ENR 3.3.2.4 中国大陆地区提供 CPDLC/ADS-C 数据链服务的航路

1. 数据链服务范围和规范

中国大陆飞行情报区内提供 CPDLC/ADS-C 数据链服务的空域 / 航路范围包括：L888 （SANLI-XKC 航段）、Y1、Y2。这些空域 / 航路的通信和监视手段，所需通信和 / 或监视性能规范，管制最低纵向间隔标准详见附件A。相关管制单位CPDLC/ADS-C地面系统支持FANS 1/A 应用。

2. 运营要求

2.1 拟使用数据链航路的航空公司开飞之前应向中国民用航空局空中交通管理局递交飞行申请，申请应包括：
a. 城市对；
b. 航班时刻；
c. 开飞时间；
d. 使用机型；
e. 机队卫星电话号码表；
f. 航路紧急脱离程序 （使用 Y1、Y2 航路不包括此项内容）。

2.2 航空运营人应当依据相关政策在航空公司注册国或航空器注册国取得 CPDLC 和 ADS-C 运行资质。

2.3 在 CPDLC/ADS-C 作为主用通信 / 监视手段的地区，管制单位在上述航路对于同时具备 RCP240 和 RSP180 能力的两架航空器之间可以执行缩小纵向间隔标准。但是，在以上航路运行时，并不强制要求航空器必须具备 RCP240 或 RSP180 运行能力。两架航空器之间如果任一航空器不具备 RCP240 或 RSP180 能力，则管制单位将在相关航空器之间执行程序管制最低间隔标准。

2.4 当 CPDLC/ADS-C 作为备用通信 / 监视手段时，飞行员也应与负责的管制单位建立 CPDLC/ADS-C 连通。当主用通信和 （或）监视系统失效时，飞行员应立即切换至备用手段，以确保后续 CPDLC/ADS-C 程序可实现无缝地执行。

3. CPDLC 服务

3.1 总则

3.1.1 管制员 / 航空器驾驶员如果启动并使用 CPDLC，应当执行 ICAO PANS-ATM Doc4444 （2016 年，第 16 版）（下同）第 14 章中相关规则、标准和程序。

3.1.2 管制员 / 航空器驾驶员如果启动并使用 CPDLC，应当使用 ICAO PANS-ATM Doc4444 12.3.6 中 CPDLC 用语。

ENR 3.3.2.4 Data link Routes with CPDLC/ADS-C Application in China Mainland

1. Airspace of application and operational specification

In the China mainland airspace, the datalink service, CPDLC/ADS-C, is applied to the routes: L888 (SANLI-XKC), Y1 and Y2. Please refer to attachment A for the RCP/RSP specification, and the applied Longitudinal Separation Minima on above-mentioned routes. The relevant ATS units support FANS 1/A CPDLC/ADS-C applications.

2. Operational Requirement

2.1 The operators are required to submit a formal application to the Air Traffic Management Bureau of the Civil Aviation Administration of China before starting operations on the data link routes. The application shall include:
a. City pairs;
b. Flight Schedules;
c. Starting time;
d. Aircraft Type;
e. Satellite telephone numbers for the fleet;
f. Procedure of emergent escape (Y1, Y2 exceptive).

2.2 The operators should obtain CPDLC and ADS-C operational approval in accordance with policies established by the State of Registry or State of the Operator.

2.3 In the area where CPDLC/ADS-C is the primary means of communication/surveillance on above mentioned routes, reduced longitudinal separation may be applied between the aircraft with a specific operation approval of RCP240 and RSP180. However, RCP240 and RSP180 are not mandated for flying on these routes. If either or both aircraft do not have RCP240 or RSP180 approval, the ATS units will apply procedural separation minimum between them.

2.4 When CPDLC/ADS-C is applied as alternate means of communication/surveillance, the pilot should also establish CPDLC/ADS-C connection with the controlling ATS unit. In the event that the primary means of communication and/or surveillance fails, the pilot shall switch to above alternate means seamlessly and adhere to the following CPDLC/ADS-C procedures.

3. Controller-pilot data link communications (CPDLC)

3.1 General

3.1.1 The controller or pilot using CPDLC should adhere to the provisions, standards and procedures in ICAO PANS-ATM Doc4444 (Sixteenth Edition, 2016, the same below).

