Appendix A

Manufacturer	Model	Type	Diameter	Gain (dBi)	Connector
Comsat RSI Mark Antennas (847)298-9420	P-24A36GN-U	Grid, Parabolic	3'	24.8	N-Type
	P-24A48GN-U	Grid, Parabolic	4'	27.5	N-Type
	P-24A72GN-U	Grid, Parabolic	6'	30.8	N-Type
	P-24A96GN-U	Grid, Parabolic	8'	33.5	N-Type
	P-24AA24N-1	Solid, Parabolic	2'	21.1	N-Type
	P-24A48N-1	Solid, Parabolic	4'	27.1	N-Type
	P-24A72N-1	Solid, Parabolic	6'	30.6	N-Type
	P-24A96N-1	Solid, Parabolic	8'	33.1	N-Type
	A-24A24N-C	Planar Array	25"x26"	21	N-Type
Gabriel Electronics (207) 883-5161	SSG3-23	Grid, Parabolic	3'	24.2	N-Type
	SSG4-23	Grid, Parabolic	4'	26.7	N-Type
	SSG6-23	Grid, Parabolic	6'	30.1	N-Type
	GHF8-23A	Grid, Parabolic	8'	33.1	N-Type
	GHF10-23A	Grid, Parabolic	10'	35.0	N-Type
	SSP2-23	Solid, Parabolic	2'	20.7	N-Type
	RFF2.5-23BSE	Solid, Parabolic	2.5'	23.0	N-Type
	SSP4-23	Solid, Parabolic	4'	26.7	N-Type
	SSP6-23	Solid, Parabolic	6'	30.3	N-Type
	RFF8-23ASE	Solid, Parabolic	8'	33.2	N-Type
	RFF10-23ASE	Solid, Parabolic	10'	35.1	N-Type
	SSGP04-23	Panel	12.1"x8"	15	N-Type
Radio Waves Inc. (978) 663-5777	SP2-2.4	Solid, Parabolic	2'	21.3	N-Type
	SP3-2.4	Solid, Parabolic	3'	24	N-Type
	SP4-2.4	Solid, Parabolic	4'	27.2	N-Type
Telex Wireless 402-467-5321	2440-24,VorH	Solid, Parabolic	2'	20	N-Type
	2440-36,VorH	Solid, Parabolic	3'	24	N-Type
	2415AB	Enclosed Yagi	18"	13.5	TNC or SMA
Conifer (800) 843-5419	13T-2400	Solid, Reflector	1'	10	N-Type
	18T-2400	Grid, Reflector	1½'	18	N-Type
	26T-2400	Grid, Reflector	3'	23	N-Type
RFS Cablewave Systems (203)239-3311	PA 4-23	Solid, Parabolic	4'	27.5	7/8" EIA
	PA 6-23	Solid, Parabolic	6'	31.0	7/8" EIA
	PA 8-23	Solid, Parabolic	8'	33.5	7/8" EIA
	PA10-23	Solid, Parabolic	10'	35.5	7/8" EIA
Cushcraft (800) 258-3860	PC2415 N	Enclosed Yagi	26"	13.9	N-Type
Larsen (800) 426-1656	PA0007	Flat Panel	9.4"x8.5"	14	N-Type
Avitronics +27128726000	AVFP2325-18	Flat Panel	370mm x 440mm	18	N-Type

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Antenna Products

Wireless Antenna Products

RSI Wireless Communications has become one of the leading suppliers of antennas to the worldwide wireless communications markets. Since 1990, we have supplied over 100,000 antennas to wireless operators around the globe. RSI Wireless Communications is proud of this leadership position, and we are constantly developing new products and technologies to maintain our prominence in the industry.

RSI Wireless Communications developed a range of base station antennas that were radically different from previous generations of mobile radio base stations, and offered new standards of performance. These antennas have been produced and installed in large numbers, and have provided outstanding operational reliability and superior electrical performance.

Microwave Antenna Products

Virtually every major cellular system in the United States is served by our antennas. Our products also serve the microwave and PCS markets, necessitating PCS and 2 GHz relocation equipment. Our spread spectrum antennas target this market by providing a low cost and easy installation.

RSI Wireless Communications

Wireless Communications
1757 S. Winthrop Drive
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Fax: 847-635-7946
e-mail: sales@rsiwc.com

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e-mail: sales@csauk.com

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RSI Wireless Communications

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Microwave Antennas

RSI Wireless Communications has decades of experience in design and production of microwave antennas that has resulted in an extraordinary depth of product applications from 335 MHz to 40 GHz. This resource has allowed us to strongly address specific needs, such as the 2 GHz relocation market, with a dedication towards cost-efficiency and quality.

Our "Mark" Grid antenna line has been continually improved to become a lightweight, yet extremely strong antenna with electrical characteristics that are comparable to similar diameter solid parabolic reflectors.

The Solid antenna line is designed for cost-efficient and reliable performance for applications not requiring high levels of back and side radiation suppression.

Shielded antennas provide superior specifications and improved front to back characteristics for high performance applications.

We now provide data sheets online for some of our antenna products. Check this area frequently for new additions.

- Planar Array Antennas
- Adjustable Gain Antenna Optimized For Digital Networks

We are pleased to provide free software and antenna pattern data online for your use. The links below will take you to the various microwave antenna pages where you can select the files you wish to download.

- < 1.6 GHz
- 1.7 to2.7 GHz
- 3.7 to 5.0 GHz *
- 5.7 to 7.2 GHz
- 7.1 to 8.4 GHz *
- 10.5 to 11.7 GHz
- 12.2 to 13.3 GHz *
- 14.2 to 15.4 GHz
- 17.7 to 19.7 GHz
- 21.2 to 23.6 GHz
- 37.0 to 40.0 GHz
- Planar Array Data

* Pattern data for antennas in these frequency bands is not yet online. Please contact your RSI Wireless Communications representative to obtain this data.

RSI Wireless Communications

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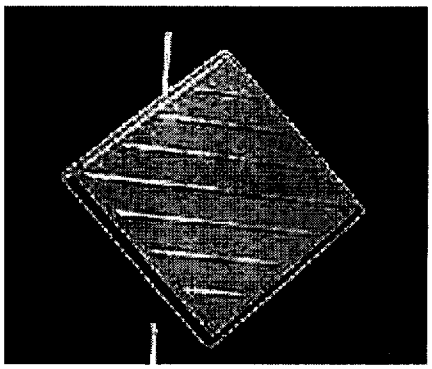
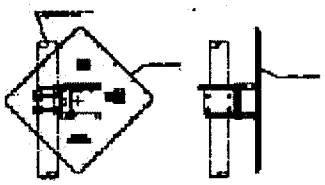
Planar Array Antennas

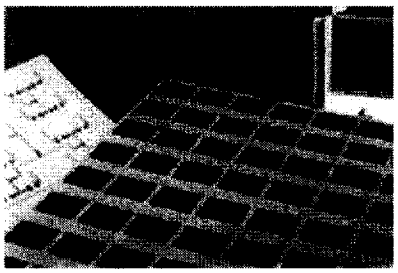


The new planar array antennas from RSI Wireless Communications are designed to work with spread spectrum radios at 2.4-2.48 GHz and 5.725-5.850 GHz, licensed radios at 3.4-3.7 GHz and 7.125-7.75 GHz, and PCS repeaters in the 1900 MHz band.



Especially in urban environments, where aesthetics and zoning are critical, the sleek planar design is an attractive alternative to solid and grid parabolic antennas

Planar antenna technology provides many benefits besides attractive packaging. This technology, developed by RSI Wireless Communications, brings intrinsic tolerance control, resulting in virtually identical antenna performance from one product to the next. Additionally, the photolithographic microstrip process results in high-production yields and cost savings that we pass on to our customers.



FCCID: HDCTRACERT1L8

Electrical Specifications					
Model	**A18A24*-*t***	**A24A24*-*t***	**A35A24*-*t***	**A57A24N-U**	**A75A24N-U**
Frequency	1.85-1.99 GHz	2.4-2.48 GHz	3.4-3.7 GHz	5.725-5.85 GHz	7.125-7.75 GHz
Gain	20.0 dBi	22.0 dBi	23.5 dBi	26.5 dBi	27.5 dBi
Half Power Beamwidth	14.2 deg	10.7 deg	7.5 deg	4.8 deg	3.7 deg
Front-To-Back Ratio	33 dB	38 dB	40 dB	41 dB	40 dB
Connector	Type N or E	Type N or E	Type N or E	Type N Only	Type N Only

Mechanical Specifications	
Polarization	Vertical or Horizontal
VSWR	1.5:1
Input Power	100 Watt
Dimensions	26x26x1.8 in
Operating Wind Speed	70 mph
Elevation Adjust	±40 deg
Weight - Antenna	15 lbs.
Mount	1.9 - 4.5 in Pipe

Notes:

* indicates termination

t indicates mount

N= N-Female
E = 7/16 DIN
U = Universal Mount with Fine Adjust
C = Standard Mount

Planar Array Data Download Page

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RSI Wireless Communications

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FCCID: HDCTRACERT1L8

Terrestrial Microwave Antennas - 450 MHz - 40 GHz

General
Gabriel's terrestrial microwave antenna line is comprised of six antenna types: Parabolic Grid, Standard Parabolic, Deep Dish Parabolic, High Performance, Ultra High Performance and Horn Reflector antenna configurations. Mounts are included on all Gabriel antenna models. All Gabriel antennas meet or exceed Standards EIA-195-C and EIA-222-E. For more information on a specific type of antenna, click on the appropriate picture below.

