FLIGHT DATABASE SERVICES
FOR PRO LINE FUSION®

Collins Aerospace

PRO LINE FUSION DATABASE OPTIONS

Welcome to Collins Aerospace Flight Database Services. Below you will find a complete list of all the databases that will need to be updated on a periodic basis. Included is a how to guide to help you navigate through our website where you will download the latest database updates.

DATABASES INCLUDED IN THE PRO LINE FUSION PACKAGE SUBSCRIPTION FROM COLLINS AEROSPACE
(Database availability depends on the specific aircraft model)

Database Name	System/Use	Update Frequency
J61_World	Navigation Database	28 days
J42_World	Navigation Database	28 days
Fusion_Emaps	IFIS – Enhanced Map Overlays Database	28 days
Fusion_Enroute	IFIS – Enroute Charts Database	28 days
Fusion_DL_GWx	IFIS – Graphical Weather overlay Database for Datalink subscribers	1 year
Fusion_XM_GWx	IFIS – Graphical Weather overlay Database for XM® subscribers	1 year
Fusion_SVS_Apt-Rwy	Synthetic Vision – Airport/Runway Database	28 days
Fusion_Obstacle	Synthetic Vision – Obstacle Database	28 days
Fusion-HRTD	Terrain Awareness Warning System – High Resolution Terrain Database	As needed*
Fusion_TDb	Awareness Warning System – Threat	1 year
Fusion_EDb	Terrain Awareness Warning System – Envelope Modulation	As needed*
Fusion_Airport_Surface	Airport Moving Map	28 days

Additional Services
Subscription service required through suppliers listed below

GRAPHICAL WEATHER

Datalink or XM WX Satellite Weather®
To arrange Datalink Graphical Weather and XM WX Satellite Weather® service, as well as additional flight support services (flight planning, flight deck communications, cabin connectivity, trip support), contact:

ARINCDirect℠ flight support services
North America: +1 866.321.6060
Worldwide: +1 410.266.2266
www.arincdirect.com

JEPPESEN ELECTRONIC TERMINAL CHARTS

Pro Line Fusion and JeppView™ Terminal Charts
+1.800.553.7750
http://jeppdirect.jeppesen.com/index.jsp
ba-customerservice@jeppesen.com

CONTENTS

Database descriptions

Manual data transfer

DATABASE DESCRIPTIONS

NAVIGATION DATABASE

The Collins Aerospace Navigation Database provides the Pro Line Fusion avionics system with the necessary information to provide accurate and reliable navigation. The Navigation Database is derived from Jeppesen's ARINC 424 navigation data. This data is received from an FAA approved Type 1 Letter of Acceptance (LOA) data provider. Collins Aerospace, an FAA approved Type 2 LOA holder, processes this data to allow compatibility with the Pro Line Fusion system. The database contains publicly available airports, approach procedures, arrivals (STARS), departures (SIDS), airways and more.

INTEGRATED FLIGHT INFORMATION SYSTEMS (IFIS) – ENHANCED MAP OVERLAYS (E-MAPS) – AIRWAYS & AIRSPACE OBSTACLES, GEO/POL BOUNDARIES, CITIES & TOWNS

Collins Aerospace E-maps add functionality to IFIS to increase situational awareness through the addition of map overlays including high- and low-altitude airways, restricted and controlled airspace, and geopolitical information including state and international boundaries, rivers, lakes and ocean coastlines.

- E-Maps Political Boundaries function depicts geographical-political boundaries for all countries and state boundaries for a select few countries on the navigation map.

- E-Maps Obstacle function depicts interactive obstacle symbols that contain additional information such as obstacle elevation, lighting, etc.

- E-Maps Special User Airspace function depicts interactive special-use and military airspaces that contain additional information such as ceiling height, controlling agency, airspace name etc.

- E-Maps Controlled Airspace function depicts Class-B and Class-C airspaces surrounding aerodromes.

- E-Maps Cities & Towns displays names of prominent cities and towns around the world on the moving map.