3.1.2 The controller or pilot using CPDLC should adhere to Section 12.3.6 of ICAO PANS-ATM Doc4444 for phraseologies to be used related to CPDLC.

3.1.3 当开始使用 CPDLC 通信时，管制单位应通知航空器备用的 VHF 或 HF 话音频率。

3.1.3 The ATS units should notify the pilot of the VHF or HF frequency of voice communication as alternate means when starting a CPDLC application.

3.1.4 一旦 CPDLC 连通建立，航空器驾驶员应下发一个 CPDLC 位置报告。

3.1.4 Once a CPDLC connection is established, the pilot should send a downlink CPDLC position report.

3.1.5 航空器驾驶员用以登录地面系统的识别标志必须与飞行计划相关项写的航空器识别标志一致。

3.1.5 The flight identification used by the pilot in the logon process should be in accordance with that contained in the flight plan.

3.1.6 航空器驾驶员如果启动并使用CPDLC，应当在收到 CPDLC 上行指令的 60 秒内完成回复，或者当飞行员需要额外的时间考虑如何回复指令时，应选择 STANDBY，不需要回复的指令除外。

3.1.6 Once a CPDLC application is initiated, the pilot should respond to CPDLC uplinks within one minute or select STANDBY when additional time is required to respond.

3.1.7 除紧急情况外，管制员或驾驶员通过 CPDLC 进行通信联络，通常应通过 CPDLC 回答。如管制员或驾驶员通过话音进行通信联络，通常应通过话音回答。无论何时，只要管制员认为有必要对通过 CPDLC 拍发的电报进行更正或需要对电报内容加以澄清，管制员或驾驶员可以使用可供使用的最适当手段更正或者澄清指令 / 请求。使用话音通信对尚未收到运行答复的CPDLC电报进行更正时，管制员或驾驶员的通话之前须加用语“CPDLC（电报类型）作废”，后接正确的管制指令或者请求。

3.1.7 Except emergencies, when a controller or pilot communicates via CPDLC, the response should be via CPDLC. When a controller or pilot communicates via voice, the response should be via voice. Whenever a correction to a message sent via CPDLC is deemed necessary or the contents of a message need to be clarified, the controller or pilot shall use the most appropriate means available for issuing the correct details or for providing clarification. When voice communications are used to correct a CPDLC message for which no operational response has yet been received, the controller's or pilot's transmission shall be prefaced by the phrase: 'DISREGARD CPDLC (message type) MESSAGE, BREAK' - followed by the correct clearance, instruction, information or request.

3.2 CPDLC 服务移交

3.2 Transferring CPDLC connections

3.2.1 航空器从一个不提供 CPDLC 服务的区域，飞入提供（或备份）有 CPDLC 服务的区域，航空器驾驶员必须在预计进入 CPDLC 区域前 15 分钟，人工登录到地面系统。

3.2.1 When the aircraft is within a non-CPDLC service area and the next controlling ATS unit which is a CPDLC service area, the pilot should initiate a logon to the next ATS unit 15 minutes in advance.

3.2.2 在同时提供 CPDLC 服务的管制区之间飞行时，除非地面管制单位要求，接受 CPDLC 服务的航空器在从一个管制区飞入另一个提供CPDLC服务的管制区时，一般不需要人工登录到下一个地面系统。向下一个地面系统进行登录的工作，由正在为航空器提供服务的管制单位在航空器进入下一个区域前完成，而不需要飞行机组的干预。

3.2.2 When flying through CPDLC service areas, the CPDLC connection will be transferred automatically between ATS units by the Address Forwarding process, unless the transferring ATS unit instruct the flight crew to logon manually at an appropriate time/distance prior to the next ATS unit boundary.

3.2.3 移交 CPDLC 服务时，话音通信和 CPDLC 的移交须同时进行。当一架航空器被从能提供 CPDLC 的管制单位移交给不能提供CPDLC的管制单位时，CPDLC的终止须和话音通信的移交同时进行。

3.2.3 When CPDLC is transferred, the transfer of voice communications and CPDLC shall commence concurrently. When an aircraft is transferred from an ATS unit where CPDLC is available to an ATS unit where CPDLC is not available, CPDLC termination shall commence concurrent with the transfer of voice communications.

