SECURITY
SINGLE MAST SOLUTION

LIGHTWEIGHT DEPLOYABLE SURVEILLANCE RADAR

- X-Band radar, 360° coverage
- Multiple E/O sensor options
- Picture compilation and threat assessment

- Extends the perimeter
- Mobile, temporary or fixed infrastructure
- Typical applications include fence line (CNIP, FOB, etc.)

SENSORS

The Single Mast Solution (SMS) provides a fully integrated and quickly deployable platform for the integration of this best-in-class radar with a wide range of electro-optical sensors to suit any operational requirement. Options can include thermal imaging cameras, long range and/or low-light optical sensors and acoustic sensors mounted on a through-shaft unit which provides 360° pan and tilt capability with no blind arcs.

The Kelvin Hughes SxV lightweight radar is a coherent wide area surveillance radar built upon our proven X-Band SharpEye™ solid state transceiver technology. Ultra-high reliability, 'fit and forget' design concept, and high detection performance make it an ideal solution for a wide range of applications. The Single Mast Solution is easy to deploy and, with its Doppler processing, can eliminate most land clutter allowing better surveillance of potential threats.

SHARPEye™ **SxV**
LIGHTWEIGHT RADAR

SOFTWARE/CONTROL

CxEye™ is our easy-to-operate control and display software. Integration of hardware and data inputs is presented seamlessly through a software interface which leverages the high-performance detection of SharpEye™ with single-touch direction of attached imaging sensors.

CxEye™ distils multiple data sources into a clear presentation for the operator. Targets are automatically tracked and displayed over georeferenced mapping. E/O sensors can be cued to radar targets and dynamically tracked.

The Single Mast Solution brings all the components together to build the surveillance picture quickly and easily. The radar, electro-optical sensors and CxEye™ control and integration software enable a Detect, Recognise, Identify and Classify methodology. CxEye™ then allows the intelligence gathered to be transmitted to headquarters or other units to ensure a realtime response capability at local, regional and national levels.

CxEye™ allows integration of multiple radars and electro-optical sensors. It is modular and scalable – allowing multiple iterations of the software to work together for larger integrated sensor networks. Capable of running on a laptop, in a vehicle or in a local control room; it can also feed into a large C4ISTAR software suite. This flexibility helps reduce infrastructure costs and is designed to fit operational requirements rather than dictate them.

