Imaging Radar, Air Surveillance

KMB Telematics, Inc.

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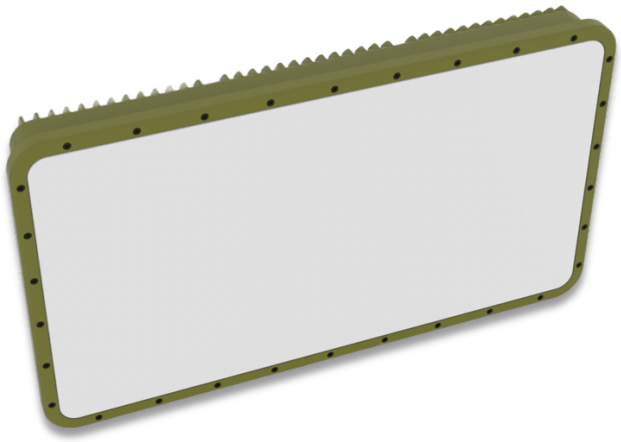
Preliminary - Subject to Change

Patent Notice
Technologies and products described in this document are covered by US patents 11,435,471 and 11,448,754. Other patents and pending patents may also apply.

Export Control Classification Number (ECCN)
The systems described may be subject to Export Administration Regulations. Your company, as the exporter of record, is responsible for determining the correct classification of any item at the time of export. Any export classification by KMB is for KMB's internal use only and shall not be construed as a representation or warranty regarding the proper export classification or whether an export license or other documentation is required for exporting KMB systems.

Specifications, Preliminary



Size	65	cm x 37 cm x 14 cm	
Weight	16.5	kg	
Power	205	W	In operation, peak
	<1	W	Standby
Resolution, horizontal	1.6	deg	
Resolution, vertical	2.1	deg	
Angular accuracy, horizontal	0.2	deg	
Angular accuracy, vertical	0.2	deg	
Field of view, horizontal	90	deg	(± 45 deg)
Field of view, vertical	80	deg	(± 40 deg)
Maximum range, detection, DJI Mavic (-20 dBsm)	2,150	m	Clear weather
	1,840	m	Light rain: 5 mm/hr
	1,460	m	Heavy rain: 12 mm/hr
Range resolution	15	m	>100 m
	0.75 – 15	m	0 – 100 m
Refresh rate	1.7	frames / sec	
Min velocity	0	m/s	Zero Doppler™
Max velocity	± 87	m/s	
Velocity resolution	0.09	m/s	
Frequency band	24	GHz	K_a band
Input voltage	28	V	MIL-STD-1275E
Electrical Interfaces	Power, high-speed data		
Communications protocol	2.5G Ethernet		
Output data	3D imagery: reflectivity and velocity		high bandwidth, suitable for classification or sensor fusion using AI
	Target tracks		low bandwidth, suitable for cuing other sensors
Temperature, operation	-25 - 55	°C	
Temperature, storage	-40 - 80	°C	
Ingress protection	IP 69K		Waterproof, washable

Fully Customizable

Software-defined architecture can be customized to meet customer needs, including:

- Higher resolution
- Custom field of view
- Longer/shorter range
- Faster update rate
- Choice of operating frequency: 24 GHz, 60 GHz, 77 GHz
- Higher dynamic range

About KMB

- Founded in 2018, KMB Telematics makes next generation imaging radar systems for autonomous machines. We combine the latest low-cost radar chips with proprietary signal processing to **turn radar into a software problem**.
- KMB radar is ideal for enabling autonomy – in the air and on the ground.

KMB radar scales to very high resolution. See for example this radar image of a bridge: