



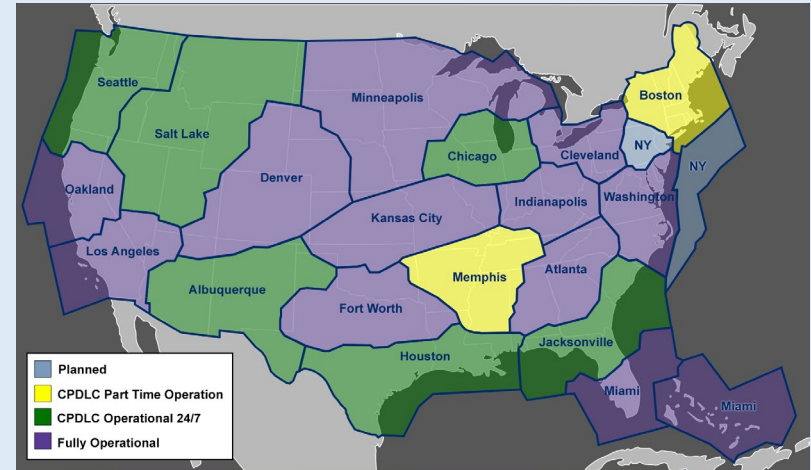
NAC Data Comm

December 2024

Data Comm NIWG Update (December 2024)

En Route Data Comm Deployment

- + 17 centers operational 24/7
- + En Route Full Services Increment 1 active at all active centers
- + Planning En Route deployment to remaining 1 center.
- + 11 centers declared IOC
- + ZBW & ZME in part time operations

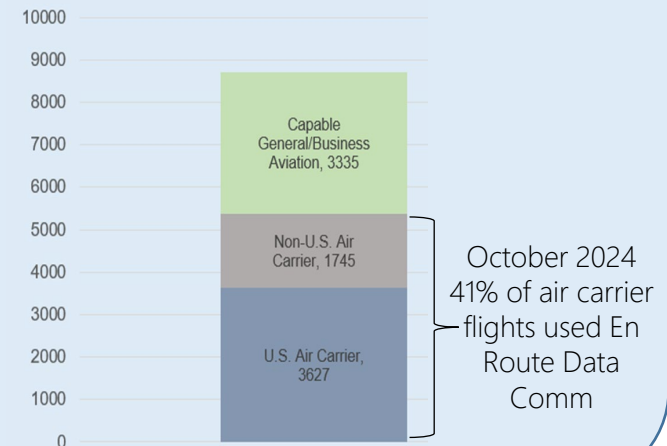


Upcoming Center Start Date (Initial Testing): New York: Jan 2025

Industry Updates

- + 41% of En Route air carrier traffic used Data Comm in October 2024
- + Installation of avionics updates 81% complete
- + Continue to receive positive user feedback as usage grows
- + GA/BA NOTAM lifted – revised En Route participation list published November 2024

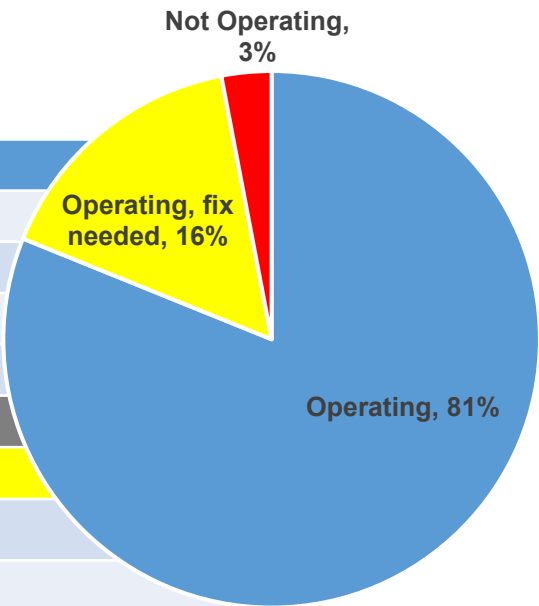
Data Comm En Route Aircraft Equipage



Data Comm Avionics Updates Fleet Status

Aircraft operating in Data Comm En Route – No Pending Actions (81%)

Alaska Airlines: B737	JetBlue: A21N*, A320*
American Airlines: B737, B777, B787	Southwest Airlines: B737
Delta: A330neo, A350, B737*	United: B737, B757, B767, B777, B787
FedEx: B757, B767*, B777, MD11	UPS: B744, MD11, B748, B757, B767



Avionics Action	Operator/Fleet	Status
-----------------	----------------	--------

