

PERIMETER SECURITY RADAR

VALLUS

FMCW radars with massive MIMO antenna array that provide accurate and reliable intrusion detection and target tracking (walkers / vehicles / boats)

CUTTING EDGE TECHNOLOGY

By adopting massive MIMO antenna array and FMCW (frequency modulated continuous wave) technology, it enables stable and reliable detection and tracking of intruders with instant and accurate data, including distance, speed, and angle.

AI EMPOWERED ALGORITHM

AI empowered algorithm facilitates the capability of target clustering and increases environmental awareness. It not only provides smart target classification, but also intelligently adapts to its environment to minimize false alerts caused by wind, plants, and small animals.

EASY INTEGRATION

The modular design and user-friendly interface make the radar easy to deploy and use. The open-architecture communication protocols allow for a seamless integration into your current systems.

24/7 PROTECTION IN ALL CONDITIONS

The radar is immune to many environmental conditions, such as light, rain, dust, fog, and smoke. Built with an industry-certified rugged design, it ensures stable performance and continuous, all-weather protection even in the harshest environments.



KEY BENEFITS:

- Frequency: 24GHz / 60GHz
- Detect and track intrusions of up to 1650 ft for walkers, 2300 ft for vehicles, and 5200 ft for boats
- AI empowered algorithm for accurate and reliable intrusion detection with minimum false alerts
- Smart target classification
- Affordable system and easy to deploy
- Reliable protection in all weather and all conditions, day and night

PERIMETER SECURITY RADAR SPECIFICATIONS								
Area Security				Perimeter Security			Water Security	Indoor Security
Model	RA500	RA200	RA60	RP500	AXPR200-P	AXRP200-L	RS16H	RA8
Detection and accuracy								
Max dection range	1650 ft for walkers and 2300 ft for vehicles	700 ft for walkers and 1000 ft for vehicles	200 ft (walkers and vehicles)	1650 ft (walkers and vehicles)	1150 ft for walkers and 1650 ft for vehicles	750 ft for walkers and 1000 ft for vehicles	5200 ft (boat longer than 25 ft) / 2600 ft (boat shorter than 25 ft)	25 ft for human
Range accuracy	3 ft	3 ft	3 ft	3 ft	3 ft	3 ft	± 6 ft	
Scan type	5 ft	5 ft	6 ft	5 ft	5 ft	5 ft	6 ft	0.2 ft
Maximum detectable target velocity	30 m/s	30 m/s	20 m/s	30 m/s	30 m/s	30 m/s		
Field of view	± 60° (horizontal) ± 7.5° (vertical)	± 60° (horizontal) ± 7.5° (vertical)	± 60° (horizontal) ± 10° (vertical)	± 15° (horizontal) ± 6° (vertical)	± 10° (horizontal) ± 6.5° (vertical)	± 10° (horizontal) ± 6.5° (vertical)	± 60° (horizontal) ± 7.5° (vertical)	± 60° (horizontal and vertical)
Angular accuracy	± 1°	± 1°	± 1°	± 1°	± 1°	± 1°	± 1°	
Max simutaneous tracking	32	32	16	32	32	32	32	6
Radar and performance								
Radar type	Frequency Modulated Continuous Wave (FMCW)							
Frequency band	24GHz	24GHz	61.5GHz	24GHz	24GHz	24GHz	24GHz	60GHz
Tx/Rx channels	MIMO	MIMO	2Tx/4Rx	MIMO	MIMO	MIMO	MIMO	4Tx/4Rx
Power requirement								
Power supply	DC 12V 2A/POE		DC12V 1A/POE	DC 12V 2A/POE				5V/1A
Power consumption	20W	20W	3.8W	18W	15W	9W	20W	1.5W
Network								
Communication interface	Ethernet / RS485	Ethernet / RS485	Ethernet	Ethernet / RS485	Ethernet / RS485	Ethernet / RS485	Ethernet / RS485	WiFi for data transmission and BLE for configutaion
Refresh rate	8Hz	8Hz	14Hz	8Hz	8Hz	8Hz	8Hz	10Hz
Alarm output	NO/NC relay*1; GPIO*1							
Environmental								
IP rating	IP66							Indoor application
Working temperature	-40~158°F	-40~158°F	-4~140°F	-40~158°F	-40~158°F	-40~158°F	-40~158°F	
Recommended mounting height	6-13 ft	6-13 ft	10 ft	6-13 ft	5-13 ft	5-13 ft	16-32 ft	In the corner or on the wall in the room
Dimension and weight								
Dimension (in)	5.2*8.3*2.2	5.2*8.3*2.2	8.6*3.5*5	5.2*8.3*2.2	5.2*8.3*2.2	5.2*8.3*2.2	5.2*8.3*2.2	3.3*3.3*2.3
Weight (lb)	3.6	3.6	1.4	3.6	3.6	3.6	3.6	0.2