



communications

Advanced Products & Design



Engineering Services

Making Technology Work for You

L-3 Communications, Advanced Products & Design (L-3 AP&D) Engineering Services leverage our company's expertise in customizable embedded video hardware platforms, software, ISO certified manufacturing processes, and unique obsolescence mitigation services to solve customers' problems related to systems lifecycles, from concept and design to end-of-life. L-3 AP&D's proven track record in the areas of product quality, scheduling, cost control, business relations, and management of key personnel allows us to deliver quality solutions to meet the most challenging customer requirements.

Organizations faced with finding specific Commercial Off-the-Shelf (COTS) products, staffing shortages, budget restrictions, engineering constraints, and aggressive project deadlines often require additional engineering support to build systems that meet their unique requirements. In addition, organizations need to ensure there is adequate engineering support to help manage change, maintain supportability, perform production upgrades, and mitigate obsolescence throughout the system's lifecycle. L-3 AP&D's Engineering Services provides organizations with the additional support necessary to ensure requirements, production goals and deadlines are met, and technology upgrades, insertions and other lifecycle support issues are addressed.

**Lifecycle Services –
Design, Customize, Integrate,
Manufacture, Support, and
Mitigate Obsolescence**





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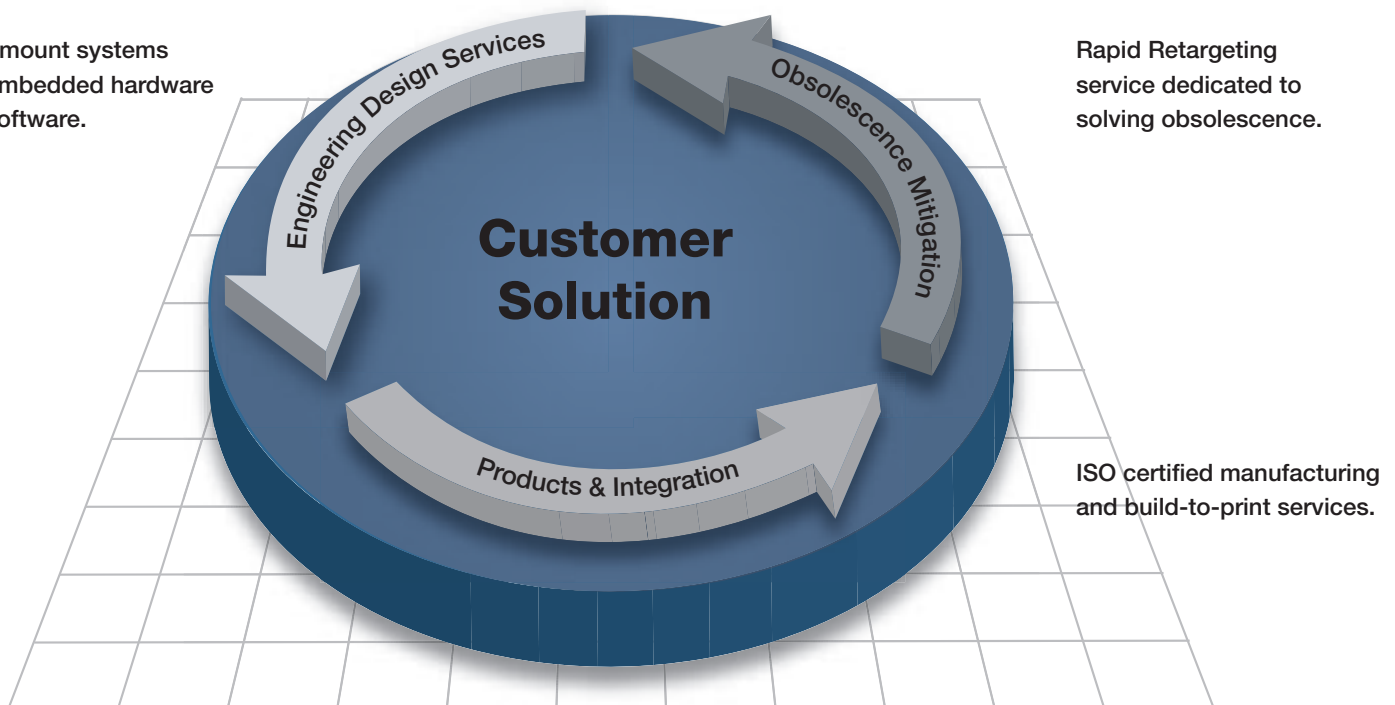
Design and Development Services

