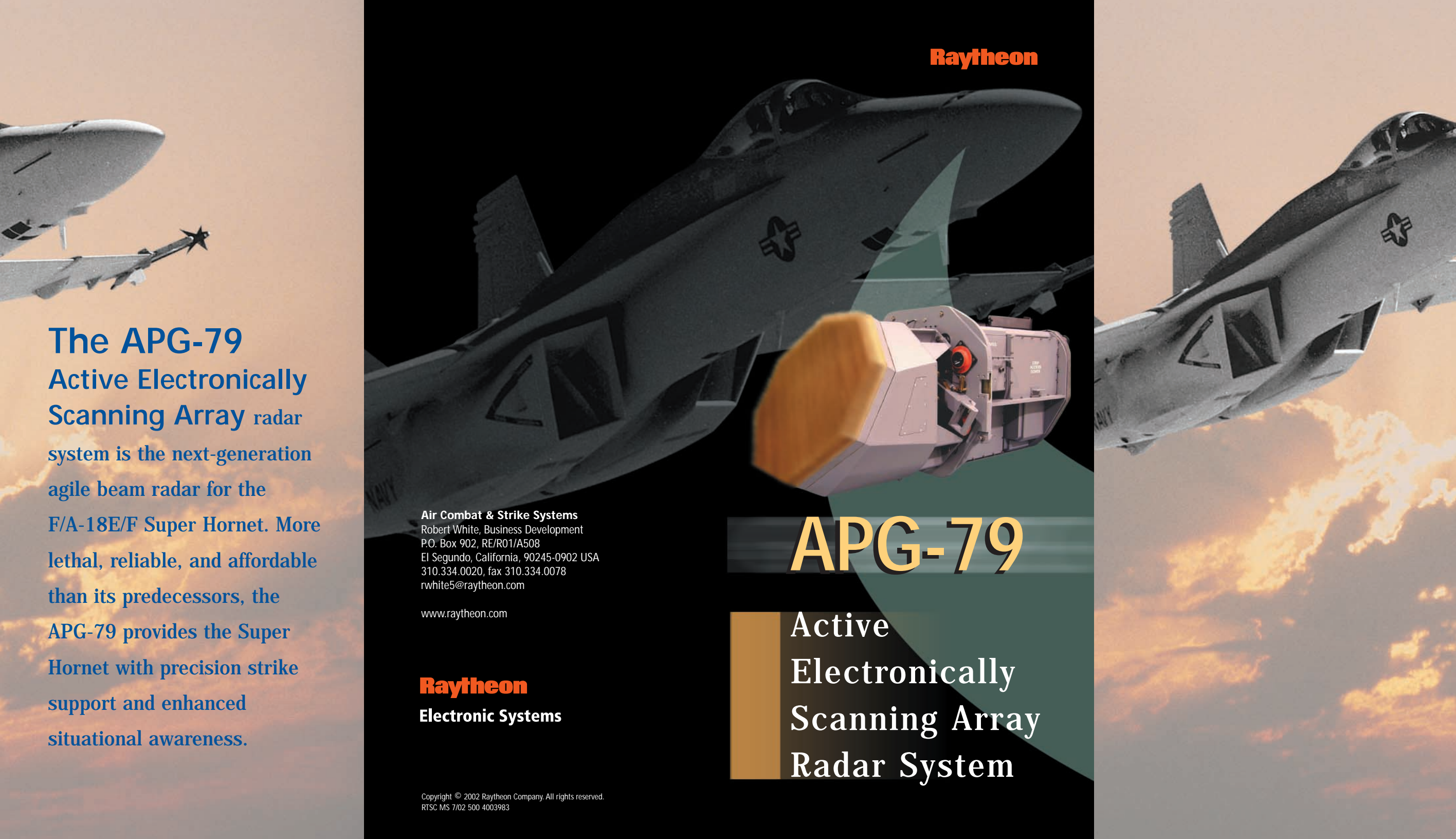





Raytheon



The **APG-79** Active Electronically Scanning Array radar system is the next-generation agile beam radar for the F/A-18E/F Super Hornet. More lethal, reliable, and affordable than its predecessors, the APG-79 provides the Super Hornet with precision strike support and enhanced situational awareness.



