

Telex® Technical Data

5.8 GHz WLAN/UNII Directional Antenna

Order No. 5816AB

5.725 - 5.825 GHz

General Description

This antenna is a totally enclosed 34 element Yagi antenna for the 5725 to 5825 MHz frequency band. It is designed to be used as a bridge antenna between two networks or for point to point communications. It has a nominal VSWR of 1.5:1 and is less than 2:1 over the entire frequency band. The gain is 16.5 dBi and the half-power beamwidth is 19 degrees. This antenna is normally mounted on a mast and is vertically polarized



Specifications

Electrical:

Frequency Range	5725-5825 MHz
VSWR	Less than 2:1, 1.5:1 Nominal
Nominal Impedance	50 ohms
Gain	16.5 dBi Nominal
Front-to-Back ratio	Greater than 20 dB
Half-power Beamwidth	19 degrees
Polarization	Vertical

Mechanical:

Size	18.0" long
Mounting method	Clamps to vertical mast up to - 1 5/8" O.D.
Cable length	1.5 ft
Cable Type	LMR-195, 50 ohm
Connector	Type N jack
Optional connectors	TNC, TNC-RP, SMA, SMA-RP

Since it is the intent of TELEX COMMUNICATIONS, INC. to continually improve its products, Telex reserves the right to make specification and design changes without notice.

TELEX®

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2.4 GHz 8 dBi High Performance Omnidirectional Wireless LAN Antenna - Model: HGV-2409U

Applications and Features

Applications:

- 2.4 GHz ISM Band
- IEEE 802.11b and 802.11g Wireless LAN
- Bluetooth®
- Public Wireless Hotspot
- WiFi
- Wireless Video Systems
- Multipoint and Mobile Applications



Features:

- High performance
- Economical
- Compact, lightweight design
- Durable UV-stable fiberglass radome
- Vented end cap and drain holes in base
- All weather operation
- Integral N-Female connector
- Can be installed in up or down positions
- Includes Mast Mounting Kit

Description

High Performance

The HyperGain® Model HGV-2409U is an economical yet high performance omnidirectional Wi-Fi antenna designed for the 2.4GHz ISM band. These compact and lightweight antennas are ideally suited for IEEE 802.11b and 802.11g wireless LANs, Bluetooth, public wireless hotspot application and other multipoint applications where wide coverage is desired.

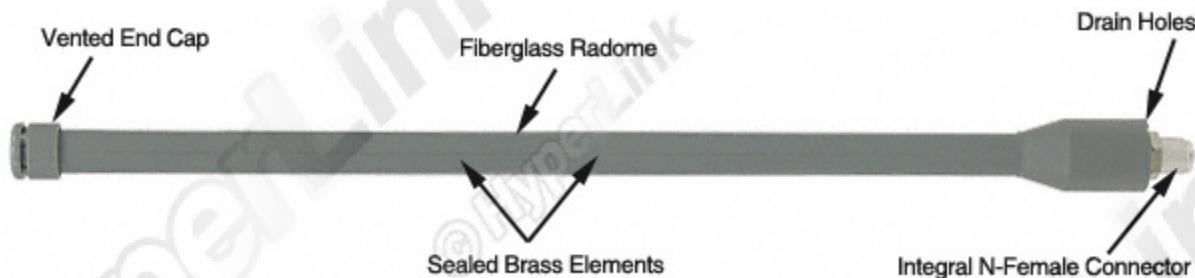


Versatile and Economical

This antenna features an integral N-Female bulkhead type connector that mounts through the wall of an equipment enclosure. Included with the HGV-2409U is a mast mounting kit. Consisting of a heavy-duty steel bracket and a pair of U-bolts, this kit allows installation on masts up to 2.0" in diameter.

All Weather Operation

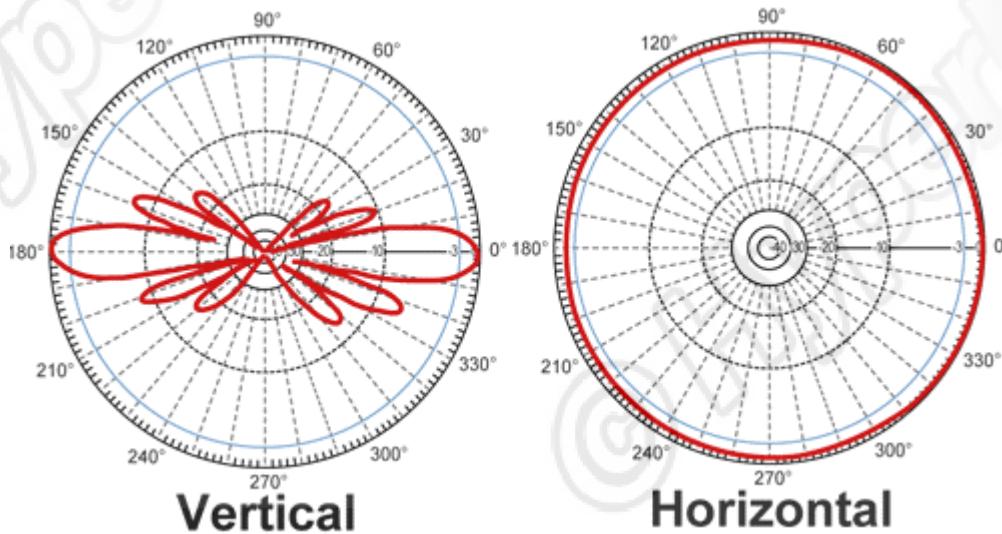
Constructed for all weather operation, the HGV-2409U features sealed collinear brass elements inside a durable UV-stable machine gray fiberglass radome. A vented end cap and drain holes in the base help prevent moisture build-up inside the antenna. These features allow the HGV-2409U to be mounted in up or down positions.



