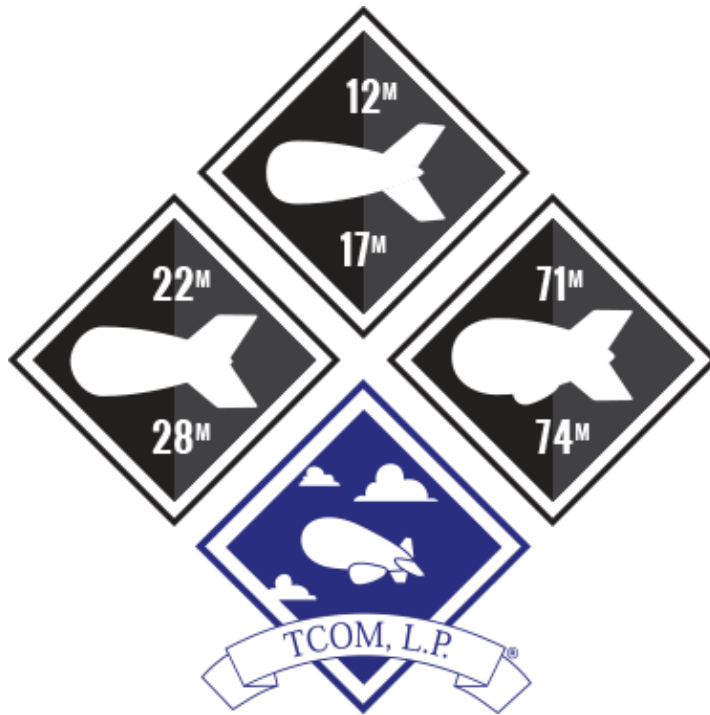


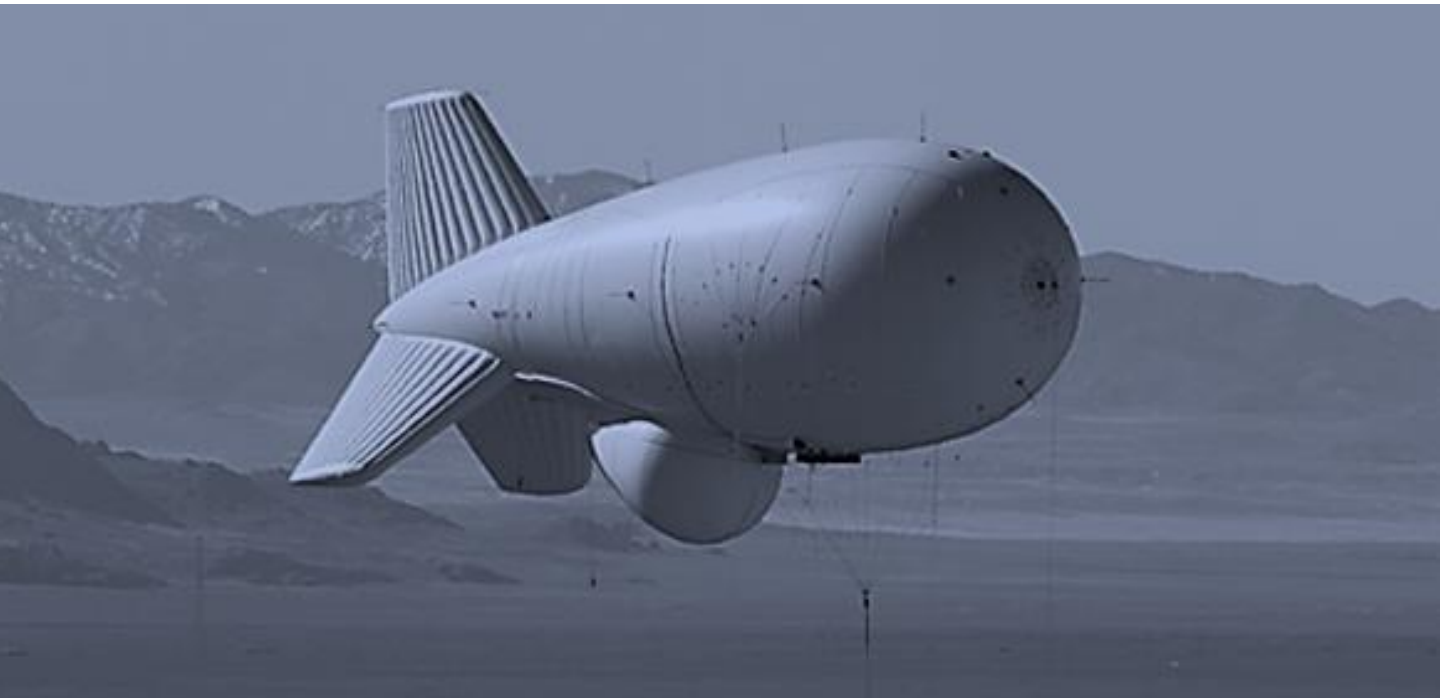
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ARMOURTM

