



SHIPBORNE HELICOPTER APPROACH SURVEILLANCE RADAR



Main characteristics

- 200 W of peak power
- High PRF and rotation speed
- Full Solid State coherent transceiver
- Pulse compression and Doppler filtering
- Automatic representation of weather data
- Highly accurate position and corrections reporting
- Fully integration with Combat Management Systems (CMS)
- Squintless antenna with cosecant square elevation beam shape
- Automatic integration with SAOL charts for wind direction and strength
- Built-in test equipment (BITE) for the continuous control of the system functions
- External IMU aid for automatic control of spot decking position for landing security
- Advanced clutter filtering and small target detection and tracking in adverse weather conditions

H A S R - 1 0 0 is a lightweight and advanced X-band radar system featuring helicopter helo decking aid. Based on state-of-art solid state technology and Pulse Compression with Doppler filtering, HASR-100 is able to track an helicopter from 12 n.m. down to ship deck and assist the pilot to land safely.



HASR-100

Antenna

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|-----------------------|---|
| Antenna polarization: | Horizontal |
| Horizontal beamwidth: | 1.2°, squintless |
| Antenna gain: | ≥ 31 dB |
| Azimuth coverage: | 360° (with continuous rotation) |
| Elevation coverage: | 15° fan-beam shape up to +7.5° quasi-cosec ² shape from +7.5° to +35° |
| Rotation speed: | 11/22 rpm in surveillance mode 30 rpm during helicopter landing operation |

Transceiver

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|----------------------|------------------------|
| Operating frequency: | 9200-9500 MHz (X-Band) |
| Peak power: | 200 W |
| Duty cycle: | up to 10% |
| Pulse width: | from 0.05 µs to 93 µs |
| PRF: | from 350 to 3200 Hz |
| Selectable channels: | up to 30 |
| MTBF: | > 50,000 hours |

Radar Processor

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|--|--|
| ARPA compliance: | included (track-while-scan TWS capability) |
| BITE: | included |
| Interface: | Fiber Optic (or Ethernet) |
| Instrumented range: | 96 n.m. |
| Helicopter detection and tracking range: | from 40 m up to 12 n.m. |

Radar Display

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|---------------|--|
| Presentation: | Head-up |
| Multi-window: | Integrated representation of surveillance and traffic control, helo approach window for landing operations |

System composition

- Antenna group (upmast transceiver and cosecant antenna)
- Radar processor
- Touch Screen 19" Radar LED display 1280x1024 px resolution or other optional end user request

| | |
|---------------------------|----------------------|
| Weight: | antenna group 220 kg |
| Environmental conditions: | IEC 60945 |

Dimensions in mm

