

XK_a

UPMAST RADAR SENSOR



The GEM elettronica dual band compact radar is capable of precise detection of targets at virtually any range. This clearly yields optimum performance, high reliability and interfacing made easy due to standard protocols used.

It exploits dual band benefits:

X : optimum radar performances at medium-to-long ranges

K_a : optimum radar performances at short-to-medium ranges



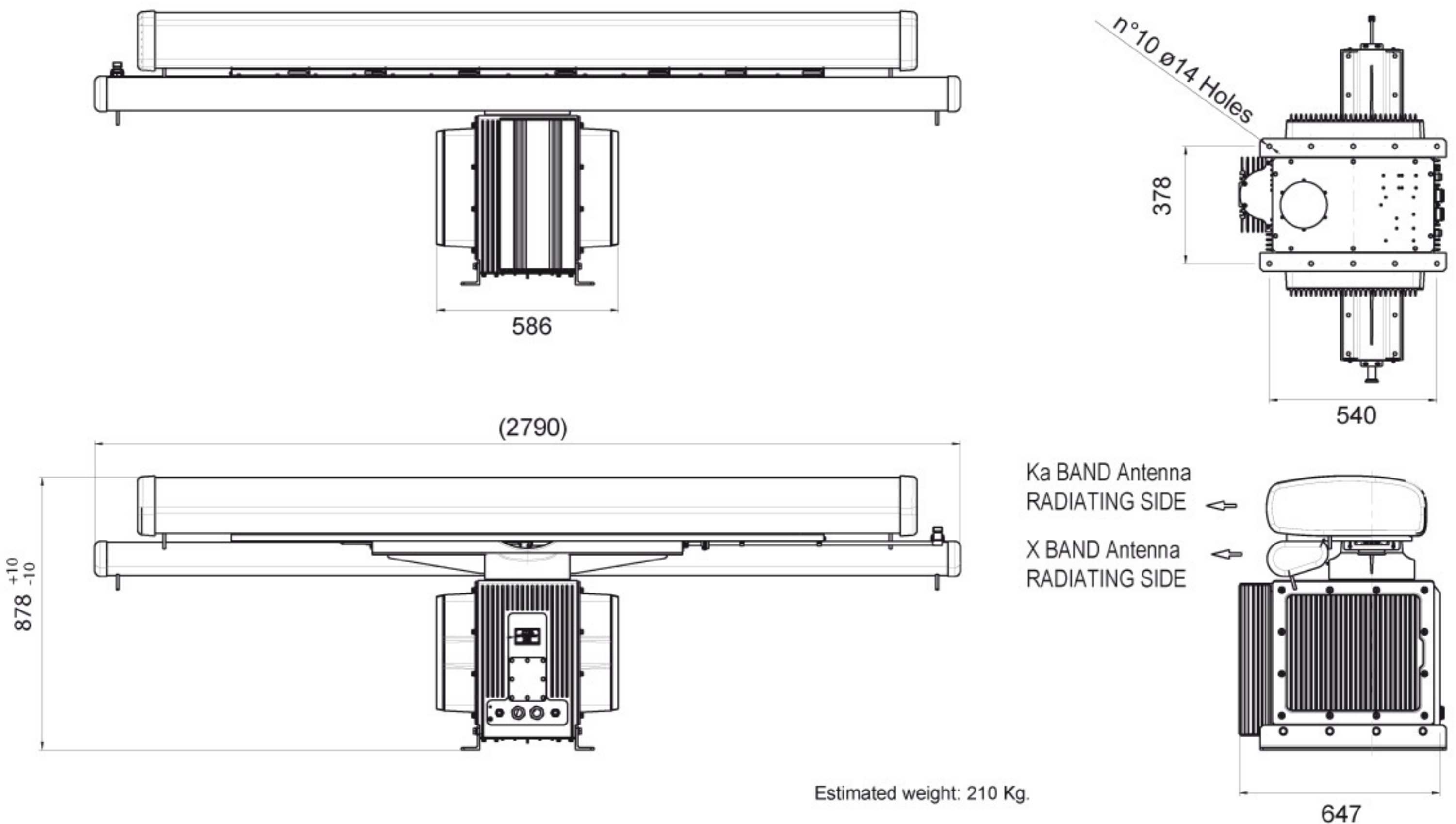
ARRAY MODEL	X-BAND	K _a -BAND
Length	9 feet	8 feet
Type	Slotted waveguide	
Frequency band	9.365 - 9.455 GHz	33.4 - 34.2 GHz
Polarization	H/C	V/C
Horizontal beamwidth to -3dB	≤ 0.85°	≤ 0.23°
Vertical beamwidth to -3dB	< 25°	< 7.5°
Gain	≥ 31 dBi	≥ 38.4 dBi
Rotation speed	22 or 60 rpm	
Tolerable relative wind speed	100 knots	

ENVIRONMENTAL PERFORMANCES	
Operating temperature range:	From -25°C to +70°C
Relative humidity:	Up to 95% at +40%
Vibrations	In accordance with IEC-945
Vibrations/shocks	1 g from 0 to 50 Hz

TRANSCEIVER UNIT PERFORMANCE	X-BAND	K _a -BAND
Peak power (nominal):	25 kW (nominal)	6 kW (nominal)
Radiation frequency:	9.365 - 9.455 GHz	33.4 - 34.2 GHz
Pulse Width:	PRF (Hz) PW/ns	PRF (Hz) PW/ns
	500 1200	2500 150
	800 600	10000 40
	1600 300	
	3200 80	
Modulator:	fully solid state	
Dynamic range:	100 dB	
Intermediate Frequency (I.F.):	60 MHz ± 2 MHz	
I.F. bandwidth:	20 MHz for short and medium pulse 4 MHz for long and extralong pulse (with ± 10% tolerance)	33 MHz for short pulse 7 MHz for long pulse (with ± 10% tolerance)
Front End:	microwave integrated circuit	
Noise figure:	< 4 dB	< 5 dB
Duplexer:	ferrite circulator with solid state limiter diode	
Sector blanking:	available	

OUTLINE DRAWING

Dimension in mm



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