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**Meeting Your Mission
Anywhere and Everywhere**



Tactical, Operational and Strategic Solutions Designed to Meet Any Mission

Maintaining continuous aerial security is a daunting task.

Threats such as low-flying, extremely fast aircraft can take advantage of the earth's curvature and exploit terrain obstructions.

This renders ground-based radars unable to provide target information in time to take appropriate action.

Slow, low flying missiles with a small cross section may also avoid early detection and pose a significant threat.

Manned aerial surveillance can decrease the risk for short periods of heightened alert, but the operational costs are much too high for extended use.

To meet this airborne coverage challenge effectively and inexpensively, TCOM developed the 71M Low Altitude Surveillance System.

With over 1,000,000 hours of operation these systems are the only operational airborne defense assets to routinely provide the continuous round-the-clock, low altitude target detection information needed to secure the skies.

TACTICAL CLASS



TCOM Tactical Class aerostat systems are compact, highly-portable persistent surveillance solutions designed to meet the tactical needs of operators on the battlefield.

These rugged and versatile systems are ideal for land surveillance applications that require rapid deployment, retrieval and relocation.

Tactical Class aerostat systems can be customized with payloads that include video surveillance, infrared and SIGINT / COMMS Relay equipment, enabling forces to obtain actionable data, even in the most remote and challenging terrain.

TCOM's Tactical Class aerostats have been used extensively in theater in Iraq and Afghanistan, and are currently supporting U.S. Customs and Border Patrol in enhancing security along the U.S. border with Mexico. These versatile systems represent the future of aerostat systems deployment and design.

12M-SPECIFICATIONS

Payload Weight	27 kg/ 60 lbs
Nominal Altitude	300 m/ 1000 ft
Available Payload Power	500 w
Flight Duration	7 days
Wind Speeds	operational- 40 kts/ survival-55 kts

TCOM 17M aerostat systems offer battle-tested reliability along with total customization for a versatile solution to inland surveillance missions. These compact systems can be deployed in a matter of hours, and require minimal manpower to operate.

12M-SPECIFICATIONS

Payload Weight	90 kg/ 200 lbs
Nominal Altitude	300 m/ 1000 ft
Available Payload Power	1 kVA
Flight Duration	7 days
Wind Speeds	operational- 40 kts/ survival-55 kts



OPERATIONAL CLASS AEROSTAT SYSTEMS



TCOM Operational Class aerostat systems offer unrivaled versatility and performance.

These medium-sized aerostat systems offer both the flexibility and portability for accelerated launch and retrieval, along with the capacity for sustained deployment for up to two weeks at a time.

Operational Class aerostats are ideal for monitoring areas in which ground-based surveillance would be rendered ineffective by domain obstructions, or where manned aerial surveillance is deemed too costly.

Versatile Operational Class aerostat systems may carry payloads that include radar, SIGINT and COMMS Relay to altitudes as high as 3,000 ft above ground control station. This makes the systems ideal for maritime surveillance applications, protecting ports and costal borders, as well as inland border surveillance applications.

22M-SPECIFICATIONS	
Payload Weight	190 kg/ 425 lbs
Nominal Altitude	900 m/ 3000 ft
Available Payload Power	2 kVA
Flight Duration	14 days
Wind Speeds	operational- 50 kts/ survival-70 kts

TCOM's 28M is one of the most widely-used aerostat systems available today. The 28M offers battle-proven reliability and can be customized with multiple payload configurations to meet the most demanding mission requirements.

