	1.92 - 2.175	2	360	80	Vertical	150x29 Ø	N(F)	▲
EVD2-1920-2175-NM/669	1.92 - 2.175	1 to 2	360	80	Vertical	185x26 Ø	N(M)	
EVD2-2050-UBI/932	1.92 - 2.175	>0	360	80	Vertical	160x62 Ø	SMA(M) 1m cable	above
SBA-2.0/1418 blade	1.98 - 2.01	2	360	60	Vertical	97x50x41	MCX 90 100mm cable	
FVD2-2050/832	1.99 - 2.11	2	360	80	Vertical	650x22 Ø	N(F)	
SVD2-2100/868	2.00 - 2.19	2	360	80	Vertical	106x6 Ø	SMA(M)	▲
FVD2-2.1-NM/1474	2.00 - 2.20	2	360	80	Vertical	305x26 Ø	N(M)	▲
SVD2-2.1V/1586	2.00 - 2.25	2	360	80	Vertical	105x7 Ø	SMA(M)	▲
OA4-2.3V/1871	2.00 - 2.25	4	360	40	Vertical	310x75 Ø	N(F)	
VOA4-2150/1093	2.00 - 2.25	4	360	40	Vertical	380x36 Ø	N(F)	
VOA4-2150/1335	2.00 - 2.25	4	360	40	Vertical	380x36 Ø	N(F)	
XVO9-2150-D2/870	2.00 - 2.30	9.5	360	8	Vertical	1006x104 Ø	N(F)	
OA2-2.3V/1842	2.00 - 2.50	1.6	360	90	Vertical	87x14 Ø	SMA(M)	▲
SVD2-2.3V/1714	2.00 - 2.50	2	360	80	Vertical	103x16 Ø	SMA(M) 90°	
SVD2-2.3V/1779	2.00 - 2.50	2	360	80	Vertical	108x16 Ø	SMA(M)	▲
EVD2-1920-2175-D1/1128	SVD2-2100/868	FVD2-2.1-NM/1474	SVD2-2.1V/1586	OA2-2.3V/1842	SVD2-2.3V/1779			
SBA-2.3V/1470 blade	2.00 - 2.50	2	360	50	Vertical	89x30x3	SMA(F)	▲
SBA-2.5V/1739 blade	2.00 - 2.50	2	360	50	Vertical	89x30x3	SMA(F)	
XPO2V-2.0-18.0/1397	2.00 - 18.00	2	360	70	Vertical	104x39 Ø	N(F)	▲
XVO9-2150/708	2.02 - 2.28	9.5	360	8	Vertical	1006x106 Ø	N(F)	
VOA7-2170/667	2.07 - 2.28	6	360	20	Vertical	558x57 Ø	N(F)	
EVD2-2200/295	2.10 - 2.30	2	360	80	Vertical	185x26 Ø	N(F)	
SBA-2.3V/1470	XPO2V-2.0-18.0/1397	RCO10-2200/1099	OA2-2.3L/1676	OA4-2.3R/1697	RCO5-2250/203			
EVD2-2200-N(M)/1208	2.10 - 2.30	2	360	80	Vertical	190x26 Ø	N(M)	
RCO10-2200/1099	2.10 - 2.30	7	360	12	Right Circular	961x104 Ø	N(F)	▲
VOA7-2200/862	2.12 - 2.28	7	360	20	Vertical	575x36 Ø	N(F)	above
VOA7-2200/032	2.12 - 2.28	7	360	20	Vertical	575x36 Ø	N(F)	
OA2-2.3L/1676	2.155 - 2.405	1 to 2	360	90	Left Circular	119x80 Ø	N(F)	▲
OA4-2.3R/1697	2.20 - 2.30	4	360	40	Right Circular	245x104 Ø	QN(M)	▲
VOA4-2250-DTC/1220	2.20 - 2.30	4.4	360	44	Vertical	185x32 Ø	TNC(F)	
RCO5-2250/203	2.20 - 2.30	5	360	40	Right Circular	385x104 Ø	N(F)	▲

Catalogue

Group 3 - 2GHz to 3GHz

Omni



Model	Frequency GHz	Gain dBi	Beamwidth az°	Beamwidth el°	Polarisation	Dimensions mm	Connector/Cable	Photo
VOA10UT4-VOA4UT25-LPA5-2265/827	2.20 - 2.335	1=9.5, 2=4, 3=6	1=360 2=360 3=70	1=7.5 2=30 3=70	1=Vertical 2=Vertical 3-Right Circular	1505x150 Ø	N(F) x3	
(2-VOA4UT25)								
(3-LPA5)								
SVD2-2300/427	2.20 - 2.34	2	360	80	Vertical	103x11 Ø	SMA(M)	
SBA-2295/1299 blade	2.20 - 2.39	2	360	80	Vertical	90x30x3	SMA(F)	
EVD2-2.3V/1639	2.20 - 2.40	2	360	60	Vertical	160x45 Ø	N(F)	
EVD2-2.3/1406	2.20 - 2.40	2	360	80	Vertical	178x26 Ø	N(F)	
EVD2-2.4/1654	2.20 - 2.40	2	360	80	Vertical	159x45 Ø	N(F)	
FVD2-2.3/1472	2.20 - 2.40	2	360	80	Vertical	305x26 Ø	N(M)	
FVD2-2300-NM/1235	2.20 - 2.40	2	360	80	Vertical	456x26 Ø	N(M)	
SVD2-2300/1204	2.20 - 2.40	2	360	80	Vertical	109x11 Ø	SMA(M)	
SVD2-2300/427	SBA-2295/1299	EVD2-2.3/1406	EVD2-2.4/1654	FVD2-2300-NM/1235	SVD2-2300/1204			
OA4-2.3V/1453	2.20 - 2.40	4	360	40	Vertical	330x36 Ø	N(F)	
EVD2-2.4/1478	2.20 - 2.50	2	360	80	Vertical	190x26 Ø	N(M)	
OA9-2.3R-UT4/1507	2.20 - 2.50	8.6	360	11	Right Circular	891x104 Ø	N(F)	
LCO5-2300/1111	2.25 - 2.35	4	360	40	Left Circular	276x104 Ø	SMA(F)	
SVD2-2.3V/1588	2.25 - 2.50	2	360	80	Vertical	100x7 Ø	SMA(M)	
OA2-2.4V/1392	2.25 - 4.00	2	360	65	Vertical	185x32 Ø	TNC(F)	
LCO10-2350/720	2.27 - 2.43	10	360	10	Left Circular	885x104 Ø	N(F)	
LCO7-2350/1018	2.27 - 2.43	6	360	20	Left Circular	581x110 Ø	N(F)	
OA6-2.4R/1549	2.27 - 2.43	6	360	20	Right Circular	580x104 Ø	N(F)	
VOA10-2340/459	2.28 - 2.38	10	360	10	Vertical	1008x57 Ø	N(F)	
OA2-2.3V/1413	2.28 - 2.42	2	360	95	Vertical	135x27 Ø	N(M)	
OA4-2.3V/1453	EVD2-2.4/1478	SVD2-2.3V/1588	OA2-2.4V/1392	VOA10-2340/459	OA2-2.3V/1413			
OA6-2.4V/1720	2.28 - 2.55	6	360	21	Vertical	295x22 Ø	TNC(M)	above
OA4-2.5V/1369	2.28 - 2.70	4	360	40	Vertical	225x27 Ø	N(M)	above
OA4-2.5V/1542	2.28 - 2.70	4	360	40	Vertical	222x26 Ø	TNC(M)	above
OA4-2.4V/1653	2.295 - 2.555	4.3	360	40	Vertical	276x75 Ø	N(F)	above
OA4-2.4V/1653LDS	2.295 - 2.555	4.3	360	40	Vertical	276x75 Ø	N(F)	
EVD2-2.3V/1706	2.30 - 2.40	2	360	80	Vertical	200x26 Ø	N(F)	
VOA4-2350-GDT/1336	2.30 - 2.40	4.2	360	37	Vertical	260x90 Ø	N(F)	
RCO10-2350R-D1/814	2.30 - 2.40	8	360	12	Right Circular	885x104 Ø	N(F)	
RCO10-2350/233	2.30 - 2.40	8	360	12	Right Circular	891x104 Ø	N(F)	

FVD2-2.4V/1746



EVD2-2450-D3/1129



EVD2-2460-D1/926



Group 3 - 2GHz to 3GHz

Omni

Model	Frequency GHz	Gain dBi	Beamwidth az°	Beamwidth el°	Polarisation	Dimensions mm	Connector/Cable	Photo
-------	------------------	-------------	------------------	------------------	--------------	------------------	-----------------	-------

FVD2-2.4V/1746	2.30 - 2.50	2	360	80	Vertical	305x26 Ø	N(M)	above
SVD2-2.4V/1565	2.30 - 2.50	2	360	80	Vertical	107x10 Ø	TNC(M) 90°	
RC05-2400-M02-D1/993	2.30 - 2.50	4	360	60	Right Circular	212x110 Ø	SMA(M) 90° 1m cable	
RC05-2400-M02/671	2.30 - 2.50	4	360	50	Right Circular	211x104 Ø	N(F)	▲
RC05-2400-M02/764	2.30 - 2.50	4	360	50	Right Circular	210x104 Ø	N(F)	
LC05-2400-M01/852	2.30 - 2.50	5	360	40	Left Circular	201x140 Ø	N(F)	▲
LC05-2400/693	2.30 - 2.50	5	360	40	Left Circular	345x104 Ø	N(F)	▲
LC05-2400/744 (black)	2.30 - 2.50	5	360	40	Left Circular	345x104 Ø	N(F)	
MPO5-24R/244	2.30 - 2.50	5	360	40	Right Circular	204x104 Ø	SMA(F)	
RC05-2400-D2/606	2.30 - 2.50	5	360	40	Right Circular	345x104 Ø	N(F)	
RC05-2400-M01/266	2.30 - 2.50	5	360	40	Right Circular	209x140 Ø	N(F)	
RC05-2400/743	2.30 - 2.50	5	360	40	Right Circular	345x104 Ø	N(F)	
RC05-2400/195	2.30 - 2.50	5	360	40	Right Circular	345x104 Ø	N(F)	
OA10-2.4V/1655	2.30 - 2.55	9	360	13	Vertical	908x57 Ø	N(F)	▲
FVD2-2337/677	2.332 - 2.345	2	360	80	Vertical	130x19 Ø	N(M)	▲
SVD2-2340/460	2.332 - 2.345	2	360	80	Vertical	105x5 Ø	SMA(M)	
RC03-2460-502/479	2.34 - 2.46	3	360	70	Right Circular	163x75 Ø	SMA(F)	
SVD2-2450-SM90/480	2.34 - 2.55	2	360	80	Vertical	100x13 Ø	SMA(M) 90°	
LC03-2460-502/737	2.34 - 2.46	3	360	70	Left Circular	163x75 Ø	SMA(F)	
RC03-2460-502-CCP/537	2.34 - 2.46	3	360	70	Right Circular	163x75 Ø	SMA RP	▲
RC05-2400-M02/671	LC05-2400-M01/852		LC05-2400/693		OA10-2.4V/1655		FVD2-2337/677	



RC03-2400-502-SMA-D1/907	2.34 - 2.48	3	360	70	Right Circular	163x75 Ø	SMA(F)	
RC03-2460-502-SMA(M)/520	2.34 - 2.48	3	360	70	Right Circular	163x75 Ø	SMA(M)	▲
RC03-2460-D2/968	2.34 - 2.60	1.5	360	80	Right Circular	163x75 Ø	SMA(M) 0.305m cable	
RC03-2460-D3/1026	2.34 - 2.60	1.5	360	80	Right Circular	163x75 Ø	SMA(M) 0.11m cable	
SVD2-2400-N(M)/1022	2.35 - 2.45	2	360	80	Vertical	127x7 Ø	N(M)	▲
SVD2-2400/786	2.35 - 2.45	2	360	80	Vertical	109x7 Ø	SMA(M)	▲
EVD2-2450-D2/631	2.35 - 2.55	2	360	80	Vertical	150x14 Ø	N(F)	▲
EVD2-2460-NM/740	2.35 - 2.55	2	360	80	Vertical	170x26 Ø	N(M)	▲
SVD2-2450-NM90/315	2.35 - 2.55	2	360	80	Vertical	96x10 Ø	N(M) 90°	▲
EVD2-2450-D3/1129	2.35 - 2.55	2	360	80	Vertical	125x29 Ø	N(F)	above
EVD2-2460-D1/926	2.35 - 2.55	2	360	80	Vertical	180x25 Ø	N(F)	above

RC03-2460-502/520	SVD2-2400-N(M)/1022		SVD2-2400/786		EVD2-2450-D2/631		EVD2-2460-NM/740	
-------------------	---------------------	--	---------------	--	------------------	--	------------------	--



Catalogue

Group 3 - 2GHz to 3GHz

Omni



Model	Frequency GHz	Gain dBi	Beamwidth az°	el°	Polarisation	Dimensions mm	Connector/Cable	Photo
-------	------------------	-------------	------------------	-----	--------------	------------------	-----------------	-------

EVD2-2460/086	2.35 - 2.55	2	360	80	Vertical	173x26 Ø	N(F)	▲
RC05-2450-D1/837	2.35 - 2.55	4	360	40	Right Circular	216x104 Ø	SMA(F)	
RC05-2450-D2/844	2.35 - 2.55	4	360	40	Right Circular	216x104 Ø	N(F)	
SVD2-2500/869	2.38 - 2.61	2	360	80	Vertical	104x6 Ø	SMA(M)	▲
SBA-2450-VOR/859 blade	2.40 - 2.48	-3	360	80	Vertical	68x15x43	SMA(F) 0.1m cable	
SBA-2450-2300RG316/1184 blade	2.40 - 2.50	2	360	80	Vertical	75x28x3	SMA(M) 2.3m cable	
DS03-2460-502-D1/871	2.40 - 2.50	1	360	90	Dual ±45°	163x75 Ø	RPBNC 1m cable x2	▲
DVOA7-2450-DT/1014	2.40 - 2.50	7	360	20	Vertical	848x60 Ø	N(F) x2	▲
DS03-2460-502/1363	2.40 - 2.50	1.5	360	90	Dual ±45°	163x75 Ø	SMA(M) RP 0.5m cable x2	
VOA10-2450/177	2.40 - 2.50	10	360	11.5	Vertical	908x57 Ø	N(F)	▲
DS03-2460-502-D4/1048	2.40 - 2.50	1.5	360	90	Dual ±45°	163x75 Ø	RPBNC 0.5m LSHJ cable x2	▲

EVD2-2460/086 SVD2-2500/869 DS03-2460-502-D1/871 DVOA7-2450-DT/1014 VOA10-2450/177 DS03-2460-502-D4/1048



DS03-2460-502/510	2.40 - 2.50	1.5	360	90	Dual ±45°	8163x75 Ø	RPTNC 0.5m cable x2	▲
FVD2-2500-NM/1236	2.40 - 2.50	2	360	80	Vertical	462x26 Ø	N(M)	
SVD2-2450-SMAF/951	2.40 - 2.50	2	360	80	Vertical	100x7 Ø	SMA(F)	
SVD2-2450/143	2.40 - 2.50	2	360	80	Vertical	95x10 Ø	SMA(M)	
SBA-2450-2400-RG316/1173 blade	2.40 - 2.50	2	360	80	Vertical	75x25x3	SMA(M) 2.4m cable	▲
SBA-2450-02/185 blade	2.40 - 2.50	2	360	80	Vertical	67x25,100x9 base	SMA(F)	
EVD2-2450-TNC(M)/1213	2.40 - 2.50	2.9	360	52	Vertical	149.5x20 Ø	TNC(M)	▲
VOA3-2450-ANTI/1348	2.40 - 2.50	3	360	38	Vertical	185x32 Ø	N(F)	
VOA4-2450-DTC/1176	2.40 - 2.50	3.3	360	44	Vertical	185x32 Ø	TNC(F)	▲
VOA4-2450-HEL/817	2.40 - 2.50	4	360	40	Vertical	250x70 Ø	N(F)	above
VOA4-2450/1109	2.40 - 2.50	4	360	40	Vertical	255x70 Ø	N(F)	▲
VOA4-2450/184	2.40 - 2.50	4	360	40	Vertical	290x36 Ø	N(F)	
VOA4-2450/748	2.40 - 2.50	4	360	40	Vertical	290x36 Ø	N(F)	
Vector OA9-2450/9207	2.40 - 2.50	9	360	10	Vertical	908x57 Ø	N(F)	
RC03-2460-502-2/222	2.40 - 2.55	1.5	360	80	Right Circular	163x75 Ø	RP TNC(F) 1m cable	
RC010-2460/255	2.40 - 2.55	10	360	10	Right Circular	891x104 Ø	N(F)	

DS03-2460-502/510 SBA-2450-2400-RG316/1173 EVD2-2450-TNC(M)/1213 VOA4-2450-DTC/1176 VOA4-2450/1109



Group 3 - 2GHz to 3GHz

Omni

Model	Frequency GHz	Gain dBi	Beamwidth az°	Beamwidth el°	Polarisation	Dimensions mm	Connector/Cable	Photo
RC03-2460-502-2/826	2.40 - 2.55	1.5	360	80	Right Circular	163x75 Ø	BNC(M) 1m cable	
LC03-2460-502/689	2.40 - 2.55	3	360	70	Left Circular	163x75 Ø	N(F)	
LC03-2460/727	2.40 - 2.55	3	360	70	Left Circular	163x75 Ø	N(F)	
RC03-2460-502/092	2.40 - 2.55	3	360	70	Right Circular	163x75 Ø	N(F)	
RC03-2460/726	2.40 - 2.55	3	360	70	Right Circular	163x75 Ø	N(F)	
RC05-2450-502/367	2.40 - 2.55	5	360	40	Right Circular	254x118 Ø	N(F)	
RC05-2450/725	2.40 - 2.55	5	360	40	Right Circular	345x104 Ø	N(F)	
RC05-2450/156	2.40 - 2.55	5	360	40	Right Circular	346x104 Ø	N(F)	
RC07-2460/135	2.40 - 2.55	7	360	20	Right Circular	581x104 Ø	N(F)	
FVD2-2500-D2/835	2.40 - 2.60	2	360	80	Vertical	183x18 Ø	N(M)	
FVD2-2500/833	2.40 - 2.60	2	360	80	Vertical	626x26 Ø	N(F)	
SVD2-2500-214/831	2.40 - 2.60	2	360	80	Vertical	350x22 Ø	N(M)	
Vector OA4-2.5V/9205	2.40 - 2.70	4.5	360	42	Vertical	291x36 Ø	N(F)	▲
Vector OA7-2.5V/9206	2.40 - 2.70	6.5	360	21	Vertical	505x36 Ø	N(F)	▲
VOA7-2500-HEL/228	2.42 - 2.57	7	360	20	Vertical	470x70 Ø	N(F)	▲
MPO5-25R/157	2.45 - 2.65	5	360	40	Right Circular	194x104 Ø	SMA(F)	
LC05-2550-D1/824	2.45 - 2.68	4	360	40	Left Circular	202x110 Ø	SMA(F)	
OA4-2.5V/9205	Vector OA7-2.5V/9206	VOA7-2500-HEL/228	FVD2-2600-D2/836	SVD2-2600-NM/892	FVD2-2.8/1528			
								
RC05-2550/253	2.45 - 2.68	5	360	40	Right Circular	334x104 Ø	N(F)	
FVD2-2575-D1/1138	2.45 - 2.70	2	360	80	Vertical	347x26 Ø	N(M)	
FVD2-2.6/1473	2.50 - 2.70	2	360	80	Vertical	305x26 Ø	N(M)	
FVD2-2600-D2/836	2.50 - 2.70	2	360	80	Vertical	190x20 Ø	N(M)	▲
FVD2-2600-NM/1237	2.50 - 2.70	2	360	80	Vertical	468x26 Ø	N(M)	
FVD2-2600/834	2.50 - 2.70	2	360	80	Vertical	650x22 Ø	N(F)	
SVD2-2600-NM/892	2.50 - 2.70	2	360	80	Vertical	125x20 Ø	N(M)	▲
SVD2-2600/1187	2.50 - 2.70	2	360	80	Vertical	98x11 Ø	SMA(M)	
VOA4-2600/1140	2.50 - 2.70	4	360	43.5	Vertical	290x36 Ø	N(F)	
VOA7-2600/415	2.50 - 2.70	7	360	20	Vertical	505x36 Ø	N(F)	
VOA11-26/1095	2.50 - 2.70	10	360	10	Vertical	1133x31 Ø	716(F)	
VOA7-2600-HEL/251	2.50 - 2.68	7	360	20	Vertical	470x70 Ø	N(F)	
FVD2-2.8/1528	2.70 - 2.90	2	360	80	Vertical	305x26 Ø	N(M)	▲
SVD2-2.8/1527	2.70 - 2.90	2	360	80	Vertical	124x10 Ø	SMA(M)	
SVD2-2.8/1540	2.70 - 2.90	2	360	80	Vertical	124x21 Ø	N(M)	

Catalogue

Group 3 - 2GHz to 3GHz

Omni

Model	Frequency GHz	Gain dBi	Beamwidth az°	Beamwidth el°	Polarisation	Dimensions mm	Connector/Cable	Photo
-------	------------------	-------------	------------------	------------------	--------------	------------------	-----------------	-------

OMNI - MULTIBAND

OA2-0.1-6.0V/1692	0.10 - 0.50 0.50 - 6.00	0	360	80	Vertical	1250x140 Ø	N(F) x2	▲
TEVD2-900-1800-2050/1016	0.88 - 0.96 1.71 - 1.88 1.92 - 2.17	2	360	80	Vertical	87x100 Ø	SMA(F) x3	
7EVD2-900-5850/1091	0.88 - 0.96 1.71 - 1.88 1.92 - 2.17 2.40 - 2.50 5.25 - 5.85	1 2 2 2 2	360	100	Vertical	103x220 Ø	SMA(F) x7	
DEVD2-1800V-2050V/766	1.71 - 1.88 1.92 - 2.17	2	360	80	Vertical	87x100 Ø	SMA(F) x2	
DOA-2.4V-3.4V-4.7V/1869	2.30 - 3.50 4.40 - 5.00	2.0 6.5	360	70	Vertical	433x23 Ø	TNC(M) 90° 0.254m cable TNC(M) 90° 0.508m cable	▲
OA3-2.4-5.4DS/1833	2.40 - 2.50 5.15 - 5.725	0	360	70	Dual ±45°	93x100 Ø	RP SMA(M) 1m cable x4	▲
DS03-24-54/1177	2.40 - 2.50 5.15 - 5.725	0	n/a	n/a	Dual ±45°	93x100 Ø	SMA(F) x4	▲
OA3-2.4-5.4DS/1785	2.40 - 2.50 5.15 - 5.725	0	n/a	n/a	Dual ±45°	93x100 Ø	RPNMC(M) x2 RPSMA(M) x2 1m cables x4	
DS03-24-54/1491	2.40 - 2.50 5.15 - 5.725	0	360	70	Dual ±45°	93x100 Ø	SMA(F) x4	
DS03-24-54/1490	2.40 - 2.50 5.15 - 5.725	0	360	80	Dual 45°	93x100 Ø	SMA(F) x4	



HEMI OMNI

*All Hemi Omni Antennas feature 360° Azimuth. Elevation measurements are cuts at various positions in the radiation pattern.

HOA2-2150L/1234	2.05 - 2.25	2	360	100	Left Circular	178x74 Ø	N(F)
HOA2-2250R-N2/257	2.03 - 2.29	2	360	160	Right Circular	68x100 Ø	SMA(F)
HOA2-2250R-N1/464	2.05 - 2.35	2	360	160	Right Circular	68x100 Ø	SMA(F)
HOA2-24R-SMA/515	2.30 - 2.40	2	360	150	Right Circular	181x75 Ø	SMA(F)
HOA2-24L/739	2.30 - 2.60	2	360	160	Left Circular	178x74 Ø	N(F)
HOA2-24R/025	2.30 - 2.60	2	360	160	Right Circular	181x75 Ø	N(F)
HOA2-25R-Miniature/031	2.40 - 2.60	2	360	160	Right Circular	64x54 Ø	SMA(F)

Group 4 - 3GHz to 4GHz

Directional

Model	Frequency GHz	Gain dBi	Beamwidth az°	Beamwidth el°	Polarisation	Dimensions mm	Connector/Cable	Photo
-------	------------------	-------------	------------------	------------------	--------------	------------------	-----------------	-------

DIRECTIONAL

DIRECTIONAL - SINGLE BAND

BDPSA5-50800-D2/1160	0.50 - 8.00	5	80	70	Circular	488x356x22	SMA(F) x2	page 94
BDFPA-0.6-4.0-RL/1313	0.60 - 4.00	4.5	75	75	Circular	280x227x50	N(F) 1m cable	page 94
FPA-0.6-6.0R/1562	0.60 - 6.00	1 to 6	70	70	Circular	50x219 Ø	N(F)	page 94
FPA3-0.8-6.0R/1329	0.80 - 6.00	4.5	80	80	Right Circular	50X219 Ø	N(F)	page 94
FPA3-0.8-6.0L/1812	0.80 - 6.00	4.5	80	80	Left Circular	50x219 Ø	N(F)	page 94
PSA10401L/1169	1.00 - 4.00	4 to 6	90	90	Left Circular	42x150 Ø	N(F)	
PSA1040R/1366	1.00 - 4.00	-5 to +7.5	75	75	Right Circular	80x100 Ø	SMA(F)	
PSA10401R/643	1.00 - 4.00	4 to 6	90	90	Right Circular	76x150 Ø	N(F)	
PSA0218L/1501	2.00 - 18.00	0 to -2	75	75	Left Circular	45x56 Ø	SMA(F)	
PSA0218R/1142	2.00 - 18.00	0 to -2	75	75	Right Circular	40x52 Ø	SMA(F)	page 94
PSA0218L/1276	2.00 - 18.00	-1(2-4) 2(4-18)	75	75	Left Circular	39x62 Ø	SMA(F)	page 94
PSA0218R/1277	2.00 - 18.00	-1(2-4) 2(4-18)	75	75	Right Circular	65x68 Ø	SMA(F)	page 95
PSA0218R/1278	2.00 - 18.00	-1(2-4) 2(4-18)	75	75	Right Circular	39x62 Ø	SMA(F)	page 95
PSA0218L/1084	2.00 - 18.00	-1(2-4) 2(4-18)	75	75	Left Circular	65x68 Ø	SMA(F)	page 95
PSA0218L/1361	2.00 - 18.00	-4(2-4) 2(6-18)	75	75	Left Circular	51x61 Ø	N(F)	page 95
PSA0218R/1360	2.00 - 18.00	-4(2-4) 2(6-18)	75	75	Right Circular	51x61 Ø	SMA(F)	page 95
PSA0218L/1333	2.00 - 18.00	-4(2-4) 2(4-18)	75	75	Left Circular	51x61 Ø	SMA(F)	page 95
PSA0218R/1362	2.00 - 18.00	-4(2-4) 2(6-18)	75	75	Right Circular	51x61 Ø	N(F)	page 95
LPA7-32R/783	3.10 - 3.30	8.5	80	80	Right Circular	10x93 Ø	SMA(F)	
FPA13-31R/687	3.13 - 3.38	14	35	35	Right Circular	195x163x13	N(F)	
LPA7-34V/342	3.30 - 3.50	7	80	70	Vertical	13x84 Ø	SMA(F)	
FPA17-3.5L/1245	3.30 - 3.60	16.7	31	16	Left Circular	300x170x10	SMA(F)	▲
FPA8-3.5R/1519	3.30 - 3.60	8	70	70	Right Circular	13x84 Ø	TNC(F)	▲
FPA8-3.5R/1846	3.30 - 3.60	8	70	70	Right Circular	13x84 Ø	SMA(F)	▲
LPA7-3450R/1304	3.30 - 3.60	8	70	70	Right Circular	13x84 Ø	N(F)	

FPA17-3.5L/1245	FPA8-3.5R/1519	FPA8-3.5R/1846	Vector FPA16-3.5V/9309	FPA16-3.4R/1658	FPA13-36V/603
					

Vector FPA17-3.5V/9309	3.30 - 3.80	17.5	23	23	Vertical	240x240x29	N(F)	▲
Vector FPA25-3.5V/9339	3.30 - 3.80	24.5	8.2	8.3	Vertical	573x573x18	N(F)	
FPA16-3.4R/1658	3.35 - 3.45	16	25	24	Right Circular	200x200x10	N(F)	▲
FPA19-34R/062	3.35 - 3.55	19	20	20	Right Circular	271x271x12	N(F)	
FPA19-34V/063	3.35 - 3.55	19	20	20	Vertical	271x271x12	N(F)	
FPA13-35VH-D2/424	3.40 - 3.50	13	40	40	Dual V&H	159x159x10	SMA(F) x2	
FPA15-20A-40E-34V/325	3.40 - 3.50	15	20	40	Vertical	226x125x10	N(F)	
LPA7X-35R/429	3.40 - 3.55	7	80	80	Right Circular	26x97 Ø	N(F)	
FPA13-36V/603	3.40 - 3.60	13	35	35	Vertical	208x159x10	N(F)	▲
FPA13-36L/804	3.40 - 3.65	13	40	40	Left Circular	118x118x10	SMA(F)	

Catalogue

Group 4 - 3GHz to 4GHz

Directional

FPA24-35V-DC/747



Model	Frequency GHz	Gain dBi	Beamwidth az°	Beamwidth el°	Polarisation	Dimensions mm	Connector/Cable	Photo
FPA13-36R/273	3.40 - 3.65	13	40	40	Right Circular	118x118x10	SMA(F)	▲
LPA7-36L/1368	3.40 - 3.65	7	80	80	Left Circular	10x84 Ø	SMA(F)	
LPA7-36R/272	3.40 - 3.65	7	80	80	Right Circular	10x84 Ø	SMA(F)	
FPA19-3550-SL/754	3.40 - 3.70	19	14	14	Vertical	286x286x10	SMA(F)	
FPA24-35V-DC/747	3.40 - 3.72	24	8	8	Vertical	573x573x18	N(F)	above
FPA19-3600/811	3.40 - 3.72	19	15	15	Vert or Horiz	377x377x11	SMA(F)	
FPA19-39V-D1/190	3.60 - 4.10	19	20	20	Vertical	238x238x10	SMA(F)	▲
LPA7-38R/608	3.70 - 3.90	7	60	60	Right Circular	10x84 Ø	SMA(F)	
FPA13-39V/209	3.70 - 4.10	13	40	40	Vertical	118x118x10	SMA(F)	
LPA7-40R/1051	3.70 - 4.20	8	65	65	Right Circular	64x64x26	SMA(F)	

FPA13-36R/273



FPA19-39V-D1/190



Group 4 - 3GHz to 4GHz

SECTOR

Sector antenna on test in anechoic base chamber



SA15-120H-35B-D2/750
120° antennas base station



Model	Frequency GHz	Gain dBi	Beamwidth az°	Beamwidth el°	Polarisation	Dimensions mm	Connector/Cable	Photo
-------	------------------	-------------	------------------	------------------	--------------	------------------	-----------------	-------

SECTOR

SA6-180-36V/558	3.00 - 4.30	6	180	35	Vertical	205x75 Ø	SMA(F)	▲
HDA-3.3V/1543 blade	3.10 - 3.40	4.7	160	75	Vertical	82x38x47	SMA(M) 0.25m cable	
SA13-60-3.4H/1466	3.30 - 3.50	13	70	18	Horizontal	251x65x10	SMA(F)	▲
SA13-60-3.4V/1467	3.30 - 3.50	12.6	74	19.5	Vertical	251x50x10	SMA(F)	
SA13-180-34V/064	3.30 - 3.55	13	180	10	Vertical	698x79 Ø	N(F)	
SA14-90-35R/941	3.30 - 3.60	14	90	10	Right Circular	840x159x155	N(F)	
Vector SA17-60-3.5DS/9319	3.30 - 3.72	17.2	65	9	Dual ±45°	650x200x101	N(F) x2	▲
Vector SA11wimax/9318	3.30 - 3.80	11	120	12	Vertical	385x54x12	MCX 90° 1.5m cable	▲
Vector SA12-180-3.5V/9305	3.30 - 3.80	13.4	180	8	Vertical	650x200x100	N(F)	
Vector SA14-120-3.5V/9313	3.30 - 3.80	14.8	120	8	Vertical	650x200x100	N(F)	▲



