

Company Profile

September 2014

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high-precision satellite positioning. Services

ABOUT US

Facts and Figures

About us



Profile

Milestones				
2000	Foundation of ascos service by E.ON Ruhrgas			
2002	The reference network covers the whole of Germany			
2008	Foundation of AXIO-NET GmbH by Allsat GmbH and EADS Astrium			
2009	Set-up of international services in Denmark, Great Britain and the Netherlands			
2013	100% subsidiary of Airbus Defence & Space			

Short Facts					
20	years of experience				
15	employees				
52°22' N 9°43' E	Headquarter in Hanover				

Subsidiary of Airbus Defence&Space



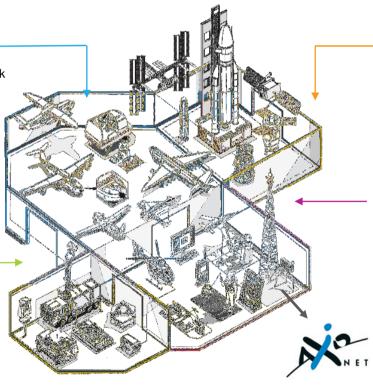


Military Aircraft

- A400M, A330 MRTT, CN235, C212, Orlik
- Eurofighter, Tornado, etc.

Electronics

- · Radare und IFF-Systeme, etc.
- Elektronik und Komponenten für Raumfahrtplattformen



Space Systems

 Ariane 5, Automated Transfer Vehicle, Beobachtungssatelliten (Spot, TanDEM-X, TerraSAR-X, Internationale Raumstation (ISS), interplanetare Raumsonden (Herschel, Mars Express, Solar Orbiter)

Communication, Intelligence and Security (CIS)

• Überwachungs- und Sicherheitslösungen, Secure Communications Solutions. Cybersicherheit, Küstenüberwachungssysteme, Nato Satcom Post-2000, drahtlose Intranetlösungen für Einsatzgebiete, Farmstar Expert, Tetra Systems, GNSS Services

About us

Products & Services



- GNSS-Reference networks
 - Provider of GNSS-servcies throughout Germany, Great Britain, Denmark and the Netherlands
 - Design, setup and operations of reference networks
 - Monitoring
 - Consulting
- System integration and projects
 - Individual solutions for all areas of precise positioning applications: surveying, forestry, agriculture, railway, automotive, aviation, shipping industry ...
 - Developing of and consulting for individual solutions

About us

References



- **GNSS-services:** providing the satellite-based reference networked service "ascos satellite positioning service", established in 1999
- FarmRTK: special service for agricultural applications in Germany, Great Britain, Denmark and the Netherlands (www.farmrtk.eu)
- AXIO-NET GB: correction data service throughout Great Britain using more than 150 reference stations
- Femern Belt Positioning System: designing, establishing and operating the GNSS reference network to support construction works of the fixed link across Femern Belt (<u>www.femern.com</u>)
- John Deere StarFire Mobile RTK: providing the positioning service to John Deere customers for precision farming













PRODUCTS AND SERVICES

Correction Data, Processes, Support

Reference Network 2012

N E T

- Design, installation and operation of GNSS-reference networks
- More than 400 reference stations throughout Germany, Denmark, Great Britain and the Netherlands



Reference station operators:



Cooperation:









Real-Time And Postprocessing Services





PED (± 2cm)



Trans



ViPP (> 1cm)



ED ($\pm 30 - \pm 50$ cm)



NET (> 1m)



ePP-NET (< 1cm)



ED Max (< 30cm)



EU ($\pm 30 - \pm 50$ cm)







