

# US Domestic Enroute CPDLC Update

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## Key Points

- **Domestic en-route CPDLC in the US is now available to everyone - the Notam limiting GA/BA participation to approved trial participants has been removed.**
- **To get CPDLC, you've got to have the right avionics and submit a form - the FAA has published a list of aircraft types, which you will need to check to see if you comply.**

*Here's a very brief summary. For the full, untarnished info, head to the dedicated FAA site [here](#).*

So for a long time, domestic en-route CPDLC in the US was only available to operators of bizav aircraft who were signed up to the FAA trial. That trial has now ended, and as long as your avionics make the grade, you can now make use of this service.

The FAA has published a list with a whole bunch of aircraft types on it.

If your aircraft is highlighted in **yellow** or **green**, you **can get datalink** (as long as you complete and submit the participation form).

If it's highlighted in **red** (or not on the list at all), you **can't get datalink**.

OEM/Aircraft Manufacturer	Aircraft Type	CPU Type	FMS Type	Radio Type	Reason	FPL TIME En Route	Pathway to Compliance	Compliance Date
Boeing	737	HW 800A v1 v32, or HW 800A v1 v32A, or RC 800-151 Core 16, or RC 800-151 Core 12, or ATN 800 Core 12 Equivalent	GE 101.0	HW VDF 874-442 w/CS 064 50000-2001, or HW VDF 874-500, or RC VDF-2200 w/8001 or P/N 822-1287-101/180 w/807 or 822-1287-121 or 1411, or RC VDF-800 (P/N 822-1250-002 w/8016 or 822-1250-000 w/8017), or RC VDF-2000 (P/N 822-2008-121)	The FMS exhibits the following Interop Issue Behavior: Does Not Properly Process UM117 CONTACT Consistent with UM151 END SERVICE when there is an OPR update on the flight deck. FMS terminates the action with a DCL with Pending Message error and sets the UM117 CONTACT to aborted without displaying UM117 to pilot. The FMS exhibits the following Interop Issue Behavior: Does Not Properly Process UM117 CONTACT Consistent with UM151 END SERVICE when there is an OPR update on the flight deck. FMS terminates the action with a DCL with Pending Message error and sets the UM117 CONTACT to aborted without displaying UM117 to pilot. Ghost Message Issue: The FMS can retain messages from previous sessions and display them when they are not relevant. There is a timer, and response options are available.	FANSE	1. Upgrade to GE 101.2 (when available), or 2. Upgrade to GE 101.4, or 3. Downgrade to GE 101.3, or 4. Downgrade to GE 101.2, or 5. Downgrade to GE 101.1	N/A
Boeing	737 / 737	RC 800-151 Core 16, or ATN 800 Core 12 Equivalent, or RC 800-151 Core 12, or ATN 800 Core 12 Equivalent	HW P51 (841) HNF-00C-10 or prior without the procedural mitigation	HW VDF 874-442 w/CS 064 50000-2001, or HW VDF 874-500, or RC VDF-2200 w/8001 or P/N 822-1287-101/180 w/807 or 822-1287-121 or 1411, or RC VDF-800 (P/N 822-1250-002 w/8016 or 822-1250-000 w/8017), or RC VDF-2000 (P/N 822-2008-121)	The FMS exhibits the following Interop Issue Behavior: Ghost Message Issue: The FMS can retain messages from previous sessions and display them when they are not relevant. There is a timer, and response options are available.	FANSE	1. Execute the Procedural Mitigation, or 2. Upgrade to P51 / P7 11 (when available), or 3. Upgrade to P51 /	N/A