3.2.4 如 CPDLC 移交导致数据权限改变，而且有些电文尚没有收到结束的答复（如未完成的电文）时，应通知相关管制员。

3.2.4 When a transfer of CPDLC results in a change of data authority, and there are still messages for which the closure response has not been received (i.e. messages outstanding), the controller shall be informed.

3.2.5 管制员对有待答复的上行电文尚未收到飞行员的答复就决定移交航空器的，该管制员应该换用话音通信以澄清与未复电文有关的任何疑问。

3.2.5 When the controller decides to transfer the aircraft without receiving pilot responses to any uplink message(s) outstanding, the controller should revert to voice communications to clarify any ambiguity associated with the message(s) outstanding.

3.3 CPDLC 紧急情况程序

3.3.1 当收到 CPDLC 紧急电文时，管制员应以最有效的方式确认收到电文。

3.3.2 当通过 CPDLC 对所有其他紧急或应急电文作答复时，上行电文须使用 “ROGER”。

3.3.3 当 CPDLC 电文要求逻辑认收和／或运行答复但没有收到此种答复时，须向驾驶员或管制员发出适当的告警。

3.3 CPDLC Emergency procedures

3.3.1 When a CPDLC emergency message is received, the controller shall acknowledge receipt of the message by the most efficient means available.

3.3.2 When responding via CPDLC to all other emergency or urgency messages, uplink message 'ROGER' shall be used.

3.3.3 When a CPDLC message requires a logical acknowledgement and/or an operational response, and such a response is not received, the pilot or controller, as appropriate shall be alerted.

4. ADS-C 服务

4.1 总则

4.1.1 在进入有关区域之前，航空器驾驶员应确认 ADS-C 服务可用。

4.1.2 在提供 ADS-C 服务的空域内，管制员／航空器驾驶员应当执行 ICAO PANS-ATM Doc4444 第 13 章契约式自动相关监视 （ADS-C）服务相关规定、标准和程序。

4.1.3 在提供 ADS-C 服务的空域内，应当使用 ICAO PANS-ATM Doc4444 12.5 中契约式自动相关监视（ADS-C）用语。

4.1.4 如果航空器在航向选择模式下偏离航路或平行航路飞行，航空器的预计航迹仍将是 FMC 中的计划航迹，为避免管制员看到错误的推测航迹，航空器驾驶员应按照实际的预飞航路修改 FMC 飞行计划航路。

4.1.5 航空器必须有能力同时支持至少装有 4 套空中交通管制的 ADS-C 地面系统的 ADS-C 协议。

4.1.6 当一套 ADS-C 地面系统试图与一架航空器建立 ADS-C 协议，却因航空器没有能力支持额外的 ADS 契约而未能做到时，航空器应该以 ICAO 的地名代码或目前与它有合同的地面系统的8位字母的系统指示器答复，以使 ATC 单位能谈判发放契约。

4. ADS-C Service

4.1 General

4.1.1 Prior to entering the designated airspace, the pilot shall verify ADS-C service is available for operation.

4.1.2 The controller or pilot should adhere to the provisions, standards and procedures in Chapter 13 of ICAO PANS-ATM Doc4444 in the ADS-C service area.

4.1.3 The controller or pilot should adhere to Section 12.5 of ICAO PANS-ATM Doc4444 for phraseologies to be used related to ADS-C.

4.1.4 If the aircraft is flying an offset route or diverting while operating in heading select mode, the intent of the aircraft will still be projected along the FMC flight plan route regardless of the actual route flown. To avoid misinformation being displayed to the controller, the FMC flight plan route should be amended to the actual route being flown.

4.1.5 The aircraft must be capable of supporting ADS-C agreements with at least four ATC unit ADS-C ground systems simultaneously.

4.1.6 When an ADS-C ground system attempts to establish an ADS-C agreement with an aircraft and is unable to do so due to the aircraft's inability to support an additional ADS contract, the aircraft should reply with the ICAO location indicators or eight-letter facility indicators of the ground systems with which it currently has contracts, in order for the ATC unit to negotiate a contract release.

