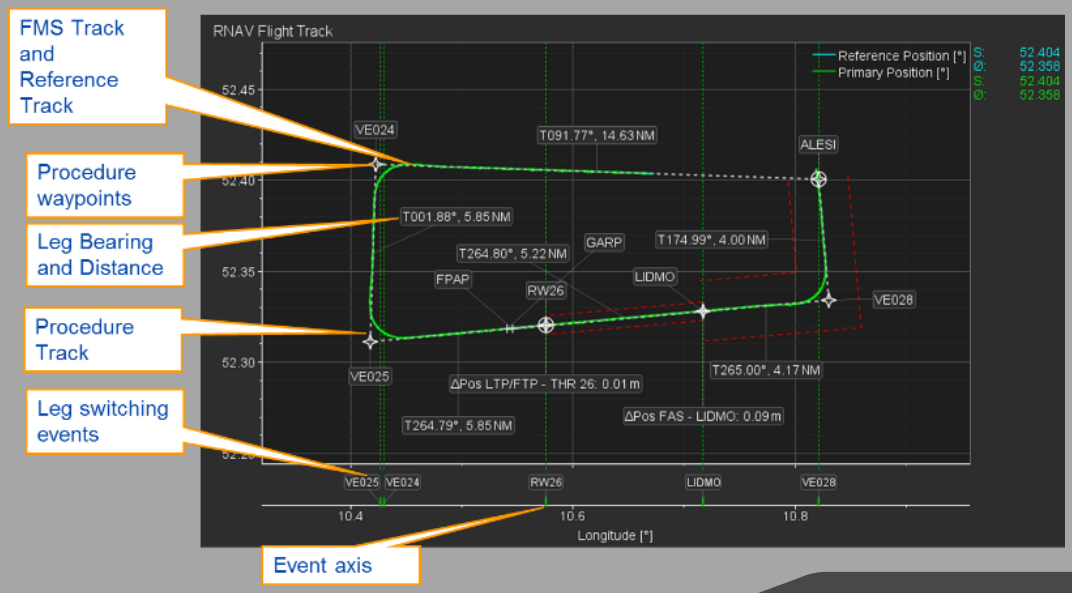
aerodata

precision in special mission



RNAV FI System AD-RNAV

Portable Procedure Validation and Radar Calibration

The AD-RNAV comes with a self-contained equipment case containing the required hardware. It can be operated by laptop. It is fully capable of inspecting RNAV/RNP procedures, SBAS (LPV) approaches and radars. This solution with minor aircraft modification converts nearly each aircraft into a procedure flight inspection aircraft for any kind of GNSS based procedures and radar.

The minimum number of interfaces and compact design enables the AD-RNAV to be used as an add-on to an existing flight inspection system or as a stand-alone solution as loose equipment in a multi-role fixed-wing aircraft or helicopter.

Key Features:

- Small and lightweight
- Minor A/C modification required
- Integrated multi GNSS receiver with 120 channels
- RNAV, PBN, radar, SBAS
- Same powerful AD-AFIS software as in the fully-featured AD-AFIS consoles
- Portable Cockpit Information Display (PCID) available
- Standalone operation or add-on to any FIS

Components

Equipment Case

The equipment case is a small, ruggedized portable housing containing the data acquisition-, real-time- and positioning module. It provides a power interface and all data interfaces to the aircraft navigation sensors (e.g. GPS/FMS). Optionally, internal batteries can provide up to 4h independent operation.

Positioning Module

The equipment case integrates a multi GNSS receiver with 120 channels.

The receiver is capable of receiving and processing the following signals:

- GPS (L1,L2C,L5)
- GLONASS (L1,L2)
- BeiDou/Compass (B1,B2)
- Galileo (E1,E5a,E5b)
- SBAS (EGNOS/WAAS/GAGAN/SDCM)
- Wide Area Differential GPS
- Phase Differential GPS (optional)

Real-Time Module

The real-time module controls the data acquisition module and the positioning module. It provides precisely time-stamped reference position and sensor data with 10Hz to the display computer where the data is analyzed by the AD-RNAV Flight Inspection Software.

