Imaging Radar, Airborne Detect and Avoid

KMB Telematics, Inc.

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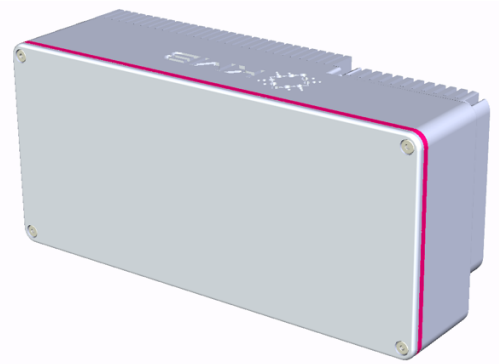
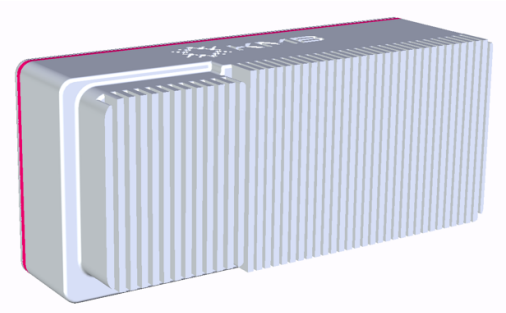
Preliminary - Subject to Change

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	14	cm x 6.5 cm x 4.6 cm	
Weight	1.4	kg	
Power	20	W	In continuous operation
	<1	W	Standby
Resolution, horizontal	2.5	deg	
Resolution, vertical	4.3	deg	
Angular accuracy, horizontal	0.2	deg	
Angular accuracy, vertical	0.2	deg	
Field of view, horizontal	120	deg	(± 60 deg)
Field of view, vertical	30	deg	(± 15 deg)
Maximum range, detection			
DJI Mavic (-20 dBsm)	750	m	
Cessna (2 dBsm)	2,400	m	
Range resolution	0.75-3.25	m	0 – 100 m
	15	m	100 – 2,400 m
Min velocity	0	m/s	Zero Doppler™
Max velocity	± 50	m/s	
Velocity resolution	1	m/s	
Refresh rate	1	frame / sec	
Frequency band	24	GHz	K_a band
Electrical Interfaces	Power, high-speed data, low speed data		
Input voltage	5 - 36	V	
Output data	Target tracks: TTL serial		low bandwidth, suitable for autopilot
	3D imagery: Gigabit Ethernet		high bandwidth, suitable for classification or sensor fusion with AI
Temperature, operation	-25 - 55	°C	
Temperature, storage	-40 - 80	°C	
Ingress protection	IP 69K		Waterproof, washable
Mechanical shock and vibration	ISO 16750-3		
Export control	Non-ITAR		EAR ECCN 6A008.g

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: