



Civil unmanned aircraft systems

in the Berlin-Brandenburg capital region

Manufacturers | Developers | Sales

AiDrones
AlphaLink Engineering
APUS Group
ArrowTec
BÄRDONES
Composite Visions
DiAvEn
European AeroMarine Drones
EvoLogics
FLIGHTCOPTER
FlyingMachines
Germandrones
KAPI electronics
NatureTec
navtec Remoto
NEX Aero
Multirotor
NatureTec
navtec Remoto
NEX Aero
Skycharge
Skypoint-e
Skylink Industries
THOLEG Civil Protection Systems
Vecdrone

Service providers | Users

adKor
AIRTEAM
allefarben-foto
Architekturbüro Wieck & Partner
ArrowTec
Atrigon Vermessungsbüro
avatum
BSF Swissphoto
BUTTER AND SALT tech marketing
CDS Group Germany UG
div-gmbh
Drohnen Expertise
Dronesperhour
DRONEC
eagle eye technologies
Ingenieurbüro Bertels
LiveEO
Masuch Geoinformation
meetaa
meteomatics
Neßlinger
ÖbVI Strehse & Rehs
paul kitawa Filmproduktion & Luftthermografie
Pix4D
SENSYS
Skypoint-e
Skyseed
Slice production studios
Solutiance AG
TeaserFilm
TRIGIS GeoServices
TWD Team Werbedesign UG
Vermessung Diering
Vermessung Kaden
Webware Experts OHG



Fire service drone



Research drone deployed in agriculture

A strong region

The capital region is a political and economic centre, with a population of six million and outstanding connections to other growth markets in Europe, making it one of Germany's key regions for aviation technology.

Local companies and numerous scientific and research institutes are focusing on a wide range of issues with high development potential, such as the integration of unmanned transport systems. Unmanned aircraft systems (drones) have many applications: their use is expanding, and they are becoming more and more important.

UAS: an economic factor with a future

Modern drones are steadily taking over the lower airspace as flying tools. UAS may have started out as simple camera carriers for high-resolution aerial photography, but today many different avenues are being explored for their use in the civilian sector. They already represent a new and innovative field in aviation. Multicopters and fixed-wing drones are



which applies aviation technologies (from UAV to satellites) to solve agricultural tasks."

Dr Peter A. Hecker, Chairman of GEOkomm, Association of the Geoinformatics Industry in Berlin/Brandenburg

"In its role as a management institution, GEOkomm e.V. primarily supports networks that address issues concerning geoinformatics. The first successful network in the UAV sector, SiBeL, is now being followed by agrASpace,



Professor Wolfgang Rütter-Kindel, Chair of Aeronautical Engineering/Logistics, Wildau Technical University of Applied Sciences

"The department of aeronautical engineering at Wildau Technical University of Applied Sciences has focused on the design, construction, manufacture and testing of civil unmanned aerial systems for 15 years. Together with its network partners, the university thus forms a competence cluster in the Berlin-Brandenburg region."

used in the capital region for 3D surveying purposes, for monitoring and inspection tasks, to coordinate emergency services personnel deployed by the authorities and organisations with security duties, in agriculture, by the weather service, in the film industry and in shows and events.

The aircraft range in size from light micro drones with a diameter of around 10 cm to those requiring official approval with a take-off weight of well over 100 kg. In Germany, the awarding of the EU Remote Pilot Certificate and aircraft registration are regulated by the Federal Aviation Office (LBA). Theory classes and examinations can be taken completely online with organisations such as the recognised examination body DPH Drone Services in Berlin.

Research and development

Research and scientific institutes such as TU Berlin, Titus Research and Wildau Technical University of Applied Sciences are helping to shape this innovative industry and are driving

Example applications of drones:

- Aerial photography | Photogrammetry
- Construction project monitoring and documentation
- Inspection | Maintenance | Surveying
- Agriculture and forestry
- Weather services
- Thermography
- Logistics, parcel and delivery services

its development. Alongside aviation authorities, leading industrial companies and aviation associations, EU, federal and state funding programmes are supporting the deployment of innovative aviation technologies to open up potential civil applications. The data required and collected by the unmanned aerial vehicles also form the basis for secondary industries such as software development, geodetics and data analysis. The logistics industry and the emergency services are increasingly pursuing the objective of using drones as autonomous transport platforms. In the future, the transportation of people in air taxis is also set to play a significant role.

For special research and development activities with mission-specific tasks, some institutes operate their own field tests with special infrastructure.

Examples include Schönhagen Airfield in the field of civil protection, the Federal Institute for Materials Research and Testing (BAM) in the field of safety research, and Havelland Railway Technology Campus (BTC) for tasks involving all modes of transport.

Outstanding networking

Strong alliances and collaborative networks have been established in the capital region in all areas of unmanned aviation. They are formed of renowned manufacturers and users from a wide variety of sectors. The Wildau-based association CURPAS e.V. connects manufacturers, suppliers and users and promotes innovation in carrier system development. Networks and associations such as SiBel, MoDiSem and SIBB e.V. help companies and scientific institutes to identify suitable development and project partners. In this way, they strengthen the area as an economic hub and further enhance its competitiveness, as well as supporting regional policy initiatives in the capital region.

- Research | Science | Archaeology
- Film and television industry
- Shows and events
- Search and rescue operations
- Civil and environmental protection
- Ammunition detection
- Surveillance | Safety and security



“CURPAS e.V. focuses on unmanned vehicle systems, including UAS, in the civilian sector. With over 60 members from science and industry, CURPAS is the most innovative UAS association in Germany and has many links to similar organisations in the EU. True to our motto, ‘We initiate innovation’, the association brings business and science together, initiates research projects and shares its expertise with numerous national and international committees.”

Professor Uwe Meinberg, Chairman of CURPAS e.V. and Chair of Industrial Information Systems at BTU Cottbus-Senftenberg

DroneMasters, the world’s largest cross-sector platform for automated vertical mobility and drones, also has its headquarters in the capital region. Events and conferences hosted by DroneMasters have brought thousands of experts and enthusiasts together since 2015.

By supporting these endeavours, the Cluster Transport, Mobility and Logistics also enhances Berlin-Brandenburg as a high-quality location.



“Accelerated by digitalisation and electromobility, drones are opening up a new field of transport that makes it possible to connect cities and the countryside much more efficiently. The capital region offers numerous commercially relevant use cases and test fields for this purpose.”

Frank Wernecke, Founder and CEO, DroneMasters Berlin

Authorities and organisations with security duties

Brandenburg Police
Berlin Police
DLRG e.V. (German Life-Saving Association)
Johanniter-Unfall-Hilfe e.V.
Potsdam Fire Service

Education | Research and development

Brandenburg University of Technology Cottbus-Senftenberg (BTU)
DAI Lab Berlin
Helmholtz Centre Potsdam – GFZ German Research Centre for Geosciences
European Aviation Security Center EASC e.V.
Embry-Riddle Aeronautical University, Berlin Campus
Research Institute for Post-Mining Landscapes (FIB)
Freie Universität Berlin
HTW Berlin (University of Applied Sciences)
Humboldt-Universität zu Berlin
Leibniz Institute for Agricultural Engineering and Bioeconomy (ATB)
IHP GmbH – Innovations for High Performance Microelectronics
Leibniz Centre for Agricultural Landscape Research (ZALF)
Brandenburg University of Applied Sciences
Wildau Technical University of Applied Sciences
TU Berlin (University of Applied Sciences)

Training | Test centres

DPH Drone Services UG (DE.PStF.003 certification)

Networks | Associations

Berlin-Brandenburg Aerospace Allianz e.V. – BBAA
BVZD – Industry Association for Civilian Drones
CURPAS e.V.
DLRG Brandenburg Regional Association
German Red Cross Fläming-Spreewald Local Association
German Red Cross Brandenburg an der Havel Local Association
DroneMasters
GEOkomm e.V.
SIBB e.V. – Digital Business Association of Berlin-Brandenburg
Unmanned Aviation Association of the BDL & BDLI (German Aviation and Aerospace Industries Associations)

*UAV = unmanned aerial vehicle

*UAS = unmanned aircraft system

*RPAS = remotely piloted aircraft system

Unmanned aircraft system test sites in Berlin-Brandenburg

Scenario-Based Test Centre for Unmanned Aircraft Systems – BAM TUAS



Operator: Federal Institute for Materials Research and Testing, Berlin

Address: An der Düne 44, 15837 Baruth/Mark OT Horstwalde, Germany

Testing capabilities: Drone flights for technical safety R&D

Unique features: BVLOS ascents of up to 1,000 m within a permanently restricted area (ED-R 56, operational Mon.–Fri.), special infrastructure for safety investigations, only for Open and Specific categories of VTOL UAS

