The Power of L-3

Together, L-3 companies leverage their resources and expertise to elevate customer capabilities around the globe. Headquartered in New York City, L-3 employs approximately 51,000 people worldwide and is a prime contractor in Command, Control, Communications, Intelligence, Surveillance and Reconnaissance (C3ISR) systems, platform and logistics solutions, and national security solutions. L-3 is also a leading provider of a broad range of electronic systems used on military and commercial platforms. The company reported 2012 sales of $13.1 billion.

Total Life-Cycle Support

At L-3 IOS we build quality, innovation and integrity into every system we produce. Our clients, both commercial and defense, require their complex systems to perform accurately and reliably in critical, long-term applications. L-3 IOS provides total life-cycle support, including warranty, spare parts, refurbs/repairs, field service and training, and system upgrades to extend service life.

We invite you to find out more about what L-3 IOS can do for you by sharing your questions, interests and challenges with us.
L-3 has decades of experience designing, developing, and manufacturing advanced and highly integrated electro-opto-mechanical systems for the Warfighter. L-3 IOS is proud to support servicemen and women with integrated technologies and systems that protect lives and critical infrastructure against ever increasing and evolving threats. In an environment with no room for error, L-3 IOS delivers multi-layer protection to today’s warfighters as they locate, discriminate and eliminate threats around the globe.

When it’s more than our reputation on the line

World Class Optical Technologies

L-3 Integrated Optical Systems (IOS) designs and produces complex electro-optical and electro-mechanical systems for the defense, aerospace and commercial markets. With locations in Pittsburgh, PA, Richmond, CA, and Wilmington, MA, L-3 IOS specializes in ground-based, airborne and space electro-optical solutions. As a recognized leader in optical technologies, our products, and precision optical capabilities enable high energy laser missions, fire control solutions, stabilized tracking systems and high resolution intelligence, surveillance, and reconnaissance systems.

The company’s portfolio includes a full range of ground and space based:

- Space Sensors
- Beam expander telescopes
- Integrated imaging systems
- Precision reflective and refractive lightweight optics
- Precision gimbal technology mounts
- Precision pointing and beam control
- Telescopes
- Test range instrumentation

L-3 IOS also makes available to clients our extensive in-house design, fabrication, assembly, and metrology and testing services.

Sensors and Solutions

L-3 IOS has long been dedicated to meeting the challenges of the most demanding environments and applications by integrating our core electro-optical and electro-mechanical technologies and components into advanced systems and solutions. Our technologies fuel advancements in today’s mission-critical ground, airborne and space programs.

Space Programs

With a long history of delivering systems that perform, L-3 IOS understands the unique challenges of space-based electro-optical sensor systems. Constantly challenged by the requirements of the extreme and hostile space environment, L-3 IOS has developed electro-optical space hardware for more than 65 flights, without a single on-orbit failure.

Advancing opportunities for space science, weather, defense, and remote sensing

WIDEFIELD INFRARED SURVEY EXPLORER (WISE)
L-3 optical and scanning systems helped the WISE spacecraft provide a vast storehouse of knowledge about the solar system, the Milky Way, and the Universe. The WISE satellite carried an infrared-sensitive telescope that provided a full-sky survey in the infrared waveband. L-3 IOS delivered an afocal telescope, scanner, imager telescope, mass mockup and flight electronics.

SAPPHIRE

The Sapphire satellite provides tracking data for earth orbiting objects that feeds into U.S. Space Surveillance Network. L-3 IOS designed and built the telescope, integrated the focal plane array and radiator and conducted performance testing and calibrated the instrument.

THE JOINT MILLI-ARCSECOND PATHFINDER SURVEY (JMAPS) INSTRUMENT
The JMAPS Mission is to refine the stellar navigation database with high resolution/accuracy star mapping from a small low Earth orbit platform. L-3 IOS provided the JMAPS telescope and mechanisms.

LONG RANGE RECONNAISSANCE IMAGER TELESCOPE (LORRI)
LORRI is a space flight telescope en route to Pluto on NASA’s New Horizons spacecraft. L-3 IOS provided the narrow field of view telescope that will provide high resolution images of Pluto, and has already provided spectacular images of planets and moons during its journey.
With more than 20 years of laser systems experience, L-3 IOS systems and components have been validated in airborne, desert and maritime environments. L-3 IOS has developed the critical knowledge and manufacturing skills to be chosen by all of the U.S. High Energy Laser/Directed Energy (HEL/DE) weapons prime contractors and U.S. government agencies for high energy laser weapon programs.