Airbus	A320	RC 800-4000 (Core 12 Equivalent)	RC FLY 484.2	RC VDF-4000 (P/N 822-1468-190)	The FMS exhibits the following Interop Issue Behavior: a) UM104 RDRAM SERVICES TERMINATED Requested When Concentrated with UM117 CONTACT: The avionics downlinks a DME2 ERROR emergencyData + DME2 THIS CONTACT/STATUS NOT SUPPORTED BY THIS AIRCRAFT. The uplink is not displayed to the pilot. b) DME2 Generated After Pilot Acceptance of UM120 Monitor TOC: RRAM auto-rejects DME2's with a cancelled uplink. The pilot will need to respond to each UM120 request generated by RRAM in response to each avionics generated DME2 after acceptance of a Monitor TOC. c) DR1 Deadline exceeded prior to WILCO When a UM151 END SERVICE is Concentrated with UM117 CONTACT: RRAM controller displays Red X, A/D Status, abnormal indicator	FANSE	Upgrade to MRA 3.6.0.0 (when available)	N/A
Airbus	A320	ARC 12A 4.1, or ARC 12A 4.2 and ACN 13 without 5823-PS05	HW VDF 100 (P/N 801-5830-011), or RC VDF-800 (P/N 822-1250-000 w/8017 or w/8016), or RC VDF-2200 (P/N 822-2008-121)	RC VDF-100 (P/N 801-5830-011), or RC VDF-800 (P/N 822-1250-000 w/8017 or w/8016), or RC VDF-2200 (P/N 822-2008-121)	ACN 13 without corrective Provider Database are more susceptible to VDL Mode 2 AVS handoff and delivery issues	FANSE	Upgrade to ACN 13 w/5823-PS05	N/A
Airbus	A320	ARC 12V 1.3.1, or ARC 12V 1.4 and ACN 14 without 5823-PS05	HW VDF 100 (P/N 801-5830-011), or RC VDF-800 (P/N 822-1250-000 w/8017 or w/8016), or RC VDF-2200 (P/N 822-2008-121)	RC VDF-100 (P/N 801-5830-011), or RC VDF-800 (P/N 822-1250-000 w/8017 or w/8016), or RC VDF-2200 (P/N 822-2008-121)	ACN 14 without corrective Provider Database are more susceptible to VDL Mode 2 AVS handoff and delivery issues	FANSE	Upgrade to ACN 14 w/5823-PS05	N/A
Bombardier	CRJ (Challenger 600)	Universal CPU 2000	RC Proxide 4 with FMS 6000	RC VDF-4000 with: • P/N 822-1468-102 with 58-11, or • P/N 822-1468-103 with 58-11, or • P/N 822-1468-104 with 58-11, or • P/N 822-1468-105	This FMS is not Push To Load capable	N/A	Installation Requires Push To Load	N/A
Boeing	737	RC 800-151 Core 12, or ATN 800 Core 12 Equivalent	GE 101.1, or GE 101.2, or GE 101.1	HW VDF 874-442 w/CS 064 50000-2001, or HW VDF 874-500, or RC VDF-2200 w/8001 or P/N 822-1287-101/180 w/807 or 822-1287-121 or 1411, or RC VDF-800 (P/N 822-1250-002 w/8016 or 822-1250-000 w/8017), or RC VDF-2000 (P/N 822-2008-121)	1. The FMS exhibits the following Interop Issue Behavior: Issue #1 - GE FMS 1 minute retransmission behavior: If a pilot initiates a downlink response (DME2) and to an uplink and the ACARS sub-management is non-received by the FMS for that response, the uplink remains in an open state and the crew can initiate a response again after 1 minute. The FMS allows the crew to reinitiate again even if the message made it to distribution, because the AK was not received at the FMS. The desired behavior is to allow the crew the option to reinitiate the response after the initial attempt, and change the uplink to an ABORTED status eventually if AK not received. Issue #2 - Link B. 30077 mode observation: When the position variable (TO REPORT) is a duplicate in the aircraft's Nav Database, the FMS can incorrectly choose an instance of the duplicate in the Nav Database that is NOT the instance of the fix on the Active Route based on proximity to Active Route elements. The new received mode would auto (DME2) and issue the aircraft to the wrong fix. This behavior goes against DO-250a. The FMS should use the instance from the Active Route. 2. Core 12 is more susceptible to VDL Mode 2 AVS handoff and delivery issues. 3. These configurations require accumulation of 10,000 operational transactions for resolution.	FANSE	1. For FMS issue #1, upgrade to a version that resolves this issue (TBD version, potentially included in 101.2). For FMS issue #2, upgrade to a version that resolves this issue (TBD version, potentially included in 101.2). 2. For Core 12 and Equivalents, upgrade to Core 12 w/RC 800-151, or ATN 800 (when available) for the ATN 800. 3. Requires that the evaluation of the accumulated 10,000 operational transactions is complete and satisfactory.	For 1, TBD For 2 & 3, TBD

