

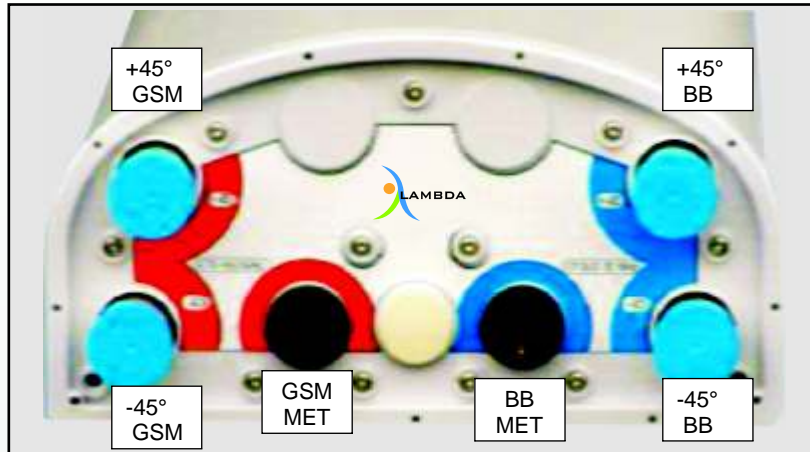
800 - 2500 MHz  
Base Station Antennas  
For Mobile Networks  
(Mono/ Dual Band/ Triple Band)



# Lambda Tel eventure

## Dual Band GSM/High Band Broad Band (BB) Independent Variable Electrical Tilt

870 - 960 MHz/1710 - 2170 MHz, 2° - 10°, 2650 mm height



### Electrical Specifications

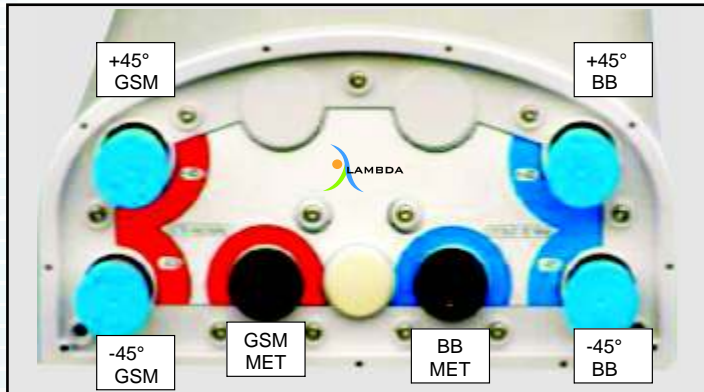
	870-960 MHz	1710 - 2170 MHz
Polarisation	± 45° Slant	± 45° Slant
-3dB Horizontal Plane	65°	66°
-3dB Vertical Plane	6.9°	6.0°
Gain (dBi)	17.2	17.9
Upper Sidelobe Level (0° to +30°)	< -18 dB	< -18 dB
Front to Back Ratio (180°± 30°)	> 25 dB	> 25 dB
Cross Polarization Level (0°± 30°)	> 15 dB	> 15 dB
Isolation	> 30 dB	> 30 dB
V.S.W.R. (50 )	< 1.5	< 1.5
Intermodulation (2 x 20 W carriers)	< -150 dBc (1m3)	< -150 dBc (1m3) < -160 dBc (IM7)
Variable Tilt	2° - 10°	2° - 10°
Maximum CW Pnput Power	500 W	500 W

### Mechanical specifications

Dimensions (L/W/D)	2650 x 276 x 143 mm
Connectors	2 x 7/16 DIN
Weight	29 Kg
Mounting Pole Diameter	50 to 115 mm

# LTV 2317

## XXPol 806-960 1710-2170MHz 65° 17/18dBi Adjustable Electrical Downtilt Antenna Manual or with optional RCU (Remote Control Unit)



