Minor Modification

PURPOSE

This minor modification is being filed to update site data in the Universal Licensing System ("ULS") for the West Virginia 5 - Tucker cellular market area ("CMA"). These modifications do not increase Applicant's existing Cellular Geographic Service Area ("CGSA").

PUBLIC INTEREST STATEMENT

The corrections detailed herein are intended to provide the most reliable data for ULS and therefore, grant of this application serves the public interest, convenience, and necessity.

SABs AND EXISTING CGSA DETERMINATION

The service area boundaries (SAB) for the sites in this application were developed in accordance with Section 22.911(a), reflect the network facilities existing as of the date of filing, and are depicted in the attached map prepared in accordance with Section 22.929(c) of the Commission's rules.

The existing CGSA shown on the attached map was derived from the most-recent CGSA submission filed with the Commission for this Call Sign.

The engineering calculations use a minimum of 98' HAAT, per FCC Rule 22.911(a)(3), and 0.1 Watt or 27 db less than maximum ERP, per FCC Rule 22.911(a)(4). Site specific information is provided below and polar antenna radiation patterns are appended hereto.

SAB EXTENSION AGREEMENTS

This application includes SAB extensions into one or more adjacent CGSAs. Applicant or its affiliate is either the licensee of the adjacent CGSAs into which the SAB extends, and therefore no written SAB extension agreement is required, or Applicant has the required written SAB extension agreement in its files.

ADMINISTRATIVE INFORMATION

The five-year build-out period has expired for all markets involved and there is no un-served area involved in this application.

Site information

Site Name	TX	ULS Location Number	ULS Location Action (A/M/D)	Latitude	Longitude	(P)roposed or (E)xisting Site	ULS Antenna Number	ULS Antenna Action (A/M/D)	Max ERP (Watts)	Rad Centerline (m)	Tip Height (m)	Antenna Data Sheet Ref
Site Location Data						***Site Antenna Specific Data***						
CHTWWVU3883_Mountain lodge	Node T Mountain lodge		A	38-24-35.7 N	79-59-35.5 W	E	1	A	0.0	5	5.2	XEA-165-00
CHTWWVU3883_Head End	Node U Head End		A	38-24-25.1 N	79-59-42.7 W	E	1	A	0.7	2.7	2.9	XEA-165-00
CHTWWVU3883_Boat House	Node V Boat House		A	38-24-54.9 N	79-59-00.9 W	E	1	A	0.2	4.4	4.6	XEA-165-00
CHTWWVU3883_Boat House2	Node V Boat House2		A	38-24-54.4 N	79-59-00.9 W	E	1	A	0.2	4	4.2	XEA-165-00
CHTWWVU3883_Expedition station	Node X Expedition station		A	38-24-44.7 N	79-59-47.1 W	E	1	A	0.0	3	3.2	XEA-165-00
CHTWWVU3883_Full tilt	Node X Full tilt		A	38-24-42.4 N	79-59-46.8 W	E	1	A	0.0	3	3.2	XEA-165-00
CHTWWVU3883_Alleghany Springs	Node Y Alleghany Springs		A	38-24-40.5 N	79-59-42.2 W	E	1	A	0.1	3	3.2	XEA-165-00
CHTWWVU3883_Full tilt	Node Y Full tilt		A	38-24-41.9 N	79-59-46.2 W	E	1	A	0.0	3	3.2	XEA-165-00
CHTWWVU3883_Sunset cantina	Node Y Sunset cantina		A	38-24-39.7 N	79-59-43.8 W	E	1	A	0.0	3.7	3.9	XEA-165-00
CHTWWVU3883_Rimfire(starbucks)	Node Z Rimfire(starbucks)		A	38-24-39.1 N	79-59-44.7 W	E	1	A	0.1	2.9	3.1	XEA-165-00
CHTWWVU3883_Split Rock pools	Node Z Split Rock pools		A	38-24-36.2 N	79-59-42.9 W	E	1	A	0.1	3	3.2	XEA-165-00
CHTWWVU3822	WVU3822X	5	M	38-16-47.5 N	80-52-08.7 W	E	1	M	436.6	40.9	41.8	SBNH-1D6565B
	WVU3822Y					E	2	M	436.6	40.9	41.8	SBNH-1D6565B
	WVU3822Z					E	3	M	436.6	40.9	41.8	SBNH-1D6565B
CHTWWVU3830	WVU3830X	39	M	38-21-38.9 N	80-38-49.7 W	E	1	M	269.2	58.8	59.4	DBXLH-8585A-VTM
	WVU3830Y					E	2	M	269.2	58.8	59.4	DBXLH-8585A-VTM
	WVU3830Z					E	3	M	269.2	58.8	59.4	DBXLH-8585A-VTM
CHTWWVU3838	WVU3838X	7	M	38-36-45.2 N	80-59-03.1 W	E	1	M	234.5	72.6	73.3	DBXNH-8585A-R2M
	WVU3838Y					E	2	M	234.5	72.6	73.3	DBXNH-8585A-R2M
	WVU3838Z					E	3	A	234.5	72.6	73.3	DBXNH-8585A-R2M
CHTWWVU3847	WVU3847X		A	38-47-04.1 N	80-39-59.5 W	E	1	A	218.8	84.8	85.5	DBXNH-8585A-R2M
	WVU3847Y					E	2	A	218.8	84.8	85.5	DBXNH-8585A-R2M
	WVU3847Z					E	3	A	218.8	84.8	85.5	DBXNH-8585A-R2M
CHTWWVU3854	WVU3854X		A	38-51-01.0 N	80-19-40.0 W	E	1	A	223.9	85.7	86.3	DBXLH-8585A-VTM
	WVU3854Y					E	2	A	223.9	85.7	86.3	DBXLH-8585A-VTM
	WVU3854Z					E	3	A	223.9	85.7	86.3	DBXLH-8585A-VTM
CHTWWVU3856	WVU3856X		A	38-58-26.0 N	80-05-21.6 W	E	1	A	18.7	75.6	76.3	DBXLH-6565A-VTM
	WVU3856Y					E	2	A	18.7	75.6	76.3	DBXLH-6565A-VTM
CHTWWVU3864	WVU3864X	12	M	39-04-54.8 N	79-39-20.8 W	E	1	M	209.0	89.9	90.6	DBXNH-8585A-R2M
	WVU3864Y					E	2	A	209.0	89.9	90.6	DBXNH-8585A-R2M
	WVU3864Z					E	3	A	209.0	89.9	90.6	DBXNH-8585A-R2M
CHTWWVU3866	WVU3866X	21	M	39-06-12.6 N	79-25-54.1 W	E	1	M	24.6	83.2	83.9	DBXNH-8585A-R2M
	WVU3866Y					E	2	A	24.6	83.2	83.9	DBXNH-8585A-R2M
	WVU3866Z					E	3	A	24.6	83.2	83.9	DBXNH-8585A-R2M
CHTWWVU3867	WVU3867X	31	M	39-02-06.7 N	79-24-01.3 W	E	1	M	209.0	24.1	24.8	DBXNH-8585A-R2M
	WVU3867Y					E	2	A	209.0	24.1	24.8	DBXNH-8585A-R2M
	WVU3867Z					E	3	A	209.0	24.1	24.8	DBXNH-8585A-R2M
CHTWWVU3869	WVU3869X	44	M	38-47-10.2 N	79-33-31.8 W	E	1	M	309.1	23.8	24.5	DBXNH-8585A-R2M
	WVU3869Y					E	2	A	309.1	23.8	24.5	DBXNH-8585A-R2M
	WVU3869Z					E	3	A	309.1	23.8	24.5	DBXNH-8585A-R2M
CHTWWVU3877	WVU3877X	30	M	38-44-57.6 N	79-55-21.4 W	E	1	M	323.6	57	57.7	DBXLH-6565A-VTM
	WVU3877Y					E	2	A	416.9	57	57.7	DBXLH-6565A-VTM
	WVU3877Z					E	3	A	323.6	57	57.7	DBXLH-6565A-VTM
CHTWWVU3879	WVU3879Y	16	M	38-26-29.8 N	80-01-22.3 W	E	4	M	407.4	46.6	47.8	SBNH-1D6565C
	WVU3879Z					E	5	M	407.4	46.6	47.8	SBNH-1D6565C
CHTWWVU3881	WVU3881X	43	M	38-08-34.1 N	80-15-58.7 W	E	1	M	309.1	23.5	24.2	DBXNH-8585A-R2M
	WVU3881Y					E	2	M	309.1	23.5	24.2	DBXNH-8585A-R2M
	WVU3881Z					E	3	A	309.1	23.5	24.2	DBXNH-8585A-R2M
CHTWWVU3882	WVU3882X		A	38-30-28.4 N	81-11-27.6 W	E	1	A	371.6	58.5	59.4	SBNH-1D8585B
	WVU3882Y					E	2	A	371.6	58.5	59.4	SBNH-1D8585B
	WVU3882Z					E	3	A	371.6	58.5	59.4	SBNH-1D8585B

Table of Contents

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DBXLH-6565A-VTM	3
DBXLH-8585A-VTM	7
DBXNH-8585A-R2M	11
SBNH-1D6565B	15
SBNH-1D6565C	20
SBNH-1D8585B	25
XEA-165-00	29

DBXLH-6565A-VTM

±45° Dual Band Panel Antenna

DECIBEL®
Base Station Antennas

- Provides two independent dual pol antennas under one radome
- Interlaced dipole technology providing for attractive, low wind load mechanical package
- Each antenna is independently capable of field adjustable electrical down tilt
- Fully compatible with Andrew TELETILT® remote control antenna system.

ELECTRICAL

Frequency (MHz) :	824 - 896	870 - 960	1710 - 1880	1850 - 1990	1920 - 2180
Polarization :	±45°	±45°	±45°	±45°	±45°
Gain (dBd/dBi) :	11.9/14	11.9/14	14.4/16.5	14.7/16.8	14.9/17
Azimuth BW (Deg.):	68	65	65	64	63
Elevation BW (Deg.):	16	15	7	6.5	6
Beam Tilt (Deg.):	0-15	0-15	0-8	0-8	0-8
USLS* (dB) :	>15	>15	>15	>15	>15
Front-To-Back Ratio* (dB) :	25	25	25	25	25
Isolation (dB) :	>30	>30	>30	>30	>30
VSWR :	<1.5:1	<1.5:1	<1.5:1	<1.5:1	<1.5:1
PIM3 @ 2 x 20w (dBc) :	-150	-150	-150	-150	-150
Max. Input Power (Watts) :	250	250	250	250	250
Impedance (Ohms) :	50	50	50	50	50
Lightning Protection :	DC Ground	DC Ground	DC Ground	DC Ground	DC Ground

Notes: Same as ADFD0920-6565A-XDM. In band 824-960, isolation for 0-1 degrees is >28dB. At maximum tilt angles, gain may be slightly reduced.

MECHANICAL

Weight :	12.7 kg (28 lb)
Dimensions (LxWxD) :	1,295 x 267 x 132 mm (51 x 10.5 x 5.2 in)
Max. Wind Area :	0.16 m² (1.7 ft²)
Max. Wind Load (@ 100 mph) :	425.2 N (95.6 lbf)
Max. Wind Speed :	201 km/h (125 mph)
Hardware Material :	Galvanized Steel
Connector Type :	7-16 DIN - Female (4, Bottom)
Color :	Off White
Standard Mounting Hardware :	600899A-2

RET Ordering Information

Field Installed:	**DBXLH-6565A-VTM**
Factory Installed, ATM100 Series:	**DBXLH-6565A-R1M**
Factory Installed, ATM200 Series:	**DBXLH-6565A-R2M**

Andrew Corporation
2601 Telecom Parkway
Richardson, Texas U.S.A 75082-3521
Tel: 214.631.0310

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www.andrew.com

* - Indicates Typical

6/14/2005

dbtech@andrew.com

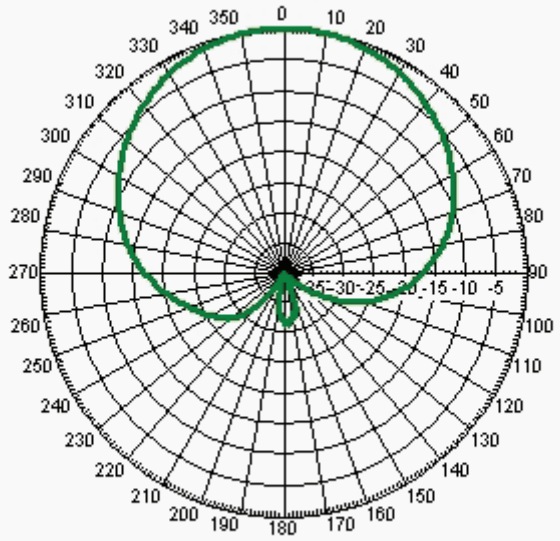
Information correct at date of issue but may be subject to change without notice.

DBXLH-6565A-VTM

±45° Dual Band Panel Antenna

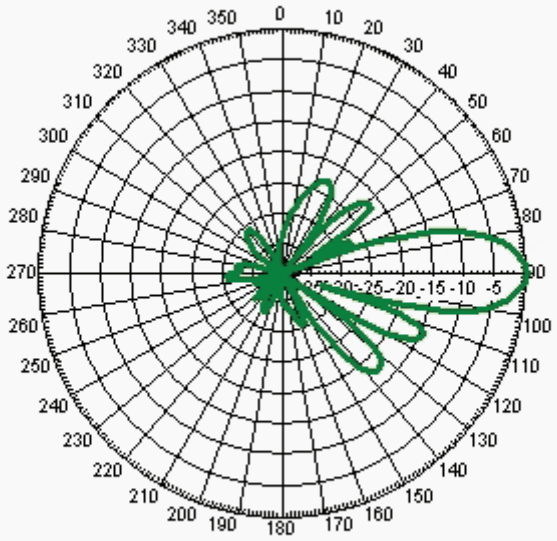
DECIBEL®
Base Station Antennas

AZIMUTH PATTERN



Freq: 850 MHz, Tilt: 0

ELEVATION PATTERN



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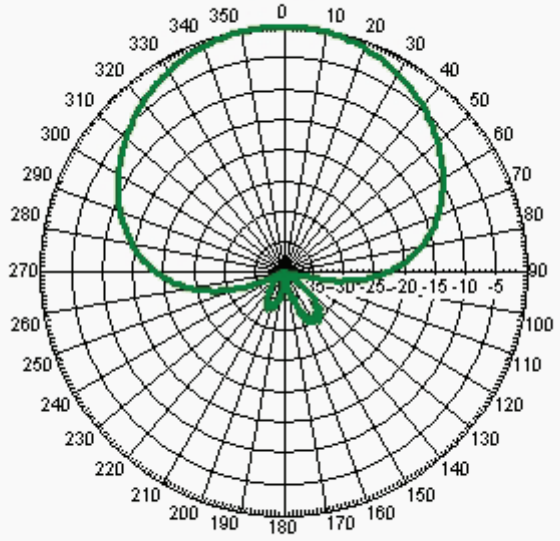

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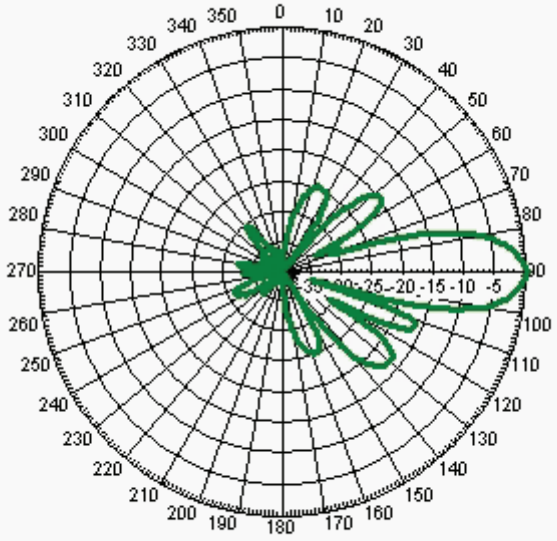

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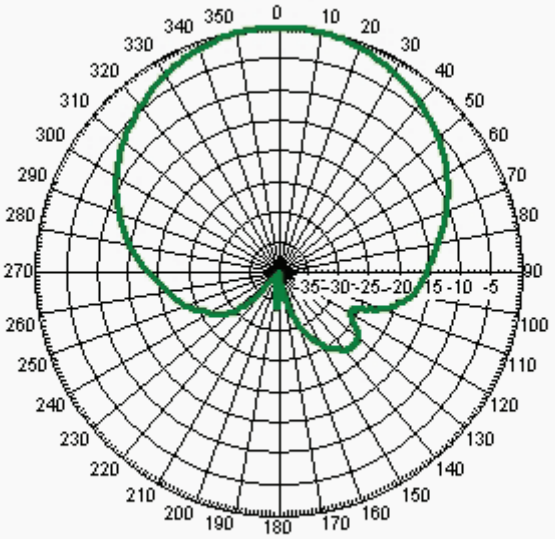

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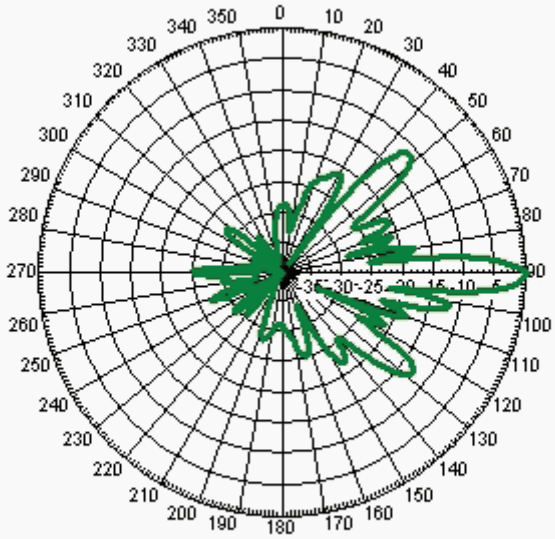

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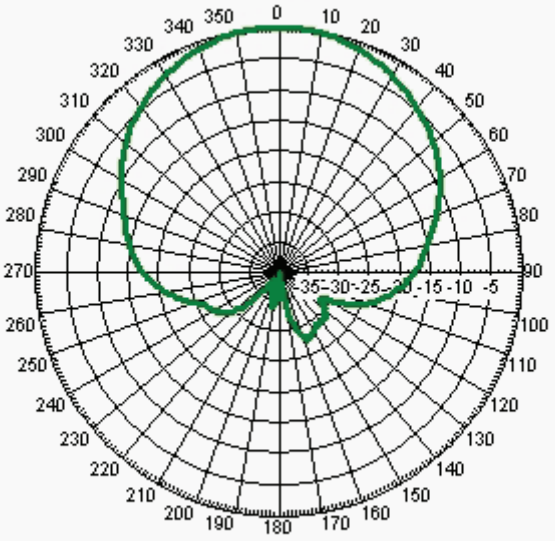

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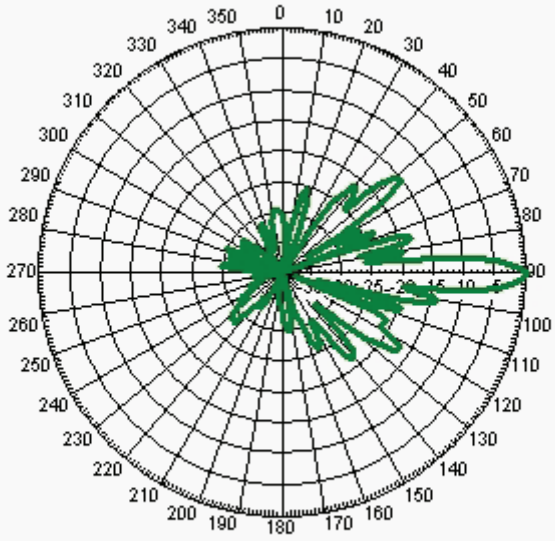

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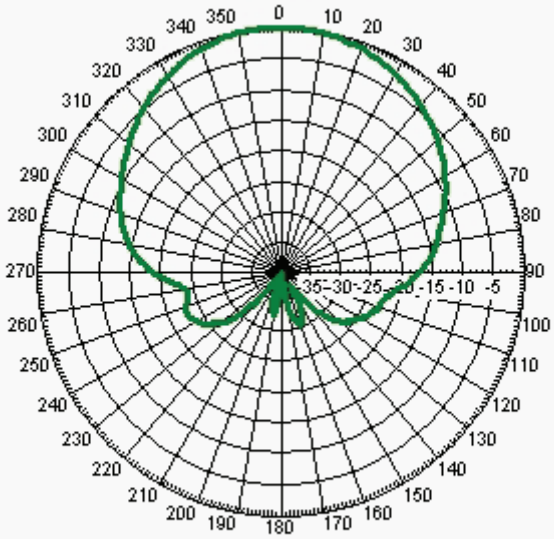

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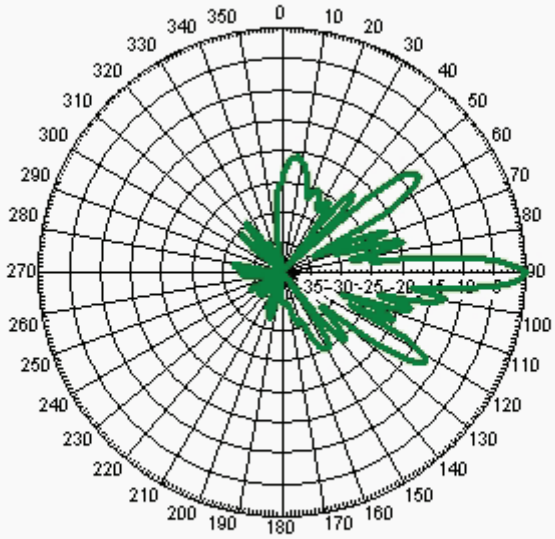

Freq: 2110 MHz, Tilt: 0

DBXLH-8585A-VTM

±45° Dual Band Panel Antenna

Decibel®
Base Station Antennas

- Provides two independent dual pol antennas under one radome
- Patented split dipole technology
- Each antenna is independently capable of field adjustable electrical down tilt
- Fully compatible with Andrew Teletilt® remote control antenna system

ELECTRICAL

Frequency (MHz) :	806 - 896	870 - 960	1710 - 1880	1850 - 1990	1920 - 2180
Polarization :	±45°	±45°	±45°	±45°	±45°
Gain (dBd/dBi) :	11.1/13.2	11.4/13.5	14.3/16.4	14.4/16.5	14.5/16.6
Azimuth BW (Deg.):	83	85	85	84	84
Elevation BW (Deg.):	16	15	7.8	7.2	7
Beam Tilt (Deg.):	0-16	0-16	0-10	0-10	0-10
USLS* (dB) :	15	15	17	17	17
Front-To-Back Ratio* (dB) :	28	28	32	32	32
Isolation (dB) :	>30	>30	>30	>30	>30
VSWR :	<1.4:1	<1.4:1	<1.5:1	<1.5:1	<1.5:1
PIM3 @ 2 x 20w (dBc) :	-150	-150	-150	-150	-150
Max. Input Power (Watts) :	500	500	200	200	200
Impedance (Ohms) :	50	50	50	50	50
Lightning Protection :	DC Ground	DC Ground	DC Ground	DC Ground	DC Ground

MECHANICAL

Weight :	14.0 kg (31 lb)
Dimensions (LxWxD) :	1,227 x 305 x 165 mm (48.3 x 12 x 6.5 in)
Max. Wind Area :	0.14 m² (1.5 ft²)
Max. Wind Load (@ 100 mph) :	587.1 N (132 lbf)
Max. Wind Speed :	201 km/h (125 mph)
Hardware Material :	Galvanized Steel
Connector Type :	7-16 DIN - Female (4, Bottom)
Color :	Light Gray
Standard Mounting Hardware :	600899A-2

RET Ordering Information

Field Installed:	**DBXLH-8585A-VTM**
Factory Installed, ATM200 Series:	**DBXLH-8585A-R2M**

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2601 Telecom Parkway
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* - Indicates Typical

1/12/2007

dbtech@andrew.com

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DBXLH-8585A-VTM

±45° Dual Band Panel Antenna

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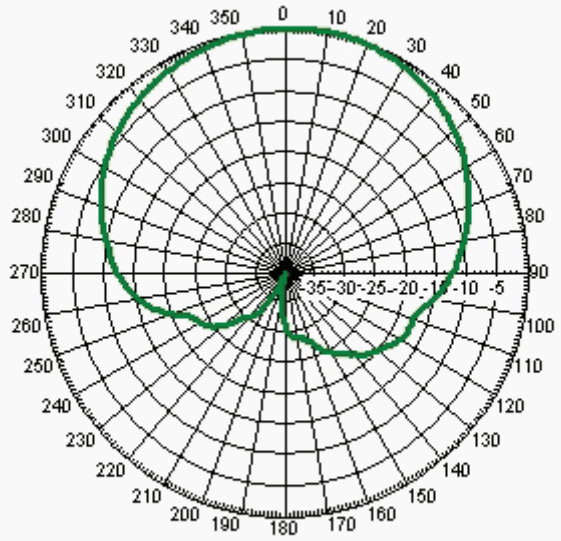
AZIMUTH PATTERN



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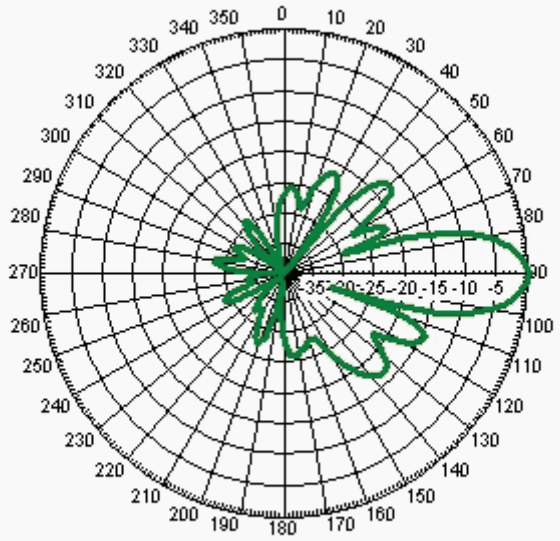

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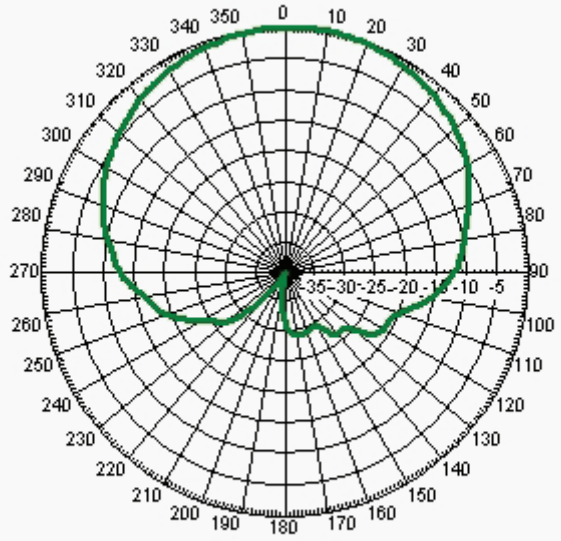

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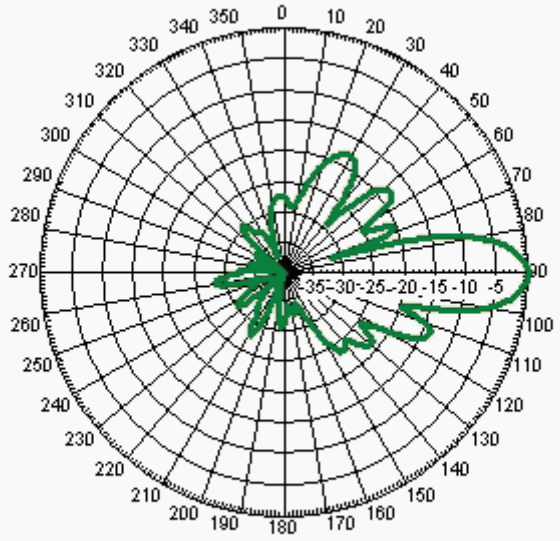

Freq: 935 MHz, Tilt: 0

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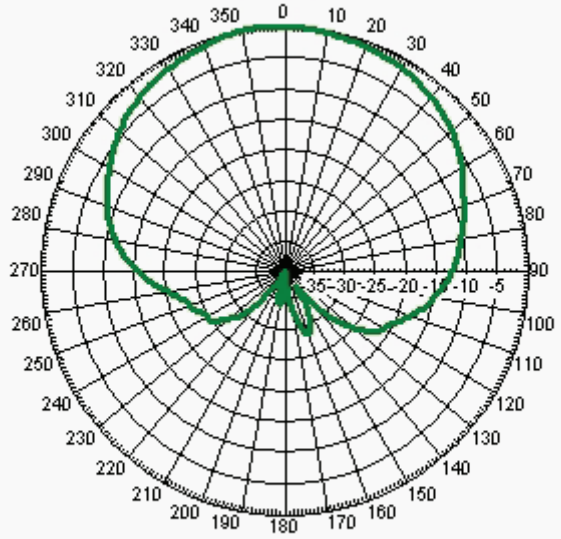

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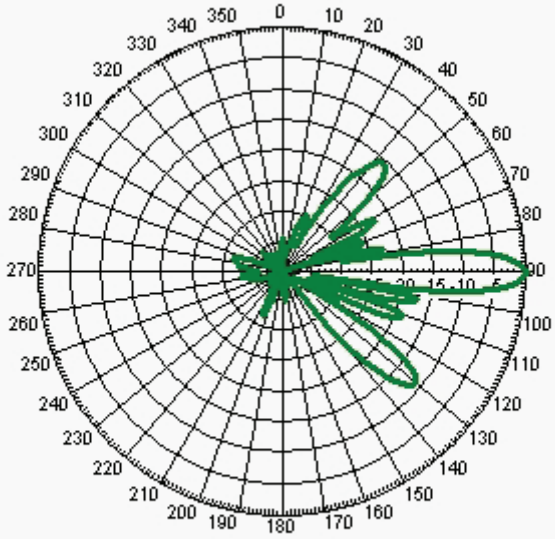

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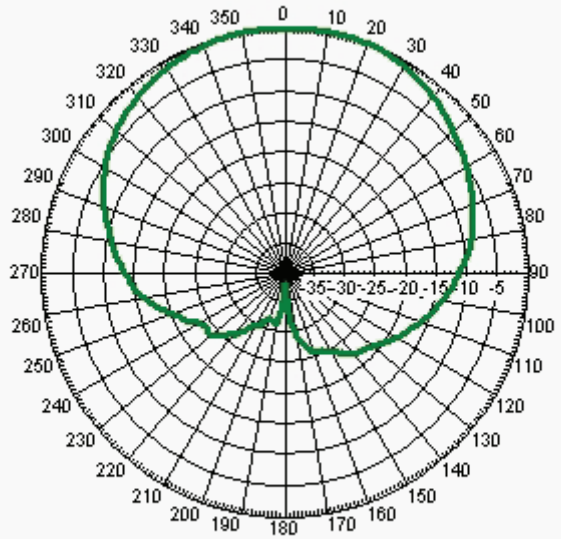

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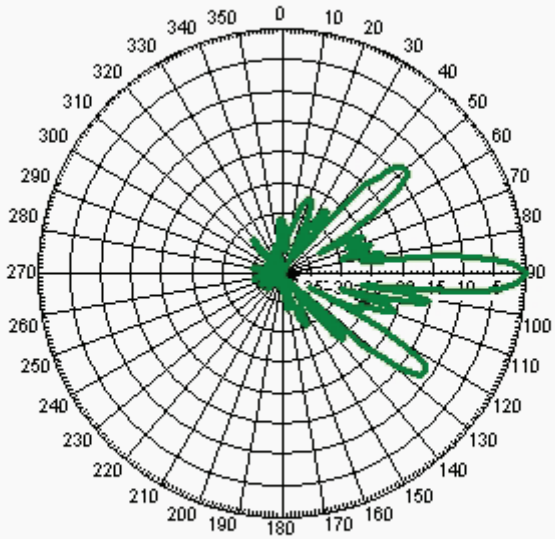

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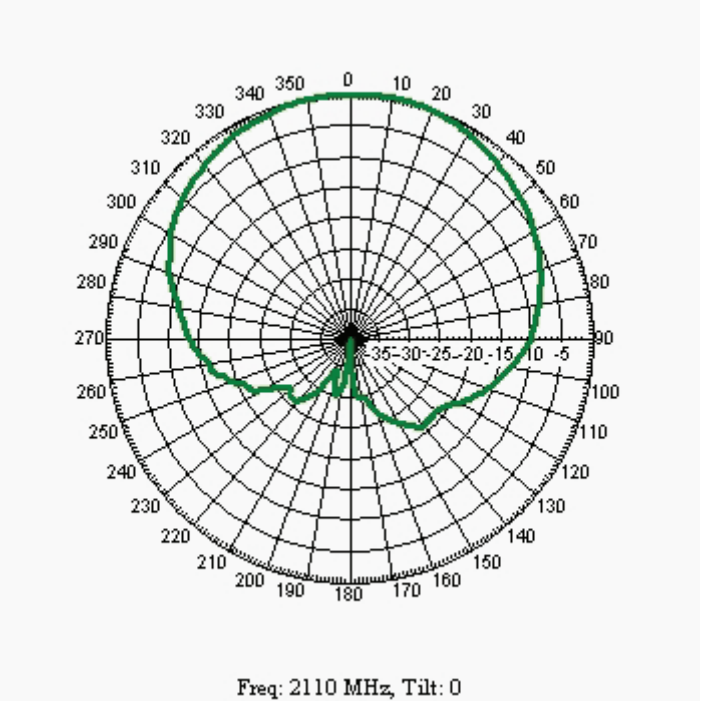

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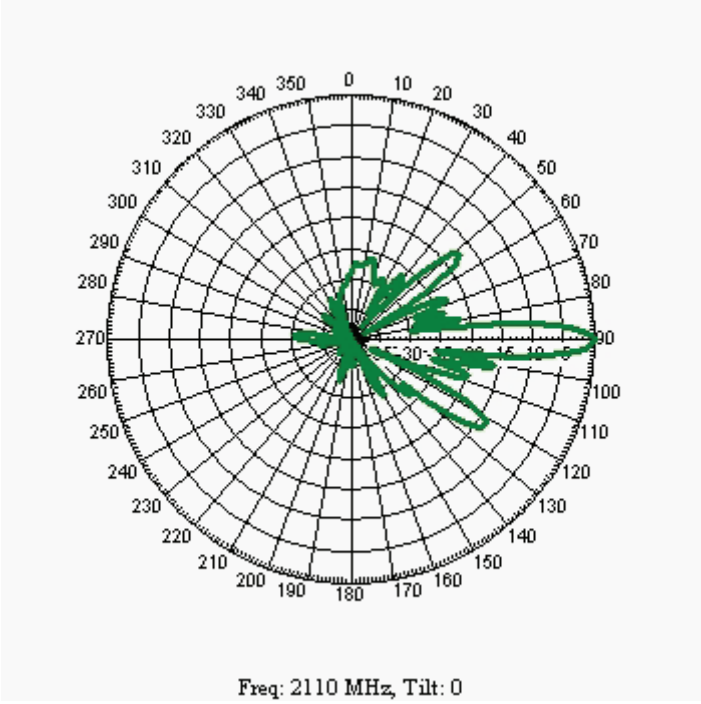

Freq: 2110 MHz, Tilt: 0

Product Specifications

ANDREW®
A CommScope Company

DBXNH-8585A-R2M

DualPol® Dual Band Antenna, 698–896 MHz and 1710–2180 MHz, 85° horizontal beamwidth, RET compatible variable electrical tilt

- Two DualPol® antennas under one radome
- Patented dipole technology
- Each antenna is independently capable of field adjustable electrical tilt
- Fully compatible with Andrew Teletilt® remote control system
- The RF connectors are IP67 rated and the radome is IP56 rated

CHARACTERISTICS

General Specifications

Antenna Type	DualPol® dual band
Brand	DualPol® | Teletilt®
Operating Frequency Band	1710 – 2180 MHz | 698 – 896 MHz

Electrical Specifications

Frequency Band, MHz	**698–806**	**806–896**	**870–960**	**1710–1880**	**1850–1990**	**1920–2180**
Beamwidth, Horizontal, degrees	89	85	86	85	85	85
Beamwidth, Horizontal Tolerance, degrees	±6	±6	±6	±6.5	±6.5	±6.5
Gain, dBd	10.3	11.1	11.4	14.0	13.7	13.8
Gain, dBi	12.4	13.2	13.5	16.1	15.8	15.9
Beamwidth, Vertical, degrees	18.0	16.5	15.5	7.3	7.0	6.5
Beam Tilt, degrees	0–15	0–15	0–15	0–10	0–10	0–10
Upper Sidelobe Suppression (USLS), typical, dB	18	18	20	18	17	17
Front-to-Back Ratio at 180°, dB	22	23	26	25	25	25
Cross Polarization Ratio (CPR) at Boresight, dB	12	12	12	12	12	12
Isolation, dB	30	30	30	30	30	30
Isolation, Intersystem, dB	40	40	40	35	35	35
VSWR | Return Loss, db	1.4:1 | 15.6	1.4:1 | 15.6	1.5:1 | 14.0	1.4:1 | 15.6	1.4:1 | 15.6	1.4:1 | 15.6
Intermodulation Products, 3rd Order, 2 x 20 W, dBc	-150	-150	-150	-150	-150	-150
Input Power, maximum, watts	500	500	500	300	300	300
Polarization	±45°	±45°	±45°	±45°	±45°	±45°
Impedance, ohms	50	50	50	50	50	50
Lightning Protection	dc Ground	dc Ground	dc Ground	dc Ground	dc Ground	dc Ground

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See www.commscope.com/andrew for the most current information.