4.2 ADS-C 服务移交

4.2.1 管制接收单位必须与受影响的航空器在到达管制移交点之前建立契约。如管制接收单位不能建立契约，必须通知移交单位提供地面转发的 ADS-C 数据，以便提供不间断的 ADS-C 服务。

4.2.2 根据航空器穿越的管制单位之间签署的协议，ADS-C 地面系统可以人工或自动终止 ADS 契约。

4.2 Transfer of control of ADS-C aircraft

4.2.1 The accepting ATC unit shall establish a contract with the affected aircraft prior to reaching the transfer of control point. Should the accepting ATC unit be unable to establish a contract, the transferring ATC unit shall be notified in order to provide ground forwarding of ADS-C data to permit an uninterrupted ADS-C service.

4.2.2 ADS contracts may be terminated manually, or automatically by the ADS-C ground system, based on agreements between ATS units.

4.2.3 当航空器退出数据链服务航路时，航空器驾驶员应恢复使用话音通信与地面联系。

4.2.3 The pilot shall re-establish communication via voice with the ATS unit as soon as the exit of data link route service.

4.3 ADS-C 紧急情况

管制员收到 ADS 紧急状况提示后，将向航空器发出固定格式的上行报文“ROGER”。此上行报文不需要航空器驾驶员回复。

4.3 ADS-C Emergency

When responding to ADS emergency alerts, uplink message 'ROGER' shall be used by the controller. This uplink message shall not be replied by the pilot.

5. 飞行计划

5.1 从中国大陆飞行情报区以外起飞进入中国大陆飞行情报区，且在上述航路运行的航空运营人及其代理人，在向中国大陆空管单位拍发 FPL/CHG/DLA/CNL/DEP/ARR等电报时，应当加发中国民航空管飞行计划处理中心 AFTN 地址 （ZBPEZMFP 和 ZSHAZMFP）。

5.2 计划在上述航路运行的航空器运营人，在提交飞行计划时，应当按照 ICAO PANS-ATM Doc4444 文件附录 2 飞行计划格式，提交相关航空器已经获得航空器注册国或航空公司注册国批准的RCP和RSP运行能力，并对填报信息的正确性负责。

5.3 管制单位将以相关航空器在飞行计划中提交的 RCP 和 RSP 运行能力信息为依据，提供空中交通服务。

5.4 计划在上述航路运行的航空器，其航空运营人应当在提交飞行计划的同时，在飞行计划编组 18 的“COM/”后提交相关航空器卫星电话联系号码。譬如：“COM/SAT PHONE 20441720”。

5. Flight Plan

5.1 Operators and their flight service agencies that conduct operations on above-mentioned data link routes entering China mainland FIR should add the AFTN address of Flight Plan Processing Center of ATMB, CAAC (ZBPEZMFP and ZSHAZMFP) when filing flight plan messages(FPL/CHG/DLA/CNL/DEP/ARR, etc.).

5.2 Operators planned to conduct flights on above-mentioned data link routes should file the RCP and RSP capabilities approved by the State of Registry or State of Operator in the flight plan in accordance with the requirement of Appendix 2 of ICAO PANS-ATM Doc4444. The operators should be responsible for the accuracy of the filed RCP and RSP capability.

5.3 The ATS units shall provide corresponding ATS service to the aircraft according to the RCP and RSP capability in the flight plan.

5.4 Operators planned to conduct flights on above-mentioned data link routes should file 'COM/' of Field Type 18 with the SATVOICE phone number in the flight plan. For instance: 'COM/SAT PHONE 20441720'.

6. 应急程序

6.1 CPDLC 失效

6.1.1 一旦发现 CPDLC 失效，须立即向管制员和驾驶员告警。

6.1.2 当管制员和驾驶员被告警 CPDLC 失效，而且管制员或驾驶员需要在CPDLC恢复之前进行通信联络时，管制员或驾驶员应转换到话音通信，并在沟通信息前增加说明：“CPDLC 失效”。

6. Emergency Procedures

6.1 CPDLC failure

6.1.1 The controller and pilot shall be alerted to the failure of CPDLC as soon as the failure has been detected.

6.1.2 When a controller or pilot is alerted that CPDLC has failed, and the controller or pilot needs to communicate prior to CPDLC being restored, the controller or pilot should revert to voice, if possible, and preface the information with the phrase: 'CPDLC FAILURE'.