Combining high agility with extremely low tracking jitter, L-3 IOS integrated systems not only provide exceptional accuracy, but are durable enough to meet the demands of field mobility and extreme environmental conditions.

High Energy Laser Systems

We pioneered the use and development of high energy laser beam director systems. The exceptional quality, ruggedness and reliability that have made L-3 IOS’ military tracking and range instrumentation systems benchmarks for performance have also been incorporated in our precision, high energy, beam directing systems.

L-3 IOS’s technology has taken scientists out of the loop making HEL systems operable by warfighters and ready for use on the battlefield. You will find L-3 IOS technology in:

• Navy Laser Weapon System (LaWS) – To be installed for operational deployment in 2014
• Maritime Laser Demonstration (MLD)
• Mobile Ordnance Disruption System (MODS)
• Tactical High Energy Laser (THEL)
• Airborne Laser (ABL)
• Advanced Tactical Laser (ATL)
• High Energy Laser Technology Demonstrator (HELTD)

In addition to playing a leading role in the development of the James Webb Space Telescope (JWST) scheduled to be launched late in this decade, L-3 IOS supports major National Aeronautics and Space Administration (NASA), National Oceanic and Atmospheric Administration (NOAA), Lawrence Livermore National Laboratory (LLNL) and Department of Defense (DoD) space programs.
**Ground and Airborne Programs**

L-3 IOS provides innovative solutions for airborne, ground-based and naval applications where a combination of high precision, high-resolution imagery, size, weight and stabilization are critical for success.

Our land combat systems and naval products are vital components to both lead and support a diverse range of military operations.

L-3 IOS telescope and test range tracking mounts and systems integrate precision optical tracking with smooth, accurate positioning systems. They feature the latest target sensing and data recording techniques, and are proven to be both durable and reliable.

Our airborne electro-optical and infrared sensor packages are effective in both day and night operations. IOS’ airborne sensors provide wide area persistent situational awareness to find, track and locate regions of interest during critically important Intelligence, Surveillance and Reconnaissance (ISR) missions.

**Elevating performance to protect the warfighter**

**XM25 FIRE CONTROL SYSTEM (FCS)**

Powered by L-3 IOS’ full solution target acquisition fire control system (TA/FCS), the XM25 is a semi-automatic weapon designed for effectiveness against enemies protected by walls, dug into foxholes, hidden in hard-to-reach places or behind cover.

**PHALANX CLOSE-IN WEAPON SYSTEM**

L-3 IOS’ two-axis, gyro-stabilized, electro-optical tracking pedestal significantly advances the capability of the Phalanx Close-In Weapon System (CIWS). The system is currently installed on the majority of U.S. combatants and on those of 24 allied nations.

**INTEGRATED BALLISTIC RETICLE SYSTEM (IBRS)**

L-3 IOS’ IBRS sight enables snipers to quickly and accurately acquire targets by using a digital ballistic fire control solution to project an electronic reticle in their line of sight.

**ULTRA WIDE SENSOR**

The Ultra Wide Sensor uses an advanced staring focal plane array and provides the warfighter tactical situational awareness, by supplying soldiers with an overhead view of their local area, and forensic video data that enables analysts to assess enemy networks of activity.

**Precision Optics**

For customers wanting to employ the design and manufacturing capabilities of L-3 IOS, we manufacture a broad array of custom precision optics ranging from very precise aspheric, flat and anamorphic optical components to the more common spheres and aspheres.

We set the standard of performance by combining sophisticated design, analysis and fabrication tools. Our propriety software was developed specifically to analyze, create and test unique high-performance optical systems and components.

L-3 IOS is a lean manufacturer producing prototypes to high-volume. Our skilled production staff is trained to respond to tight turnaround requirements while maintaining cost objectives. Our continuing legacy of quality, delivery and service has established us as the long-term producer of precision optics needed by our diverse and international group of customers.
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L-3 IOS provides a comprehensive suite of optical and electro-optical solutions and programs that reflect our heritage and commitment to the successful completion of critical projects and programs. We are proud to support the diverse needs of our diverse international customer base.

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