



AMDB

# AERODROME MAPPING DATA BASE



COMPASSDATA PROVIDES COMPLETE SOLUTION FOR AIRPORTS

AMM - AIRPORT MOVING MAP

AES - AEROSPACE & ELECTRONIC SYSTEM



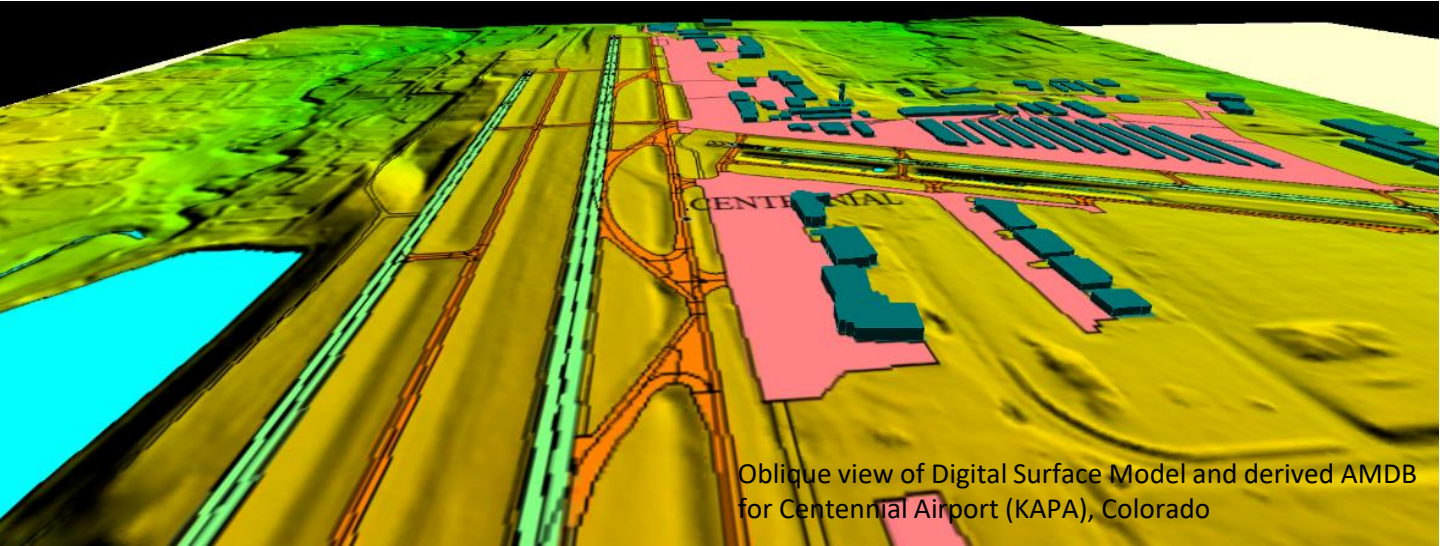
# FROM PIXELS TO ACCURATE DECISION MAKING

A CompassData AMDB is a spatial database that contains the layout of aerodrome features as per the elements listed below. Highly accurate point, line, and polygon features, with standardized aeronautic attributes, provide geographic intelligence to the user. CompassData can deliver AMDBs that follow the requirements outlined in the world regulatory standards RTCA DO-272 or are customized to user requirements. Our process involves the digitization of airport features that are visible in the orthorectified imagery, adhering to strict topological guidelines and utilizing industry-best practices.



CompassData and DigitalGlobe are pleased to present customized solutions for Aerodromes and other feature-rich areas. Our solutions incorporate, but are not limited to, high-resolution imagery, insert imagery (5-meter resolution), Aerodrome Mapping Databases (AMDBs), other GIS data capture and attribution, 3-D elevation models (DTM, DSM, obstruction surfaces), verification and validation of feature accuracy, and updates of pre-existing datasets.

These are competitively priced, end-to-end, scalable solutions that not only eliminate the complexity and overhead associated with multiple data providers but also align with modern market demands. The combination of DigitalGlobe’s high-resolution imagery and collection capacity, with CompassData’s remote sensing and aerodrome mapping experience, can be creatively configured for the end user to deploy sophisticated final solutions. CompassData’s current database of user-ready elements covers over 1,000 airports worldwide.