Vector SA15-90-3.5V/9312	3.30 - 3.80	15.4	90	8	Vertical	650x200x100	N(F)
SA15-90-3.5V/1438	3.30 - 3.80	15	98	8	Vertical	325x200x100	N(F)
SA16-60-35V/934	3.30 - 3.80	16	60	10	Vertical	590x265x50	N(F)
SA16-60-35V/953	3.30 - 3.80	16	60	10	Vertical	590x265x50	N(F)
Vector SA16-60-3.5H/9315	3.30 - 3.80	16.7	60	8	Horizontal	650x200x100	N(F)
Vector SA15-120-3.5V/9304	3.30 - 3.80	16.8	120	5.5	Vertical	1100x200x101	N(F)
Vector SA17-90-3.5V/9303	3.30 - 3.80	17.1	90	5.5	Vertical	1100x200x101	N(F)
Vector SA17-60-3.5V/9301	3.30 - 3.80	17.5	60	8	Vertical	650x200x100	N(F)
Vector SA19-60-3.5V/9314	3.30 - 3.80	19	60	5	Vertical	1100x200x101	N(F)
SA13-180-34V/1339	3.35 - 3.55	13	180	10	Vertical	696x50 Ø	N(F)
SA12-160-3450V/988	3.375 - 3.75	11	200	9	Vertical	575x75 Ø	SMA(F)
SA13-34H/324	3.40 - 3.50	13	80	20	Horizontal	251x50x10	N(F)
SA13-34V/323	3.40 - 3.50	13	80	20	Vertical	251x50x10	N(F)
SA15-120H-35B-D2/750	3.40 - 3.60	12	120	7	Horizontal	840x159x82	N(F)
SA15-120H-35B-D1/506	3.40 - 3.60	12	120	7	Horizontal	840x159x83	716(F)
SA15-120H-35B/529	3.40 - 3.60	12	120	7	Horizontal	840x159x80	716(F)



Catalogue

Group 4 - 3GHz to 4GHz

Sector

SA13-120FP-35V/659



SA16-60-38V/554
60° sectors as base station



Model	Frequency GHz	Gain dBi	Beamwidth az°	el°	Polarisation	Dimensions mm	Connector/Cable	Photo
SA13-120FP-35H/660	3.40 - 3.60	13	120	10	Horizontal	499x242x93	716(F)	
SA13-120FP-35V/659	3.40 - 3.60	13	120	10	Vertical	507x232x95	716(M)	above
SA13-180V-35B-D2/493	3.40 - 3.60	13	180	7	Vertical	840x159x80	N(F)	
SA14-90-35R-D1/1033	3.40 - 3.60	13	80	10	Right Circular	580x96 Ø	N(F)	▲
SA13-180V-35B-D1/504	3.40 - 3.60	13	180	7	Vertical	840x159x83	716(F)	
SA15-120V-35B-D1/505	3.40 - 3.60	14	120	7	Vertical	840x159x83	N(F)	
SA15-120V-35B-D2/678	3.40 - 3.60	14	120	7	Vertical	840x159x83	N(F)	
SA15-120V-35B/528	3.40 - 3.60	14	120	7	Vertical	840x159x80	716(F)	
SA17-60H-35B-D1/509	3.40 - 3.60	15	60	7	Horizontal	840x159x83	716(F)	
SA16-60-35V-D1/780	3.40 - 3.60	15.5	60	10	Vertical	474x88x10	716(F)	▲
SA16-60-38V/554	3.40 - 3.60	16	65	10	Vertical	474x88x10	N(F)	above
SA17-60V-35B-D1/508	3.40 - 3.60	16	60	7	Vertical	840x159x83	716(F)	
SA17-60H-35B/440	3.40 - 3.60	16	75	7	Horizontal	840x159x80	716(F)	
SA17-60V-35B/439	3.40 - 3.60	17	60	7	Vertical	840x159x79	716(F)	
SA18-30-35V/500	3.40 - 3.60	18	30	8	Vertical	597x233x12	N(F)	
SA16-35V-BRE/683	3.40 - 3.70	16	60	10	Vertical	474x117x10	MCX(M) 0.01m cable	
SA16-35V-WM/978	3.40 - 3.70	16	60	10	Vertical	474x117x10	SMB(F) 0.165m cable	
Vector SA14-120-3.5H/9317	3.40 - 3.72	13.8	120	8	Horizontal	650x200x100	N(F)	
SA13-180V-35B-D3/800	3.40 - 3.72	14	180	10	Vertical	840x159x82	N(F)	
SA13-120V-35B-D3/801	3.40 - 3.72	15	120	7	Vertical	840x159x82	N(F)	
SA16-60-35H/584	3.40 - 3.72	16.5	60	50	Horizontal	474x88x10	N(F)	
SA16-60-35V/579	3.40 - 3.72	16.5	60	10	Vertical	474x88x10	N(F)	▲
Vector SA16-60-3.5V/9302	3.40 - 3.80	16	60	10	Vertical	590x265x50	N(F)	
Vector SA15-90-3.5H/9316	3.40 - 3.80	14.7	90	8	Horizontal	650x200x100	N(F)	
SA13-180-35H-D1/838	3.42 - 3.50	10	180	7	Horizontal	840x159x80	N(F)	
SA13-180-35H/406	3.42 - 3.50	10	180	7	Horizontal	840x159x80	716(F)	
Vector SA15-120-3.7V/9335	3.60 - 3.80	14.9	115	8	Vertical	650x200x101	N(F)	
Vector SA15-90-3.7V/9334	3.60 - 3.80	15.4	95	8	Vertical	650x200x101	N(F)	
Vector SA17-60-3.7V/9333	3.60 - 3.80	17.2	62.5	7.5	Vertical	650x200x101	N(F)	
SA13-120-38H/446	3.60 - 4.00	13	130	12	Horizontal	840x159x83	N(F)	
SA13-120-38V/443	3.60 - 4.00	13	125	9	Vertical	840x159x83	N(F)	
SA16-60-38H/585	3.60 - 4.00	16	60	10	Horizontal	474x88x10	N(F)	
SA10-40R/1052	3.70 - 4.20	10	70	40	Right Circular	115x64x16	SMA(F)	
SA10-4.0L/1852	3.70 - 4.20	10	70	40	Left Circular	115x64x16	SMA(F)	
SA12-160-39V/896	3.80 - 4.00	12	175	8.5	Vertical	550x75 Ø	SMA(F)	
SA9-160-39V/1010	3.80 - 4.00	9	160	20	Vertical	347x75 Ø	SMA(F)	

SA14-90-35R-D1/1033



SA16-60-35V/780



SA16-60-35V/579



Group 4 - 3GHz to 4GHz

Sector

Model	Frequency GHz	Gain dBi	Beamwidth az°	Beamwidth el°	Polarisation	Dimensions mm	Connector/Cable	Photo
-------	------------------	-------------	------------------	------------------	--------------	------------------	-----------------	-------

MULTI-SECTOR

MSA5-3.3L/1407	3.20 - 3.40	12.5 sector 8 overhead	68 64	16.7 62	Left Circular	583x156 Ø	-	▲
MSA5-3.4V/1435	3.35 - 3.55	13	80	16.5	Vertical	583x156 Ø	SMA(F) x5	▲
MSA7-16-35R/497	3.40 - 3.50	15 sector 7 overhead	70 70	10 60	Right Circular	681x156 Ø	N(F)	▲
MSA5-34R-ECS/374	3.40 - 3.60	13 sector 7 overhead	80 80	20 80	Right Circular	708x156 Ø	N(F)	▲
MSA5-34L-ECS/963	3.40 - 3.60	13 sector 7 overhead	80 80	20 80	Left Circular	606x156 Ø	N(F)	
DSA17-35V/462	3.40 - 3.60	17	65	7	Vertical	816x201x12	N(F) x2	▲

MSA5-3.3L/1407 Base of MSA5-3.4V/1435 MSA7-16-35R/497 MSA5-34R-ECS/374 DSA17-35V/462



Catalogue

Group 4 - 3GHz to 4GHz

Omni

Model	Frequency GHz	Gain dBi	Beamwidth az°	el°	Polarisation	Dimensions mm	Connector/Cable	Photo
-------	------------------	-------------	------------------	-----	--------------	------------------	-----------------	-------

OMNI

OMNI - SINGLE BAND

OA2-0.3-10.0V/1667	0.30 - 10.00	2	360	65	Vertical	306x162 Ø	N(F)	
OA2-0.3-10.0V/1668	0.30 - 10.00	2	360	65	Vertical	306x162 Ø	N(F)	
OA2-0.3-10.0V/1505	0.30 - 10.00	2	360	65	Vertical	306x162 Ø	N(F)	
OA2-0.8-6.0V/1665	0.80 - 6.00	2	360	75	Vertical	143x108 Ø	N(F)	
OA2-0.8-6.0V/1666	0.80 - 6.00	2	360	75	Vertical	143x108 Ø	N(F)	
XPO2V-0.8-6.0-GF/1441	0.80 - 6.00	2	360	75	Vertical	143x108 Ø	N(F)	page 96
XPO2V-0.8-6.0/1485	0.80 - 6.00	2	360	75	Vertical	143x79 Ø	N(F)	page 96
OA2-0.85-6.0V/1699	0.84 - 6.00	1	360	60	Vertical	170x60 Ø	N(F)	page 96
OA2-1.0-6.0V/1794	1.00 - 6.00	1	360	80	Vertical	213x80 Ø	N(F)	page 97
XPO2V-1.0-6.0/1442	1.00 - 6.00	2	360	70	Vertical	134x80 Ø	N(F)	page 97
XPO2V-1.0-6.0/1512	1.00 - 6.00	2	360	70	Vertical	134x80 Ø	N(F)	page 97
OA2-1.7-6.0V/1624	1.70 - 6.00	2	360	70	Vertical	104x35 Ø	N(F)	
XPO2V-2.0-18.0/1397	2.00 - 18.00	2	360	70	Vertical	104x39 Ø	N(F)	page 97

EVD2-3.2/1398	EVD2-3.2/1401	OA5-3.3L/1402	SVD2-3350/1126	LC05-3450-M01/1434	RC05-3450-H1/494
---------------	---------------	---------------	----------------	--------------------	------------------



SBA3150/731 blade	3.00 - 3.30	2	360	80	Vertical	100x25x54	SMA(F)	
OA2-3.4V/1938	3.00 - 3.80	2	360	70	Vertical	83x14 Ø	SMA(M)	
EVD2-3.2/1398	3.10 - 3.35	2	360	80	Vertical	123x45 Ø	N(F)	▲
EVD2-3.2/1401	3.10 - 3.35	2	360	80	Vertical	150x25 Ø	N(F)	▲
OA4-3.2V/1399	3.10 - 3.35	4	360	43	Vertical	300x36 Ø	N(F)	
OA4-3.3V/1642	3.10 - 3.40	4.5	360	40	Vertical	205x25 Ø	TNC(M)	
OA5-3.3L/1402	3.25 - 3.35	4.2	360	38.5	Left Circular	318x82 Ø	N(F)	▲
SVD2-3350/1126	3.25 - 3.45	2	360	80	Vertical	72x7 Ø	SMA(M)	▲
Vector OA10-3.4V/9323	3.30 - 3.50	10	360	9	Vertical	785x36 Ø	N(F)	
Vector OA11-HP-3.5V/9307	3.30 - 3.72	11	360	7	Vertical	907x96 Ø	N(F)	
Vector OA11-3.5V/9306	3.30 - 3.72	11	360	7	Vertical	907x96 Ø	N(F)	
Vector OA7-3.5V/9321	3.30 - 3.80	7	360	20	Vertical	405x36 Ø	N(F)	above
XPO2V-30-42/560	3.30 - 4.20	4	360	40	Vertical	205x75 Ø	SMA(F)	
XV010-3450/065	3.35 - 3.55	9.4	360	10	Vertical	600x96 Ø	N(F)	
LC03-3450-502/866	3.35 - 3.55	3	360	80	Left Circular	163x75 Ø	N(F)	
RC03-3450-502/486	3.35 - 3.55	3	360	80	Right Circular	163x75 Ø	N(F)	
LC05-3450-M01/1434	3.35 - 3.55	4	360	40	Left Circular	245x140 Ø	N(F)	▲
RC05-3450-H1/494	3.35 - 3.55	4	360	40	Right Circular	387x80 Ø	N(F)	▲
LC010-3450/753	3.35 - 3.55	8	360	12	Left Circular	627x79 Ø	N(F)	
RC05-3450-M01/518	3.35 - 3.55	4	360	40	Right Circular	245x140 Ø	N(F)	above
LC05-3450-H1/964	3.35 - 3.55	4	360	40	Left Circular	387x80 Ø	N(F)	above
RC010-3450/487	3.35 - 3.55	8	360	12	Right Circular	717x79 Ø	N(F)	

EVD2-3.5/1433

Group 4 - 3GHz to 4GHz

Omni



Model	Frequency GHz	Gain dBi	Beamwidth az°	Beamwidth el°	Polarisation	Dimensions mm	Connector/Cable	Photo
SBA4-3450/987 blade	3.375 - 3.75	4	360	40	Vertical	44x3x112	SMA(F)	
EVD2-3.5/1433	3.40 - 3.50	2	360	80	Vertical	174x45 Ø	N(F)	above
EVD2-3450/225	3.40 - 3.50	2	360	80	Vertical	178x26 Ø	N(F)	▲
LC05-3450-D1/996	3.40 - 3.50	4	360	50	Left Circular	234x98 Ø	SMA(F)	
RC05-3450/236	3.40 - 3.50	5	360	40	Right Circular	294x83 Ø	N(F)	
LC05-3450/813	3.40 - 3.50	5	360	40	Left Circular	298x83 Ø	N(F)	
Vector OA10-3.5V/9320	3.40 - 3.60	10	360	9	Vertical	765x36 Ø	N(F)	▲
XVO11-3500-D1/771	3.40 - 3.60	10.5	360	7	Vertical	904x98 Ø	716(F)	
SBA3500/732 blade	3.40 - 3.60	2	360	80	Vertical	100x25x54	SMA(F)	
EVD2-3450/225								
Vector OA10-3.5V/9320								
EVD2-3.5V/1691								
OA6-3.5V/1625								
OA8-3.5V/1626								
OA8-3.5V/1625								
RCO10-3500/931								
RCO10-3500-D1/1185								
SVD2-3450/426								
VOA7-36/1146								
VOA4-3450-HEL/237								
VOA4-3450/428								
RCO9-3700/1343								
Vector OA10-3.7V/9324								
SVD2-3450/426								
VOA7-36/1146								
RCO9-3700/1343								
EVD2-38/1039								
SBA3800/220 blade								
SBA-3800-D1/1040 blade								
XVO9-3880/944								
VOA4-3900/130								
SBA-38/919 blade								
OMNI - MULTIBAND								
OA2-0.1-6.0V/1692	0.10 - 0.50							
	0.50 - 6.00	0	360	80	Vertical	1250x140 Ø	N(F) x2	▲

Catalogue

Group 5 - 4GHz to 6GHz

Directional

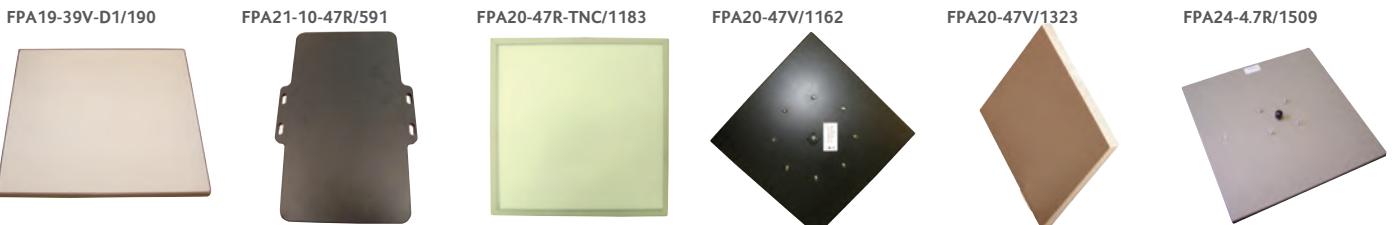


Model	Frequency GHz	Gain dBi	Beamwidth az°	Beamwidth el°	Polarisation	Dimensions mm	Connector/Cable	Photo
-------	------------------	-------------	------------------	------------------	--------------	------------------	-----------------	-------

