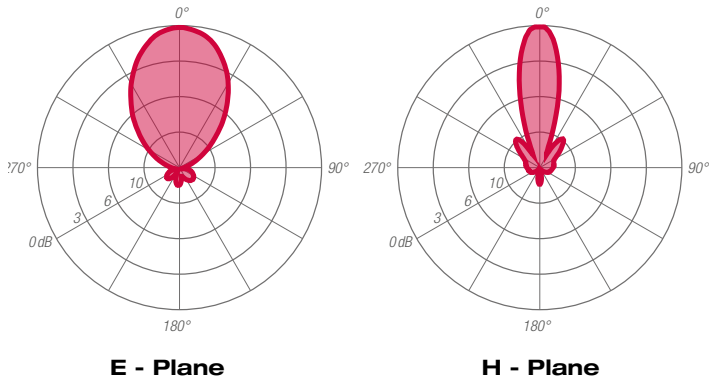




### ANTENNA FEATURES

- Panel antenna 11.1 dBd gain.
- Horizontal polarization.
- Broadband 470-862 MHz.
- Directional radiation pattern.
- Designed for digital and/or analogue services.
- Pressurizable.

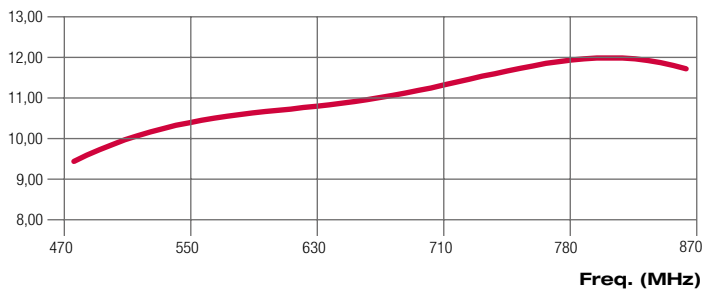
### RADIATION PATTERNS (Mid Band)



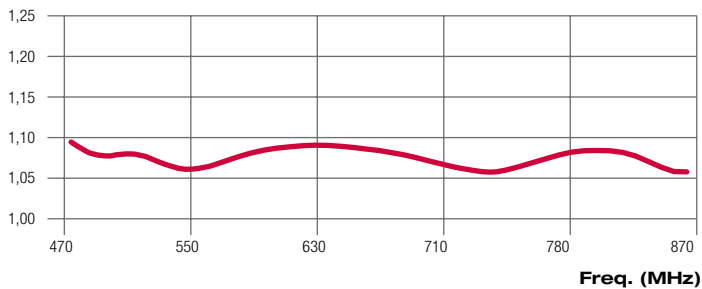
### ELECTRICAL DATA

|                             |  |
|-----------------------------|--|
| WORKING BAND:               | 470-862 MHz  |
| BANDWIDTH:                  | UHF IV/V band  |
| GAIN:                       | 11.1 dBd (13.3 dBi)  |
| VSWR:                       | ≤ 1.1:1 (-26.4 dB)   |
| POLARIZATION:               | Horizontal   |
| IMPEDANCE:                  | 50 Ohm balanced  |
| HALF POWER BEAMWIDTH:       | E-Plane - 57°<br>H-Plane - 23°   |
| LIGHTNING PROTECTION:       | All metal parts DC grounded including inner conductors   |
| AVAILABLE VERSION AND CODE: | ATU0807420 - DIN 7/16 female - max 1000W rms<br>ATU0807421 - EIA 7/8" - max 2500W rms<br>ATU0807422 - N female - max 400W rms<br>ATU0807428 - EIA 1 5/8" - max 5000W rms |

