

DATA PRODUCT SPECIFICATION

This document explains the details of the Data Products
published by HungaroControl AIS

Version 3.0

*Document
published by
HungaroControl AIS*

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0.1 Version history

<u>Version</u>	<u>Changes</u>	<u>Effective date</u>	<u>Chapters affected</u>
1.0	First version in accordance with 469/2020 EU regulation	12.10.2021	Entire document
2.0	Supplementary information about legacy data	21.02.2024	2.1.2.
3.0	Updating document	01.08.2026.	All

1 General

1.1 Purpose

The primary purpose of the document is to demonstrate compliance with regulation (EU) 2017/373 AIS.TR.335 b) which requires that:

„A description of each available data set shall be provided in the form of a data product specification.”

A Data Product Specification constitutes a detailed description of a data set or a collection of data sets, including the supplementary information necessary to enable the data to be created, supplied, and effectively used by intended recipients.

1.2 Structure of the document

This document is provided in English to enable the international air transport community to understand the characteristics and intended use of the products supplied by HungaroControl AIS.

1.3 Publication of the document

The publication and maintenance of this document are the responsibility of the Head of the Aeronautical Data Management Unit at HungaroControl AIS. The current version and all subsequent revisions are available on the [HungaroControl AIS website](#).

HungaroControl also provides a notification service to inform users about updates and amendments.

1.4 Document maintenance

This document is maintained by the HungaroControl AIS Department. It is reviewed and updated whenever changes are introduced to the data products made available by HungaroControl AIS. Each revision is assigned an effective date in accordance with the internationally established AIRAC cycle. Updates may also be required to reflect changes in applicable international standards, recommendations, regulations, or the national regulatory framework.

1.5 Consultation

Should you have any questions regarding the interpretation of this document or the use of the related products, please contact the HungaroControl Aeronautical Data Management Unit at pubsdo@hungarocontrol.hu

2 Data Product Specification

2.1 Electronic Obstacle Dataset

The Electronic Aeronautical Obstacle Dataset products are made available in accordance with the provisions of AIP section GEN 3.1.6 and can be obtained either directly from HungaroControl AIS or through the Downloads section of the HungaroControl AIS website. <https://ais-en.hungarocontrol.hu/aip/>

Recommended application to consume the product: Microsoft Excel.

2.2 Description of Spreadsheet Columns

<i>Sheet</i>	<i>Column</i>	<i>Attribute</i>	<i>Definition</i>	<i>List of values or Data type</i>
Metadata	a)	Data Originator Identifier	String that identifies the originator of the data. As a metadata, this is considered for the entire dataset	Data type: Text
Metadata	b)	Area of coverage	The textual description to depict the area of the coverage. As a metadata this is considered for the entire dataset	Data type: Text
Data	c)	Latitude, WGS-84, ICAO	ICAO formatted WGS-84 coordinates.	Data type: Coordinate
Data	d)	Latitude, WGS-84, GML	ISO format coordinates, primarily usable by applications.	Data type: Number
Data	e)	Longitude, WGS-84, ICAO	ICAO formatted WGS-84 coordinates.	Data type: Coordinate
Data	f)	Longitude, WGS-84, GML	ISO format coordinates, primarily usable by applications	Data type: Number
Data	g)	Obstacle Identifier	Identifier string for the obstacle on a main level. This value does not change during the lifecycle of the obstacle.	Data type: Text

Sheet	Column	Attribute	Definition	List of values or Data type
			Naming convention: LHxx_AREAAyy_z_mmm LHxx: FIR or Airport ICAO code AREAAyy: yy defines the AREA where the obstacle is located z: Geometry type of obstacle mmm: incremental identifier number, serves as (main) identifier starting from 001	LHxx: LHCC, LHBC, LHBP, ... etc. See eAIP AD 2 AREAAyy: See CodeObstacleAreaType in https://aixm.aero z: P - Point, L - Line (Curve), S - Surface mmm: 001, 002, ... etc.
Data	h)	Obstacle Part Identifier	Identifies the vertex within the obstacle. This identifier is unique and shall not change during the lifetime of the obstacle. Naming convention: LHxx_AREAAyy_mmm_nnn LHxx: FIR or Airport ICAO code AREAAyy: yy defines the AREA where the obstacle is located z: Geometry type of obstacle mmm: incremental identifier number, serves as (main) identifier starting from 001 nnn: incremental identifier number, serves as (sub) identifier starting from 001	Data type: Text LHxx: LHCC, LHBC, LHBP, ... etc. See eAIP AD 2 AREAAyy: See CodeObstacleAreaBaseType in https://aixm.aero z: P - Point, L - Line (Curve), S - Surface mmm: 001, 002, ... etc. nnn: 001, 002, ... etc.