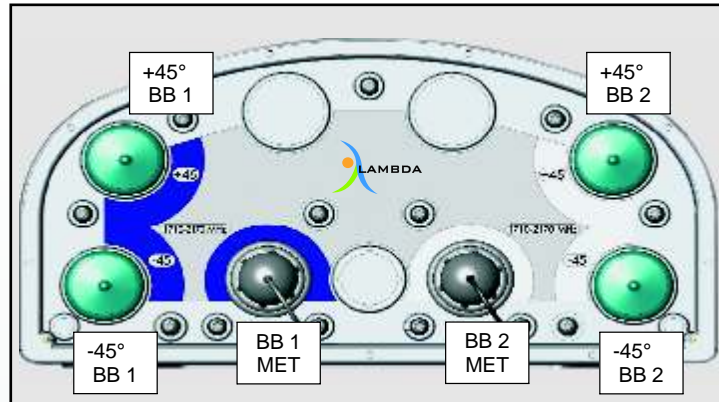
### Electrical Specifications

Frequency range (MHZ)	806~894	880~960	1710~1880	1850~1990	1920~2170
Polarization	±45°		±45°		
Gain (dBi)	2 x 16.5	2 x 17	2 x 17	2 x 17.8	2 x 18
Electrical downtilt ( ° )	0~8	0~8	0~8	0~8	0~8
Half-power beam width ( ° )	Hor. : 65 Ver. : 8	Hor. : 63 Ver. : 7.5	Hor. : 66 Ver. : 5.3	Hor. : 64 Ver. : 5	Hor. : 62 Ver. : 4.8
Sidelobe suppression ( dB ) (First sidelobe above horizon)	15				
Front-to-back ratio ( dB )	25				
Isolation (dB)	30				
Cross-polar ratio(dB)	>15(±60°>10)				
Impedance ( )	50				
Cross-polar ratio (dB)	=15(±60°=10)				
VSWR	1.5				
Intermodulation IM3 (dBm) (2 x 43dBm carrier)	<-107				
Maximum input power ( W )	400/200				
Lightning protection	DC Ground				

### Mechanical specifications

Dimensions (L/W/D)	2560 x 268 x 138
Connectors	4 x 7/16DIN-Female
Weight	23.5 Kg
Rated wind velocity (m/s)	60

# LTV 2401



## Dual Band High Band/High Band Broad Band (BB) Independent Variable Electrical Tilt

1710 - 2170 MHz/1710 - 2170 MHz, 2° - 12°, 1450 mm Height

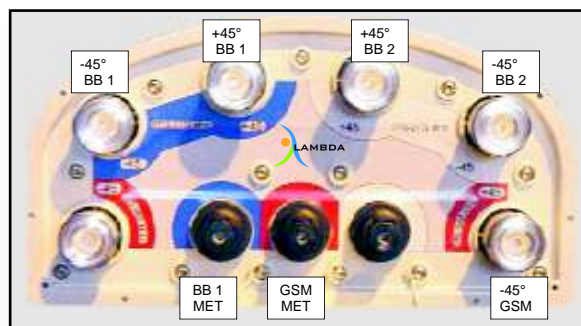
### Electrical Specifications

	Broadband 1 1710-1800 Mhz	Broadband 2 1920-2170 Mhz
Polarisation	Dual Linear $\pm$ 45° Slant	
-3dB Horizontal Plane	65° $\pm$ 2°	62° $\pm$ 2°
-3dB Vertical Plane	7.3° $\pm$ 0.2°	7.3° $\pm$ 0.2°
Gain (dBi)	17.0	16.5
Upper Sidelobe Level (0° to +30°)	< -18 dB	< -18 dB
Front to Back Ratio (180° $\pm$ 30°)	> 25 dB	> 25 dB
Cross Polarization Level (0° $\pm$ 30°)	> 15 dB	> 15 dB
Isolation	> 30 dB	> 30 dB
V.S.W.R. (50 )	< 1.5	< 1.5
Intermodulation (2 x 20 W carriers)	< -150 dBc (Im3)	< -165 dBc (IM7)
Variable Electrical Tilt	2° to 12°	2° to 12°
Maximum CW Pnput Power	500 W	500 W

### Mechanical specifications

Dimensions (L/W/D)	1450 x 270x145 mm
Connectors	4 x 7/16 DIN
Weight	15 Kg
Mounting Pole Diameter	50 to 115 mm

# LTV 3415



TRI Band GSM/High Band/High Band Broad Band (BB)  
Independent Variable Electrical Tilt

