

Kelvin Hughes S-Band Navigation Radar

SHARPEYE™ UPMAST SOLID STATE RADAR DISPLAY



Kelvin Hughes SharpEye™ S-band radar technology meets the challenges of safety, navigation and collision avoidance at sea through a clever combination of radar techniques designed to provide the best performance in all conditions.

Solid state radar ensures extremely high reliability and low through life costs:

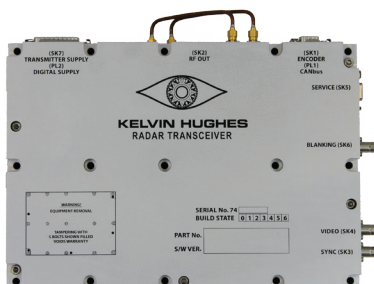
- No magnetron - minimal routine maintenance requirements.
- High reliability - solid state electronics - MTBF >150,000 hrs.
- In-built clutter suppression provides greater visibility of small targets in rain and sea clutter.
- Built In Test Equipment (BITE) for automatic diagnostics.



SharpEye™ technology removes the need for magnetrons and high voltage components such as modulators in the transceiver. Consequently, the reliability of the transceiver is dramatically increased to over 150,000 hours (greater than 17 years). This is achieved by deploying techniques previously only found in high-end military radars and adapting them into an affordable navigation radar package. The high voltages are removed by reducing the peak power required by 99% from 30kW to just 200w. The length of the pulses transmitted is increased so that the energy radiated is more than equivalent to the older magnetron technology. This technique enables superior detection performance – especially in poor weather conditions – which is just when you need the radar to perform.

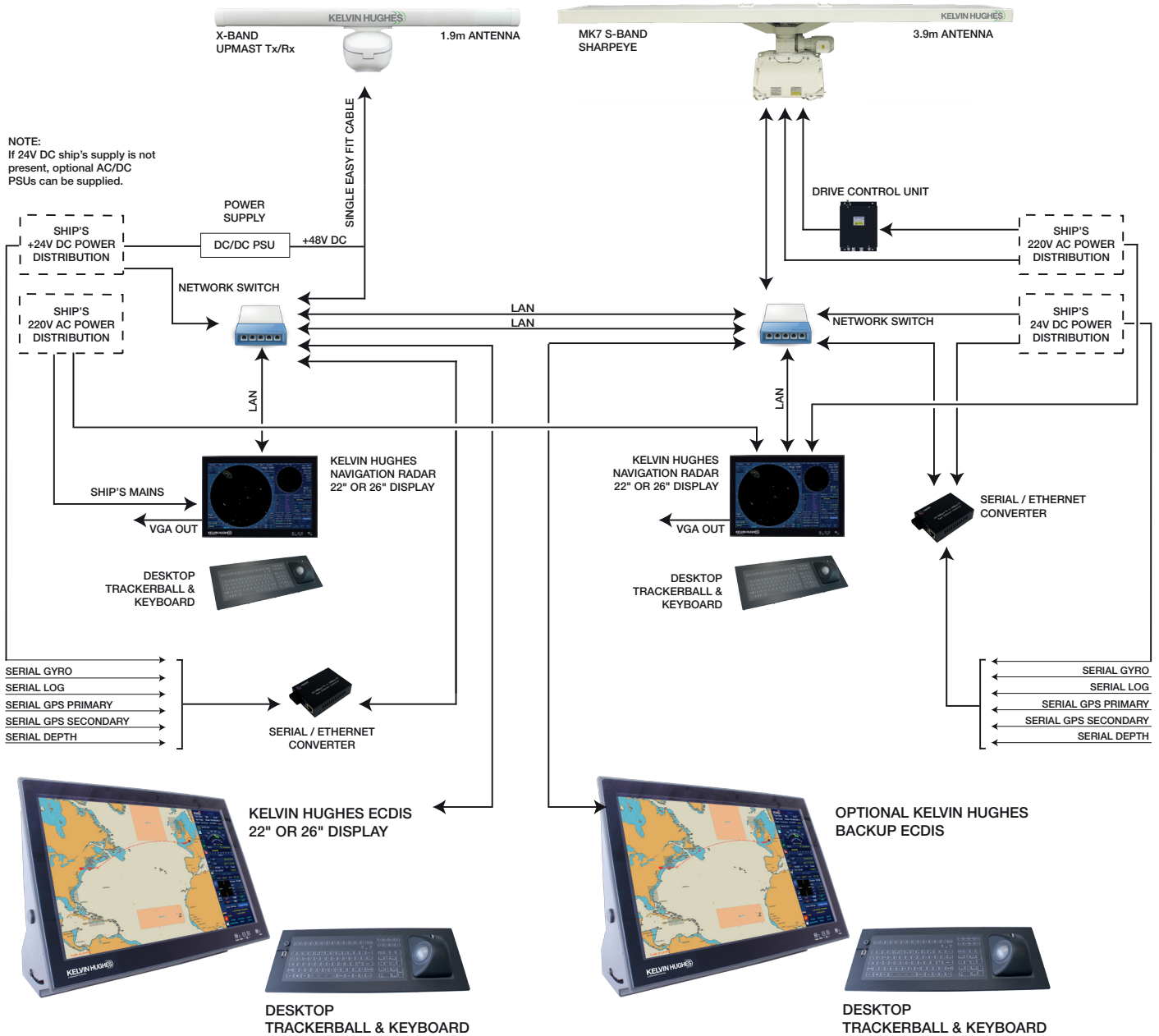
SYSTEMS	
CMSSE-22	S-BAND SHARPEYE™ SOLID-STATE RADAR SYSTEM WITH 22" DISPLAY
CMSSE-26	S-BAND SHARPEYE™ SOLID-STATE RADAR SYSTEM WITH 26" DISPLAY

SPECIFICATION	
FREQUENCY BAND	S-BAND
FREQUENCY	2.9-3.1 GHz (8 SELECTABLE CHANNELS)
PEAK POWER	200W TYPICAL
MAGNETRON LIFE	NO MAGNETRON MTBF >150,000 HRS
SIGNAL PROCESSING	PULSE COMPRESSION 150:1
RECEIVER NOISE	< 4dB NOM
RECEIVER IF FREQUENCY	60MHz
RECEIVER BANDWIDTH	20MHz
MINIMUM RANGE	< 40m
RANGE RESOLUTION	15m
ANTENNA LENGTH	3.9m (12'9")
MASS	177kg



SharpEye™ transceiver located in upmast turning unit housing

NETWORKED NAVIGATION SYSTEM



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