Display Computer

A ruggedized laptop with SSD storage and Windows 10 can be used as display computer.

Pilot Guidance

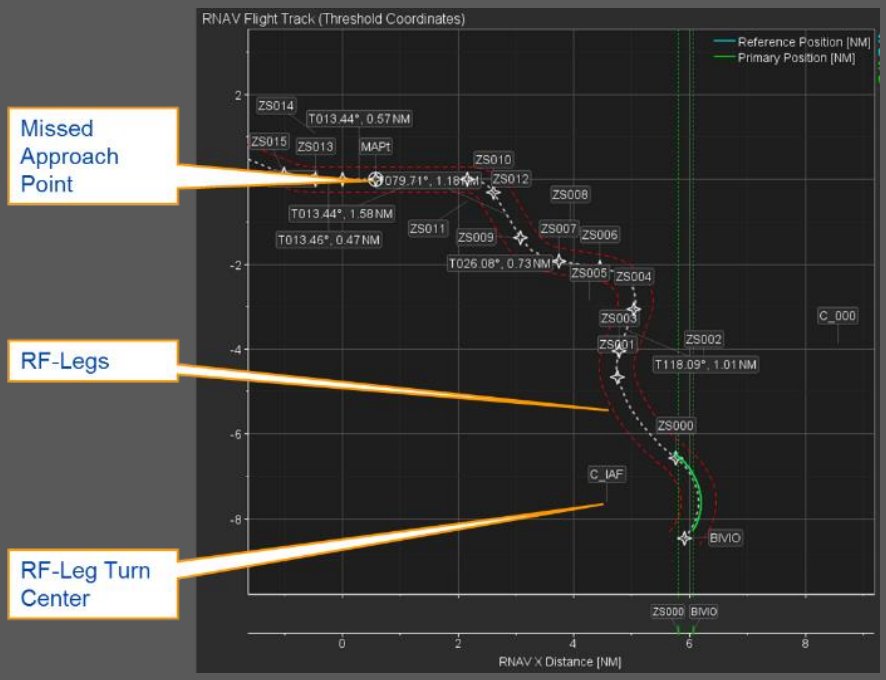
Pilot RNAV guidance can be provided by an additional display (PCID) or optional data feed to the autopilot.

