

UPLOAD USER DATA THROUGHPUT IN TECHNOLOGY AUTO DETECT MODE (FIXED SIZE)								
Road	Auto mode Throughput [Kbps]				Operator Position			
	Jazz	Telenor	Ufone	ZonG	Jazz	Telenor	Ufone	ZonG
<i>Hazara Motorway</i>	11277.13	11955.54	15793.16	11945.39	Fourth	Second	First	Third
<i>Quetta To Karachi</i>	11897	9124.49	14158.15	13133.52	Third	Fourth	First	Second
<i>Haripur To Taxila</i>	10855.47	11574.86	17626.95	15376.93	Fourth	Third	First	Second
<i>Pindi Bhatian To Multan</i>	12467.58	9391.43	13408.3	13347.91	Third	Fourth	First	Second
<i>Multan to Sukkur</i>	12626.25	9222.23	14443.06	12854.12	Third	Fourth	First	Second
<i>Nowshera To Chitral</i>	9660.75	9990.72	11110.27	12326.74	Fourth	Third	Second	First
<i>Swabi To Katlang</i>	9542.08	10843.03	5504.21	11129.15	Third	Second	Fourth	First
<i>Islamabad To Kohala</i>	14695.38	12393.14	14181.18	16116.53	Second	Fourth	Third	First
<i>Islamabad To Peshawar</i>	13681.64	11928.61	17152.59	11595.09	Second	Third	First	Fourth
<i>Lahore to Abdul Hakeem</i>	13808.88	10344.5	5774.5	14285.05	Second	Third	Fourth	First
<i>Lahore to Islamabad</i>	12067.95	9920.51	15794.79	14636.3	Third	Fourth	First	Second
<i>Lahore To Sialkot</i>	13667.47	10953.91	5657.78	15119.6	Second	Third	Fourth	First
<i>Rawalpindi To Turkham</i>	9729.05	11804.16	17091.28	12090.92	Fourth	Third	First	Second

Table 4.7: Upload User Data Throughput Technology Auto Detect Mode [Fixed Size] \geq 512Kbps

UPLOAD USER DATA THROUGHPUT IN 4G TECHNOLOGY LOCKED MODE (FIXED DURATION)								
Road	Auto mode Throughput [Kbps]				Operator Position			
	Jazz	Telenor	Ufone	ZonG	Jazz	Telenor	Ufone	ZonG
<i>Hazara Motorway</i>	10258.97	4061.56	13169.52	7597.3	Second	Fourth	First	Third
<i>Haripur To Taxila</i>	9560.75	2167.31	11186.58	8702.39	Second	Fourth	First	Third
<i>Pindi Bhatian To Multan</i>	17150.97	3059.61	14390.69	16463.88	First	Fourth	Third	Second
<i>Multan to Sukkur</i>	12453.16	4392.83	11418.73	12532.56	Second	Fourth	Third	First
<i>Nowshera To Chitral</i>	13791.42	3139.82	9803.97	11155.9	First	Fourth	Third	Second
<i>Swabi To Katlang</i>	5518.89	5513.87	10016.8	11979.98	Third	Fourth	Second	First
<i>Islamabad To Kohala</i>	10518.23	3201.49	10200.91	8288.97	First	Fourth	Second	Third
<i>Islamabad To Peshawar</i>	14691.95	4740.2	18397.65	11038.42	Second	Fourth	First	Third
<i>Lahore to Abdul Hakeem</i>	17299.71	4319.14	18906.56	17310.84	Third	Fourth	First	Second
<i>Lahore to Islamabad</i>	17449.2	5216.95	17747.46	1844.93	Second	Third	First	Fourth
<i>Lahore To Sialkot</i>	12709.87	3988.12	23249.75	12846.39	Third	Fourth	First	Second
<i>Rawalpindi To Turkham</i>	16438.33	5939.69	4749.6	10311.89	First	Third	Fourth	Second

Table 4.8: Upload User Data Throughput in 4G Technology Locked Mode [Fixed Duration] \geq 512Kbps

