

# SBNHH-1D45B



6-port sector antenna, 2x 698–896 and 4x 1695–2360 MHz, 45° HPBW, 3x RET

- Interleaved dipole technology providing for attractive, low wind load mechanical package
- Three internal RETs for independent tilt on all three bands
- The antenna is supplied with mounting kits that provide 0 degree of mechanical downtilt; optional downtilt mounting kits are available

## General Specifications

<b>Antenna Type</b>	Sector
<b>Band</b>	Multiband
<b>Color</b>	Light Gray (RAL 7035)
<b>Grounding Type</b>	RF connector inner conductor and body grounded to reflector and mounting bracket
<b>Performance Note</b>	Outdoor usage   Wind loading figures are validated by wind tunnel measurements described in white paper WP-112534-EN
<b>Radome Material</b>	Fiberglass, UV resistant
<b>Radiator Material</b>	Aluminum   Low loss circuit board
<b>Reflector Material</b>	Aluminum
<b>RF Connector Interface</b>	7-16 DIN Female
<b>RF Connector Location</b>	Bottom
<b>RF Connector Quantity, high band</b>	4
<b>RF Connector Quantity, low band</b>	2
<b>RF Connector Quantity, total</b>	6

## Remote Electrical Tilt (RET) Information

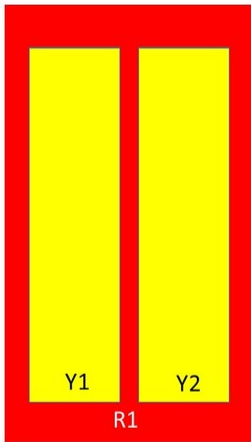
<b>RET Interface</b>	8-pin DIN Female   8-pin DIN Male
<b>RET Interface, quantity</b>	1 female   1 male
<b>Input Voltage</b>	10–30 Vdc
<b>Internal RET</b>	High band (2)   Low band (1)
<b>Power Consumption, idle state, maximum</b>	2 W
<b>Power Consumption, normal conditions, maximum</b>	13 W
<b>Protocol</b>	3GPP/AISG 2.0 (Multi-RET)

# SBNHH-1D45B

## Dimensions

<b>Width</b>	457 mm   17.992 in
<b>Depth</b>	178 mm   7.008 in
<b>Length</b>	1829 mm   72.008 in
<b>Net Weight, without mounting kit</b>	29.2 kg   64.375 lb

## Array Layout



Array	Freq (MHz)	Conns	RET (MRET)	AISG RET UID
R1	698-896	1-2	1	ARxxxxxxxxxxxxxxxxxx.1
Y1	1695-2360	3-4	2	ARxxxxxxxxxxxxxxxxxx.2
Y2	1695-2360	5-6	3	ARxxxxxxxxxxxxxxxxxx.3

Left Bottom Right

(Sizes of colored boxes are not true depictions of array sizes)

## Electrical Specifications

<b>Impedance</b>	50 ohm
<b>Operating Frequency Band</b>	1695 – 2360 MHz   698 – 896 MHz
<b>Polarization</b>	±45°

## Electrical Specifications

Frequency Band, MHz	698–806	806–896	1695–1880	1850–1990	1920–2200	2300–2360
<b>Gain, dBi</b>	16.9	17.6	19.6	20.1	20.5	21
<b>Beamwidth, Horizontal, degrees</b>	47	43	45	42	42	39
<b>Beamwidth, Vertical, degrees</b>	12.4	11.4	5.8	5.3	5.1	4.5
<b>Beam Tilt, degrees</b>	0–14	0–14	0–8	0–8	0–8	0–8
<b>USLS (First Lobe), dB</b>	16	16	18	17	17	16
<b>Front-to-Back Ratio at 180°,</b>	34	33	35	37	37	39

# SBNHH-1D45B

dB

<b>Isolation, Cross Polarization, dB</b>	25	25	25	25	25	25
<b>Isolation, Inter-band, dB</b>	30	30	30	30	30	30
<b>VSWR   Return loss, dB</b>	1.5 14.0	1.5 14.0	1.5 14.0	1.5 14.0	1.5 14.0	1.5 14.0
<b>PIM, 3rd Order, 2 x 20 W, dBc</b>	-153	-153	-153	-153	-153	-153
<b>Input Power per Port, maximum, watts</b>	350	350	350	350	350	300

## Electrical Specifications, BASTA

<b>Frequency Band, MHz</b>	<b>698–806</b>	<b>806–896</b>	<b>1695–1880</b>	<b>1850–1990</b>	<b>1920–2200</b>	<b>2300–2360</b>
<b>Gain by all Beam Tilts, average, dBi</b>	16.6	17.3	19.2	19.8	20.1	20.8
<b>Gain by all Beam Tilts Tolerance, dB</b>	±0.4	±0.3	±0.5	±0.4	±0.5	±0.4
<b>Gain by Beam Tilt, average, dBi</b>	0° 16.6 7° 16.7 14° 16.4	0° 17.3 7° 17.4 14° 17.1	0° 19.3 4° 19.3 8° 19.0	0° 19.9 4° 19.9 8° 19.6	0° 20.1 4° 20.2 8° 20.0	0° 20.7 4° 20.9 8° 20.4
<b>Beamwidth, Horizontal Tolerance, degrees</b>	±1.5	±2.8	±2.1	±1.7	±1	±1.7
<b>Beamwidth, Vertical Tolerance, degrees</b>	±0.8	±0.6	±0.3	±0.2	±0.4	±0.1
<b>USLS, beampeak to 20° above beampeak, dB</b>	19	23	16	15	16	16
<b>Front-to-Back Total Power at 180° ± 30°, dB</b>	24	24	28	30	31	30
<b>CPR at Boresight, dB</b>	28	29	23	24	20	19
<b>CPR at 10 dB Horizontal Beamwidth, dB</b>	13	17	13	13	13	13

## Mechanical Specifications

<b>Effective Projective Area (EPA), frontal</b>	1 m <sup>2</sup>   10.764 ft <sup>2</sup>
<b>Effective Projective Area (EPA), lateral</b>	0.21 m <sup>2</sup>   2.26 ft <sup>2</sup>
<b>Mechanical Tilt Range</b>	0°–13°
<b>Wind Loading @ Velocity, frontal</b>	1,065.0 N @ 150 km/h (239.4 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, lateral</b>	220.0 N @ 150 km/h (49.5 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, maximum</b>	1,065.0 N @ 150 km/h (239.4 lbf @ 150 km/h)
<b>Wind Loading @ Velocity, rear</b>	935.0 N @ 150 km/h (210.2 lbf @ 150 km/h)
<b>Wind Speed, maximum</b>	241 km/h (150 mph)

# SBNHH-1D45B

---

## Packaging and Weights

<b>Width, packed</b>	567 mm   22.323 in
<b>Depth, packed</b>	311 mm   12.244 in
<b>Length, packed</b>	1950 mm   76.772 in
<b>Weight, gross</b>	40.1 kg   88.405 lb

## Regulatory Compliance/Certifications

<b>Agency</b>	<b>Classification</b>
CE	Compliant with the relevant CE product directives
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system



## Included Products

BSAMNT-2F	-	Mounting bracket for cylindrical pipe installations (60-115mm pipe diameter) for fix mechanical tilt applications.
-----------	---	--

## \* Footnotes

<b>Performance Note</b>	Severe environmental conditions may degrade optimum performance
-------------------------	---