Specifications

Frequency	2400-2500 MHz
Gain	8 dBi
Polarization	Vertical
Vertical Beam Width	15°
Horizontal Beam Width	360°
Impedance	50 Ohm
Max. Input Power	100 Watts
VSWR	< 1.5:1 avg.
Weight	1.1 lbs. (0.5 kg)
Length	19.7 in. (50 cm)
Base Diameter	1.27 in. (3.22 cm)
Radome Diameter	.75 in. (1.90 cm)
Radome Material	Gray Fiberglass
Wind Survival	>150 MPH
Operating Temperature	-40° C to 85° C (-40° F to 185° F)
Connector	Integral N-Type Female (Bulkhead type)

RF Antenna Gain Pattern



Guaranteed Quality

This product is backed by Hyperlink's Limited Warranty.

Mounting Options

	Ceiling/Wall Universal Antenna Mount can be used with HyperLink's 4.5" sq and 8.5" sq. patch antennas as well as N-Type bulkhead and TNC/BNC bulkhead omni directional antennas. Includes ceiling/wall mounting hardware.	HGX-UMOUNT02
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5.8 GHz 24 dBi ISM / UNII Band High Performance Parabolic Dish Wireless LAN Antenna

Model: HG5824D

Applications and Features

Applications:

- 5.8GHz UNII applications
- 5.8GHz ISM applications
- 5.8GHz Wireless LAN systems
- Long-range Directional Applications
- Point to Point, Point to Multi-point Systems
- Wireless Bridges
- Backhaul Applications

Features:

- Superior performance
- Aluminum reflector dish
- UV Stable light gray polymer finish
- All weather operation
- Vertical or horizontal polarized mounting
- Includes tilt and swivel mast mount kit
- Optional radome cover kits available



Description

Superior Performance

The HyperGain® 5.8GHz High-Performance Parabolic Dish WiFi Antenna is ideal for directional 5.8GHz ISM / UNII band applications. It features 24 dBi gain with a 9° beam-width. These antennas can be oriented for either vertical or horizontal polarization.

Rugged and Weatherproof

The reflector dish of these antennas are constructed from high quality aluminum which gives them superior strength. The dish is coated in a light gray UV-inhibited polymer for durability and aesthetics. The small diameter of the dish helps minimize wind loading.



These antennas are supplied with a tilt and swivel mast mount kit. This allows installation at various degrees of incline for easy alignment. The HG5824D can be adjusted up or down from 0° to 60°.

Radome Cover Kits

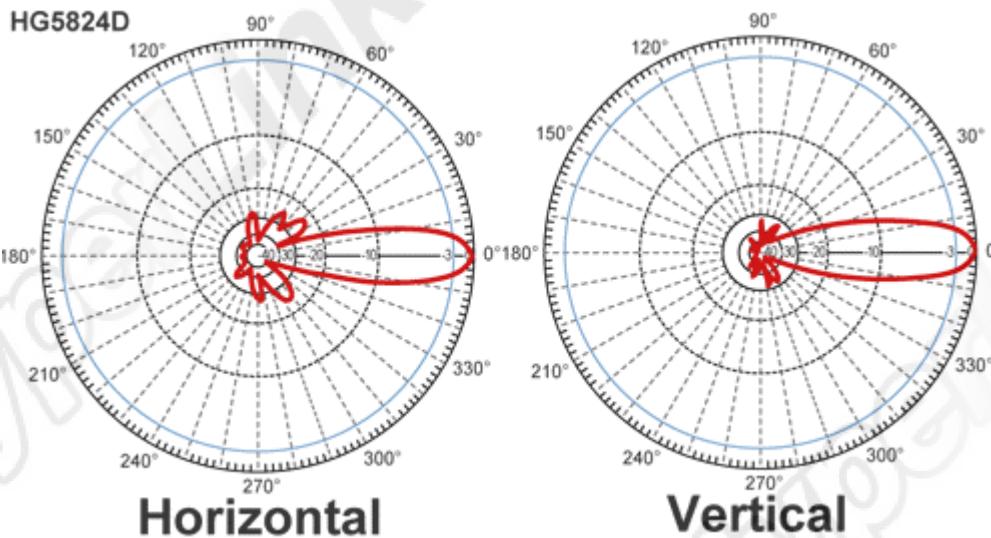


HyperGain® Radome Covers are an ideal way to provide additional protection to our parabolic dish antennas. These light weight radome kits feature fiberglass construction and UV stable gray finish. Drain holes are provided on the radome cover to help prevent moisture build-up inside the dish antenna.

These radome kits bolt directly to the dish antennas with the provided stainless steel hardware. Drilling mounting holes in the antenna is not required. The radome cover can be attached to existing antennas already mounted in the field or pre-assemble to the antenna before mounting.

Specifications

Frequency	5725-5850 MHz
Gain	24 dBi
Polarization	Horizontal or Vertical
Horizontal Beam Width	9°
Vertical Beam Width	9°
Front to Back Ratio	30 dB
Impedance	50 Ohm
Max. Input Power	100 Watts
VSWR	< 1.5:1 avg.
Weight	6.6 lbs. (3 kg)
Diameter	17.2 in. (436.8 mm)
Mounting	2 in. (50.8 mm) diameter mast max.
Operating Temperature	-40° C to 85° C (-40° F to 185° F)
Lighting Protection	DC Short
Connector	N-Female
RoHS Compliant	Yes
Radome Cover Part Number	HGR-04

RF Antenna Patterns


5.8 GHz ISM / UNII Band 17 dBi 90 Degree Sector Panel Wireless LAN Antenna - Model HG5817P-090

Applications and Features

Applications:

- 5.8GHz UNII applications
- 5.8GHz ISM applications
- 5.8GHz Wireless LAN systems
- WiFi
- Wireless Internet Provider "cell" sites

Features:

- Superior performance
- Light weight
- All weather operation
- Compact Size
- DC Ground lightning protection
- Integral N-Female Connector
- Supplied with a tilt and swivel mast mount kit
- RoHS Compliant



Description

Superior Performance

The HyperGain® HG5817P-090 Sector Panel WiFi Antenna combines high gain with a wide 90° beam-width. It is a professional quality "cell site" antenna designed primarily for service providers in the 5.8GHz ISM and UNII band.



Rugged and Weatherproof

This antenna features a heavy-duty plastic radome for all-weather operation. The HG5817P antenna is supplied with a tilt and swivel mast mount kit. This allows installation at various degrees of incline for easy alignment.

Ideal for Wireless Internet "Cell" Sites

This RF antenna is an ideal choice for Wireless Internet Provider "cell" sites since the cell size can be easily determined by adjusting the down-tilt angle. Horizontal coverage is a full 90 degrees.

Specifications

Electrical Specifications

Frequency	5725-5850 MHz
Gain	17 dBi
Horizontal Beam Width	90 degrees
Vertical Beam Width	8 degrees
Impedance	50 Ohm
Max. Input Power	100 Watts
Front to Back Ratio	> 25 dB
VSWR	< 1.5:1 avg.
Lightning Protection	DC Ground
Connector	N Female

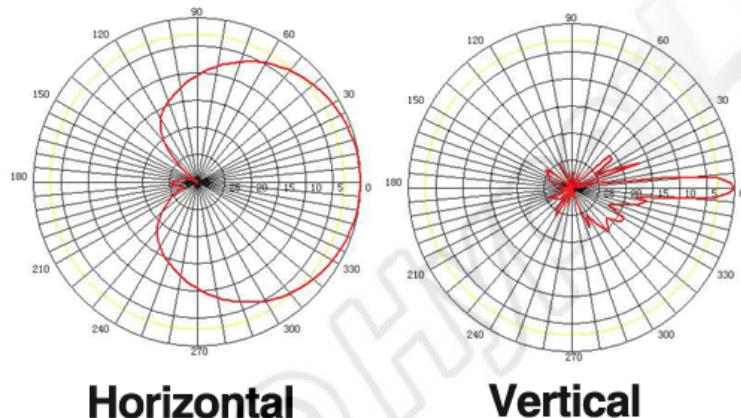
Mechanical Specifications

Weight	2.2 lbs. (1 Kg)
Dimensions	14.5 x 6.7 x 2.5 inches (370 x 170 x 65 mm)
Radome Material	UV-Inhibited Polymer
Operating Temperature	-40° C to 85° C (-40° F to 185° F)
Mounting	2 inch (50.8 mm) O.D. pipe max.
Polarization	Vertical
Downtilt (mech)	0 to 20 degrees (adjustable)
RoHS Compliant	Yes

Wind Loading Data

Wind Loading	Front Surface	Side Surface
Area	0.67 sq. ft. (.062 sq. meters)	0.25 (.023 sq. meters)
@ 100 MPH (161 KPH)	22 lbs. (10 Kg)	8 lbs.(3.6 Kg)

RF Antenna Patterns



Guaranteed Quality

This product is backed by Hyperlink's Limited Warranty.

