

EM-VER-057-100601

30 Trumbull Street
Hartford, CT 06103-3597
Phone (860) 275-8200
Fax (860) 275-8299
kbaldwin@rc.com
Direct (860) 275-8345

ORIGINAL

June 1, 2010

Via Hand Delivery

RECEIVED
JUN - 1 2010
CONNECTICUT
SITING COUNCIL

S. Derek Phelps
Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Re: **Notice of Exempt Modification – Antenna Swap
411 West Putnam Avenue, Greenwich, Connecticut**

Dear Mr. Phelps:

Cellco Partnership d/b/a Verizon Wireless (“Cellco”) currently maintains a wireless telecommunications facility on the roof of the building at 411 West Putnam Avenue in Greenwich. By virtue of its approval of an existing AT&T facility at this address in 1992, the Council maintains jurisdiction over this non-tower facility. The building and underlying property are owned by Florida Sherwood Forest LTD. Cellco’s facility consists of twelve (12) panel antennas on the roof of the building. The antennas maintain a centerline height of 55 feet above ground level. Cellco now intends to modify its installation by replacing its six (6) PCS antennas with three (3) model MG D3-800T0 PCS antennas; two (2) BXA-70063/6CF LTE antennas; and one (1) SLWX 5514 LTE antenna, all at the same centerline height of 55 feet. Attached behind Tab 1 are the specifications for Cellco’s replacement antennas.



Law Offices

BOSTON

PROVIDENCE

HARTFORD

NEW LONDON

STAMFORD

WHITE PLAINS

NEW YORK CITY

ALBANY

SARASOTA

www.rc.com

Please accept this letter as notification pursuant to R.C.S.A. § 16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to Peter Tesai, First Selectman for the Town of Greenwich.

The planned modifications to the facility fall squarely within those activities explicitly provided for in R.C.S.A. § 16-50j-72(b)(2).

1. The proposed modifications will not result in any increase in the height of the existing building or Cellco’s antennas.

ROBINSON & COLE_{LLP}

S. Derek Phelps
June 1, 2010
Page 2

2. The proposed modifications would not involve any change to ground-mounted equipment and, therefore, will not require the extension of the site boundary.

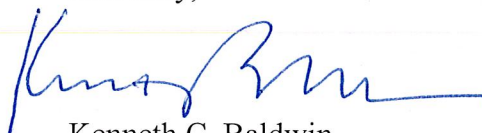
3. The proposed modifications will not increase noise levels at the facility by six decibels or more.

4. The proposed modifications will not result in the increase of radio frequency (RF) power density levels at the facility to a level at or above the Federal Communications Commission (FCC) adopted safety standard. A Calculated Radio Frequency Emissions Report for Cellco's modified facility is included behind Tab 2.

Also attached is a Structural Certification Letter confirming that the building roof can support Cellco's proposed antenna modifications. (See Tab 3).

For the foregoing reasons, Cellco respectfully submits that the proposed modifications to the above-referenced telecommunications facility constitutes an exempt modification under R.C.S.A. § 16-50j-72(b)(2).

Sincerely,



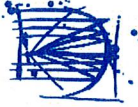
Kenneth C. Baldwin

Enclosures

Copy to:

Peter Tesai, Greenwich First Selectman
Katie Blankley, Deputy Director Planning & Zoning/Assistant Town Planner
Sandy M. Carter





SINGLE-BAND PANEL ANTENNA BROADBAND 1700-2170 MHz

MGD3-800TX

1710-1880	1850-1990	1920-2170
H66° V7.2°	H64° V6.6°	H63° V6.3°
Fixed Tilt 0°, 2°, 4°, 6°	Fixed Tilt 0°, 2°, 4°, 6°	Fixed Tilt 0°, 2°, 4°, 6°

ELECTRICAL SPECIFICATIONS

BROADBAND 1710-2170 MHz

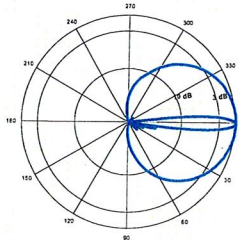
Antenna Model	MGD3-800TX		
Polarization	± 45°		
Frequency	1710 - 1880	1850 - 1990	1920 - 2170
Horizontal Beamwidth	66°	64°	63°
Vertical Beamwidth	7.2°	6.6°	6.3°
Gain (dBi)	17.9	18	18.5
Vertical Electrical Tilt	FIXED 0°, 2°, 4°, 6°	FIXED 0°, 2°, 4°, 6°	FIXED 0°, 2°, 4°, 6°
Upper Sidelobe Suppression for the 1 st lobe above main beam (dB)	20	20	20
Front-to-Back Ratio /Cpol @ ± 20° (dB)	> 30	> 30	> 30
VSWR	< 1.4 : 1	< 1.4 : 1	< 1.4 : 1
Cross Polar Ratio @ ± 60° (dB)	> 10	> 10	> 10
Isolation Between Ports (dB)	> 30	> 30	> 30
Maximum Power Per Input (W)	250		
Intermodulation (dBc)	< - 150		
Impedance (Ω)	50		

