



# KBT 28 Ports 2L4H+8T8R(2327)+8T8R(3338) BF 2.5m Antenna

## KB65D90D75D0738A28-17D19F15F17F-I-W

Electrical Specifications					
Frequency Range (MHz)		2 x (690 – 960) (R1, R2)			
		690-792	792-880	880-960	
Polarization		±45			
Electrical Downtilt (°)		2-12, Independently continuously adjustable			
Gain (dBi)	at mid Tilt	15.9	16.2	16.6	
	over all Tilts	15.8±0.8	16.1±0.8	16.5±0.8	
Side lobe suppression for first side lobe above main beam (dB)		>15	>15	>15	
Horizontal 3dB Beam Width (°)		70±8	65±8	65±8	
Vertical 3dB Beam Width (°)		9.1±0.7	8.0±0.6	7.4±0.6	
Cross-Polar Ratio, 0° (dB)		>18	>18	>18	
Front to Back Ratio, ±30° (dB)		>21	>22	>22	
Frequency Range (MHz)		4 x (1710 –2690) (Y1, Y2, Y3, Y4)			
		1710-1880	1920-2170	2200-2500	2500-2690
Polarization		±45			
Electrical Downtilt (°)		2-12, Independently continuously adjustable			
Gain (dBi)	at mid Tilt	16.6	17.1	17.6	18.3
	over all Tilts	16.5±0.8	17.0±0.8	17.5±0.8	18.2±0.9
Side lobe suppression for first side lobe above main beam (dB)		>16	>16	>16	>15
Horizontal 3dB Beam Width (°)		67±8	65±8	58±8	53±8
Vertical 3dB Beam Width (°)		7.2±0.6	6.6±0.8	5.5±0.6	5.1±0.5
Cross-Polar Ratio, 0° (dB)		>18	>18	>18	>18
Front to Back Ratio, ±30° (dB)		>22	>25	>24	>24
VSWR		≤1.5			
Intermodulation IM3 (dBc)		≤-150 (2 x 43 dBm carrier)			
Cross Polar Isolation (dB)		≥25 (R1, R2); ≥27 (Y1, Y2, Y3, Y4);			
Interband isolation (dB)		≥25			
Max. power per port (W)		250 (R1, R2); 200 (Y1, Y2, Y3, Y4)			
Impedance (Ω)		50			
Grounding		DC Grounding			
Values based on NGMN recommendations on Base Station Antenna Standards V12.0 (BASTA V12.0)					

Add: No.30 Dongyang 3rd Road, Danzao Town, Nanhai District, Foshan City, Guangdong, China 528216

Tel: +86-757-88022860

Email: kbt@kenbotong.com

Web: <http://www.kenbotong.com>



# KBT 28 Ports 2L4H+8T8R(2327)+8T8R(3338) BF 2.5m Antenna

## General Electrical Properties

General parameters	Frequency Range (MHz)	2300-2690 (Y5)	3300-3800 (P1)
	Polarization	±45	
	Electrical Downtilt(°)	2-12, continuously adjustable	
	Electrical Downtilt tolerance (°)	±1	
	Max. power per port (W)	50 (at 50°C ambient temperature)	
	Impedance (Ω)	50	
	Grounding	DC Grounding	
Calibration and electrical parameters	Coupling factor between calibration port and each antenna port (dB)	-26±2	-26±2
	Max. amplitude tolerance from calibration port to input ports (dB)	0.8	0.9
	Max. phase tolerance from calibration port to input ports (°)	6	7
	VSWR	≤1.5	≤1.5
	Co-polarization isolation between ports (dB)	≥20	≥20
	Cross-polarization isolation between ports (dB)	≥23	≥23