Air Pressurizers . Transmission Line Systems . Antenna Patterns
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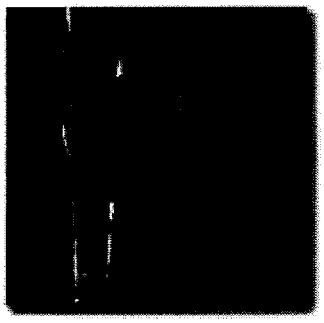
Parabolic Grid Antenna 400 MHz - 2.700 GHz



- Special Configurations
- Model Number Descriptions
- Frequency Band Detail

Models	GLF, GHF, GHA
Operating Frequencies	From 450 MHz to 2.700 GHz (refer to product specifications for detailed frequency bands)
Dielectric	Pressurized Air Dielectric Unpressurized Foam Dielectric
Polarizations	Plane
Reflector	Constructed with corrosion-resistant aluminum tubular elements formed to a precision parabolic contour. Each element is attached at the outer rim and to the backstructure. Elements are capped and supplied with drain holes.
Diameters	3 ft. (0.9 m) - 12 ft. (3.7 m)
Mount	Supplied
Characteristics	These antennas exhibit low windloading and tower loading characteristics.
Special Feature	Available in two sections to facilitate reduced shipping costs and handling.
Standard	Meets and exceeds EIA-195-C and EIA-222-D.

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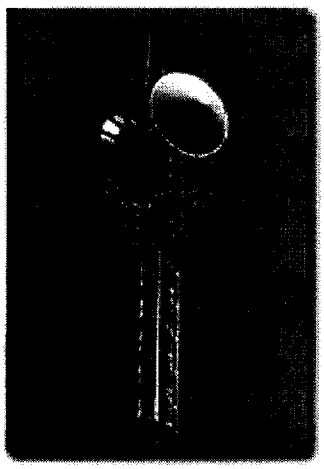
Standard Parabolic Antenna 824 MHz - 23.6 GHz



- Special Configurations
- Model Number Descriptions
- Frequency Band Detail

Models	RF, RFB, RFF, DP, RSS
Operating Frequencies	824 MHz - 23.6 GHz (refer to product specifications for detailed frequency bands)
Dielectric	Pressurized Air Dielectric Unpressurized Foam Dielectric
Polarizations	Plane and Dual see specific models
Reflector	Constructed of aluminum alloy and spun to tolerances that are checked throughout the fabrication process. Each reflector is supplied with integral rim for enhanced structural integrity.
Diameters	2 ft. (0.6 m) - 15 ft. (4.6 m)
Mount	Supplied. Two configurations available ("SE" and "A" frame versions) Gabriel mounts and adjusting mechanisms offer a rugged and compact attachment to the tower.
Characteristics	These reflectors are a cost effective solution which provide a high degree of structural integrity along with excellent electrical characteristics.
Options	Standard Parabolic antennas are available with optional conical radomes. Severe Environment available.
Standard	Meets and exceeds EIA-195-C and EIA-222-D.

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Frequency Bands Detailed

Freq. ID	Freq. Band	Freq. ID	Freq. Band
450	450-470	W59	5.925-6.575
800	800-870	5968	5.925-6.875
824	824-894	5971	5.825-7.125
890	890-960	64	6.425-7.125
940	940-960	L-71	7.125-7.750
15	1.427-1.535	71	7.125-8.500
17	1.700-1.850	74	7.425-7.900
W17	1.700-2.100	L-77	7.750-8.500
18	1.850-1.990	82	8.200-8.500
19	1.900-2.110	105	10.50-10.70
W19	1.900-2.300	W107	10.50-11.70
21	2.100-2.200	107	10.70-11.70
22	2.200-2.300	122	12.20-12.70
23	2.300-2.500	W122	12.20-13.25
W23	2.300-2.700	127	12.70-13.25
25	2.480-2.700	144	14.25-15.35
33	3.300-3.500	180	17.70-19.70
34	3.400-3.900	220	21.20-23.60
35	3.540-4.200	240	24.25-25.25
39	3.700-4.200	250	25.00-27.50
44	4.400-5.000	275	27.50-29.50
57	5.690-5.925	380	37.00-40.00
59	5.925-6.425		

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Model Number Description (terrestrial microwave antennas)
Gabriel Electronics Incorporated microwave antennas are found throughout the world. The product model numbers are unique to the product type and are descriptive by design. The following is a compilation of product descriptions to assist in product identification.

Model Types
Gabriel manufactures many types of microwave antennas. The following is a breakdown by category with model number prefix.

Product Type	Model Identifier
Parabolic Grid Antennas	GHF, GHA, GLF
Standard Parabolic Antennas	RF, RFB, RFF, DP, RSS
Deep Dish Parabolic Antennas	DRFB, DDP
High Performance Antennas	HP, HPF, SR, SRD, HSS
Ultra High Performance Antennas	USF, USP, UCC, UDC, UOF, UWB, AD, UHG
Horn Reflector Antennas	ATH (this model has replaced the TH series)

