International Civil Aviation Organization

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Agenda Item 4: Review of ADS/CPDLC Operations and Performance

DATA LINK PERFORMANCE REPORT FOR CHINA

(Presented by China)

SUMMARY

This paper presents data link performance data for 2025 for the Lanzhou FIR and Urumuqi FIR, and information on actions taken to identify and rectify the causes of performance issues.

1. INTRODUCTION

1.1 **Tables 1** to **8** summarize Automatic Dependent Surveillance – Contract (ADS-C) and Controller-Pilot Data Link Communications (CPDLC) performance where the Required Surveillance Performance (RSP) and Required Communications Performance (RCP) criteria stipulated in ICAO Doc 4444 – Procedures for Air Navigation Services – Air Traffic Management (PANS-ATM) were not met. Actions taken to address performance not meeting the criteria are discussed, together with the outcomes of such actions.

1.2 ADS-C and CPDLC operation is applied in the routes L888 (SANLI-XKC), Y1 and Y2, operated by Lanzhou Air Control Center (ACC) and Urumqi ACC. The data link performances in the routes were measured against the RCP 240 and RSP 180 specifications for PBCS operations.

1.3 This report provides observed performance of the operational data link systems for the above-mentioned data link routes, collected from Lanzhou and Urumqi FIR for the period from Jan. 2025 to Dec. 2025.

2. DISCUSSION

Lanzhou FIR ADS-C RSP180 Performance – Media Type, RGS and GES

2.1 **Table 1** outlines overall ADS-C performance per media type, Remote Ground Station (RGS) and Ground Earth Station (GES) supporting/relevant to operation within the Lanzhou FIR during 2025, where surveillance performance meets an acceptable level. Overall traffic remained stable throughout the year with no major fluctuation in total message count. The message count for the second half was larger than that of the first half. SATCOM and VHF met 95% requirements. The overall service performance stayed consistent in both half-years.

2.2 Several stations even achieved 100% compliance in either H1 or H2, demonstrating highly reliable service delivery. Multiple SATCOM sites show substandard 95% compliance rates: XXA, XXI, XXF's 95% compliance were roughly between 96.5%–98.0%, and IG1 remained Lowest performance among SATCOM stations, with 95% compliance at 89.52% (H1) and 89.22% (H2).

2.3 EUA 1 performance was low in 2024, showing much improvements and compliance in 2025. Every other ground stations failing 95% requirements besides HKG1 were constructed outside of Chinese airspace.

Table 1: ZLLL FIR ADS-C Downlink Latency per Media Type, RGS and GES

FIR		**ZLLL**					
Criteria		**RSP180**					
Period		**Jan-June 2025**			**July-December 2025**		
Criteria Met 99.0-99.89 Under-Criteria		**Message Counts**	**95%** **% < = 90sec**	**99.90%** **% <= 180sec**	**Message Counts**	**95%** **% < = 90sec**	**99.90%** **% <= 180sec**
By Media Type							
VHF		394706	99.16	99.62	384690	99.22	99.58
SATCOM		233115	97.56	99.52	238397	97.45	99.43
HF		74	40.54	62.16	102	40.19	62.74
ALL		627895	98.5	99.5	623189	98.5	99.5
By Remote Ground Station (RGS) Ground Earth Station (GES)							
(only RGS/GES with message counts >100 recorded)							
GOQ	VHF	31854	99.6	99.72	28585	99.58	99.7
XXA	SAT	27506	96.55	99.47	13400	96.56	99.27
XXI	SAT	16818	97.74	99.75	18937	97.11	99.55
XXF	SAT	15778	97.94	99.51	17917	97.65	99.28
TFUV	VHF	17963	99.59	99.94	14042	99.69	99.92
TFU	VHF	13119	98.45	99.68	12366	98.57	99.56
IG1	SAT	11545	89.52	98.13	13445	89.22	97.96
EUA1	SAT	12858	97.04	99.54	11295	97.15	99.31
UGC1	VHF	11838	99.79	99.95	9956	99.93	99.94
LHW	VHF	11688	98.31	99.15	9615	97.96	98.86
GYD1	VHF	10853	99.64	99.81	9939	99.53	99.65
KRL	VHF	9867	99.65	99.76	10246	99.76	99.8
KRLV	VHF	9989	99.91	99.93	9846	99.94	99.95
IGW1	SAT	9516	94.23	97.69	9739	93.61	96.92
XXQ	SAT				17939	97.26	99.66
HKGV	VHF	8217	99.67	99.96	6779	99.71	99.92
JGN	VHF	6069	99.39	99.75	7625	99.44	99.73
HMI	VHF	6005	99.8	99.88	7604	99.73	99.85
ALA1	VHF	6496	99.43	99.73	6725	99.73	99.83
CIT1	VHF	6045	99.83	99.9	5917	99.76	99.84
HKG8	VHF	5553	99.69	99.94	6066	99.7	100
CKG	VHF	5948	98.97	99.74	5555	98.77	99.33
JGNV	VHF	4561	99.16	99.86	4582	99.1	99.86
HMIV	VHF	4511	99.88	99.97	4389	99.84	99.97
CTU	VHF	4339	99.12	99.7	3971	99.21	99.74