MECHANICAL SPECIFICATIONS

Connectors	2 X 7/16 Female
Connector Position	Bottom
Survival Wind Speed mph (km/h)	124 (200)
Front Windload lbs (N) @ 160 km/h	83 (370)
Lateral Windload lbs (N) @ 160 km/h	38 (170)
Radome Color	Grey, paintable
Temperature Range F (°C)	-67° to 140° (-55° to +60°)
Humidity	100%
Antenna Weight lbs (kg)	15.43 (7)
Antenna Dimension in (mm) H X W X D	53 X 6.29 X 3.54 (1340 X 160 X 90)



H&V Pattern



RYMSA Telecom Group (Headquarters)

10000 Wilshire Blvd, Suite 2000
Beverly Hills, CA 90210
Tel: +1 310 207 1000
Fax: +1 310 207 1001
www.rymsawireless.com



RYMSA México: ventas@rymsa.com.mx
Tel: +52 55 5260 2620

RYMSA Wireless U.S.A.: sales@rymsawireless.com
Tel: +1 888 622 6015

Slant $\pm 45^\circ$ Dual Polarized FET Panel $63^\circ / 14.5$ dBd 696-900 MHz

Mechanical specifications

Length	1804 mm	71.0 in
Width	285 mm	11.2 in
Depth	114 mm	4.5 in
Depth with z-bracket	154 mm	6.1 in
Weight ⁴⁾	7.9 kg	17.0 lbs
Wind Area Fore/Aft	0.51 m ²	5.5 ft ²
Wind Area Side	0.21 m ²	2.2 ft ²
Max Wind Survivability	>201 km/hr	>125 mph
Wind Load @ 100 mph (161 km/hr)		
Fore/Aft	753 N	169 lbf
Side	351 N	79 lbf

Antenna consisting of aluminum alloy with brass feedlines covered by a UV safe fiberglass radome.

Mounting & Downtilting

Mounting hardware attaches to pipe diameter $\varnothing 50$ -160 mm; $\varnothing 2.0$ -6.3 in

Mounting Bracket Kit	36210002
Downtilt Bracket Kit	36114003

Electrical specifications

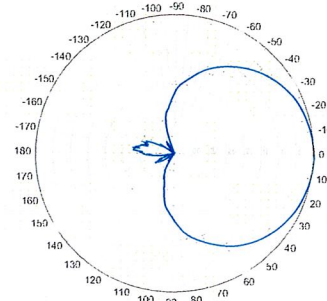
Frequency Range	696-900 MHz
Impedance	50 Ω
Connector ³⁾	NE or E-DIN Female 2 ports / Center
VSWR ¹⁾	$\leq 1.35:1$
Polarization	Slant $\pm 45^\circ$
Isolation Between Ports ¹⁾	< -25 dB
Gain ¹⁾	14.5 dBd 16.5 dBi
Power Rating ²⁾	500 W
Half Power Angle ¹⁾	
Horizontal Beamwidth	63 $^\circ$
Vertical Beamwidth	11 $^\circ$
Electrical downtilt ⁵⁾	0 $^\circ$
Null fill ¹⁾	5%
Lightning protection	Direct ground

Patented Dipole Design: U.S. Patent No. 6,608,600 B2

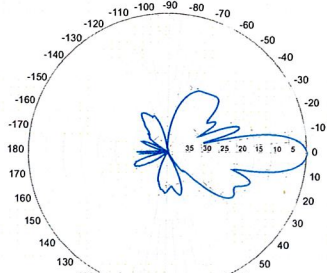
- 1) Typical values.
- 2) Power rating limited by connector only.
- 3) NE indicates an elongated N connector.
E-DIN indicates an elongated DIN connector.
- 4) Antenna weight does not include brackets.
- 5) Add'l downtilts may be available. Check website for details.

Improvements to mechanical and/or electrical performance of the antenna may be made without notice.

