



**APXV9TM13\_43-C-I20**

TDD 8T8R Antenna, X-Pol, 1.3m, 2460-2690 MHz, 90deg unit beam, Integrated RET

**FEATURES / BENEFITS**

- TDD beamforming 8T8R
- Integrated RET
- ACU-A20-S, ACU HW Version HW05
- Compliant with AISG V2.0 and 3GPP
- Mechanical down tilt kit included
- 58 mm column spacing - .5 wavelength @ 2.6 GHz



**Technical features**

**ELECTRICAL SPECIFICATIONS**

Electrical Specification Header		Unit Beam (2496-2690MHz) Ports 1-8
Frequency Band	MHz	2496 - 2690
Gain	dBi	17.0
Azimuth Beamwidth 3dB	Deg	82 +/- 10
Elevation Beamwidth 3dB	Deg	5.0 +/- 0.3
Cross-Pol at Boresight	dB	17
F/B at 180 Copolar	dB	29
Electrical Downtilt	Deg	0 to 9
First Upper Side Lobe	dB	15
VSWR	-	1.5:1
Return Loss	dB	-14
Cross Polar Isolation	dB	25
3rd Order PIM 2 x 43dBm	dBc	-150
Gain Over All Tilts	dBi	16.5 +/- 0.5
Cross-Pol over Sector	dB	9
F/B at +/-30 Total Power	dB	22
Upper Side Lobe Peak to +20	dB	15



**ELECTRICAL SPECIFICATIONS**

Electrical Specification Header		Broadcast Beam 65 Degrees (2496-2690MHz)
Frequency Band	MHz	2496 - 2690
Gain	dBi	18.4
Azimuth Beamwidth 3dB	Deg	60 +/- 6
Elevation Beamwidth 3 dB	Deg	5.0 +/- 0.3
Cross-Pol at Boresight	dB	22
F/B at 180 Copolar	dB	36
Electrical Downtilt	Deg	0 to 9
First Upper Side Lobe	dB	15
Gain Over all Tilts	dBi	17.9 +/- 0.5
Cross-Pol over Sector	dB	11
F/B at +/-30 Total Power	dB	25
Upper Side Lobe Peak to +20	dB	16

**ELECTRICAL SPECIFICATIONS**

Electrical Specification Header		Broadcast Beam 90 Degrees (2496-2690MHz)
Frequency Band	MHz	2496 - 2690
Gain	dBi	17.5
Azimuth Beamwidth 3dB	Deg	91 +/- 4
Elevation Beamwidth 3 dB	Deg	5.0 +/- 0.3
Cross-Pol at Boresight	dB	21
F/B at 180 Copolar	dB	31
Electrical Downtilt	Deg	0 to 9
First Upper Side Lobe	dB	17
Gain Over all Tilts	dBi	17.0 +/- 0.5
Cross-Pol over Sector	dB	10
F/B at +/-30 Total Power	dB	25
Upper Side Lobe Peak to +20	dB	15

**ELECTRICAL SPECIFICATIONS**

Electrical Specification Header		SERVICE BEAM at 0deg (2496-2690MHz)
Frequency Band	MHz	2496 - 2690
Gain	dBi	21.9
Azimuth Beamwidth 3dB	Deg	28 +/- 1
Elevation Beamwidth 3 dB	Deg	5.0 +/- 0.3
Cross-Pol at Beam Peak	dB	20
F/B at 180 Copolar	dB	36
Electrical Downtilt	Deg	0 to 9
First Upper Side Lobe	dB	16
Gain Over All Tilts	dBi	21.4 +/- 0.5
Cross-Pol over 3dB	dB	19
F/B at +/-30 Total Power	dB	31
Upper Side Lobe Peak to +20	dB	16

**ELECTRICAL SPECIFICATIONS**

Electrical Specification Header		SERVICE BEAM at 30deg(2496-2690MHz)
Frequency Range	MHz	2496-2690
Gain	dBi	20.5
Azimuth Beamwidth 3dB	Deg	32 +/- 1
Elevation Beamwidth 3dB	Deg	5.0 +/- 0.4
Cross-Pol at Beam Peak	dB	15
F/B at 180 Copolar	dB	30
Electrical Downtilt	Deg	0 to 9
First Upper Side Lobe	dB	17
Gain Over All Tilts	dBi	20.1 +/- 0.4
Cross-Pol over 3dB	dB	14
F/B at +/-30 Total Power	dB	28
Upper Side Lobe Peak to +20	dB	17

**ELECTRICAL SPECIFICATIONS**

Electrical Specification Header		CALIBRATION & ELECTRICAL PARAMETERS (2496-2690MHz)
Frequency Range	MHz	2496-2690
Transmission from antenna ports to CAL port	dB	26 +/- 2
Amplitude Diff Between antenna port and CAL port	dB	< 0.7
Phase Diff Between antenna port and CAL port	Deg	<5
Same Polarization ISO	dB	>20 (typical)
Different Polarization ISO	dB	25

**ELECTRICAL SPECIFICATIONS**

Impedance	Ohm	50
Polarization	Deg	+/- 45

**MECHANICAL SPECIFICATIONS**

Dimensions - H x W x D	mm (in)	1395 x 320 x 160 (55 x 12.6 x 6.3)
Weight (Antenna Only)	kg (lb)	25 (55)
Weight (Mounting Hardware only)	kg (lb)	3.5 (7.7)
Packing size- HxWxD	mm (in)	1540 x 400 x 360 (60.6 x 15.7 x 14.2)
Shipping Weight	kg (lb)	32 (70.5)
Connector type		8x 4.3-10 female + 2 AISG connectors (1 male, 1 female)
Adjustment mechanism		Integrated RET solution AISG compliant
Radome Material / Color		ASA / Light Grey RAL7035
Mechanical Distance between Mounting Points	mm (in)	907 (35.7)



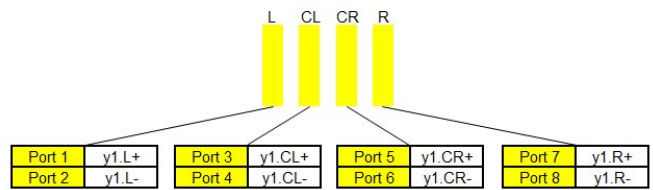
**TESTING AND ENVIRONMENTAL**

Temperature Range	°C (°F)	-40 to 60 (-40 to 140 )
Lightning protection		Direct Ground
Survival/Rated Wind Velocity	km/h	200 (160 )
Wind Load @Rated Wind Front	N	616
Wind Load @Rated Wind Side	N	473
Wind Load @Rated Wind Rear	N	572
Environmental		ETSI 300-019-2-4 Class 4.1E

**ORDERING INFORMATION**

Order No.	Configuration	Mounting Hardware	Mounting pipe Diameter	Shipping Weight
APXV9TM13_43-C-I20	ACU-A20-S Integrated RET	APM40-2 Beam tilt kit	60-120mm	32kg (70.5)

Port	Array	Frequency	RET	AISG RET UID
1	Y1	2496-2690	Y1	RFxxxxxxxxx-2Y1
2		2496-2690		
3	Y2	2496-2690		
4		2496-2690		
5	Y3	2496-2690		
6		2496-2690		
7	Y4	2496-2690		
8		2496-2690		



Physical array & port mapping according to AISG naming convention:  
Left - Center Left - Center Right -Right (seen from front of antenna)



RET Information	
Frequency	2496-2690
Model	ACU-A20-S
Location	Integrated
Field Replaceable	No
Quantity	1
RET ID	Y1

