

WinterGreen Research, INC.

**Homeland Security and Commercial Unmanned Aircraft Systems (UAS)
Market Shares, Strategies, and Forecasts, Worldwide, 2011 to 2017**

**Homeland Security Unmanned Aircraft Systems (UAS): Border Patrol, Aerial
Photography, and Commercial Cargo Planes**



Torrie The Cat in the Tulips and Elvis the Big Black Dog Carrying His Sstick

Picture by Susan Eustis

WinterGreen Research, Inc.

Lexington, Massachusetts

www.wintergreenresearch.com

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CHECK OUT THESE KEY TOPICS

<ul style="list-style-type: none">Unmanned aircraft systems (UAS)Unmanned Aircraft Vehicles (UAV)Networks of Military Unmanned airplanesUnmanned Military Logistics AirplanesMilitary Unmanned AircraftMilitary RobotsManeuverable Military AirplanesMilitary Embedded Remote Control Software	<ul style="list-style-type: none">Sensor NetworksUnmanned Aerial SystemsAerial platformLaunching Laser Defensive WeaponsSupport Logistics MissionsRecharge BatteriesSearch And RescueRobot NavigationBattery for Military UASBattery for Military UAVMilitary Airplanes Drive ControlMilitary Airplanes Electronics	<ul style="list-style-type: none">Military Unmanned Aircraft Systems (UAS)UAS Market SegmentsLarge and Mid Size Military Unmanned AircraftGuns Mounted on Unmanned AirplanesRemote-Controlled WeaponsCommon Operator Control UnitRadio Control Moduleshttp://wintergreenresearch.com/reports/UAS.htm
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Military Unmanned Aircraft Systems (UAS) Localization and Deterent Strategy

**Homeland Security and Commercial Unmanned Aircraft Systems (UAS):
Market Shares, Strategies, and Forecasts, Worldwide, 2011-2017**

LEXINGTON, Massachusetts (February 24, 2011) – WinterGreen Research announces that it has a new study on homeland security unmanned aircraft systems (UAS). Homeland security unmanned aircraft systems (UAS) markets grow as the governments worldwide realize these affordable airplanes provide a less expensive way to provide defense of a nation’s borders and deterrent to intruders. These markets are poised to grow based on the creation of new services efficiencies that accrue from improved technologies. New composite materials systems are achieving consistent price declines throughout the forecast period.

The 2011 study has 672 pages and 216 tables and figures. Worldwide markets are poised to achieve significant growth as governments worldwide move to implement more cost efficient military systems and weapons delivery modalities. Vendors are building out localized distribution networks that support a UAS system in a local environment, providing remote control of airplanes.

The military UAS technology is migrating to new markets; commercial drone technology is increasingly available beyond military circles. Commercial applications are spreading fast. An unmanned aircraft that can fly a predetermined route costs a few hundred bucks to build and can be operated by iPhone.

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Homeland security and commercial unmanned aircraft system (UAS) are used by countries to protect their borders and get aerial views of commercial projects. Complex systems include ground stations and other elements in addition to the aircraft. UAS are used by the International Civil Aviation Organization (ICAO) and other government aviation regulatory organizations.

The requirement for rapid responses to complicated contingencies and the enduring need for ever more persistent surveillance to meet each of the contingencies requires development of extended persistence, pre-positioning, maritime air take-off and landing and aerial refueling. Thin film batteries become significant.

Enhanced strike capability and payloads are evolving: UASs are required to carry out an increasing number of strike missions on the battlefield. These missions mandate UASs be able to be equipped with flexible payloads and advanced autonomous target recognition capabilities. More UASs with strike capabilities will be required.

Commercial UAS may include air cargo planes flown from a remote location using a video controller. This significantly reduces the cost of logistics for moving anything. The ability to reduce the cost of transport of goods, by reducing the labor component is a significant advance in commercial activity.

Unmanned aircraft systems (UAS) are achieving a level of relatively early maturity. Fleets of unmanned aircraft systems have begun to evolve. The U.S. Army has achieved one million flight hours for its unmanned aircraft systems fleet. This market maturity is anticipated to extend the usefulness of the technologies into homeland security and commercial markets. Unmanned aerial systems have good handling characteristics. Units are designed to perform high-speed, long-endurance, more covert, multi-mission intelligence, surveillance, and reconnaissance (ISR) and precision-strike missions over land or sea.

Units feature a variety of internal weapons loads, including 2,000 lb Joint Direct Attack Munition (JDAM), an Electro-optical/Infrared (EO/IR) sensor, and an all-weather GA-ASI Lynx® Synthetic Aperture Radar/Ground Moving Target Indicator (SAR/GMTI), maximizing both long loiter ISR and weapons carriage capabilities.