28M-SPECIFICATIONS		+
Payload Weight	385 kg/ 850 lbs	570 kg/ 1250 lbs
Nominal Altitude	1500 m/ 5000 ft	900 m/ 3000 ft
Available Payload Power	3 kVA	5 kVA
Flight Duration	14 days	14 days
Wind Speeds	operational- 50 kts/ survival-70 kts	operational- 50 kts/ surviva

STRATEGIC CLASS AEROSTAT SYSTEMS



TCOM's Strategic Class of aerostat systems includes some of the largest tethered aerostats currently in operation.

These robust systems are ideal for aerial surveillance applications due to their enormous payload capacity and extended altitude range.

TCOM Strategic Class aerostats are capable of sustained deployments lasting up to 30 days at a time.

Typically, Strategic Class aerostat systems are customized for surveillance applications that involve the detection of low-flying, fast-moving objects including light aircraft and cruise missiles.

Strategic Class payloads may include long-range radar, active and passive communications equipment as well as COMINT/ELINT technologies, often carrying payloads as high as 15,000 ft above ground control station. Due to their large size, high altitude and considerable payload, Strategic Class aerostats use a stationary mooring station.

71M-SPECIFICATIONS

Payload Weight	1600 kg/ 3500 lbs
Nominal Altitude	4600 m/ 15000 ft
Available Payload Power	23.5 kVA
Flight Duration	30 days
Wind Speeds	operational- 70 kts/ survival-90 kts

The 74M is one of the largest and most powerful aerostat systems available. The high altitude and maximum payload capacity set the 74M apart as a reliable tool for aiding military forces in sustained aerial surveillance applications.

74M-SPECIFICATIONS

Payload Weight	3200 kg/ 7000 lbs
Nominal Altitude	3000 m/ 10000 ft
Available Payload Power	70 kVA
Flight Duration	30 days
Wind Speeds	operational- 70 kts/ survival-100 kts



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Applications include



**LONG-RANGE UAV
CONTROL AND
MONITORING**



**AIR DEFENSE
/AIRCRAFT
MONITORING**



**ELECTRONIC
MONITORING (ELINT)**



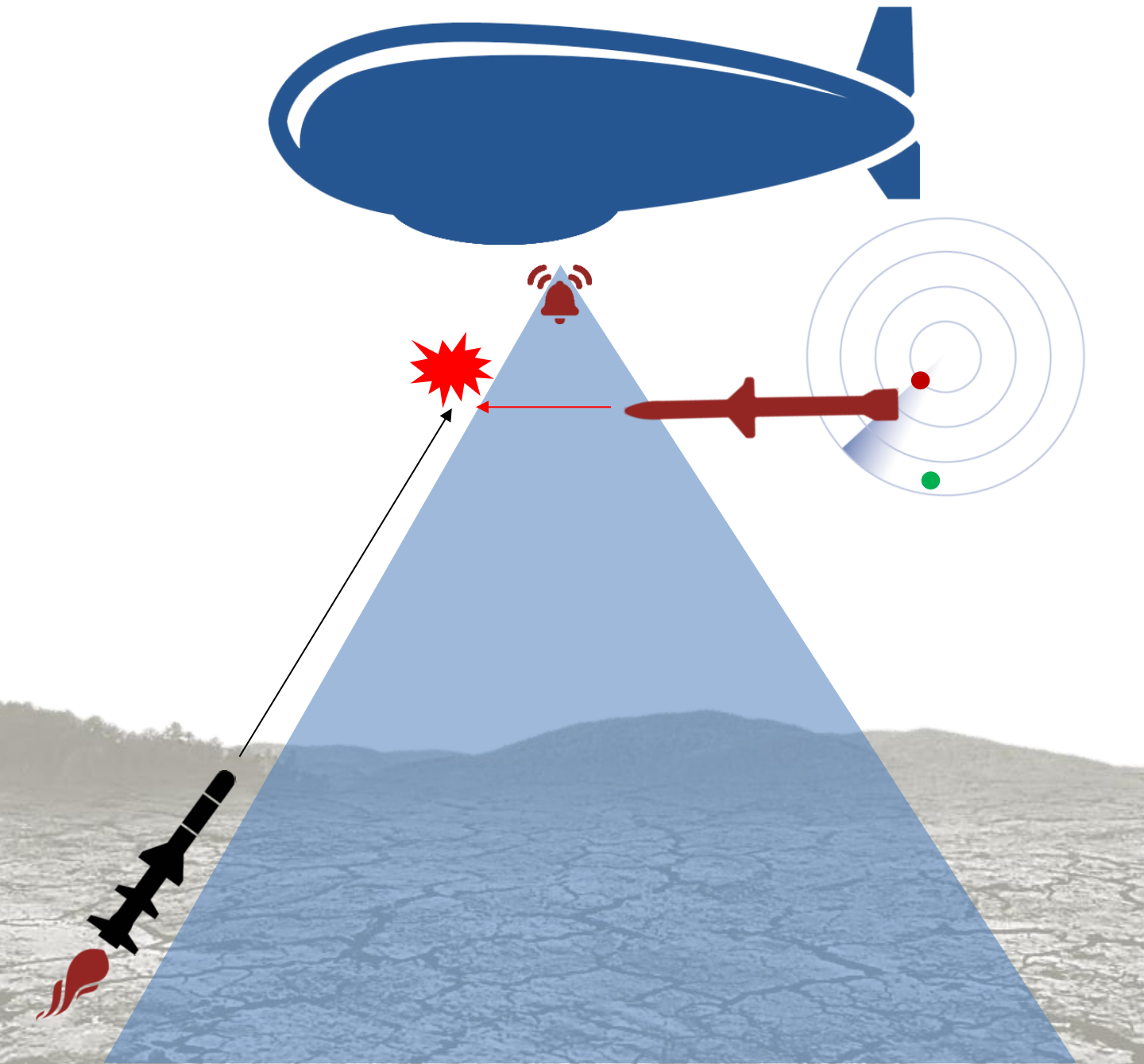
**DETECTION AND
TRACKING OF DRONE
AND UAV CRA**



