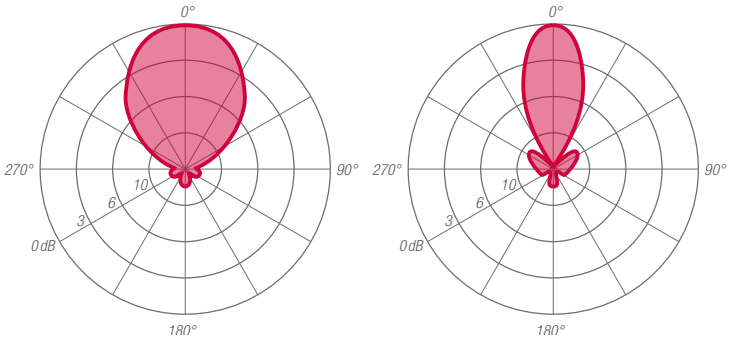
ANTENNA FEATURES

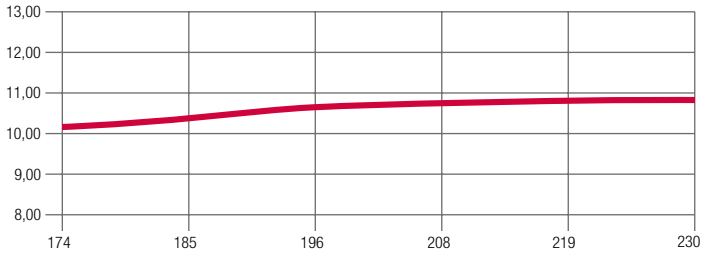
- 4 dipoles antenna panel.
- Horizontal polarization.
- Broadband 174÷230 MHz.
- Directional radiation pattern.
- Analogue/Digital Service.

RADIATION PATTERNS (Mid Band)

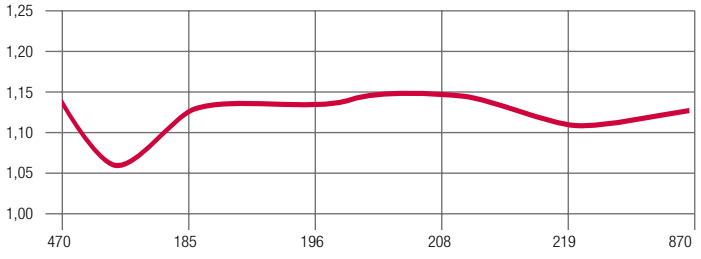


E - Plane **H - Plane**

GAIN (dB)



VSWR



ELECTRICAL DATA

WORKING BAND:	174-230 MHz
BANDWIDTH:	VHF - Band III (DAB)
GAIN:	10.5 dBd (12.7 dBi)
VSWR:	≤ 1.13:1 (-24.3 dB)
POLARIZATION:	Horizontal
IMPEDANCE:	50 Ohm balanced
HALF POWER BEAMWIDTH:	E-Plane - 64° H-Plane - 30°
LIGHTNING PROTECTION:	All metal parts DC grounded including inner conductors
AVAILABLE VERSION AND CODE:	AVP0204432 - 2x EIA 7/8" flange - max 2x 3000W rms

MECHANICAL DATA

MATERIALS:	Reflecting grid in hot dip galvanized steel Dipoles in stainless steel
MOUNTING:	Directly on supporting structure via Ø11 holes
MOUNTING BRACKETS:	Optional (cod. XAVP) for ø40-114mm mast
ICING PROTECTION:	Dipoles covered by ABS radome
TREATMENTS:	Reflecting grid in hot dip galvanized steel Silver-plated lines and connector
ANTENNA DIMENSIONS:	2240x1110x416 mm (88.9x43.7x16.4 in)
WEIGHT:	75 kg (165.3 lb)
WIND SURFACE:	0.72 m² (7.75 ft²) front - 0.34 m² (3.65 ft²) side
WIND LOAD (160 km/h and 30°C)	1.07 kN front - 0.34 kN side
SURVIVAL WIND:	220 km/h (136.7 mph)
PACKING DIMENSIONS:	Wooden cage (ISMP-15) 2650x1300x445 mm - 100 kg gross (104.3x51.18x14.57 in - 220.4 lb)