Radiation-pattern¹⁾
750 MHz

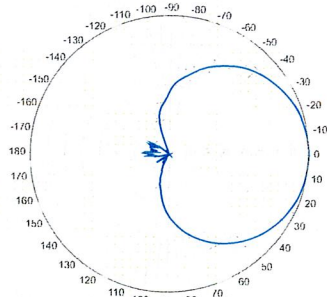


Horizontal

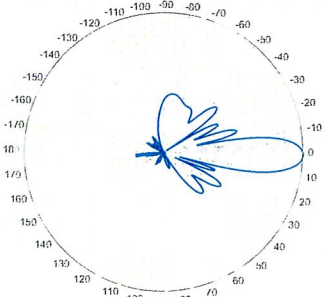


Vertical

850 MHz



Horizontal

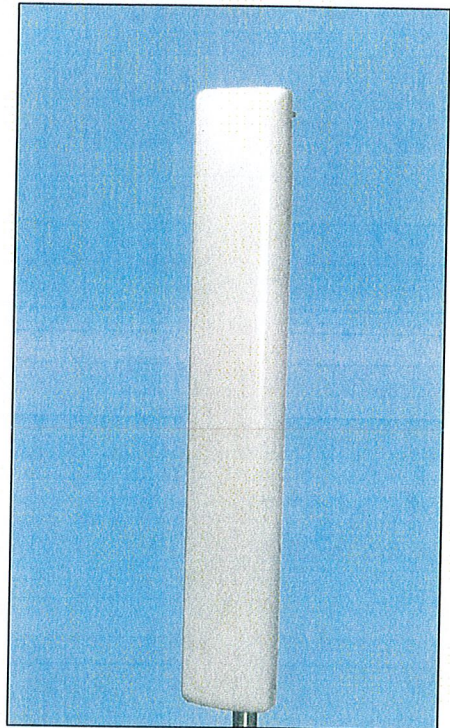


Vertical

696-900 MHz

BXA-70063/6CF _____

When ordering replace "_____" with connector type.



Featuring our Exclusive
3T Technology™
Antenna Design:

- Watercut brass feedline assembly for consistent performance.
- Unique feedline design eliminates the need for conventional solder joints in the signal path.
- A non-collinear system with access to every radiating element for broad bandwidth and superior performance.
- Air as insulation for virtually no internal signal loss.

Warranty:

This antenna is under a five-year limited warranty for repair or replacement.

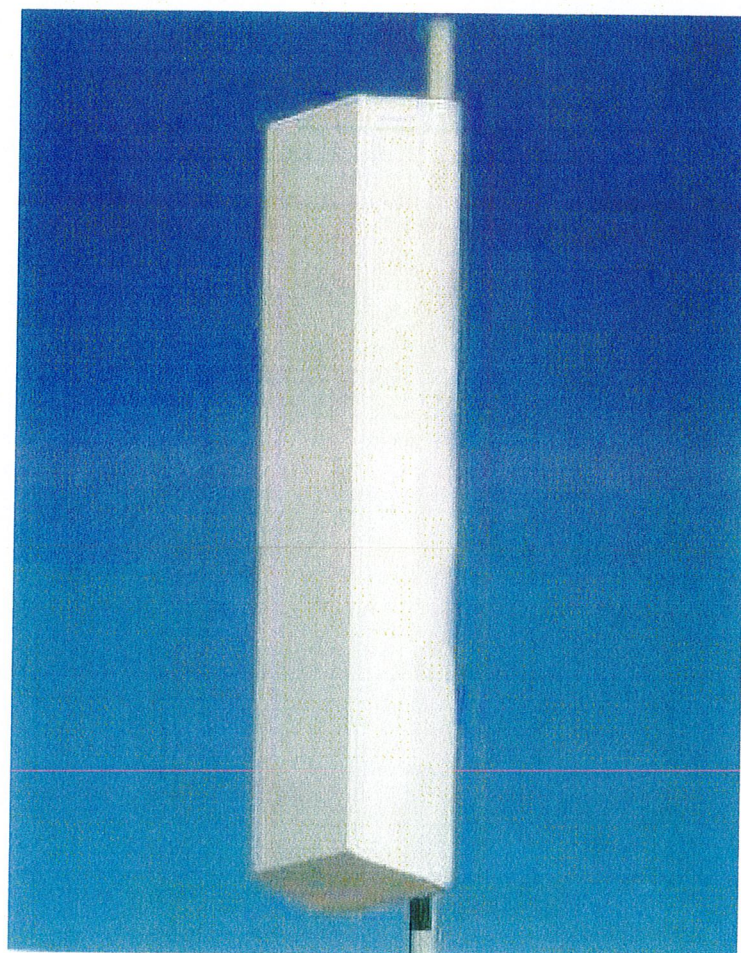
Revision: Date: 01/08/09

SLXW 5514

698 - 900 MHz Cross pol. log-periodic antenna

Features

- Small size
- Improved Side-to-side rejection
- Suitable for CDMA/GSM/3G/4G
- High return loss
- Low intermodulation
- High front-to-back ratio
- Dramatically improved signal to interference performance
- Upper side-lobe suppression
- Rugged design
- Outstanding performance over the entire band (698 - 900 MHz)