Aircraft operating in Data Comm En Route with Open Avionics Actions (16%)

Collins CMU 900 Core 16	Delta	Delta ongoing installs
Boeing 767 ATN 523 (Core 16)	FedEx	SB expected late Q3 2024.
Airbus A320 ATSU CSB 7.5	American (100%), Delta (100%), JetBlue (100%)	CSB 7.5 released in late 2020, technical issues increased, root caused; Fix planned for CSB 7.6 Q4 2024 (or CSB 9 available now)
Airbus A320 ATSU CSB 7.6	American, Delta, JetBlue, United	CSB 7.6 planned for Q4 2024 (or CSB 9 available now)

Aircraft removed from Data Comm En Route due to Open Avionics Actions (3%)

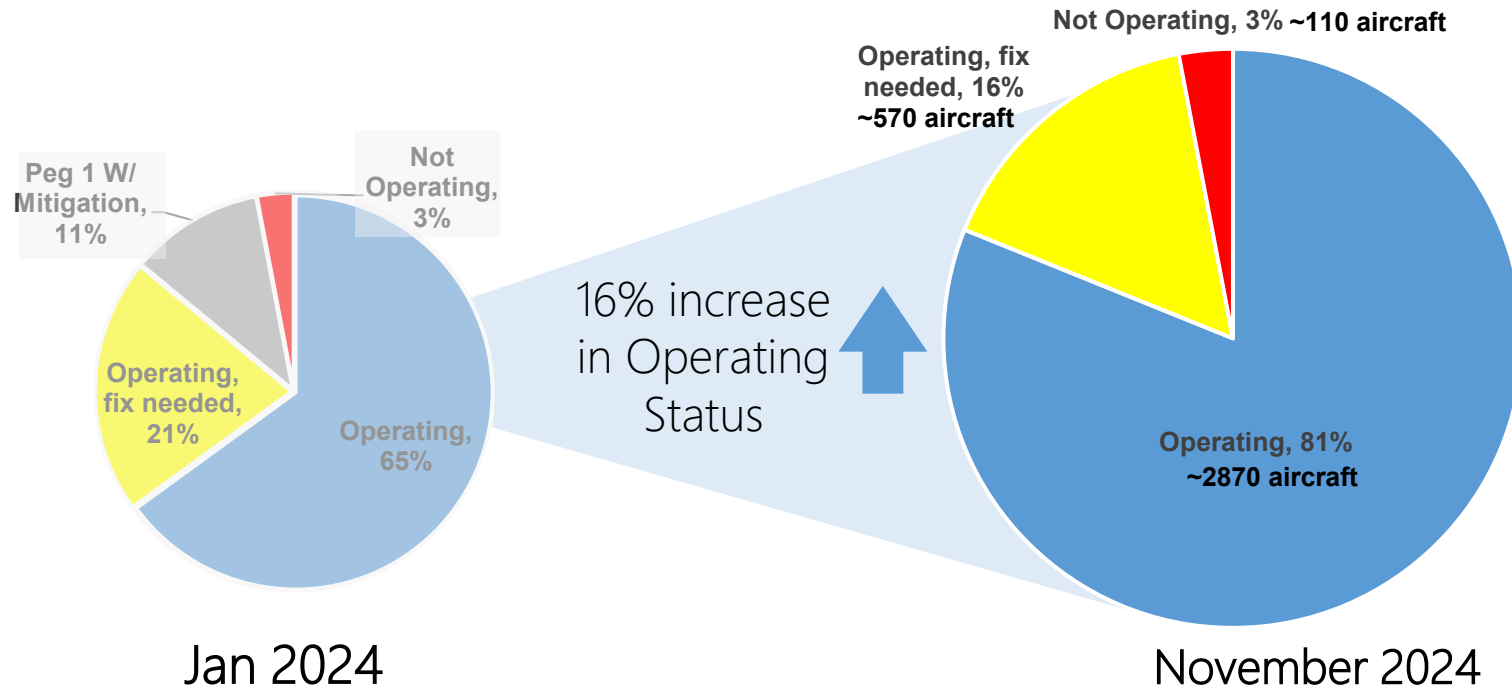
Airbus A220	Delta, JetBlue	Pending avionics fixes, FMS update Q4 2025; RIU update 2026
-------------	----------------	-------------------------------------------------------------

Note: Data above represents avionics upgrades/fixes tracked in NAC SC Ad Hoc for 8 US air carrier fleet already equipped for Data Comm.
 *Denotes partial fleets



Data Comm 2024 Avionics Year in Review

Avionics Fix Installation Progress (subset of equipped fleet)



Note: Data above represents avionics upgrades/fixes tracked in NAC SC Ad Hoc for 8 US air carrier fleet already equipped for Data Comm.