Product Specifications

DBXNH-8585A-R2M

Mechanical Specifications

Color	Gray
Connector Interface	7-16 DIN Female
Connector Location	Bottom
Connector Quantity	4
Wind Loading, maximum	402.7 N @ 150 km/h 90.5 lbf @ 150 km/h
Wind Speed, maximum	241.0 km/h | 149.8 mph

Dimensions

Depth	181.0 mm | 7.1 in
Length	1310.0 mm | 51.6 in
Width	301.0 mm | 11.9 in
Net Weight	17.5 kg | 38.6 lb

Remote Electrical Tilt (RET) Information

RET System	Teletilt®

INCLUDED PRODUCTS

DB380
Pipe Mounting Kit for 2.4 - 4.5 in (60 - 115 mm) OD round members

DB5083
Downtilt Mounting Kit for 2.4 - 4.5 in (60 - 115 mm) OD round members

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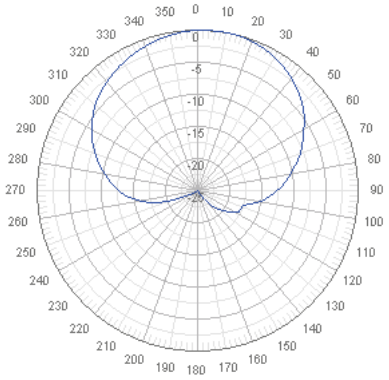
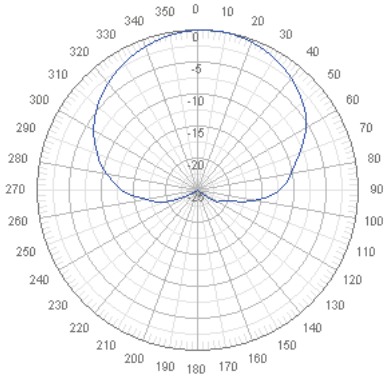
Product Specifications

DBXNH-8585A-R2M

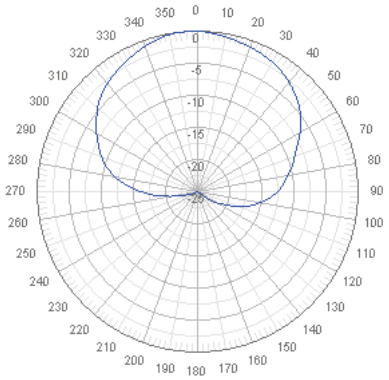
Horizontal Pattern



Freq: 750 MHz, Tilt: 0°

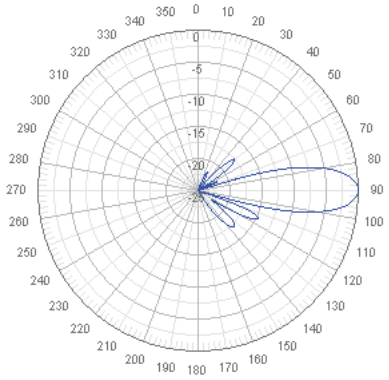


Freq: 850 MHz, Tilt: 0°

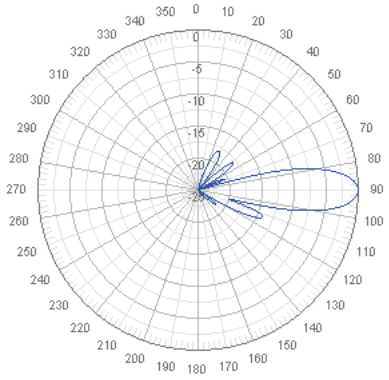


Freq: 1785 MHz, Tilt: 0°

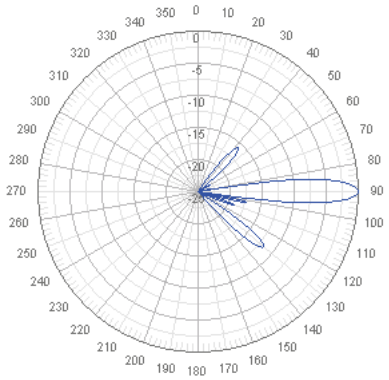
Vertical Pattern



Freq: 750 MHz, Tilt: 0°



Freq: 850 MHz, Tilt: 0°



Freq: 1785 MHz, Tilt: 0°

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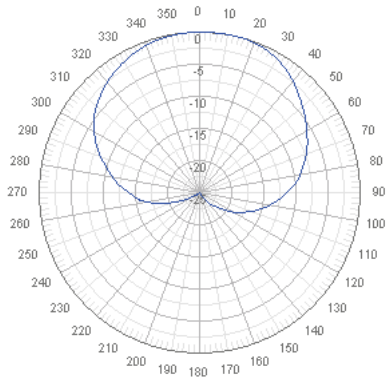
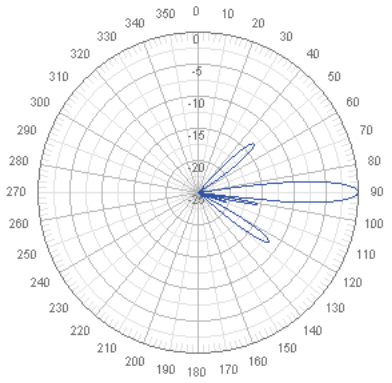
Product Specifications

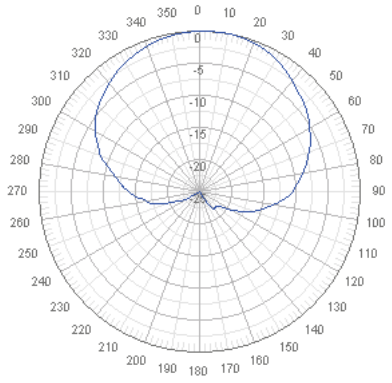
DBXNH-8585A-R2M



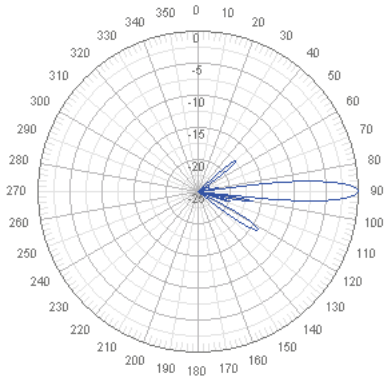
Freq: 1920 MHz, Tilt: 0°



Freq: 1920 MHz, Tilt: 0°



Freq: 2110 MHz, Tilt: 0°



Freq: 2110 MHz, Tilt: 0°

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Product Specifications

COMMSCOPE®

SBNH-1D6565B

Smartbeam® DualPol® Dual Band Teletilt® Antenna, 698–896 MHz and 1710–2180 MHz, 65° horizontal beamwidth, RET compatible

- Interleaved dipole technology providing for attractive, low wind load mechanical package
- Internal next generation actuator eliminates field installation and defines new standards for reliability

CHARACTERISTICS

General Specifications

Antenna Type	SmartBeam®
Brand	DualPol® | SmartBeam® | Teletilt®
Operating Frequency Band	1710 – 2180 MHz | 698 – 896 MHz

Electrical Specifications

Frequency Band, MHz	**698–806**	**806–896**	**1710–1880**	**1850–1990**	**1920–2180**
Beamwidth, Horizontal, degrees	70	67	59	57	65
Beamwidth, Horizontal Tolerance, degrees	±3	±8	±2	±4	±6
Gain, dBd	12.9	13.1	16.3	16.1	15.7
Gain, dBi	15.0	15.2	18.4	18.2	17.8
Beamwidth, Vertical, degrees	12.3	10.8	5.5	5.1	4.8
Beam Tilt, degrees	0–10	0–10	0–6	0–6	0–6
Upper Sidelobe Suppression (USLS), typical, dB	15	15	15	15	15
Front-to-Back Ratio at 180°, dB	25	27	34	35	32
Front-to-Back Total Power at 180° ± 20°, dB	20	20	28	28	25
Cross Polarization Ratio (CPR) at Boresight, dB	24	18	25	25	22
Cross Polarization Ratio (CPR) at Sector, dB	10	8	10	10	8
Isolation, dB	30	30	30	30	30
Isolation, Intersystem, dB	30	30	30	30	30
VSWR | Return Loss, db	1.5:1 | 14.0	1.5:1 | 14.0	1.5:1 | 14.0	1.5:1 | 14.0	1.5:1 | 14.0
Intermodulation Products, 3rd Order, 2 x 20 W, dBc	-150	-150	-150	-150	-150
Input Power, maximum, watts	400	400	300	300	300
Polarization	±45°	±45°	±45°	±45°	±45°
Impedance	50 ohm	50 ohm	50 ohm	50 ohm	50 ohm
Lightning Protection	dc Ground	dc Ground	dc Ground	dc Ground	dc Ground

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Product Specifications

SBNH-1D6565B

Mechanical Specifications

Color	Light gray
Connector Interface	7-16 DIN Female
Connector Location	Bottom
Connector Quantity	4
Radome Material	Fiberglass, UV resistant
Wind Loading, maximum	617.7 N @ 150 km/h 138.9 lbf @ 150 km/h
Wind Speed, maximum	241.0 km/h | 149.8 mph

Dimensions

Depth	181.0 mm | 7.1 in
Length	1847.0 mm | 72.7 in
Width	301.0 mm | 11.9 in
Net Weight	21.5 kg | 47.4 lb

Remote Electrical Tilt (RET) Information

Adjustment Time, full range, maximum	30 s
Annual Failure Rate, maximum	0.01%
Power Consumption, during motor movements, maximum	11.0 W
Power Consumption, idle state, maximum	2.0 W
Power Input	10–30 V
Protocol	3GPP/AISG 2.0 Multi-RET
RET Interface	RS-485 Male (input port, 1) | RS-485 Female (daisy chain port ,1)
RET System	Teletilt®

