



PHYSICAL OPTICS CORPORATION CAPABILITIES



Technology that makes a difference.®

/// ABOUT US

Physical Optics Corporation (POC) is a rapidly growing systems integrator of advanced technology, serving military and defense, homeland security, and selected commercial markets. Since its founding in 1985, POC has grown to \$115M in revenue, with over 270 employees, including 30 Ph.D.'s and 112 engineers. POC is a highly innovative, employee-owned company and is located in Torrance, California.

The company currently holds over 160 issued patents worldwide, covering 60 technologies. To date, POC has shipped over \$600M in commercial and government products. Financially, POC has been profitable every year since its founding and is now planning for its next wave of growth. As POC moves forward, it will continue its work in innovative research and development, focusing on several strategic thrust areas and advanced programs. This includes developing and producing next-generation airborne systems, such as flight data recorders, data transfer systems, mass storage units, and mission computer systems for both military and commercial platforms. Other areas of growth include ground systems, maritime systems, cybersecurity, EW/RF, x-ray nondestructive inspection, and unmanned and intelligent deep learning systems.

/// LEADERSHIP STATEMENT

Over the years, Physical Optics Corporation has come a long way – from a small enterprise with just three employees in 1985, to a leading supplier of integrated products, services and support to military forces, intelligence agencies and prime contractors worldwide. Throughout our history, our products have consistently responded to the needs of U.S. and Allied military forces, touching the lives of our troops, and helping prepare our forces with enhanced readiness.



/// OUR MISSION

As an innovative, agile, and trusted partner, we offer the most advanced technology at the greatest value. We are committed to supporting our customers at our highest level of performance, leaving no problem unsolved.

/// OUR VISION

To be the preferred choice for solving the industry's most challenging problems—meeting or exceeding our customers' expectations—through efficient application of POC's innovations.

Innovative-Trusted-Reliable-Agile-Proven

/// CAPABILITIES

PROJECT MANAGEMENT

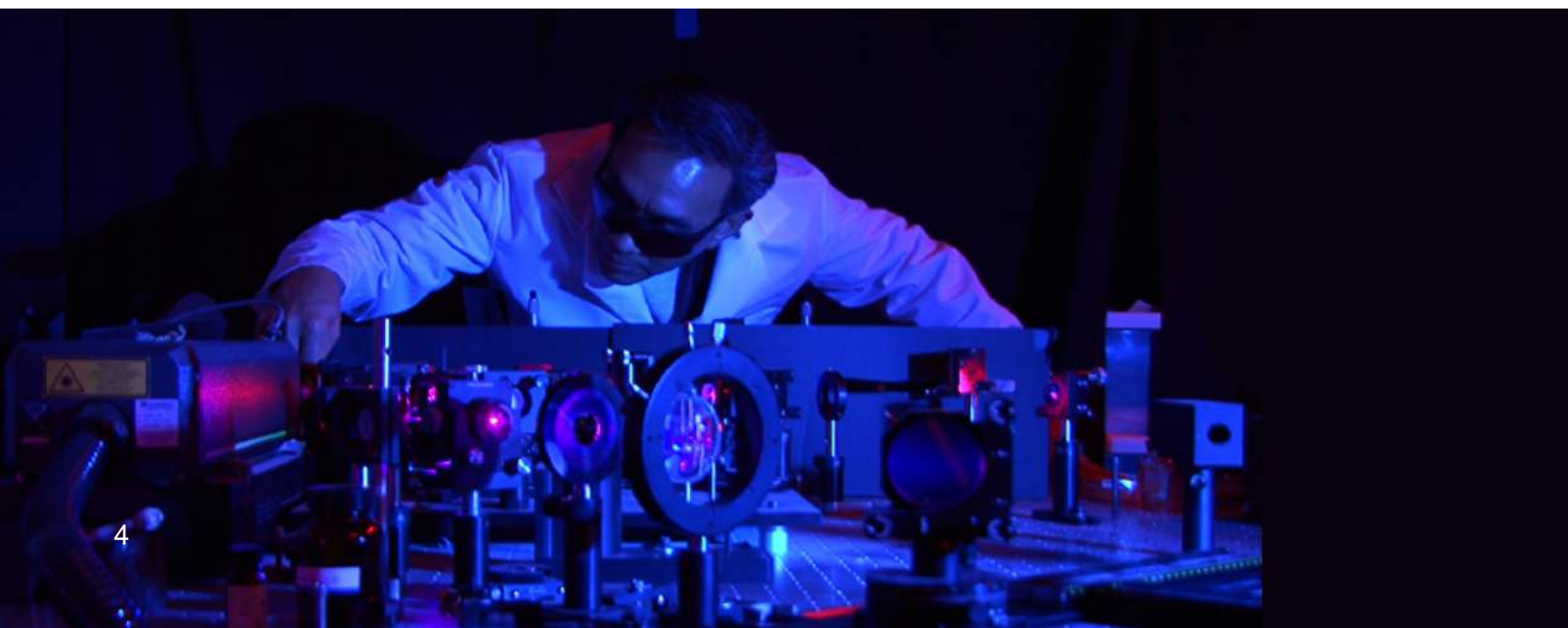
POC provides the leadership required to plan, coordinate, and oversee the execution of complex and diverse projects. Combined with POC's DCMA-approved accounting, purchasing and property management systems, our teams are enabled to predict variance and manage risk.