Data Comm En Route Equipage in 2024

- +6% increase in en route air carrier IFR usage
- +65% increase in en route equipped aircraft (8,707 equipped)
 - US, Non-US, and BA/GA
- +56% increase in BA/GA aircraft using CPDLC (2,872 using)



Backup

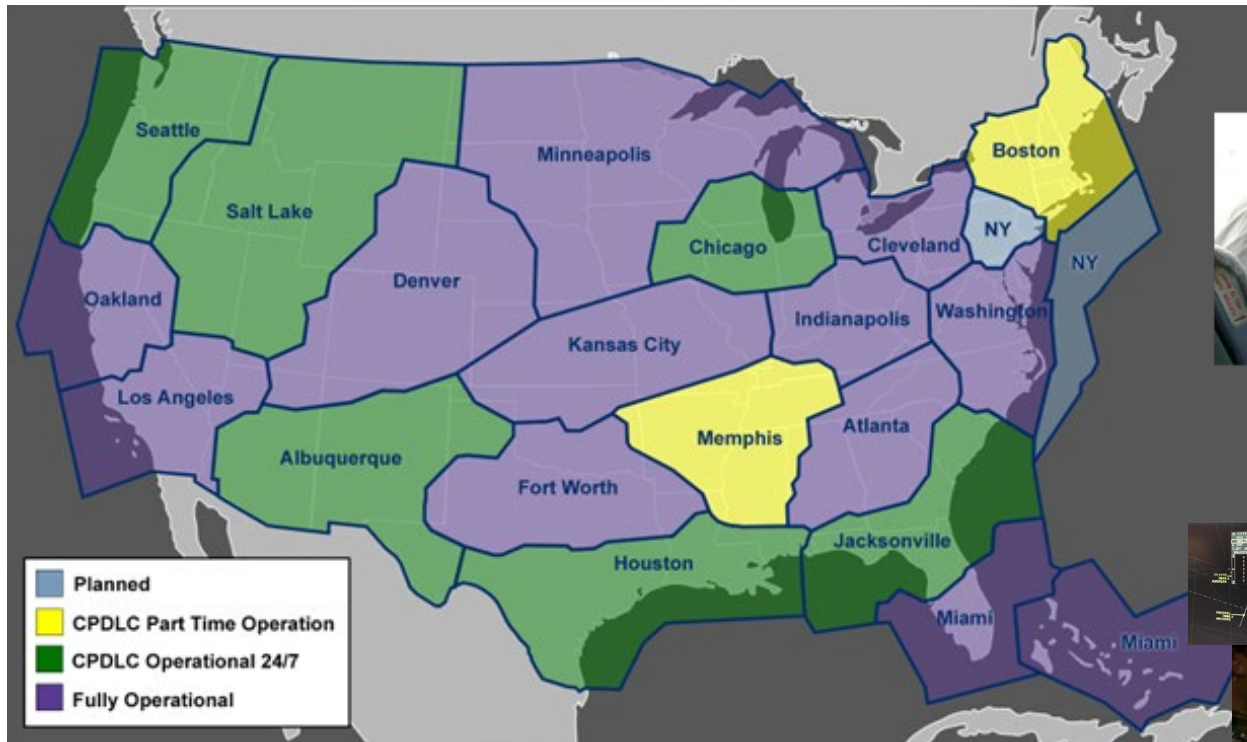


Data Comm Accomplishments

- Data Comm services are operational at 65 airports and 19 En Route Centers
 - 11 ARTCCs now IOC (ZDC as of 10/18). ZAB now 24/7 ops, ZBW, ZME now in limited testing.
- Data Comm user participation continues to grow – tower and en route operations reaching new highs each month
- Localized air-to-ground interop issues are being fault isolated and analyzed for needed corrective actions in the avionics and air-to-ground networks
- En Route Full services increment 1 operational at all active centers



Data Comm Operational Status



Air-to-Ground Network



En Route



Tower

Data Comm operational at 65 Towers

Data Comm operational 24x7 at 17 En Route Centers

ZMA, ZLA, ZOA, ZOB, ZDV, ZDC have recently declared IOC

Full Services Increment 1 (Speeds / Block Altitudes) enabled at all operational sites

ZAB, ZBW, ZME – Limited DFV

En Route Initial Services Activation Schedule







ZNY – Limited DFV (1/2025)