UAS offers the war fighter persistent situational awareness and strike mission affordability. For the cost of one manned fighter aircraft, multiple-swarm configured units can cover an area of interest, providing 24/7 ISR coverage, target identification, neutralization, mission flexibility, and attrition tolerance. Some UAS have the capability to perform manned aircraft missions.

According to Susan Eustis, primary author of the study, "growth is spurred by increasing interest from homeland security planning departments. The governments worldwide are moving toward embracing unmanned aircraft systems (UAS) because of the increased intelligence capability and deterrent efficiency combined. The versatility of single aircraft, and the ability to use multiple inexpensive aircraft for different purposes is a formidable and compelling market driver."

Unmanned aerial systems (UAS) markets at \$84 million in 2010 are forecast to reach \$2.3 billion dollars, worldwide by 2017. US UAS aircraft have flown one million miles over the last four years and are set to fly one million more in the next year. The pace of homeland security and commercial utilization is picking up as planners realize that UAS are significantly more efficient than manned aircraft in every way.

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Market growth of unmanned aircraft systems (UAS) markets is a result of the ability to fly longer, see better, provide more useful imaging, put better sensor packages in place, achieve better maneuverability, and implement new technology. The improved control units that permit handlers to work remotely improves systems capability.

Units more easily portable, more battery technology permits the ability for systems to stay in the air longer. New systems permit refueling in the air.

Keywords: Unmanned aircraft systems (UAS), Unmanned aircraft vehicles (UAV), Networks of Military Unmanned airplanes, Unmanned Military Logistics airplanes, Military Unmanned Aircraft Market Shares, Unmanned Aerial Vehicles , Military Robots Market Forecasts, Maneuverable Military Airplanes, Military Embedded remote control Software, Sensor Network, Unmanned aerial systems platform, Launching Laser Defensive Weapons, Support Logistics Missions, Recharge Batteries, Search And Rescue, Robot Navigation, Battery for Military UAS, Battery for Military UAV, Military airplanes Drive Control, Military airplanes Electronics, Military Unmanned aircraft systems (UAS) Market Segments, Large and Mid Size Military Unmanned aircraft, Guns Mounted on Unmanned airplanes, Remote-Controlled Weapons, Common Operator Control Unit, Radio Control Modules, <http://wintergreenresearch.com/reports/UAS.htm>

Companies Profiled

Market Leaders

Boeing
Lockheed Martin
General Atomics Aeronautical Systems, Inc. (GA ASI)
Northrop Grumman
L-3 Communications Corp.,

Aurora Flight Sciences
Integrated Dynamics
Textron
AeroVironment
BAE Systems

Market Participants

Unmanned Aerial Systems
(UAS)Company Profiles
Unmanned Aircraft Systems
(UAS) Company Profiles
AB Precision (Poole) Ltd
Airborne Technologies
Applied Research Associates, Inc.
ARA
ATK
BAE Systems Large UGV 5-
42

BAE Systems Plc (BAES.L) Hired
Black Ram Engineering
Boeing-/ iRobot
Caterpillar
Challis Helicopters Inc. / Challis
Heliplane UAV
Challis Heliplanes
Concurrent Technologies
Corsair
DiSTI Software For UAV Systems
DOK-ING

Draganfly Innovations Inc.
DRS Unmanned Technologies, Inc.
Elbit Systems Ltd.,
Elbit Systems of America
Frontline Robotics
G-NIUS Unmanned Ground
Systems Ltd
General Dynamics / AxleTech
International
GE
Harris

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Insitu
National Airspace Integration
Research
Integrated Dynamics
intelliDrones
InRob Tech
iRobot
John Deere
L-3 Communications Corp.,
LaserMotive
Pioneer Technology
Groups Of Unmanned Vehicles 5-
180
Meggitt
BAE Mantis UAS Advanced
Concept Technology

Mesa Robotics, Inc.
MRI
MLB Company
Mist Mobility Integrated Systems
Technology Inc. (MMIST)
Omnitech Robotics
Oshkosh
Oto Melara SpA Land Automatic
Surveillance Capabilities
Proxy Aviation Systems, Inc.
Pilot Guides Multiple UAVs
Qinetiq / Foster-Miller
Robotic Technology Inc.
RE2, Inc.
Rolls-Royce
SESI

SESI Boeing
Stratom Warrior Tool and
Payload Accessory
Telerob
Textron Systems / AAI
Corporation
Textron Systems / Aerosonde
Textron /MillenWorks:
Unmanned Vehicle Maker
Textron Marine & Land Systems
Thales
Versa / Allen-Vanguard
VIA Technologies

Homeland Security and Commercial Unmanned Aircraft Systems (UAS): Market Shares, Strategies, and Forecasts, Worldwide, 2011 to 2017

Report Methodology

This is the 463th report in a series of primary market research reports that provide forecasts in communications, telecommunications, the Internet, computer, software, telephone equipment, health equipment, and energy. Automated process and significant growth potential are a priorities in topic selection. The project leaders take direct responsibility for writing and preparing each report. They have significant experience preparing industry studies. Forecasts are based on primary research and proprietary data bases.