CONTROLLED AIRSPACE INFORMATION

Significantly improve your situational awareness by simplifying routine tasks,such as establishing visual contact with the airport, or approaching speed or altitude constraints by relating aircraft position to ground features presented on the charts.

RESTRICTED AIRSPACE INFORMATION

Know your aircraft's exact position as it relates to restricted airspace and have the information needed to make informed decisions when flight plan deviations may be necessary due to weather or traffic.

DATABASE DESCRIPTIONS (CONT.)

IFIS - TERMINAL CHARTS DATABASE

Collins Aerospace Electronic Terminal Charts Application (ETCA) on Pro Line Avionics provides an electronic display of worldwide terminal charts on the forward display, with display of present position. The terminal charts database is supplied by Jeppesen. The terminal charts database includes instrument approaches, SIDs STARs, airport diagrams and other relevant chart items that are typically available in paper format.

With Collins' patented ChartLink™ capability, the terminal charts application automatically identifies and retrieves the charts needed based on the FMS flight plan. With over 7,000 airports and 40,000 charts in the database, the ChartLink function significantly reduces pilot workload during crucial phases of flight. The display of the aircraft's present position in every phase of flight is a unique capability not available on most EFBs, let alone on a forward looking display.

The Pro Line Fusion flight displays offer a high-contrast and sun-glare free experience that is unmatched by EFBs and other electronic devices. On the full-screen mode, each chart image provides a user experience that is superior to paper products due to powerful interactive capabilities such as zoom and pan. The charts application also offers shortcuts to most needed features such as FMS chart list, quick swap, night mode, rotate, center of aircraft, runway highlight, etc.

IFIS ELECTRONIC CHARTS

Collins Areospace IFIS replaces heavy and bulky printed charts with large-format, high-resolution electronic charts. Now, critical departure, arrival, approach and airport information is instantly available to the flight crew.

EASY TO READ AND INTERPRET

Enhanced functionality is now available on the flight deck. Instantly zoom in or out on charts. Display geo-referenced approach and airport charts with aircraft location with worldwide coverage Selectable day or night mode operation is available for easier viewing.

KNOW YOUR POSITION ON THE AIRPORT DIAGRAM

Enhance your peace of mind on the airport surface with a clear, easy-to-interpret display of all runways and taxiways.

IFIS – ENROUTE CHARTS DATABASE

Collins Aerospace Enroute Charts Application (ENRA) is a first-of-its-kind solution offered in this market segment providing an electronic display of worldwide Lufthansa Systems enroute charts on the forward display. ENRA offers a paper-like representation of Enroute IFR charts that pilots have been using for many years. This powerful capability reduces the need for additional pilot training.

Each enroute chart is divided into smaller 'tiles' that allow quick access to different areas of a large 20x40 inch chart page. Interactive edge-links enable quick transition between adjacent tiles. With supplement materials including NOTAMs, IFR cruising levels, RVSM overview, etc., the Collins Aerospace Enroute Chart database offers paper-free access to all the relevant enroute information typically available on 10+ pounds of paper.

For the first year of enroute charts subscription, you will receive Lufthansa Systems enroute paper charts at no cost.

PERSPECTIVE VIEW

Interactive page showing eight tiles that make up a single chart
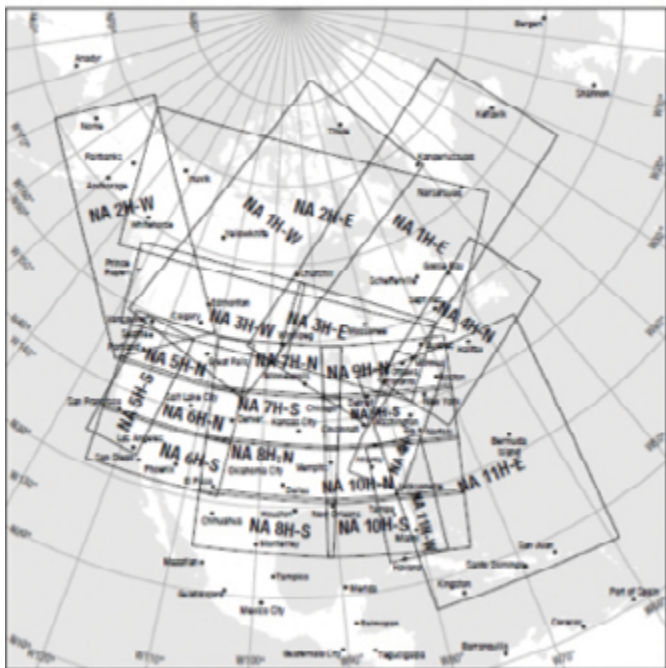
REGION VIEW