<i>Sheet</i>	<i>Column</i>	<i>Attribute</i>	<i>Definition</i>	<i>List of values or Data type</i>
			Some examples of the naming convention: LHDC_AREA2_P_001 is a point object. LHDC_AREA2_L_001_001 and LHDC_AREA2_L_001_002, is a line object consists of two vertexes. LHDC_AREA3_S_001_001, LHDC_AREA3_S_001_002, LHDC_AREA3_S_001_003, LHDC_AREA3_S_001_004 is a surface that consists of four vertexes. In such cases, where there are more than one vertex for the obstacle object, the same elevation values are stored and published.	
Data	i)	Owner	Contact information, such as company name of the operator or owner of the obstacle. For further information regarding the obstacle please contact pubsdo@hungarocontrol.hu	Data type: Text
Data	j)	Type	A code indicating the type of vertical structure, such as building, tower, cable, etc.	See CodeVerticalStructureBaseType in https://aixm.aero
Data	k)	Visible material	The type(s) of material that compose the load-bearing structure and/or exterior facing of a vertical construction (for example: a building or non-building structure).	See CodeVerticalStructureMaterialBaseType in https://aixm.aero

<i>Sheet</i>	<i>Column</i>	<i>Attribute</i>	<i>Definition</i>	<i>List of values or Data type</i>
Data	l)	Lighted	A simple indication that the obstacle is lighted, when no further details are available.	YES Yes NO No OTHER Other
Data	m)	Lighting ICAO Standard	Indicates if the lighting is ICAO standard as described in Annex 14.	YES Yes NO No OTHER Other
Data	n)	Synchronized Lighting	Indicates that the flashing light elements that compose the lighting of the vertical structure (could be a group) are synchronized (flash in unison).	YES Yes NO No OTHER Other
Data	o)	Lighting colour	A code indicating the colour of the lights in the group.	See CodeColourBaseType in https://aixm.aero
Data	p)	Marking ICAO Standard	Indicates if the markings comply with the ICAO standard, as described in Annex 14.	YES Yes NO No OTHER Other This information is not empty only in such cases where Lighted equals "YES"
Data	q)	Marking pattern	The general layout of the external paint or another marking element, intended to increase the visibility of the vertical structure.	See CodeVerticalStructureMarkingBaseType in https://aixm.aero
Data	r)	Marking First Colour	The principal colour of the marking.	See CodeColourBaseType in https://aixm.aero
Data	s)	Marking Second Colour	The secondary colour for the marking.	See CodeColourBaseType in https://aixm.aero
Data	t)	Datum	The used horizontal reference system during survey.	The default value is WGE throughout all the datasets
Data	u)	Horizontal accuracy	The difference between the recorded horizontal coordinates of a feature and its true position referenced to the same geodetic datum expressed as a circular error at 95 percent probability.	Data type: Number

<i>Sheet</i>	<i>Column</i>	<i>Attribute</i>	<i>Definition</i>	<i>List of values or Data type</i>
Data	v)	Horizontal accuracy Uom	The unit of measurement considered for the horizontal accuracy in point u).	See UomDistanceType in https://aixm.aero
Metadata	w)	Horizontal confidence level	The horizontal confidence level that is considered for the entire dataset. E.g. 95%	Data type: Numeric (%)
Data	x)	Horizontal resolution	The horizontal resolution of coordinates.	Possible values: 1 (means 1 geographic second) 0.1 (means 0.1 geographic second) 0.01 (means 0.01 geographic second) 0.001 (means 0.001 geographic second) 0.0001 (means 0.0001 geographic second)
Data	y)	Elevation (at top)	The distance measured from Mean Sea Level at the top of the obstacle.	Data type: Numeric
Data	z)	Elevation Uom	The unit of measurement for the value given in point y).	See UomDistanceType in https://aixm.aero
Data	aa)	Height	The distance measured between the ground and the top of the obstacle.	Data type: Numeric
Data	bb)	Height Uom	The unit of measurement considered for the value given in point aa).	See UomDistanceType in https://aixm.aero
Data	cc)	Vertical accuracy	A degree of conformance between the estimated or measured value and the true value considered for values in point y) and aa).	Data type: Numeric
Data	dd)	Vertical Accuracy Uom	Unit of measurement considered for the value given point cc)	See UomDistanceType in https://aixm.aero
Data	ee)	Vertical resolution	A number of units or digits to which a measured or calculated value is expressed and used.	Possible values: 1 (means 1 meter) 0.1 (means 0.1 meter) 0.01 (means 0.01 meter) 0.001 (means 0.001 meter) 0.0001 (means 0.0001 meter)

<i>Sheet</i>	<i>Column</i>	<i>Attribute</i>	<i>Definition</i>	<i>List of values or Data type</i>
Data	ff)	Vertical datum	A specific datum from which the vertical distance of a level, point or an object considered as a point is measured.	This is by default EGM_98 throughout the entire datasets
Metadata	gg)	Vertical confidence level	The probability that the true value of a parameter is within a certain interval around the estimate of its value. This value is considered for the entire dataset.	Data type: Numeric (%)
Data	hh)	Mobile	A flag indicating whether the vertical structure is expected to move around its nominal location.	YES Yes NO No OTHER Other
Data	ii)	Timestamp	Datetime of the survey	Data type: DateTime
Metadata	jj)	Integrity		Data type: Text
Data	kk)	AREA1	Indicates if the obstacle is in AREA1	YES Yes NO No
Data	ll)	AREA2	Indicates if the obstacle is in AREA2	YES Yes NO No
Data	mm)	AREA3	Indicates if the obstacle is in AREA3	YES Yes NO No
Data	nn)	AREA4	Indicates if the obstacle is in AREA4	YES Yes NO No

2.2.1 Supplementary information

Obstacles that are not from the current official data provider are marked as "LEGACY". In the AREA2, AREA3 and AREA4 areas of the airports, the revision of legacy data is in progress.