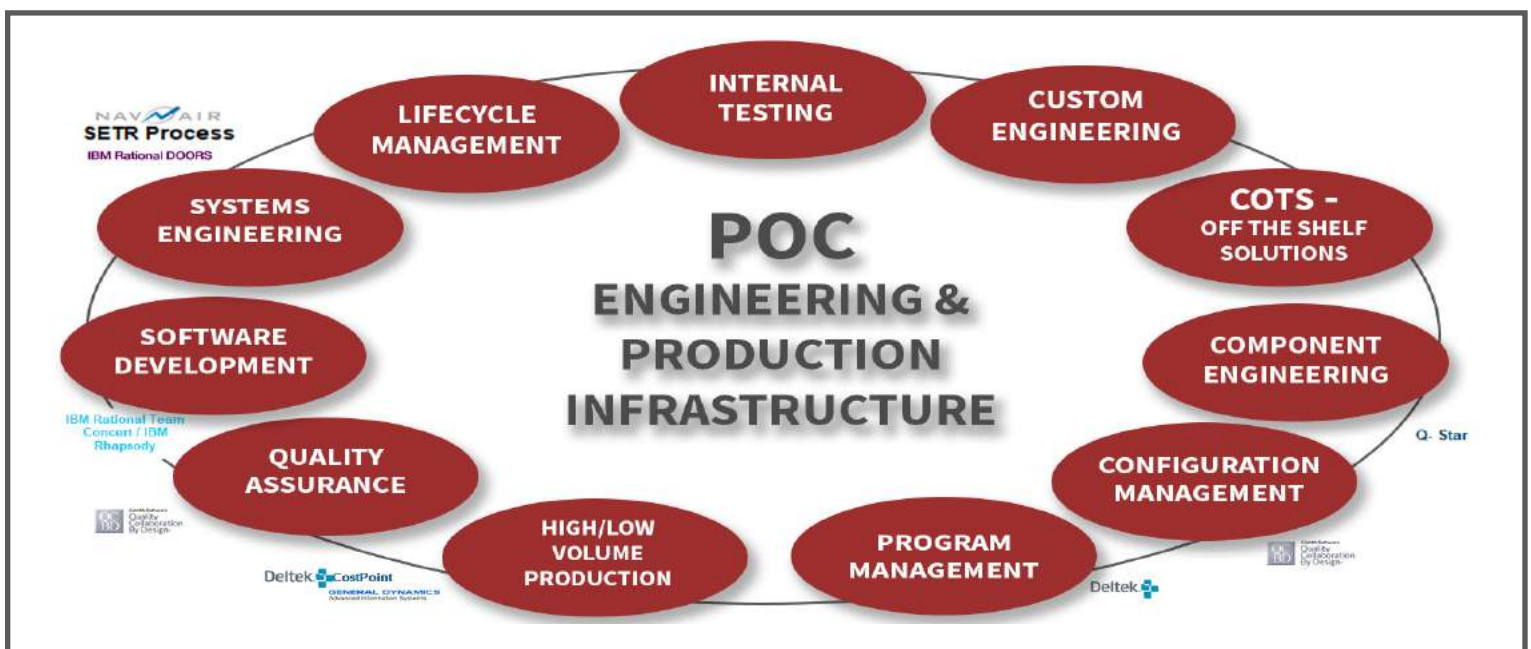
CONTRACTING FLEXIBILITY

POC routinely performs contract work under five NAICS codes (541712, 334511, 336411, 334112, 336413), and accepts both cost-type and fixed-price contracts. POC is the prime contractor on the majority of our contracts, and POC also contributes as a subcontractor to other primes. Many of POC's contracts are awarded after a full & open competition, but as a qualified small business under the relevant FAR and DFAR clauses, POC is eligible to receive all types of government contracts on a non-competitive basis. Further, POC qualifies as a non-traditional defense contractor as required for participation in Other Transaction Agreements (OTAs).