DIRECTIONAL

DIRECTIONAL - SINGLE BAND

BDPSA5-50800-D2/1160	0.50 - 8.00	5	80	70	Circular	488x356x22	SMA(F) x2	page 94
FPA-0.6-6.0R/1562	0.60 - 6.00	1 to 6	70	70	Circular	50x219 Ø	N(F)	page 94
FPA3-0.8-6.0R/1329	0.80 - 6.00	4.5	80	80	Right Circular	50x219 Ø	N(F)	page 94
FPA3-0.8-6.0L/1812	0.80 - 6.00	4.5	80	80	Left Circular	50x219 Ø	N(F)	page 94
PSA0218L/1501	2.00 - 18.00	0 to -2	75	75	Left Circular	45x56 Ø	SMA(F)	
PSA0218R/1142	2.00 - 18.00	0 to -2	75	75	Right Circular	40x52 Ø	SMA(F)	page 94
PSA0218L/1276	2.00 - 18.00	-1(2-4) 2(4-18)	75	75	Left Circular	39x62 Ø	SMA(F)	page 94
PSA0218R/1277	2.00 - 18.00	-1(2-4) 2(4-18)	75	75	Right Circular	65x68 Ø	SMA(F)	page 95
PSA0218R/1278	2.00 - 18.00	-1(2-4) 2(4-18)	75	75	Right Circular	39x62 Ø	SMA(F)	page 95
PSA0218L/1084	2.00 - 18.00	-1(2-4) 2(4-18)	75	75	Left Circular	65x68 Ø	SMA(F)	page 95
PSA0218L/1361	2.00 - 18.00	-4(2-4) 2(6-18)	75	75	Left Circular	51x61 Ø	N(F)	page 95
PSA0218R/1360	2.00 - 18.00	-4(2-4) 2(6-18)	75	75	Right Circular	51x61 Ø	SMA(F)	page 95
PSA0218L/1333	2.00 - 18.00	-4(2-4) 2(4-18)	75	75	Left Circular	51x61 Ø	SMA(F)	page 95



PSA0218R/1362	2.00 - 18.00	-4(2-4) 2(6-18)	75	75	Right Circular	51x61 Ø	N(F)	page 95
FPA19-39V-D1/190	3.60 - 4.10	19	20	20	Vertical	238x238x10	SMA(F)	▲
FPA13-39V/209	3.70 - 4.10	13	40	40	Vertical	118x118x10	SMA(F)	
LPA7-40R/1051	3.70 - 4.20	8	65	65	Right Circular	64x64x26	SMA(F)	
FPA-4.0-6.0R/1787	4.00 - 6.00	4	90	90	Right Circular	39x62 Ø	N(F)	page 95
FPA-4.0-18.0L/1757	4.00 - 18.00	0.5 - 4.8	360	80	Left Circular	37x37 Ø	SMA(F)	page 95
FPA13-45R/246	4.25 - 4.75	13	40	40	Right Circular	118x118x10	SMA(F)	
FPA21-10-47V/1153	4.40 - 4.85	20.5	10	19	Vertical	386x257x11	SMA(F)	
FPA21-10-47R/591	4.40 - 4.85	20.5	10	20	Right Circular	386x257x11	SMA(F)	▲
FPA20-47R-TNC/1183	4.40 - 5.00	19.5	14	14	Right Circular	265x265x23	TNC(F)	▲
FPA20-47V/1162	4.40 - 5.00	20	14	14	Vertical	265x265x23	TNC(F)	▲
FPA20-47V/1323	4.40 - 5.00	20	14	14	Vertical	265x265x23	N(F)	▲
FPA20-4.7V/9701	4.40 - 5.00	20	14	14	Vertical	265x265x23	TNC(F)	
FPA24-4.7R/1509	4.40 - 5.00	24.3	8	8	Right Circular	445x445x23	N(F)	▲
FPA24-4.7R/1857	4.40 - 5.00	24.3	8	8	Right Circular	445x445x24	N(F)	
FPA26-4.7V/1899	4.40 - 5.00	26	6	6	Vertical	600x600x24	N(F)	above
FPA26-47V/1322	4.40 - 5.00	26	6	6	Vertical	600x600x24	N(F)	above
FPA26-47V/1157	4.40 - 5.00	26	6	6	Vertical	600x600x24	N(F)	above
DPA1-47R/1163	4.40 - 5.00	2.8	62.5	61.5	Right Circular	9x62 Ø	SMA(M)	
DPA1-47VH/1164	4.40 - 5.00	3.5	70	51	Dual V&H	9x62 Ø	SMA(M) 0.51m cable	
PA7-4.7V/1819	4.40 - 5.00	6.5	85	72	Vertical	8.5x49 Ø	SMA(M) 0.43m cable	above

Group 5 - 4GHz to 6GHz

Directional

Model	Frequency GHz	Gain dBi	Beamwidth az°	Beamwidth el°	Polarisation	Dimensions mm	Connector/Cable	Photo
LPA7-47R-TNC/1182	4.40 - 5.00	7	65	65	Right Circular	10x84 Ø	TNC(F)	
LPA7-47R/542	4.40 - 5.00	7	75	75	Right Circular	10x84 Ø	SMA(F)	
FPA10-4.7R/1564	4.40 - 5.00	9.5	54	58	Right Circular	10x84 Ø	TNC(F)	▲
FPA18-48R/751	4.60 - 5.00	17	20	20	Right Circular	201x201x10	N(F)	
LPA7-51V/322	4.80 - 5.40	7	90	70	Vertical	35x35x9	SMA(F)	
FPA18-5.0V/1784	4.90 - 5.10	19	18	16	Vertical	240x240x29	N(F)	
LPA7-51R/454	5.00 - 5.20	7	52	55	Right Circular	13x70 Ø	SMA(F)	
DHDA-5.7V/1584	5.00 - 6.30	1	160	90	Vertical	82x46	SMA(M) 0.4m cable	▲
FPA21-10A-50R/590	5.07 - 5.52	20.5	10	20	Right Circular	386x256x10	N(F)	
FPA10-4.7R/1564	DHDA-5.7V/1584	Vector FPA19-5.5V/9506	FPA19-55VH/490	FPA19-5.5V/1758	FPA19-5.5V/448			
								
FPA19-52R/408	5.15 - 5.35	18	20	20	Right Circular	201x201x10	N(F)	
FPA19-52V/388	5.15 - 5.35	17.5 to 18	19	18	Vertical	201x201x10	N(F)	
8LPA7-54VH-OCT/1104	5.15 - 5.72	6	75	75	Dual V&H	9x120 Ø	SMA(F) x16	
Vector FPA19-5.5V/9506	5.15 - 5.85	19	17.5	15.5	Vertical	240x240x29	N(F)	▲
FPA19-55VH-D2/516	5.20 - 5.82	17	20	20	Dual V&H	212x212x4	SMA(M) 0.153m & 0.18 cables	
FPA19-55VH/490	5.20 - 5.82	18	20	20	Dual V&H	193x193x9	SMA(F) x2	▲
LPA7-55R/947	5.25 - 5.85	7	60	60	Right Circular	15x84 Ø	SMA(F)	
FPA23-55VH-AB/809	5.20 - 5.825	22.5	8	8	Dual V&H	353x335x5	SMA(M) 90° cable x2	
FPA19-5.5V/1758	5.25 - 5.82	18	20	20	Vertical	262x193x9.3	N(F)	▲
FPA19-55V/448	5.25 - 5.825	18	20	20	Vertical	193x193x9	SMA(F)	▲
LPA7-57R/216	5.40 - 6.00	7	80	80	Right Circular	15x84 Ø	SMA(F)	
FPA19-58V-701/474	FPA22-58V-701/935	FPA23-61V/1132	FPA23-61VH/1072	FPA21-62L/1119				
								
FPA19-58V-701/474	5.72 - 5.82	18	20	20	Vertical	225x225x12	N(F)	▲
FPA22-58V-701/935	5.72 - 5.82	22	10	10	Vertical	343x343x17	N(F)	▲
LPA7-60R/674	5.80 - 6.20	8	70	70	Right Circular	15x84 Ø	SMA(F)	
FPA23-61V/1132	5.80 - 6.40	23	7	7	Vertical	380x380x17	SMA(F)	▲
FPA23-61VH/1072	5.80 - 6.40	23.5	7	7	Dual V&H	380x380x17	SMA(F) x2	▲
FPA23-61V/1266	5.80 - 6.40	27	6.8	6.5	Vertical	411x455x14	SMA(F)	
FPA21-62L/1119	5.90 - 6.40	21	11	11	Left Circular	8x281 Ø	SMA(F)	▲
LPA7-62L/1053	5.90 - 6.45	7	70	70	Left Circular	45x38x11	SMA(F)	

Catalogue

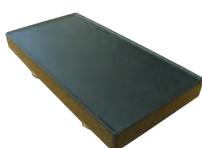
Group 5 - 4GHz to 6GHz

Directional

Model	Frequency GHz	Gain dBi	Beamwidth az°	Beamwidth el°	Polarisation	Dimensions mm	Connector/Cable	Photo
-------	------------------	-------------	------------------	------------------	--------------	------------------	-----------------	-------

DIRECTIONAL - MULTIBAND

LPA7-TRI-DS2450-DS5500/1090	0.88 - 0.96 1.71 - 1.88 1.92 - 2.175 2.40 - 2.50 5.25 - 5.85	7	60	60	Vertical Vertical Vertical Dual ±45° Dual ±45°	339x225x42	SMA(F) x7	
FPA8-2.4R-5.9R/1893	2.40 - 2.50 5.10 - 5.90	7.5 10	88 40	72 43	Right Circular	168x85x15	N(F) x2	
FPA7-2.3-5.9R/1894	2.40 - 2.50 5.10 - 5.90	6, 7	70	70	Right Circular	41x 106 Ø	N(F)	
DLPA7-2.5-5.5DS/1315	2.40 - 2.50 5.15 - 5.85	7	60	60	Dual ±45°	37x132 Ø	SMA(F) x4	
DLPA6-2.5-5.5DS/1314	2.40 - 2.50 5.15 - 5.85	8	60	60	Dual ±45°	55x161 Ø	N(M) 0.5m cable x4	
DLPA6-2.5-5.5DS /1722	2.40 - 2.50 5.15 - 5.85	7	60	60	Dual ±45°	55x161 Ø	N(M) 1m cable x4	
FPA8-2.4R-5.9R/1893	FPA8-2.3-5.9R/1894	DLPA7-2.5-5.5DS/1315	DLPA6-2.5-5.5DS/1314					



DIRECTIONAL - HELIX

AMHH12-58R/217	5.50 - 6.20	12	45	45	Right Circular	207x155	N(F)
----------------	-------------	----	----	----	----------------	---------	------

Group 5 - 4GHz to 6GHz

Sector

Model	Frequency GHz	Gain dBi	Beamwidth az°	Beamwidth el°	Polarisation	Dimensions mm	Connector/Cable	Photo
-------	------------------	-------------	------------------	------------------	--------------	------------------	-----------------	-------

SECTOR

SA6-180-36V/558	3.00 - 4.30	6	180	35	Vertical	205x75 Ø	SMA(F)	▲
SA10-40R/1052	3.70 - 4.20	10	70	40	Right Circular	114x63x26	SMA(F)	
SA6-180-51V/559	4.30 - 6.00	6	180	35	Vertical	205x57 Ø	SMA(F)	
SA14-60-47R/1165	4.40 - 5.00	14.5	60	9	Right Circular	408x76x9	TNC(F)	▲
SA17-60-4.7V/1817	4.40 - 5.00	17	55	8.5	Vertical	470x106x24	N(F)	
SA17-60-4.7V/1419	4.40 - 5.00	17	55	8.5	Vertical	470x106x24	N(F)	▲
SA12-120-4.8V/1659	4.40 - 5.10	12.8	120	16	Vertical	409x98 Ø	TNC(F)	
SA11-180-4950V/619	4.80 - 5.10	11	180	10	Vertical	616x57 Ø	N(F)	▲
SA5-180-49V/620	4.80 - 5.10	5	180	30	Vertical	120x41x44	SMA(F)	
Vector SA15-120-5.5V/9503	4.90 - 5.90	15	120	6.5	Vertical	650x200x101	N(F)	▲
Vector SA16-90-5.5V/9502	4.90 - 5.90	16.6	90	6.5	Vertical	650x200x101	N(F)	
Vector SA17-60-5.5V/9501	4.90 - 5.90	17.5	60	6.5	Vertical	650x200x101	N(F)	

SA6-180-36V/558



SA14-60-47R/1165



SA15-60-4.7V/1419



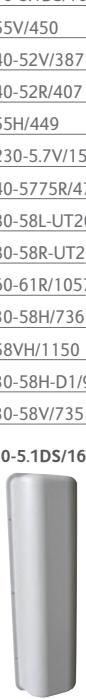
SA11-180-4950V/619



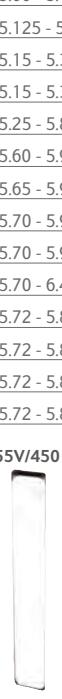
Vector SA16-90-5.5V/9502



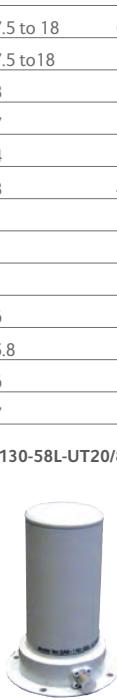
SA19-30-5.1DS/1616



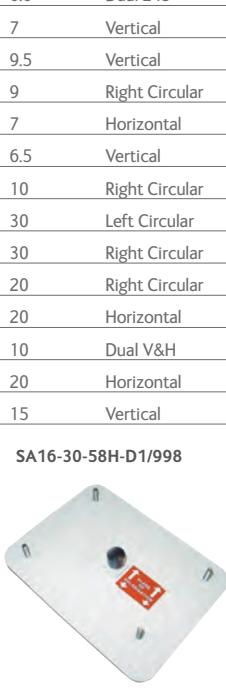
SA17-55V/450



SA8-130-58L-UT20/883



SA16-30-58H-D1/998



Catalogue

Group 5 - 4GHz to 6GHz

Sector

Model	Frequency GHz	Gain dBi	Beamwidth az°	Beamwidth el°	Polarisation	Dimensions mm	Connector/Cable	Photo
SA16-30-58V-D1/997	5.72 - 5.85	17	30	15	Vertical	174x130x8	TNC(F)	▲
SA15-120-58V/983	5.72 - 5.87	15	120	7	Vertical	548x263x30	N(F)	▲
SA16-90-58V/982	5.72 - 5.87	16	90	6	Vertical	548x263x30	N(F)	
SA10-62L/1054	5.90 - 6.45	10	70	35	Left Circular	76x44x20	SMA(F)	

SA16-30-58V-D1/997



SA15-120-58V/983



MULTI-SECTOR

MSA6-15-46L/879	4.40 - 4.80	15 sector 8.5 overhead	70 60	8.4 55	Left Circular	623x158 Ø	N(F)	▲
MSA6-4.7V/1484	4.40 - 5.00	15 sector 8 overhead	70 70	8 65	Vertical Right Circular	625x162 Ø	SMA(M)	
MSA6-90-4.7V/1554	4.40 - 5.00	13.8 sector 8 overhead	90 70	8 65	Vertical Right Circular	627x162 Ø	SMA(M)	
MSA6-4.7V-5.5V/1622	4.40 - 5.00 5.25 - 5.85	12.5	70	20	Vertical	627x162 Ø	SMA(F)	
MSA3-5.5V/1891	5.10 - 5.90	12	120	12	Vertical	645x109 Ø	N(F) x3	▲
DSA16-55VH/642	5.20 - 5.80	15	55H 65V	10	Dual V&H	380x151x10	N(F) x4	
4SA17-55V/876	5.25 - 5.825	17	60	7	Vertical	499x305x15	SMA(F) x4	▲
4SA17-55H/981	5.25 - 5.825	4 x 17	55	7	Horizontal	499x305x15	SMA(F) x4	
MSA6-5.5V/1783	5.25 - 5.85	12.5	70	17	Vertical	51x162 Ø	SMA(F)	▲