Product Characteristics	Model Description	Frequency Ranges
ADD & ADP	Ultra High Performance - Angle Diversity	5.925 - 7.125 GHz
DDP	Standard - Deep Dish - Dual Polarized	4 - 11 GHz
DP	Standard - Dual Polarized Antenna	3 - 23 GHz
DRFB	Standard - Deep Dish - Plane Polarized	4 - 11 GHz
GHA	Grid High Frequency - Pressurized	1.4 - 2.7 GHz
GHF	Grid High Frequency - Unpressurized	1.4 - 2.7 GHz
GLF	Grid Low Frequency - Unpressurized	450 MHz - 960 MHz
HP	High Performance - Pressurized	1.7 - 2.7 GHz
HPF	High Performance - Unpressurized	1.7 - 2.7 GHz
HSS	High Performance - Spread Spectrum	5.6-5.9 GHz
RF	Standard - Pressurized -	1.4 - 23.6 GHz
RFB	Standard - Plane Polarized Antenna	4 - 13 GHz
RFF	Standard - Unpressurized	450 MHz - 2.7 GHz
RSS	Standard Parabolic - Spread Spectrum	5.6-5.9 GHz
SR (surpressed radiation)	High Performance - Plane Polarized	3 - 40 GHz
SRD (surpressed radiation)	High Performance - Dual Polarized	4 - 23 GHz
UCC	Ultra High Performance - Dual Polarized	4 - 11 GHz

UDC	Ultra High Performance - Dual Polarized	10.50 - 10.70 GHz
UHG	Ultra High Performance - Dual Polarized	4 - 8 GHz
UOF	Ultra High Performance - Dual Polarized	6.425 - 7.125 GHz
USF	Ultra High Performance Unpressurized	1.850 - 2.500 GHz
USP	Ultra High Performance Pressurized	1.850 - 2.500 GHz
UWB (wide band)	Ultra High Performance - Dual Polarized	5.9 - 7.125 GHz

Product Size
*UCC**10**-59CSE*

All Gabriel model numbers reference the diameter of the reflector in the model number. The diameter is referenced in feet (UCC10-). Gabriel's parabolic antennas are available in 1 ft. (0.3 m) to 15 ft. (4.6 m) diameters.

Special Product Characteristics (UCC10**X**-59CSE)	**Product Description**
X	High Cross Polarization Discrimination (XPD)
W	Wide Band
L	Low VSWR

Frequency Specifier (UCC10-**59**CSE)	**Frequency Range**
59	5.925-6.425 GHz

Revisions
UCC10-59**C**SE
One alpha character immediately after the frequency specifier denotes the antennas latest revision. Revisions denote changes to the antenna either mechanically and/or electrically. If no alpha character exists immediately after the frequency specifier, the product has not been modified from it's original introduction.

What is "SE"
UCC10-59C**SE**

The "SE" denotes a type of mount and backstructure employed with the product.

It is important to note that these mechanical features do not effect the antenna's electrical performance. The "SE" and the non-SE mount and backstructure (ie: heavy duty "A" frame type) have the same pattern (DPE) characteristics.

RADIOWAVES

PRODUCTS

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Short Haul Microwave Antennas

Available in the following Sizes
30 CM to 120CM

Key Features:

- **Ease of installation**, Lightweight antennas, requires only one person to install (30CM & 60CM).
- **Plastic Radomes Standard, Optional** Pre-tensioned Long Life Radomes, of Hydrophobic coated fabric (HP only). Molded Radomes available for SP Models.
- **Left or Right** Pole mountable.
- **Rugged and Lightweight cast** aluminum mount with fine and coarse adjustments for both azimuth and elevation.
- **Compact Size**, antennas are designed to minimize size yet keep performance.
- All materials are of plated aluminum, hot dipped galvanized steel and stainless steel for **corrosion resistance.**
- Backshell design allows for **direct mounting** of customers RF Unit.
- Weight (Including Mount)

Antenna Size	SP Series	SP w/Radome	HP Series
1 ft. (30CM)			17 lb. (7.70 kg)
2 ft. (60CM)	22 lb. (12.25 kg)	25 lb. (11.35 kg)	27 lb. (12.25 kg)
3 ft. (90CM)	43 lb. (19.50 kg)	48 lb. (21.80 kg)	50 lb. (22.70 kg)
4 ft. (120CM)	60 lb. (29.50 kg)	75 lb. (34.00 kg)	85 lb. (38.55 kg)

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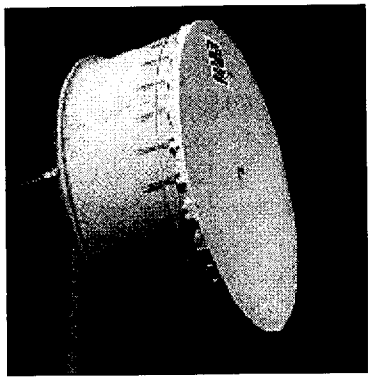
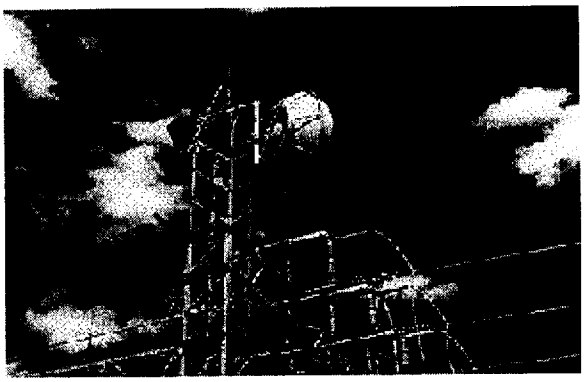
Microwave Antennas



RFS Cablewave manufactures precision spun aluminum parabolic antennas for commercial and military services operating in frequency bands from 1.7 to 23 GHz. Our microwave antennas are used for both short and long-haul terrestrial communications. RFS Cablewave antennas meet standard EIA-195C and TIA/EIA-222F..