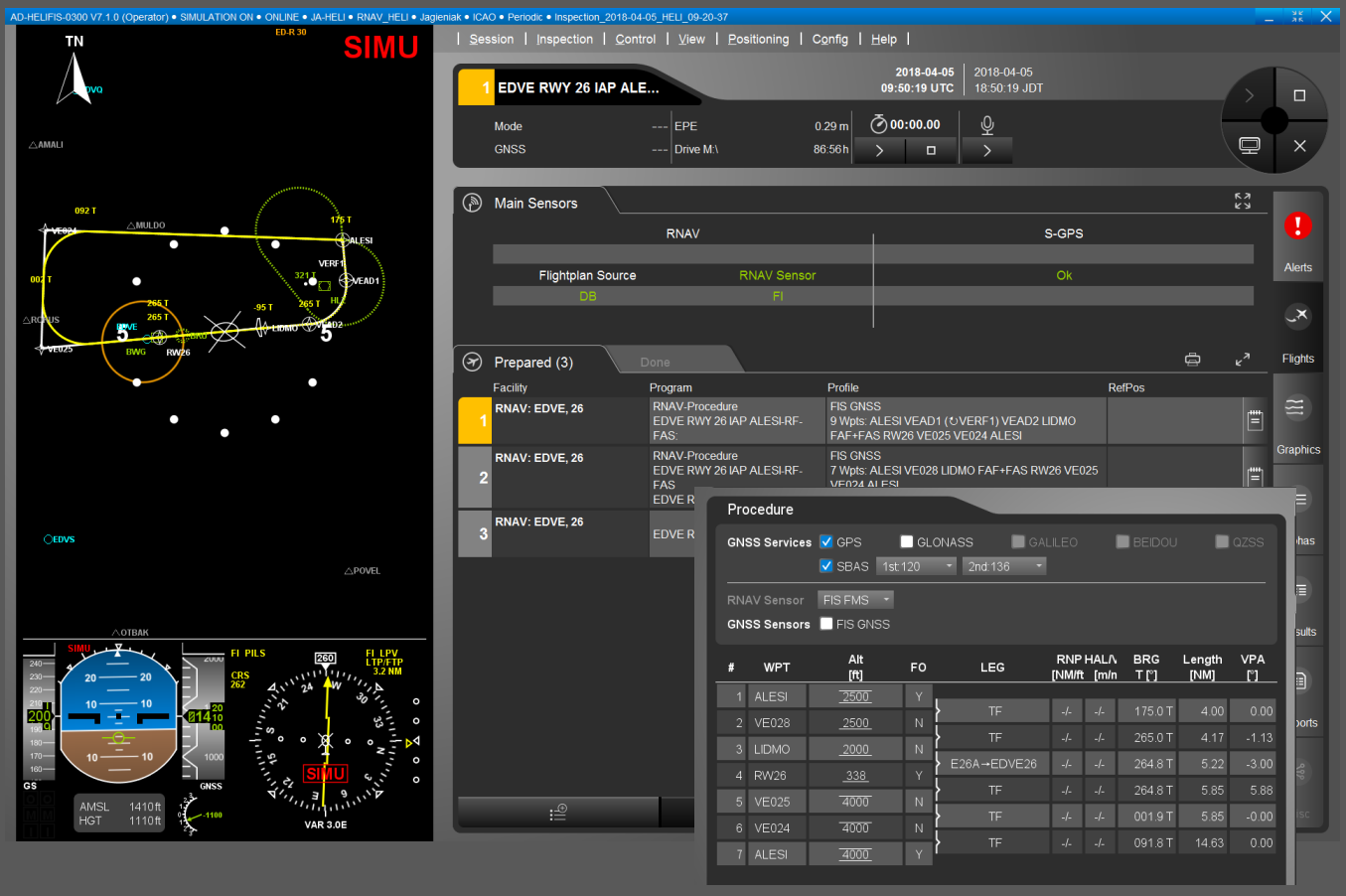
Aerodata AG · Hermann-Blenk-Straße 34-36 · 38108 Braunschweig/Germany
Phone +49 531/2359-0 · Fax: +49 531/2359-158 · E-Mail: fis@aerodata.de

www.aerodata.de

AD-RNAV Flight Inspection Software

- Easy-to-learn user interface known from AD-AFIS
- Built-in training mode
- 10Hz data recording in office-compatible data format
- Interface to standard office software packages
- ARINC 424 database import
- Full replay and reprocessing functionality
- Menu, keyboard and dedicated function key operation
- Automatic report generation
- Electronic Flight Instrument System (EFIS)
- Fully compatible to AD-AFIS series
- Windows® 10 compatible





Aerodata AG · Hermann-Blenk-Straße 34-36 · 38108 Braunschweig/Germany
Phone +49 531/2359-0 · Fax: +49 531/2359-158 · E-Mail: fis@aerodata.de
www.aerodata.de

aerodata

precision in special mission

Inspection Capabilities

- Waypoint accuracy
- Bearing accuracy
- Distance accuracy
- FAS data block
- Navigation sensor error (NSE)
- V-NAV performance
- SBAS integrity, coverage, and interference
- For the primary and secondary SBAS satellite(s):
  - SBAS PRN being tracked
  - Signal-to-noise ratio (C/N0)
  - Elevation
  - Azimuth
- GNSS integrity
  - DOP, HPL,VPL, HIL, HPL, …
  - Signal-to-Noise Ratio (C/N0)
  - Elevation
  - Azimuth
- GNSS interference
- Flyability
- Radar coverage and accuracy checks
- Receiver Autonomous Integrity Monitoring (RAIM)
- Approach lighting systems

