



PATHFINDER RADAR

SOLID-STATE IMO TYPE APPROVED RADAR SYSTEMS

Key Benefits

Built to Last

6' fan-less, solid-state open array antenna with simplified cabling and lightweight design reduces installation time

Simplified Installation

Half the weight of comparable radars and small-diameter interconnect cables simplifies cable runs and reduces installation time.

The New Standard

Target performance exceeds a 12kW magnetron radar while surpassing IMO requirements for target detection, including the detection of RACON beacons over 5.5 NM



Other Benefits

- Superior target separation and increased long-range resolution using CHIRP pulse compression and beam sharpening technology
- Subjected to rigorous environmental testing for increased reliability and lower cost of ownership
- Designed for compliance with IMO standards, IEC 62288 and IEC 62388
- Modern user interface allowing access to key functions without distracting from the main radar screen.
- Asterix CAT-240 support for seamless integration with third-party ECDIS, radar tracking applications, and naval combat systems.

Specifications for Pathfinder Radar Systems

RADAR			
ANTENNA	E70630	POWER CONSUMPTION	
Antenna Size	6ft	Peak Power Output	110 W
Antenna Type	Slotted Array	Power Consumption (Typical)	95 W
Polarization	Horizontal	Power Consumption (Standby)	28 W
Beamwidth (Vertical)	25°	Power Consumption (Max)	195 W
Beamwidth (Horizontal)	1.32°	DISPLAY FEATURES	
Rotation Speed (rpm)	12, 24, 36, 48, 60 *Not all modes IMO certified	Orientation Modes	H-UP, STAB H-UP, C-UP, N-UP
Max Wind Speed	100 Kn	Stabilization Modes	Ground, Sea
Weight	12 Kg	Motion Modes	True, Relative
TRANSCEIVER	E70621	Target Tracking	100 Targets (Auto or Manual)
Max Range Scale	96 Nm	AIS	4000 Displayed 6000 Processed
Rotation Speed (rpm)	12, 24, 36, 48, 60 *Not all modes meet IMO	Past Positions	Off, 1-30 mins
Power Connection	1	Vectors	Off, 1-30 mins
Data Connection	1 (Raynet)	Trails	Off, 1-30 mins
Transmitter Frequencies (Mhz)	9370, 9400, 9430	Radar Maps	>99 user maps > 100 points per map
Receiver Characteristics	Linear	Acquisition Zones	2
Receiver Noise	< 5 dB	PI Lines	> 10 PI lines
Peak Power Output	110 W	Range Scales (Range Rings) NM	0.25 (.13) 0.5 (.25) 0.75 (.25) 1.5 (.5) 3 (1) 6 (2) 12 (3) 24 (4) 48 (8) 96 (12)
Weight	16 Kg		

INTERFACING	
PATHFINDER RADAR DISPLAYS	ALL
Ethernet Ports	3 PoE RayNet (10/100/1,000 Mbps/s)
IEC-61162-450 Enabled	Yes
Buzzer Output	2 Bare-ended wires (via accessory cable)
PATHFINDER DCU	A80792
Serial Port Inputs	8 Configurable Opto-isolated
Serial Port Outputs	6 Configurable ISO-Drive™ isolated
Alarm Output	1 Alarm output relay (N/O and N/C contacts) Activated on System Fail or Specific Alert ID
LAN	10/100BaseT, automatic polarity detection
DATA SENTENCES	PATHFINDER RADAR SYSTEM
Input	ACK, ACN, ALR, DBT, DPT, DTM, GGA, GLL, GNS, HBT, HDG, HDT, MWV, RMC, ROT, RTE, SRP, THS, VBW, VDM, VDO, VHW, VLW, VTG, WPL, ZDA
DATA SENTENCES	PATHFINDER RADAR SYSTEM
Output	ACK, ALC, ALF, ALR, ARC, DBT, DPT, EVE, GLL, GSA, GST, GSV, HBT, OSD, RSD, SRP, TLB, TTD, TTM, VHW, VTG

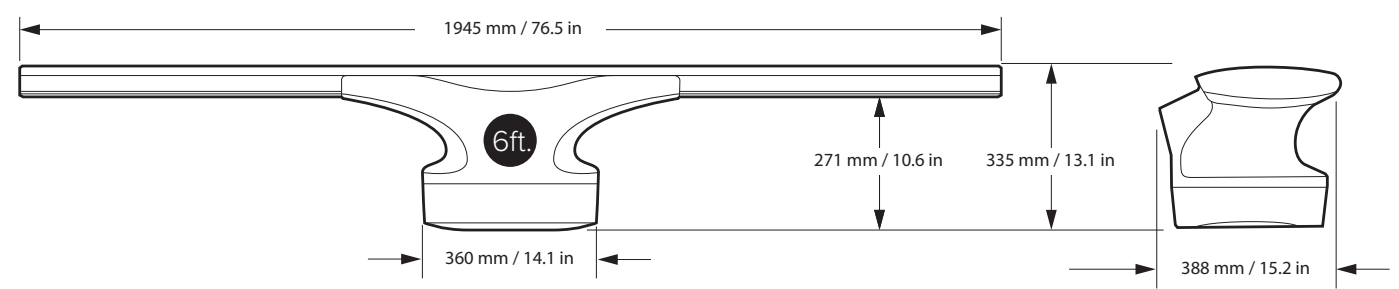
Specifications for Pathfinder Radar Systems