MSA6-16-46L/879



MSA3-5.5V/1891



4SA17-55V/876



MSA6-5.5V/1783



Group 5 - 4GHz to 6GHz

Omni

Model	Frequency GHz	Gain dBi	Beamwidth az°	Beamwidth el°	Polarisation	Dimensions mm	Connector/Cable	Photo
-------	------------------	-------------	------------------	------------------	--------------	------------------	-----------------	-------

OMNI

OMNI - SINGLE BAND

OA2-0.3-10.0V/1667	0.30 - 10.00	2	360	65	Vertical	306x162 Ø	N(F)	
OA2-0.3-10.0V/1668	0.30 - 10.00	2	360	65	Vertical	306x162 Ø	N(F)	
OA2-0.3-10.0V/1505	0.30 - 10.00	2	360	65	Vertical	306x162 Ø	N(F)	
OA2-0.8-6.0V/1665	0.80 - 6.00	2	360	75	Vertical	143x108 Ø	N(F)	
OA2-0.8-6.0V/1666	0.80 - 6.00	2	360	75	Vertical	143x108 Ø	N(F)	
XPO2V-0.8-6.0-GF/1441	0.80 - 6.00	2	360	75	Vertical	143x108 Ø	N(F)	▲
XPO2V-0.8-6.0/1485	0.80 - 6.00	2	360	75	Vertical	143x79 Ø	N(F)	▲
OA2-0.85-6.0V/1699	0.84 - 6.00	1	360	60	Vertical	170x60 Ø	N(F)	▲
OA2-1.0-6.0V/1794	1.00 - 6.00	1	360	80	Vertical	213x80 Ø	N(F)	▲
XPO2V-1.0-6.0/1442	1.00 - 6.00	2	360	70	Vertical	134x80 Ø	N(F)	▲
XPO2V-1.0-6.0/1512	1.00 - 6.00	2	360	70	Vertical	134x80 Ø	N(F)	▲

XPO2V-0.8-6.0GF/1441 XPO2V-0.8-6.0/1485 OA2-0.85-6.0/1699 OA2-1.0-6.0V/1794 XPO2V-1.0-6.0/1442 XPO2V-1.0-6.0/1512



OA2-1.7-6.0V/1624	1.70 - 6.00	2	360	70	Vertical	104x35 Ø	N(F)	
XPO2V-2.0-18.0/1397	2.00 - 18.00	2	360	70	Vertical	104x39 Ø	N(F)	▲
XPO2V-30-42/560	3.30 - 4.20	4	360	40	Vertical	205x75 Ø	SMA(F)	
VOA4-3900/130	3.75 - 4.05	4	360	40	Vertical	255x36 Ø	N(F)	
XPO2V-4.0-18.0/1382	4.00 - 18.00	1	360	60	Vertical	78x26 Ø	N(F)	
OA9-4.5V/1566	4.30 - 4.70	8.2	360	12	Vertical	603x36 Ø	N(F)	
VOA9-45/1161	4.30 - 4.70	9	360	11	Vertical	515x40 Ø	N(F)	▲
SVD2-4550/477	4.30 - 5.00	2	360	80	Vertical	68x11 Ø	SMA(M)	
SVD2-4460-SM90/478	4.35 - 4.55	2	360	80	Vertical	70x5 Ø	SMA(F) 90°	
OA8-4.5H/1590	4.40 - 4.60	8	360	12	Horizontal	450x79 Ø	SMA(F)	▲
LCO6-4600/875	4.40 - 4.80	6.5	360	22	Left Circular	221x190 Ø	N(F)	▲
OA6-4.7L/1755	4.40 - 4.80	6	360	19	Left Circular	246x104 Ø	QN(M)	▲
LCO6-4600-D1/908	4.40 - 4.80	6.5	360	22	Left Circular	362x109 Ø	N(F)	

XPO2V-2.0-18.0/1397 VOA9-45/1161 OA8-4.5H/1590 LCO6-4600/875 OA6-4.7L/1755



LCO6-4600-D1/908 mounted under helicopter



Catalogue

Group 5 - 4GHz to 6GHz

Omni

Model	Frequency GHz	Gain dBi	Beamwidth az°	el°	Polarisation	Dimensions mm	Connector/Cable	Photo
LC06-4600-D2/918	4.40 - 4.80	6.5	360	22	Left Circular	234x102 Ø	SMA(F)	
OA6-4.7L/1593	4.40 - 4.80	6.5	360	22	Left Circular	362x109 Ø	N(F)	
OA6-4.7L/1593	4.40 - 4.80	6.5	360	22	Left Circular	362x109 Ø	N(F)	
OA6-4.7R/1594	4.40 - 4.80	6.5	360	22	Right Circular	362x109 Ø	N(F)	
EVD2-4700/1174	4.40 - 5.00	2	360	80	Vertical	120x26 Ø	N(F)	▲
EVD2-47-TNC/1181	4.40 - 5.00	1.5	360	80	Vertical	120x28 Ø	TNC(F)	▲
EVD2-4700/1334	4.40 - 5.00	2	360	80	Vertical	120x26 Ø	N(M)	
OA2-4.7V/1840	4.40 - 5.00	2.4	360	63	Vertical	73x14 Ø	SMA(M)	▲
EVD2-4.7/1471	4.40 - 5.00	3.5	360	40	Vertical	110x45 Ø	N(F)	
OA4-4.7V/1643	4.40 - 5.00	5	360	31	Vertical	153x20 Ø	TNC(M)	▲
VOA6-4.7V/1489	4.40 - 5.00	6	360	24	Vertical	226x32 Ø	N(M)	▲
OA6-4.7V/1621	4.40 - 5.00	6	360	25	Vertical	236x75 Ø	N(F)	▲
OA6-4.7V/1621/LDS	4.40 - 5.00	6	360	25	Vertical	276x75 Ø	N(F)	
EVD2-4700/1174	EVD2-47-TNC/1181	OA2-4.7V/1840	OA4-4.7V/1643	VOA6-4.7V/1489	OA6-4.7V/1621			
								
OA6-4.7V/1704/LDS	4.40 - 5.00	6	360	25	Vertical	236x75 Ø	N(F)	▲
VOA7-4700-DTC/1175	4.40 - 5.00	6.5	360	18	Vertical	185x32 Ø	TNC(F)	▲
VOA6-47/914	4.40 - 5.00	6.5	360	23	Vertical	225x50 Ø	N(F)	▲
OA6-4.7V/1481	4.40 - 5.00	6.5	360	23	Vertical	329x40 Ø	TNC(F)	▲▲
OA6-4.7V/1704/LDS	VOA7-4700-DTC/1175	VOA6-47/914	OA6-4.7V/1481	OA6-4.7V/1481 (with spring mount)	OA8-4.7V/1592			
								
OA8-4.7V/1592	4.40 - 5.00	7.5	360	17	Vertical	379x70 Ø	N(F)	▲
VOA8-47/1170	4.40 - 5.00	7.5	360	17	Vertical	375x70 Ø	N(F)	above
OA3-4.8V/1465	4.40 - 5.20	3	360	48	Vertical	44x77 Ø	SMA(F)	above
OA4-4.4-5.8V/1623	4.40 - 5.80	3.5	360	40	Vertical	154x26 Ø	N(M)	
OA4-4.4-5.8V/1662	4.40 - 5.80	5	360	38	Vertical	153x45 Ø	N(F)	above
OA9-4.6V/1701	4.49 - 4.80	8.5	360	12.5	Vertical	600x36 Ø	N(F)	
SBA-49/621 blade	4.80 - 5.10	2	360	80	Vertical	100x25x55	SMA(F)	
Vector OA9-5.1V/9512	4.90 - 5.30	9	360	12	Vertical	360x26 Ø	N(F)	
SBA-5200/476 blade	5.10 - 5.30	2	360	70	Vertical	100x25x54	SMA(F)	

Group 5 - 4GHz to 6GHz

Omni

Model	Frequency GHz	Gain dBi	Beamwidth az°	Beamwidth el°	Polarisation	Dimensions mm	Connector/Cable	Photo
OA6-5.3V/1771/LDS	5.10 - 5.50	6.5	360	22	Vertical	240x75 Ø	N(F)	▲
SVD2-5250/373	5.15 - 5.35	2	360	80	Vertical	72x12 Ø	SMA(M)	▲
EVD2-5300/1285	5.15 - 5.45	2	360	80	Vertical	122x26 Ø	N(M)	▲
Vector OA4-5.5V/9515	5.15 - 5.85	5	360	38	Vertical	136x14 Ø	N(F)	▲
OA1-5.5V/1908	5.25 - 5.875	0-2	360	82	Vertical	21x50 Ø	SMA(F)	▲
Vector OA8-5.6V/9505	5.40 - 5.85	8.9	360	11	Vertical	345x27 Ø	N(F)	▲
EVD2-5600/1479	5.40 - 5.90	2	360	80	Vertical	132x26 Ø	N(M)	▲
OA4-5.7V/1644	5.40 - 6.00	4.5	360	35	Vertical	150x20 Ø	TNC(M)	▲
EVD2-5600/1286	5.45 - 5.75	2	360	80	Vertical	122x26 Ø	N(M)	▲
OA7-5.7V/1370	5.47 - 5.84	7	360	17.4	Vertical	225x27 Ø	N(M)	▲
OA4-5.7V/1587	5.50 - 5.90	4	360	23.5	Vertical	187x32 Ø	SMA(F)	▲
SVD2-5800/227	5.70 - 5.90	2	360	80	Vertical	63x11 Ø	SMA(F)	▲
RC05-58-DT5/884	5.70 - 5.90	4.7	360	33	Right Circular	184x55 Ø	SMA(F)	▲
LC05-58-DT5/882	5.70 - 5.90	4.7	360	33	Left Circular	184x55 Ø	SMA(F)	▲
OA6-5.8L/1756	5.70 - 5.90	>5	360	17.5	Left Circular	218x104 Ø	QN(M)	▲
OA8-5.8H/1555	5.70 - 5.90	8	360	15	Horizontal	385x79 Ø	SMA(F)	▲
OA4-5.5V/9515	5.72 - 5.85	3	360	35	Horizontal	220x108 Ø	N(F)	▲
OA4-VH-5850/1247	5.72 - 5.85	4	360	40	Dual V&H	340x108 Ø	N(F) x2	▲

OMNI - MULTIBAND

OA8-5.8H/1555	OA4-5.8H/1272	OA4-VH-5850/1247
		

Catalogue

Group 5 - 4GHz to 6GHz

Omni

Model	Frequency GHz	Gain dBi	Beamwidth az°	el°	Polarisation	Dimensions mm	Connector/Cable	Photo
OA2-0.1-6.0V/1692	0.10 - 0.50 0.50 - 6.00	0	360	80	Vertical	1250x140 Ø	N(F) x2	▲
7EVD2-900-5850/1091	0.88 - 0.96 1.71 - 1.88 1.92 - 2.17 2.40 - 2.50 5.25 - 5.85	1 2 2 2 2	360	100	Vertical	103x220 Ø	SMA(F) x7	▲
OA3-2.4-5.4DS/1833	2.40 - 2.50 5.15 - 5.725	0	360	70	Dual ±45°	93x100 Ø	RP SMA(M) 1m cable x4	▲
DS03-24-54/1177	2.40 - 2.50 5.15 - 5.725	0	n/a	n/a	Dual ±45°	93x100 Ø	SMA(F) x4	▲
OA3-2.4-5.4DS/1785	2.40 - 2.50 5.15 - 5.725	0	n/a	n/a	Dual ±45°	93x100 Ø	RPBNC(M) x2 RPSMA(M) x2 1m cables x4	
DS03-24-54/1491	2.40 - 2.50 5.15 - 5.725	0	360	70	Dual ±45°	93x100 Ø	SMA(F) x4	
DS03-24-54/1490	2.40 - 2.50 5.15 - 5.725	0	360	80	Dual 45°	93x100 Ø	SMA(F) x4	
DOA-2.4V-3.4V-4.7V/1869	2.30 - 3.50 4.40 - 5.00	2.0 6,5	360	70 23	Vertical	433x23 Ø	TNC(M) 90° 0.254m cable TNC(M) 90° 0.508m cable	▲



FPA23-69V/1267

FPA16-70R/922



Group 6 - 6GHz and over

Directional

Model	Frequency GHz	Gain dBi	Beamwidth az°	Beamwidth el°	Polarisation	Dimensions mm	Connector/Cable	Photo
-------	------------------	-------------	------------------	------------------	--------------	------------------	-----------------	-------

DIRECTIONAL

DIRECTIONAL - SINGLE BAND

BDPSA5-50800-D2/1160	0.50 - 8.00	5	80	70	Circular	488x356x22	SMA(F) x2	▲
PSA0218L/1501	2.00 - 18.00	0 to -2	75	75	Left Circular	45x56 Ø	SMA(F)	
PSA0218R/1142	2.00 - 18.00	0 to -2	75	75	Right Circular	40x52 Ø	SMA(F)	▲
PSA0218L/1276	2.00 - 18.00	-1(2-4) 2(4-18)	75	75	Left Circular	39x62 Ø	SMA(F)	▲
PSA0218R/1277	2.00 - 18.00	-1(2-4) 2(4-18)	75	75	Right Circular	65x68 Ø	SMA(F)	▲
PSA0218R/1278	2.00 - 18.00	-1(2-4) 2(4-18)	75	75	Right Circular	39x62 Ø	SMA(F)	▲
PSA0218L/1084	2.00 - 18.00	-1(2-4) 2(4-18)	75	75	Left Circular	65x68 Ø	SMA(F)	▲

BDPSA-50800-D2/1160	PSA0218R/1142	PSA0218L/1276	PSA0218R/1277	PSA0218R/1278	PSA0218L/1084

PSA0218L/1361	2.00 - 18.00	-4(2-4) 2(6-18)	75	75	Left Circular	51x61 Ø	N(F)	▲
PSA0218R/1360	2.00 - 18.00	-4(2-4) 2(6-18)	75	75	Right Circular	51x61 Ø	SMA(F)	▲
PSA0218L/1333	2.00 - 18.00	-4(2-4) 2(4-18)	75	75	Left Circular	51x61 Ø	SMA(F)	▲
PSA0218R/1362	2.00 - 18.00	-4(2-4) 2(6-18)	75	75	Right Circular	51x61 Ø	N(F)	page 95
FPA-4.0-6.0R/1787	4.00 - 6.00	4	90	90	Right Circular	39x62 Ø	SMA(F)	page 95
FPA-4.0-18.0L/1757	4.00 - 18.00	0.5 - 4.8	360	80	Left Circular	37x37 Ø	SMA(F)	page 95
LPA7-57R/216	5.40 - 6.00	7	80	80	Right Circular	15x84 Ø	SMA(F)	

PSA0218L/1361	PSA0218R/1360	PSA0218L/1333	FPA23-61V/1132	FPA23-61VH/1072	FPA21-62L/1119

LPA7-60R/674	5.80 - 6.20	8	70	70	Right Circular	15x84 Ø	SMA(F)	
FPA23-61V/1132	5.80 - 6.40	23	7	7	Vertical	380x380x17	SMA(F)	▲
FPA23-61VH/1072	5.80 - 6.40	23.5	7	7	Dual V&H	380x380x17	SMA(F) x2	▲
FPA23-61V/1266	5.80 - 6.40	27	6.8	6.5	Vertical	411x455x14	SMA(F)	
FPA21-62L/1119	5.90 - 6.40	21	11	11	Left Circular	8x281 Ø	SMA(F)	▲
LPA7-62L/1053	5.90 - 6.45	7	70	70	Left Circular	45x38x11	SMA(F)	
LPA7-6450R/820	6.30 - 6.70	8.4	70	70	Right Circular	15x63 Ø	SMA(F)	
FPA23-69V-N(F)/1320	6.40 - 7.40	25.5	7.6	7.4	Vertical	394x350x14	N(F)	
FPA23-69V/1267	6.40 - 7.40	25.5	7.6	7.4	Vertical	350x394x14	SMA(F)	above
FPA13-70VH/397	6.75 - 7.25	13	40	40	Dual V&H	83x83x9	SMA(F) x2	
FPA16-70R/922	6.80 - 7.20	16	18	18	Right Circular	189x163x13	SMA(F)	above