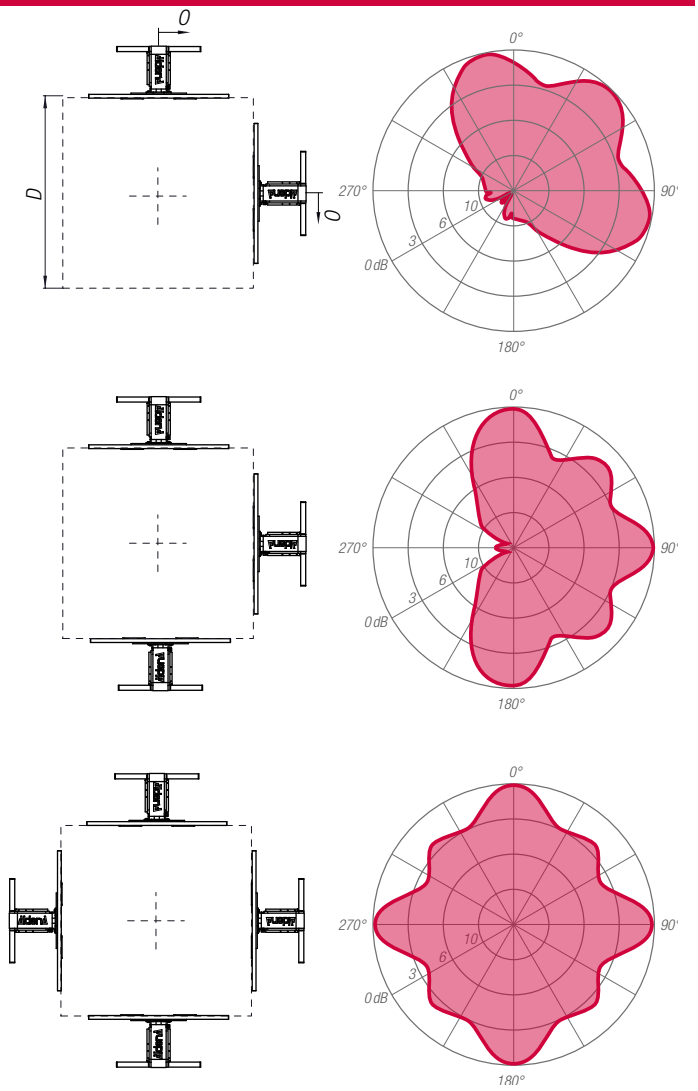
ARRAY FEATURES

- Omnidirectional o directional patterns
- Equal or unequal power distribution system
- Configurable for specific azimut and elevation pattern
- Suitable for multiplexing many channels

ARRAY ELECTRICAL DATA

FREQUENCY RANGE	174 ÷ 230 MHz
IMPEDANCE	50 ohm
CONNECTOR	EIA flange according to system power rating
POWER RATING	The antenna system can accept any power according to requirements
VSWR	≤ 1.10 in the operating channels or ≤ 1.15 throughout the frequency range
POLARIZATION	Horizontal or vertical
GAIN	Refer to table
HORIZONTAL PATTERN	Any type according to requirement
VERTICAL PATTERN	Null fill, beam tilt and special requirements to order
OTHER FEATURES	Antenna components and feed harnesses can be optimized for channels of interest. The antenna system can be supplied in split feed configuration (two equal halves). Each half can accept full power.