Electrical specifications

Frequency range: **698 - 900 MHz**
 Impedance: **50 ohm**
 Connector type: **7/16 Din**
 Return loss: **20 dB**
 Polarization: **+/- 45°**
 Isolation between ports: **40-60 dB**

Gain: **14 dBd**
 Front-to-back ratio: **> 30 dB**
 Power rating: **500 W**
 H-plane (-3 dB point): **48 - 54°**
 V-plane (-3 dB point): **15 - 18°**
 Upper side-lobe suppression: **18 dB**

Intermodulation (2x20W): **IM3 150 dB**
IM5 160 dB
IM7/9 170 dB

Lightning protection: **DC grounded**

Mechanical specifications

Overall height: **80 in** [2032 mm]
 Width: **14 in** [356 mm]
 Depth: **9 in** [229 mm]
 Weight (excluding brackets): **36 lbs** [16.3 Kg]
 Wind load measured up to: **150 mph** [240 Km/h]
 Wind area (side of antenna): **7.8 sq. ft.** [0.72 sq.m]
 Lateral thrust At 113 mph/
 180Km/h (worst case): **397 lbs** [1767 N]

Materials

Radiating Elements: **Aluminum**
 Transformer (Power distribution) **Ceramic PCB**
 Chassis: **Aluminum**
 Radome: **Grey Fiberglass/PVC**
 Mounting bolts: **Stainless steel**

The SLXW 5514 is made in the U.S.A.



C Squared Systems, LLC
920 Candia Road
Manchester, NH 03109
Phone: (603) 657 9702
E-mail:

support@csquaredsystems.com

Calculated Radio Frequency Emissions



Greenwich SW

411 West Putnam Ave

Greenwich, CT 06830

1. Introduction

The purpose of this report is to investigate compliance with applicable FCC regulations for the proposed Verizon Wireless antenna upgrade on the existing rooftop at 411 West Putnam Ave, Greenwich, CT 06830. Verizon Wireless is proposing to modify their existing three-sector array to accommodate the addition of their 700MHz LTE system to the existing rooftop and to modify their existing antenna arrays for their 850MHz Cellular and 1900 MHz PCS systems. This report uses the actual configuration for Verizon Wireless to give a representation of the resulting %MPE that might result.

2. FCC Guidelines for Evaluating RF Radiation Exposure Limits

In 1985, the FCC established rules to regulate radio frequency (RF) exposure from FCC licensed antenna facilities. In 1996, the FCC updated these rules, which were further amended in August 1997 by OET Bulletin 65 Edition 97-01. These new rules include Maximum Permissible Exposure (MPE) limits for transmitters operating between 300 kHz and 100 GHz. The FCC MPE limits are based upon those recommended by the National Council on Radiation Protection and Measurements (NCRP), developed by the Institute of Electrical and Electronics Engineers, Inc., (IEEE) and adopted by the American National Standards Institute (ANSI).

The FCC general population/uncontrolled limits set the maximum exposure to which most people may be subjected. General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

Public exposure to radio frequencies is regulated and enforced in units of milliwatts per square centimeter (mW/cm^2). The general population exposure limits for the various frequency ranges are defined in the attached "FCC Limits for Maximum Permissible Exposure (MPE)" in Attachment B of this report. Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.

Higher exposure limits are permitted under the occupational/controlled exposure category, but only for persons who are exposed as a consequence of their employment provided they are fully aware of the potential for exposure, and are able to exercise control over their exposure. General population/uncontrolled limits are five times more stringent than the levels considered acceptable for occupational, or radio frequency trained individuals. Attachment B contains excerpts from OET Bulletin 65 and defines the Maximum Exposure Limit.

Finally, it should be noted that the MPE limits adopted by the FCC for both general population/uncontrolled exposure and for occupational/controlled exposure incorporate a substantial margin of safety and have been established to be well below levels generally accepted as having the potential to cause adverse health effects.

5. Calculation Results

Table 2 below outlines the power density information for the site at the base of the building. All information except Verizon Wireless was obtained from CSC database.

Carrier	Number of Trans.	Effective Radiated Power (ERP) Per Transmitter (Watts)	Antenna Height (Feet)	Operating Frequency (MHz)	Total ERP (Watts)	Power Density (mw/cm ²)	Limit	%MPE
Verizon (PCS)	3	609	55	1970	1827	0.0217	1.0000	2.2%
Verizon (Cellular)	9	453	55	869	4077	0.0484	0.5793	8.4%
Verizon (LTE)	1	826	55	757	826	0.0098	0.5047	1.9%
SNET/ Cingular	12	100	64	850	1200	0.1053	0.5667	18.6%
							Total	31.1%

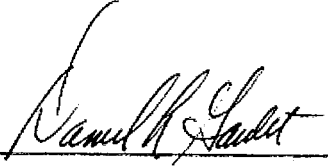
Table 2: % MPE Calculations²

These calculations assume the following: all antennas are operating at 100 percent capacity, all channels are transmitting simultaneously, and that all radio transmitters are operating at full power. Obstructions (trees, buildings etc.) that would normally attenuate the signal are not taken into account. As a result, the predicted signal levels are much higher than the actual signal levels would be from the finished installation.