UPLOAD USER DATA THROUGHPUT IN 3G TECHNOLOGY LOCKED MODE (FIXED DURATION)								
Road	Auto mode Throughput [Kbps]				Operator Position			
	Jazz	Telenor	Ufone	ZonG	Jazz	Telenor	Ufone	ZonG
<i>Hazara Motorway</i>	908.11	1097.57	1855.78	655.26	Third	Second	First	Second
<i>Haripur To Taxila</i>	469.16	1083.17	2333.1	455.95	Third	Second	First	Fourth
<i>Pindi Bhatian To Multan</i>	1296.13	1557.07	2686.8	1450.44	Fourth	Second	First	Third
<i>Multan to Sukkur</i>	1137.81	1940.33	1040.37	1412.12	Third	First	Fourth	Second
<i>Nowshera To Chitral</i>	664.38	1127.39	1998.98	1788.13	Fourth	Third	First	Second
<i>Swabi To Katlang</i>	1004.01	1349.04	1502.95	1817.04	Fourth	Third	Second	First
<i>Islamabad To Kohala</i>	1426.44	1327.28	2237.87	712.11	Second	Third	First	Fourth
<i>Islamabad To Peshawar</i>	956.43	1146.28	2443.47	1128.38	Fourth	Second	First	Third

UPLOAD USER DATA THROUGHPUT IN 3G TECHNOLOGY LOCKED MODE (FIXED DURATION)								
Road	Auto mode Throughput [Kbps]				Operator Position			
	Jazz	Telenor	Ufone	ZonG	Jazz	Telenor	Ufone	ZonG
Lahore to Abdul Hakeem	940.23	1267.22	1822.39	1499.33	Fourth	Third	First	Second
Lahore to Islamabad	878.31	1389.54	3135.34	1080.02	Fourth	Second	First	Third
Lahore To Sialkot	785.51	1141.83	2454.86	1698.94	Fourth	Third	First	Second
Rawalpindi To Turkham	846.98	1388.86	1587.24	922.82	Fourth	Second	First	Third

Table 4.9: Upload User Data Throughput in 3G Technology Locked Mode [Fixed Duration] \geq 64Kbps

4.4. **WEBPAGE LOADING TIME.** As per Cellular Mobile Network Quality of Service (QoS) Regulations 2021, licensees are required to meet Webpage Loading Time threshold of 5 Seconds. The results of Webpage Loading Time is shown in Table 4.10: Webpage Loading Time < 5 Seconds.

WEBPAGE LOADING TIME IN TECHNOLOGY AUTO DETECT MODE ON ROADS								
Road	Webpage Loading Time [Seconds]				Compliant (Yes/No)			
	Jazz	Telenor	Ufone	ZonG	Jazz	Telenor	Ufone	ZonG
Hazara Motorway	6	6	5	6	No	No	No	No
Quetta To Karachi	6	6	6	6	No	No	No	No
Haripur To Taxila	7	8	5	6	No	No	No	No
Pindi Bhatian To Multan	7	8	7	7	No	No	No	No
Multan to Sukkur	7	8	6	7	No	No	No	No
Nowshera To Chitral	7	8	7	7	No	No	No	No
Swabi To Katlang	6	9	8	7	No	No	No	No
Islamabad To Kohala	6	7	6	5	No	No	No	Yes
Islamabad To Peshawar	6	7	6	5	No	No	No	No
Lahore to Abdul Hakeem	6	8	8	6	No	No	No	No
Lahore to Islamabad	5	7	6	6	No	No	No	No
Lahore To Sialkot	7	8	8	6	No	No	No	No
Rawalpindi To Turkham	7	8	6	7	No	No	No	No

Table 4.10: Webpage Loading Time < 5 Seconds

4.5. **LATENCY.** As per Cellular Mobile Network Quality of Service (QoS) Regulations 2021, licensees are required to meet threshold of 75 milliseconds of 4G/LTE Technology & 150 milliseconds of 3G Technology of Latency. The results of QoS KPI Latency is shown in (i). Table 4.11: Latency in Technology Auto Detect Mode < 75 milliseconds, (ii). Table 4.12: Latency in 4G/LTE Technology Locked Mode < 75 milliseconds & (iii) Table 4.13: Latency in 3G Technology Locked Mode < 150 milliseconds.

LATENCY IN TECHNOLOGY AUTO DETECT MODE								
Road	Latency (milliseconds)				Compliant (Yes/No)			
	Jazz	Telenor	Ufone	ZonG	Jazz	Telenor	Ufone	ZonG
Hazara Motorway	286	263	254	241	No	No	No	No
Quetta To Karachi	305	290	227	269	No	No	No	No
Haripur To Taxila	294	286	214	241	No	No	No	No
Pindi Bhatian To Multan	223	234	232	282	No	No	No	No
Multan to Sukkur	247	262	335	262	No	No	No	No
Nowshera To Chitral	354	249	417	293	No	No	No	No
Swabi To Katlang	307	279	316	264	No	No	No	No
Islamabad To Kohala	243	248	250	210	No	No	No	No
Islamabad To Peshawar	283	269	212	266	No	No	No	No
Lahore to Abdul Hakeem	259	267	280	263	No	No	No	No