Antennas utilize heavy gauge spun aluminum reflectors and center fed single and dual polarized waveguide feeds. Reflector diameters range in size from 2 to 12 feet and are designed to withstand 125mph wind with 1 inch radial ice. Antennas include a galvanized steel tower mount with elevation and azimuth fine adjusts of ±5°. RFS Cablewave offers more than 275 standard models of microwave antennas with varying combinations of gain, beam width, and front to back ratio. Antenna systems configured for high windload or harsh environments are available on request.

A wide range of waveguides and coaxial cable transmission lines are available to complete any microwave antenna system, including a full line of installation accessories, connectors, jumpers and pressurization equipment. RFS Cablewave also offers a broad range of technical support and field services to help you plan, install and maintain your microwave antenna system.

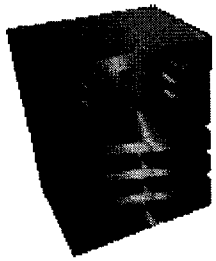


Microwave Parabolic Antennas

Antenna Series	Antenna Description
PA	Standard, Single Polarized
PAF	Standard, Plane Polarized, 2 GHz Non-Pressurized, Coaxial Cable Feed
PAL	Standard, Single Polarized, Low VSWR
PAX	Standard, Dual Polarized, Low VSWR
DA	High Performance, Single Polarized, Shrouded
DAX	High Performance, Dual Polarized, Shrouded
UA	Ultra Directive, Single Polarized, Shrouded
UXA	Ultra Directive, Dual Polarized, Shrouded

***Radomes are available for all standard antennas.**
***Antenna color standard is light blue. For other colors, contact the factory.**
***2, 4 & 6 ft. 190 and 220 antennas standard color is white.**

Features - Standard Antennas
Features - High Performance Antennas



PA - PAF - PAL - PAX
Standard Antennas

All antennas meet EIA-195-C and EIA-222-E standards

REFLECTOR

- Heavy gauge precision spun aluminum.
- Predrilled for tower mount and shroud attachment.

FEED

- Nonpressurized type for PAF antennas.
- Pressurizable up to 10 psi for PA - PAL - PAX antennas.
- Rear mounted, easily removed.
- Special foam packaging for safer shipping and handling.

GUY WIRES

- Mylar guy wire for extended life and higher durability.
- Unique guy wire "SEcure" feature.

TOWER MOUNT

- Heavy duty galvanized steel.
- Reverse figure seven (7), three point attachment orientation for 10- and 12-foot antennas and T-mount for 2- and 4-, 6- and 8-foot antennas.
- Left or right feed offset feature.
- Vertical tower mount for 4 1/2" O.D pipe and / or 2 3/8" O.D. pipe for 2-foot antenna.

SWAY BAR

- Heavy duty galvanized steel pipe 2 3/8" O.D.
- For protection against antenna shifting, two sway bars are included with 12-foot antennas. 8-foot and 10-foot antennas include one sway bar.

HARDWARE

- Galvanized ASTM structural grade steel hardware.
- 316 stainless steel hardware available for marine environments.

ADJUSTMENTS

- Azimuth adjustment of ±5 Deg, elevation adustment of ±5 Deg for 6-, 8-, 10- and 12-foot antennas, -5 Deg to +50 Deg elevation for 2- and 4- foot antennas.
- Stainless steel elevation adjustment rods with brass nuts.

- Fine thread elevation adjustment rods for 18 GHz and 23 GHz antennas.

COLOR

- Standard colors are light blue, international orange, or white.
- Standard color for 18 and 23 GHz antennas is white.
- Light blue color is used unless otherwise specified.
- Powder coating is used for corrosion protection.
- Any color available on request.

INSTRUCTIONS

- Printed illustrated installation instructions are included with each antenna.

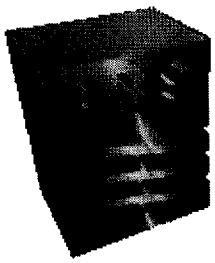
PACKAGING

- Heavy duty cardboard box for 2-foot antennas
- Enclosed plywood crating for 4-foot antennas
- Open slat wood crating for 4-, 6- and 8- foot antennas.
- 8-* and 10-foot antennas use slant pack crating.
- 12-foot antennas are sectionalized (2 halves) in enclosed plywood crate

* 8- and 10-foot antennas are also available in open slat wood crates.

WIND LOADING

- Antennas will withstand 125 mph wind with one inch radial ice without damage.
- Higher wind load capacity > 125 mph available upon request.

