

Frequently Asked Questions

What does the company name SAPCORDA stand for?

SAPCORDA is an abbreviation and stand for “**SA**fe and **P**recise **COR**rection **DA**ta”.

Where is SAPCORDA located and how many employees does SAPCORDA have?

SAPCORDA's headquarter is located in Berlin, Germany with sites in Hanover, Germany, and Scottsdale, AZ, USA. SAPCORDA has been able to bring together the smartest, most tenacious GNSS experts with senior-level industry experience. The SAPCORDA team is constantly growing with currently more than 50 employees.

What services are provided by SAPCORDA?

SAPCORDA provides unique high precision GNSS augmentation services for mass market applications as well as autonomous and automotive industries. With these services highly accurate GNSS positioning (<10cm) can be achieved. The correction data is provided in SPARTN format and is based using state of art network processing technology.

SAPCORDA provides three services called SAPA Basic, SAPA Premium and SAPA Premium+.

What are possible mass market applications, where can the SAPA services be used?

SAPA services can be used in any application that requires a navigation solution better than 1 meter up to sub 10 cm accuracy. One of the most popular applications using the SAPA correction data is autonomous driving, coming up in the new generation of cars in the near future.

What does GNSS stand for?

GNSS is the abbreviation for **G**lobal **N**avigation **S**atellite **S**ystems. The following satellite systems are normally summarized under GNSS: GPS (USA), GLONASS (Russia), GALILEO (Europe), BeiDou (China), QZSS (Japan). GNSS systems are the basis for satellite navigation.

Why are the SAPA services considered as GNSS augmentation services?

All GNSS suffer from inaccuracies and errors that limit the positioning accuracy of the systems to several meters. SAPA services effectively corrects these errors and therefore change the performance experience of GNSS, making the GNSS positioning system to perform with high accuracy and high reliability as opposed to the standard GNSS performance, thus augmenting GNSS in general.

What is the SPARTN format?

SPARTN is the abbreviation for **S**afe **P**osition **A**ugmentation for **R**eal **T**ime **N**avigation. It is an industry-driven standard for communication of GNSS high accuracy correction data between service providers and end users. More information can be found on the SPARTNformat.org website.

What is the difference between SAPA Basic, SAPA Premium and SAPA Premium+?

SAPA is the abbreviation for **S**afe **A**nd **P**recise **A**ugmentation. The three services provide different accuracy levels for navigation solutions. SAPA Basic can be used for all applications requiring a solution accuracy better than 1 m up to 10 cm, while SAPA Premium and SAPA Premium+ provide a position accuracy of better than 10 cm. SAPA Premium+ provides service integrity parameters in addition to the Premium data. SAPA Premium+ is compliant to functional safety requirements.

Why is SAPCORDA service unique?

SAPCORDA's services have been designed with the goal to service automotive, autonomous and mass-market applications. The mass-market demands like high data availability, compliance with functional safety, efficiency in submitting the data to the rover but also processing the data on low-cost chips were the basis for the system design. SAPCORDA is the only service worldwide, which can offer a solution tailored to mass market applications with providing the correction data in an open, industry driven format at the lowest bandwidth to retrieve high-precision position accuracy in convergence times below 30 seconds.

What is the content of the SAPA data streams?

SAPCORDA provides its correction services for GPS and GLONASS satellite systems. The support for GALILEO and BeiDou is planned to be introduced soon. SAPA Basic provides satellite orbit, satellite clock, signal bias and basic atmosphere corrections. SAPA Premium includes sophisticated atmosphere messages (ionosphere and troposphere models). Integrity messages are only transmitted in SAPA Premium+ streams.

What does Superior Performance – sub 10 cm in seconds mean?

Classical correction service solutions can gain the same performance but require a quite long time to retrieve the respective accuracy. SAPCORDA's innovative technology provides the correction data that allows a GNSS receiver / GNSS chip to calculate its high precision position in less than 30 seconds.

What error sources can degrade the accuracy of the position?

The accuracy of the position is dependent on the used hardware (receiver, antenna), the implementation of the algorithms to read and process the received corrections, and the interference level of the environment around the antenna. SAPCORDA supports its customers in optimizing the usage of the SPARTN data to retrieve the best possible solution.

What areas is the SAPA service available at?

SAPCORDA offers its services in the US and in Europe. Please contact sales@sapcorda.com for further detailed information.

What are GNSS receiver & antenna hardware requirements for using SAPA services?

The SAPA services are hardware independent and can be used with all GNSS receivers and GNSS chips. The usage might require the integration of the SPARTN format, if not yet available. SAPCORDA supports its customers for the integration. Please contact sales@sapcorda.com for further information.

What is the availability for SAPA Services?

SAPA Services provides an availability of 99.9%, and expected to continuously increase over time.

Where can I retrieve more information about the SAPA Services?

Our sales team will be happy to provide you the information you need to understand our service offering better. Please contact sales@sapcorda.com with your specific request.

What is the price for the SAPA services and where can I buy those?

The price for a subscription for SAPA services has been tailored to the mass market needs. Our sales team will help you with providing the pricing information for your application. Contact sales@sapcorda.com to retrieve the respective information.

What is the relationship between SAPCORDA and u-blox?

SAPCORDA has been founded in 2017 as a Joint Venture of the four leading technology companies Bosch, Geo++, Mitsubishi Electric and u-blox. In march 2021, u-blox acquired full ownership of the former joint venture.