MANUFACTURING & FINAL ASSEMBLY

At POC, the electronic assemblies, metal fabrications, cables and card assemblies are joined to complete the final product. We are customer-focused, investing in capabilities that allow us to provide better, faster and more flexible service. Our lean manufacturing facilities offer the latest automated equipment and process control techniques to ensure quality products meet your time-to-market demands.





TECHNOLOGY TRANSITION

We have taken a multi-faceted approach to a technology transition strategy. POC integrates a cross-functional transition integrated product team (TIPT) supported by customer users and 3rd party Tier 1 platform integrators. This process results in a smoother transition from development, through prototype demonstration, to an affordable, operationally suitable system for the end user needs.

INTEGRATION CAPABILITIES

POC's integration capabilities include programming and testing of circuit cards, software configuration of the cards and system, safety (leakage & HiPot) testing, inventory consignment/management, configuration management and functional testing. POC offers COTS, custom build-to-order configurations and engineering services. We collaborate with customers to deliver prototypes and evaluation units to test various configurations in the customer's specific application environment.

EARNED VALUE MANAGEMENT SYSTEM

POC has an Earned Value Management Systems (EVMS) that is compliant with ANSI/EIA 748. POC key staff members have extensive experience in analyzing EVM data using EV predictive metrics to proactively manage large government programs with EVMS, contract work breakdown structures, integrated master schedules, and CSDR requirements.

END-OF-LIFE (EOL) - LIFE CYCLE MANAGEMENT

Every customer is provided with advanced notifications of EOL items as well as a preliminary replacement strategy to facilitate manufacturing and ensure no disruption to existing production contracts. POC works intently with its suppliers to get accurate roadmaps and formulate design criteria for each system to ensure the longest product life possible.

/// COMPETENCIES

QUALITY ASSURANCE

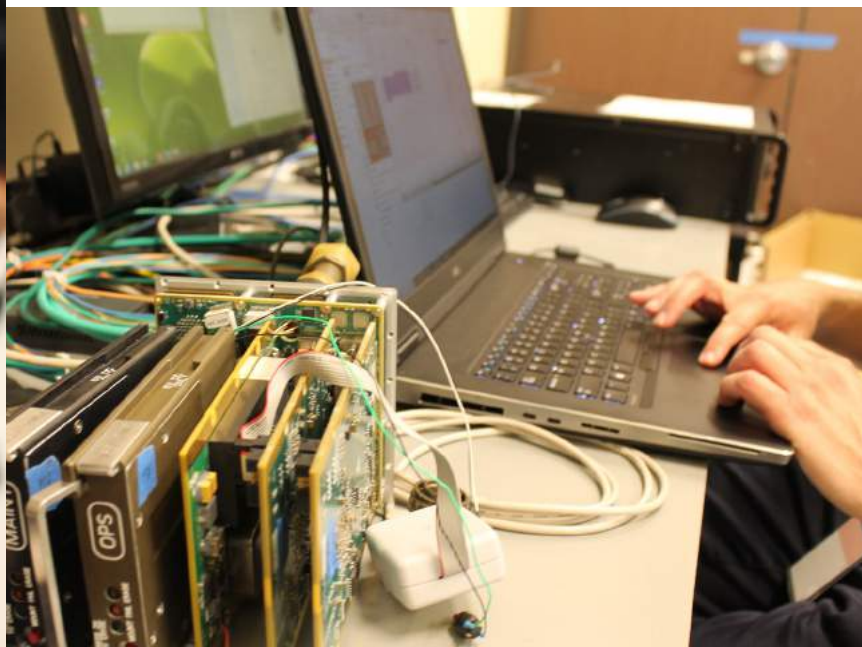
Our commitment is to meet or exceed customer expectations by providing quality products, on time, and in compliance with customer, regulatory, and authority requirements. POC is AS9100D and AS9110C certified, CMMI Maturity Level 3 appraised, and ISO/IEC 17025 accredited. POC is the only business with this set of four certifications.