870 - 960, 1710 - 2170 MHz/1710 - 2170 MHz, 2° - 10°, 2650 mm

## Electrical Specifications

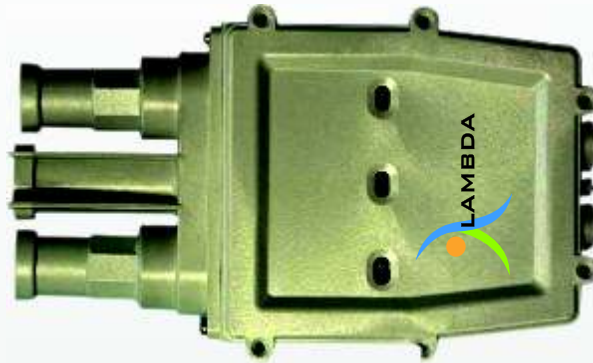
	GSM	Broadband 1 & Broadband 2 1710-2170 MHz	
Frequency	870-960 MHz	1710-1880 Mhz	1920-2170 Mhz
Polarisation	Dual Linear $\pm 45^\circ$	Dual Linear $^\circ \pm 45^\circ$	Dual Linear $^\circ \pm 45^\circ$
-3dB Horizontal Plane	$69^\circ \pm 3^\circ$	$68^\circ \pm 3^\circ$	$63^\circ \pm 2^\circ$
-3dB Vertical Plane	$6.9^\circ \pm 0.3^\circ$	$6.8^\circ \pm 0.3^\circ$	$6.7^\circ \pm 0.3^\circ$
Gain (dBi)	16.5	17.5	18
Vertical Upper first side lobe suppression	< 18 dB	< 15 dB	< 15 dB
Vertical Upper first side lobe suppression (30° range)	> 15 dB	> 15 dB	> 15 dB
Front to Back Ratio (180° $\pm 30^\circ$ )	> 25 dB	> 25 dB	> 25 dB
Cross Polarization Level (0° $\pm 30^\circ$ )	> 15dB	> 15dB	> 15 dB
Isolation (Intra-band 45°)	<30 to -2 <30 dB to -10	< 30 dB	< 30 dB
Isolation (Inter-band)	Broadband - Broadband : > 30 dB GSM - Broadband : > 45 dB		
V.S.W.R.(50 )	< 1.5	< 1.5	< 1.5
Intermodulation (2x20W carriers)	<-150 dBC (Im3)	<-150 dBC (Im3)	<-150 dBC (Im3)
	(Im3)	<-165 dBC (Im7)	<-165 dBC (Im7)
Variable electrical tilt	-2° to -10	-2° to -10	-2° to -10
Maximum CW Input Power	500 W	500 W	500 W

## Mechanical specifications

Dimensions (L/W/D)	2650x 276x145 mm
Connectors	6 x 7/16 DIN
Weight	32 Kg
Mounting Pole Diameter	50 to 115 mm

# Triple band RET unit LTV-RET-3-D-R1

External Remote Electrical Tilt unit  
AISG v1.1 compliant



## Electrical Specifications

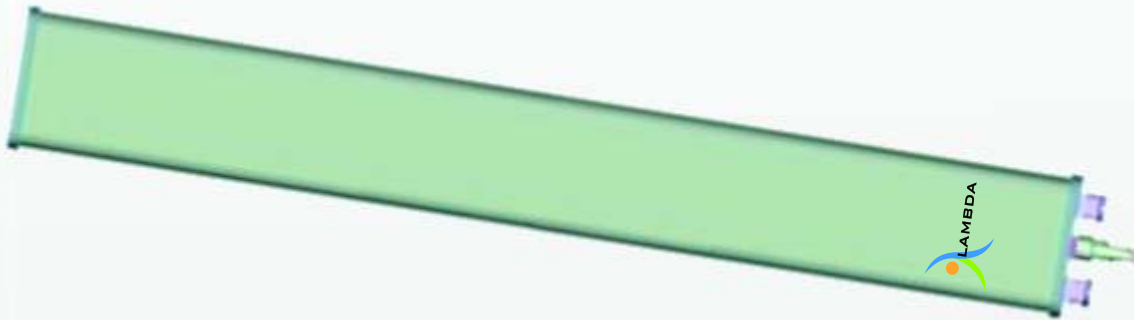
Part Number	ARIA-RET-3-D-R1 (tilt range programmed for 2° to 10°)
Connectors	2x8 pin connectors IEC 60130-9, comply with AISG
Logical interface	AISG compliant coded commands
Electrical interface	RS-485A/B
DC power supply range	10 V to 30 V
Power consumption (one way)	<1 W in standby, <4 W in operation.
Full-range adjustment time	50s
Number of adjustment cycles	> 36000 cycles
Operation temperature range	-40°C to +65°C
Weight (Triple band unit)	1.5 kg
Overall dimensions	282 x 168 x 62 mm (Height x Width x Thickness)
MTBF	> 500 000 hrs
Ingress protection	Ip34 protection class (IEC 60529)
Environmental	ETSI 300 019-X-X
Lightning/EMC	EN 61000 (-4-2 to -4-6)