Oblique view of Digital Surface Model and derived AMDB for Centennial Airport (KAPA), Colorado

# THE RICHNESS OF FEATURES

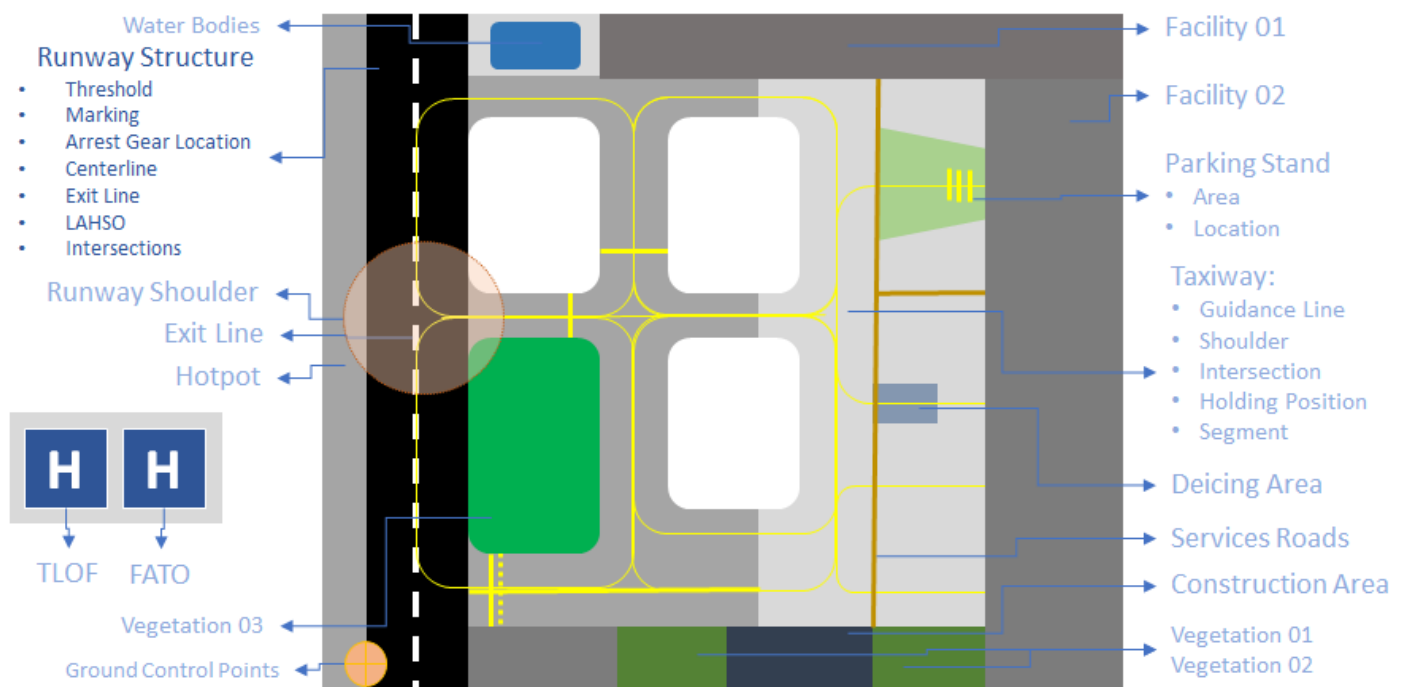
AMDBs are used in a wide variety of applications, but the core applicability is within onboard components like the Electronic Flight Bags (EFBs), where the focus is to improve the situational awareness of the user, promoting the navigation environment (2D or 3D) of the aerodrome universe. The richness of the CompassData AMDB brings an increase in safety conditions. The detail of each feature and the accuracy of the layers permit excellence of operational efficiency.



- Different professionals from the Aviation environment can get benefits from the AMDB Solution:
- Pilots
  - Controllers
  - Airport Managers
  - Simulator Team
  - Emergency Team
  - Security Team
  - Regulation Agents
  - Government
  - Military

## Operational Intelligence - Safety – Planning – Training – Management - Reality

### Base Content





# QUALITY

CompassData's global airport product suite is uniquely positioned to meet the complex demands of evolving market needs. Our long-standing partnership with DigitalGlobe facilitates solutions to support the end user's product requirements. By using the highest resolution, commercially available satellite imagery (30 - 50 cm depending on sensor), and by following FAA-qualified Airport Moving Map (AMM) production and quality processes, the resulting aerodrome data contain a higher density of content (such as hard-to-distinguish paint lines and vertical obstructions), and a certified quality level which competitors utilizing lower resolution imagery cannot match.



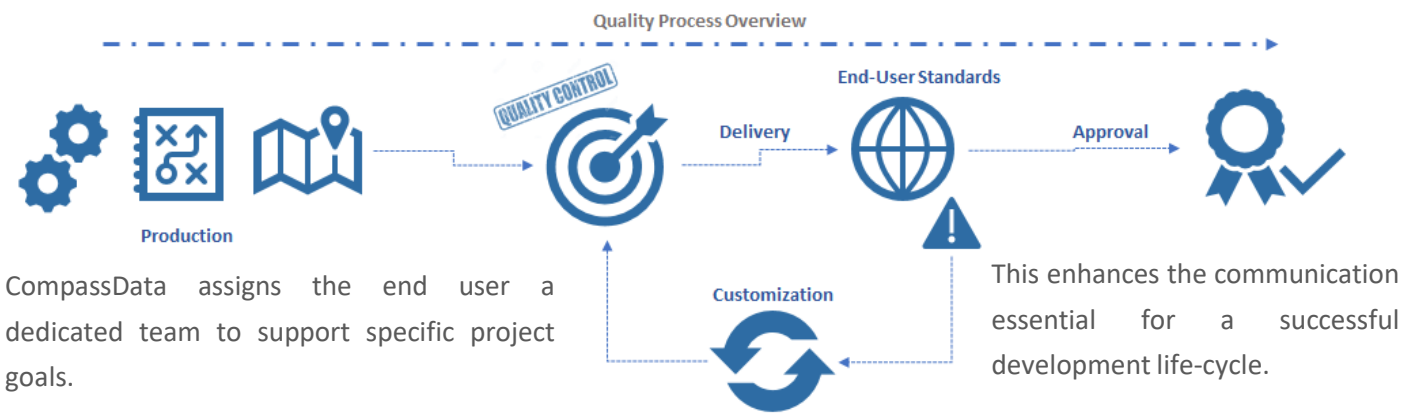
On April 1, 2014, CompassData emerged as a certified source of high-accuracy airport products when we achieved our FAA Type 1 Letter of Acceptance. Per CompassData's FAA certification, we maintain a current global database of 600+ authoritative airport products, with additional certified materials to quickly expand this database to 1,000 airports.



**FAA DO-200**  
**Certified Airport**  
**Ortho Imagery**

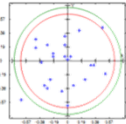


The certification is based on RTCA DO-200 (Radio Technical Commission for Aeronautics, "Standards for Processing Aeronautical Data") and FAA AC-153A ("Acceptance of Aeronautical Data Processes and Associated Databases").



## All Airports have Ground Control Points collected in the field

CompassData's GCP expertise and certified procedures fuel the production of the most accurate AMM's from satellite imagery available on the market today.