CONFIGURATION MANAGEMENT

Configuration Management manages product documentation characterizing physical, functional, performance, and reliability attributes and changes there to ensure consistency and reproducibility of product, and its conformance to customer design and performance requirements throughout the product lifecycle.

SYSTEMS ENGINEERING

POC's systems engineering processes have been developed utilizing the Government's SETR processes and CMMI processes including requirements management, reliability, logistics, engineering management, testing and evaluation, verification/validation, maintainability, and sustainability over the life cycle of our products.



INTERNAL TESTING

POC has state-of-the-art testing facilities to ensure that product qualifications can be completed in-house to the maximum extent possible. From an anechoic chamber that can perform MIL-STD-461F/G and MIL-STD-464 high-intensity radiated field (EME/HIRF) qualification testing, to environmental stress screening (ESS) performed with several ESS and HALT/HASS chambers, POC can accomplish a wide range of testing internally to reduce both cost and schedule.

SOFTWARE DEVELOPMENT

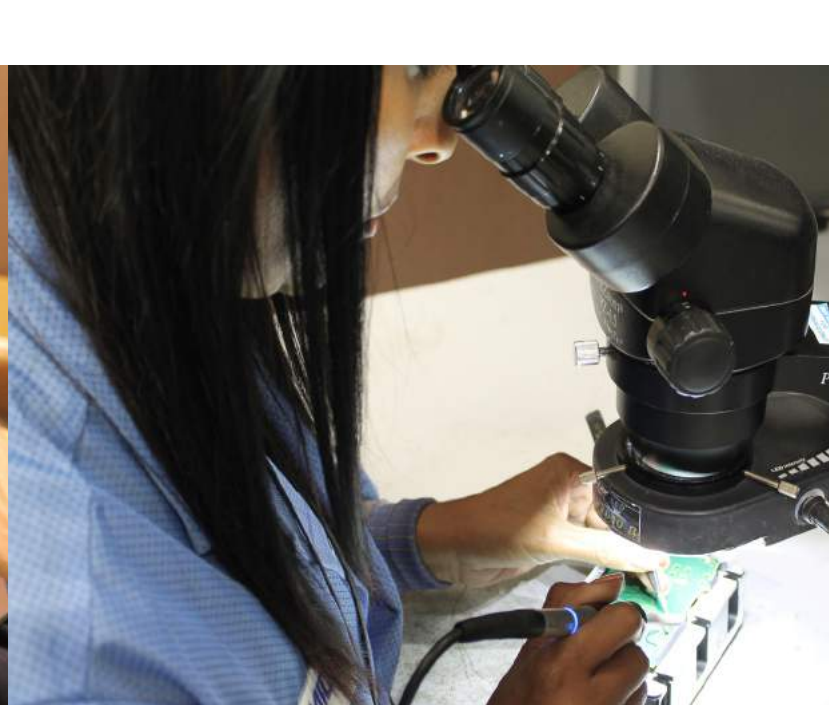
Software Development and Software Quality Assurance (SQA) is fully integrated into the support of POC programs throughout the developmental life cycle in compliance with AS9100 and CMMI-DEV-ML3. Established industry processes and procedures for software development and quality are well defined and utilized with specific software coding guidelines that standardize coding efforts across all programs.

HARDWARE DEVELOPMENT

POC has in-house manufacturing facilities for integration and assembly of production, flight-ready hardware utilized on several fixed-wing and rotary-winged craft. POC's Hardware-In-The-Loop (HWIL) development laboratories enable efficient hardware development.

FACE & OPEN SYSTEMS ARCHITECTURE

POC's Mission Systems Division develops and productizes reliable, safe and secure avionics systems in conformance to requirements and standards such as the Future Airborne Capability Environment (FACE™). Also, in response to customers' needs, POC is developing our products to maximize the inherent flexibility of Open Systems Architecture.







MEETING OR EXCEEDING CUSTOMER EXPECTATIONS

/// OUR QUALITY POLICY

Physical Optics Corporation meets or exceeds customer expectations by providing quality products, on time, and in compliance with customer, regulatory, and authority requirements. We are committed to continual improvement of the Quality Management System through deployment of quality objectives which are measured, reported, and reviewed for continuing suitability.

/// OUR SAFETY POLICY

Physical Optics Corporation is committed to product safety, and providing a safe environment for employees and visitors, in compliance with customer, industry, regulatory, and authority safety requirements. This commitment is communicated throughout the organization. In support of this policy, safety objectives are established, measured, reported, and periodically reviewed for continual safety improvement opportunities and continuing suitability.