² Values for SNET/Cingular were taken from CSC database records on file.

7. Statement of Certification

I certify to the best of my knowledge that the statements in this report are true and accurate. The calculations follow guidelines set forth in ANSI/IEEE Std. C95.3, ANSI/IEEE Std. C95.1 and FCC OET Bulletin 65 Edition 97-01.



Dan Goulet
C Squared Systems, LLC

March 19, 2010

Date

Attachment B: FCC Limits for Maximum Permissible Exposure (MPE)

(A) Limits for Occupational/Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (E) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	(900/f ²)*	6
30-300	61.4	0.163	1.0	6
300-1500	-	-	f/300	6
1500-100,000	-	-	5	6

(B) Limits for General Population/Uncontrolled Exposure


Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (E) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f ²)*	30
30-300	27.5	0.073	0.2	30
300-1500	-	-	f/1500	30
1500-100,000	-	-	1.0	30

f = frequency in MHz * Plane-wave equivalent power density

NOTE 1: Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

NOTE 2: General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or can not exercise control over their exposure.

Attachment C1: 800MHz Cellular Antenna Specs - DB844G65ZAXY



DB840 dB Director® Series

Vertically Polarized Log Periodic Antennas

65° HORIZONTAL BEAMWIDTH

HORIZONTAL BEAMWIDTH	65°	65°	65°	65°
FREQUENCY RANGE	806-960 MHz	806-960 MHz	806-960 MHz	806-960 MHz
	10.5 dBd / 0° Tilt	13.5 dBd / 0° Tilt	13.1 dBd / 0° Tilt	13 dBd / 6° Tilt
MODEL	DB842H65E-XY	DB844G65ZAXY	DB844H65E-XY	844H65T6E-XY
TYPE	Log Periodic	Log, No Wings	Log Periodic	Log Periodic

DIVERSITY

VERTICAL LOG

VERTICAL PANEL

FLAT PANEL

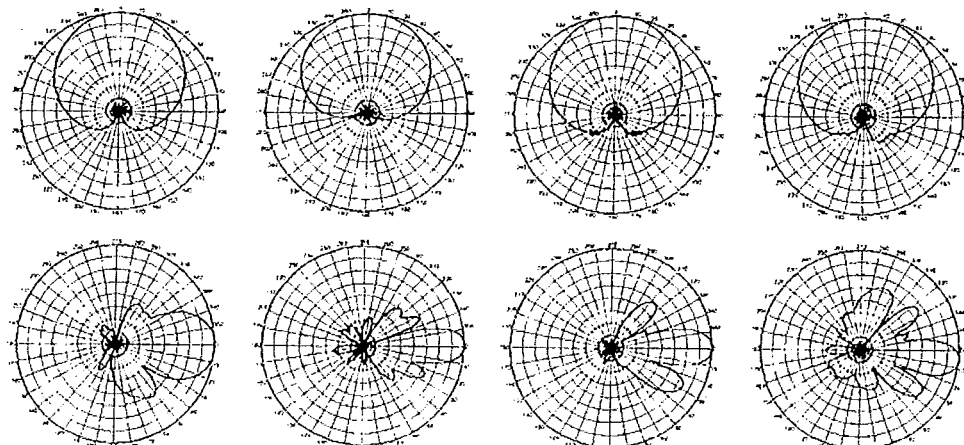
OMNI

YAGI

ELECTRICAL SPECIFICATIONS				
Frequency Range (MHz)	806-960	806-960	806-960	806-960
Gain (dBd/dBi)	10.5 / 12.6	13.5 / 15.6	13.1 / 15.2	13 / 15.1
Horizontal Beamwidth (Deg.)	65	65	65	65
Elevation Beamwidth (Deg.)	30	15	15	15
SLS (dB)	N/A	-15	-15	-15
Vult Fill (dB) - Below Peak	N/A	20-25	N/A	N/A
Beam Tilt (Deg.)	0	0	0	6
VSWR	<1.4:1	1.5:1	1.5:1	<1.5:1
Front-To-Back Ratio (dB)	40	40	40	40
Max. Input Power (Watt)	500	500	500	500
Connector Location	Back	Back	Back	Back
Connector Type	7/16 DIN - Female	7/16 DIN - Female	7/16 DIN - Female	7/16 DIN - Female
Optional Connectors	N-Female	N/A	N-Female	N-Female