### Benefits

- The External RET can be easily attached without dismounting antenna
- Field upgradeable with installed Triple band and Dual band MET antennas
- Easy readable indication of the selected tilt
- Daisy chaining capability

# LTV 1630

Xpol 1710 ~ 2170MHz 90° 16.8dBi Adjustable  
Electrical Downtilt Antenna,  
Manual or by optional RCU (Remote Control Unit)



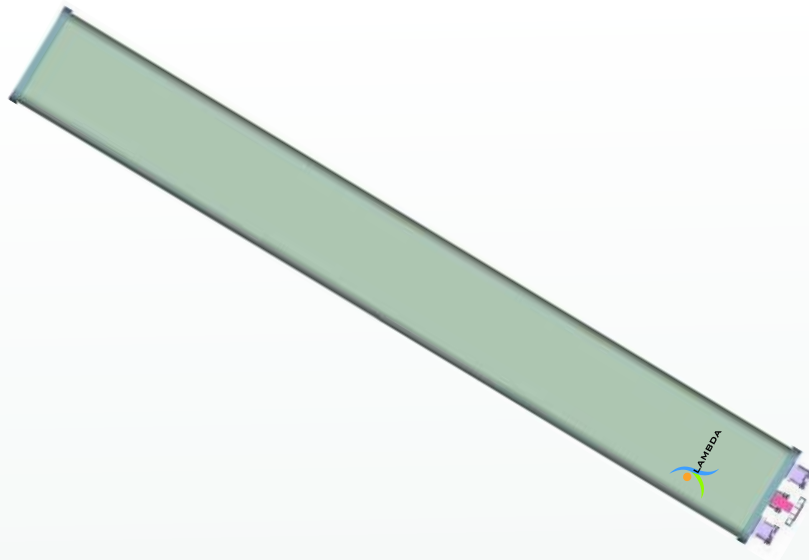
## Electrical Specifications

Frequency range (MHZ)	1710~1880	1850~1990	1920~2170
Polarization	±45°	±45°	±45°
Gain (dBi)	16.5	16.8	16.7
Electrical downtilt ( ° )	0~ 10	0~ 10	0~ 10
Half-power beam width ( ° )	Hor. : 88 Ver. : 7.5	Hor. : 88 Ver. : 7	Hor. : 90 Ver. : 6.5
Sidelobe suppression ( dB ) (First sidelobe above horizon)	0 o . 5.o . . 10 o 16 . .15 . . .14.	0 o . 5.o . . 10 o 16 . .15 . . .15.	0 o . 5.o . . 10 o 16 . .15 . . .15.
Front-to-back ratio ( dB )	23		
Isolation (dB)	30		
Cross-polar ratio(dB)	15(±60° 10)		
Impedance ( Ω )	50		
VSWR	1.5		
Intermodulation IM3 (dBm) (2 × 43dBm carrier)	<-107		
Maximum input power ( W )	300		
Lightning protection	DC Ground		

## Mechanical specifications

Dimensions (L/W/D)	1360×160×80
Connectors	2×7/16DIN-Female
Weight	11 Kg
Rated wind velocity (m/s)	60

Xpol 1710-2170MHz 65° 17.5dBi  
Adjustable Electrical Downtilt  
Manual or by optional RCU (Remote Control Unit)