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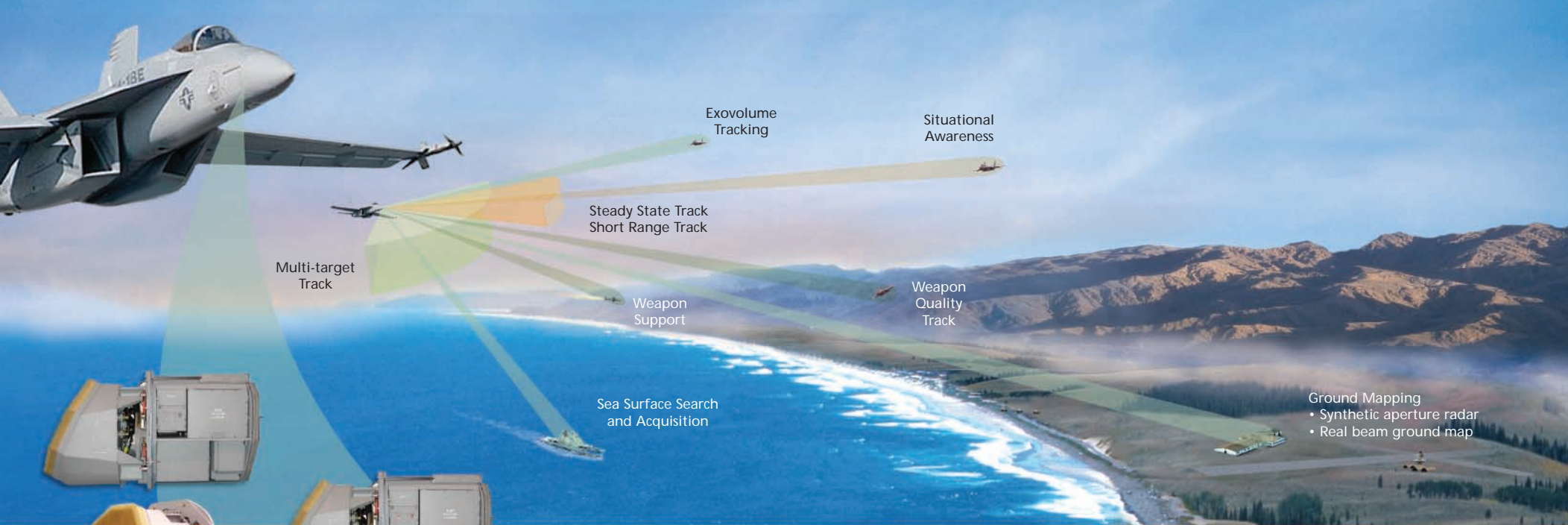
www.raytheon.com



Raytheon
Electronic Systems

APG-79

Active
Electronically
Scanning Array
Radar System



Air-to-Air

- Targets engaged at very long ranges
- Reduced aircrew workload via resource manager

Air-to-Surface

- High resolution ground mapping at long standoff ranges
- Interleaved mode capability

Reliability and Cost

- Five fold increase in system reliability
- Built-in test capable of isolation to line replaceable modules
- Graceful array degradation via robust transmit/receive module design
- Significantly lower operating cost

Development Schedule and Status

- Full scale development, 2000–2003; flight test begins in 2003; low rate initial production in 2005; IOC in 2006; first deployment in 2007

Active Electronically Scanning Array (AESA)

- Array architecture provides benefits of lower weight, reduced aperture depth, and enhanced reliability
- Wideband multifunction array supports a variety of waveforms for air-to-air, air-to-ground, and electronic warfare
- Sixth generation transmit/receive module

Motion Sensor Subsystem and Radar Power System

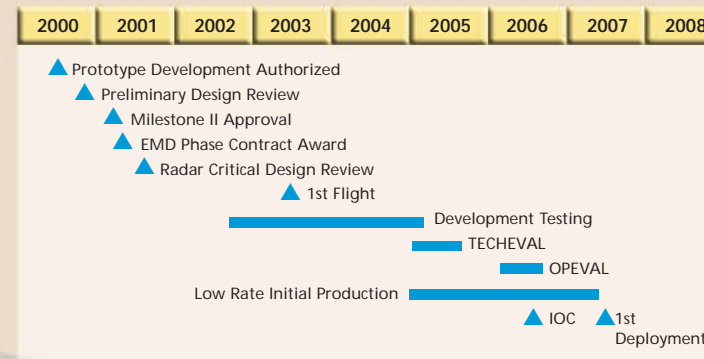
- Motion sensor compensates for aperture motion
- Radar power subsystem is highly fault tolerant and derived from established radar design
- Power subsystem designed for support of modular transmit/receive architecture

Common Integrated Sensor Processor

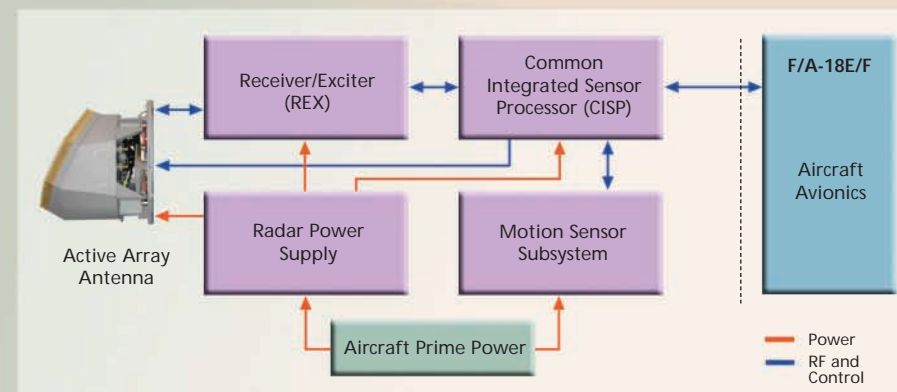
- COTS-based Power PC® modular design
- Obsolescence mitigated via open system architecture and software isolation
- Processing speed can be upgraded for future applications

Receiver/Exciter

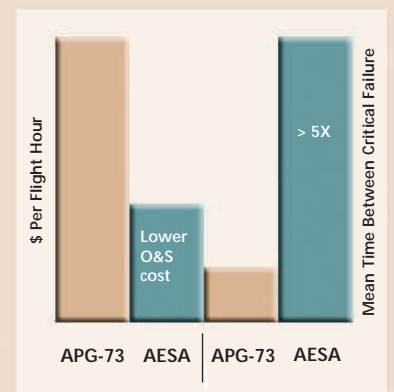
- Four channels
- Programmable waveform generation
- Wide bandwidth
- Fast frequency agility
- Low noise/spurious



AESA Development Schedule



APG-79 Radar Architecture and Subsystems



Cost Reliability