5.8 GHz ISM / UNII Band 12 dBi Professional Omnidirectional Wireless LAN Antenna - Model: HG5812U-PRO



Applications and Features

Applications:

- 5.8GHz UNII and ISM applications
- 5.8GHz Wireless LAN systems
- WiFi
- Multipoint Applications

Features:

- Superior performance
- Heavy duty industrial grade design
- All weather operation
- DC Ground lightning protection
- Integral N-Female Connector
- Supplied with mast mounting kit
- RoHS Compliant

Description

Professional Performance

The HyperGain® HG5812U-PRO is a professional high gain omni-directional base station WiFi antenna designed and optimized for the 5.8GHz ISM and UNII band. This antenna is ideally suited for multipoint applications where long range and wide coverage is desired.

Rugged and Weatherproof

The HG5812U-PRO construction features a heavy-duty fiberglass radome for durability and aesthetics. Designed to operate in the harshest of environments, the HG5812U-PRO far exceeds other omni-directional antennas. The included mounting system features heavy-duty mast clamps, allowing installation on masts from 1.4 inches (35 mm) up to 2.0 inches (50 mm) diameter. This antenna features an integral N-Female connector.

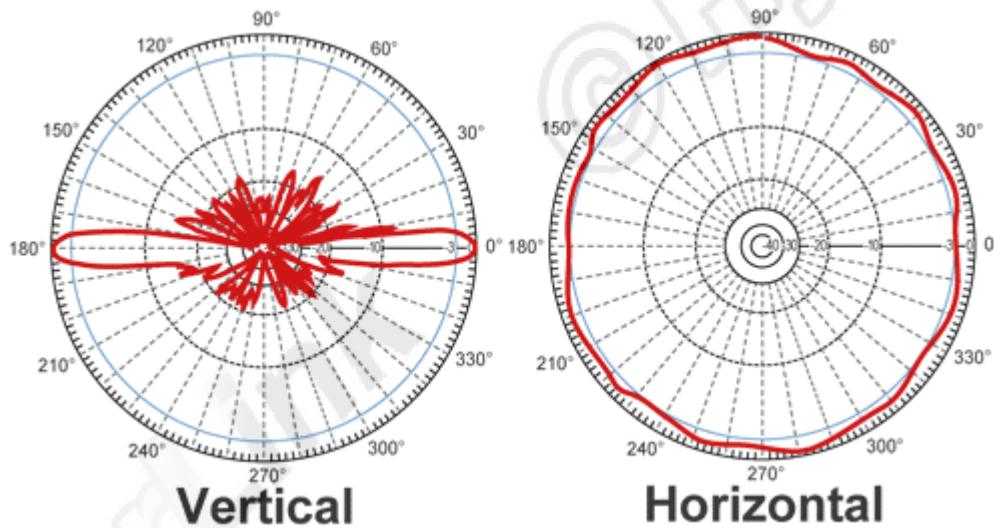
Specifications

Electrical Specifications

Frequency	5725-5850 MHz
Gain	12 dBi
Polarization	Vertical
Downtilt	0°
Vertical Beam Width	6°
Horizontal Beam Width	360°
Impedance	50 Ohm
Max. Input Power	150 Watts
VSWR	< 1.5:1 avg.
Lightning Protection	DC Short

Mechanical Specifications

Weight	1.5 lbs (0.7kg)
Length	29.4 in. (0.7 m)
Base Diameter	2.28 in. (57.9mm)
Radome Diameter	2.04 in. (51.8mm)
Radome Material	Fiberglass
Mounting	1.4 in. (35 mm) to 2.0 in. (50 mm) dia mast
Rated Wind Velocity	137 MPH/S (220Km/S)
Operating Temperature	-40° C to 85° C (-40° F to 185° F)
Connector	Integral N-Female
RoHS Compliant	Yes

RF Antenna Patterns

Guaranteed Quality

This product is backed by Hyperlink's Limited Warranty.