ENVIRONMENTAL	
OPEN ARRAY	E70621
Waterproof Rating	IPx6
Operating Temperature Range	-25°C to +55°C (-13°F to 131°F)
Humidity	Up to 93% at 40°C (104°F)
Maximum Wind Speed	100 kn
PATHFINDER BLACK BOX PROCESSOR	E70708
Waterproof Rating	TBD
Operating Temperature Range	-25°C to +55°C (-13°F to 131°F)
Humidity	Up to 93% at 40°C (104°F)
PATHFINDER DCU	A80792
Waterproof Rating	IP40
Operating Temperature Range	-25°C to +70°C (-13°F to 158°F)
Humidity	Up to 95% at 55°C (131°F)

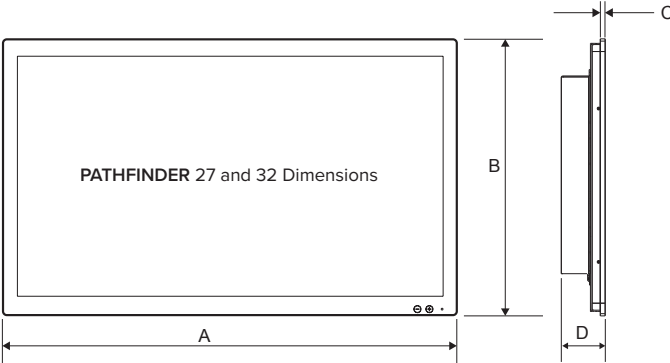
CAT-1 DISPLAYS		
Pathfinder Radar Display	27"	32"
Part Number	E70709	E70710
Screen Size	27"	32"
Resolution	1920 x 1080 pixels	3840 x 2160 pixels
Illumination	350 cd/m ² Typical	350 cd/m ² (typical)
Weight (kg)	13.3kg / 29.3lbs	13.5kg / 29.7lbs
Waterproof Rating	IP66 front – IP22 rear	
Operating Temperature	-15°C to +55°C (+5° F to +131°F)	
Humidity	Up to 95%	

CAT-2 AND CAT-3 PATHFINDER DISPLAYS				
Pathfinder Radar Display	16"	19"	22"	24"
Part Number	E70661-IMO	E70662-IMO	E70663-IMO	E70664-IMO
Screen Size	15.6"	18.5"	21.5"	24"
Resolution	1920 x 1080 pixels	1920 x 1080 pixels	1920 x 1080 pixels	1920 x 1200 WUXGA
Illumination	1300 nits	1200 nits	1275 nits	1300 nits
Viewing Distance (m)	0.6	0.7	0.8	0.9
Weight (kg)	5.9 kg / 13lbs	7.6 kg / 16.75 lbs	9.9 kg / 21.83 lbs	11.8 kg / 26 lbs
Waterproof Rating	IPx6			
Operating Temperature	-25°C to +55°C (-13°F to 131°F)			
Humidity	Up to 93% at 40°C (104°F)			

POWER REQUIREMENTS		
	V (DC)	AC
Transceiver	12/24 (via VCM100)	110/230v via AC Power Kit
Pathfinder Radar Displays	12/24	110/230v via AC Power Kit
Pathfinder Black Box Processor	12/24	110/230v via AC Power Kit
Pathfinder DCU	12/24	110/230v via AC Power Kit



	PATHFINDER 27		PATHFINDER 32	
	mm	in	mm	in
A	394.9	15.54	462	18.1
B	248.22	9.77	289	11.3
C	9.0	0.35	9.0	0.35
D	73.96	2.91	73.96	2.91



	PATHFINDER 16		PATHFINDER 19		PATHFINDER 22		PATHFINDER 24	
	mm	in	mm	in	mm	in	mm	in
A	394.9	15.54	462	18.1	534	21.02	578	22.76
B	248.22	9.77	289	11.3	326	12.83	387	15.23
C	9.0	0.35	9.0	0.35	9.0	0.35	9.0	0.35
D	73.96	2.91	73.96	2.91	79.75	3.14	76	3.0