LHWV	VHF	4502	99.62	99.86	3787	99.41	99.65
NNG	VHF	4436	98.35	99.75	3758	99.2	99.76
CTUV	VHF	4199	99.85	99.92	3904	99.87	99.92
TZX7	VHF	4144	99.27	99.51	3843	99.34	99.5
CAN	VHF	4046	97.92	99.15	3853	98.59	99.27
HKG7	VHF	4117	99.56	99.85	3689	99.64	99.94
SZX	VHF	3821	97.88	99.16	3740	98.44	99.41
NNGV	VHF	4751	98.96	99.89	2790	99.49	99.96
BFJV	VHF	4219	99.97	99.97	3006	99.9	100
HKG	VHF	3425	99.18	99.47	3490	99.51	99.65
URCV	VHF	3396	99.85	100	3508	99.94	100
DNHV	VHF	3332	99.87	99.96	3388	99.85	99.97
KZO	VHF	2862	99.79	99.86	3721	99.75	99.83
BXH1	VHF	3089	99.64	99.87	3109	99.45	99.64
URC	VHF	2753	99.49	99.78	3388	99.73	99.79
CKGV	VHF	3261	99.6	99.84	2724	99.81	99.92
KZO1	VHF	2972	99.76	99.89	2992	99.96	100
KWLV	VHF	2788	99.03	99.85	3100	99.48	99.96
ZUHV	VHF	3196	98.15	99.93	2663	98.61	100
KXX1	VHF	2584	99.53	99.69	3274	99.78	99.87
SZF7	VHF	2838	98.55	98.9	2947	98.57	98.81
AVK	VHF	2397	99.2	99.7	3223	97.92	99.1
SKD1	VHF	3006	99.93	99.96	2562	100	100
TAS1	VHF	2801	99.92	100	2342	99.57	99.65
KWL	VHF	2304	98.82	99.78	2590	98.57	99.65
SCO1	VHF	2248	99.82	99.91	2558	99.33	99.53
APK2	SAT	2274	98.37	99.42	2505	97.6	99.52
SZF	VHF	2442	99.34	99.59	2290	98.86	99.03
JZH	VHF	1059	95.75	98.3	3672	97.73	98.58
ZHAV	VHF	2770	98.77	99.81	1938	98.24	99.79
KWE	VHF	1666	98.91	99.63	2868	99.23	99.75
SZXV	VHF	2297	98.3	99.91	2120	98.53	99.85
DZN1	VHF	2047	99.56	99.8	2310	99.65	99.69
DNH	VHF	1693	99.17	99.58	2331	98.49	99.05
DEBT	VHF	1983	99.49	99.49	2028	99.5	99.5
TCG	VHF	1788	98.54	99.44	1943	99.02	99.43
TBS1	VHF	1910	99.31	99.52	1801	98.33	98.66
ASB1	VHF	2167	99.81	99.95	1470	99.72	99.86
ZHA	VHF	1833	98.79	99.67	1736	98.55	99.48
TAS	VHF	3265	99.66	99.78	256	100	100
MFM	VHF	1717	98.25	99.35	1625	98.15	99.38
AVAV	VHF	2235	98.7	99.91	1061	99.71	100
IST8	VHF	1476	97.76	98.5	1760	97.84	98.63
BOJV	VHF	1544	97.34	97.73	1489	98.72	98.99