5.4 GHz 23 dBi High Performance Parabolic Dish Wireless LAN Antenna

Model: HG5423D

Applications and Features

Applications:

- 5.4 GHz Band Applications
- Unlicensed European 5.4 GHz Band Applications
- IEEE 802.11a Wireless LAN
- WiFi Systems
- Radio Local Area Networks (RLAN)
- Fixed Wireless Access Systems (FWA)
- WiMAX Technology
- Long-range Directional Applications
- Wireless Bridges
- Backhaul Applications

Features:

- Superior performance
- Aluminum reflector dish
- UV Stable light gray polymer finish
- All weather operation
- Vertical or horizontal polarized mounting
- Includes tilt and swivel mast mount kit
- Optional radome cover kits available
- RoHS Compliant



Description

Superior Performance

The HyperGain® 5.4GHz High-Performance Parabolic Dish WiFi Antenna is ideal for directional 5.4GHz 802.11a band applications as well as applications in the European unlicensed 5.4 GHz band. It features 23 dBi gain with a 9° beam-width. These antennas can be oriented for either vertical or horizontal polarization.

Rugged and Weatherproof

The reflector dish of these antennas are constructed from high quality aluminum which gives them superior strength. The dish is coated in a light gray UV-inhibited polymer for durability and aesthetics. The small diameter of the dish helps minimize wind loading.



These antennas are supplied with a tilt and swivel mast mount kit. This allows installation at various degrees of incline for easy alignment. The HG5423D can be adjusted from 0° to 60°.

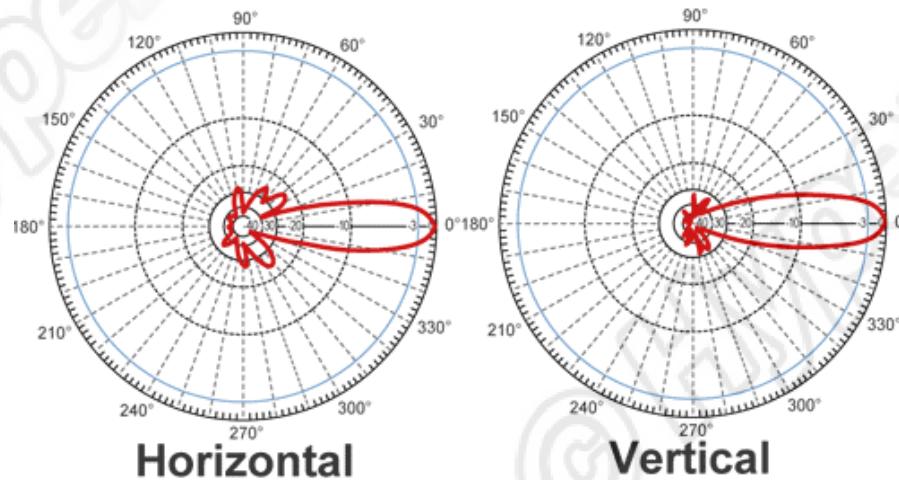
Radome Cover Kits


HyperGain® Radome Covers are an ideal way to provide additional protection to our parabolic dish antennas. These light weight radome kits feature fiberglass construction and UV stable gray finish. Drain holes are provided on the radome cover to help prevent moisture build-up inside the dish antenna.

These radome kits bolt directly to the dish antennas with the provided stainless steel hardware. Drilling mounting holes in the antenna is not required. The radome cover can be attached to existing antennas already mounted in the field or pre-assemble to the antenna before mounting.

Specifications

Frequency	5470-5725 MHz
Gain	23 dBi
Polarization	Horizontal or Vertical
Horizontal Beam Width	9°
Vertical Beam Width	9°
Front to Back Ratio	30 dB
Impedance	50 Ohm
Max. Input Power	100 Watts
VSWR	< 1.5:1 avg.
Weight	6.6 lbs. (3 kg)
Diameter	17.2 in. (436.8 mm)
Mounting	2 in. (50.8 mm) diameter mast max.
Operating Temperature	-40° C to 85° C (-40° F to 185° F)
Lighting Protection	DC Short
RoHS Compliant	Yes
Connector	N-Female
Radome Cover Part Number	HGR-04

RF Antenna Patterns


5.4 GHz 17 dBi 90 Degree Sector Panel Wireless LAN Antenna - Model: HG5417P-090

Applications and Features

Applications:

- 5.4 GHz Band Applications
- Unlicensed European 5.4 GHz Band Applications
- IEEE 802.11a Wireless LAN
- WiFi Systems
- Radio Local Area Networks (RLAN)
- Fixed Wireless Access Systems (FWA)
- WiMAX Technology
- Wireless Internet Provider "cell" sites

**Features:**

- Superior performance
- Light weight
- All weather operation
- Compact Size
- DC Ground lightning protection
- Integral N-Female Connector
- Supplied with a tilt and swivel mast mount kit
- RoHS Compliant

Description

Superior Performance

The HyperGain® HG5417P-090 Sector Panel WiFi Antenna combines high gain with a wide 90° beam-width. It is a professional quality "cell site" antenna designed primarily for service providers in the 5.4GHz band.

**Rugged and Weatherproof**

This antenna features a heavy-duty plastic radome for all-weather operation. The HG5417P antenna is supplied with a tilt and swivel mast mount kit. This allows installation at various degrees of incline for easy alignment.

