



The YAR28(N) Series Small Target (Network) Radar

The YAR28(N) is a higher performance navigation and maritime surveillance network radar based on the general navigation radar, with better small target detection capability, more outstanding sea clutter suppression performance and superior target tracking performance. The YAR28N can be remotely controlled by the control centre via RJ45 Ethernet and can output radar echoes, target track data, bearing/position/AIS and other navigation data for the control centre to use, providing a data interface for radar control and output.

The YAR28 series marine radar complies with the latest international radar standards such as IEC 60945 and IEC 62388 (2013), and has passed the Chinese Classification Society (CCS) type approval certification and owns a Radio Transmission Equipment Type Approval Certificate. In addition to ship navigation and collision avoidance, it is also suitable for new applications such as shore-based monitoring, networking and photoelectric linkage.

The YAR28 series radar has excellent small target detection performance, and also has very good detection capability for targets with RCS as small as 0.1m². The radar adopts unique sea clutter and rain clutter suppression algorithms, constant false alarm processing, non-coherent accumulation, target enhancement, relative and ground true trail, ARPA collision avoidance, pilot ship operation and other functions, especially suitable for ocean-going, merchant ships, marine police, maritime, maritime surveillance, salvage and other occasions with high requirements for radar.

PRODUCT FEATURES

- Unique noise reduction and wave and rain clutter suppression technology, strong ability to find small targets.
- Long range of action, 0.125~128NM range.
- Up to 300 radar target tracking, outputting target number, position, speed and other track data.
- Support sector and polygon capture area setting.
- Up to 1500 AIS target displays and support fusion display of radar targets and AIS.
- Support relative and ground trailing functions and vector display for easy identification of moving vessels.
- Rich navigation aid markings, support up to 200 waypoints and 30 route plans.
- Can support wind speed, bathymetry and rangefinder display.
- Support Chinese and English bilingual menu, optional Chinese keyboard.
- Optional built-in radar performance monitor.
- Rich self-test function, automatic fault alarm, modular architecture, easy maintenance.
- N version network supports remote network control.
- N version network supports radar echo image, target track data, bearing/position/speed/AIS and other navigation data output.
- Optional support for radar target, AIS fusion and track output.

SPECIFICATIONS

• Antenna & Scanner Unit

Name	Parameters	Note		
Output frequency	X-band, 9410±30MHz			
Network Interface	RJ45, Type N supports network upgrades, control, echo data, track data, navigation data sending and receiving			
Output power (peak)	RTR12	RTR25		
	12.5kW	25.0kW		
antenna	type	Slotted waveguide array		
	polarization	horizontal		
	Antenna model	RAX12	RAX20	RAX24
	length	4ft (1.2m)	6.5ft (2m)	8ft (2.4m)
	beam width(H)	1.85°	1.25°	0.95°
	beam width(V)	22°	22°	22°
	Sidelobe within ±10°	-24dB	-28dB	-28dB
Sidelobe outside ±10°	-30dB	-32dB	-32dB	
Rotation	24RPM			
pulse length	0.075us;0.15us;0.3us;0.5us;0.7us;1.2us			
pulse repetition frequency	500Hz(96NM)/600Hz;1000Hz;1500Hz;3000Hz			
IF	60MHz			
Minimum range	25m			
Range discrimination	25m			
Range accuracy	1% of maximum range in use or 30m, which is greater			
Bearing accuracy	≤1°			
Environmental conditions				
Ambient temperature	-25° C~+55° C	IEC 60945 Ed.4		
Storage temperature	-30° C~+70° C	IEC 60945 Ed.4		
Waterproof	IPX6	IEC 60529		
Performance Monitor (RPM-X)				
frequency	9410±45MHz			
Input power	+8dBm~-+28dBm			
Input pulse width	≥1us			
Output power (2nd pulse)	-56dBm~-36dBm			
Step level	+9 dB~-11dB	First to second Pulse		
temperature	-30°C~+80°C			

*RPM-X is optional

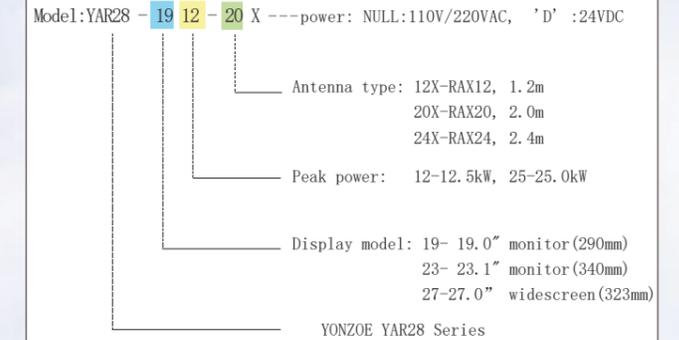
• Display & Processor Unit

Name	parameters	Note		
Display size,model	RD19x RD23x			
	19.0" 23.1" 27"			
Effective radar diameter	290mm 340mm 340mm			
Resolution	1280X1024 1600X1200 1920X1280			
color	Yellow, green, white, colour echo in 32 levels			
Range unit	(NM) or (ka)			
Display mode	Head up :			
	head up true bearing :			
	North up :			
	North up true motion:			
	Course up :			
stern up :				
Relative or true trails	15s-25min selectable			
target track	Max 300ARPA target; 0.1NM-24NM	Auto or manual, Support for polygons		
AIS	1000 targets	IMO SN/Circ. 217; IEC/PAS 60936-5		
Radar map	Navline, waypoints, shorelines, buoys, etc.			
range (NM)	0.125 0.25 0.5 0.75 1.0 1.5 2 3 6 12 24 32 48 96 128			
No. of rings	5 5 5 5 5 5 4 6 6 6 6 4 6 8 4			
Ring interval (NM)	0.025 0.05 0.1 0.15 0.2 0.3 0.5 0.5 1 2 4 8 8 12 32			
Interface	COMPASS;NAVIGATOR;LOG;AIS; VDR;ARPA ;DATA;ALARM;RJ45			
For Electric	Monitor	RD01	110VAC(85-130V)-2.0A	with 'D' for DC
		RD01D	220VAC(170-260V)-1.0A	
	Processor	RPA001	110VAC(85-130)-4.0A	
		RPA001D	220VAC(170-260)-2.0A	
			24VDC(18-36V)-10A	
			24VDC(18-36V)-20A	

Temperature		
Ambient temperature	-15° C~+55° C	IEC 60945
storage temperature	-30° C~+70° C	IEC 60945
Waterproof	IPX0	

*Connecting cables: 30m Standard ,cable mode is "RC25".

SELECTION TREE



CONNECTIONS