MECHANICAL SPECIFICATIONS				
Length (Inch/mm)	24 / 610	48 / 1219	48 / 1219	48 / 1219
Width (Inch/mm)	20.5 / 521	10 / 254	20.5 / 521	20.5 / 521
Depth (Inch/mm)	9 / 229	8 / 203	9 / 229	9 / 229
Net Weight (lbs/kg)	10 / 4.5	11.5 / 5.2	20 / 9.1	20 / 9.1
Max. Flat Plate Area (ft²/m²)	2.3 / 0.71	3.4 / 0.32	4.6 / 0.43	4.6 / 0.43
Max. Wind Load at 100 mph (lb/N)	91 / 405	136 / 605	182 / 810	182 / 810
Max. Wind Speed (mph/kmh)	160 / 161	125 / 201	125 / 201	125 / 201
Radome Material	ABS, UV Resistant	ABS, UV Resistant	ABS, UV Resistant	ABS, UV Resistant
Reflector Material	Pass. Aluminum	Pass. Aluminum	Pass. Aluminum	Pass. Aluminum
Radiator Material	Brass	Aluminum	Brass	Brass
Hardware Material	Galvanized Steel	Galvanized Steel	Galvanized Steel	Galvanized Steel
Std. Mounting Hardware	DB360	DB790	DB360	DB360
Optional Downhill Kit	DB5083	DB5083	DB5083	DB5083
Optional Azimuth Wall Bracket	DB5084-AZ	DB5084-AZ	DB5084-AZ	DB5084-AZ

DB842H65E-XY DB844G65ZAXY DB844H65E-XY 844H65T6E-XY



Scale: 10° radius, 5 dB per circle

Attachment C3: 750MHz LTE Antenna Specs – BXA-70063/6CF

Slant $\pm 45^\circ$ Dual Polarized FET Panel $63^\circ / 14.5$ dBd
696-900 MHz

Mechanical specifications

Length	1804 mm	71.0 in
Width	285 mm	11.2 in
Depth	114 mm	4.5 in
Depth with z-bracket	154 mm	6.1 in
Weight ⁴⁾	7.9 kg	17.0 lbs
Wind Area Fore/Aft	0.51 m ²	5.5 ft ²
Wind Area Side	0.21 m ²	2.2 ft ²
Max Wind Survivability	>201 km/hr	>125 mph
Wind Load @ 100 mph (161 km/hr)		
Fore/Aft	753 N	169 lbf
Side	351 N	79 lbf

Antenna consisting of aluminum alloy with brass feedlines covered by a UV safe fiber-glass radome.

Mounting & Downtilting

Mounting hardware attaches to pipe diameter $\varnothing 50$ -160 mm; $\varnothing 2.0$ -6.3 in

Mounting Bracket Kit	36210002
Downtilt Bracket Kit	36114003

Electrical specifications

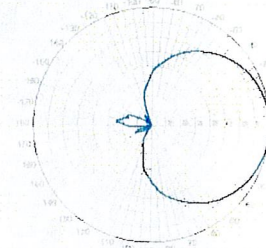
Frequency Range	696-900 MHz
Impedance	50 Ω
Connector ³⁾	NE or E-DIN Female 2 ports / Center
VSWR ¹⁾	$\leq 1.35:1$
Polarization	Slant $\pm 45^\circ$
Isolation Between Ports ¹⁾	< -25 dB
Gain ¹⁾	14.5 dBd 16.5 dBi
Power Rating ²⁾	500 W
Half Power Angle ¹⁾	
Horizontal Beamwidth	63 $^\circ$
Vertical Beamwidth	11 $^\circ$
Electrical downtilt ⁵⁾	0 $^\circ$
Null fill ¹⁾	5%
Lightning protection	Direct ground

Patented Dipole Design: U.S. Patent No. 6,608,600 B2

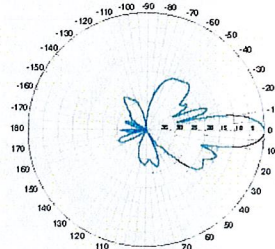
- 1) Typical values.
- 2) Power rating limited by connector only.
- 3) NE indicates an elongated N connector.
E-DIN indicates an elongated DIN connector.
- 4) Antenna weight does not include brackets.
- 5) Add'l downtilts may be available. Check website for details.

Improvements to mechanical and/or electrical performance of the antenna may be made without notice.