L-3 AP&D's Engineering Services address unique requirements for the creation of video, image, audio, and I/O board products, as well as complex, integrated rack mounted systems for defense applications. From the start, Engineering Services works closely with customers to determine their specific needs, helping ensure the end product provides the performance and functionality to meet the most demanding application requirements.

Our "Custom, Off-the-Shelf" approach to signal processing enables our engineers to easily and quickly extend capabilities to satisfy on-going project requirements. Engineering Services, combined with our customizable COTS platforms, improves our customers' ability to meet changes in project requirements with minimal effort, without replacing the hardware. The result is improved efficiency, reduced costs, shortened time to market, and ease of maintenance over the system's lifecycle.

Rack mount systems and embedded hardware and software.

Rapid Retargeting service dedicated to solving obsolescence.



Production Services

Once a design has been created, prototyped and tested, production of the final product must be addressed.

L-3 AP&D's ISO-9000:2001 certified systems integration and manufacturing processes ensure the highest quality product is delivered on time, and on a continual basis. L-3 AP&D eliminates our customer's costly overhead and day-to-day management associated with manufacturing, testing and quality control. Customers can count on the same quality product from L-3 AP&D over the life of their system design.

Obsolescence Risk Management

Obsolescence is a critical issue in modern and legacy military electronics where service life is typically measured in decades. Obsolescence mitigation of electronics is a never-ending process, as components become obsolete faster than solutions can be found. Developers dependent on predictable, uninterrupted product delivery schedules often find themselves with limited options to maintaining critical electronic systems.

L-3 AP&D's Rapid Retargeting® provides a core engineering competency not found with other vendors. The Rapid Retargeting design process uses a collection of sophisticated Electronic Design Automation technologies to capture existing system functionality and upgrade it to modern component technology while maintaining backwards compatibility. This creates new life for both legacy and modern systems by providing a form, fit and functionally identical replacement. In many cases, system functionality is captured in a single, high performance

programmable device, which can replace multiple older board technologies. The result is a one time, lifetime solution to electronic obsolescence.

L-3 AP&D Engineering Expertise

Video & Graphics:

- Digital and Analog
- Compression/Decompression (MPEG 2, MPEG 4)
- 2D and 3D Graphics

Digital Signal Processing:

- Real-time Image Processing
- Algorithm Development

Audio Processing:

- Digital and Analog

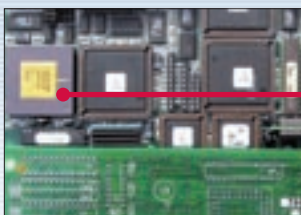
Ruggedized Rack Mount Systems

- Design through Delivery
- Build to Print Integration Services
- ISO 9001:2000 Certified Processes

Engineering Services Technologies:

- FPGA
- ASIC
- EDA Tools
- VHDL
- Embedded Processors

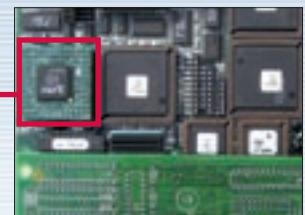
Component Retargeting



4002 NTDS with Legacy Bit Slice Processor



Retargeted Bit Slice Processor



4002 NTDS with New, Retargeted Bit Slice Processor

For additional information, visit our website at www.L-3Com.com/apd. Or contact us via email at apd-info@L-3Com.com, or via phone at 800.621.8474 or 858.552.9500.

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MKTG ES030306

DoD/OFOISR Cleared #06-S-1678



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