*“We never leave our customers
with a problem.”*

Joanna Jannson, Ph.D
President/CEO

/// CREDENTIALS

QUALITY MANAGEMENT SYSTEM CERTIFICATIONS

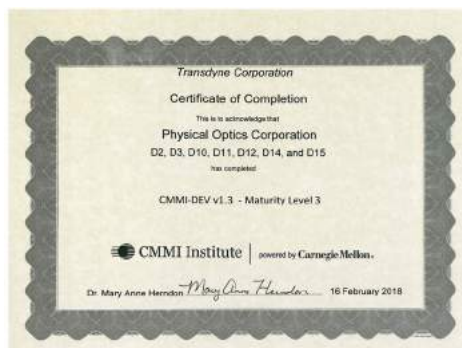


AS9100D



AS9110C

CAPABILITY MATURITY MODEL® INTEGRATION (CMMI V1.3)



POC has been assessed to the Maturity Level 3 requirements of the Capability Maturity Model® Integration (CMMI v1.3) for engineering development and process integration.




Experimental Radio Station
Construction Permit
and License

TEST LABORATORY ACCREDITATION

POC is an accredited ISO/IEC 17025:2005 Test laboratory
(ANAB Accreditation L2469) for performing:

- Electromagnetic Interference (EMI) Testing
- Electromagnetic Environmental Effects (EME) High Intensity Radiated Field (HIRF) Testing
- Aircraft Electrical Power Testing
- Electrostatic Discharge (ESD) Testing
- Environmental Stress Screening (ESS) consisting of Random Vibration/Thermal Cycling





Of all certificate holders, only 6 holds all three (AS9100, AS9110, & CMMI) certifications:

1. Physical Optics Corporation

- 2. Lockheed Martin Aeronautics
- 3. Moog Aircraft Group
- 4. Sierra Nevada Corporation
- 5. L3 Technologies Mission Integration
- 6. BAE Systems Technology Solutions & Service Inc.

Of all certificate holders, only 1 holds all four (AS9100, AS9110, CMMI-DEV/3, & ISO 17025) certifications:

POC is the only company in America, large or small, that has developed a management system that is able to support all four certifications, giving it unmatched capabilities in the market place.



/// CORE ADVANTAGES

Physical Optics Corporation offers our customers technologies and products based on a deep understanding of physical principles that can be applied to solve our customer needs and provide them with a competitive advantage.

INTELLECTUAL PROPERTY

Physical Optics has developed more than 100 products and holds over 160 patents covering 60+ technologies in the areas of applied technology, electro-optics systems, information technologies, photonic systems, avionics systems, and products and engineering.

WORLD-RENOWNED EXPERTS

With a staff of highly talented employees, from scientists, engineers, and production personnel to contract management, corporate marketing and business development teams, of whom many hold Ph.D. degrees, POC is positioned to develop and deliver solutions and **“technology that makes a difference®”** to our customers.

/// IMPLEMENTED PRODUCTS

DTM II



- F-15C/E

DTS



- V-22

ADTS



- MH-60R/S
- CH-53K
- H-1Y/Z
- V-22
- UH-60V/M
- CRH

HDVR



- F-15
- F-16
- F-18
- A-10

DTU



- F/A 18E/F
- EA-18G

DDS



- T-45

FAERITO



- S-76C++

/// THRUST AREAS

AIRBORNE SYSTEMS

POC designs, develops and manufactures avionics solutions for both military and commercial aircraft. Our broad portfolio of cutting-edge avionic technologies includes mission computers, data storage and transfer, vehicle health monitoring, and cyber-security systems as well as many other advanced technologies.

ELECTRONIC WARFARE / RF SYSTEMS

This growing technology segment impacts air, ground and sea platforms for every service branch. Our focus is constantly finding ways to take advantage of the EW/RF field, while enhancing its spectrum dominance for both offense and defensive cyber. POC holds an experimental FCC License (call sign WA3XBC) to support this work.

GROUND SYSTEMS

POC is developing technologies that will allow next generation vehicles to manage the immense stream of data and secure information with sub-systems such as mission computers, data transfer devices, and cyber-security systems that will meet those requirements.

MARITIME SYSTEMS

POC develops advanced technologies for manned and unmanned maritime platforms in both the surface and undersea environments. Delivering innovative software and hardware solutions, POC has a proven record in solving many of the Navy's toughest technological challenges.