6.2 ADS-C 失效

6.2.1 当 ADS-C 发生计划外终止时，管制单位应建立位置报告程序，确保按要求建立话音和 CPDLC 联系，直到重新建立 ADS 契约。

6.2.2 当在规定的时间参数内未收到航空器预期的位置报告，管制员应当通过语音或者 CPDLC，立即查明航空器的位置。

6.2 ADS-C failure

6.2.1 ATS authorities shall establish position-reporting procedures to ensure that voice and CPDLC contracts are re-established as required when unplanned ADS-C termination occurs, until the ADS contract is re-established.

6.2.2 Where an expected position report is not received within a prescribed time parameter, action shall be taken, as appropriate, to ascertain the position of the aircraft. This may be achieved by the use of CPDLC or voice communications.

6.2.3 如果 ADS-C 地面系统发生计划外关闭，管制员应当通知所有受影响的航空器，并向其告知用话音或CPDLC进行位置报告。管制员应为航空器间配备足够间隔，通过直接协调通知相邻的管制单位，必要时发布NOTAM。

6.2.3 In the event of an unplanned ADS-C ground system shutdown, the relevant ATS provider shall inform all affected aircraft and advise them of the requirement for position reports via voice or CPDLC. The controller shall take necessary action to establish alternative separation, if required; inform the adjacent ATS unit(s) by direct coordination; and inform all other relevant parties via the publication of a NOTAM, if appropriate.

6.3 运行中不再满足 RCP240/RSP180 运行要求的处置程序

6.3 Procedures for no longer meeting RCP240/RSP180 operational requirement

6.3.1 在主用或备用系统为 CPDLC/ADS-C 服务的空域内，如果航空器丧失 RCP240/RSP180 运行能力，航空器驾驶员应当立即报告管制员。

6.3.1 The pilot should contact the controller immediately after the loss of RCP240/RSP180 capability during the flight in the CPDLC/ADS-C service area where CPDLC/ADS-C is the primary or alternate means of communication/surveillance.

6.3.2 在提供 CPDLC/ADS-C 服务的空域内，如果航空器在运行中失去 RCP240/RSP180 运行能力，管制员应当尽快为该航空器与其他航空器间配备 ICAO 程序管制间隔。

6.3.2 In the CPDLC/ADS-C service area, if the aircraft loss the RCP240/RSP180 operational capability, the controller shall take necessary action to establish ICAO procedural separation for the affected flights as soon as possible.

6.4 空中紧急情况

6.4 Emergency Procedures

6.4.1 发生紧急情况时，航空器驾驶员应将 ACARS 设备调至 ADS EMMERGENCY MODE，并尽早利用最有效的方法与管制单位恢复话音通信。

6.4.1 In case of emergency, the pilot shall operate the ACARS with an ADS EMERGENCY MODE to notify the ground facility for the emergency, and resume voice communication with ATC authority by the most efficient method as soon as possible.

6.4.2 L888 航路的备降机场是: 昆明机场、成都机场、乌鲁木齐机场和喀什机场。

6.4.2 The available alternate airports for route L888 are: Kunming airport, Chengdu airport, Urumqi airport and Kashi airport.

6.4.3 航空器遇到紧急情况需要脱离或备降时，航空器驾驶员应按照航图中的路线脱离 L888。
BIDRU-- 直飞昆明机场;
MAKUL-- 直飞昆明机场;
NIVUX-- 飞往 XIC (VOR)、SB (NDB)、XFA (VOR) 至昆明机场;
LEVBA-- 飞往 XIC (VOR)、SB (NDB)、XFA (VOR) 至昆明机场;
PEXUN-- 飞往 JTG (VOR) 至成都机场;
SANLI-- 飞往 JTG (VOR) 至成都机场;
LUVAR-- 飞往 MEPEP、LUSMA、DUMIN、TUSLI、HAM (VOR)、MIMAR、VIKOL、FKG(VOR) 至乌鲁木齐机场;
MUMAN-- 飞往 LUSMA、DUMIN、TUSLI、HAM (VOR)、MIMAR、VIKOL、FKG(VOR) 至乌鲁木齐机场;
LEBAK-- 飞往 LUSMA/DUMIN、TUSLI、HAM (VOR)、MIMAR、VIKOL、FKG(VOR) 至乌鲁木齐机场;
TONAX-- 飞往 DUMIN、TUSLI、HAM (VOR)、MIMAR、VIKOL、FKG(VOR) 至乌鲁木齐机场。