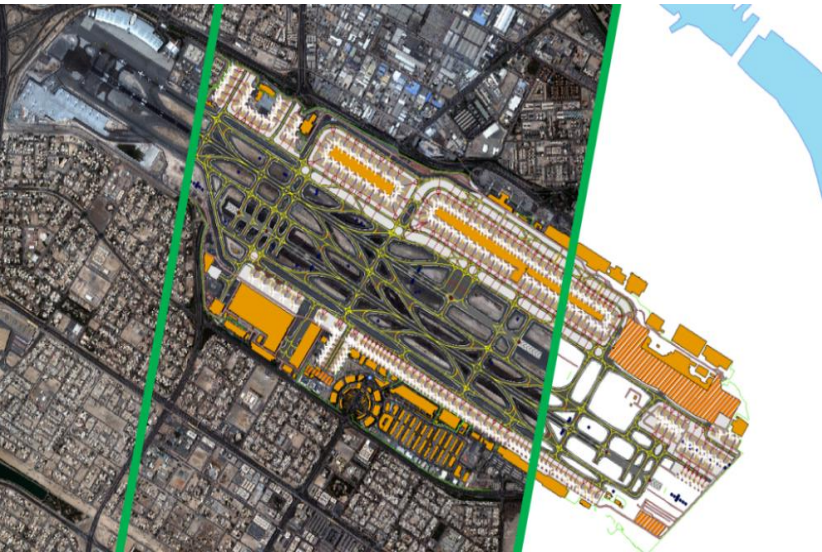


Min ΔX:	-0.635
Min ΔY:	-0.615
Max ΔX:	0.516
Max ΔY:	0.456
Mean ΔX:	-0.058
Mean ΔY:	-0.043
RMSE(X):	0.298
RMSE(Y):	0.297
RMSE(L):	0.42
No Obs:	24
CE 95:	0.642
CE 95:	0.732





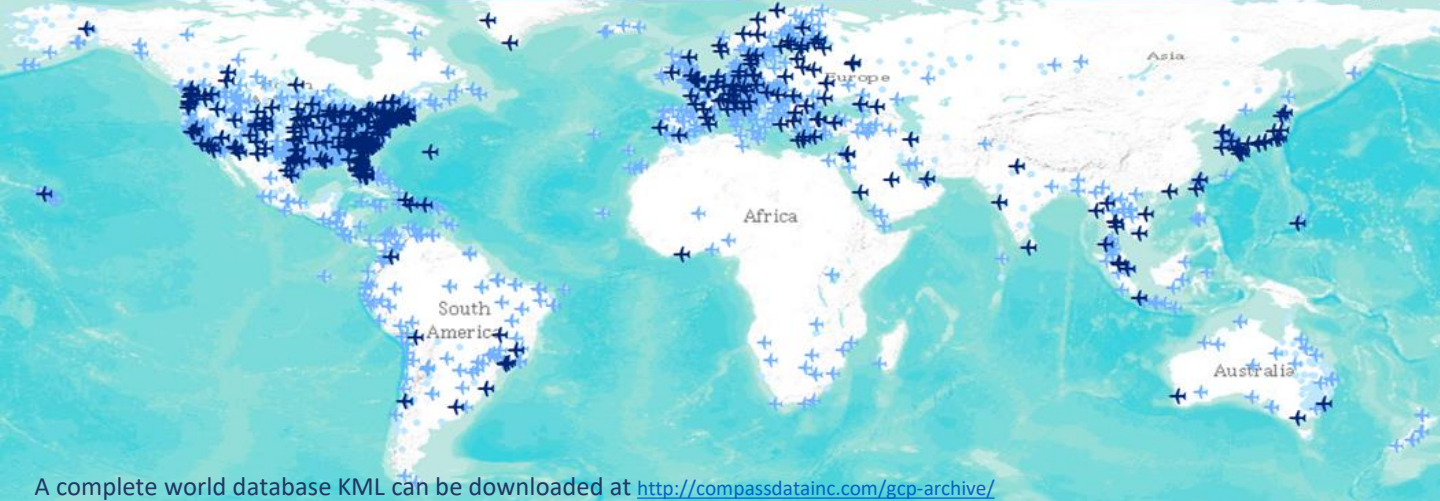
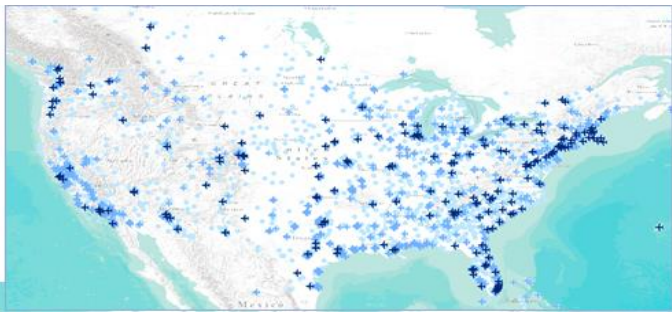
# A LIVE AND DYNAMIC SOLUTION