Ideal for Wireless Internet "Cell" Sites

This RF antenna is an ideal choice for Wireless Internet Provider "cell" sites since the cell size can be easily determined by adjusting the down-tilt angle. Horizontal coverage is a full 90 degrees.

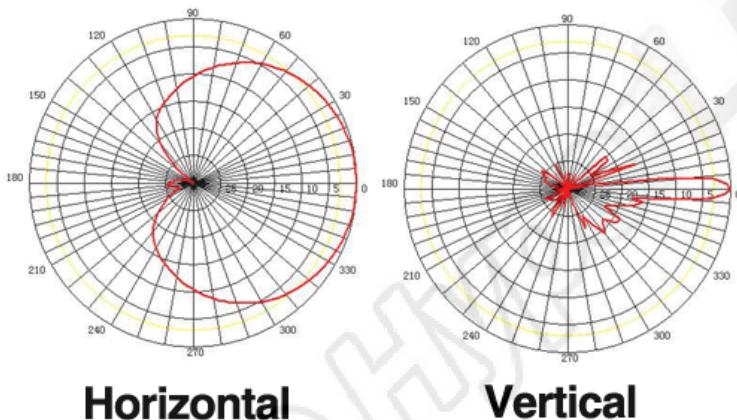
Specifications

Electrical Specifications	
Frequency	5470-5725 MHz
Gain	17 dBi
Horizontal Beam Width	90 degrees
Vertical Beam Width	8 degrees
Impedance	50 Ohm
Max. Input Power	100 Watts
Front to Back Ratio	> 25 dB
VSWR	< 1.5:1 avg.
Lightning Protection	DC Ground
Connector	N Female
Mechanical Specifications	
Weight	2.2 lbs. (1 Kg)
Dimensions	17.5 x 6.7 x 2.5 inches (445 x 170 x 65 mm)
Radome Material	UV-Inhibited Polymer
Operating Temperature	-40° C to 85° C (-40° F to 185° F)
Mounting	2 inch (50.8 mm) O.D. pipe max.
Polarization	Vertical
Downtilt (mech)	0 to 20 degrees (adjustable)
RoHS Compliant	Yes

Wind Loading Data

Wind Loading	Front Surface	Side Surface
Area	0.67 sq. ft. (.062 sq. meters)	0.25 (.023 sq. meters)
@ 100 MPH (161 KPH)	22 lbs. (10 Kg)	8 lbs.(3.6 Kg)

RF Antenna Patterns



Guaranteed Quality

This product is backed by Hyperlink's Limited Warranty

5.4 GHz 12 dBi 802.11a Compatible High Performance Omnidirectional Antenna - Model: HG5412U



Applications and Features

Applications:

- 5.4 GHz Band Applications
- Unlicensed European 5.4 GHz Band Applications
- IEEE 802.11a Wireless LAN
- WiFi Systems
- Radio Local Area Networks (RLAN)
- Fixed Wireless Access Systems (FWA)
- WiMAX Technology
- Multipoint applications

Features:

- Superior performance
- Compact, lightweight design
- Durable UV-stable fiberglass radome
- All weather operation
- Integral N-Female connector
- Includes mast mounting kit

Description

The HyperGain® HG5412U is a high performance omnidirectional antenna designed for the 5.4 GHz band. It is ideal for IEEE 802.11a wireless LAN applications in the 5.4GHz band as well as applications in the European unlicensed 5.4 GHz band and is well suited for multipoint applications where high gain and wide coverage is desired.



The HG5412U construction features a .96" diameter gray fiberglass radome for durability and aesthetics. It is designed for all weather operation. The integral N-Female type connector can be mounted through the wall of an equipment enclosure or to a mast up to 2.0" in diameter with the included mast mounting kit. The mast mounting kit consists of a heavy-duty steel bracket and a pair of U-bolts