KWEV	VHF	456	100	100	2513	100	100
BAVV	VHF	1450	99.93	99.93	1496	99.73	99.86
INC	VHF	1324	99.24	99.62	1564	98.78	99.36
YIN	VHF	1221	99.18	99.83	1616	98.94	99.31
ZUH	VHF	1455	99.1	99.65	1345	99.4	99.7
XNN	VHF	744	99.05	99.73	1848	99.62	99.83
BTST	VHF	1239	99.51	99.51	1326	99.01	99.01
TWCV	VHF	1163	99.14	99.82	1379	99.41	99.78
ICN1	VHF	1268	99.6	99.6	1272	99.6	99.6
HKG2	VHF	1331	96.54	98.19	1196	95.9	98.82
TLQ	VHF	1135	99.91	100	1391	99.71	100
TSRV	VHF	1319	99.39	99.39	1155	99.91	99.91
AKU	VHF	1067	99.71	99.9	1301	99.76	99.92
GYS	VHF	881	98.41	99.65	1349	98.36	99.77
TBS	VHF	1119	97.67	98.65	1090	96.42	97.61
PEK	VHF	977	99.79	99.89	1219	99.67	99.75
HET	VHF	1052	99.8	99.9	1140	99.21	99.38
FRAV	VHF	1172	99.31	99.4	1015	99.8	100
LEJ7	VHF	952	100	100	1219	99.58	100
BFJ	VHF	1297	99.76	99.92	861	99.18	99.76
ISTV	VHF	777	94.98	96.78	1197	98.57	98.74
ERZ	VHF	926	99.35	99.89	961	99.06	99.16
BPLV	VHF	1268	99.36	100	557	99.1	99.82
OTP7	VHF	880	99.09	99.09	912	97.8	97.8
XXP	SAT	804	97.38	99.12	974	96.81	99.48
ESB7	VHF	849	93.87	97.17	928	94.82	97.95
ESBV	VHF	771	98.57	98.96	1006	98.11	98.5
IOR8	SAT	806	99.62	99.87	923	99.67	99.78
AVA	VHF	1108	96.02	99.54	602	96.84	99.16
CANV	VHF	889	98.76	99.21	792	98.23	99.49
OTPV	VHF	856	98.48	98.48	796	99.49	99.49
ICNV	VHF	704	100	100	937	100	100
BAV	VHF	699	99.57	99.85	933	99.24	99.67
VIEV	VHF	836	99.16	99.16	793	99.87	100
TWC	VHF	644	100	100	970	98.65	99.69
DATV	VHF	718	99.86	99.86	882	99.77	100
BPL	VHF	780	95.51	98.58	796	97.36	99.49
IST7	VHF	964	85.37	93.15	608	88.32	95.23
BUS1	VHF	912	98.46	99.34	645	97.82	98.91
MUCV	VHF	828	99.39	99.51	699	99.71	99.85
PKX	VHF	681	99.85	100	818	99.51	99.75
VAR7	VHF	878	98.63	98.86	611	97.05	97.21
MUX1	VHF	736	99.72	100	739	100	100
LNZT	VHF	817	99.26	99.51	656	99.23	99.23

DRST	VHF	641	99.68	99.84	826	99.87	99.87
ALA	VHF	563	99.82	99.82	903	99.33	99.44
TBSV	VHF	630	99.04	99.52	783	98.97	99.23
AKUV	VHF	636	99.37	100	764	100	100
HAK	VHF	596	98.48	99.66	703	99.57	99.85
MCT7	VHF	720	99.86	100	565	100	100
TSN	VHF	565	99.64	99.64	701	99.42	99.57
DSNV	VHF	561	99.46	99.82	679	99.41	99.7
ISTW	VHF	582	98.96	99.82	644	99.37	99.84
CND7	VHF	629	97.29	98.09	557	96.05	96.76
ICN	VHF	551	98.54	99.45	607	99.67	99.83
EVN1	VHF	704	99	99.14	444	99.32	99.54
GUW1	VHF	570	99.12	99.29	569	98.94	98.94
KCA	VHF	542	99.07	100	567	99.47	99.64
TZX	VHF	668	97.9	98.65	441	98.18	98.41
IOR7	SAT	488	100	100	593	100	100
PKXV	VHF	492	99.79	100	580	100	100
BUDV	VHF	586	98.8	98.8	476	100	100
BUD	VHF	466	99.78	99.78	588	98.97	98.97
BOJT	VHF	336	97.02	98.21	712	97.61	97.75
KJH	VHF	465	99.35	100	553	99.27	100
BRU	VHF	433	99.3	99.3	579	99.82	99.82
ISTS	VHF	647	93.97	95.67	356	96.62	98.31
DXBV	VHF	651	99.07	99.84	314	99.04	99.68
PVGV	VHF	473	100	100	477	100	100
TCGV	VHF				941	99.89	99.89
SJW	VHF	438	99.77	100	493	98.98	98.98
TAO	VHF	456	99.78	100	436	98.85	100
DAT	VHF	371	99.73	100	518	99.8	100
HETV	VHF	463	99.78	99.78	371	99.73	100
YBP	VHF	531	98.49	99.24	300	99	99.33
ISTX	VHF	453	99.11	100	346	98.84	99.42
PEKV	VHF	351	100	100	433	100	100
KTWT	VHF	366	98.9	98.9	387	98.7	99.22
TPE	VHF	438	100	100	311	100	100
HKG1	VHF	402	89.8	92.03	322	93.78	95.96
DSN	VHF	302	99.33	100	404	99	99.75
CCU1	VHF	192	100	100	511	98.82	99.8
SXR1	VHF	392	99.23	99.48	309	100	100
VAS7	VHF	301	97.67	99.66	399	98.24	98.74
GYSV	VHF				699	99.42	100
MHD1	VHF	462	100	100	234	100	100
IXJ1	VHF	330	100	100	365	100	100
EVN	VHF	405	98.02	99.01	275	96	96.72

FRAT	VHF	446	99.55	99.77	234	100	100
MUCT	VHF	428	99.76	99.76	251	98.8	99.6
SZF1	VHF	405	99.25	99.75	253	98.41	98.81
TLV	VHF	455	99.78	99.78	202	100	100
YNTV	VHF	270	100	100	375	99.73	100
KHH1	VHF	306	99.67	100	335	99.7	100
NQZ1	VHF	352	93.75	95.45	288	97.22	98.61
ESB	VHF	321	94.08	95.32	316	97.15	97.78
BOJ	VHF	284	93.3	93.66	345	95.07	95.36
AAT	VHF	305	100	100	316	99.68	99.68
TPE7	VHF	347	100	100	266	100	100
TSNV	VHF	289	99.3	100	317	100	100
TPE8	VHF	225	100	100	363	100	100
BEG	VHF	291	100	100	294	98.63	98.63
KLVT	VHF	310	98.7	98.7	263	99.23	99.23
KRY	VHF	168	98.8	100	373	99.46	99.73
HUZ	VHF	270	97.77	98.88	269	98.14	98.88
SEL	VHF	227	99.11	100	312	97.43	99.03
TAOV	VHF	233	99.14	99.57	302	99.66	99.66
FMOT	VHF	295	99.66	99.66	239	98.32	98.32
AUH8	VHF	238	100	100	290	100	100
LCA	VHF	381	100	100	144	99.3	99.3
AMSW	VHF	281	98.57	98.57	234	98.29	98.71
AMSX	VHF	294	98.97	98.97	216	98.61	98.61
KHH	VHF	307	98.04	99.67	196	97.95	98.46
ZQZ	VHF	234	98.29	99.14	256	100	100
CLJ7	VHF	260	98.46	98.46	224	98.66	98.66
KHG	VHF	215	99.53	100	268	97.76	98.88
PUS1	VHF	203	99.5	99.5	277	100	100
KUVV	VHF	231	100	100	247	99.59	100
IMF1	VHF	160	97.5	100	305	97.37	99.34
UNR	VHF	167	100	100	285	98.94	99.29
XAIV	VHF	263	100	100	181	100	100
XNNV	VHF				444	99.77	100
IFN1	VHF	285	98.94	98.94	158	98.73	100
PVG	VHF	223	100	100	216	98.61	99.07
PRG	VHF	176	98.86	98.86	261	100	100
UKK	VHF	265	99.24	99.24	171	97.07	97.66
MCT	VHF	284	99.64	99.64	146	97.26	100
VIE	VHF	221	100	100	208	98.55	98.55
DXB7	VHF	234	100	100	192	100	100
DZHV	VHF	239	100	100	183	100	100
SELV	VHF	162	99.38	99.38	255	100	100
JZHV	VHF				416	98.31	99.51