The primary research is conducted by talking to customers, distributors and companies. The survey data is not enough to make accurate assessment of market size, so WinterGreen Research looks at the value of shipments and the average price to achieve market assessments. Our track record in achieving accuracy is

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unsurpassed in the industry. We are known for being able to develop accurate market shares and projections. This is our specialty.

The analyst process is concentrated on getting good market numbers. This process involves looking at the markets from several different perspectives, including vendor shipments. The interview process is an essential aspect as well. We do have a lot of granular analysis of the different shipments by vendor in the study and addenda prepared after the study was published if that is appropriate.

Forecasts reflect analysis of the market trends in the segment and related segments. Unit and dollar shipments are analyzed through consideration of dollar volume of each market participant in the segment. Installed base analysis and unit analysis is based on interviews and an information search. Market share analysis includes conversations with key customers of products, industry segment leaders, marketing directors, distributors, leading market participants, opinion leaders, and companies seeking to develop measurable market share.

Over 200 in depth interviews are conducted for each report with a broad range of key participants and industry leaders in the market segment. We establish accurate market forecasts based on economic and market conditions as a base. Use input/output ratios, flow charts, and other economic methods to quantify data. Use in-house analysts who meet stringent quality standards.

Interviewing key industry participants, experts and end-users is a central part of the study. Our research includes access to large proprietary databases. Literature search includes analysis of trade publications, government reports, and corporate literature.

Findings and conclusions of this report are based on information gathered from industry sources, including manufacturers, distributors, partners, opinion leaders, and users. Interview data was combined with information gathered through an extensive review of internet and printed sources such as trade publications, trade associations, company literature, and online databases. The projections contained in this report are checked from top down and bottom up analysis to be sure there is congruence from that perspective.

The base year for analysis and projection is 2010. With 2010 and several years prior to that as a baseline, market projections were developed for 2011 through 2017. These projections are based on a combination of a consensus among the opinion leader contacts interviewed combined with understanding of the key market drivers and their impact from a historical and analytical perspective. The analytical methodologies used to generate the market estimates are based on penetration analyses, similar market analyses, and delta calculations to supplement independent and dependent variable analysis. All analyses are displaying selected descriptions of products and services.

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This research includes referencde to an ROI model that is part of a series that provides IT systems financial planners access to information that supports analysis of all the numbers that impact management of a product launch or large and complex data center. The methodology used in the models relates to having a sophisticated analytical technique for understanding the impact of workload on processor consumption and cost.

WinterGreen Research has looked at the metrics and independent research to develop assumptions that reflect the actual anticipated usage and cost of systems. Comparative analyses reflect the input of these values into models.

The variables and assumptions provided in the market research study and the ROI models are based on extensive experience in providing research to large enterprise organizations and data centers. The ROI models have lists of servers from different manufacturers, Systems z models from IBM, and labor costs by category around the world. This information has been developed from WinterGreen research proprietary data bases constructed as a result of preparing market research studies that address the software, energy, healthcare, telecommunications, and hardware businesses.

YOU MUST HAVE THIS STUDY

Homeland Security and Commercial Unmanned Aerial Systems (UAS) Market Shares, Strategies, and Forecasts, Worldwide, 2011-2017

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Homeland Security and Commercial Unmanned Aerial Systems (UAS) Market Shares And Market Forecasts

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ABOUT THE COMPANY

WinterGreen Research, research strategy relates to identifying market trends through reading and interviewing opinion leaders. By using analysis of published materials, interview material, private research, detailed research, social network materials, blogs, and electronic analytics, the market size, shares, and trends are identified. Analysis of the published materials and interviews permits WinterGreen Research senior analysts to learn a lot more about markets. Discovering, tracking, and thinking about market trends is a high priority at WinterGreen Research. As with all research, the value proposition for competitive analysis comes from intellectual input.

WinterGreen Research, founded in 1985, provides strategic market assessments in telecommunications, communications equipment, health care, Software, Internet, Energy Generation, Energy Storage, Renewable energy, and advanced computer technology. Industry reports focus on opportunities that expand existing markets or develop major new markets. The reports access new product and service positioning strategies, new and evolving technologies, and technological impact on products, services, and markets. Innovation that drives markets is explored. Market shares are provided. Leading market participants are profiled, and their marketing strategies, acquisitions, and strategic alliances are discussed. The principals of WinterGreen Research have been involved in analysis and forecasting of international business opportunities in telecommunications and advanced computer technology markets for over 30 years.

The studies provide primary analytical insight about the market participants. By publishing material relevant to the positioning of each company, readers can look at the basis for analysis. By providing descriptions of each major participant in the market, the reader is not dependent on analyst assumptions, the information backing the assumptions is provided, permitting readers to examine the basis for the conclusions.

About The Principal Authors

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