**ANTI-TERRORISM
EFFORTS**



THE VIEW FROM ABOVE



Easily Meet Changing Requirements

TCOM Air solutions are as versatile as they are effective. Despite the massive size of the fully-inflated aerostats, the complete systems are easily transported, and can be deployed in nearly any environment. Mooring stations are either stationary – to be deployed in one location for an extended period; or fully transportable – built into standard trailers. Although TCOM Air solutions are readily available, individual systems can also be modified to better meet the needs of each mission



Along hostile borders or in troubled interior regions, ground forces and civilian populations are at constant risk of attack.

Well-armed insurgents use the cover of night to initiate surprise attacks and plant explosive devices. Without adequate continuous surveillance, enemy forces can inflict major damage. Ground-based radars and day/night optical sensors alone cannot provide the line of sight needed to overcome terrain obstructions and defeat these threats in a timely manner.

Continuous operation of manned or unmanned aircraft is too costly and difficult to maintain.

Therefore, security forces need an effective and affordable elevated land surveillance system that offers continuous, wide-area surveillance, while providing target information rapidly and reliably.

Applications include



**ANTI TERROR
& INSURGENT
MONITORING**



**PERIMETER
SECURITY**



**COMMUNICATIONS
INTELLIGENCE**



**BORDER
SURVEILLANCE**



**TROOP
MOVEMENTS & RE
CONNAISSANCE**

LAND SURVEILLANCE



SYSTEM IN ACTION



Unmatched Versatility

The versatility of TCOM land surveillance systems is unrivalled in the industry. Land-based aerostat solutions are available in fixed, transportable, or mobile configurations to meet a wide range of applications. The smallest systems are very mobile and can be operated with the aerostat aloft while on-the-move. Our smaller sized aerostats can also be deployed by helicopter lift when roads are impassible or non-existent. – See more at: <http://www.tcomlp.com/land-surveillance-systems/#sthash.eqLcKt8q.dpuf>



Monitoring territorial waters on a round-the-clock basis while providing intelligence in time to take appropriate action is a major challenge to many nations.

Ground-based and shipboard systems have a limited range against surface targets, while continuous use of aircraft is prohibitively expensive.

Nations need an effective and affordable system that offers continuous, wide-area maritime surveillance and timely provision of target information.