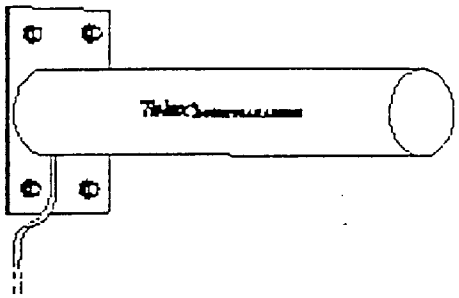


Telex® Technical Data

High-Gain WLAN Antenna
Model 2415AB

General Description

This antenna is a totally enclosed 16 element Yagi antenna for the 2400 to 2483 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 13.5 dBi and the half-power beamwidth is 30 degrees. This antenna is normally mounted on a mast and is vertically polarized



Specifications

Electrical:

Frequency Range	2400-2483 MHz
VSWR	Less than 2:1, 1.5:1 Nominal
Nominal Impedance	50 ohms
Gain	13.5 dBi Nominal
Front-to-Back ratio	Greater than 20 dB
Half-power Beamwidth	30 degrees
Polarization	Vertical

Mechanical:

Size	18" long
Mounting method	Clamps to vertical mast up to - 2 5/8" O.D.
Cable length	36"
Cable Type	RG-58 A/U Type, 50 ohm, low-loss, white
Connector	Reverse TNC or SMA (polariz

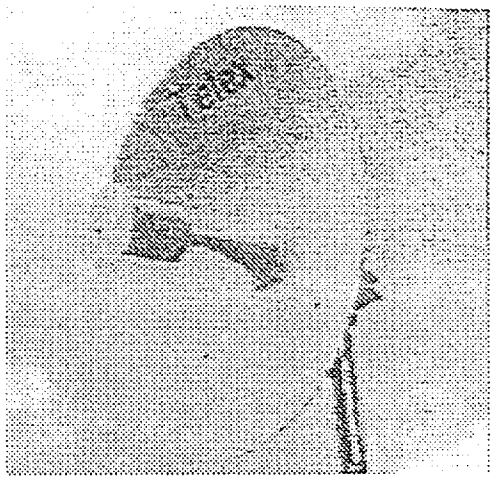
TELEX Wireless
8601 East Cornhusker Highway, Lincoln, NE 68505
Phone: (402) 467-5321 FAX: (402) 467-3279

Telex® Technical Data

High-Gain WLAN Antenna
Model 2440-24V/2440-24H

General Description

This antenna is a parabolic dish designed for the band of frequencies from 2400 to 2483 MHz. It is designed to be used as a bridge antenna between two networks or for point-to-point communications. It consists of an aluminum parabolic reflector and feed antenna. The antenna features a rugged mount. It also offers 20 degree fine adjustment for both horizontal and vertical planes. The antenna is provided with hardware for mast mounting and is available in either vertical or horizontal polarization. The antenna is available in either vertical 2440-24V or horizontal 2449-24H models



Specifications

Electrical:

Frequency Range	2400-2483 MHz
VSWR	Less than 1.5:1, 1.8:1 Nomina
Nominal Impedance	50 ohms
Gain	20 dBi Nominal
Front-to-Back ratio	Greater than 25 dB
Half-power Beamwidth	12.4 degrees
Polarization	Vertical (V) or Horizontal (V)
Maximum Side Lobe Level	-17 dB

Mechanical:

Size	24" round
Mounting method	Stainless steel U bolts
Cable length	15"
Cable Type	RG-303/U
Connector	Type N Female
Wind Rating with 1/2 inch ice	110 MPH

TELEX Wireless

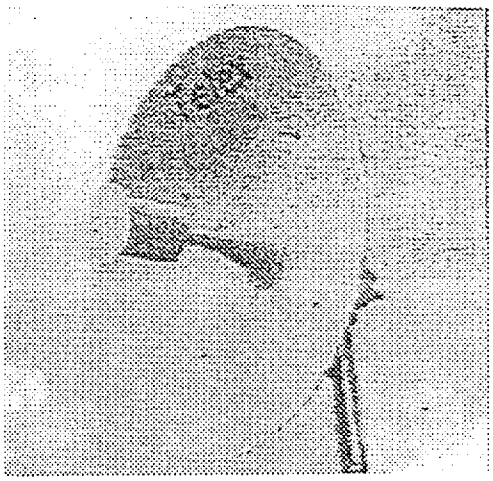
3601 East Cornhusker Highway, Lincoln, NE 68505
Phone: (402) 467-5321 FAX: (402) 467-3279

Telex® Technical Data

High-Gain WLAN Antenna
Model 2440-36V/2440-36H

General Description

This antenna is a parabolic dish designed for the band of frequencies from 2400 to 2483 MHz. It is designed to be used as a bridge antenna between two networks or for point-to-point communications. It consists of an aluminum parabolic reflector and feed antenna. The antenna features a rugged mount. It also offers 20 degree fine adjustment for both horizontal and vertical planes. The antenna is provided with hardware for mast mounting and is available in either vertical or horizontal polarization. The antenna is available in either vertical 2440-36V or horizontal 2449-36H models



Specifications

Electrical:

Frequency Range	2400-2483 MHz
VSWR	Less than 1.5:1, 1.8:1 Nomina
Nominal Impedance	50 ohms
Gain	24 dBi Nominal
Front-to-Back ratio	Greater than 30 dB
Half-power Beamwidth	8.7 degrees
Polarization	Vertical (V) or Horizontal (V)
Maximum Side Lobe Level	-22 dB

Mechanical:

Size	36" round
Mounting method	Stainless steel U bolts
Cable length	15"
Cable Type	RG-303/U
Connector	Type N Female
Wind Rating with 1/2 inch ice	110 MPH

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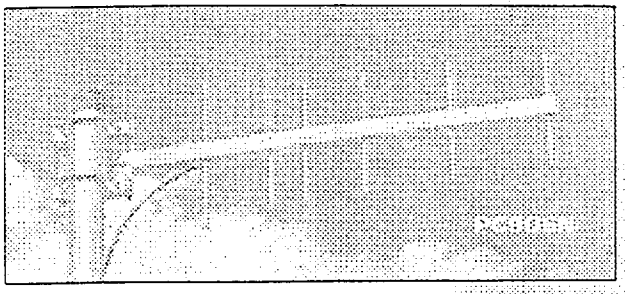
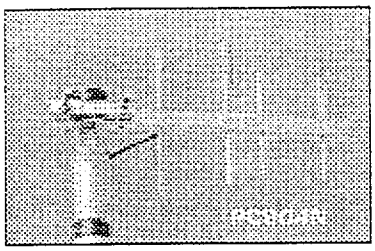
Custom Antennas To Meet Special Needs

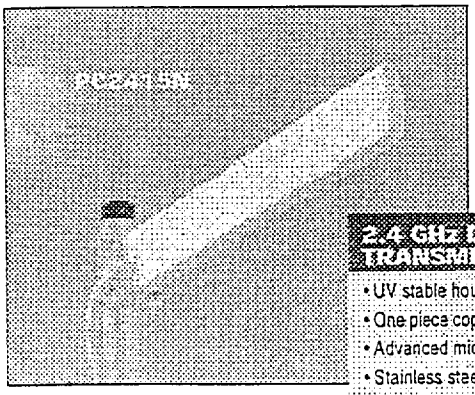
Whatever your connector of choice, it is likely that Cushcraft/Signals can meet your needs. We stock connectors for most of the approved systems. Also, if you require special lengths of cable or other changes to the antenna, please do not hesitate to contact us. Cushcraft would like to respond to your need for new antenna designs. If you have a quantity requirement, please let us know.

Check our specifications in the Yagi Selector Chart. Look over the features in the Features Box. Then call your favorite distributor or the factory for immediate shipment or to ask any additional questions you may have.

Yagi	Spread Spectrum	SCADA
PC-8910N	Yes	No
PC-904N	Yes	Yes
PC-906N	Yes	No
PC-9010N	No	Yes
PC-9013N	Yes	No
PC2415N	Yes	No







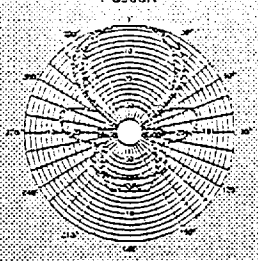
NEW 2.4 GHz Yagi

For those long-range directional applications, Cushcraft has designed the PC2415N Yagi. It produces a gain of 13.9 dBd and can be mounted in a number of ways. The model shown utilizes the flat plate design. Many others could be used. Cushcraft has the ability to modify this model for OEM applications to fit your needs. The UV-stabilized polycarbonate radome shields the antenna from the sun and all weather conditions.

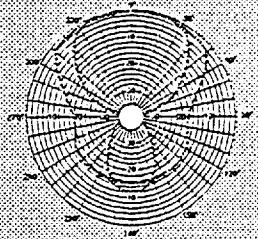
2.4 GHz DATA TRANSMISSION YAGI

- UV stable housing
- One piece copper radiating element
- Advanced microwave substrate
- Stainless steel hardware
- Pigtail mounted connector

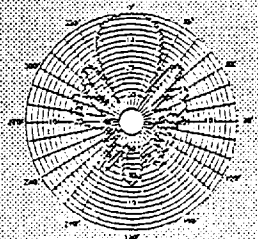
PC906N



PC904N



PC2415N



H-Plane
E-Plane

DATA YAGI SELECTOR CHART

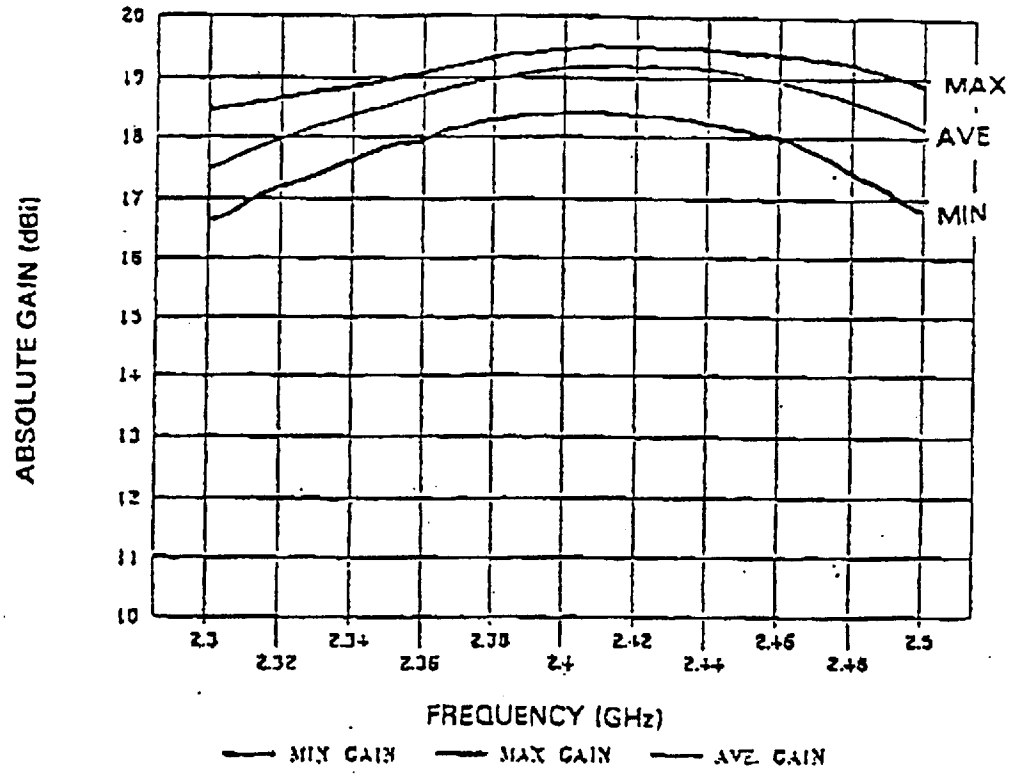
Model	Freq. MHz	Gain dBd	No. Elem	F to B dB	Bandwidth 1.5:1 3dB Beamwidth E-Plane°	H-Plane°	Conn. Type (Female)	W/ surf. Area ft² (m²)	W/ surv. mph (kph)	W/ 1/2" Ice	Length in (cm)	Wt. lb. (kg)
PC8910N	896-940 MHz	11	10	20	40	45	N	0.38 (0.035)	125 (200)	100 (161)	41-7/16 (105.2)	2.31 (1.04)
PC904N	896-930 MHz	6	4	12	70	100	N	0.11 (0.01)	125 (200)	100 (161)	13 (33)	1.12 (.50)
PC906N	896-940 MHz	8.5	6	18	55	55	N	0.26 (0.024)	125 (200)	100 (161)	24-3/4 (62.9)	1.62 (.73)
PC9010N	928-960 MHz	12	10	20	40	45	N	0.38 (0.035)	125 (200)	100 (161)	41-7/16 (105.2)	2.31 (1.04)
PC9013N	902-928 MHz	13	13	20	35	40	N	0.46 (0.043)	125 (200)	100 (161)	53-1/2 (135.9)	3.12 (1.40)
Common Specifications: Power handling - 200 Watts; Elements - 1/4 in. (.63 cm) 6061T6 aluminum rod; Boom - 3/4 in (1.9 cm) 6061T6 aluminum channel; Mounting style - U-bolt; Maximum mast diameter - 2-1/8in (5.4 cm)												
PC2415N	2.4-2.5 GHz	13.9	15	18	30	34	N	0.4 (.04)	125 (200)	100 (161)	26 (66)	<1 (.473)
Power handling - 50Watts; Radiating element - copper; Enclosure material - UV stable polycarbonate; Maximum mast diameter - 2-1/8" (5.4 cm)												

cushcraft/Signals

PRODUCTION GAIN SPREAD

(Sample : 750 antennas)

AVFP-18 FLAT PANEL ANTENNA



AVITRONICS

GRINAKER AVITRONICS

GRINAKER AVITRONICS is an ISO 9001 Company

SABS

FLAT PANEL ANTENNA
MODEL: AVFP2325-18

ELECTRICAL SPECIFICATIONS:

Antenna type	:	18 dBi Flat Panel Antenna
Frequency	:	2.3 - 2.5 GHz
Polarization	:	Horizontal or Vertical
VSWR	:	≤ 1.6:1
Gain	:	18 dBi peak within band 16.5 dBi min at band edges
Beamwidth (3 dB)	:	E-plane 21° (Nominal) H-plane 18° (Nominal)
Front-to-back ratio	:	Greater than 30 dB
Boresight cross polarization	:	≤ -20 dB
Power Handling	:	100 Watt CW
Connector	:	Type N(F)

MECHANICAL SPECIFICATIONS:

Size	:	370 x 440 mm rectangular with rounded corners
Elevation tilt action	:	± 15°
Mounting bracket	:	Stainless steel bracket accepting 50 - 65 mm diameter pipe (e.g. standard two inch galvanised water pipe).
Mass	:	2.6 kg (including tilt action mounting bracket).
Exterior finish	:	Passivated and painted UV resistant two component polyurethane white. Supplied with stainless steel bolts and nuts.
Wind loading	:	198 N for normal incidence to antenna face at 150 km per hour.

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