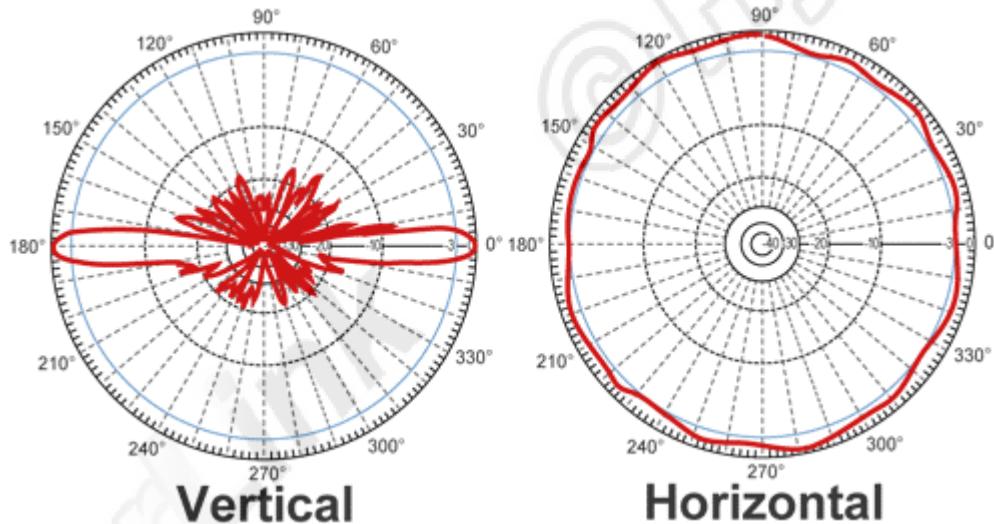
Specifications

Electrical Specifications

Frequency	5470 - 5725 MHz
Gain	12 dBi
Polarization	Vertical
Vertical Beam Width	6°
Horizontal Beam Width	360°
Impedance	50 Ohm
Max. Input Power	5 Watts
VSWR	< 1.5:1 avg.
Lightning Protection	DC Short

Mechanical Specifications

Connector	Integral N-Female
Weight	1.1 lbs. (0.5 Kg)
Length	29 in. (0.7 m)
Radome Diameter	0.96 in. (24 mm)
Base Diameter	1.25 in. (31.7 mm)
Radome Material	Gray Fiberglass
Mounting	1 1/4" to 2" dia. mast max. (31.7mm to 50.8mm dia.)
Operating Temperature	-40° C to 85° C (-40° F to 185° F)
Wind Survival	137mph (220KM/h)
RoHS Compliant	Yes

RF Antenna Gain Patterns


This product is backed by HyperLink's Limited Warranty.

Mounting Options

	Description	Part Number
	Ceiling/Wall Universal Antenna Mount can be used with HyperLink's 4.5" sq and 8.5" sq. patch antennas as well as N-Type bulkhead and TNC/BNC bulkhead omni directional antennas. Includes ceiling/wall mounting hardware.	HGX-UMOUNT02

2.4 GHz 14 dBi 120 Degree Vertical Polarized Sector Panel Wireless LAN Antenna - Model: HG2414SP-120



Applications and Features

Applications:

- 2.4 GHz ISM Band
- IEEE 802.11b and 802.11g Wireless LAN
- Bluetooth®
- Public Wireless Hotspot
- WiFi
- Wireless Video Systems
- Wireless Internet Provider "cell" sites

Features:

- Superior performance
- All weather operation
- Vertical Polarized
- 20° Down-Tilt Mounting Bracket
- Includes Mast Mounting Hardware
- Integral N-Female Connector
- RoHS Compliant

Description**Superior Performance**

The HyperGain® HG2414SP-120 Sector Panel WiFi Antenna combines high gain with a 120° beam-width. It is a professional quality "cell site" antenna designed primarily for service providers in the 2.4GHz ISM band.

Applications include IEEE 802.11b and 802.11g wireless LAN systems.

Rugged and Weatherproof

This WiFi antenna features a heavy-duty plastic radome for all-weather operation. The heavy-duty mounting system allows installation adjusts from 0 to 20 degrees downtilt.

**Ideal for Wireless Internet "Cell" Sites**

This is an ideal choice for Wireless Internet Provider "cell" sites since the cell size can be easily determined by adjusting the down-tilt angle. Horizontal coverage is a full 120 degrees.