6.4.3 The pilot shall fly via regulated way points to evacuate from route L888 when evacuating or alternating is decided in an emergent condition. The breaking points are:
BIDRU-- direct to Kunming airport;
MAKUL-- direct to Kunming airport;
NIVUX-- direct to XIC(VOR), SB(NDB), XFA(VOR), Kunming airport;
LEVBA-- direct to XIC(VOR), SB(NDB), XFA(VOR), Kunming airport;
PEXUN-- direct to JTG(VOR), Chengdu airport;
SANLI-- direct to JTG(VOR), Chengdu airport;
LUVAR-- direct to MEPEP, LUSMA, DUMIN, TUSLI, HAM (VOR), MIMAR, VIKOL, FKG(VOR), Urumqi airport;
MUMAN-- direct to LUSMA, DUMIN, TUSLI, HAM (VOR), MIMAR, VIKOL, FKG(VOR), Urumqi airport;
LEBAK-- direct to LUSMA/DUMIN, TUSLI, HAM (VOR), MIMAR, VIKOL, FKG(VOR), Urumqi airport;
TONAX-- direct to DUMIN, TUSLI, HAM (VOR), MIMAR, VIKOL, FKG(VOR), Urumqi airport.

6.4.4 航空器驾驶员对座舱释压紧急下降时的超障高度和机动飞行的轨迹负责。

6.4.4 The pilot shall be responsible for the obstacle clearance altitude and maneuvering track when emergency descent is executed in the condition of air cabin depressurizing.

7. 通信地址

7. Contact Address

7.1 CPDLC

7.1 CPDLC Contact Address

在建立 CPDLC 连接之前，航空器必须先登录到地面系统。航空固定服务登录的地址如下：

The pilot shall log on to the ground system before the establishment of CPDLC connection. The AFTN address is:

管制单位 ATS Units	ICAO 机构代号 ICAO Facility Designator	ACARS 地址 ACARS Address
兰州区域管制室 Lanzhou ACC	ZLLL	LHWE1YA
乌鲁木齐区域管制中心 Urumqi ACC	ZWWW	URCE1YA

7.2 紧急联系电话

7.2 The emergency telephone

管制单位 ATS Units	电话号码 Telephone Number
兰州区域管制室 Lanzhou ACC	+86-931-8168324

8. 数据链质量问题报告机制

8.1 管制部门在系统运行使用过程中发现数据链质量相关问题，应会同设备维护部门对问题经过研究确认后，填报《数据链质量问题报告表》，上报地区空管局空管部。地区空管局空管部负责对本地区管制运行单位上报的报告进行审核把关，会同通导部，对发现的本地区职责内的管制或设备运行问题进行规范处理，问题报告应于事件发生后的 3 日之内汇总上报民航局空管局，邮件发送至民航数据公司，并抄送民航局空管局空管部、通导部。《数据链质量问题报告表》模板参见附件 B。

8.2 在以上航路运行的航空运营人在运行过程中发现数据链质量相关问题应于事件发生后尽快提交问题报告，邮件直接发送至民航数据公司。《数据链质量问题报告表》模板参见附件 B。

8.3 数据链质量问题报告联络人和联系方式为：
民航数据公司联络人：兆珺
电话：010-82328200
邮箱：rmachina@rmachina.cn
民航局空管局通导部联络人：蔡晶
电话：010-87786915
邮箱：caijing@atmb.net.cn
民航局空管局空管部联络人：刘亮
电话：010-87786825
邮箱：liuliang@atmb.net.cn

8. Data link problem reporting mechanism

8.1 The ATS units that encountered problems with data link service shall report to the ATC division of its responsible regional ATMB after initial investigation with local system maintenance department. The responsible ATC division of the regional ATMB, together with the responsible CNS division, shall take remedial actions to investigate the ATC operation and CNS systems concerning the related problems, and send the problem report(s) to ADCC (Aviation Data Communication Corporation) of ATMB, CAAC, and copy to ATC division and CNS division of ATMB within 3 days of occurrence. The problem report table please refer to Attachment B.

8.2 The operators operating on the data link routes and encountering problems with data link service shall send problem report(s) directly to ADCC (Aviation Data Communication Corporation) of ATMB, CAAC as expeditiously as possible. The problem report table please refer to Attachment B.