Catalogue

Group 6 - 6GHz and over

Directional

Model	Frequency GHz	Gain dBi	Beamwidth az°	Beamwidth el°	Polarisation	Dimensions mm	Connector/Cable	Photo
FPA19-75V/1179	7.20 - 7.80	19	17.5	18	Vertical	150x150x13	SMA(F)	▲
LPA7-7500R/1043	7.30 - 7.70	7	70	70	Right Circular	10x60 Ø	SMA(F)	
FPA26-77R/1255	7.65 - 7.75	26	7.5	3.5	Right Circular	580x320x17	N(F)	▲
FPA17-79V/482	7.80 - 8.00	17-17.5	20	20	Vertical	133x133x10	N(F)	▲
FPA23-80V/1268	7.80 - 8.50	24.5	8	8	Vertical	344x300x14	SMA(F)	
PSA0818R/1308	8.00 - 18.00	4	90	90	Right Circular	21x24 Ø	SMA(F)	▲
PSA-0818L/1045	8.00 - 18.00	4	90	90	Left Circular	21x24 Ø	SMA(F)	▲
PA7-8.3V/1820	8.00 - 8.50	8	84	65	Vertical	4x31 Ø	SMA(M) 0.43m cable	▲
FPA13-81V/1106	8.05 - 8.25	13	35	35	Vertical	10x70 Ø	SMA(F)	
FPA13-84V-T2/1841	8.20 - 10.00	13	40	40	Vertical	18x68 Ø	SMA(F)	



FPA13-84V-T2/261	8.20 - 10.00	13	40	40	Vertical	18x68 Ø	SMA(F)	
FPA13-84V/1000	8.20 - 8.60	13	35	35	Vertical	10x70 Ø	SMA(F)	▲
FPA23-85V/1047	8.30 - 8.50	23	8	8	Vertical	240x240x15	SMA(F)	
FPA26-90V/1006	8.30 - 9.70	26	9	4	Vertical	440x224x9	SMA(F)	
FPA13-86R/644	8.50 - 08.65	13	35	35	Right Circular	10x77 Ø	SMA(F)	
FPA23-95V/215	8.70 - 10.50	22	10	10	Vertical	224x213x9	SMA(F)	
FPA13-9550VH-D1/213	9.00 - 10.00	13	40	40	Dual V&H	76x76x8	SMA(F) x2	
FPA13-110V/303	9.00 - 11.50	13	40	40	Vertical	6x59 Ø	SMA(F)	
FPA13-92R/612	9.40 - 11.00	13	40	40	Right Circular	7x59 Ø	SMA(F)	
FPA16-100V-D1/152	9.60 - 10.20	16	30	30	Vertical	80x95x10	SMA(M)	
DFPA22V-13H-100/178	10.00 - 10.50	13	10	10				
		22	40	40	Dual V&H	203x174x18	SMA(F) x2	
LPA7-105R-D2/618	10.00 - 11.00	6	65	65	Right Circular	30x30x6	SMA(M) 0.28m cable	
LPA7-105R/481	10.00 - 11.00	7	65	65	Right Circular	30x30x7	SMA(F)	▲
FPA23-109V-D1/192	10.00 - 11.50	23	10	10	Vertical	193x185x6	SMA(F)	▲
FPA23-103V-501/416	10.10 - 10.80	23	9	11	Vertical	208x208x12	SMA(F)	▲
FPA23-103V-501-D1/1019	10.10 - 10.80	23	9	12	Vertical	208x208x12	SMA(F)	
FPA25-104V-D1/722	10.15 - 10.65	25	7	7	Vertical	251x251x16	SMA(F)	



Group 6 - 6GHz and over

Directional

Model	Frequency GHz	Gain dBi	Beamwidth az°	Beamwidth el°	Polarisation	Dimensions mm	Connector/Cable	Photo
-------	------------------	-------------	------------------	------------------	--------------	------------------	-----------------	-------

FPA13-105V-WD/377	10.20 - 10.70	13	44	36	Vertical	90x50x12	SMA(F)	▲
LPA7-105V/378	10.20 - 10.70	6	90	70	Vertical	6x21 Ø	SMA(F)	▲
4FPA24-105V/895	10.25 - 10.75	23.5	8.5	8.5	Vertical	374x374x16	SMA(F) x4	
FPA29-105V/1246	10.25 - 10.75	28	4	4	Vertical	374x374x11	SMA(F)	▲
FPA16-109V-D1/186	10.50 - 11.30	13.5	30	30	Vertical	95x80x10	SMA(F)	
FPA23-124V/275	11.70 - 13.00	23	10	10	Vertical	193x185x6	SMA(F)	▲

FPA13-105V-WD/377 LPA7-105V/378 FPA29-105V/1246 FPA23-124V/275



FPA28-127V/1270	12.00 - 13.50	28.8	3.2	3.2	Vertical	455x411x10	SMA(F)	
CHA7-12500R/441	12.25 - 12.75	8	70	70	Right Circular	100x25 Ø	SMA(F)	▲
FPA23-13V/1058	12.50 - 13.50	23	9	8	Vertical	150x150x24	SMA(F)	▲
FPA28-147V/1271	14.00 - 15.50	27	3.6	3.5	Vertical	394x350x14	SMA(F)	
FPA15-143V/211	14.20 - 14.60	15	30	30	Vertical	67x73x6	SMA(F) (gold plated)	
FPA23-1480V/1044	14.60 - 15.00	23	9	9	Vertical	130x130x12	SMA(F)	
FPA26-28V-ANT/787	27.75 - 28.25	26	6	6	Vertical	154x154x14		▲

CHA7-12500/441	FPA23-13V/1058	FPA26-28V-ANT/787

DIRECTIONAL - HELIX

AMHH12-58R/217	5.50 - 6.20	12	45	45	Right Circular	207x155	N(F)
----------------	-------------	----	----	----	----------------	---------	------

Catalogue

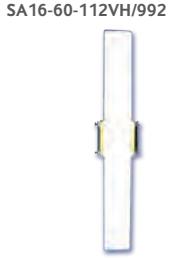
Group 6 - 6GHz and over

Sector

Model	Frequency GHz	Gain dBi	Beamwidth az°	Beamwidth el°	Polarisation	Dimensions mm	Connector/Cable	Photo
-------	------------------	-------------	------------------	------------------	--------------	------------------	-----------------	-------

SECTOR

SA13-60-61R/1057	5.70 - 6.40	11	70	20	Right Circular	150x50x12	SMA(F)	
SA10-62L/1054	5.90 - 6.45	10	70	35	Left Circular	76x44x20	SMA(F)	
SA16-65R/840	6.40 - 6.60	14.4	80	9.6	Right Circular	288x86x14	SMA(F)	
SA16-70-73H/129	7.10 - 7.50	16	75	7	Horizontal	497x81x15	N(F)	
SA12-120-75V/503	7.15 - 7.70	12	120	10	Vertical	357x160 Ø	N(F)	▲
SA12-120-8.4V/1892	8.10 - 8.60	11.5	120	16	Vertical	193x50 Ø	TNC(F)	

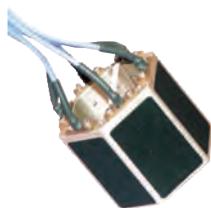


SA13-92H/587	8.90 - 9.50	12.5	50	20	Horizontal	118x55x11	SMA(F)	
SA15-90-104H-D1/1133	10.10 - 10.65	15	87-95	6	Horizontal	310x152x16	N(F)	
SA15-90-104V-D1/1124	10.10 - 10.65	15	84-87	7	Vertical	330x157x14	N(F)	
SA17-30-104H/572	10.15 - 10.65	18	30	12	Vertical	250x250x12	SMA(F)	
SA17-30-104V/571	10.15 - 10.65	15.7 to 16	30	12	Vertical	250x250x13	SMA(F)	
SA17-60-112VH/992	10.70 - 11.70	17.75	60	5	Dual V&H	650x80x65	SMA(F) x2	▲
SA17-60-122VH/1123	11.70 - 12.75	18	60	4	Dual V&H	650x80x64	SMA(F) x2	
SA17-13R/1077	13.40 - 14.00	17	75	6	Right Circular	220x50x11	SMA(F)	▲

MULTI-SECTOR

DSA16-90-104H/775	10.15 - 10.65	15	90	6.5	Horizontal	310x247x16	SMA(F) x2	
SA10-HEX-105H/269	10.30 - 10.70	10	80	40	Vertical	50x60 Ø	SMA(M) x6	
SA10-HEX-105V/250	10.30 - 10.80	10	80	40	Vertical	50x60 Ø	SMA(M) x6	▲
SA10-HEX-130V/267	12.70 - 13.50	10	80	40	Vertical	50x60 Ø	SMA(M) x6	

MSA10-HEX-105V/250



Group 6 - 6GHz and over

Omni

Model	Frequency GHz	Gain dBi	Beamwidth az°	Beamwidth el°	Polarisation	Dimensions mm	Connector/Cable	Photo
-------	------------------	-------------	------------------	------------------	--------------	------------------	-----------------	-------

OMNI

OMNI - SINGLE BAND

OA2-0.3-10.0V/1667	0.30 - 10.00	2	360	65	Vertical	306x162 Ø	N(F)	
OA2-0.3-10.0V/1668	0.30 - 10.00	2	360	65	Vertical	306x162 Ø	N(F)	
OA2-0.3-10.0V/1505	0.30 - 10.00	2	360	65	Vertical	306x162 Ø	N(F)	
XPO2V-2.0-18.0/1397	2.00 - 18.00	2	360	70	Vertical	104x39 Ø	N(F)	▲
XPO2V-4.0-18.0/1382	4.00 - 18.00	1	360	60	Vertical	78x26 Ø	N(F)	
SBA-49/621 blade	4.80 - 5.10	2	360	80	Vertical	100x25x54	SMA(F)	
SBA-5200/476 blade	5.10 - 5.30	2	360	70	Vertical	100x25x54	N(F)	
SVD2-7200/1603	6.00 - 7.40	2	360	80	Vertical	60x22 Ø	N(F)	▲
SVD2-7500/1042	7.30 - 7.70	2	360	80	Vertical	62x21 Ø	N(M)	▲
SVD2-7790/1243	7.50 - 8.00	2.5	360	64	Vertical	43x16 Ø	SMA(F)	▲
RCO4-7900/854	7.75 - 8.25	4	360	30	Right Circular	113x109 Ø	N(F)	
EVD2-1000/533	9.10 - 12.00	2	360	80	Vertical	33x6 Ø	SMA(M)	▲
RCO4-1020-D2/630	9.40 - 11.00	4	360	50	Right Circular	189x85 Ø	SMA(F)	
RCO4-1020/613	9.40 - 11.00	4	360	50	Right Circular	92x85 Ø	SMA(F)	▲

XPO2V-2.0-18.0/1397	SVD2-7200/1603	SVD2-7500/1042	SVD2-7790/1243	EVD2-1000/533	RCO4-1020/613
					
Actual Size			Actual Size	Actual Size	

XPO5-112VH/1122	10.70 - 11.70	5	360	18	Dual V&H	435x38 Ø	SMA(F) x2	▲
XPO5-122VH/1155	11.70 - 12.75	5	360	18	Dual V&H	425x38 Ø	SMA(F) x2	
RCO4-12850/271	12.20 - 13.50	4	360	50	Right Circular	76x74 Ø	SMA(F)	▲
RCO3-149/1945	14.40 - 15.35	0.5	360	45	Right Circular	52x69 Ø	SMA(F)	
RCO3-149/1946	14.40 - 15.35	0.5	360	45	Right Circular	52x69 Ø	SMA(F)	
RCO3-149/1062	14.40 - 15.35	0.5	360	45	Right Circular	51x69 Ø	SMA(F)	▲
RCO4-149/1385	14.40 - 15.40	4	360	40	Right Circular	74x69 Ø	SMA(F)	
RCO4-149/1447	14.40 - 15.40	4	360	30	Right Circular	74x69 Ø	TNC(F)	▲
RCO4-149/1389	14.40 - 15.40	4	360	40	Right Circular	74x69 Ø	N(F)	▲
XHO10-145/1190	14.42 - 14.52	10	360	7	Horizontal	274x36 Ø	SMA(F)	

XPO5-112VH/1122	RCO4-12850/271	RCO3-149/1062	RCO4-149/1447	RCO4-149/1389
				

Catalogue

DIRECTIONAL

PSA-50200-LP/1211
for security application



Ultra Wideband - all

Model	Frequency GHz	Gain dBi	Beamwidth az°	Beamwidth el°	Polarisation	Dimensions mm	Connector/Cable	Photo
-------	------------------	-------------	------------------	------------------	--------------	------------------	-----------------	-------

DIRECTIONAL - ULTRA WIDEBAND

UWBA15300/1221	0.15 - 3.00	Request datasheet			Right Circular	705x671x37	N(F)	▲
PES-200-1000-NC/581	0.20 - 1.00	2 n/a n/a			Circular	560x372x35	N(F)	▲
PSA7530L/1147			1 (0.5) 4 to 6 (1-3)			70 90	Left Circular	57x246 Ø SMA(F) 90°
PSA75301R/170			1 (0.5) 4 to 6 (1-3)			70 90	Right Circular	57x246 Ø SMA(F) 90°
PSA-50200-LP/1211	0.50 - 3.00	8			70 60	Right Circular	490x365x30	N(F)



PSA-50200-LP/1421	0.50 - 3.00	8	70	60	Right Circular	490x365x31	N(F)	▲
BDPSA-50800-D2/1160	0.50 - 8.00	5	80	70	Circular	488x356x22	SMA(F) x2	▲
BDFPA-0.6-4.0-RL/1313	0.60 - 4.00	4.5	75	75	Circular	280x227x50	N(F) 1m cable	▲
FPA-0.6-6.0R/1562	0.60 - 6.00	1 to 6	70	70	Circular	50x219 Ø	N(F)	▲
PSA-8025R/707	0.80 - 2.50	4.5 to 8	65	65	Right Circular	48x220 Ø	N(F)	▲
FPA3-0.8-6.0R/1329	0.80 - 6.00	4.5	80	80	Right Circular	50x219 Ø	N(F)	▲
FPA3-0.8-6.0L/1812	0.80 - 6.00	4.5	80	80	Left Circular	50x219 Ø	N(F)	▲
PSA10401L/1169	1.00 - 4.00	4 to 6	90	90	Left Circular	42x150 Ø	N(F)	▲



PSA1040R/1366	1.00 - 4.00	-5 to +7.5	75	75	Right Circular	80x100 Ø	SMA(F)	▲
PSA10401R/643	1.00 - 4.00	4 to 6	90	90	Right Circular	76x150 Ø	N(F)	▲
PSA0218L/1501	2.00 - 18.00	0 to -2	75	75	Left Circular	45x56 Ø	SMA(F)	▲
PSA0218R/1142	2.00 - 18.00	0 to -2	75	75	Right Circular	40x52 Ø	SMA(F)	▲
PSA0218L/1276	2.00 - 18.00	-1(2-4) 2(4-18)	75	75	Left Circular	39x62 Ø	SMA(F)	▲