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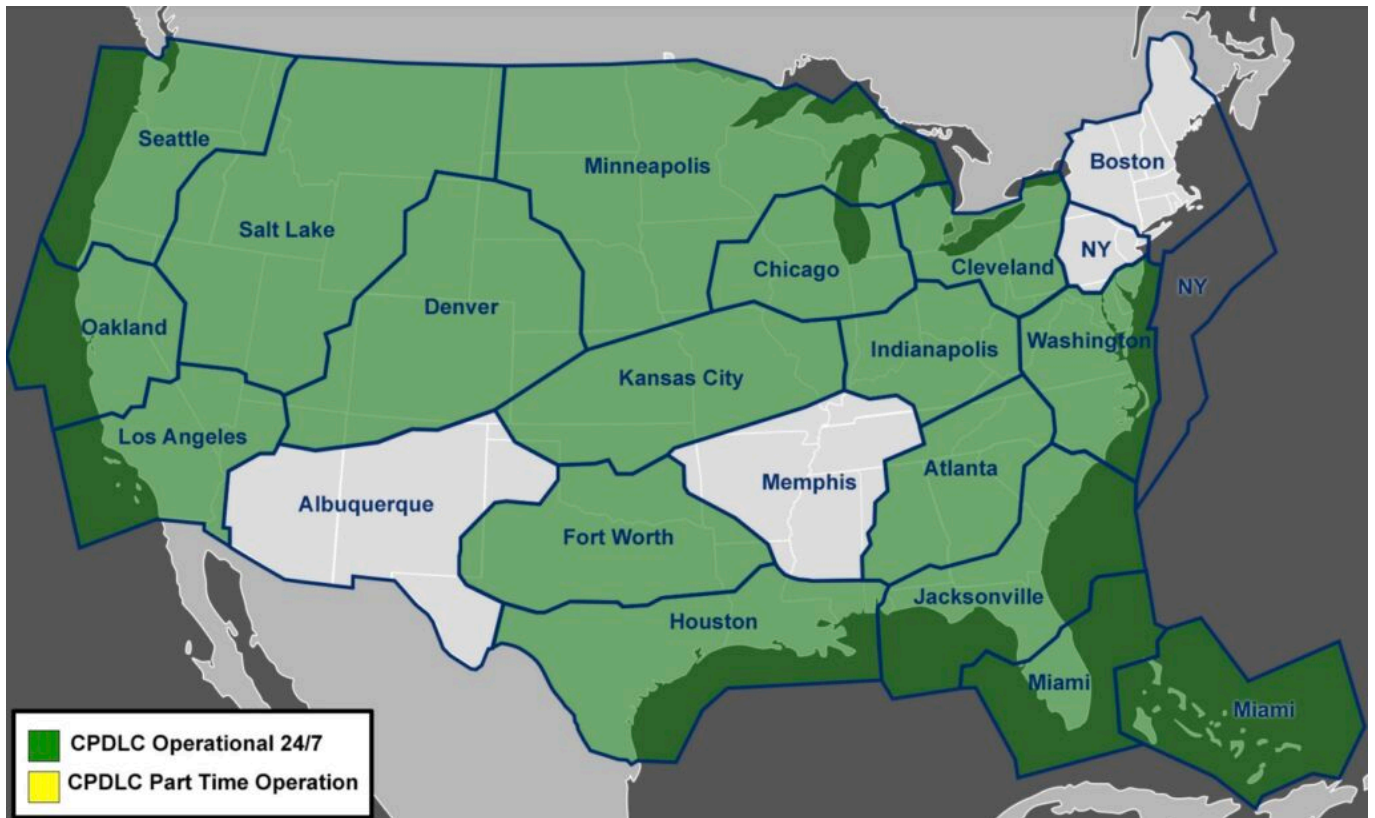
**L3Harris have provided this guidance:**