### GAIN (dB)



### VSWR



### MECHANICAL DATA

|                               |  |
|-------------------------------|--|
| MATERIALS:                    | Reflector in stainless steel, lines and dipoles in copper and brass, teflon isolators, silicon O-rings |
| MOUNTING:                     | Directly on supporting structure via 4x M8 holes   |
| MOUNTING BRACKETS:            | Optional fixed brackets (cod. XZATUF) tiltable brackets (cod. XZATU)                                   |
| ICING PROTECTION:             | Whole antenna fully covered by fiberglass (SMC) radome Standard color RAL9010 white                    |
| TREATMENTS:                   | Silver-plated lines, dipoles and connector   |
| PRESSURIZATION:               | 5.0 psi  |
| ANTENNA DIMENSIONS:           | 450x215x1000 mm (17.72x8.46x39.37 in)  |
| WEIGHT:                       | 13 kg (28.66 lb)<br>(ATU0807428 version 15 kg - 33.07 lb)  |
| WIND SURFACE:                 | 0.45 m <sup>2</sup> (4.84 ft <sup>2</sup> ) front - 0.22 m <sup>2</sup> (2.37 ft <sup>2</sup> ) side   |
| WIND LOAD (160 km/h and 30°C) | 0.83 kN front - 0.41 kN side   |
| SURVIVAL WIND:                | 220 km/h (136.7 mph)   |
| PACKING DIMENSIONS:           | Box 530x1050x370 mm - 15.5 kg<br>(20.87x41.34x14.57 in - 34.17 lb)                                     |
| SPECIAL FEATURES:             | Colored radome upon request (typically red, grey, green)   |

Specification are subject to change without notice



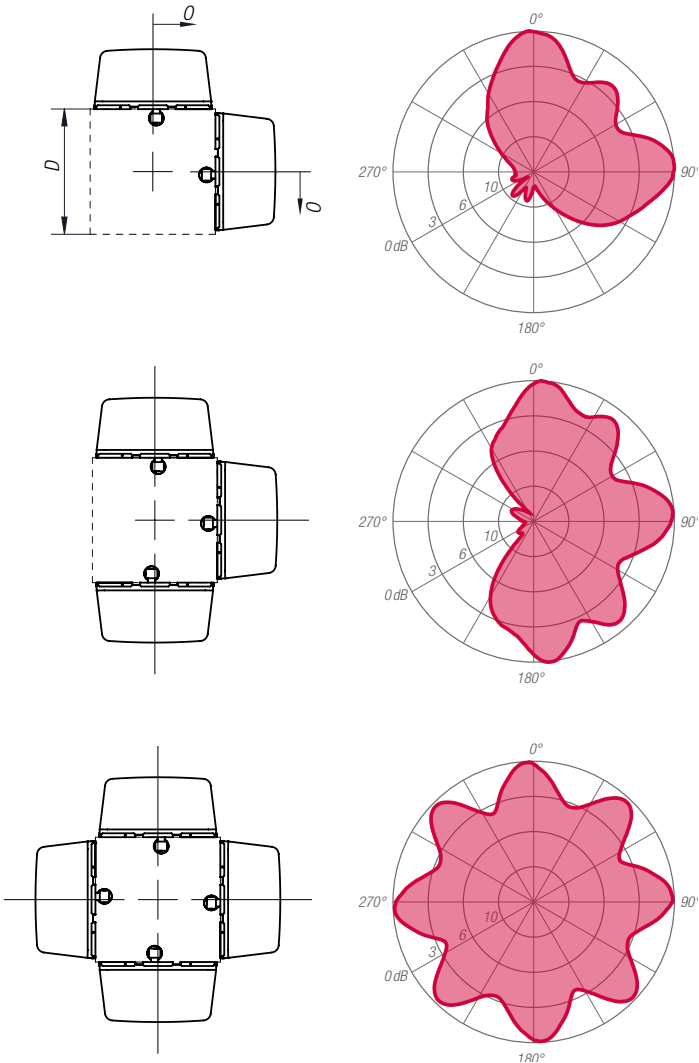
**ARRAY FEATURES**

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

**ARRAY ELECTRICAL DATA**

|                    |   |
|--------------------|---|
| FREQUENCY RANGE    | 470 ÷ 862 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               | ≤ 1.05 in the operating channels or ≤ 1.15 throughout the frequency range   |
| POLARIZATION       | Horizontal  |
| 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.<br>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     | Yes  |
| MOUNTING HARDWARE | Optional mounting spine for top/side mount configuration |

