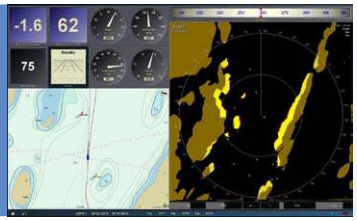
SITUATIONAL INTELLIGENCE

SOLID STATE RADOME

SHARPEYE™ SCV
SMALL CRAFT VARIANT




Until recently, users of small craft had to resort to radar equipment designed for the amateur seafarer and the leisure industry. Kelvin Hughes can now offer an alternative. Our SharpEye™ sensor technology used on warships is now available to the small boat user in the form of a radome X-Band radar. Built to advanced specifications, it delivers superior target detection in all weathers. The associated SeaCross display software was created with specialist missions in mind.

This smaller lightweight version of SharpEye™ uses solid state power amplifier technology (no magnetron or modulator) to produce a coherent transmission that enables Doppler analysis of the returns. Armed with this additional information on the returning radar plots, the device is able to see targets that other radars miss as well as seeing smaller targets at greater ranges. This advantage is more marked in poor weather conditions such as heavy sea and rain clutter, when the traditional leisure radar is almost useless.

SHARPEYE™ SCV

The radome is designed for easy installation on radar arches and masts. It has a flexible interface making it possible for the core high performance element of the radar system, the SharpEye™ transceiver, to interface with other radar displays. We also offer a 15" or 12" fully waterproof ruggedised console display with a state-of-the-art solid state ruggedised processor.

RADOME	DISPLAY	OPTIONS
Ø585mm (24") SHARPEYE™ SOLID STATE TRANSCEIVER AND ANTENNA	LCD (TFT) 381mm (15") LCD (TFT) 305mm (12") 1024 x 768 XGA RUGGEDISED CONSOLE OPERATORS DISPLAY	INTEGRATE WITH OTHER DISPLAYS THROUGH OPEN ARCHITECTURE FLEXIBLE INTERFACE
INTEGRATED GPS	SOLID STATE RUGGEDISED PROCESSOR	INTERCHANGEABLE COLOUR/PATTERN PULL OVER RADOME COVERS
AVAILABILITY - NO WARM UP	TRACKERBALL UNIT	REMOVEABLE ARMOUR LAYER FOR RADOME
POWER AMPLIFIER DUAL REDUNDANCY	OPEN ARCHITECTURE - INTERFACE WITH OTHER VESSEL SENSORS AND CAMERA	

SharpEye™ SCV uses pulse compression and Doppler processing to provide superior detection. The solid state electronics design requires no routine maintenance and, unlike normal small boat radars, has no components that degrade with time and so the high performance is available throughout the life of the unit.

Another advantage of the SharpEye™ technology is the low peak power of the transmission which is 80W, compared to anything up to 10kW from an equivalent magnetron radar. This low power coupled with a precise use of frequency, makes it very difficult for ESM equipment to detect the transmission. The user can also select individual transmit frequencies, power modes and configure azimuth sector blanking to further improve the covert characteristics of the device.

SharpEye™ SCV offers advanced sensor technology with low power consumption, ultra-high reliability, superior performance and reduced probability of transmissions being intercepted.

KELVIN HUGHES
surveillance

SITUATIONAL INTELLIGENCE, THE WORLD OVER

SOLID STATE RADOME

SHARPEYE™ BENEFITS AND FEATURES	
RESILIENCE	RESISTANT TO JAMMING RESISTANT TO INTERFERENCE
CLUTTER SUPPRESSION	DOPPLER PROCESSING RF FREQUENCY VARIATION
RAPID DEPLOYMENT	INTEGRATED TRANSCEIVER INTEGRATED GPS RADAR STANDBY MODE SIMPLE MOUNTING
ULTRA HIGH RELIABILITY	SOLID STATE ELECTRONICS (NO MAGNETRON) POWER AMPLIFIER DUAL REDUNDANCY RUGGED DESIGN
SCANNING IN AZIMUTH	SECTOR SCANNING 360° SCANNING
DETECTION	CONCURRENT LONG AND SHORT RANGE (TRANSMITS LONG, MEDIUM AND SHORT PULSE SIMULTANEOUSLY)
RADAR OUTPUT	GIGABIT LAN
CONTINUOUS HEALTH MONITOR	BUILT IN SELF TEST SYSTEM STATUS MONITOR

SHARPEYE™ PERFORMANCE	
INSTRUMENTED RANGE	UP TO 24 NM
RANGE RESOLUTION	40m
RANGE ACCURACY	5m RMS
AZIMUTH ACCURACY	0.8° RMS
PROBABILITY OF FALSE ALARM	10^{-4} Pfa
ENVIRONMENTAL	IP67 -25°C TO +55°C
FREQUENCY	X-BAND (I-BAND) 9.22-9.48 GHz
FREQUENCY SELECTION	14 USER SELECTABLE

RADOME SPECIFICATION	
PEAK POWER	UP TO 80W
WAVEFORMS	PULSED, COHERENT
SIGNAL PROCESSING	PULSE COMPRESSION PULSE DOPPLER ADAPTIVE CLUTTER SUPPRESSION
OUTPUT DATA	ASTERIX CAT 240 RADAR VIDEO
DIMENSIONS	Ø585mm X 262mm (NOT INCLUDING VIBRATION KIT)
POWER	BATTERY OPERATED 150W TYPICAL 19-32 VDC
WEIGHT	20kg (NOT INCLUDING MOUNTING KIT)
AZIMUTH BEAM WIDTH	<4° @ -3dB
ELEVATION BEAM WIDTH	25°

DISPLAY SPECIFICATION	
DISPLAY	LCD TFT 15" (381mm) OR 12" (305mm)
RESOLUTION	1024 X 768 (XGA
INSTRUMENTED RANGE	MIN 0.125 NM - MAX 24 NM
ENVIRONMENTAL	IP67 -25°C - +55°C
POWER	BATTERY OPERATED >30W 9-36 VDC
DIMENSIONS	CONSOLE MOUNTING SPECIFICATION AVAILABLE ON REQUEST
INTERFACES	SERIAL ETHERNET OPEN ARCHITECTURE VESSEL SENSORS CAMERA INTEGRATION
USER INTERFACES	TRACKERBALL IP67 SUBMERSIBLE IP68 TRACKBALL SEALING

The ruggedised display incorporates a fully customisable boat management system allowing the user to arrange the onscreen windows to show other sensors and engine data as well as the radar and chart.

Clever use of colours and customisation allows each user to have their own preferences saved for quick and easy activation of their preferred screen layout.

APPLICATIONS

RHIB	PATROL BOAT	LIFE BOAT
HOVERCRAFT	POLICE BOATS	SEARCH AND RESCUE
MILITARY BOAT	FAST ATTACK CRAFT	LANDING CRAFT

SEE WHAT YOU ARE MISSING!!

Kelvin Hughes Ltd
Voltage, Mollison Avenue,
Enfield EN3 7XQ, UK
t: +44 (0)1992 805300 f: +44 (0)1992 805310
e: surveillance@kelvinhughes.com

Kelvin Hughes LLC
631 South Washington Street, Alexandria,
VA 22314, USA
t: +1 703 548 4007 f: +1 703 548 4141

Kelvin Hughes Pte Ltd
896 Dunearn Road, #03-05 Sime Darby Centre,
Singapore, 589472
t: +65 6545 9880 f: +65 6545 8892

WWW.KELVINHUGHES.COM
surveillance@kelvinhughes.com

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