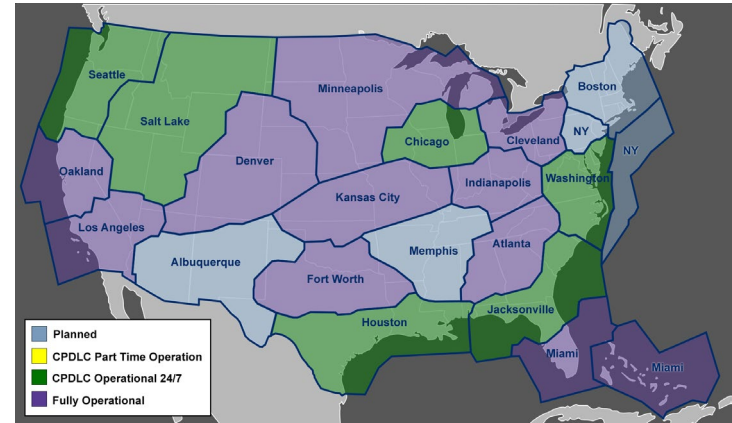
❖ Dates are tentative and subject to change







Data Comm Benefits

Since 2016, CPDLC DCL...

-  Served 22 US Air Carriers and 104 Non-US commercial and cargo operators
-  Cleared 21.34M+ flights
-  Saved 4.17M+ minutes of airspace user time
-  Saved 5.95M+ minutes of radio time
-  Prevented 57.37M Kgs of CO₂ Emissions
-  Prevented 316,570+ readback errors



Since 2019, En Route Data Comm...

-  Served 60 operators
-  Cleared 9,089,302 flights
-  Saved 7.2M+ minutes of radio time
-  Prevented 1.8M+ readback errors

2024 Data Comm NIWG/Avionics Ad Hoc Focus Items

1. Complete nationwide en route center Data Comm deployment – Initial and Full Services
 - Provide national waterfall plan for Initial and Full Services
2. Complete installation of Data Comm avionics updates for retrofit and newly delivered aircraft
3. Continue to track progress against NextGen Joint Implementation Plan (NJIP) milestones
 - NIWG members expressed concern about the “Enhanced Services” baseline slipping to end of 2029



Data Comm – NJIP CY19-21 Open Milestones

Milestone	FAA /Industry	Milestone Date Q/CY	Status	Notes from July 28, 2022 NIWG Meeting
IOC for Initial En Route Services at all CONUS ARTCCs	FAA	4Q2019 4Q2021 4Q2022 4Q2023 1Q2024 2Q2025	Milestone impacted by COVID-19 and latent avionics and air-ground interop issues; deployment restarted in March 2022	Complete nationwide en route center Data Comm deployment – Initial and Full Services Provide national waterfall plan for Initial and Full Services
Baseline additional Data Comm capabilities for En Route utilizing the existing FANS message set	FAA Industry	3Q2021 3Q2024 3Q2026 4Q2029	Due to budget impacts from COVID-19, baselining of follow-on Data Comm capabilities delayed	Data Comm initial and full services provide the foundational CPDLC features. Planning for capabilities beyond en route initial and full services continue to slip to the right. In order to realize all potential benefits of Data Comm a continued evolution of capability is required to realize benefits of TBO.
Loadability Solution for Runway SID	FAA	3Q2019	Agreed on solution using future TFDM implementation in 2019. TFDM deployment milestones and Loadable SID solution release are TBD.	Current TDLS system limitations prevent ATC from sending loadable Runway/SID. Today's implementation requires manual Runway/SID entry – creating opportunity for errors. Loadable SIDs continues to be a high priority request from Data Comm users – improving efficiency and resolving human factors issues on flight deck with current implementation.



Data Comm NIWG Milestone Discussion

During our March 2023 meeting, Data Comm NIWG members expressed concern about the “Enhanced Services” baseline slipping to end of 2029.

With this new plan, there will a multi-year gap for additional Data Comm functionality which many operators included in their equipage business case.

Milestone	FAA /Industry	Milestone Date Q/CY	Status	Notes from July 28, 2022 NIWG Meeting
Baseline additional Data Comm capabilities for En Route utilizing the existing FANS message set	FAA Industry	3Q2021 3Q2024 3Q2026 4Q2029	Due to budget impacts from COVID-19, baselining of follow-on Data Comm capabilities delayed	Data Comm initial and full services provide the foundational CPDLC features. Planning for capabilities beyond en route initial and full services continue to slip to the right. In order to realize all potential benefits of Data Comm a continued evolution of capability is required to realize benefits of TBO.