**ARRAY TECHNICAL DATA**

| BAYS | PANELS PER BAY | GAIN <sup>(1)</sup> dB | GAIN TIMES <sup>(1)</sup> | WEIGHT <sup>(2)</sup> kg (lb) | ANTENNA HEIGHT <sup>(L)</sup> m (ft) | WIND LOAD <sup>(3)</sup> kN |
|------|----------------|------------------------|---------------------------|-------------------------------|--------------------------------------|-----------------------------|
| 2    | 1              | 15.1                   | 32.4                      | 35 (77.2)                     | 2.2 (7.2)                            | 1.7                         |
| 4    | 1              | 18.1                   | 64.6                      | 70 (154.3)                    | 4.6 (15.1)                           | 3.3                         |
| 6    | 1              | 19.9                   | 97.7                      | 105 (231.5)                   | 7.0 (23.0)                           | 5.0                         |
| 8    | 1              | 21.2                   | 131.8                     | 140 (308.6)                   | 9.4 (30.8)                           | 6.6                         |
| 12   | 1              | 23.0                   | 199.6                     | 220 (485.0)                   | 14.2 (46.6)                          | 10.0                        |
| 16   | 1              | 24.2                   | 263.0                     | 330 (727.5)                   | 19.0 (62.3)                          | 13.3                        |
| 1    | 2              | 9.1                    | 8.1                       | 35 (77.2)                     | 1.0 (3.3)                            | 1.2                         |
| 2    | 2              | 12.2                   | 16.6                      | 70 (154.3)                    | 2.2 (7.2)                            | 2.5                         |
| 4    | 2              | 15.2                   | 33.1                      | 140 (308.6)                   | 4.6 (15.1)                           | 5.0                         |
| 6    | 2              | 17.0                   | 50.1                      | 220 (485.0)                   | 7.0 (23.0)                           | 7.4                         |
| 8    | 2              | 18.3                   | 67.6                      | 330 (727.5)                   | 9.4 (30.8)                           | 9.9                         |
| 12   | 2              | 20.0                   | 100.0                     | 440 (970.0)                   | 14.2 (46.6)                          | 14.9                        |
| 16   | 2              | 21.3                   | 134.9                     | 660 (1455.1)                  | 19.0 (62.3)                          | 19.8                        |
| 1    | 3              | 7.6                    | 5.8                       | 50 (110.2)                    | 1.0 (3.3)                            | 1.7                         |
| 2    | 3              | 10.6                   | 11.5                      | 100 (220.5)                   | 2.2 (7.2)                            | 3.3                         |
| 4    | 3              | 13.7                   | 23.4                      | 200 (440.9)                   | 4.6 (15.1)                           | 6.6                         |
| 6    | 3              | 15.5                   | 35.5                      | 310 (683.4)                   | 7.0 (23.0)                           | 9.9                         |
| 8    | 3              | 16.7                   | 46.8                      | 450 (992.1)                   | 9.4 (30.8)                           | 13.2                        |
| 12   | 3              | 18.5                   | 70.8                      | 620 (1366.9)                  | 14.2 (46.4)                          | 19.8                        |
| 16   | 3              | 19.8                   | 95.5                      | 880 (1940.1)                  | 19.0 (62.3)                          | 26.4                        |
| 1    | 4              | 5.5                    | 3.5                       | 70 (154.3)                    | 1.0 (3.3)                            | 1.7                         |
| 2    | 4              | 8.6                    | 7.2                       | 140 (308.6)                   | 2.2 (7.2)                            | 3.3                         |
| 4    | 4              | 11.7                   | 14.8                      | 330 (727.5)                   | 4.6 (15.1)                           | 6.6                         |
| 6    | 4              | 13.5                   | 22.4                      | 440 (970.0)                   | 7.0 (23.0)                           | 9.9                         |
| 8    | 4              | 14.7                   | 29.5                      | 660 (1455.1)                  | 9.4 (30.8)                           | 13.2                        |
| 12   | 4              | 16.5                   | 44.7                      | 880 (1940.1)                  | 14.2 (46.4)                          | 19.8                        |
| 16   | 4              | 17.8                   | 60.3                      | 1320 (2910.1)                 | 19.0 (62.3)                          | 26.4                        |

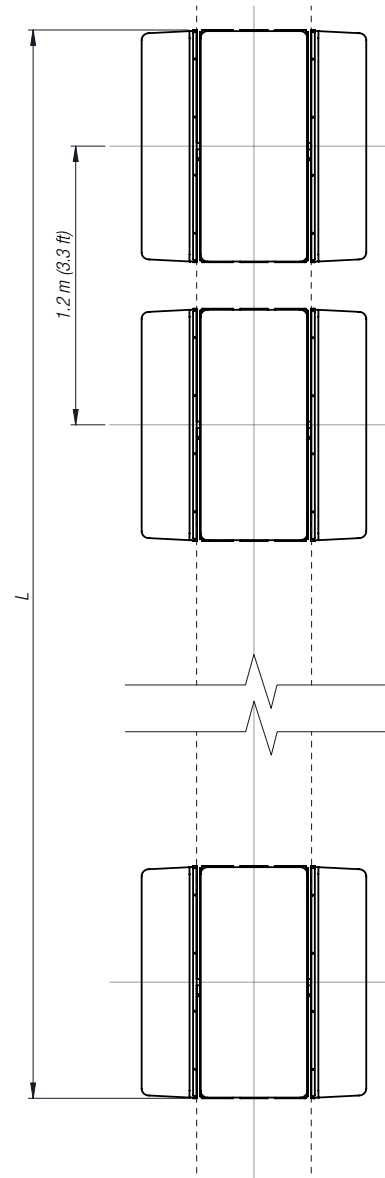
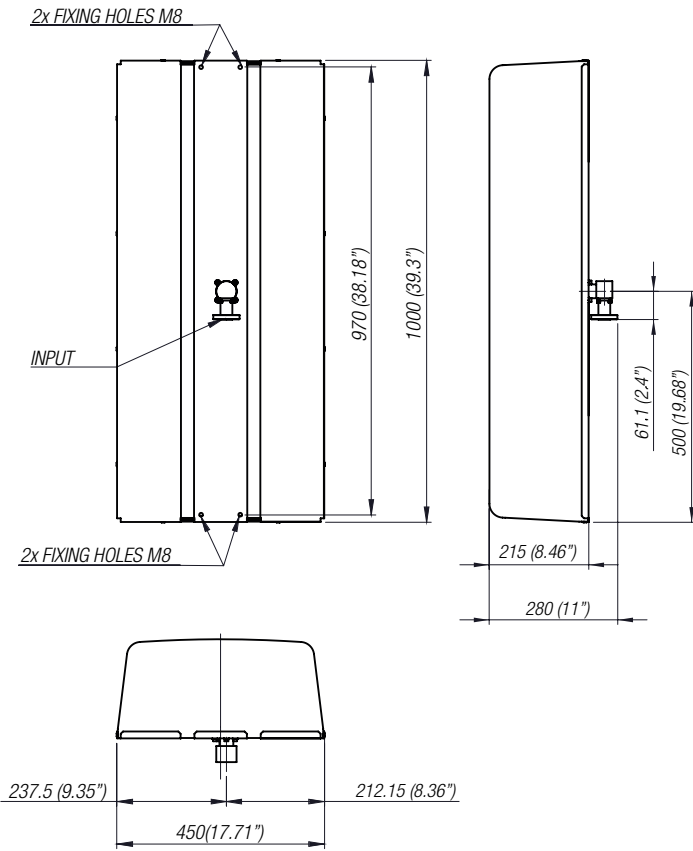
**Note:**  
Antenna Distance (D) and Antenna Offset (O) are subject to change according to requirement.  
Custom designed antennas meeting special requirements such as specific azimuthal pattern, different gains and custom power input are available upon request.

(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.  
(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**

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

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