

City	4G User Data Throughput (Mbps)				Operator Position			
	Jazz	Telenor	Ufone	ZonG	Jazz	Telenor	Ufone	ZonG
Jacobabad	16.50	3.24	3.10	14.97	First	Third	Fourth	Second
Dadu	8.57	2.37	19.73	12.75	Third	Fourth	First	Second
Tando Allah Yar	13.84	4.21	9.92	10.78	First	Fourth	Third	Second
Sialkot	9.16	3.84	18.31	15.23	Third	Fourth	First	Second
Gwadar	3.86	2.35	2.09	7.32	Second	Third	Fourth	First
D.I Khan	12.27	2.04	7.90	16.80	Second	Fourth	Third	First

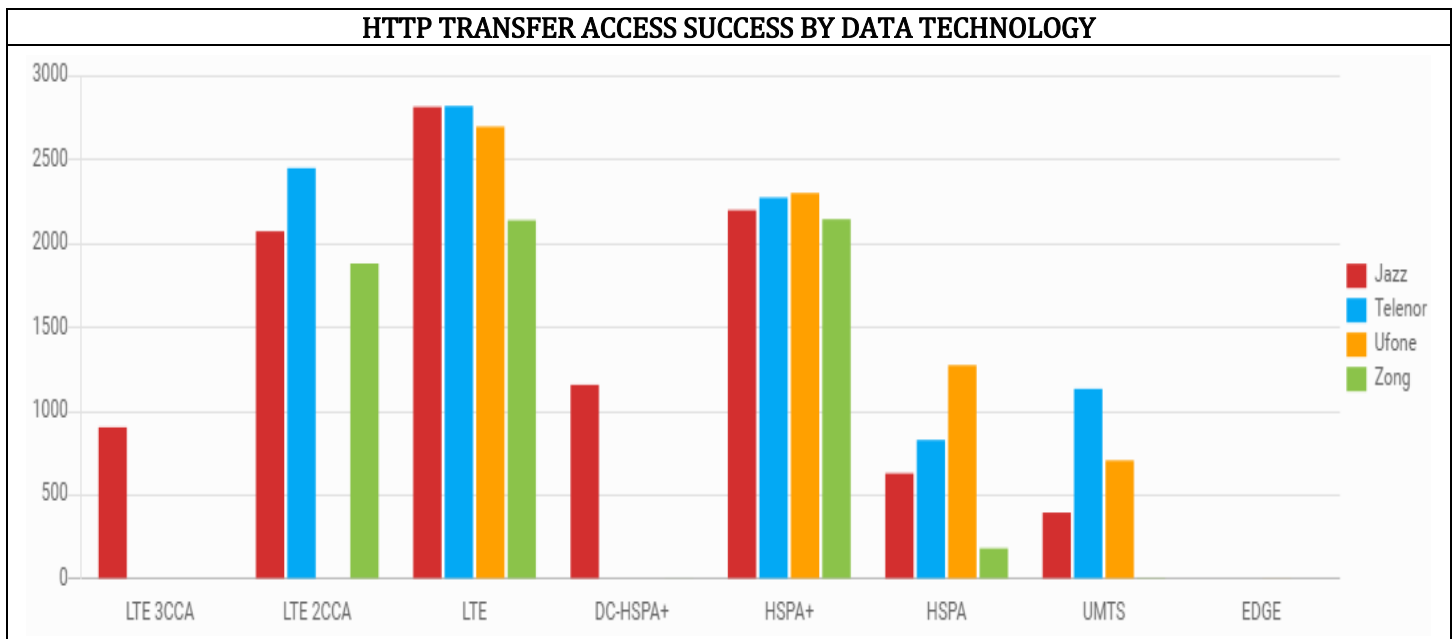
Table4.2.1: 4G User Data Throughput in Pakistan ≥ 2 Mbps

4.3. **3G USER DATA THROUGHPUT.** As per Next Generation Mobile Service (NGMS) licenses awarded, licensees are required to meet **the threshold of minimum of 256Kbps of 3G User Data Throughput**. The results of Data Service QoS KPI i.e. User Data Throughput is shown in **Table 4.3: 3G User Data Throughput in Pakistan ≥ 256 Kbps**.

City	3G User Data Throughput (Kbps)				Operator Position			
	Jazz	Telenor	Ufone	ZonG	Jazz	Telenor	Ufone	ZonG
Khanpur	3069.50	3810.87	3566.99	1944.04	Third	Second	First	Fourth
Sadiqabad	3213.56	4789.25	3656.23	2046.48	Third	First	Second	Fourth
Kharian	1677.81	1836.83	3685.05	2031.25	Fourth	Third	First	Second
Wazirabad	1249.90	2083.82	5159.92	2332.42	Fourth	Third	First	Second
Kotri	1298.83	2923.11	5706.80	1376.28	Fourth	Second	First	Third
Jacobabad	4119.01	2539.55	2225.21	1057.98	First	Second	Third	Fourth
Dadu	3074.27	2285.97	3856.25	1196.27	Second	Third	First	Fourth
Tando Allah Yar	1054.34	2686.46	2817.79	961.31	Third	Second	First	Fourth
Sialkot	2098.40	2677.96	3386.38	1879.95	Third	Second	First	Fourth
Gwadar	2527.18	3871.15	2756.26	763.26	Third	First	Second	Fourth
D.I Khan	2054.03	939.90	2638.49	2127.99	Third	Fourth	First	Second

Table4.3: 3G User Data Throughput ≥ 256 Kbps

4.4. 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.



VOICE CALLS CITIES– COMPLIANCE (YES/NO)												
Operator	* QoS KPIs	Khanpur	Sadiqabad	Kharian	Wazirabad	Kotri	Jacobabad	Dadu	Tando Allah Yar	Sialkot	Gwadar	D.I Khan
Jazz	NA	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	SA	Yes	Yes	Yes	No	No	No	No	No	No	No	No
	CCT	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
	CCR	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	No	Yes
	MOS	Yes	Yes	Yes	Yes	No	No	Yes	No	Yes	Yes	Yes
	ISHO	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	RSSR	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Telenor	NA	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	SA	Yes	Yes	Yes	No	No	No	No	No	Yes	No	No
	CCT	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	CCR	Yes	Yes	Yes	Yes	No	No	Yes	No	Yes	Yes	No
	MOS	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	ISHO	N/A	N/A	N/A	N/A	Yes	Yes	No	Yes	N/A	N/A	N/A
	RSSR	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Ufone	NA	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	SA	No	Yes	Yes	No	Yes	Yes	No	Yes	No	Yes	Yes
	CCT	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	CCR	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
	MOS	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
	ISHO	Yes	Yes	Yes	Yes	N/A	Yes	N/A	Yes	Yes	Yes	Yes
	RSSR	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
ZonG	NA	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	SA	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
	CCT	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	CCR	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	MOS	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	ISHO	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	RSSR	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

* Note Voice QoS KPIs: Network Accessibility (NA) > 99%, Service Accessibility (SA) > 98%, Call Connection Time (CCT) ≤ 7.5 Seconds, Call Completion Ratio (CCR) ≥ 98%, Mean Opinion Score (MOS) > 3, Inter System Hand Over (ISHO) > 98% & RAB Setup Success Rate (RSSR) > 98%

Table 5.2: Voice QoS KPIs Compliance Level