## Electrical Specifications

Frequency range (MHZ)	1710~1880	1850~1990	1920~2170
Polarization	±45°	±45°	±45°
Gain (dBi)	17	17.3	17.5
Electrical downtilt ( ° )	0~ 10	0~ 10	0~ 10
Half-power beam width ( ° )	Hor. : 67 Ver. : 7.5	Hor. : 65 Ver. : 7	Hor. : 62 Ver. : 6.5
Sidelobe suppression ( dB ) (First sidelobe above horizon)	0 o . 5.o . . 10 o 16 . .15. . .14.	0 o . 5.o . . 10 o 16 . .15. . .14.	0 o . 5.o . . 10 o 16 . .15. . .15.
Front-to-back ratio ( dB )	25		
Isolation (dB)	30		
Cross-polar ratio(dB)	>15(±60°>10)		
Impedance ( Ω )	50		
Cross-polar ratio (dB)	=15(±60°=10)		
VSWR	1.5		
Intermodulation IM3 (dBm) (2 x 43dBm carrier)	<-107		
Maximum input power ( W )	300		
Lightning protection	DC Ground		

## Mechanical specifications

Dimensions (L/W/D)	1360 x 160 x 80
Connectors	2 x 7/16 DIN-Female
Weight	13 Kg
Rated wind velocity (m/s)	60

# LTV 1931

Xpol 1710 ~ 2170MHz 33 ° 18dBi Adjustable  
Electrical Downtilt Antenna,  
Manual or by optional RCU (Remote Control Unit)



## Electrical Specifications

Frequency range (MHZ)	1710~1880	1850~1990	1920~2170
Polarization	±45°	±45°	±45°
Gain (dBi)	17.5	17.7	18
Electrical downtilt ( ° )	0 ~ 12	0 ~ 12	0 ~ 12
Half-power beam width ( ° )	Hor. : 34 Ver. : 14	Hor. : 32 Ver. : 13	Hor. : 30 Ver. : 12
Sidelobe suppression ( dB ) (First sidelobe above horizon)	0°...6°...12° 15...15...14	0°...6°...12° 15...16...12	0°...6°...12° 15...16...12
Front-to-back ratio ( dB )	=27		
Isolation (dB)	30		
Cross-polar ratio(dB)	15(±60° 10)		
Impedance ( Ω )	50		
VSWR	=1.5		
Intermodulation IM3 (dBm) (2 × 43dBm carrier)	<-107		
Maximum input power ( W )	300		
Lightning protection	DC Ground		

## Mechanical specifications

Dimensions (L/W/D)	760×280×85
Connectors	2×7/16DIN-Female
Weight	15 Kg
Rated wind velocity (m/s)	60

# LTV 1621

XPoI 806 ~ 960MHz 90 ° 16dBi Adjustable  
Electrical Downtilt Antenna,  
Manual or by optional RCU (Remote Control Unit)



## Electrical Specifications

Frequency range (MHZ)	806 ~ 890	890 ~ 960
Polarization	$\pm 45^\circ$	$\pm 45^\circ$
Gain (dBi)	15.8	16.1
Electrical downtilt ( o )	0 ~ 8	0 ~ 8
Half-power beam width ( ° )	Hor:90 Vert:7.5	Hor:88 Vert:7
Sidelobe suppression ( dB ) (First sidelobe above horizon)	0°...4°...8° 15...15...15	0°...4°...8° 16...15...15
Front-to-back ratio ( dB )	23	
Isolation (dB)	30	
Cross-polar ratio(dB)	=15( $\pm 60^\circ$ =10)	
Impedance ( )	50	
VSWR	=1.5	
Intermodulation IM3 (dBm) (2 x 43dBm carrier)	<-107	
Maximum input power ( W )	400	
Lightning protection	DC Ground	

## Mechanical specifications

Dimensions (L/W/D)	2580x268x138
Connectors	2x7/16DIN-Female
Weight	23 Kg
Rated wind velocity (m/s)	60

# LTV 1921

XPol 806 ~ 960MHz 33 ° 20.4dBi Adjustable  
Electrical Downtilt Antenna,  
Manual or by optional RCU (Remote Control Unit)