Contact: Dr Patrick Neumann, patrick.neumann@bam.de

<https://www.bam.de/Content/DE/Standardartikel/Themen/Infrastruktur/smarte-drohnen-im-test.html>

German Weather Service Boundary Layer Field Site at Falkenberg (in Tauche)



Operator: German Weather Service, Lindenberg Meteorological Observatory

Address: Am Observatorium 12, 15848 Falkenberg (Tauche), Germany

Testing capabilities: Drone flights for meteorology and weather research

Unique features: BVLOS ascents of up to 12 km within a temporarily restricted zone (ED-R), for all Open and Specific categories of UAS

Contact: Dr Franz H. Berger, franz.berger@dwd.de

https://www.dwd.de/DE/forschung/atmosphaerenbeob/lindenbergersaeule/grenzschichtprozesse/gmfalkenberg_node.html

Schönhagen Airfield (EDAZ)



Operator: Flugplatzgesellschaft Schönhagen mbH

Address: Flugplatz Haus 2, 14959 Trebbin OT Schönhagen, Germany

Testing capabilities: Drone flights for civil protection and integration with general aviation

Unique features: Ascents within aerodrome infrastructures, combined traffic with manned aircraft, 5G campus network, for all Open, Specific and Certified categories of UAS

Contact: Dr Klaus-Jürgen Schwahn, drschwahn@edaz.de

<https://www.flugplatz-schoenhagen.aero/>

Drone test area at Havelland Railway Technology Campus (BTC)

Operator: BahnTechnologie Campus Havelland GmbH

Address: Bahnhofstr. 2, 14641 Wustermark, Germany

Testing capabilities: Unmanned air and rail transport systems in the immediate vicinity of railway infrastructure (e.g. overhead line flights), autonomous/highly automated missions, among other testing capabilities

Unique features: BVLOS within the 4-km-long BTC campus, for Open and Specific categories of UAS, mainly VTOL UAS, LTE network coverage across the entire campus

Contact: Manuel Jakob, manuel.jakob@btc-havelland.de

<https://www.btc-havelland.de/>



Leibniz Centre for Agricultural Landscape Research (ZALF), patchCROP Landscape Laboratory at Tempelberg

Operator: Leibniz Centre for Agricultural Landscape Research (ZALF), Müncheberg

Address: 15518 Steinhöfel/Tempelberg, Germany

Testing capabilities: Living lab for flying and mobile robotics in agricultural landscape research

Unique features: Use of automated field robotics on land and in the air, collaborative use of specifically configurable landscape areas, flights of up to 120m, for Open and Specific categories of UAS, including BVLOS

Contact: Dr agr. Kathrin Grahmann, kathrin.grahmann@zalf.de

<https://comm.zalf.de/sites/patchcrop/SitePages/Homepage.aspx>



Lusatia Living Lab – Cottbus-Neuhausen/Spree Airfield

Operator: Flugplatzgesellschaft Cottbus/Neuhausen mbH

Address: Am Flugplatz 3, 03058 Neuhausen/Spree, Germany

Testing capabilities: UAS flights for integration into general aviation

Unique features: Ascents within aerodrome infrastructures, combined traffic with manned aircraft, for all Open, Specific and Certified categories of UAS

Under construction: Mobility Campus, 5G campus network, training centre for remote pilots and drone maintenance

Contact: Torsten Schwieg, info@flughafen-cottbus.de

<https://flughafen-cottbus.de/>



Our goal: your success!

Berlin and Brandenburg have joined forces in the aerospace field of action. Together, they are promoting the aerospace sector with a joint economic policy in the Cluster Transport, Mobility and Logistics. The cluster is managed by Berlin Partner for Business and Technology and the Economic Development Agency Brandenburg.

We'd be delighted to hear from you!

www.mobility-bb.com

PHOTOS: Title: ADOBE stock photo – Budimir Jevtic, inside: THOLEG Civil Protection Systems, Technische Hochschule Wildau – FB Luftfahrttechnik, Bundesanstalt für Materialforschung und -prüfung BAM, BahnTechnologie Campus Havelland BTC, Wirtschaftsförderung Land Brandenburg GmbH
LAYOUT: GDA Gesellschaft für Marketing und Service der Deutschen Arbeitgeber mbH, Berlin PRINTED BY: Druckerei Arnold e.Kfm.

© May 2023

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Co-funded by
the European Union

Published by Wirtschaftsförderung Land Brandenburg GmbH in cooperation with Berlin Partner für Wirtschaft und Technologie GmbH. Funded by the State of Brandenburg and the European Regional Development Fund.