TYPICAL HORIZONTAL PATTERNS



ARRAY MECHANICAL DATA

HEIGHT OF ARRAY	Subject to number of bays
TOTAL NET WEIGHT	Refer to table
WIND LOAD	Refer to table
PRESSURIZABLE	No
MOUNTING HARDWARE	Optional mounting spine for top/side mount configuration

ARRAY TECHNICAL DATA

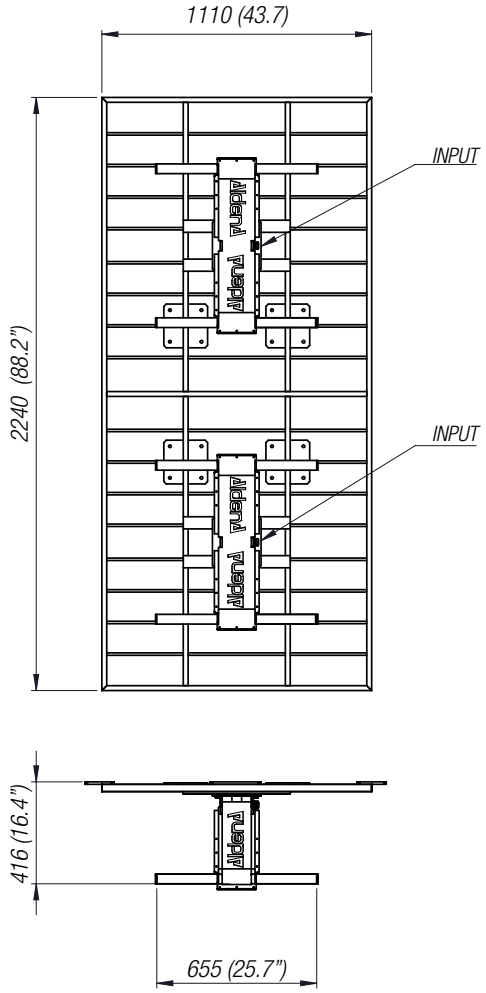
BAYS	PANELS PER BAY	GAIN[1] dB	GAIN TIMES[1]	WEIGHT[2] kg (lb)	ANTENNA HEIGHT[L] m (ft)	WIND LOAD[3] kN
2	1	14.4	27.8	145 (319.6)	6.0 (19.6)	2.1
4	1	17.4	55.7	270 (595.2)	12.4 (40.6)	4.3
6	1	19.2	83.8	455 (1003.1)	18.8 (61.6)	6.4
8	1	20.5	111.9	580 (1278.6)	25.2 (82.6)	8.5
12	1	22.6	168.3	880 (1940.0)	38.0(124.6)	12.9
16	1	23.5	224.0	11800 (2601.4)	24.0 (78.7)	17.1
1	2	8.8	7.62	145 (319.6)	2.8 (9.2)	1.4
2	2	11.8	15.4	270 (595.2)	6.0 (19.6)	2.1
4	2	14.9	30.9	580 (1278.6)	12.4 (40.6)	4.3
6	2	16.7	46.6	760 (1675.5)	18.8 (61.6)	6.4
8	2	17.9	62.5	1110 (2447.1)	25.2 (82.6)	8.5
12	2	19.7	93.9	1760 (3880.1)	38.0 (124.6)	12.9
16	2	21.9	154.9	2640 (5820.2)	24.0 (78.7)	22.6
1	3	7.7	3.5	215 (474.0)	2.8 (9.2)	1.4
2	3	10.6	11.5	370 (815.7)	6.0 (19.6)	2.1
4	3	13.7	23.1	860 (1895.9)	12.4 (40.6)	4.3
6	3	15.5	34.7	1300 (2863.0)	18.8 (61.6)	6.4
8	3	16.7	46.5	1730 (3813.9)	25.2 (82.6)	8.5
12	3	18.5	69.6	2600 (5732.0)	38.0 (124.6)	12.9
16	3	19.7	93.3	3480 (7672.0)	24.0 (78.7)	28.2
1	4	6.2	4.2	290 (639.3)	2.8 (3.3)	1.4
2	4	9.1	8.2	580 (1278.6)	6.0 (9.2)	2.1
4	4	12.2	16.5	1160 (2557.2)	12.4 (40.6)	4.3
6	4	13.9	24.9	1760 (3880.1)	18.8 (61.6)	6.4
8	4	15.2	23.3	2420 (5335.1)	25.2 (82.6)	8.5
12	4	16.9	50.0	5360 (11816.0)	38.0 (124.6)	12.9
16	4	18.2	66.1	7150 (15763.0)	24.0 (78.7)	28.2

