

WATERBORNE SITUATIONAL INTELLIGENCE

RADAR RADOME

SHARP^{Eye} SCV
SMALL CRAFT VARIANT



A Kelvin Hughes Surveillance radar solution is the primary sensor for threat detection at sea, in the littoral and riverine environment. SharpEye™ SCV ensures users have the best possible real time situational awareness. We provide fully coherent SharpEye™ radar technologies, developed specifically for small watercraft capable of detecting the smallest of targets in the most challenging conditions.

The SharpEye™ SCV family of lightweight coherent radars utilising the core SharpEye™ Technology has been designed to meet specific requirements of naval and military watercraft ranging from small RHIBs up to 35m fast watercraft operated by navies, armies, special forces, police, customs, search and rescue and coastguards. A modular, scalable and unique processing architecture packages our solid state technology for a wide range of watercraft applications. SharpEye™ SCV offers low cost, low power consumption, lightweight design, ultra-high reliability, and superior performance. Key features include anti-jamming, counter surveillance, covert mode and interchangeable radome covers to suit mission needs. Doppler processing enables the detection of extremely small and slow targets in inclement weather conditions day or night.

SharpEye™ SCV

The SharpEye™ SCV high performance I-band (X-band) radar radomes are designed for easy installation on radar arches and masts and have a flexible interface making the system display independent. Incorporating SharpEye™ technology the Small Craft Variant radar system provides situational awareness to small watercraft giving waterborne missions a discreet means of building an organic surveillance picture out to the radar horizon, so reducing reliance on external communications links and informing real time tactical decision making.

OPTIONS

COMPACT DISPLAY SYSTEM	RHIBS, FIAC
MANTADIGITAL™ DISPLAY SYSTEM	FAC, COAST GUARD VESSELS, PATROL BOAT
INTEGRATE WITH LEGACY DISPLAY	FAC, COAST GUARD VESSELS, PATROL BOAT
INTEGRATE WITH COTS DISPLAY	OPEN ARCHITECTURE FLEXIBLE INTERFACE
RADAR RADOME COVER	MULTIPLE COLOUR OPTIONS, PROFILE OPTIONS UP ON REQUEST

SharpEye™ SCV is a lightweight, low cost, low power, environmentally sealed I-band surveillance and tracking system designed to bridge the gap between leisure and IMO type approved radars. Greatly reduced radar mass and reduced physical footprint of the SharpEye™ transceiver enables the SharpEye™ SCV to overcome the inherent performance limitations of commercial type navigation radars in cluttered environments day or night and in all weather conditions. It presents small craft operators with a high quality radar picture via a chosen display option. The multiple dome profile and colour options combined with features such as covert mode enables the radar radome to be used in previously unthought-of ways and provide a radar capability on a par with an I-band navigation and tactical radar of a capital ship.

BENEFITS		FEATURES	
ANTI-JAMMING	RESISTANT TO JAMMING RESISTANT TO INTERFERENCE	AUTOMATIC ACQUISITION	AIR TARGETS SURFACE TARGETS
HIGH ACCURACY	NARROW BEAMWIDTH WIDE BANDWIDTH	SURFACE & AERIAL TRACKING	AUTOMATIC DESIGNATION MANUAL DESIGNATION
CLUTTER INSUSCEPTIBILITY	MOVING TARGET INDICATION DOPPLER PROCESSING FAST FOURIER TRANSFORMATION RF FREQUENCY VARIATION	SCANNING IN AZIMUTH	SECTOR SCANNING 360 DEGREE SCANNING
RAPID DEPLOYMENT	INTEGRATED TRANSCEIVER INTEGRATED GPS SINGLE INTERCONNECT LOOM RADAR POWER UP - 15 SECONDS SIMPLE MOUNTING OPTIONS	TARGET CLASSIFICATION	AUTOMATIC
ULTRA-HIGH RELIABILITY	SOLID STATE ELECTRONICS GRACEFUL DEGRADATION	DETECTION TRACKING	CONCURRENT LONG & SHORT RANGE
CONCURRENT TRACKING & DETECTION	SHORT RANGE LONG RANGE	RADAR OUTPUT	GIGABIT ETHERNET
		CONTINUOUS HEALTH MONITOR	BUILT-IN SELF TEST SYSTEM STATUS MONITOR

SPECIFICATION		PERFORMANCE			
PEAK POWER	50W NOMINAL	DETECTION RANGE (SEA STATE 3)	MAN IN WATER	1 NM	MAX
			SMALL BOAT	2.5 NM	MAX
			LARGE SHIP	24 NM	MAX
WAVEFORMS	PULSED, COHERENT AUTOMATIC POWER OPTIMISATION	RANGE RESOLUTION	40m		
SIGNAL PROCESSING	PULSE COMPRESSION PULSE DOPPLER ADAPTIVE CLUTTER SUPPRESSION	RANGE ACCURACY	5m RMS		
OUTPUT DATA	PLOT DATA VIA DIGITAL LAN	AZIMUTH ACCURACY	0.8 DEGREES RMS		
DIMENSIONS	720mm x 220mm	NUMBER OF TRACKS	DEPENDENT ON DISPLAY OPTION		
ANTENNA	24 INCH ROTATING ARRAY	PROBABILITY OF FALSE ALARM	10 ⁻⁴ Pfa		
POWER	BATTERY OPERATED 50 WATT MAX 18 -33 VDC	MOVING TARGET DETECTION	UP TO 1024 FILTERS		
WEIGHT	10kg	MOVING TARGET INDICATION	YES		
INSTRUMENTED RANGE	UP TO 48 NM	CONSTANT FALSE ALARM RATE	YES		
TARGET CLASSIFICATION	SURFACE & AIR	ENVIRONMENTAL	IP67		
AZIMUTH BEAM WIDTH	3.6 DEGREES	OPERATING TEMPERATURE	-25 DEG TO +55 DEG		
ELEVATION BEAM WIDTH	25 DEGREES	RELIABILITY	UP TO 30,000 HOURS		
		FREQUENCY	I-BAND	9.0 - 9.5 GHz	
		FREQUENCY SELECTION	11	USER SELECTABLE	

APPLICATIONS		
RHIB	PATROL BOAT	LIFE BOAT
HOVER CRAFT	POLICE BOATS	SEARCH & RESCUE
MILITARY BOAT	FAST ATTACK CRAFT	LANDING CRAFT

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