DIRECTIONAL and SECTOR

Ultra Wideband - all

Model	Frequency GHz	Gain dBi	Beamwidth az° el°	Polarisation	Dimensions mm	Connector/Cable	Photo
PSA0218R/1277	2.00 - 18.00	-1(2-4) 2(4-18)	75 75	Right Circular	65x68 Ø	SMA(F)	▲
PSA0218R/1278	2.00 - 18.00	-1(2-4) 2(4-18)	75 75	Right Circular	39x62 Ø	SMA(F)	▲
PSA0218L/1084	2.00 - 18.00	-1(2-4) 2(4-18)	75 75	Left Circular	65x68 Ø	SMA(F)	▲
PSA0218L/1361	2.00 - 18.00	-4(2-4) 2(6-18)	75 75	Left Circular	51x61 Ø	N(F)	▲
PSA0218R/1360	2.00 - 18.00	-4(2-4) 2(6-18)	75 75	Right Circular	51x61 Ø	SMA(F)	▲
PSA0218L/1333	2.00 - 18.00	-4(2-4) 2(4-18)	75 75	Left Circular	51x61 Ø	SMA(F)	▲
PSA0218R/1277	PSA0218R/1278	PSA0218L/1084	PSA0218L/1361	PSA0218R/1360	PSA0218L/1333		
							
PSA0218R/1362	2.00 - 18.00	-4(2-4) 2(6-18)	75 75	Right Circular	51x61 Ø	N(F)	▲
FPA-4.0-6.0R/1787	4.00 - 6.00	4	90 90	Right Circular	39x62 Ø	N(F)	▲
FPA-4.0-18.0L/1757	4.00 - 18.00	0.5 - 4.8	360 80	Left Circular	37x37 Ø	SMA(F)	▲
PSA0818R/1308	8.00 - 18.00	4	90 90	Right Circular	21x24 Ø	SMA(F)	▲
PSA-0818L/1045	8.00 - 18.00	4	90 90	Left Circular	21x24 Ø	SMA(F)	▲

PSA0218R/1362	FPA-4.0-6.0L/1787	FPA-4.0-18.0L/1757	PSA0818R/1308	PSA0818L/1045
				

SECTOR - ULTRA WIDEBAND

SA9-180-0.96-1.22V/1814	0.96 - 1.215	9	180	20	Vertical	1228x250 Ø	N(F)	▲
SA13-120-0.96-1.22V/1694	0.96 - 1.22	13	110	9	Vertical	1650x155 Ø	N(F)	

SA9-180-0.96-1.22V/1814



Catalogue

OMNI

Ultra Wideband and Extended Performance - all

Model	Frequency GHz	Gain dBi	Beamwidth az°	Beamwidth el°	Polarisation	Dimensions mm	Connector/Cable	Photo
-------	------------------	-------------	------------------	------------------	--------------	------------------	-----------------	-------

OMNI - ULTRA WIDEBAND, HIGH PERFORMANCE

OA2-0.1-6.0/1692	0.10 - 0.50 0.50 - 6.00	2	360	80	Vertical	1250x140 Ø	N(F) x2	▲
XPO2V-150-600/148	0.15 - 0.60	2	360	80	Vertical	806x156 Ø	N(F)	▲
XPO3V-300-600/083	0.30 - 0.60	3	360	80	Vertical	500x96 Ø	N(F)	▲
OA2-0.3-1.0V/1530	0.30 - 1.00	2	360	60	Vertical	472x104 Ø	N(F)	
OA2-0.3-10.0V/1667	0.30 - 10.00	2	360	65	Vertical	306x162 Ø	N(F)	
OA2-0.3-10.0V/1668	0.30 - 10.00	2	360	65	Vertical	306x162 Ø	N(F)	
OA2-0.3-10.0V/1505	0.30 - 10.00	2	360	65	Vertical	306x162 Ø	N(F)	
XPO3V-500-1300-LP/586	0.50 - 1.30	1 to 2	360	80	Vertical	275x108 Ø	N(F)	
XPO2V-500-1300/1351	0.50 - 1.30	1 to 2	360	80	Vertical	326x108 Ø	N(F)	▲
XPO3V-500-1300/034	0.50 - 1.30	1 to 2	360	80	Vertical	333x108 Ø	N(F)	▲
OA2-0.8-6.0V/1665	0.80 - 6.00	2	360	75	Vertical	143x108 Ø	N(F)	
OA2-0.8-6.0V/1666	0.80 - 6.00	2	360	75	Vertical	143x108 Ø	N(F)	
XPO2V-0.8-6.0-GF/1441	0.80 - 6.00	2	360	75	Vertical	143x108 Ø	N(F)	▲

OA2-0.1-6.0/1692 XPO2-15-600/148 XPO3V-300-600/083 XPO2V-500-1300/1351 XPO3V-500-1300/034 XPO2V-0.8-6.0GF/1441



XPO2V-0.8-6.0/1485	0.80 - 6.00	2	360	75	Vertical	143x79 Ø	N(F)	▲
OA2-0.85-6.0V/1699	0.84 - 6.00	1	360	60	Vertical	170x60 Ø	N(F)	▲
XPO2V-880-2175/1355	0.88 - 2.175	2.5	360	50	Vertical	221x50 Ø	N(F)	▲
XPO2V-880-2175/1350	0.88 - 2.175	2.5	360	50	Vertical	345x36 Ø	N(F)	▲
OA2-0.9-2.2V1830	0.88 - 2.175	2	360	50	Vertical	262x31 Ø	QN(M)	above
OA2-0.8-2.2V/1726	0.88 - 2.175	2.5	360	50	Vertical	345x36 Ø	N(F)	
XPO2V-880-2175/1060	0.88 - 2.175	2.5	360	50	Vertical	221x50 Ø	N(F)	▲
XPO2V-880-2175/1321	0.88 - 2.175	2.5	360	50	Vertical	221x50 Ø	N(F)	▲
EVD2-960-1215/004	0.96 - 1.215	2	360	80	Vertical	281x26 Ø	N(F)	page 50
EVD2-960-1215/628	0.96 - 1.215	2	360	80	Vertical	292x25 Ø	N(M)	page 50
OA7-1090V/1328	0.96 - 1.215	7	360	16.5	Vertical	1040x180 Ø	N(F)	page 50

XPO2V-0.8-6.0/1485 OA2-0.85-6.0/1699 XPO2V-880-2175/1355 XPO2V-880-2175/1350 XPO2V-880-2175/1321 XPO2V-880-2175/1060



OA2-0.9-2.2V/1830



XVO7-960-1215/1120
for LINK16



OMNI

Ultra Wideband and Extended Performance - all

Model	Frequency GHz	Gain dBi	Beamwidth az°	Beamwidth el°	Polarisation	Dimensions mm	Connector/Cable	Photo
-------	------------------	-------------	------------------	------------------	--------------	------------------	-----------------	-------

XVO7-960-1215/1120 Link16	0.96 - 1.215	7	360	16.5	Vertical	1029x79 Ø	N(F)	▲
XPO4-960-1215/1425 Link16	0.96 - 1.215	4.5	360	33	Vertical	620x79 Ø	N(F)	▲
OA2-1.0-6.0V/1794	1.00 - 6.00	1	360	80	Vertical	213x80 Ø flange	N(F)	▲
XPO2V-1.0-6.0/1442	1.00 - 6.00	2	360	70	Vertical	134x80 Ø	N(F)	▲
XPO2V-1.0-6.0/1512	1.00 - 6.00	2	360	70	Vertical	134x80 Ø	N(F)	▲
XPO2V-1150-1650/1036	1.15 - 1.65	2	360	70	Vertical	250x25 Ø	N(M)	▲
XPO7R-1500/138	1.45 - 1.55	7	360	20	Right Circular	707x158 Ø	N(F)	▲

XVO7-960-1215/1120 XPO4-960-1215/1425 OA2-1.0-6.0V/1794 XPO2V-1.0-6.0/1442 XPO2V-1.0-6.0/1512 XPO2V-1150-1650/1036



OA2-1.6-3.0V/1683	1.65 - 3.00	2	360	63	Vertical	184x13 Ø	TNC(F)	▲
OA2-1.6-3.0V/1377	1.65 - 3.00	2	360	68	Vertical	186x75 Ø	N(F)	
OA2-HP-2.0V/1291	1.65 - 3.00	2	360	80	Vertical	253x25 Ø	N(F)	
XPO2V-1650-3000/140	1.65 - 3.00	2	360	80	Vertical	256x25 Ø	N(F)	
XPO2V-1650-3000/1354	1.65 - 3.00	2	360	80	Vertical	256x25 Ø	N(F)	▲
XPO2V-1710-2175/1007	1.70 - 2.17	3.5	360	50	Vertical	147x26 Ø	N(F)	▲
OA4-1.7-2.5V/1810	1.70 - 2.50	4	360	40	Vertical	256x50 Ø	N(F)	page 66
OA2-1.7-6.0V/1624	1.70 - 6.00	2	360	70	Vertical	104x35 Ø	N(F)	
XVO9-2150-D2/870	2.00 - 2.30	9.5	360	8	Vertical	1006x104 Ø	N(F)	
XPO2V-2.0-18.0/1397	2.00 - 18.00	2	360	70	Vertical	104x39 Ø	N(F)	▲
XVO9-2150/708	2.02 - 2.28	9.5	360	8	Vertical	1006x106 Ø	N(F)	▲
XV010-3450/065	3.35 - 3.55	9.4	360	10	Vertical	600x96 Ø	N(F)	
XPO2V-30-42/560	3.30 - 4.20	4	360	40	Vertical	205x75 Ø	SMA(F)	
XVO11-3500-D1/771	3.40 - 3.60	10.5	360	7	Vertical	904x98 Ø	716(F)	
XVO9-3880/944	3.70 - 4.06	9	360	7	Vertical	782x98 Ø	N(F)	
XPO2V-4.0-18.0/1382	4.00 - 18.00	1	360	60	Vertical	78x26 Ø	N(F)	
OA4-4.4-5.8V/1623	4.40 - 5.80	3.5	360	40	Vertical	154x26 Ø	N(M)	
XPO5-112VH/1122	10.70 - 11.70	5	360	18	Dual V&H	435x38 Ø	SMA(F) x2	▲
XPO5-122VH/1155	11.70 - 12.75	5	360	18	Dual V&H	425x38 Ø	SMA(F) x2	
XHO10-145/1190	14.42 - 14.52	10	360	7	Horizontal	274x36 Ø	SMA(F)	

OA2-1.6-3.0V/1683 XPO2V-1650-3000/1354 XPO2V-1710-2175/1007 XPO2V-2.0-18.0/1397 XVO9-2150/708 XPO5-112VH/1122



Catalogue

SECTORS

Multi-Sectors - all

Model	Frequency GHz	Gain dBi	Beamwidth az°	Beamwidth el°	Polarisation	Dimensions mm	Connector/Cable	Photo
-------	------------------	-------------	------------------	------------------	--------------	------------------	-----------------	-------

MULTI-SECTOR

MSA5-1400/1131	1.31 - 1.43	12 sector 6.5 overhead	88 57	19 56	Vertical Right Circular	735x197 Ø	N(F)	
MSA5-1.4V/1782	1.395 - 1.525	11.5 sector 4.4 overhead	80 87	19 87	Vertical Right Circular	758x197 Ø	-	▲
MSA5-1.5V/1645	1.43 - 1.52	12 sector 7.5 overhead	84 66	17.6 67	Vertical Right Circular	733x197 Ø	-	
MSA6-2.4V/1795	2.00 - 2.70	8 sector 8.5 overhead	140 65	35 65	Vertical Right Circular	300x156 Ø	SMA(F) x6	▲
DSA17-22V/522	2.02 - 2.28	17	65	8	Vertical	1143x334x14	N(F) x2	
MSA7-16-2350R/829	2.30 - 2.40	14 sector 6.5 overhead	70 60	10 53	Right Circular	813x231 Ø	N(F)	▲
MSA5-10-24R/389	2.30 - 2.50	10 sector 6 overhead	90 90	40 90	Right Circular	210x140 Ø	SMA(F) x5	
MSA5-24R-D1/672	2.30 - 2.50	12 sector 7 overhead	80 70	20 70	Right Circular	550x156 Ø	SMA(M) x5	
MSA4-24R/199	2.30 - 2.50	13	90	20	Right Circular	706x156 Ø	N(F)	▲

MSA5-1.4V/1782 MSA6-2.4V/1795 MSA7-16-2350R/829 MSA4-24R/199 MSA5-2.4V/1681 SA7-QUAD-24R/284



MSA5-24R/223	2.30 - 2.50	13 sector 7 overhead	80 80	20 80	Right Circular	706x156 Ø	N(F)	
MSA5-24L-ECS/1293	2.30 - 2.50	13 sector 7 overhead	90 80	20 80	Left Circular	583x156 Ø	-	
MSA5-24R-ECS/270	2.30 - 2.50	13 sector 7 overhead	90 80	20 80	Right Circular	706x156 Ø		
MSA5-24L-ECS/763	2.30 - 2.50	13 sector 7 overhead	90 80	20 80	Left Circular	707x156 Ø	-	
DSA17-24V/466	2.30 - 2.50	17	65	8	Vertical	1143x335x14	N(F) x2	
MSA5-2.4V/1681	2.30 - 2.55	12.5 sector 7 overhead	80	21 75.8	Vertical Right Circular	583x156 Ø	n/a	▲
SA7-QUAD-24R/284	2.30 - 2.68	7 sector	80	80	Right Circular	85x85x69	SMA(F) x4	▲
DSA11-6-2450R-701/563	2.40 - 2.50	11 Rx, 6 Tx	65 70	30 70	Right Circular	547x140x19	SMA(F), SMA(M) 0.5m cable	
DSA11-6-2450R-NF/723	2.40 - 2.50	11 Rx, 6 Tx	65 70	30 70	Right Circular	547x140x19	N(F) 0.5m cable	above
MSA5-26L/117	2.48 - 2.68	13 sector 7 overhead	90 80	20 80	Left Circular	706x156 Ø	N(F)	
DSA16-26VH/640	2.50 - 2.70	15.5	65	55	Dual V&H	652x250x10	N(F) x4	
4SA12-26S45S45VS45/1063	2.50 - 2.70	12	75	20	Linear 2x +45°, 1x -45°, 1x Vertical	292x292x7	MCX jack x1, PCB fs x3	
4SA9-26S45S45VS45/1064	2.50 - 2.70	9	75	45	Linear 2x +45°, 1x -45°, 1x Vertical	292x146x7	MCX jack x1, PCB x3	

SECTORS

Multi-Sectors - all

Model	Frequency GHz	Gain dBi	Beamwidth az°	Beamwidth el°	Polarisation	Dimensions mm	Connector/Cable	Photo
MSA5-3.3L/1407	3.20 - 3.40	12.5 sector 8 overhead	68 64	16.7 62	Left Circular	583x156 Ø	-	▲
MSA5-3.4V/1435	3.35 - 3.55	13	80	16.5	Vertical	583x156 Ø	SMA(F) x5	▲
MSA7-16-35R/497	3.40 - 3.50	15 sector 7 overhead	70 70	10 60	Right Circular	681x156 Ø	N(F)	▲
MSA5-34R-ECS/374	3.40 - 3.60	13 sa 7 oh	80 80	20 80	Right Circular	708x156 Ø	N(F)	▲
MSA5-34L-ECS/963	3.40 - 3.60	13 sector 7 overhead	80 80	20 80	Left Circular	606x156 Ø	N(F)	
DSA17-35V/462	3.40 - 3.60	17	65	7	Vertical	816x201x12	N(F) x2	▲
MSA6-15-46L/879	4.40 - 4.80	15 sector 8.5 overhead	70 60	8.4 55	Left Circular	623x158 Ø	N(F)	▲
MSA6-4.7V/1484	4.40 - 5.00	15 sector 8 overhead	70 70	8 65	Vertical Right Circular	625x162 Ø	SMA(M)	
MSA6-90-4.7V/1554	4.40 - 5.00	13.8 sector 8 overhead	90 70	8 65	Vertical Right Circular	627x162 Ø	SMA(M)	
MSA6-4.7V-5.5V/1622	4.40 - 5.00 5.25 - 5.85	12.5	70	20	Vertical	627x162 Ø	SMA(F)	
MSA5-3.3L/1407	Base of MSA5-3.4V/1435	MSA7-16-35R/497	MSA5-34R-ECS/374	DSA17-35V/462	MSA6-16-46L/879			
MSA3-5.5V/1891	5.10 - 5.90	12	120	12	Vertical	645x109 Ø	N(F) x3	▲
DSA16-55VH/642	5.20 - 5.80	15	55H 65V	10	Dual V&H	380x151x10	N(F) x4	
4SA17-55V/876	5.25 - 5.825	17	60	7	Vertical	499x305x15	SMA(F) x4	▲
4SA17-55H/981	5.25 - 5.825	4 x 17	55	7	Horizontal	499x305x15	SMA(F) x4	
MSA6-5.5V/1783	5.25 - 5.85	12.5	70	17	Vertical	51x162 Ø	SMA(F)	▲
DSA16-90-104H/775	10.15 - 10.65	15	90	6.5	Horizontal	310x179x23	SMA(F) x2	
SA10-HEX-105H/269	10.30 - 10.70	10	80	40	Horizontal	50x60 Ø	SMA(M) x6	
MSA10-HEX-105V/250	10.30 - 10.80	10	80	40	Vertical	50x60 Ø	SMA(M) x6	▲
SA10-HEX-130V/267	12.70 - 13.50	10	80	40	Vertical	50x60 Ø	SMA(M) x6	
MSA3-5.5V/1891	4SA17-55V/876	MSA6-5.5V/1783	MSA10-HEX-105V/250					

Catalogue

OMNI and SECTOR Blade Antennas

Omni Blade antennas - all

Model	Frequency GHz	Gain dBi	Beamwidth az°	el°	Polarisation	Dimensions mm	Connector/Cable	Photo
-------	------------------	-------------	------------------	-----	--------------	------------------	-----------------	-------

Omni BLADE

SBA-0.35V/1856 blade	0.342 - 0.36	2	360	74	Vertical	204x30, 40x40	SMA(F)	
SBA-0.36V/1573 blade	0.344 - 0.374	0 to 2	360	80	Vertical	160x32x40	SMA(F)	
SBA-0.4V/1469 blade	0.415 - 0.435	2.4	360	80	Vertical	40x40x175	SMA(F)	page 38
SBA-0.5V/1829 blade	0.45 - 0.465	2	360	90	Vertical	40x40,30x160	SMA(F)	page 38
SBA-0.8V/1780 blade	0.76 - 0.83	0	360	60	Vertical	90x44 Ø	TNC(F)	
SBA-900/1249 blade	0.902 - 0.928	0 to 2	360	100	Vertical	25x77x3, 44 Ø	TNC(F)	▲
SBA-1.3V/1885 blade	1.15 - 1.35	0.2	360	70	Vertical	53x25, 44 Ø	TNC(F)	
SBA-1.4V/1765 blade	1.31 - 1.49	0	360	90	Vertical	30x2x120	SMA(F)	
SBA-1470/702 blade	1.42 - 1.52	0 to 1	360	80	Vertical	100x67x12	SMA(F)	
SBA-1480/1297 blade	1.43 - 1.52	2	360	80	Vertical	120x22x2	SMA(F)	page 52
SBA-1500-502/445 blade	1.45 - 1.55	2	360	80	Vertical	72x14x126	SMA(F)	page 53
SBA-1500/055 blade	1.45 - 1.55	2	360	80	Vertical	100x9x122	SMA(F)	page 53
SBA-1700/154 blade	1.65 - 1.75	2	360	80	Vertical	100x25x95	SMA(F)	
SBA-1790/1298 blade	1.75 - 1.82	2	360	80	Vertical	105x30x2	SMA(F)	
SBA-2.0/1418 blade	1.98 - 2.01	2	360	60	Vertical	97x50x41	MCX 90 0.1m cable	
SBA-2.3V/1470 blade	2.00 - 2.50	2	360	50	Vertical	89x30x3	SMA(F)	▲
SBA-2.5V/1739 blade	2.00 - 2.50	2	360	50	Vertical	89x30x3	SMA(F)	
SBA-2295/1299 blade	2.20 - 2.39	2	360	80	Vertical	90x30x3	SMA(F)	page 68
SBA-2450-2300RG316/1184 blade	2.40 - 2.50	2	360	80	Vertical	75x28x3	SMA(M) 2.3m cable	
SBA-2450-VOR/859 blade	2.40 - 2.48	-3	360	80	Vertical	68x15x43	SMA(F) 0.1m cable	
SBA-2450-2400-RG316/1173 blade	2.40 - 2.50	2	360	80	Vertical	75x25x3	SMA(M) 2.4m cable	▲
SBA2450-02/185 blade	2.40 - 2.50	2	360	80	Vertical	67x25,100x9 base	SMA(F)	
SBA3150/731 blade	3.00 - 3.30	2	360	80	Vertical	100x25x54	SMA(F)	
SBA4-3450/987 blade	3.375 - 3.75	4	360	40	Vertical	44x3x112	SMA(F)	
SBA3500/732 blade	3.40 - 3.60	2	360	80	Vertical	100x25x54	SMA(F)	
SBA3800/220 blade	3.60 - 4.00	2	360	80	Vertical	100x25x55	SMA(F)	
SBA-3800-D1/1040 blade	3.60 - 4.00	2	360	70	Vertical	54x3, 26 Ø base	SMA(F)	
SBA-38/919 blade	3.80 - 4.00	4	360	60	Vertical	43x25x112	SMA(F)	page 79
SBA-49/621 blade	4.80 - 5.10	2	360	80	Vertical	100x25x54	SMA(F)	
SBA-5200/476 blade	5.10 - 5.30	2	360	70	Vertical	100x25x54	N(F)	

Left to right

SBA-2.3V/1470 (omni)
SBA-900/1249 (omni)



OMNI and SECTOR Blade Antennas

Sector Blade type antennas - all

Model	Frequency GHz	Gain dBi	Beamwidth az° el°	Polarisation	Dimensions mm	Connector/Cable	Photo
-------	------------------	-------------	-------------------------	--------------	------------------	-----------------	-------

Sector BLADE

HDA-368/1025 blade	0.36 - 0.37	0 to 2	140	90	Mixed	161x125x1	SMA(F)
HDA-0.38/1811 blade	0.369 - 0.389	0	64	126	Linear	202x52x2	SMA(M) 1m cable
HDA-462/517 blade	0.462	0 to 2	n/a	n/a	Mixed	130x100x1	SMA(M) 1m cable
HDA-0.9V/1798 blade	0.87 - 0.69	0 to 2	360	80	Vertical	35x25x7	SMA(M) 1.5m cable
HDA-1.2V/1545 blade	1.15 - 1.26	1.3	120	100	Vertical	82x38x47	SMA(M) 0.25m cable
HDA-1275/1561 blade	1.20 - 1.35	4	75	175	Horizontal	120x75x2	TNC(M) 1m LMR195 cable
HDA-1275/1148 blade	1.20 - 1.35	4	75	175	Horizontal	120x74x1	SMA(M) 90°
HDA-1275/1274 blade	1.20 - 1.35	4	75	175	Horizontal	120x74x1	SMA(M) 90°
HDA-1.3V/1632 blade	1.26 - 1.40	2	170	80	Vertical	82x38x47	SMA(M) 0.3m cable
HDA-1.3V/1488 blade	1.26 - 1.40	5	120	70	Vertical	81x37x46	SMA(M)
HDA-1394-SMA/903 blade	1.35 - 1.43	2	360	80	Vertical	82x38x44	SMA(M) 0.68m cable
HDA-1394-SMA90/785 blade	1.35 - 1.43	2	360	80	Vertical	82x38x44	SMA(M) 90° 0.14m cable
HDA-1.6V/1682 blade	1.55 - 1.70	3.5	123	70	Vertical	81x37x46	SMA(M) 0.25m cable
HDA-1800-502-D2/655 blade	1.71 - 1.88	3	140	70	Mixed	90x46x45	N(F) 0.5m cable
HDA-1800-502-D4/1002 blade	1.71 - 1.88	3	140	70	Vertical	90x46x45	N(F) 0.3m cable
HDA-1800-502-D3/1001 blade	1.71 - 1.88	3	142	72	Vertical	90x46x44	N(F) 0.3m cable
HDA-1800-502/381 blade	1.71 - 1.88	3	142	72	Mixed	90x46x44	N(F) 0.5m cable
HDA-1800-2050/769 blade	1.71 - 1.88						
	1.92 - 2.175	2	140	70	Dual V&H	180x46x43	SMA(M) 1m cable x2
HDA-1.9V/1797 blade	1.71 - 2.17	0 to 1			Vertical	35x45	SMA(M)
HDA-2050-D2/1030 blade	1.92 - 2.175	4.5	150	80	Vertical	90x46x44	SMA(M) 0.5m cable
HDA-2050/913 blade	1.92 - 2.175	4.5	150	80	Vertical	90x46x44	SMA(M) 0.5m cable
HDA-2.4V/1689 blade	2.20 - 2.70	3.4	169	85	Vertical	82x38x47	SMA(M) 0.3mm cable
DHDA-2.4V/1448 blade	2.28 - 2.55	1	160	78.5	Vertical	82x47x37	SMA(M) 0.4m cable
HDA-2.4V/1423 blade	2.28 - 2.55	4.5	160	78.5	Vertical	82x47x37	SMA(M) 0.25m cable
HDA-2460-SMA(M)/902 blade	2.40 - 2.50	2	120	120	Dual V&H	36x50 Ø	SMA(M) 1m cable
HDA-2460/024 blade	2.40 - 2.50	2	120	120	Dual V&H	50x50 Ø	TNC(M) 1m cable
HDA-3.3V/1543 blade	3.10 - 3.40	4.7	160	75	Vertical	82x38x47	SMA(M) 0.25m cable



Catalogue

Accessories

Combiners and Dividers

Model	Description	Frequency GHz	Dimensions mm	Connector/Cable	Photo
-------	-------------	------------------	------------------	-----------------	-------

COMBINERS and DIVIDERS

BMU2/005	Broadband matching unit, 100 watts	0.02 - 0.20	140x82x37	N(F)	
BM2-200/596	Broadband matching unit	0.02 - 0.50	200x90x37	N(F)	
BMU-25-500/1222	Broadband Matching Unit	0.025 - 0.50	126x82x30	N(F) x2	▲
BPF-0.96-1.22/1911	Interdigital Bandpass Filter - Link 16	0.902 - 1.213	175x75x25	Input N(F), Output, N(F)	▲
HC5-1080-02/012	Combiner/Divider 5 way	0.96 - 1.215	189x154x24	N(F) x6	
HC5-1080-01/001	Combiner/Divider 5 way	0.96 - 1.215	216x142x24	N(F) x6	
HC3-1080/010	Combiner 3 way	0.96 - 1.215	119x97x22	N(F) x4	
HC6-1080-01/224	Power Divider, 6-way High Power	0.96 - 1.215	189x154x24	N(F) x7	
MC6-1080-02/183	Power Divider, 6-way	0.96 - 1.215	163x100x20	SMA(F) x7	
BSF-1030-1090/1347	Bandstop Filter - Link 16	0.96 - 1.27	210x85x100	Input N(F), Output N(F)	▲
2PDE-15-N/134	Power Divider	1.30 - 1.70	71x66x21	N(F) x3	
PDE-23/1012	Splitter	2.10 - 2.50	89x73x25	N(F) x3	▲
PDE4-2.3/1602	4 Way Splitter/Combiner	2.20 - 2.40	85x85x290	SMA(F) x5	▲
2PDE-24N-2FCC/331	Power Divider	2.40 - 2.50	72x66x21	Input N(F), Output SMA(F) x2	
2PDE-26-N/174	Equal 2 way Divider	2.50 - 2.70	71x61x21	N(F) x3	

BMU-25-500/1222
Broadband Matching Unit



BPF-0.96-1.22/1911
Interdigital Bandpass
Filter for Link 16
frequencies



BSF-1030-1090/1347
Bandstop Filter for Link16
frequencies



PDE-23/1012
Splitter



PDE4-2.3/1602



Accessories

Mounting Kits

Model	Description	Finish SS = stainless steel MS = Mild Steel A = Aluminium	Dimensions mm	Weight kg
-------	-------------	--	------------------	--------------

MOUNTING KITS

MK001A	MK001A Magnetic mount for EVD2 omni, N(F) bulkhead connectors, protective rubber foot	Protective rubber food	102 Ø, 88x40	-
MK032	MK032 Mounting kit for sector antenna, fits 2" to 4.5" poles, tilt adjustment -3 to -10°	304 SS, natural finish, 2.5mm thick	160mm	3.2
MK056A	MK056A Bracket assembly for wall mount of tripod mount for FPA17-16RL/1096 antenna	Mild steel, matt black finish	133x65	-
MK112A	MK112A Universal mounting kit for panel antenna FPA19-1.5L, tripod format	Mild steel bracket, SS fixings, galvanised finish	1000x163	15
MK156A	MK156A Small tilting mounting kit	SS, natural finish	128x94	3.2
MK1A	MK1/A Mounting kit for sector antenna. Fits 1.6" to 4.7" (40 to 120mm) poles, ±10° when fixed 560mm apart	SS/aluminium, natural finish	-	2.7
MK2A	MK2/A Mounting kit for smaller omni antennas via M8 U-bolts	Mild steel/SS Zinc plated/natural	-	3.6
MK2B	MK2/B Mounting kit for flat panel antennas via M6 nuts	Mild steel/SS Zinc plated/natural	-	3.6
MK2C	MK2/C Mounting kit for large omni antennas via M10 set screws	Mild steel/SS Zinc plated/natural	-	3.6
MK3	MK3 Mounting kit for sector antenna. Fits 51mm (2") poles	Zinc plated mild steel, natural finish SS	100x51x38	0.52
MK428	MK428 Mounting kit	Aluminium	108x108	0.226
MK4A	MK4A Light weight pole mounting kit, fits poles up to 2" (50.8mm), mounts to omni antennas via M6 U-bolts	Zinc plated mild steel bracket, natural finish SS fixings	115x105	1
MK4B	MK4B Light weight pole mounting kit - fits up to 50.8mm (2") poles, mounts to flat panel antennas via studs in housing	Zinc plated mild steel bracket, natural finish SS fixings	115x105	1
MK4C	MK4C Mounting kit - fits up to 50.8mm (2") poles, mounts to omni antennas via M8 U-bolts	Zinc plated mild steel bracket, natural finish SS fixings	115x105	1
MK5	MK5 Pole mounting kit for EVD2. Fits 50.8 to 127mm pole (2" to 5")	SS, natural finish	100x100	0.5
MK6A	MK6A Quick Deployment Spring Mount	5.4Ø Wire, Carbon Steel Spring Aluminium Brackets, Zinc Plate + Black Pass, Spring Anodised Black Brackets	127x138 Ø	0.8
MK6B	MK6B Quick Deployment Spring Mount	7.0Ø Wire, Carbon Steel Spring Aluminium Brackets, Zinc Plate + Black Pass, Spring Anodised Black Brackets	125x138 Ø	0.85
MK7B	MK7B Spring mount suitable for omni antennas with N(F) connector and 57mm Ø spigot	7.0Ø wire, Carbon Steel Spring Aluminium Brackets. Finish Zinc Plate + Black Pass, Spring Anodised Black Bracket	208x136 Ø	1.3
MK9	MK9 Mounting kit to poles from 2" (50.8mm) to 4.5(114.5mm) Ø	304 SS, natural finish	-	3.2

COBHAM



BROCHURES



2012 Catalogue



Total Capability



Antenna Testing



Ground Control



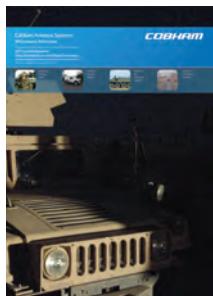
Electronic Warfare



Body Worn



Link16



IED Countermeasures



WiMAX and LTE



Unmanned Systems



C-Band



Radar Systems

Cobham Antenna Systems

M: Cobham Antenna Systems, Lambda House
Cheveley, Newmarket, Suffolk CB8 9RG, UK
T: +44 (0)1638 732177
F: +44 (0)1638 731999
E: newmarket.sales@cobham.com

Chelton Limited trading as Cobham Antenna Systems

Cobham Antenna Systems: Capability Catalogue Issue 2 2012-08

© Chelton Limited

Chelton Limited has a policy of continuous development and stress that the information provided is a guide only and does not constitute an offer or contract or part thereof.

Whilst every effort is made to ensure the accuracy of the information contained in this brochure, no responsibility can be accepted for any errors or omissions.
All photography is copyright and is used with thanks to the respective owners.



www.cobham.com/antennasystems/microwaveantennas