RNav: Result Page

RNAV: RNAV;FMS#4; FlightPlan: FATO03, ZS200, ZS201, ZS206, ZS202, ZS203, ZS207, ZS204, ZS205, ZS208, BIVIO,Operator: Demo-Operator;Company: Demo-Company;
Regulations: ICAO; Date: 2015-07-22 Start: 10:17:33, Stop: 10:27:12; Software: AD-AFIS V7.0.0
Inspection: \Demo-Inspection; INS+GPS; Database: VARIOUS

Flightplan

#	From	Type	To	RAIM	RNP	RNP VNAV	HAL	VAL	Dis-tance	True Track	VPA
					[NM]	[ft]	[m]	[m]	[NM]	[°]	[°]
1	FATO03	TF	ZS200	Terminal	0.3	125.0	40.0	50.0	1.2	213.93	5.87
2	ZS200	TF	ZS201	Terminal	0.3	125.0	40.0	50.0	4.01	213.61	5.74
3	ZS201	RFCW	ZS202	Terminal	0.3	125.0	40.0	50.0	0.67	255.76	5.74
4	ZS202	TF	ZS203	Terminal	0.3	125.0	40.0	50.0	1.7	297.95	4.15
5	ZS203	RFCCW	ZS204	Terminal	0.3	125.0	40.0	50.0	1.1	276.39	-0.0
6	ZS204	TF	ZS205	Terminal	0.3	125.0	40.0	50.0	2.53	254.85	-0.0
7	ZS205	RFCW	BIVIO	Terminal	0.3	125.0	40.0	50.0	1.1	294.26	-0.0

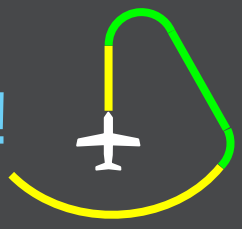
SBAS

SBAS (120.0) C/N0 min	SBAS (120.0) No of MT6	SBAS (126.0) C/N0 min	SBAS (126.0) No of MT6
[dbHz]		[dbHz]	
39.2558	1657	36.029	1657

Waypoint list

#	Name	Latitude	Longitude	Level	Altitude	Type
					[ft]	
1	FATO03	46° 31' 53.0000" N	9° 52' 53.8800" E	at	5600.0	fly-by
2	ZS200	46° 30' 53.2700" N	9° 51' 55.6700" E	not below	6350.0	fly-by
3	ZS201	46° 27' 32.7200" N	9° 48' 42.8100" E	not below	8800.0	fly-by
4	ZS206	46° 27' 49.3000" N	9° 48' 06.6600" E	N/A	N/A	arc center CW
5	ZS202	46° 27' 22.8100" N	9° 47' 46.3200" E	at	9250.0	fly-by
6	ZS203	46° 28' 10.6000" N	9° 45' 35.8800" E	not below	10000.0	fly-by
7	ZS207	46° 26' 51.1000" N	9° 44' 34.9400" E	N/A	N/A	arc center CCW
8	ZS204	46° 28' 17.9400" N	9° 44' 00.9100" E	not below	10000.0	fly-by
9	ZS205	46° 27' 38.1500" N	9° 40' 28.6100" E	not below	10000.0	fly-by
10	ZS208	46° 28' 28.4200" N	9° 40' 08.8400" E	N/A	N/A	arc center CW
11	BIVIO	46° 28' 05.3500" N	9° 39' 01.2500" E	not below	10000.0	fly-by

We keep you on the best path!



Aerodata AG · Hermann-Blenk-Straße 34-36 · 38108 Braunschweig/Germany
Phone +49 531/2359-0 · Fax: +49 531/2359-158 · E-Mail: fis@aerodata.de

www.aerodata.de