## TDD LTE Electrical Specifications

Radiation parameters	Frequency Range (MHz)		2300-2690 (Y5)	3300-3800 (P1)
	Single column beam	Gain (dBi)	15.0±1	16.5±1
		Horizontal 3dB Beam Width(°)	90±15	75±15
		Front to Back Ratio (dB)	>24	>23
		Cross-Polar Ratio, 0° (dB)	>16	>16
		Vertical 3dB Beam Width (°)	8.3±0.8	5.8±0.6
		Vertical sidelobe suppression for first sidelobe above main beam (dB)	>16	>16
	65° Broadcast beam	Gain (dBi)	16.0±0.8	17.0±1
		Horizontal 3dB Beam Width(°)	63±9	58±15
		Front to Back Ratio (dB)	>25	>23
		Vertical 3dB Beam Width (°)	8.4±0.8	5.9±0.6
		Side lobe suppression for first side lobe above main beam (dB)	>16	>16
	Service beam	0° direction Beam Gain (dBi)	20.0±0.8	21.0±1
		0° direction Beam Horizontal 3dB Beam Width (°)	26	20
		0° direction Beam Front to Back Ratio, ±30° (dB)	>29	>28
		0° direction Beam Cross-Polar Ratio, 0° (dB)	>18	>18

Add: No.30 Dongyang 3rd Road, Danzao Town, Nanhai District, Foshan City, Guangdong, China 528216

Tel: +86-757-88022860

Email: kbt@kenbotong.com

Web: <http://www.kenbotong.com>



# KBT 28 Ports 2L4H+8T8R(2327)+8T8R(3338) BF 2.5m Antenna

5G NR Electrical Properties				
Radiation parameters	Frequency Range (MHz)		2300-2690 (Y5)	3300-3800 (P1)
	Single column beam	Gain (dBi)	15.0±1	16.5±1
		Horizontal 3dB Beam Width(°)	90±15	75±15
		Front to Back Ratio (dB)	>24	>23
		Cross-Polar Ratio, 0° (dB)	>16	>12
		Vertical 3dB Beam Width(°)	8.3±0.8	5.8±0.6
		Side lobe suppression for first side lobe above main beam (dB)	>18	>18
	NR Broadcast beam	Gain (dBi)	19.9±0.8	21.7±0.8
		Horizontal 3dB Beam Width (°)	65	65
		Front to Back Ratio (dB)	>25	>25
		Vertical 3dB Beam Width (°)	8.4±0.8	5.9±0.6
		Side lobe suppression for first side lobe above main beam (dB)	>16	>16
	NR Service beam	0° direction Beam Gain (dBi)	20.0±0.8	21.0±1
		0° direction Beam Horizontal 3dB Beam Width (°)	26	20
		0° direction Beam Front to Back Ratio, ±30° (dB)	>29	>28
		0° direction Beam Cross-Polar Ratio, 0° (dB)	>18	>18

Mechanical Specifications	
RET type	Integrated RET (AISG2.0/3GPP)
AISG Connectors (2 in 2 out)	4 x 8 pin (in: Male; out: Female)
Connector	12 x 4.3-10 Female, 2 x (MQ4 + MQ5), Bottom
Antenna dimensions (H x W x D) (mm)	2600 × 495 × 185
Packing dimensions (H x W x D) (mm)	2900 × 610 × 310
Antenna weight (kg)	48.5
Clamps weight (kg)	6.8
Diameter of installation pole (mm)	φ50-φ125
Radome material	Fiberglass
Radome color	Light grey
Operational temperature (°C)	-40 to +60
Wind load at 42m/s (N)	1676/ 584/ 1671 (Frontal/ Lateral/ Rearal)
Max. operational wind speed (km/h)	200

Add: No.30 Dongyang 3rd Road, Danzao Town, Nanhai District, Foshan City, Guangdong, China 528216