Specifications

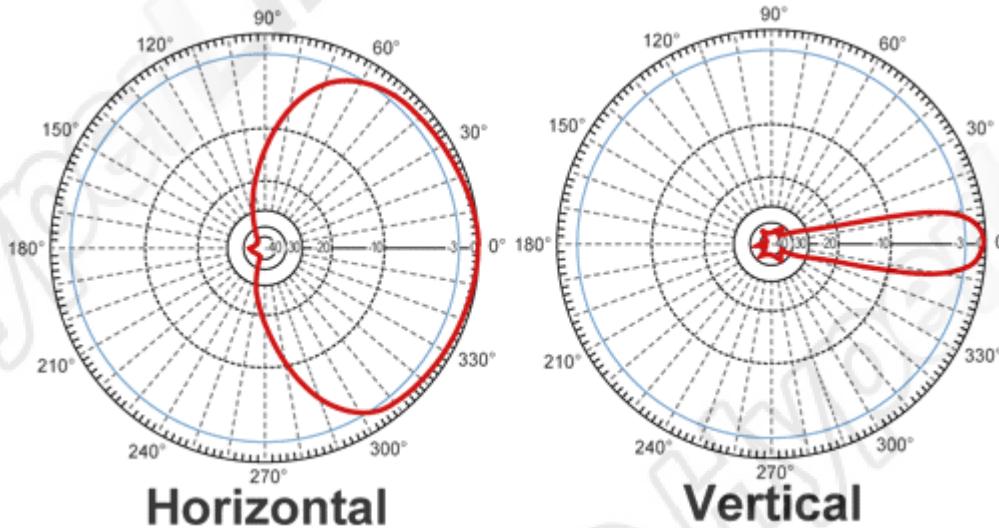
Electrical Specifications

Frequency	2400 - 2500 MHz
Gain	14 dBi
Polarization	Vertical
Horizontal Beam Width	120°
Vertical Beam Width	15°
Impedance	50 Ohm
VSWR	< 1.5:1 avg.
Front to Back Ratio	> 23 dB
Max. Input Power	300 Watts
Lightning Protection	DC Ground
Connector	Integral N-Female

Mechanical Specifications

Weight	4.4 lbs. (2 kg)
Dimensions	20 x 7 x 3.5 inch (500 x 180 x 90 mm)
Radome Material	UV-inhibited Plastic
Mounting	2 inch (50 mm) dia. mast max.
Operating Temperature	-40° C to 85° C (-40° F to 185° F)
Rated Wind	>130 MPH (210 Km/h)
RoHS Compliant	Yes

RF Antenna Gain Patterns



Guaranteed Quality

This product is backed by Hyperlink's Limited Warranty.

Dual-Band Omni-Directional Antenna for 2.4 / 5.2 / 5.6 / 5.8 GHz

Version 1

SAA04-220080

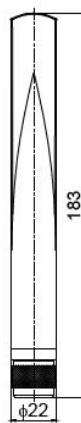
Electrical Specification

Frequency range	2400 MHz - 2483 MHz	5150 MHz - 5875 MHz
Peak gain	4.5 dBi	7.0 dBi
Average gain	2.5 dBi	5.0 dBi
VSWR	2.0 : 1 Max.	
Polarization	Linear, vertical	
Power handling	2 W (cw)	
Impedance	50 Ohms	
Connector	RP- N plug	

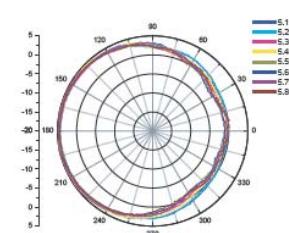
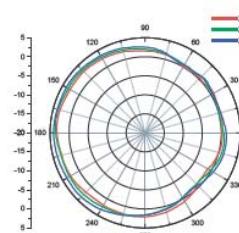


Environmental & Mechanical Characteristics

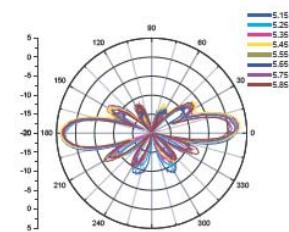
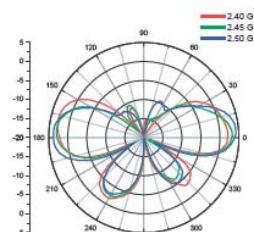
Survival wind speed	216 km/hr
Temperature	- 40°C to +70°C
Humidity	95% @ 25°C
Radome color	Gray
Radome material	ABS
Weight	70 gw
Dimensions	φ22 x 183 mm



H-plane Co-polarization pattern



V-plane Co-polarization pattern



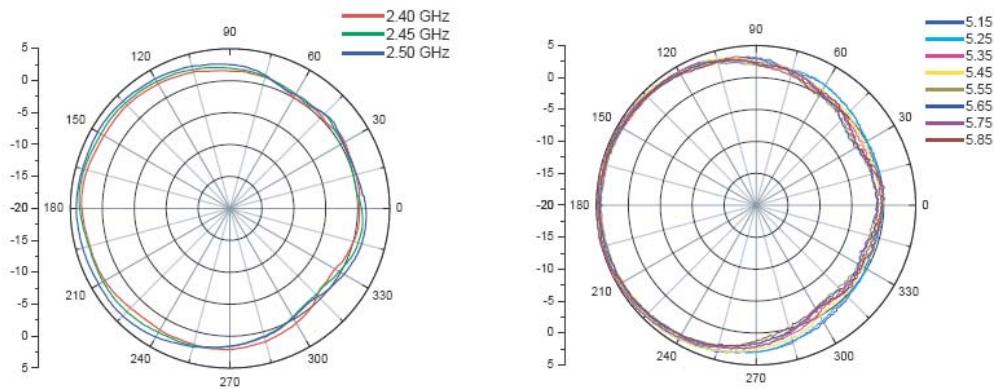
Dual-Band Omni-Directional Antenna for 2.4 / 5.2 / 5.6 / 5.8 GHz

Version 1

SAA04-220080

Radiation Pattern

H-plane Co-polarization pattern



V-plane Co-polarization pattern