Note:
Antenna Distance (D) and Antenna Offset (O) are subject to change according to requirement.
Custom designed antennas meeting special requirements such as specific azimuthal pattern, different gains and custom power input are available upon request.

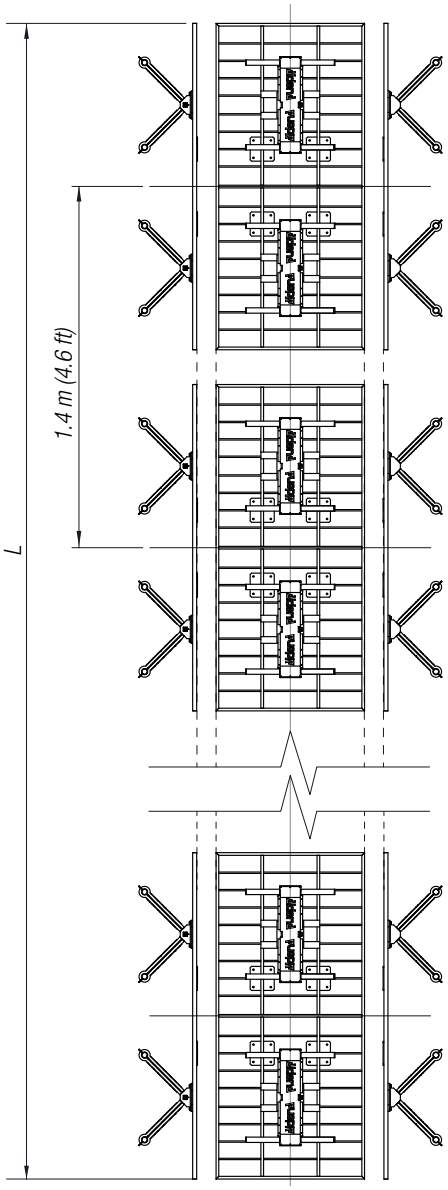
(1) Gain data is relative to half-wave dipole. Values given are nominal and assume standard harness configurations
Gain will vary depending in specific feed system, null fill and beam tilt.
Gain data in relative to array in horizontal polarization.
(2) Without mounting hardware.
(3) 160 km/h (100 mph) wind and 30°C (86°F) air temperature.
(L) Total Antenna Height.

Specification are subject to change without notice

ANTENNA DIMENSIONAL DETAILS



ARRAY VERTICAL HEIGHT



Note:
Total Antenna Height (L) is subject to change according to requirement.

OPTIONS & SERVICES

PATTERN DESIGN	Custom azimuth and elevation (beam tilt and null fill) patterns can be designed to meet specific protection/coverage requirements
PATTERN CERTIFICATION	Proof-of-performance factory test and pattern measurements on ALDENA test plan area
MOUNTING HARDWARE	Turn-key antenna delivering Tower top/side spine Special hardware/brackets
TRANSMISSION LINE	Transmission line system design and layout
COMBINERS/FILTERS	Combiners/Filters to suit requirements can be supplied
CALCULATION SERVICES	Coverage/interferfence simulations EM Near Field control and reduction (Environmental impact studies)
ON-SITE SERVICES	Site Survey and Inspection Installation/commissioning and supervisioning Drive test & EM Field strength measurements After sales maintenance
TRAINING	Techical training certification and consultancy