Applications include



EARLY INTRUSION ALERT



**PIRACY AND
SMUGGLING
DETERRENCE**



**ILLEGAL
IMMIGRATION
MONITORING**



ANTI-TERRORISM

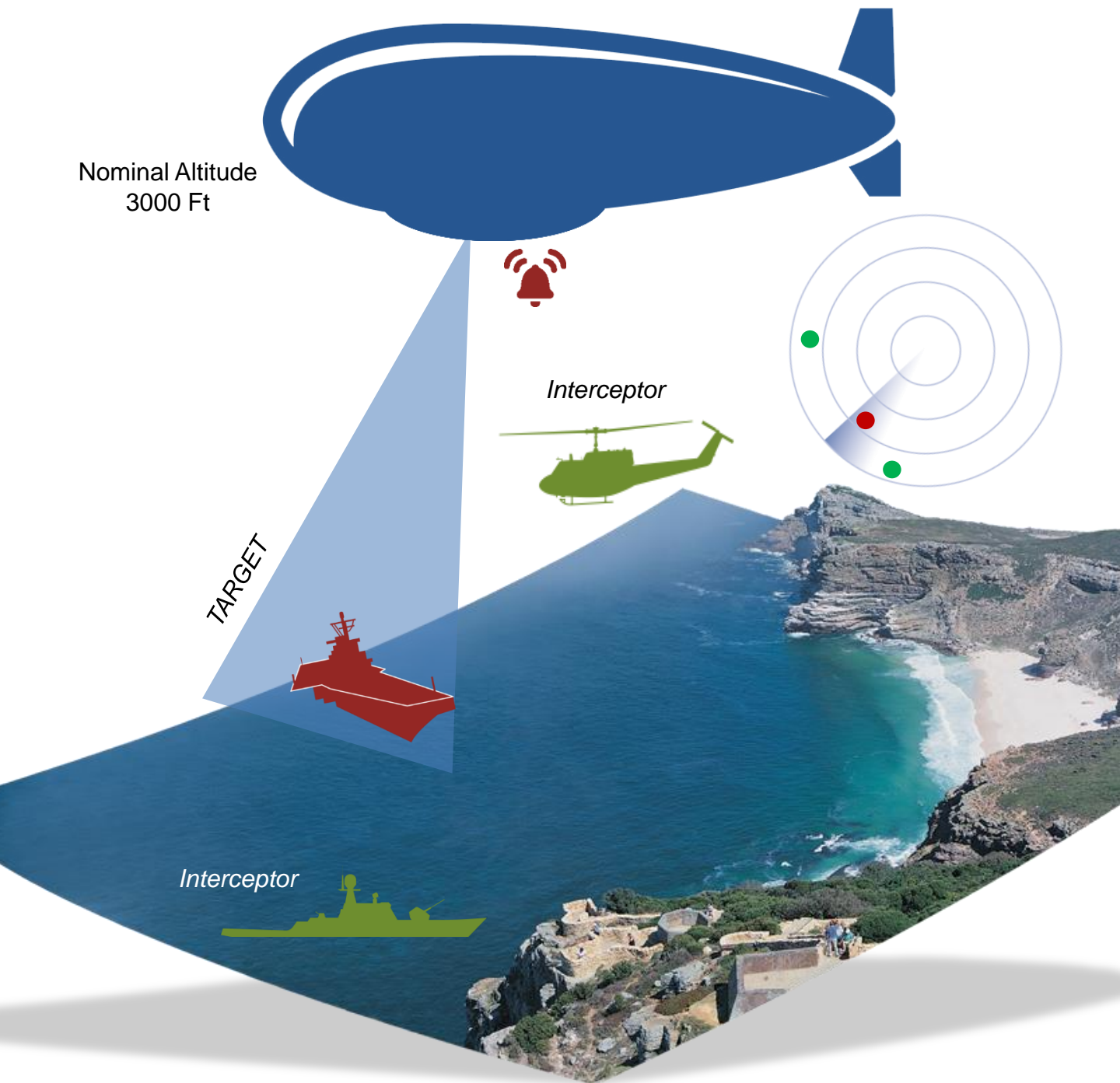


**FISHING ACTIVITY
SURVEILLANCE**

SEA SURVEILLANCE



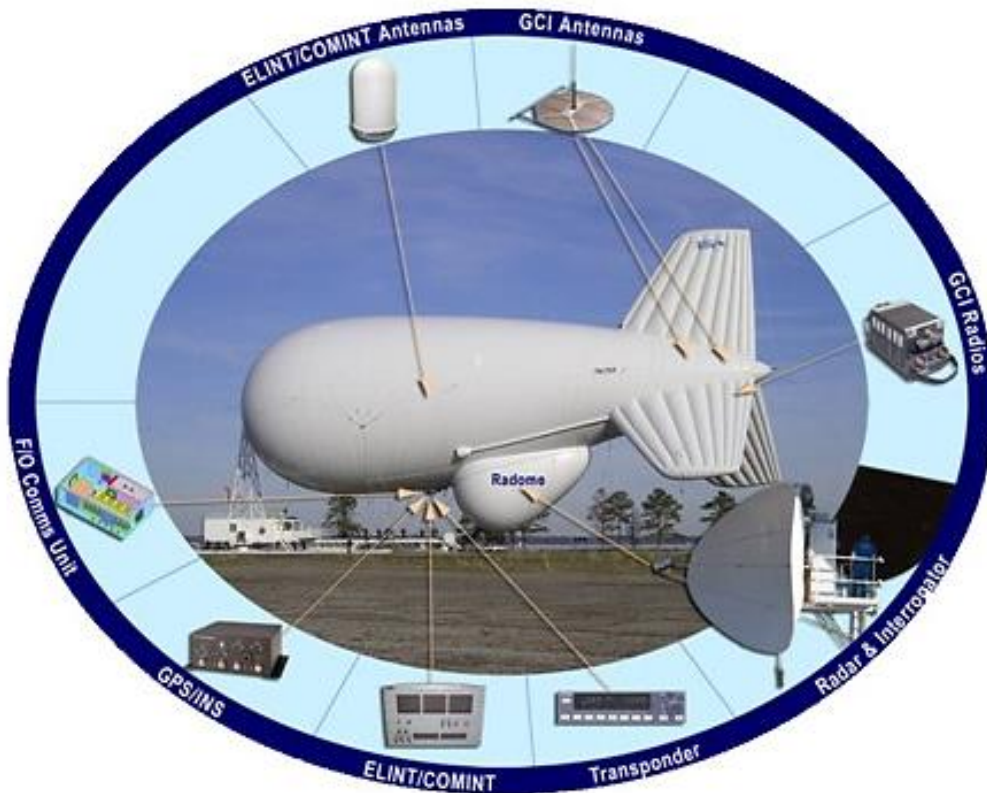
SYSTEM IN ACTION



Easily Meet Changing Requirements:

The versatility of the sea surveillance system makes it ideal for responding to requirements or threats that change rapidly. The system is fully transportable and can be easily relocated with no site preparation. Although fully mature, the system can be shaped to better meet the needs of the client. Additional capabilities such as passive surveillance and remote data linking can be included.

PAYLOAD INTEGRATION



TCOM begins system integration by mounting each payload in the locations chosen to provide the correct field of view, to minimize interference from other on-board payloads and to correctly balance the aerostat for flight.

If required, TCOM can provide gimbal mounting for stabilization and INS/GPS for geo-referencing. Environmental packaging is added as required for lightweight weather protection, lightning and environmental protection.

The size and weight of the payloads will dictate the load distribution for payload mounting trusses laced onto the aerostat structure.

Power for the payloads is provided from power distribution modules in the on-board avionics. Two-way communications for data and control is provided to the Aerostat System Ground Control Station.

At the ground control station the data for the different sensors is correlated and displayed on a common operating display to verify successful integration.