ASR	VHF	266	98.49	98.87	143	99.3	99.3
CLJ1	VHF	224	95.98	97.32	184	96.73	96.73
HTN	VHF	234	100	100	173	100	100
LAO	VHF	175	99.42	100	229	100	100
DOYV	VHF	197	100	100	205	100	100
KRYV	VHF	162	100	100	236	99.15	100
ESB1	VHF	252	94.44	94.84	142	97.88	97.88
AMS1	VHF	249	96.78	99.59	137	99.27	99.27
VAN7	VHF	185	100	100	199	99.49	99.49
HND8	VHF	107	100	100	274	100	100
MUC	VHF	165	99.39	99.39	210	99.04	99.04
OTP	VHF	168	96.42	96.42	205	95.6	95.6
LEJ1	VHF	203	99.5	100	162	99.38	99.38
XIY	VHF	123	99.18	99.18	238	99.57	100
VAR	VHF	190	97.36	97.89	170	92.35	92.35
KAGV	VHF	133	100	100	226	99.11	99.55
KMG	VHF	163	99.38	100	196	98.97	99.48
MCT8	VHF	191	100	100	168	100	100
TAEV	VHF	152	99.34	99.34	206	99.51	100
SHJ8	VHF	206	100	100	149	100	100
LPFV	VHF				350	100	100
KGT	VHF	166	99.39	100	182	98.9	99.45
NRT7	VHF				341	100	100
LGGV	VHF	180	100	100	156	99.35	99.35
CGOV	VHF	169	99.4	99.4	155	100	100
TNA	VHF	168	99.4	99.4	152	98.68	98.68
FRA	VHF	139	99.28	100	169	99.4	99.4
ZQZV	VHF	139	100	100	167	99.4	99.4
OTP1	VHF	173	96.53	97.1	128	93.75	93.75
VAR1	VHF	160	93.75	93.75	140	95.71	95.71
TAE1	VHF	161	99.37	100	138	100	100
HAN	VHF	118	100	100	176	100	100
NRTV	VHF	291	100	100			
AMM	VHF	166	100	100	121	100	100
DZH	VHF	169	100	100	118	99.15	100
LKO1	VHF	143	96.5	99.3	139	98.56	98.56
AMS5	VHF	155	98.7	99.35	124	100	100
TSR1	VHF	155	96.77	96.77	118	99.15	99.15
PRGV	VHF	114	92.98	92.98	157	99.36	99.36
CGNW	VHF	264	100	100			
CGO	VHF	122	99.18	99.18	129	97.67	98.44
VNO	VHF	116	92.24	92.24	132	92.42	92.42
CND1	VHF	139	97.12	97.12	108	98.14	98.14
PFO	VHF	132	99.24	100	107	100	100

LHRV	VHF	107	99.06	99.06	130	100	100
HFEV	VHF	126	100	100	108	100	100
AUH	VHF				217	99.53	100
KHHV	VHF	215	97.2	99.53			
DXB	VHF	207	99.51	100			
LEJV	VHF	201	94.52	95.02			
SAWT	VHF				198	97.47	97.97
HNDV	VHF	197	100	100			
YGJV	VHF	191	99.47	99.47			
YNT	VHF				185	100	100
IXA1	VHF				184	99.45	100
CDGY	VHF	169	100	100			
MNL	VHF				168	98.8	100
BOJ7	VHF	166	98.19	99.39			
FRAW	VHF	165	100	100			
LPF	VHF				164	99.39	100
BRU7	VHF				161	96.89	98.75
IZOV	VHF	155	99.35	99.35			
SLL	VHF	153	100	100			
X2I	VHF				152	98.68	98.68
RTMT	VHF				149	95.97	95.97
TPEV	VHF	149	99.32	100			
ADD	VHF	147	100	100			
UYN	VHF				144	100	100
KAG	VHF				143	100	100
MNL8	VHF	142	100	100			
NRT1	VHF	140	97.85	97.85			
HUZV	VHF	139	99.28	99.28			
KIXV	VHF	138	100	100			
IST2	VHF	135	97.77	98.51			
HND1	VHF	134	99.25	99.25			
USN	VHF				134	99.25	99.25
KIX7	VHF				131	100	100
AYT	VHF	130	100	100			
DOY	VHF				130	99.23	100
CJU1	VHF				126	100	100
BUD1	VHF				125	99.2	99.2
UYNV	VHF				125	98.4	98.4
KIX8	VHF				123	100	100
SHSV	VHF	119	100	100			
DOH9	VHF	118	99.15	99.15			
DOH7	VHF	116	100	100			
ZYI	VHF	116	100	100			
TVSV	VHF				115	100	100

KWJ1	VHF				114	100	100
ISL	VHF	113	94.69	95.57			
PAT1	VHF				113	99.11	100
DWC7	VHF				111	100	100
BTS1	VHF	110	99.09	99.09			
IZO7	VHF				109	100	100
AUH7	VHF	106	100	100			
ZAG	VHF	106	100	100			
PWQ	VHF	104	99.03	100			
DEL2	VHF				102	97.05	100
KSC1	VHF	101	98.01	100			

ZLLL FIR ADS-C RSP180 Performance – Aircraft Operator/Type

2.4 **Table 2** summarizes overall ADS-C performance per Aircraft Operator/Type for downlinks sent within the Lanzhou FIR during 2025, where performance did not meet the RSP180 performance criteria. For most operators/types, the 95% requirement was achieved, only a couple of operators/types failed. While most of the aberrant aircraft had low data counts, they have been put under constant observation.