Services

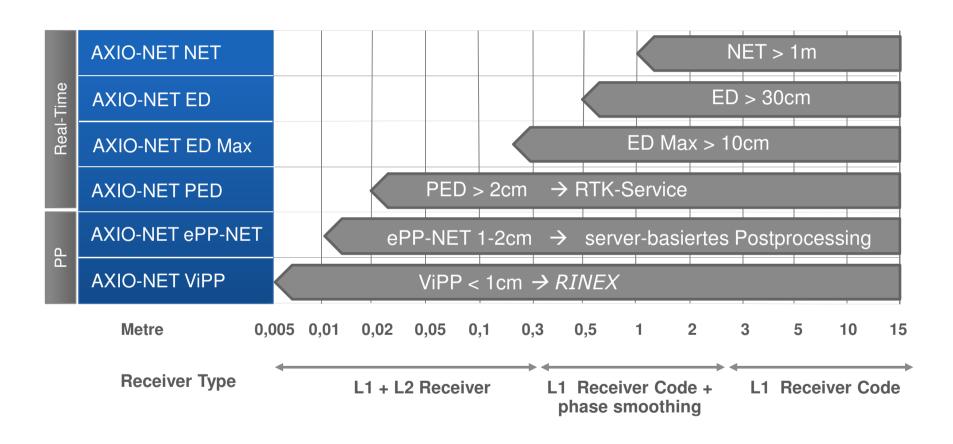
- Monitoring
- Technical Support
- Certified Quality





Services and Accuracies





Processes













Reference Stations

Raw Data Collection

Raw Data Processing

Delivery of Correction Data

Sales & Customer

- Hardware
- Set-up
- Monitoring
- Maintenance
- Network Design
- Reliability
- Monitoring
- Software standards
 SIM-Cards
- Reliability
- Monitoring
- Computing Center
 GSM/GPRS/UMTS
 Tariffs

 - Internet
 - Radio Broadcast
 - Satellite (SBAS)

- Support
- Contracts
- Hotline
- Support Invoicing

Technology

Operations & Services

- RTCM-standardised services
- Independent of hardware manufacturers, compliant with almost every rover by Leica, Javad, Trimble, Topcon, Novatel, Geomax, Stonex, Thales,
- Independent of software provider
 GNSS networking software by all major suppliers:
 - ➤ Geo++ (GNSMART)
 - ➤ Leica (GNSS Spider)
 - > Trimble (GPS Net)
- Real-time monitoring











SERVICE & SUPPORT

Quality and Branches

Service and Support

Service Center

- Product information, technical and tariff consultancy via telephone and e-mail
- Consultancy in GNSS-positioning and geodetic coordinates
- Consultancy in contracts and tariffs
- Office hours from Monday to Friday: 08:00 a.m. to 06:00 p.m.





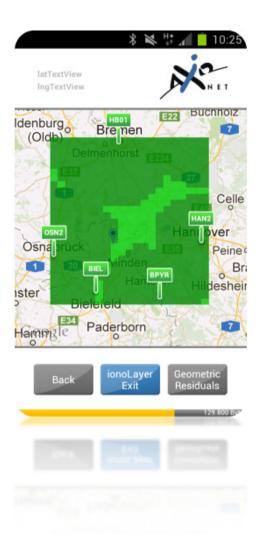


Beratung und Support

InfoApp

- Kostenfrei nutzbar für AXIO-NET und FarmRTK Kunden
- Aktueller Status der Referenzstationen und des Netzwerkes
- Auswirkungen ionosphärischer Aktivitäten
- Echtzeitinformationen und Alarmmeldungen
- Weitere Funktionalitäten in Vorbereitung





Quality

Certified



- The first GNSS correction data service certified by TÜV / NavCert
 - > Accuracy of measurements: 2 cm in real-time
 - > 99% availability of correction data service
 - High quality of service (availability and response time)
- Certification according to ISO 9001:2008





Branches

Covering all

- Surveying
- Machine control
- Agriculture
- Public Utilities
- Forestry
- Rail & roads
- Marine navigation (coastal area)
- Gardening & landscape gardening
- Mining
- GNSS network owners
- etc.