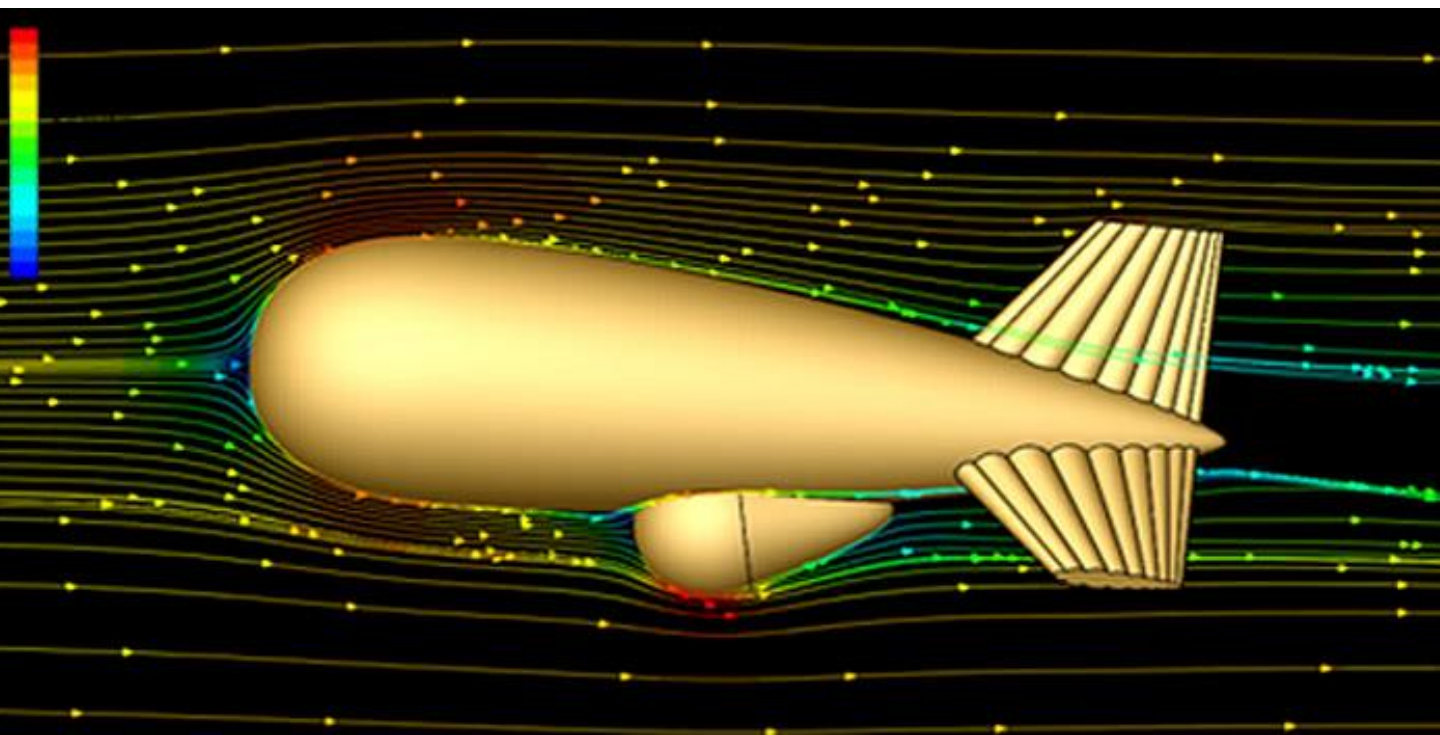
Where required by the customer, the data from the ground control station can be disseminated to multiple remote stations with recording and archiving and a full set of analysis tools.

A comprehensive testing program is generated to ensure that the integrated system meets all the end user requirements.

Proven Global Success

The result of TCOM's approach to the provision of Aerostat Persistent Surveillance Systems is unmatched and well documented. TCOM has provided aerostat systems with integrated multiple active and passive sensors in more countries around the world than any other aerostat system provider.

CUSTOMIZED DESIGN TO MEET THE MISSION



Every security mission requires a unique set of sensors integrated onto a TCOM aerostat design to form a platform system that will meet the customer's persistent Intelligence, Surveillance & Reconnaissance (ISR) mission.

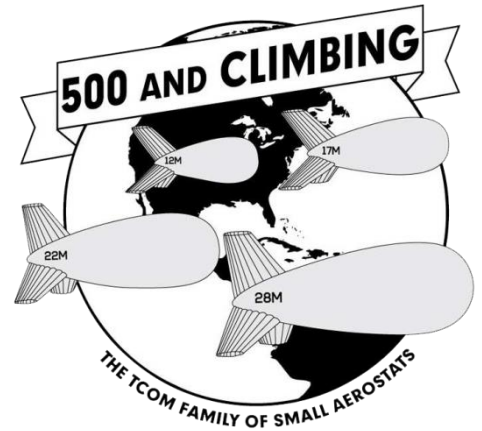
At the heart of every TCOM Aerostat Surveillance system lies a proven design process that effectively blends customer needs and superior engineering to create the system that will meet all of the customer's functional requirements in a cost-effective and reliable way. The aerostat design also ensures durability and performance for the life of the system.

TCOM engineers begin the aerostat design process by gathering a full understanding of the customer's surveillance mission and operational environment. Based on this understanding and years of expert knowledge and experience, the engineers select the ideal sensor suite that will be integrated onto the Aerostat.