CxEye™
DISPLAY & INTERFACE

KELVIN HUGHES
security

SITUATIONAL INTELLIGENCE, THE WORLD OVER

SINGLE MAST SOLUTION

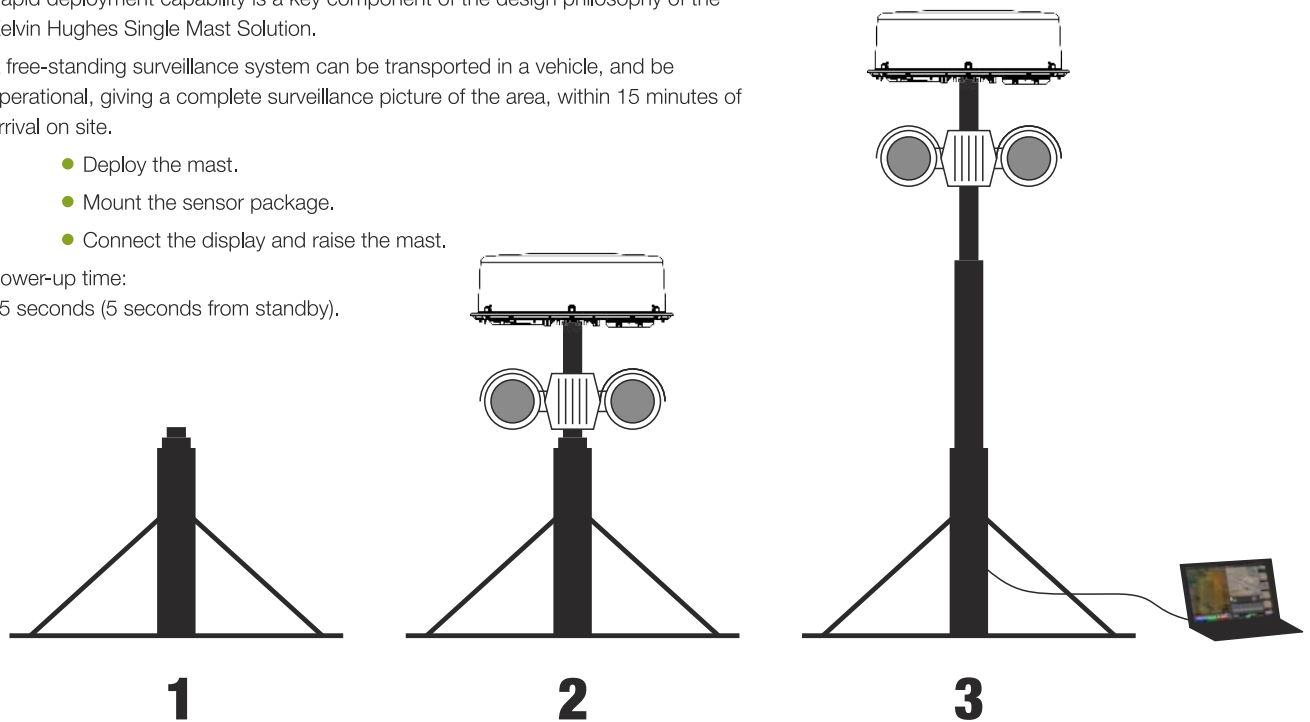|	FEATURES	SHARP$_{Eye}$ SXV LIGHTWEIGHT RADAR
SHARP$_{Eye}$ RADAR	CONCURRENT LONG AND SHORT RANGE DETECTION	JAMMING/INTERFERENCE RESILIENT (RF FREQUENCY VARIATION)
	LOW POWER CONSUMPTION: 150 WATTS	ADAPTIVE CLUTTER SUPPRESSION DOPPLER PROC./PULSE COMPRESSION
	360° AND SECTOR SCANNING	522mm ROTATING PATCH ARRAY ANTENNA
	VERSATILE MAST AND MOUNT OPTIONS	GIGABIT ETHERNET OUTPUT
	GRACEFUL DEGRADATION	ASTERIX CAT 240 RADAR VIDEO AND CAT 253 CONTROL
	INTEGRATED TRANSCEIVER & GPS	CONTINUOUS SYSTEM HEALTH MONITOR AND BUILT-IN SELF TEST
	PULSED, COHERENT WAVEFORMS	ENVIRONMENTAL RESILIENCE: IP67 -25°C TO +55°C OPERATING TEMPERATURE
E/O	360° PAN/TILT E/O MOUNT	WIDE RANGE OF ELECTRO-OPTICAL SENSOR OPTIONS
	HARMONIC STRAIN WAVE GEARBOX (50:1)	REPEATABILITY TO WITHIN 0.009°
	PAN/TILT SPEED RANGE: 0.0025°/sec - 45°/sec	ENVIRONMENTAL RESILIENCE: IP67 -30°C TO +65°C OPERATING TEMPERATURE
SMS SOFTWARE	PAN AND ZOOM ENABLED RADAR DISPLAY	OPEN SOURCE MAPPING AND OWN MAP INTEGRATION
	UP TO 4 RADAR INPUTS	MULTI HYPOTHESIS TRACK EXTRACTION FROM RADAR VIDEO
	MULTIPLE TRACK EXTRACTOR INPUTS	INTUITIVE INTERFACE - DESIGNED FOR TOUCHSCREEN OPERATION
	COMPREHENSIVE E/O INTERFACE STANDARDS	ONE-TOUCH SLEW-TO-CUE
	NMEA TTM OUTPUT FOR SELECTED TARGET	TRACKER OUTPUT TO OTHER SYSTEMS
	SIMPLE MECHANICAL MOUNTING INTERFACE	FREE-STANDING, FIXED INFRASTRUCTURE, VEHICLE/TRAILER-MOUNTED
	COMPATIBLE WITH A RANGE OF MAST TYPES	EASILY INTEGRATED WITH VIRTUALLY ANY SUPPORT STRUCTURE REQUIREMENT

DEPLOYMENT

Rapid deployment capability is a key component of the design philosophy of the Kelvin Hughes Single Mast Solution.

A free-standing surveillance system can be transported in a vehicle, and be operational, giving a complete surveillance picture of the area, within 15 minutes of arrival on site.

- Deploy the mast.
- Mount the sensor package.
- Connect the display and raise the mast.

Power-up time:
25 seconds (5 seconds from standby).

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Kelvin Hughes Limited
Voltage, Mollison Avenue
Enfield EN3 7XQ, United Kingdom
t: +44 (0)1992 805 200 f: +44 (0)1992 805 310
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

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