Creative Network

Customers and Partnera



















































PROJECTS

Femern Belt

Projects

Femern Belt Positioning System (FBPS)



- Design, set-up and operation of FBPS
- Set-up of a GNSS reference network to support all construction works for the Femern Belt Fixed Link
- Compliance with the very high requirements regarding accuracy, reliability and signal coverage
- Design & installation in 2009/10
- Operation since 08/2010



Projects

Femern Belt Positioning System (FBPS)

N E T

- 4 reference stations (2 in Femern and 2 in Lolland)
- High level of redundancy for high reliability
- Monitoring, inspection and maintenance



Lolland



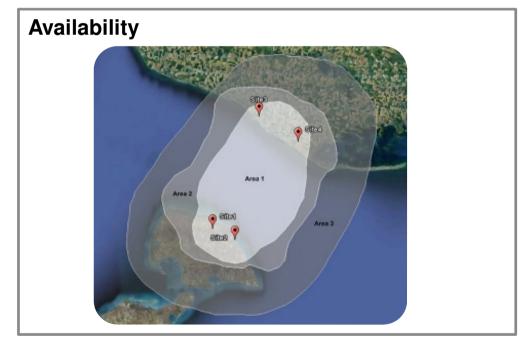
Projects



Femern Belt Positioning System (FBPS)

Reliability							
T	une 2010		July 2010				
	1	99,9	1	99,7			
	2	99,6	2	99,7			
	3	99,8	3	99,2			
	4	99,8	4	100,0			
	5	99,9	5	99,5			
	6	99,9	6	99,9			
	7	99,8	7	99,8			
	8	99,7	8	99,8			
	9	99,5	9	99,8			
	10	99,9	10	99,8			
	11	99,9	11	99,9			
	12	99,8	12	99,8			
	13	99,7	13	99,8			
	14	99,7	14	97,6			
	15	99,8	15	99,8			
	16	99,7	16 17	99,9			
	17	99,8	18	100,0			
	18	99,8	19	100,0 99,7			
	19	99,9	20	99,7			
	20	99,9	21	99,5			
	21	99,8	22	99,2			
	22	99,7	23	99,9			
	23	99,7	24	99,9			
	24	99,9	25	99,9			
	25	99,9	26	99,5			
	26	99,9	27	99,9			
	27	99,9	28	99,7			
	28	99,1	29	99,9			
	29	99,7	30	99,8			
	30	99,8	31	100,0			









PROJECTS AND APPLICATIONS

FarmRTK - www.farmrtk.eu



Projects and Applications

Precision Farming – AXIO-NET FarmRTK

- Area-wide accuracies of 2 cm in real-time
- All from a single source: SIM cards, correction data and service
- High degree of absolute accuracy and repeatability
- Individual solutions for special applications
- Set-up and operation of local reference stations or networks which are integrated in the networking and the monitoring provided by AXIO-NET
- Monitoring and maintenance supplied by AXIO-NET
- High-quality and redundant hardware
- Certified quality





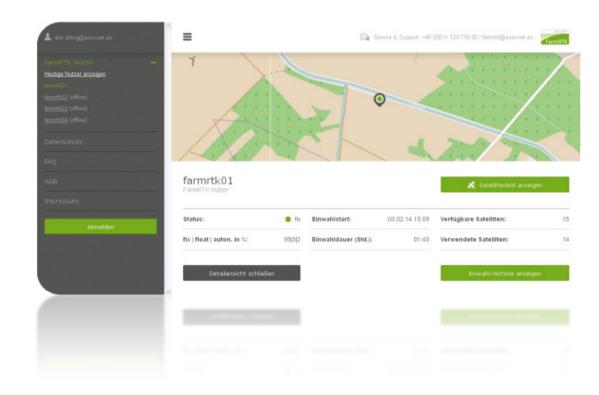


Service and Support

FarmRTK Portal



- Free of charge
- Login status history
- Additional information
- System status
- Support Tool





Thank You for Your Attention.

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