

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

LATENCY IN TECHNOLOGY AUTO DETECT MODE								
Road	Latency (milliseconds)				Compliant (Yes/No)			
	Jazz	Telenor	Ufone	ZonG	Jazz	Telenor	Ufone	ZonG
<i>Lahore to Islamabad</i>	266	258	215	237	No	No	No	No
<i>Lahore To Sialkot</i>	266	228	268	247	No	No	No	No
<i>Rawalpindi To Turkham</i>	304	237	225	262	No	No	No	No

Table 4.11: Latency in Technology Auto Detect Mode < 75 milliseconds

LATENCY IN 4G/LTE TECHNOLOGY LOCKED MODE								
Road	Latency [milliseconds]				Compliant (Yes/No)			
	Jazz	Telenor	Ufone	ZonG	Jazz	Telenor	Ufone	ZonG
<i>Hazara Motorway</i>	69.68	119.82	125.24	78.72	Yes	No	No	No
<i>Haripur To Taxila</i>	76.50	105.77	82.28	227.84	No	No	No	No
<i>Pindi Bhatian To Multan</i>	65.00	81.00	93.00	79.00	Yes	No	No	No
<i>Multan to Sukkur</i>	116.59	88.40	133.92	94.14	No	No	No	No
<i>Nowshera To Chitral</i>	90.66	126.42	124.63	151.97	No	No	No	No
<i>Swabi To Katlang</i>	162.04	120.59	105.77	86.65	No	No	No	No
<i>Islamabad To Kohala</i>	73.04	77.25	95.02	184.34	Yes	No	No	No
<i>Islamabad To Peshawar</i>	73.60	201.39	84.72	310.71	Yes	No	No	No
<i>Lahore to Abdul Hakeem</i>	116.73	74.52	89.87	83.52	No	Yes	No	No
<i>Lahore to Islamabad</i>	76.38	89.92	78.16	226.17	No	No	No	No
<i>Lahore To Sialkot</i>	91.16	99.16	77.23	89.92	No	No	No	No
<i>Rawalpindi To Turkham</i>	148.73	110.48	92.70	126.75	No	No	No	No

Table 4.12: Latency in 4G/LTE Technology Locked Mode < 75 milliseconds

LATENCY IN 3G TECHNOLOGY LOCKED MODE								
Road	Latency [milliseconds]				Compliant (Yes/No)			
	Jazz	Telenor	Ufone	ZonG	Jazz	Telenor	Ufone	ZonG
<i>Hazara Motorway</i>	510	337	465	207	No	No	No	No
<i>Haripur To Taxila</i>	547	480	431	187	No	No	No	No
<i>Pindi Bhatian To Multan</i>	253	739	484	204	No	No	No	No
<i>Multan to Sukkur</i>	353	955	602	216	No	No	No	No
<i>Nowshera To Chitral</i>	575	735	480	448	No	No	No	No
<i>Swabi To Katlang</i>	569	377	531	476	No	No	No	No
<i>Islamabad To Kohala</i>	474	294	392	169	No	No	No	No
<i>Islamabad To Peshawar</i>	542	292	430	209	No	No	No	No
<i>Lahore to Abdul Hakeem</i>	468	665	488	147	No	No	No	Yes
<i>Lahore to Islamabad</i>	517	495	459	187	No	No	No	No
<i>Lahore To Sialkot</i>	508	393	448	205	No	No	No	No
<i>Rawalpindi To Turkham</i>	601	425	523	463	No	No	No	No

Table 4.13: Latency in 3G Technology Locked Mode < 150 milliseconds

4.6. During the survey, the deployed technologies by Cellular Mobile Operators (CMOs), Success Rate of http Transfer Download Tests and Resource Block Utilization have been recorded. The details can be seen in attached graphs.