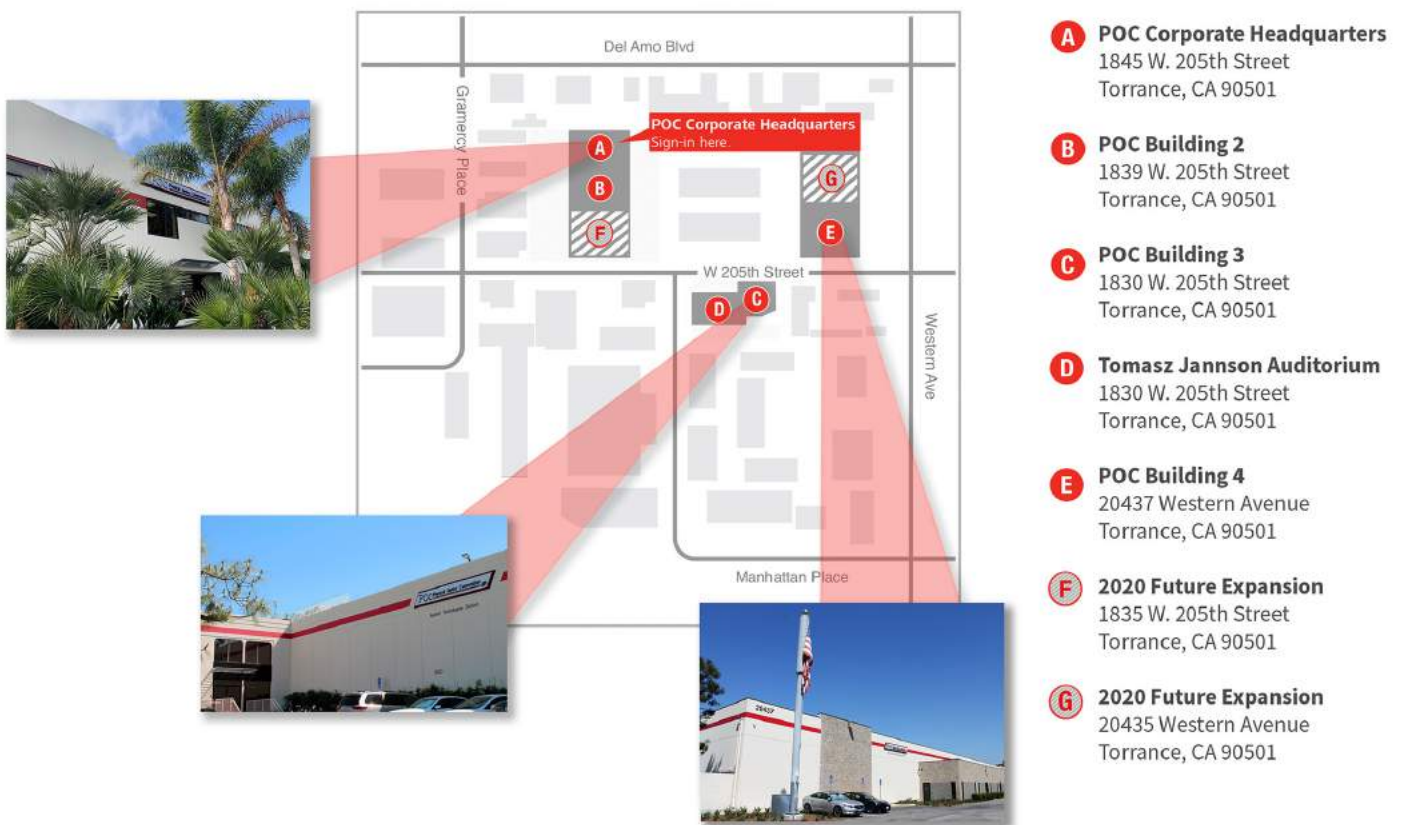
EMERGING TECHNOLOGIES

POC has a number of emerging technologies currently being matured to meet specific customer needs. These technologies include: cybersecurity and encryption, artificial intelligence, deep learning, mission computers, special mission processors, hypersonics, X-ray nondestructive inspection, low profile antenna technology, digital RF countermeasure, network attached storage drives, and unmanned technologies.

/// OUR FACILITIES

POC is located 10 miles south of Los Angeles International Airport, in Torrance, California. Our facilities house some of the most highly advanced and unique research laboratories, as well as engineering, prototyping, development, testing, and production facilities.

POC HEADQUARTERS MAP





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