## Electrical Specifications

Frequency range (MHZ)	806 ~ 890	890 ~ 960
Polarization	$\pm 45^\circ$	$\pm 45^\circ$
Gain (dBi)	19.9	20.4
Electrical downtilt ( ° )	0 ~ 10	0 ~ 10
Half-power beam width ( ° )	Hor:34 Vert:7.5	Hor:32 Vert:7
Sidelobe suppression ( dB ) (First sidelobe above horizon)	0°...5°...10° 15...15...15	0°...5°...10° 16...15...15
Front-to-back ratio ( dB )	=27	
Isolation (dB)	30	
Cross-polar ratio(dB)	15( $\pm 30^\circ$ )	
Impedance ( Ω )	50	
VSWR	=1.5	
Intermodulation IM3 (dBm) (2 x 43dBm carrier)	<-107	
Maximum input power ( W )	400	
Lightning protection	DC Ground	

## Mechanical specifications

Dimensions (L/W/D)	2520x515x100
Connectors	2x7/16DIN-Female
Weight	38 Kg
Rated wind velocity (m/s)	60

# LTV 1421

XPoI 806 ~ 960MHz 65 ° 17.5dBi Adjustable  
Electrical Downtilt Antenna,  
Manual or by optional RCU (Remote Control Unit)



## Electrical Specifications

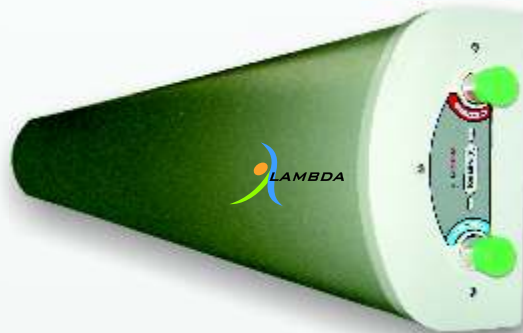
Frequency range (MHZ)	806 ~ 890	890 ~ 960
Polarization	$\pm 45^\circ$	$\pm 45^\circ$
Gain (dBi)	17.5	17.8
Electrical downtilt ( o )	0 ~ 10	0 ~ 10
Half-power beam width ( ° )	Hor:65 $\pm$ 3 Vert:7.5 $\pm$ 1	Hor:65 $\pm$ 3 Vert:7.5 $\pm$ 1
Sidelobe suppression ( dB ) (First sidelobe above horizon)	0 $^\circ$ ...5 $^\circ$ ...10 $^\circ$ 15...15...15	0 $^\circ$ ...5 $^\circ$ ...10 $^\circ$ 16...15...15
Front-to-back ratio ( dB )	Copolar 25	
Isolation (dB)	30	
Cross-polar ratio(dB)	=15( $\pm 60^\circ$ =10)	
Impedance ( )	50	
VSWR	1.4	
Intermodulation IM3 (dBm) (2 x 43dBm carrier)	<-107	
Maximum input power ( W )	400	
Lightning protection	DC Ground	

## Mechanical specifications

Dimensions (L/W/D)	2580x268x138
Connectors	2x7/16DIN-Female
Weight	23 Kg
Rated wind velocity (m/s)	60

# LTV 1321

XPol 806 ~ 960MHz 65 ° 18dBi  
Fixed Tilt 0 Sector Panel Antenna



## Electrical Specifications

Frequency Range (MHZ)	806 ~ 960
Polarisation	$\pm 45^\circ$
Gain (dBi)	18
Electrical Downtilt ( $^\circ$ )	0
Half-Power Beam Width ( $^\circ$ )	Hor: 65/ Vert: 7
Sidelobe Suppression (dB) (First sidelobe above horizon)	-16
Front-to-Back Ratio (dB)	30
Isolation (dB)	30
Cross-Polar Ratio (dB)	15( $\pm 30^\circ$ 10)
Impedance ( )	50
VSWR	1.4
Intermodulation IM3 (dBm) (2x43dBm carrier)	-107
Maximum Input Power (W)	500 W
Lightning Protection	DC Ground

## Mechanical specifications

Dimensions (L/W/D)	2580x280x85
Connectors	2x7/16 DIN-Female
Weight	30 Kg
Rated Wind Velocity (m/s)	60