Tel: +86-757-88022860

Email: kbt@kenbotong.com

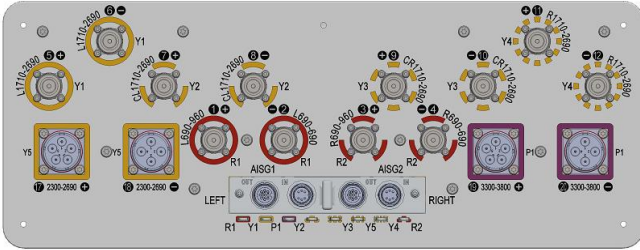
Web: <http://www.kenbotong.com>



# KBT 28 Ports 2L4H+8T8R(2327)+8T8R(3338) BF 2.5m Antenna

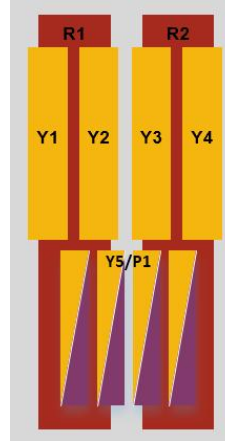
## Layout and Pattern

### Connector Position:



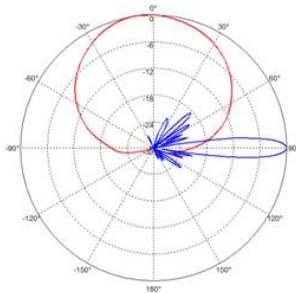
R1/ R2: 690-960 MHz;  
 Y1/ Y2/ Y3/ Y4: 1710-2690 MHz;  
 Y5: 2300-2690 MHz;  
 P1: 3300-3800 MHz;

### Configuration Types:

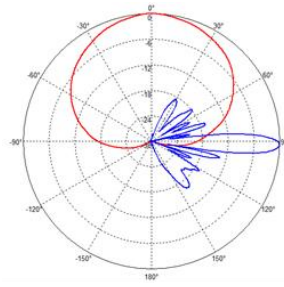


RET S/N:  
 KBxxx-R1-xx.....;  
 KBxxx-R2-xx.....;  
 KBxxx-Y1-xx.....;  
 KBxxx-Y2-xx.....;  
 KBxxx-Y3-xx.....;  
 KBxxx-Y4-xx.....;  
 KBxxx-Y5-xx.....;  
 KBxxx-P1-xx.....;

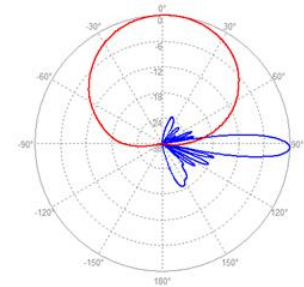
### Pattern sample for reference:



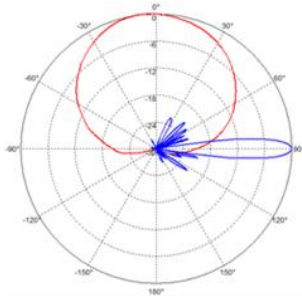
R1/ R2: 690-960 MHz



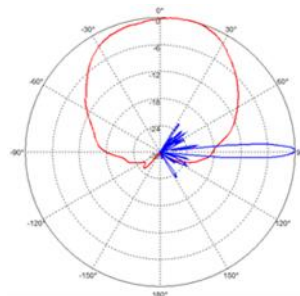
Y1/ Y4: 1710-2690 MHz



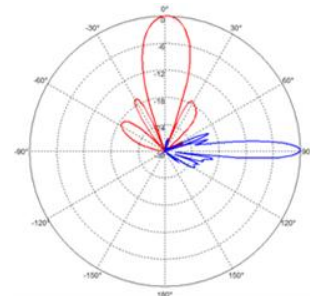
Y2/ Y3: 1710-2690 MHz



Single column  
Y5: 2300-2690 MHz



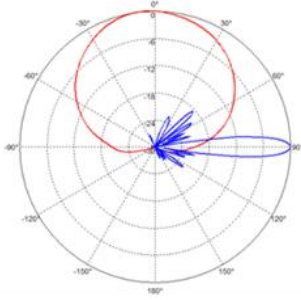
65° Broadcast  
Y5: 2300-2690 MHz



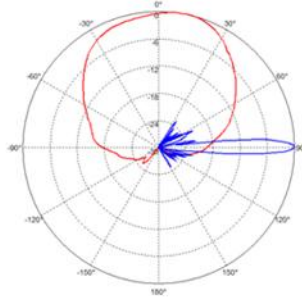
Service Beam (0°)  
Y5: 2300-2690 MHz



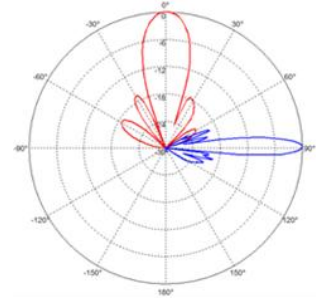
# **KBT** 28 Ports 2L4H+8T8R(2327)+8T8R(3338) BF 2.5m Antenna



Single column  
P1: 3300-3800 MHz



65° Broadcast  
P1: 3300-3800 MHz



Service Beam (0°)  
P1: 3300-3800 MHz