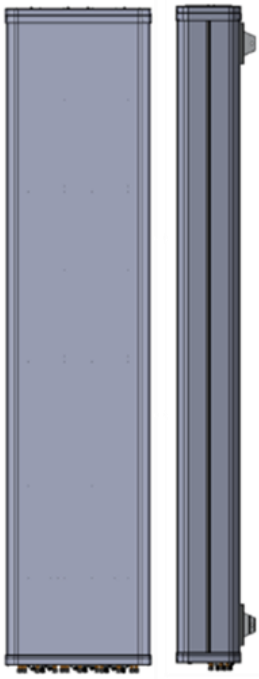
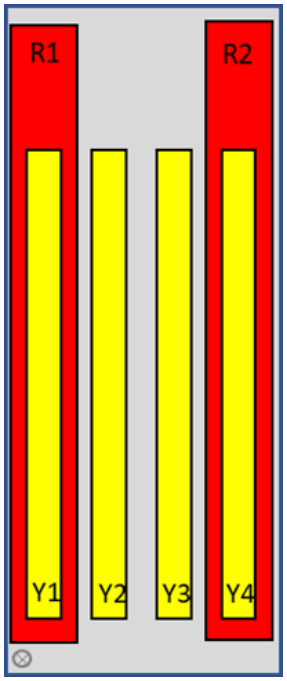
Antenna type

12075x

CMA-UBTULBULBHHHH/6515/15/18/19/19/18

12-port antenna	Unit	R1	R2	Y1	Y2	Y3	Y4
Frequency range	MHz	617 - 894	617 - 894	1695 - 2360	1695 - 2690	1695 - 2690	1695 - 2360
Polarization		x	X	x	x	x	x
HBW	°	65	65	65	65	65	65
Gain	dBi	15	15	18	19	19	18
EDT range	°	4 – 14	4 – 14	2 - 9	2 - 10	2 - 10	2 - 9





Product architecture

The CellMax new multiband antennas extend the line of the ultra-wide band antennas, combining wide band frequency range in the mid band with wide band in the low band, still featuring exceptionally low insertion loss in a compact package.

The design aims at low differences between the ports in terms of gain (per band), azimuth and elevation patterns, and a very good electrical tilt precision, allowing the network to generate highest possible cell throughput, capacity, and coverage.

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Electrical Parameters R1 and R2:

Parameter (Radiation)				
Frequency band	MHz	617-698	699-798	824-894
Gain	dBi	13.5	14.0	14.6
Azimuth Parameters				
Azimuth (3dB) Beam Width	°	75	72	69
Azimuth Beam Squint 3dB	°	6	6	6
Front to Back Ratio (total power ± 30 °)	dB	>20	>20	>20
Cross-Polar Discrimination (0°)	dB	>15	>15	>16
Sector Power Ratio	%	8	8	6
Elevation Parameters				
Elevation (3 dB) Beam Width	°	20.8	18.5	16.4
Electrical Downtilt Range	°	4 – 14	4 – 14	4 – 14
First upper Sidelobe suppression	dB	>12	>13	>14

Parameter (ports)		
Frequency band	MHz	617-894
Impedance	Ω	50
VSWR/Return Loss	_/dB	1.5 / 14
Intra Array Isolation	dB	25
Inter Array Isolation	dB	25
Passive Intermodulation @ 2x43 dBm CW	dBc	-155
Maximum input Power per port	W	500
Antenna Insertion Loss	dB	0.3

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Antenna type

12075x

CMA-UBTULBULBHHHH/6515/15/18/19/19/18

Parameters Y1,Y4:

Parameter (Radiation)					
Frequency band	MHz	1695 - 1880	1850 - 1990	1920 - 2170	2200 - 2360
Gain	dBi	18.1	18.1	18.1	17.9
Azimuth Parameters					
Azimuth (3dB) Beam Width	°	62	60	60	59
Azimuth Beam Squint	°	1	1	1	1
Front to Back Ratio (total power ± 30 °)	dB	>28	>30	>31	>31
Cross-Polar Discrimination (0°)	dB	>23	>24	>26	>25
Sector Power Ratio	%	3	2	2	2
Elevation Parameters					
Elevation (3 dB) Beam Width	°	7.6	7.0	6.7	5.9
Electrical Downtilt Range	°	2 – 9	2 – 9	2 – 9	2 – 9
First upper Sidelobe suppression	dB	>18	>18	>18	>20

Parameters Y2,Y3:

Parameter (Radiation)	Unit					
Frequency band	MHz	1695 - 1880	1850 - 1990	1920 - 2170	2200 - 2360	2490 - 2690
Gain	dBi	18.2	18.6	19.0	19.0	19.1
Azimuth Parameters						
Azimuth (3dB) Beam Width	°	61	58	55	55	56
Azimuth Beam Squint	°	1	1	3	3	1
Front to Back Ratio (total power)	dB	>32	>30	>30	>32	>34
Cross-Polar Discrimination (0°)	dB	>23	>20	>21	>20	>20
Sector Power Ratio	%	4	3	3	2	3
Elevation Parameters						
Elevation (3 dB) Beam Width	°	8.1	7.6	7.2	6.3	5.6
Electrical Downtilt Range	°	2 – 10	2 – 10	2 – 10	2 – 10	2 – 10
First upper Sidelobe suppression	dB	>15	>20	>16	>16	>17
First Nullfill Below Horizon	dB	15	16	17	19	28

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Antenna type

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CMA-UBTULBULBHHHH/6515/15/18/19/19/18

Parameter (ports)	Unit					
Frequency band	MHz	1695 - 1880	1850 - 1990	1920 - 2170	2200 - 2360	2490 - 2690
Impedance	Ω	50				
VSWR/Return Loss	_/dB	1.5 / 14				
Intra Array Isolation	dB	25				
Inter Array Isolation	dB	25				
Passive Intermodulation @ 2x43 dBm CW	dBc	-155				
Maximum Input Power per port	W	500				
Antenna Insertion Loss	dB	0.4	0.4	0.4	0.5	0.5

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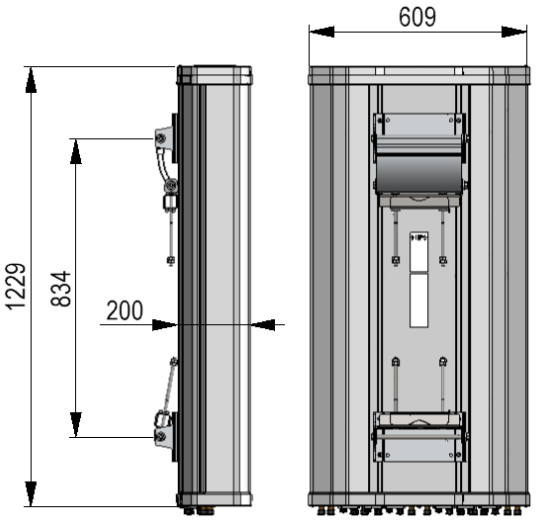
CMA-UBTULBULBHHHH/6515/15/18/19/19/18

Mechanical parameters:

Mechanical specification:	
Connectors	12 x 4.3 -10 female
Connector position	Bottom
Lightning protection	DC grounded
Height mm (inch)	1229 (48)
Width mm (inch)	609 (24)
Depth mm (inch)	200 (8)
Antenna weight kg (lb)	40 (88)
Wind load at 42 m/s (94 mph)	
Frontal N (lbf)	766 (172)
Lateral N (lbf)	155 (35)
Survival wind speed m/s (mph)	67 (151)
EPA m^2 ($inch^2$)	1.29 (1998)
Colour radome	Light Grey, RAL 7035
Radome material	ASA
Mounting hardware:	
Mounting bracket	2
Bracket weight (complete) kg (lb)	4 (9)
Pole diameter mm (inch)	45 (1.8) - 120 (4.7)
Mechanical tilt range °	0 - 5



Packing data	
Box size mm (inch)	2260x634x293 (89x25x12)
Box weight kg (lb)	50 (110)
Maximum number of boxes per pallet	7

Ordering information:

Product number	Product description
120755	CMA-UBTULBULBHHHH/6515/15/18/19/19/19/18/RET including standard tilt mount

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Antenna type

12075x

CMA-UBTULBULBHHHH/6515/15/18/19/19/18

Bottom View

RET info

The RET actuator is AISG compatible and signals Single-Antenna RET Device type 0x01 (hex) in AISG protocol layer 2 as described in 3GPP TS25.462 (a.k.a. TYPE 1).

One RET actuator per antenna column, with individual AISG connectors in and out.

Type CMA-RET-02

RET spare part order number: 110086.

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