Table 2: ZLLL FIR ADS-C Downlink Latency per Aircraft Operator/Type

FIR	**ZLLL**					
Criteria	**RSP180**					
Period	**Jan-June 2025**			**July-December 2025**		
Criteria Met	**Message Counts**	**95%**	**99.90%**	**Message Counts**	**95%**	**99.90%**
99.0-99.89		**% <= 90sec**	**% <= 180sec**		**% <= 90sec**	**% <= 180sec**
Under-Criteria						
By Aircraft Operator / Type (only message counts >100 recorded)						
B772/	1975	88.45	98.78	387	97.15	99.48
B763/CHZ	640	94.37	97.96	1935	96.17	98.24
B738/CSN	811	91.49	99.63	139	87.76	99.28
A319/CES	425	95.76	100	483	92.75	99.58
A333/AFL	391	93.6	95.65	426	96	98.12
A333/KZU				746	93.56	98.92
B39M/VSV				691	92.47	94.06
B739/VSV				544	87.86	89.88
A332/MSR				517	91.48	93.23
B763/MFX	271	94.09	97.04	238	97.89	99.57
B744/ATG				300	94.66	96.33
B763/UZB	108	96.29	97.22	118	94.91	98.3
A21N/QNT				206	91.74	95.14
A359/AFL	130	87.69	99.23			
A333/CES				108	93.51	95.37

ZLLL FIR CPDLC RCP240 Performance – Media Type, RGS and GES

2.5 **Tables 3A** and **3B** summarize overall CPDLC performance per Media Type, RGS and GES for messages sent within the Lanzhou FIR during 2025, where performance did not meet the RCP240 performance criteria. Only HS and VS failed 95% requirement, both were under 100 data counts.

2.6 Based on the full-year PBCS monitoring data for FIR ZLLL under RCP240 criteria from January to December 2025, the overall safety performance measured by the 95% benchmark meets the required standard, falling within the 99.0–99.89% under-criteria band. A total of 3,832 messages were processed across all media types. For the 95% safety benchmark, the aggregate results are 99.27% and 98.50%, respectively. By media type, VHF performed best at 99.83% (ACP) and 99.57% (ACTP), followed closely by SAT at 99.03% and 98.57%. Satellite Voice (SV) achieved 99.42% (ACP) but a lower 97.14% (ACTP), while VHF Data (VS) reached 100% (ACP) yet 94.78% (ACTP).

2.7 In summary, while the FIR ZLLL as a whole satisfies the RCP240 safety criteria for 2025, the rare happening of HS transmission should be tracked in the future.

Table 3A: ZLLL FIR CPDLC Performance Latency per per Media Type, RGS and GES – Jan-Jun 2025.

FIR		**ZLLL**				
Criteria		**RCP240**				
Period		**Jan - Jun 2025**				
Criteria Met 99.0-99.89 Under-Criteria		**Message Counts**	**95% benchmark**		**99.9% Benchmark**	
			ACP	**ACTP**	**ACP**	**ACTP**
			% < = 180sec	**% <= 120sec**	**% < = 210sec**	**% <= 150sec**
By Media Type						
SAT		1222	99.34	99.09	99.42	99.50
VHF		599	100.00	99.33	100.00	99.49
SV		90	98.88	96.66	98.88	100.00
VS		59	100.00	91.52	100.00	96.61
HS		7	71.42	57.14	85.71	57.14
ALL		1977	99.44	98.68	99.54	99.29
By Remote Ground Station (RGS) Ground Earth Station (GES)						
Designator	**Type**	(RGS/GES with message counts >100)				

Table 3B: ZLLL FIR CPDLC Performance Latency per per Media Type, RGS and GES – Jul-Dec 2025.

FIR	**ZLLL**				
Criteria	**RCP240**				
Period	**Jul - Dec 2025**				
Criteria Met 99.0-99.89 Under-Criteria	**Message Counts**	**95% benchmark**		**99.9% Benchmark**	
		ACP	**ACTP**	**ACP**	**ACTP**
		% < = 180sec	**% <= 120sec**	**% < = 210sec**	**% <= 150sec**

By Media Type					
SAT	1162	98.70	98.02	99.39	99.05
VHF	539	99.62	99.81	99.62	99.81
SV	85	100.00	97.64	100.00	100.00
VS	56	100.00	98.21	100.00	100.00
HS	13	100.00	61.53	100.00	69.23
ALL	1855	99.08	98.27	99.51	99.13
By Remote Ground Station (RGS) Ground Earth Station (GES)					
Designator	**Type**	(RGS/GES with message counts >100)			

ZLLL FIR CPDLC RCP240 Performance – Aircraft Operator/Type

2.8 **Tables 4A** and **4B** summarize overall CPDLC performance per Aircraft Operator/Type for messages sent within the Lanzhou FIR during 2025, where performance did not meet the RCP240 performance criteria. Only 9 targets' message count was above 100 during the whole year, all of them achieved 95% requirements.

Table 4A: ZLLL FIR CPDLC Performance Latency per Aircraft Operator/Type – Jan-Jun 2025

FIR	**ZLLL**				
Criteria	**RCP240**				
Period	**Jan - Jun 2025**				
Criteria Met 99.0-99.89 Under-Criteria	**Message Counts**	**95% Benchmark**		**99.9% Benchmark**		**95%**
		ACP	**ACTP**	**ACP**	**ACTP**	**PORT**
		% < = 180sec	**% <= 120sec**	**% < = 210sec**	**% <= 150sec**	**%< 60secs**
By Aircraft Operator / Type (only message counts >100 recorded)						

Table 4B: ZLLL FIR CPDLC Performance Latency per Aircraft Operator/Type – Jan-Jun 2025

FIR	**ZLLL**				
Criteria	**RCP240**				
Period	**Jul - Dec 2025**				
Criteria Met 99.0-99.89 Under-Criteria	**Message Counts**	**95% Benchmark**		**99.9% Benchmark**		**95%**
		ACP	**ACTP**	**ACP**	**ACTP**	**PORT**
		% < = 180sec	**% <= 120sec**	**% < = 210sec**	**% <= 150sec**	**%< 60secs**
By Aircraft Operator / Type (only message counts >100 recorded)						

ZWWW FIR ADS-C RSP180 Performance – Media Type, RGS and GES

2.9 **Table 5** summarizes overall ADS-C performance per media type, Remote Ground Station (RGS) and Ground Earth Station (GES) for downlinks supporting/relevant to operation within the Urumqi FIR during 2025, where performance did not meet the RSP180 performance criteria. All ground stations are providing services outside of Urumuqi FIR, IG and IG1 remained incompliant for the year of 2025. XXP shows improvements in the second half of the year, this is data viaration is possibly because of randomness.

Table 5: ZWWW FIR ADS-C Downlink Latency per Media Type, RGS and GES

FIR		ZWWW					
Criteria		RSP180					
Period		Jan-June 2025			July-December 2025		
Criteria Met 99.0-99.89 Under-Criteria		Message Counts	95% % < = 90sec	99.90% % <= 180sec	Message Counts	95% % < = 90sec	99.90% % <= 180sec
By Media Type							
VHF		194468	99.26	99.66	77083	99.27	99.63
SATCOM		105618	97.61	99.49	43149	97.90	99.51
HF		53	28.30	58.49	10	50.00	60.00
ALL		300139	98.60	99.50	120252	98.70	99.50
By Remote Ground Station (RGS) Ground Earth Station (GES)							
Designator	**Type**	(only RGS/GES with message counts >100 recorded)					
ESB	VHF	151	96.02	96.02			
ESB7	VHF	220	94.09	96.81			
HKG1	VHF	175	86.28	88.00			
HKG2	VHF	480	93.54	96.87	194	92.26	96.39
IG1	SAT	6186	91.09	98.20	2982	90.87	97.78
IGW1	SAT	3410	93.69	97.30	1371	94.82	97.30
IST7	VHF	286	88.46	95.80			
NQZ1	VHF	205	92.68	95.12			
XXP	SAT	514	94.94	97.85	203	98.52	100.00

ZWWW FIR ADS-C RSP180 Performance – Aircraft Operator/Type

2.10 **Table 6** summarizes overall ADS-C performance per Aircraft Operator/Type for downlinks sent within the Urumqi FIR during 2025, where performance did not meet the RSP180 performance criteria.

Table 6: ZWWW FIR ADS-C Downlink Latency per Aircraft Operator/Type

FIR	ZWWW					
Criteria	RSP180					
Period	Jan-June 2025			July-December 2025		
Criteria Met 99.0-99.89 Under-Criteria	Message Counts	95% % <= 90sec	99.90% % <= 180sec	Message Counts	95% % <= 90sec	99.90% % <= 180sec
By Aircraft Operator / Type (only message counts >100 recorded)						
B772/AFR	819	91.57	98.53	123	93.49	98.37
B763/UZB	306	94.77	97.38	122	98.36	99.18
B763/MFX	202	93.56	96.53	148	98.64	100.00
GL7T/VJT	198	96.96	97.97	219	92.23	93.15
A321/QNT				103	91.26	96.11
A333/QTR				138	94.92	97.10

ZWWW FIR CPDLC RCP240 Performance – Media Type, RGS and GES

2.11 **Tables 7A** and **7B** summarize overall CPDLC performance per Media Type, RGS and GES for messages sent within the ZWWW FIR during 2025, where performance did not meet the RCP240 performance criteria. The CPDLC data counts remained very low throughout the year of 2025.

Table 7A: ZWWW FIR CPDLC Performance Latency per per Media Type, RGS and GES – Jan-Jun 2025.

FIR		**ZWWW**					
Criteria		**RCP240**					
Period		Jan - Jun 2025					
Criteria Met 99.0-99.89 Under-Criteria		**Message Counts**	**95% benchmark**		**99.84% Benchmark**		**95.00%**
			ACP	**ACTP**	**ACP**	**ACTP**	**PORT**
By Media Type			**% < = 180sec**	**% <= 120sec**	**% < = 210sec**	**% <= 150sec**	**% <= 60sec**
SAT		6	100	100	100	100	100
VHF		2	100	100	100	100	100
ALL		8	100	100	100	100	100
By Remote Ground Station (RGS) Ground Earth Station (GES)							
Designator	**Type**	(RGS/GES with message counts >100)					
/	/	/	/	/	/	/	/

Table 7B: ZWWW FIR CPDLC Performance Latency per Media Type, RGS and GES – Jul-Dec 2025.

FIR		**ZWWW**					
Criteria		**RCP240**					
Period		Jul - Dec 2025					
Criteria Met 99.0-99.89 Under-Criteria		**Message Counts**	**95% benchmark**		**99.84% Benchmark**		**95.00 %**
			ACP	**ACTP**	**ACP**	**ACTP**	**PORT**
By Media Type			**% < = 180sec**	**% <= 120sec**	**% < = 210sec**	**% <= 150sec**	**% <= 60sec**
SAT		5	100	100	100	100	100
VHF		3	100	100	100	100	100
SV		1	100	100	100	100	100
ALL		9	100	100	100	100	100
By Remote Ground Station (RGS) Ground Earth Station (GES)							
Designator	**Type**	(RGS/GES with message counts >100)					
/	/	/	/	/	/	/	/

ZLLL FIR CPDLC RCP240 Performance – Aircraft Operator/Type

2.12 **Tables 8A** and **Table 8B** summarize overall CPDLC performance per Aircraft Operator/Type for messages sent within the Urumqi FIR during 2025, where performance did not meet the RCP240 performance criteria. No operator has reached 100 data count for analysis.

Table 8A: ZLLL FIR CPDLC Performance Latency per Aircraft Operator/Type – Jan-Jun 2025

FIR	ZLLL					
Criteria	RCP240					
Period	Jan - Jun 2025					
Criteria Met 99.0-99.89 Under-Criteria	Message Counts	95% Benchmark		99.9% Benchmark		95%
		ACP	ACTP	ACP	ACTP	PORT
		% < = 180sec	% <= 120sec	% < = 210sec	% <= 150sec	%< 60secs
By Aircraft Operator / Type (only message counts >100 recorded)						

Table 8B: ZLLL FIR CPDLC Performance Latency per Aircraft Operator/Type – Jan-Jun 2025

FIR	ZLLL					
Criteria	RCP240					
Period	Jul - Dec 2025					
Criteria Met 99.0-99.89 Under-Criteria	Message Counts	95% Benchmark		99.9% Benchmark		95%
		ACP	ACTP	ACP	ACTP	PORT
		% < = 180sec	% <= 120sec	% < = 210sec	% <= 150sec	%< 60secs
By Aircraft Operator / Type (only message counts >100 recorded)						

Other Developments

2.13 During the 2025–2026 assessment cycle spanning June 2025 to June 2026, the China Regional Monitoring Agency (RMA) conducted comprehensive on-site evaluations targeting PBCS operational environments.

2.14 The RMA performed technical oversight visits to major operators including China Eastern Airlines, China Southern Airlines, and Sichuan Airlines, as well as to the Lanzhou Area Control Center (ACC) and Urumqi ACC. Across these engagements, consultations with operational personnel, maintenance engineers, and safety managers confirmed that while standardized Problem Report (PR) mechanisms are fully functional for mandatory event reporting, no occurrences significantly impacting PBCS operational safety were observed.

2.15 Additionally, the RMA introduced updates regarding emerging data link technologies to operational air traffic controllers, who expressed explicit interest in future applications. This operational outreach was complemented by the Annual China RMA Meeting held in October 2025, joined by more than 300 participants, where leadership from the Civil Aviation Administration of China (CAAC) and the Air Traffic Management Bureau (ATMB) further urged the Stakeholders to solidify their safety awareness regarding PBCS monitoring and to reinforce the rigor of PR reporting mechanisms. The RMA extends its sincere gratitude to Lanzhou ACC, Urumqi ACC, China Eastern Airlines, China Southern Airlines and Sichuan Airlines, for their full support and cooperation throughout these oversight activities.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

a) note the information contained in this paper; and

b) discuss any relevant matters as appropriate.

— END —