Radiation-pattern¹⁾
750 MHz

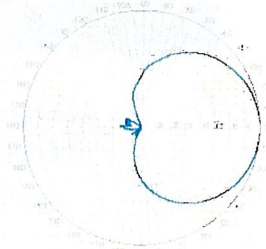


Horizontal

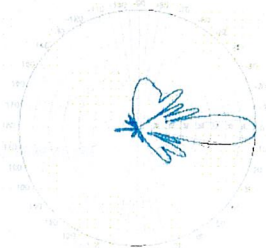


Vertical

850 MHz



Horizontal

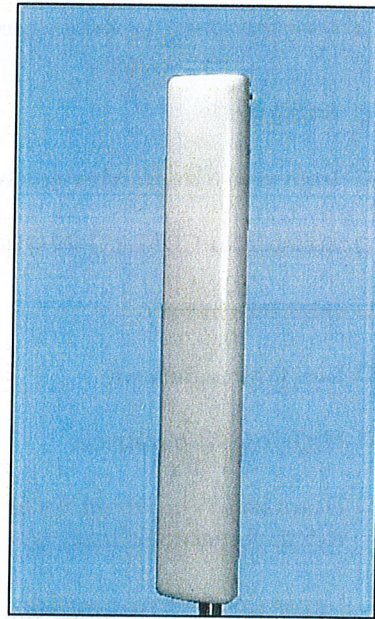


Vertical

696-900 MHz

BXA-70063/6CF

When ordering replace " " with connector type.



Featuring our Exclusive
3T Technology™
Antenna Design:

- Watercut brass feedline assembly for consistent performance.
- Unique feedline design eliminates the need for conventional solder joints in the signal path.
- A non-collinear system with access to every radiating element for broad bandwidth and superior performance.
- Air as insulation for virtually no internal signal loss.

Warranty:

This antenna is under a five-year limited warranty for repair or replacement.

Revision Date: 01/08/09

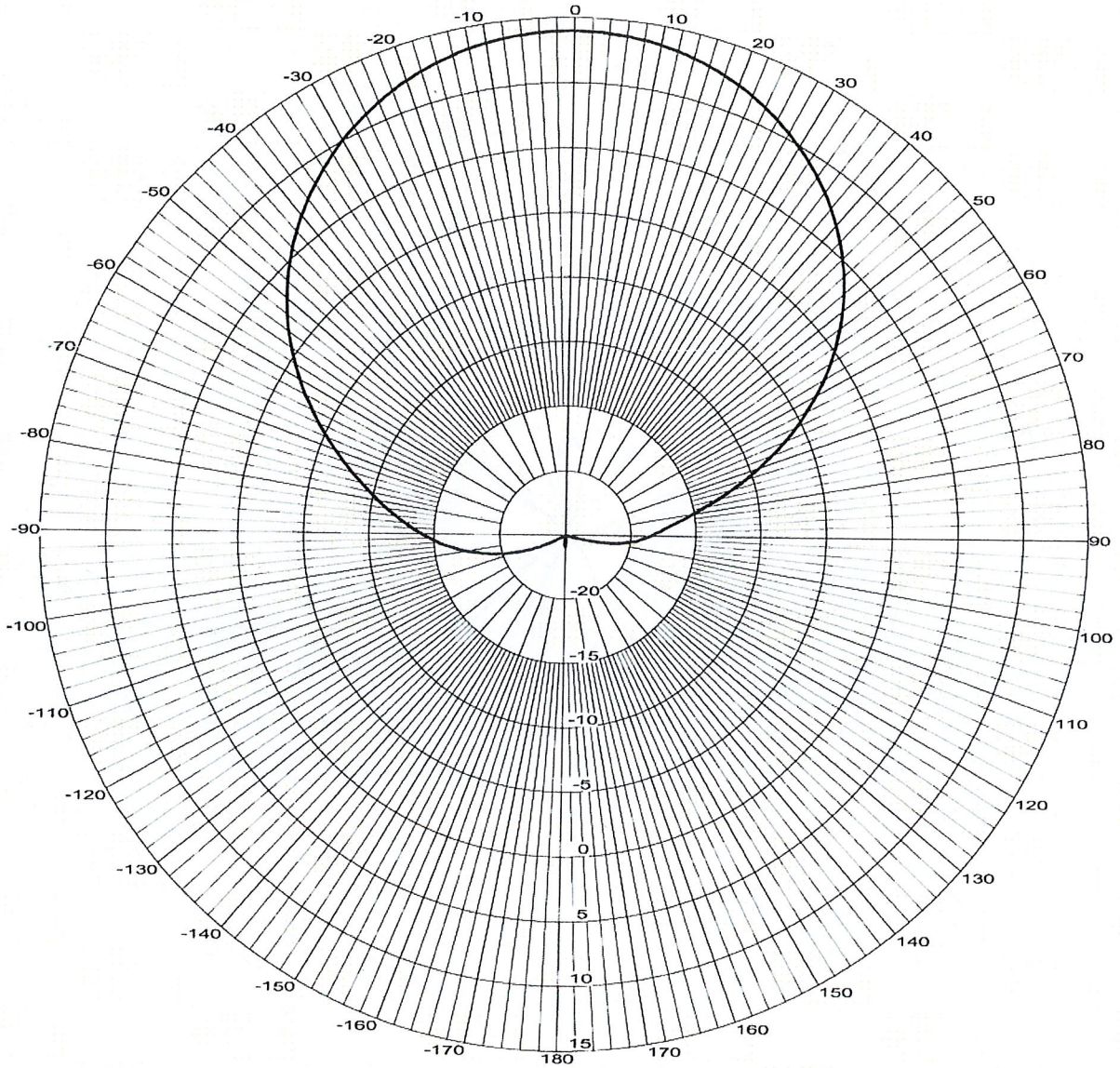
815.399.0001 • antel@antellinc.com • www.antellinc.com



1 of 1

Swedcom

SLXW 5514



Frequency: **752 MHz**
Plane: **H-Plane**
Gain: **dBd**

1075 Old County Road, Suite C
Belmont, CA 94002

Phone: (650) 620-9420
Fax: (650) 620-9281

www.swedcom.com
info@swedcom.com



February 18, 2010

Mr. Aleksey Tyurin
Verizon Wireless
99 East River Drive
East Hartford, CT 06108

*Re: Structural Certification Letter ~ LTE Antenna Upgrade
Verizon Wireless Site Ref ~ Greenwich SW
411 West Putnam Ave.
Greenwich, CT 06830*

Natcomm Project No. 10001.CO25

Dear Mr. Tyurin,

Natcomm Inc. has reviewed the proposed Verizon Wireless antenna upgrade at the above referenced site. The purpose of the review is to determine the structural adequacy of the existing four story, 47-ft +/- tall host building to support the proposed modified antenna configuration. The review considered the effects of wind load, dead load, ice load and seismic forces in accordance with TIA/EIA-222-F and the 2005 Connecticut State Building Code. Visual verification of existing antenna installation was conducted from grade by Natcomm personnel on January 27, 2010.

The existing, proposed and future Verizon Wireless loads considered in this analysis consist of the following:

- **Verizon (Existing/ Reconfigured):**
Antennas: Six (6) Decibel DB844G65ZAXY panel antennas mounted to the proposed/modified antenna frame with a RAD center elevation of 55-ft +/- AGL.
Coaxial Cables: Twelve (12) 1-5/8" dia. coaxial cables.
- **Verizon (Existing to Remove):**
Antennas: Six (6) Decibel 950F65T2ZE-M panel antennas mounted to the existing antenna frame with a RAD center elevation of 55-ft +/- AGL.
- **Verizon (Proposed):**
Antennas: Two (2) Antel BXA-70063/6CF, one (1) Swedcom SLXW-5514 and three (3) RYMSA MGD3-800T0 panel antennas mounted to the proposed/modified antenna frame with a RAD center elevation of 55-ft +/- AGL.
Coaxial Cables: Six (6) 1-5/8" dia. coaxial cables.

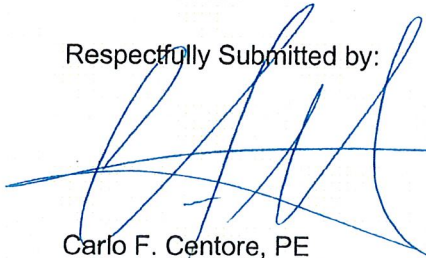
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To resist overturning due to the proposed/modified antenna configuration additional ballast will be required. To assure that the existing roof deck is not compromised, the ballast must be distributed per the attached sketch DE-4 "Ballast Frame Reinforcements" prepared by Natcomm Inc. dated February 22, 2010.

With the aforementioned antenna ballast frame modifications, the proposed antenna installation meets the requirements of the TIA/EIA-222-F Standard considering the basic wind speed (fastest mile) of 85 mph for Fairfield County which controls over the basic wind speed (fastest mile) of 80 mph for Greenwich (equivalent to 100 mph 3-second gust wind speed as required in Appendix K of the Connecticut supplement per Table 1609.3.1). Our findings are based on the assumption that all structural members and appurtenances were properly designed, detailed, fabricated, installed and have been properly maintained since erection.

In conclusion, the proposed Verizon LTE antenna upgrade will not negatively impact the structural integrity of the host building. If there are any questions regarding this matter, please feel free to call.

Respectfully Submitted by:



Carlo F. Centore, PE
Principal ~ Structural Engineer