Regulatory Compliance/Certifications

Agency	Classification
RoHS 2002/95/EC	Compliant by Exemption
China RoHS SJ/T 11364-2006	Above Maximum Concentration Value (MCV)
ISO 9001:2008	Designed, manufactured and/or distributed under this quality management system

INCLUDED PRODUCTS

DB380

Pipe Mounting Kit for 2.4 - 4.5 in (60 - 115 mm) OD round members

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DB5083
Downtilt Mounting Kit for 2.4 - 4.5 in (60 - 115 mm) OD round members

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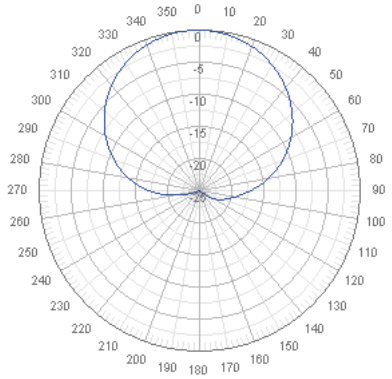
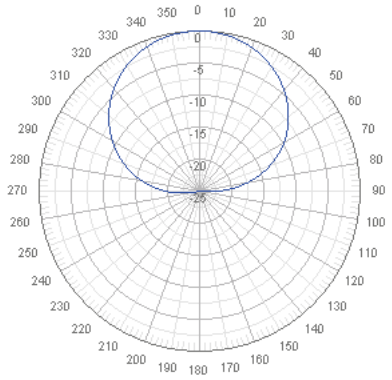
Product Specifications

SBNH-1D6565B

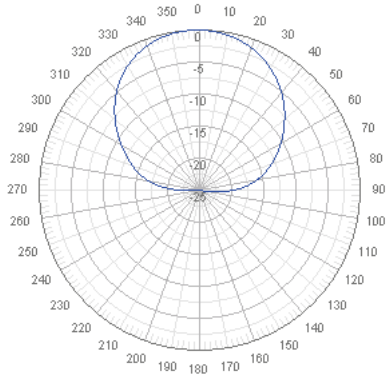
Horizontal Pattern



Freq: 725 MHz, Tilt: 0°

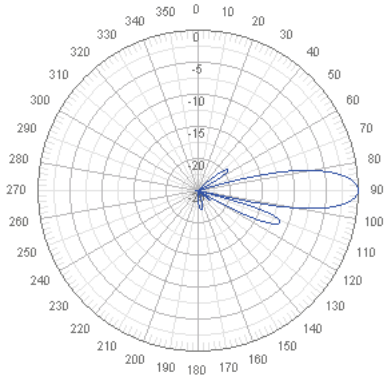


Freq: 850 MHz, Tilt: 0°

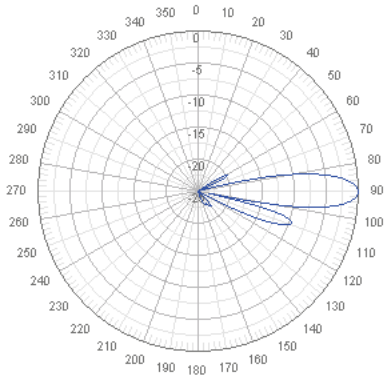


Freq: 1730 MHz, Tilt: 0°

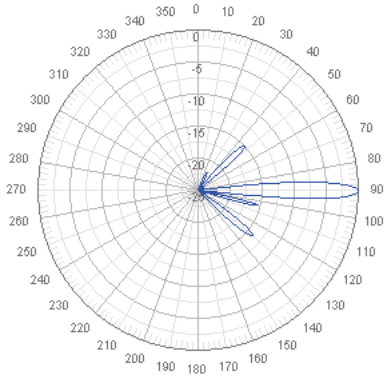
Vertical Pattern



Freq: 725 MHz, Tilt: 0°



Freq: 850 MHz, Tilt: 0°



Freq: 1730 MHz, Tilt: 0°

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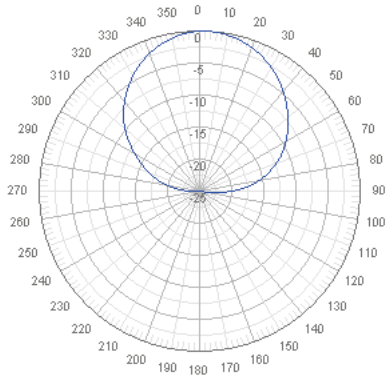
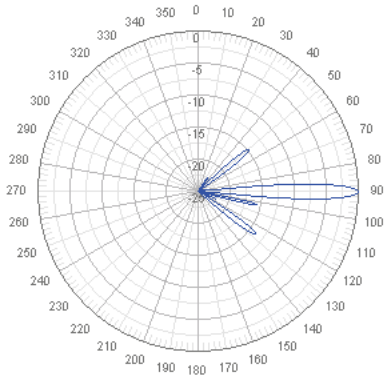
Product Specifications

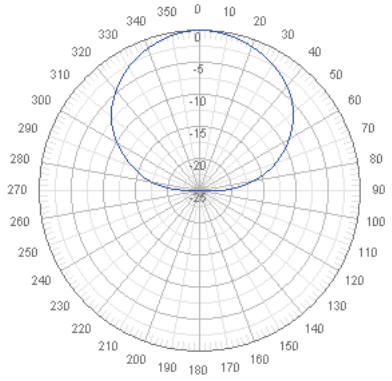
SBNH-1D6565B



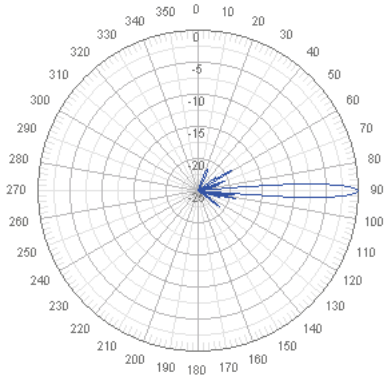
Freq: 1920 MHz, Tilt: 0°



Freq: 1920 MHz, Tilt: 0°



Freq: 2130 MHz, Tilt: 0°



Freq: 2130 MHz, Tilt: 0°

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Product Specifications

SBNH-1D6565C

Smartbeam® DualPol® Dual Band Teletilt® Antenna, 698–896 MHz and 1710–2180 MHz, 65° horizontal beamwidth, RET compatible

- Interleaved dipole technology providing for attractive, low wind load mechanical package
- Internal next generation actuator eliminates field installation and defines new standards for reliability

CHARACTERISTICS

General Specifications

Antenna Type	SmartBeam®
Brand	DualPol® | SmartBeam® | Teletilt®
Operating Frequency Band	1710 – 2180 MHz | 698 – 896 MHz

Electrical Specifications

Frequency Band, MHz	**698–806**	**806–896**	**1710–1880**	**1850–1990**	**1920–2180**
Beamwidth, Horizontal, degrees	71	67	58	57	59
Beamwidth, Horizontal Tolerance, degrees	±3	±6	±3	±3	±3
Gain, dBd	13.6	14.3	15.9	15.9	15.9
Gain, dBi	15.7	16.4	18.0	18.0	18.0
Beamwidth, Vertical, degrees	8.6	7.8	5.5	5.1	4.8
Beam Tilt, degrees	0–11	0–11	0–7	0–7	0–7
Upper Sidelobe Suppression (USLS), typical, dB	15	15	16	16	16
Front-to-Back Ratio at 180°, dB	25	28	34	31	31
Front-to-Back Total Power at 180° ± 20°, dB	21	22	30	27	26
Cross Polarization Ratio (CPR) at Boresight, dB	24	21	17	17	17
Cross Polarization Ratio (CPR) at Sector, dB	11	8	9	8	9
Isolation, dB	30	30	30	30	30
Isolation, Intersystem, dB	35	35	35	35	35
VSWR | Return Loss, db	1.5:1 | 14.0	1.5:1 | 14.0	1.5:1 | 14.0	1.5:1 | 14.0	1.5:1 | 14.0
Intermodulation Products, 3rd Order, 2 x 20 W, dBc	-150	-150	-150	-150	-150
Input Power, maximum, watts	400	400	300	300	300
Polarization	±45°	±45°	±45°	±45°	±45°
Impedance	50 ohm	50 ohm	50 ohm	50 ohm	50 ohm
Lightning Protection	dc Ground	dc Ground	dc Ground	dc Ground	dc Ground

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Product Specifications

SBNH-1D6565C

Mechanical Specifications

Color	Light gray
Connector Interface	7-16 DIN Female
Connector Location	Bottom
Connector Quantity	4
Radome Material	Fiberglass, UV resistant
Wind Loading, maximum	879.0 N @ 150 km/h 197.6 lbf @ 150 km/h
Wind Speed, maximum	241.0 km/h | 149.8 mph

Dimensions

Depth	181.0 mm | 7.1 in
Length	2449.0 mm | 96.4 in
Width	301.0 mm | 11.9 in
Net Weight	27.6 kg | 60.8 lb

Remote Electrical Tilt (RET) Information

Adjustment Time, full range, maximum	30 s
Annual Failure Rate, maximum	0.01%
Power Consumption, during motor movements, maximum	11.0 W
Power Consumption, idle state, maximum	2.0 W
Power Input	10–30 V
Protocol	3GPP/AISG 2.0 Multi-RET
RET Interface	RS-485 Male (input port, 1) | RS-485 Female (daisy chain port ,1)
RET System	Teletilt®

Regulatory Compliance/Certifications

Agency	Classification
RoHS 2002/95/EC	Compliant by Exemption
China RoHS SJ/T 11364-2006	Above Maximum Concentration Value (MCV)