- Ensure that your avionics are configured to use VDL Mode 2 as the primary media for U.S. Domestic En Route CPDLC. VDL Mode 2 is the only approved media for participation in the domestic U.S.
- Ensure that both the 'J4' code in the field 10a equipment field as well as the FANSE (e.g. '1FANSE2PDC') DAT Code in field 18 (other information/DAT) are both included on the flight plan to indicate eligibility for U.S. Domestic En Route CPDLC (see the US Domestic Flight and Planning Guide for more information).
- Verify that VHF3/COM3 is set to DATA.
- The aircraft registration/tail in field 18 (other information/REG).
- If you are still researching your avionics in response to questions from L3Harris, please continue to file for CPDLC-DCL only (FANS) until your verification of eligibility is complete.

Also, a member has reported that if you're now eligible but tried to log on in the past when you were not eligible, **your aircraft reg might have been placed on a "blocked list"**. To get off this list, you need to contact L3Harris, who will forward to the FAA to ask to unblock you (should take less than 24hrs).

**Where is CPDLC available in the US?**

L3Harris published this updated map on 3 June 2024:



Come on, Albuquerque and Memphis!

**So do I need CPDLC now?**

No. US domestic datalink is not mandated.

**What if I'm flying into the US internationally?**

L3Harris have published a guide answering this very question. You can access it here:

## Transitioning between data authorities

### INBOUND KUSA

Entering U.S. Domestic CPDLC En Route airspace with a connection from a previous data authority

- If an aircraft has a CPDLC connection established and is entering via a **CPDLC-ON** En Route Center, an automatic connection handoff will occur between the previous data authority and the CPDLC-ON En Route Center.
- If an aircraft has a CPDLC connection established and is entering via a **CPDLC-OFF** En Route Center, the CPDLC session will be terminated. Upon entry to a CPDLC-ON En Route Center, a connection request will be initiated automatically.
- In both scenarios:
  - No manual termination or manual logon action required, but the flight crew must accept the CDA confirmation message for the ground system to confirm the KUSA connection is recognized by the aircraft as its CDA
  - If the flight crew does not acknowledge the CDA confirmation after three attempts, the flight crew will have to manually logon to KUSA

Entering U.S. Domestic CPDLC En Route airspace without a connection from a previous data authority

- If the flight crew has not previously logged on during the flight, the flight crew needs to perform a manual logon to KUSA.
  - KUSA session will be established upon reaching a CPDLC-ON En Route Center and accepting the CDA confirmation message

### OUTBOUND KUSA

Exiting U.S. Domestic CPDLC En Route airspace with a connection established

- If an aircraft is exiting U.S. domestic airspace from a **CPDLC-ON** En Route Center, an automatic connection handoff will occur between the CPDLC-ON En Route Center and the next data authority, and the CPDLC connection will be transferred.
  - No manual termination or manual logon action required by the flight crew

Exiting U.S. Domestic CPDLC En Route airspace without a connection established

- If an aircraft is exiting U.S. domestic airspace from a **CPDLC-OFF** En Route Center, the CPDLC connection will be terminated automatically soon after entering that CPDLC-Off En Route Center, and the aircraft will exit without a connection.
  - No manual termination required by the flight crew
  - The flight crew may need to perform a logon to the next ATC facility per SOP after connection termination

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For those of you who aren't so familiar with the US, **KUSA is the CPDLC logon code** - and that is the one and only logon code you need, all the way across.