8.3 China Data link Problem Reporting Point of Contact:
ADCC of ATMB, CAAC: Ms. Jun ZHAO
Phone: +86 10 82328200
E-mail: rmachina@rmachina.cn
CNS division of ATMB, CAAC: Ms. Jing CAI
Phone: +86 10 87786915
E-mail: caijing@atmb.net.cn
ATC division of ATMB, CAAC: Mr. Liang LIU
Phone: +86 10 87786825
E-mail: liuliang@atmb.net.cn

附件 A 中国大陆地区数据链服务航路情况说明

Attachment A China Mainland Data Link Routes Operational Conditions

航路 Route Designator	管制区 Area Control Center (Unit)	航段范围 Route Segment	通信方式和 RCP 规范 Communication means and RCP specification	监视方式和 RSP 规范 ATS Surveillance means and RSP specification	最低纵向间隔标准 Longitudinal Separation

L888	兰州 ACC Lanzhou ACC	SANLI- TONAX	主用 PRIM	CPDLC RCP: FANS 1/A CPDLC RCP 240	主用 PRIM	ADS-C RSP: FANS 1/A ADS-C RSP180	PBCS 管制间隔 PBCS separation
			备用 1 ALTN1	VHF (LUVAR-SANLI 未覆盖) (no coverage from LUVAR to SANLI)	备用 ALTN	ADS-B (大部分覆盖) (Cover most area)	
			备用 2 ALTN2	HF			
	乌鲁木齐 ACC Urumqi ACC	TONAX- XKC	主用 PRIM	VHF	主用 PRIM	ADS-B	监视间隔 ATS surveillance separation
			备用 ALTN	CPDLC RCP: FANS 1/A CPDLC RCP 240	备用 ALTN	ADS-C RSP: FANS 1/A ADS-C RSP180	
Y1	兰州 ACC Lanzhou ACC	OMBON- MAGOD	主用 PRIM	VHF	主用 PRIM	ADS-B/ 二次雷达 ADS-B/SSR	监视间隔 ATS surveillance separation
			备用 1 ALTN1	CPDLC RCP:FANS 1/A CPDLC RCP240	备用 ALTN	ADS-C RSP:FANS 1/A ADS-C RSP180	
			备用 2 ALTN2	HF			
	乌鲁木齐 ACC Urumqi ACC	MAGOD- SADAN	主用 PRIM	VHF	主用 PRIM	ADS-B	监视间隔 ATS surveillance separation
			备用 ALTN	CPDLC RCP:FANS 1/A CPDLC RCP240	备用 ALTN	ADS-C RSP:FANS 1/A ADS-C RSP180	
Y2	兰州 ACC Lanzhou ACC	LUVAR- MEPEP	主用 PRIM	VHF	主用 PRIM	ADS-B	监视间隔 ATS surveillance separation
			备用 1 ALTN1	CPDLC RCP:FANS 1/A CPDLC RCP240	备用 ALTN	ADS-C RSP:FANS 1/A ADS-C RSP180	
			备用 2 ALTN2	HF			
以上航路的所需导航性能规范 :RNP4。 The RNP specification for the data link routes: RNP4. 以上航段方向均为双向。 Direction of all route segments: bidirectional. 航路高使用度均为 9 200m(含) 以上。 Available flight levels: 9 200m and above. 航路宽度均为 56km。 Route Lateral limits: 56km.							

附件 B 数据链质量问题报告模板 **Attachment B FANS 1/A Problem Report Form**

问题报告索引编号			
问题报告标题			
日期 (UTC)		时间 (UTC)	
航空器注册号		航班号	

起飞落地机场		航路		
报告单位		机型		
报告单位所属 地区空管局 (仅管制单位填写)				
当前管制单位		下一管制单位		
事件位置	经纬度			或
	航空器距附近台站、报告点相对位置			或
	有持续性事件可提供航段描述		至	
问题情况描述				
其他补充信息 (报告单位可另附页，提供涉及数据链问题的其他补充信息,例如:问题描述的图片、初步调查分析的结论、其他辅助数据等有用信息)				

FANS 1/A Problem Report Form

Originators Reference Number			
Title			
Date UTC		Time UTC	
Registration		Flight Number	
Flight Sector			

Originator		Aircraft Type	
Organization (Only ANSPs fill in this blank)			
Active Center		Next Center	
Position			
Problem Description			
Attach File			
Additional Data			