TCOM designs also take into account the required communications, power, EMI/RFI stabilization and heading reference systems to provide a high availability airborne surveillance system.

Our engineers excel at designing the ground control station as well as the fiber-optic powered tether that carries data and command information from the aerostat to the ground station. TCOM promotes, encourages and supports design engineering in their quest for technical excellence and innovation by providing the analysis tools, state-of-the-art analysis software and test facilities to enable cost effective innovative solutions to challenging aerostat design requirements. In addition, processes and mechanisms are in place to spawn new initiatives and identify emerging technologies so that TCOM engineering is always ahead of the technical curve.

SUPPORT FROM START TO FINISH



TCOM provides single point responsibility for the overall system performance and continuing aerostat support essential for the reliable and consistent performance of the Aerostat Surveillance System.

After the system has successfully completed all its formal testing at our Manufacturing and Flight Test Facility (MFTF), it is shipped to the customer.

TCOM's Field Operations & Support (FOS) group, supported by TCOM's headquarters design and systems engineering groups, provides the in-country expertise for on-site installation, on-the-job training and integration into existing networks

The Turnkey Installation Solution Includes:

- Site survey, design and construction
- Installation of the aerostat subsystems that make up the aerostat system
- Integration of the aerostat system with the site infrastructure
- Payloads integration including providing connectivity with the customer's command centers and data/communications network
- On-site formal classroom training and/or on-the-job-training (OJT)
- O&M support as required
- Logistics support to integrate spares and support equipment into a tracking database

TCOM FOS pools of field engineers have trained and experienced personnel with the skillsets to supply a turnkey aerostat support solution from installation and checkout (I&CO) of the system to when the system is handed over to the customer for operation and maintenance (O&M). TCOM has installed aerostat systems in more countries than any other aerostat system manufacturer.

AEROSTAT SYSTEM TRAINING TO ENSURE MISSION SUCCESS



The most sophisticated and capable system cannot be used effectively if the individuals who operate and maintain it are not properly trained.

Therefore, the TCOM Training Group provides aerostat system training to meet this need. The Training Group and Technical Documentation Group are integrally tied together as vital elements of the Integrated Logistics Support of our Aerostat Surveillance Systems wherever they are deployed

Hands-On Experience, On-Site Instruction

One significant advantage of TCOM aerostat system training is the ability to use our Manufacturing and Flight Test Facility (MFTF) which provides excellent facilities for both classroom and hands-on training of customer personnel.

The classroom training is based on material prepared by our experts in our Technical Documentation Group and can be shaped to meet unique customer requirements.

The training prepares Flight Directors to fly and manage the aerostat system, and trains technicians to maintain all of the mechanical, electric and electronic equipment in the system. The technicians are also trained to assist in launch and recovery procedures.

The MFTF hangar is so large that trainees can actually fly our smaller aerostat systems inside without concern for adverse weather conditions. It also allows trainees to perform many hands-on activities on our larger systems.

Additional on-the-job aerostat system training on these larger platforms is provided at the operational site location. OJT training for smaller systems can be accomplished right at the MFTF facility.

AEROSTAT SYSTEM TRAINING TO ENSURE MISSION SUCCESS



Proven Expertise

TCOM's proven approach to aerostat lifecycle support for fielded systems is based on our expertise in anticipating each system's needs, balancing availability with affordability, and assigning Headquarters and Field personnel familiar with the system. The support assumes that Operation & Maintenance of the system is being performed by properly trained customer personnel using TCOM supplied documentation, and includes the following elements:

Supply Support: Initial Provisioning of spare parts, support and test equipment and periodic re-provisioning based on failures and usage.

Warranty Support: Processing of warranty claims in a timely manner during the warranty period and repair or replacement of the item in question.

Logistics Monitoring: A Logistics Engineer is assigned to each program to maintain a logistic data base which tracks usage/failures in the field and tracks and expedites return of repairable.

Obsolescence Monitoring: TCOM utilizes a COTS obsolescence software tool to actively monitor Bills of Material for obsolete items. TCOM will offer a quantity buy or a design upgrade for the item.

Mod Kits to implement system improvements and/or Upgrades that are driven by emerging needs from customer, feedback from field or operators, or improvements supplied with newer systems.