INCLUDED PRODUCTS

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DB380
Pipe Mounting Kit for 2.4 - 4.5 in (60 - 115 mm) OD round members

DB5083
Downtilt Mounting Kit for 2.4 - 4.5 in (60 - 115 mm) OD round members

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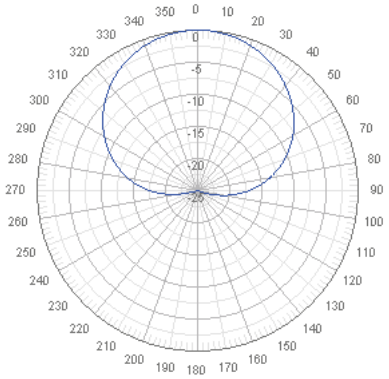
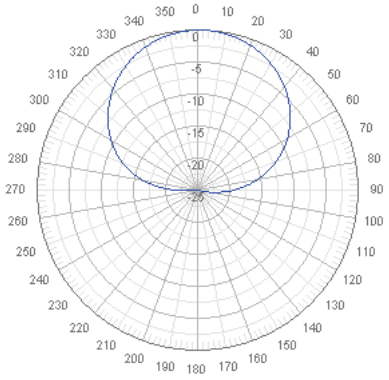
Product Specifications

SBNH-1D6565C

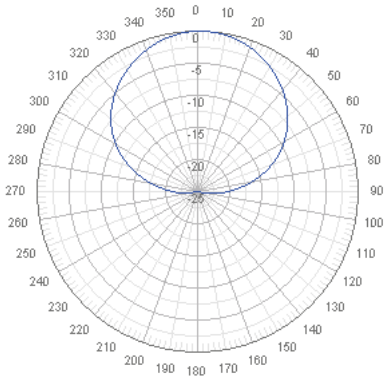
Horizontal Pattern



Freq: 725 MHz, Tilt: 0°

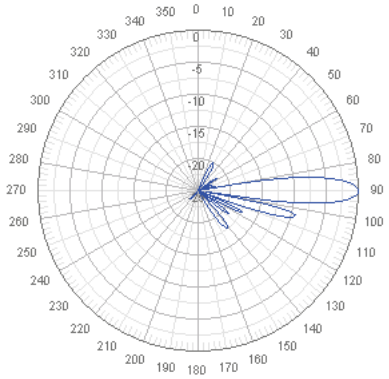


Freq: 850 MHz, Tilt: 0°

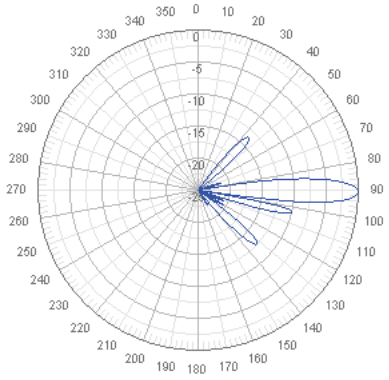


Freq: 1730 MHz, Tilt: 0°

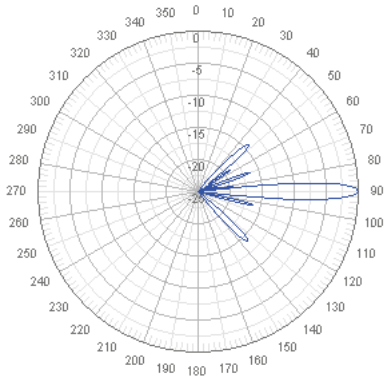
Vertical Pattern



Freq: 725 MHz, Tilt: 0°



Freq: 850 MHz, Tilt: 0°



Freq: 1730 MHz, Tilt: 0°

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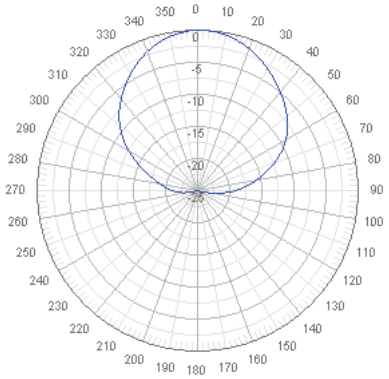
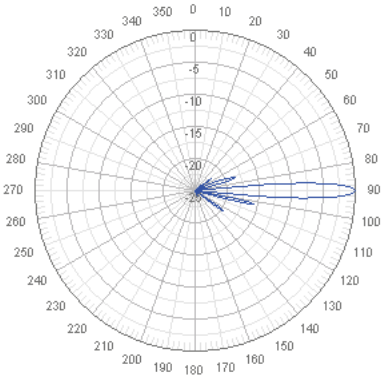
Product Specifications

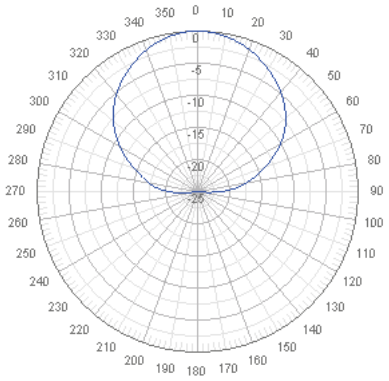
SBNH-1D6565C



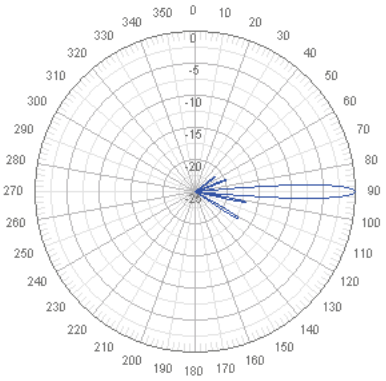
Freq: 1920 MHz, Tilt: 0°



Freq: 1920 MHz, Tilt: 0°



Freq: 2130 MHz, Tilt: 0°



Freq: 2130 MHz, Tilt: 0°

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Product Specifications

COMMSCOPE®

on the go

Andrew Solutions

SBNH-1D8585B

DualPol® Dual Band Teletilt® Antenna, 698–896 and 1710–2180 MHz, 85° horizontal beamwidth, RET compatible

- Patented dipole technology
- Internal next generation actuator eliminates field installation and defines new standards for reliability

Electrical Specifications

Frequency Band, MHz	**698–806**	**806–896**	**1710–1880**	**1850–1990**	**1920–2180**
Gain, dBi	13.9	14.4	16.8	16.9	17.3
Beamwidth, Horizontal, degrees	90	89	85	83	85
Beamwidth, Vertical, degrees	12.5	10.8	5.2	4.7	4.4
Beam Tilt, degrees	0–10	0–10	0–6	0–6	0–6
USLS, typical, dB	15	15	16	17	18
Front-to-Back Ratio at 180°, dB	25	25	27	28	28
Front-to-Back Total Power at 180° ± 20°, dB	19	19	24	24	24
CPR at Boresight, dB	23	22	20	21	20
CPR at Sector, dB	13	14	8	9	9
Isolation, dB	30	30	30	30	30
Isolation, Intersystem, dB	30	30	30	30	30
VSWR | Return Loss, dB	1.5:1 | 14.0	1.5:1 | 14.0	1.5:1 | 14.0	1.5:1 | 14.0	1.5:1 | 14.0
PIM, 3rd Order, 2 x 20 W, dBc	-150	-150	-150	-150	-150
Input Power per Port, maximum, watts	400	400	300	300	300
Polarization	±45°	±45°	±45°	±45°	±45°
Impedance	50 ohm	50 ohm	50 ohm	50 ohm	50 ohm
Lightning Protection	dc Ground	dc Ground	dc Ground	dc Ground	dc Ground

Mechanical Specifications

Color | Radome Material	Light gray | Fiberglass, UV resistant
Connector Interface | Location | Quantity	7-16 DIN Female | Bottom | 4
Wind Loading, maximum	618.5 N @ 150 km/h 139.0 lbf @ 150 km/h
Wind Speed, maximum	241.0 km/h | 149.8 mph

Dimensions

Depth	181.0 mm | 7.1 in
Length	1849.00 mm | 72.80 in
Width	301.00 mm | 11.85 in
Net Weight	20.40 kg | 44.97 lb

Remote Electrical Tilt (RET) Information

Adjustment Time, full range, maximum	30 s
Annual Failure Rate, maximum	0.01%
Power Consumption, during motor movements, maximum	11.0 W
Power Consumption, idle state, maximum	2.0 W
Power Input	10–30 V

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Protocol	3GPP/AISG 2.0 Multi-RET
RET Interface	RS-485 Female (daisy chain port ,1) | RS-485 Male (input port, 1)

Regulatory Compliance/Certifications

Agency	Classification
RoHS 2002/95/EC	Compliant by Exemption
China RoHS SJ/T 11364-2006	Above Maximum Concentration Value (MCV)

Included Products

DB380 — Pipe Mounting Kit for 2.4"-4.5" (60-115mm) OD round members on wide panel antennas. Includes 2 clamp sets.

DB5083 — Downtilt Mounting Kit for 2.4"-4.5" (60 - 115 mm) OD round members. Includes a heavy-duty, galvanized steel downtilt mounting bracket assembly and associated hardware. This kit is compatible with the DB380 pipe mount kit for panel antennas that are equipped with two mounting brackets.