Map of North America with all the constituent charts

DETAILED VIEW

Single chart tile showing complete Enroute information

DATABASE DESCRIPTIONS (CONT.)

IFIS - GRAPHICAL WEATHER OVERLAY DATABASES

With IFIS, pilots have a powerful new tool to help them make more strategic decisions about their flight plans. By combining strategic weather information provided by IFIS with Collins Aerospace airborne weather radar, pilots can look at the big weather picture prior to each flight and during the flight as weather develops. As a result, pilots can choose the most efficient flight path around hazardous weather.

Datalink Weather Subscribers

Datalink weather offer graphical display of weather from around the world. With coverage that includes every continent and oceanic regions, datalink graphical weather is an ideal solution for both international operations as well as regional operations outside the US. The datalink graphical weather database provides updates to the background map over which all the datalink weather products can be displayed. Yearly updates provide corrections, enhancements and improvements to depiction of the background. Graphical weather products include NEXRAD WX Radar (CONUS only) and echo tops/movements. Other capabilities and features include worldwide graphical METARS, turbulence, icing, weather depiction and winds aloft.

(Appropriate datalink hardware and a weather service provider are required to enable this function.)

TURBULENCE DISPLAY CAPABILITY

IFIS can be integrated with Collins Aerospace datalink to present en route graphical weather information, including predicted and actual areas of precipitation or significant turbulence.

ICING CONDITIONS DISPLAY

Global graphical weather display capabilities give pilots a continuously updated picture of global weather patterns.

WIND DIRECTION AND TEMPERATURE

Flight crews benefit from graphic depictions of the actual temperature and direction of winds aloft to better determine the effect on performance fuel loads and arrival times.

ECHO TOPS AND MOVEMENT

With IFIS, you can use echo tops and cell movement to track majorstorm cells. This depiction enables the air crew to comprehend severe storm cells, peak altitudes and true ground track movements at a glance.

XM WX Satellite Weather Subscribers

XM Satellite Weather offers CONUS aircraft operators a strategic view of weather conditions in a single affordable, yet highly capable system. With high bandwidth data rates, XM offers unmatched graphics and color to display strategic weather information. Data is received from XM satellites for continental US and a future version will include Canada and Puerto Rico.

Graphical weather products include NEXRAD, SIGMETs, lightning, METARs, SCITs, Winds Aloft, Icing, Turbulence, Satellite (with and without NEXRAD) and animated NEXRAD. Textual weather products include SIGMETs, AIRMETs, METARs and TAFS, Winds Aloft, Icing, Turbulence and Satellite (with or without NEXRAD). Products have altitude controls to allow the users to view specific data at selected altitudes.

The XM graphical weather database provides updates to the background map over which all the XM weather products can be displayed. Yearly updates provide corrections, enhancements and improvements to depiction of the background.
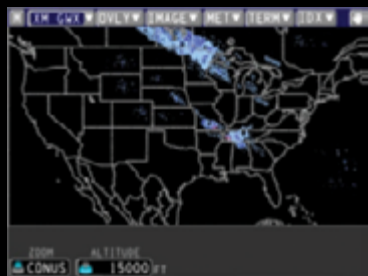
(An XM receiver is required and an XM subscription will be needed to enable this XM weather.)
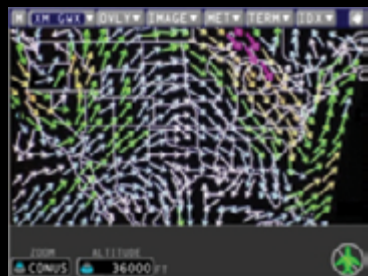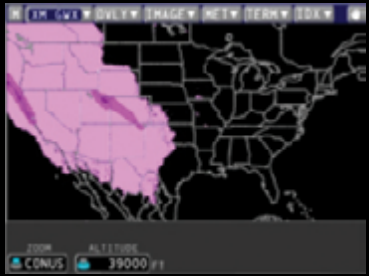
GRAPHICAL WEATHER
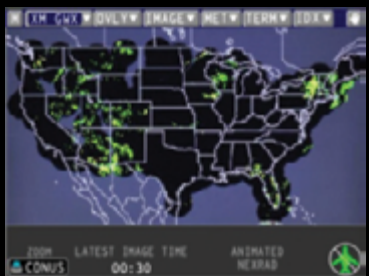
ANIMATED NEXRAD

ICING

WINDS ALOFT

LIGHTNING

SATELLITE WITHOUT NEXRAD

SATELLITE WITH NEXRAD

TURBULENCE

PAN MODE

DATABASE DESCRIPTIONS (CONT.)

SYNTHETIC VISION SYSTEMS (SVS)

High Resolution Terrain Database: The SVS uses the 3x, 9 and 27 arc second layers to render terrain within the SVS scene. The system retrieves files based on a radius from the aircraft prior to the file being needed. Once needed, the SVS will render terrain based on the type and elevation data provided in the terrain file.

Airport/Runway Database: The SVS receives the selected origin, destination and alternate airport IDs from the FMS. The system renders a fixed size dome at the airport location for the destination, origin and alternate airports. The SVS also renders conformal runway surfaces representing all landing surface, displaced threshold surface and stopways at each of these airports.

Obstacle Database: The SVS retrieves all obstacles necessary to render obstacles within a 20 nm radius of the aircraft. The SVS application filters the obstacles based on the obstacle height parameter. Only obstacles greater than 200 ft are rendered. Obstacles in the SVS scene are conformal to the database-provided location and height. Size is assumed using an algorithm that is a function of height.
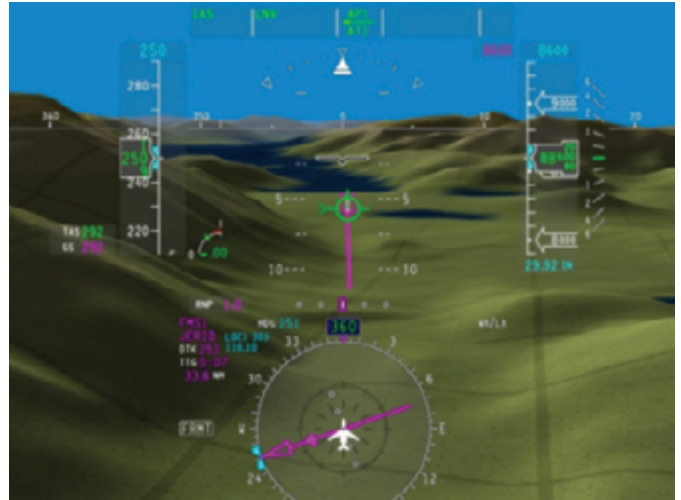

TERRAIN AWARENESS WARNING SYSTEM (TAWS)

High Resolution Terrain Database: TAWS uses the 3x, 9 and 27 arc second layers to render terrain within the TAWS scene. The TAWS retrieves files based on a radius from the aircraft prior to the file being needed. Once needed, the TAWS will render terrain based on the type and elevation data provided in the terrain file.

Threat Database: The TAWS function utilizes the Threat Database (TDb) to protect the flight crew and passengers from controlled flight into terrain. The TDb includes terrain, obstacle and airport data. The TAWS function retrieves the necessary data from the TDb to perform the TAWS alerting functions per TSO-C151b and TSO-C92c.

Envelope Modulation Database: The TAWS function utilizes the Envelope Modulation Database (EDb) to provide terrain detailing at airports with unique approaches to prevent nuisance alerts.
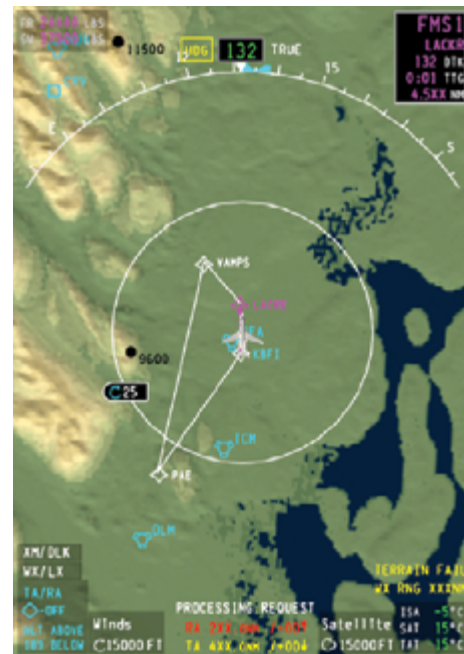
AIRPORT MOVING MAP (AMM)

The Airport Moving Map (AMM) will render airport maps based on either Airport/Map or Airport/Runway database information. When an airport is available in the Airport/Map database, a high-detail map will be rendered; otherwise, a low-detail map will be rendered using information in the Airport/Runway database.

Low Detail Airport/Runway Database: For low detail maps, the AMM renders runway surfaces representing all landing surface, displaced threshold surface, and stopways. Runway identifiers that park at the edge of the screen are also displayed. The selected origin and destination runways are highlighted, based on information received from the FMS.

High Detail Airport/Runway Database: For high-detail maps, the AMM renders the low-detail features listed above, plus the following additional features: taxiways, land and hold short lines, runway exit lines, aprons, stand guidance lines, parking stands, de-icing areas, helipads, buildings, construction areas, service roads, water, airport reference point and windsocks. Labels are displayed for apron areas, taxiways, buildings, parking stands and de-icing areas.

MANUAL DATA TRANSFER

ACCESSING AND DOWNLOADING DATABASES

Rockwell Collins website – New User Registration

1. Go to www.rockwellcollins.com

2. Click "Request an Account"

3. Click "Get Started"

4. New User Registration:

    a. Select "To access catalogs, technical publications...and other tools"

    b. Complete the following information with your work contact information

        – Starred items* are mandatory

    c. Select challenge phrases and answers

    d. Create your password

    e. Type the validation code

    f. Click "Submit"

5. Log in:

    a. Go to your email address that you used to register. You should receive an automated email from Collins Aerospace asking you to accept Terms and Conditions. Click the link to accept the terms.

    b. Close the browser window and log back in to:

    www.rockwellcollins.com > Database and Software Updates > Flight Deck Content

    c. Enter your user name and password, click "Log in"

6. Your account and eligible databases will appear for download

WEBSITE LOGIN/PASSWORD SUPPORT
Telephone support provided 24/7/365

Calling from U.S. and Canada: +1.888.721.3094
Calling from all other locations: +1.800.721.3094

To learn more, go to
collinsaerospace.com

Resources available to you

DATABASE SUPSCRIPTION SUPPORT

- New/change subscription

- Pricing/Invoicing/Billing

- Cancellation

+1.319.295.5000 (Menu Option 3)
Assistance available during normal business hours
M-F; 7:30 a.m. - 4:30 p.m. CST

fmssubs@rockwellcollins.com

DATABASE TECHNICAL SUPPORT

- Database content issues

- Downloading database for website

+1.319.295.5000 (Menu Option 1, Option 1, Option 1)
Assistance available during normal business hours
M-F; 7:30 a.m. - 4:30 p.m. CST

collinsdatabasetech@rockwellcollins.com

PRODUCT SUPPORT

- Loading database on aircraft

- Hardware and software

+1.319.295.5000 (Menu Option 1, Option 2, Option 1)

customerservices@rockwellcollins.com

Collins Aerospace

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