Raytheon

AN/ALR-67(V)3
Digital Radar Warning Receiver

The AN/ALR-67(V)3 digital radar warning receiver dramatically enhances the survivability of the warfighter through improved situational awareness.

Benefits

- Cost-effective integrated solution
- Operates successfully in high density electromagnetic environments
- Mitigates performance degradation in complex waveform environments
- All-digital, precision parameter measurement
- Accurate, unambiguous emitter identification
- Powerful dual COTS Power PC G4 processors with significant excess capacity
- Proven form-fit retrofit for all models of F/A-18 legacy Hornets
- Comprehensive life-cycle performance based logistics program

The U.S. Navy Standard for Digital RWR Technology

The AN/ALR-67(V)3 is the advanced digital countermeasures receiving set now serving as the "System of Record" U.S. Navy radar warning receiver (RWR) on all front-line, carrier-based F/A-18E/F Super Hornet tactical aircraft. In full rate production, it is the Naval Air Systems Command's answer to a critical operational requirement — *ensuring survivability in today's complex, high-density environment.*

The proliferation and increasing sophistication of radar systems has produced an electromagnetic environment that virtually saturates legacy RWR systems. As a result, these receivers are frequently ineffective. A particular problem is performance degradation caused by a proliferation of increasingly complex waveforms such as frequency agile pulse-doppler radars.

Advanced Architecture for Superior, Cost-effective Performance

The AN/ALR-67(V)3 is the first and only RWR to combine a fully channelized digital receiver architecture with the processing power of dual COTS Power PC G4 processors.

The channelized receiver architecture allows successful detection of emitters in high pulse density, as well as interception of faint distant signals despite interference from strong nearby transmitters. The digital measurement path of the receiver uses leading edge digital technology for improved reliability and low cost through reduced parts count, and improved performance through precision digital parameter measurements. This is a key enabler for the advanced functionality needed to fulfill the requirements of major combat operations over the next several decades.

The digital channelized receiver is coupled with a countermeasures signal processor (CSP) that houses dual Power PC G4 processors, providing memory and throughput more than an order-of-magnitude beyond those of competing warning receivers. This enables the AN/ALR-67(V)3 to easily process the increased RF density of the future as well as perform the sophisticated processing algorithms supporting advanced 21st century combat scenarios and capabilities.

The operational flight program (OFP) software processes the pulse and continuous-wave descriptive data from the receiver to characterize, identify and prioritize intercepted threats based on their lethality to the warfighter. The system's software architecture allows complete reprogramming of the separately loadable user data file (which includes both threat and operational data) without

modifying the functional code of the existing OFP.

The AN/ALR-67(V)3 is also the first tactical RWR to provide active components — starting with the antenna — allowing end-to-end calibration and built-in test.

F/A-18 A/B/C/D Hornet Compatibility

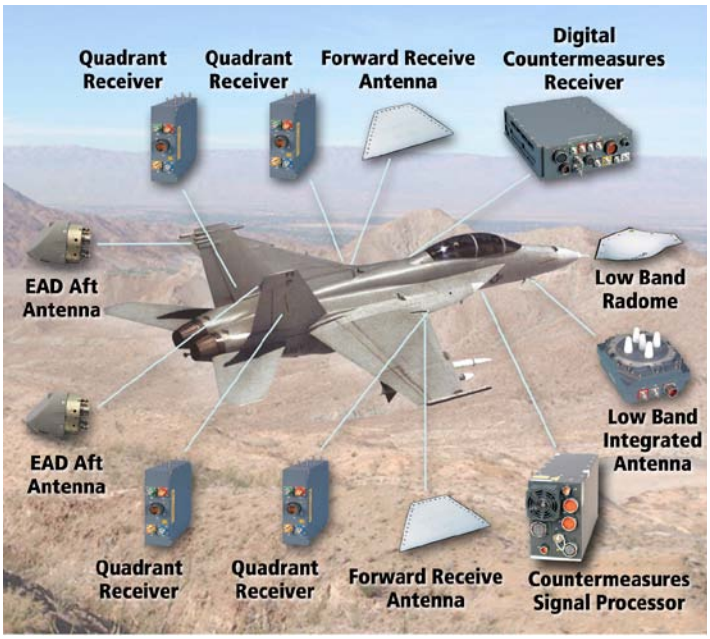
The AN/ALR-67(V)3 is a proven form-fit replacement for the AN/ALR-67(V)2 system currently being used on F/A-18 A/B/C/D Hornets. The AN/ALR-67(V)3 is fully integrated with all avionics equipment on the F/A-18A/B/C/D Hornets, as well as that on the F/A-18E/F Super Hornets. Minor localized A-kit modifications allow easy installation into all F/A-18A/B/C/D Hornet variants.

The performance improvements of the AN/ALR-67(V)3 are a quantum leap beyond the capabilities of the AN/ALR-67(V)2. Retrofitting the AN/ALR-67(V)3 in legacy F/A-18 Hornets is a proven low risk, high payoff investment.

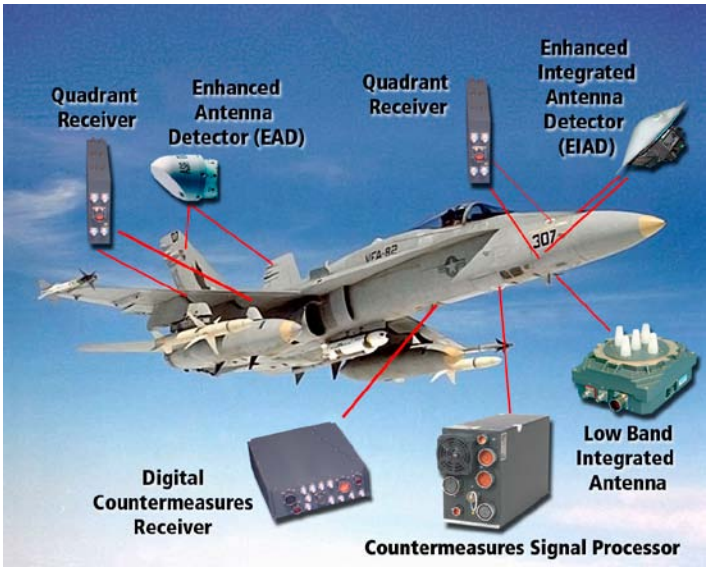
Comprehensive Performance Based Logistics Program

The AN/ALR-67(V)3 system is fully supported with a wholelife sustainment performance based logistics (PBL) program. The state-of-the-art PBL program includes web-based customer access to all PBL data. It is currently achieving near 100% system availability and operational field reliability — more than double the system requirement. Long-term sustainment and reliability is accomplished by technology insertion, state-of-the-art interactive diagnostics, and preventative health maintenance.

Raytheon's AN/ALR-67(V)3 couples sophisticated digital receiver technology with Power PC G4 based processing power, yielding superior, reliable performance in high density, complex electromagnetic environments. The system is integrated with all F/A-18 avionics and is supported by a comprehensive, state-of-the-art PBL sustainment program.



F/A-18E/F Super Hornet Configuration



F/A-18A/B/C/D Hornet Configuration

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Customer Success Is Our Mission