With access to the DigitalGlobe archive, CompassData gathers the latest suitable imagery, creates Digital Elevation Models (DEM), and produces orthorectified imagery with accuracies better than 85 cm RMSE (depending on GCP utilization). Cost savings are passed on to the client as satellite tasking fees do not apply; the imagery is collected via “spec-collect-deck” (preferential imagery collections without direct payment to task a satellite), which has proven to meet the requirements on similar global airport

If desired, CompassData and DigitalGlobe can provide this data with an integrator license included. This enables the customer to sell their deployed products and services without having to come back to CompassData/DigitalGlobe post-sale

The CompassData and DigitalGlobe approach to fulfill market needs is based on a mixture of high-resolution airport imagery, photogrammetric and software expertise, and geospatial analysis. The descriptions in this brochure are for several individual products that can also be delivered as bundled products





# PRODUCT

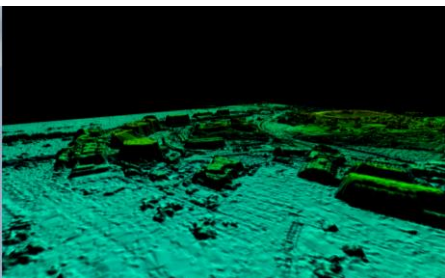
CompassData’s unique approach to building airport products has evolved to satisfy a wide variety of aviation data providers. Our procedures are intentionally set up to produce key building blocks, giving our customers options for a fit-for-purpose solution. Our goal is to support the end user with the immediate product needs while building a partnership to support the next generation of solutions. CompassData will utilize its established DO-200A and ISO 9001 certified processes to ensure a quality suite of imagery and aerodrome features that meet the customer requirements.

## Feature classes are standard to RTCA DO-272

- |                                     |                              |
|-------------------------------------|------------------------------|
| ✓ AerodromeReferencePoint           | ✓ RunwayMarking              |
| ✓ ApronElement                      | ✓ RunwayShoulder             |
| ✓ ArrestingGearLocation             | ✓ RunwayThreshold            |
| ✓ Blastpad                          | ✓ ServiceRoad                |
| ✓ ConstructionArea                  | ✓ StandGuidanceLine          |
| ✓ DeicingArea                       | (including dashed lines)     |
| ✓ FinalApproachAndTakeOffArea       | ✓ Stopway                    |
| ✓ FrequencyArea                     | ✓ SurveyControlPoint         |
| ✓ HelipadThreshold                  | ✓ TaxiwayElement             |
| ✓ Hotspot                           | ✓ TaxiwayGuidanceLine        |
| ✓ LandAndHoldShortOperationLocation | ✓ TaxiwayHoldingPosition     |
| ✓ PaintedCenterline                 | ✓ TaxiwayIntersectionMarking |
| ✓ ParkingStandArea                  | ✓ TaxiwayShoulder            |
| ✓ ParkingStandLocation              | ✓ TouchDownLiftOffArea       |
| ✓ RunwayDisplacedArea               | ✓ VerticalLineStructure      |
| ✓ RunwayElement                     | ✓ VerticalPolygonalStructure |
| ✓ RunwayExitLine                    | ✓ VerticalPointStructure     |
| ✓ RunwayIntersection                | ✓ Water                      |

## Digital Terrain Model (DTM) & Digital Surface Model (DSM)

### Obstruction Data



Accurate terrain modeling is a critical foundation for the creation of orthorectified imagery and thus for accurate AMDB applications. CompassData generates high-quality terrain models in a variety of formats and from a variety of sources.

Our models may be used for orthorectification of imagery, volumetric calculations, and relief map generation. DTMs (“bare earth”) are standard for orthorectification, while DSMs (all surfaces – buildings and trees) are useful for and obstruction identification. To date we have constructed over 600 airport-related DEM models, typically comprising 100 -200 sq. km.