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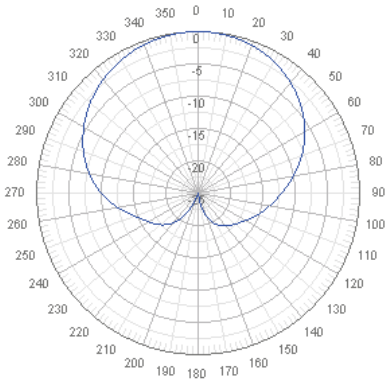
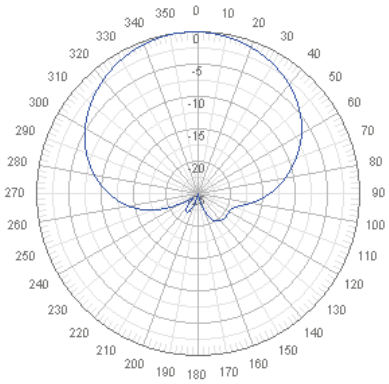
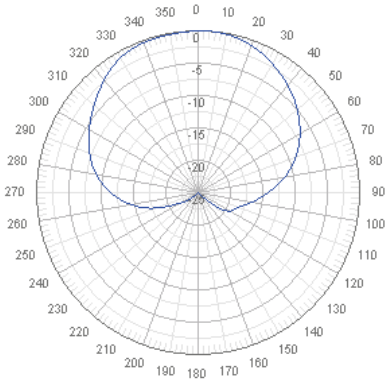
Horizontal Pattern



Freq: 725*

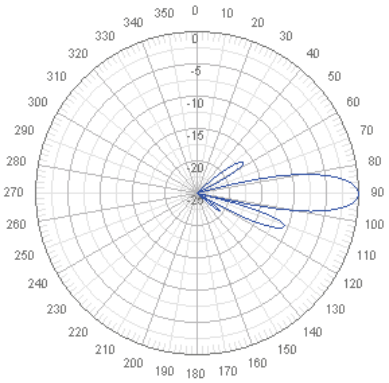


Freq: 850*



Freq: 1880*

Vertical Pattern



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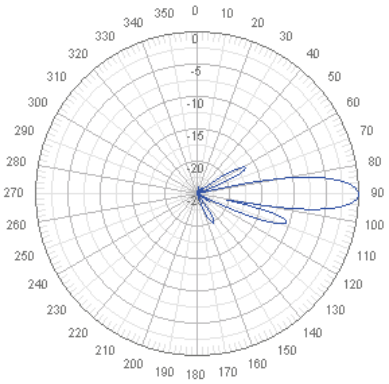

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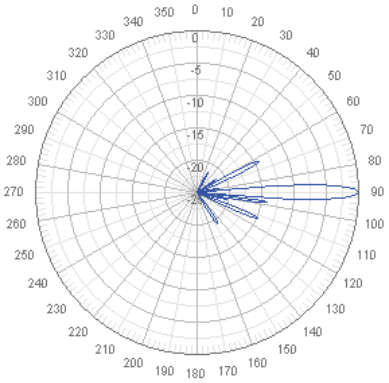

Freq: 1880*

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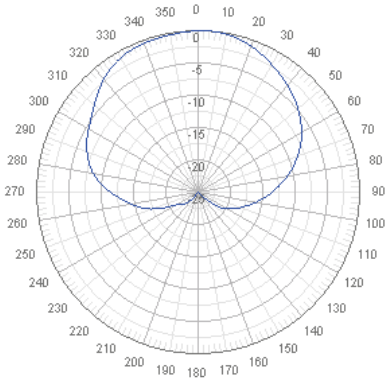
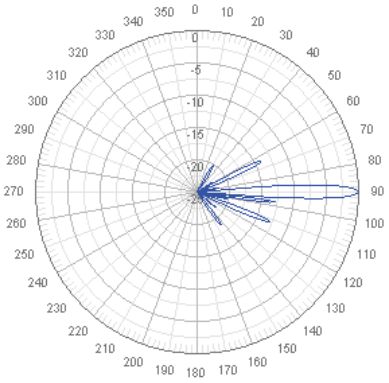
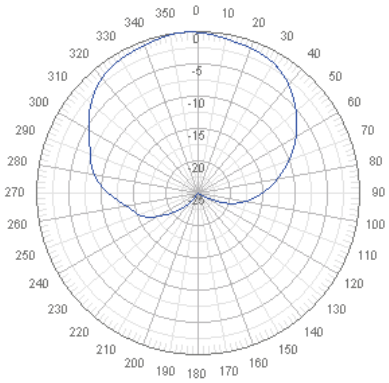
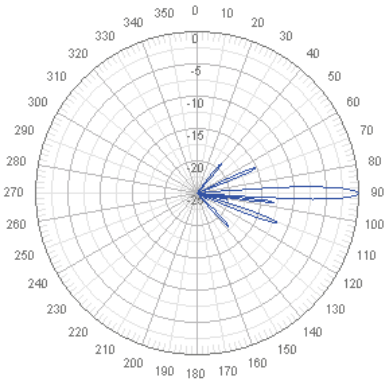
SBNH-1D8585B









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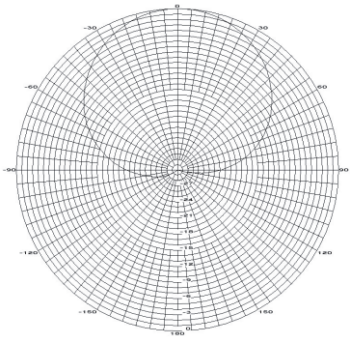
XEA-165

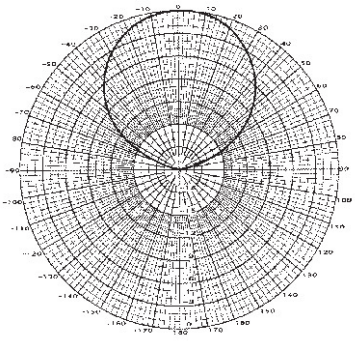
Dual Band Xpol, 65° H-Beams

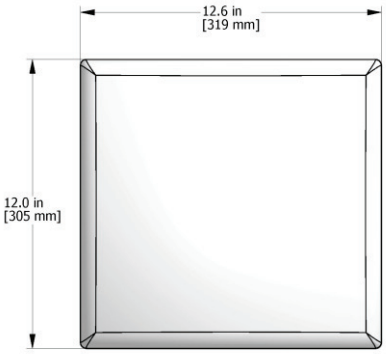
698-945 MHz
1710-2170 MHz

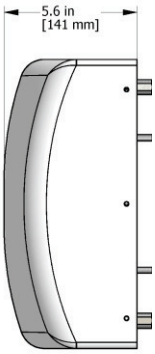
Frequency	698-824 MHz	824-945 MHz	1710-1880 MHz	1850-1910 MHz	1900-2170 MHz
Polarization	+/- 45º	+/- 45º	+/- 45º	+/- 45º	+/- 45º
Gain	8.5 dBi	9.1 dBi	11.6 dBi	11.8 dBi	11.9 dBi
Horizontal Beam (3dB pts)	66º	63º	65º	65º	60º
Vertical Beam (3dB pts)	68º	65º	30º	28º	25º
Front-to-Back (Copolar)	27 dB	27 dB	30º	30º	30º
Sidelobe Suppression for 1st lobe above main beam	N/A	N/A	12.0 dB	12.0 dB	11.0 dB
Electrical Downtilt	0º		0º		
VSWR / Return Loss	1.70:1 / 11.7 dB		1.70:1 / 11.7 dB		
Impedance	50 Ohms		50 Ohms		
Max. Power Per Connector	250 CW at 800 MHz		125 CW at 1900 MHz		
Isolation between ports	<-25 dB				
Intermodulation (2x20W)	<-150 dBc				

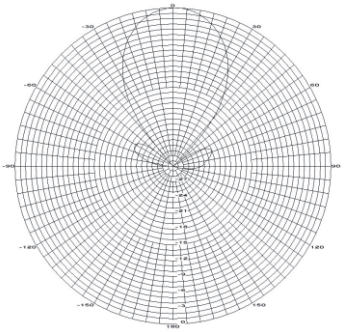
Input Connector (female)	2 or 4 DIN or Type N, Back	Wind Survival	120 mph
Dimensions (LxWxD)	12.0 x 12.6 x 5.6 in. (305 x 319 x 141 mm)	Front Wind Load @100mph	25.3 lbf
*Antenna Weight	5.6 lbs	Equivalent Flat Plate @100mph	0.5 sq-ft. (c=2)
Bracket Weight	5.0 lbs	Mounting Brackets	Wall or Pole "Stadium",919050
		Mechanical Downtilt Range	+/- 35º Lateral & +/- 55º Vertical
		Clamps/Bolts	Stainless Steel/Stainless Steel





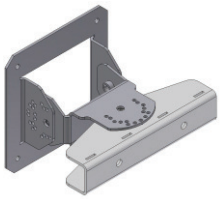






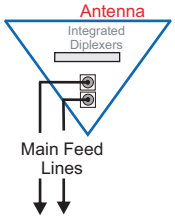
Link to Mechanical Drawing

Recommended Connector Coupling Torque
7/16 DIN: 220-265 lbf-in (25-30 N-m)
Type N: 12-15 lbf-in (1.4-1.7 N-m)



"Stadium Bracket"
Azimuth & Mechanical
Tilt Adjustment

Available with Integrated Diplexers to reduce mainline cables and eliminate separate external devices



Ordering Information & Options

XEA-165-00	X-Pol dual band, 0 deg EDT both bands with four DIN connectors.
XEA-165-00-ip	X-Pol dual band, 0 deg EDT both bands with two DIN connectors and integrated diplexers.
XEA-165-00-N	X-Pol dual band, 0 deg EDT both bands with four N connectors.
XEA-165-00-ipN	X-Pol dual band, 0 deg EDT both bands with two N connectors and integrated diplexers.

*Antenna Weight may vary slightly with options.

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Subject to alteration.

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