

| <b>LATENCY IN TECHNOLOGY AUTO DETECT MODE</b> |                               |                |              |             |                           |                |              |             |
|---|-------------------------------|----------------|--------------|-------------|---------------------------|----------------|--------------|-------------|
| <b>Road</b>                                   | <b>Latency (milliseconds)</b> |                |              |             | <b>Compliant (Yes/No)</b> |                |              |             |
|   | <b>Jazz</b>                   | <b>Telenor</b> | <b>Ufone</b> | <b>ZonG</b> | <b>Jazz</b>               | <b>Telenor</b> | <b>Ufone</b> | <b>ZonG</b> |
| <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**

| <b>LATENCY IN 4G/LTE TECHNOLOGY LOCKED MODE</b> |                               |                |              |             |                           |                |              |             |
|---|-------------------------------|----------------|--------------|-------------|---------------------------|----------------|--------------|-------------|
| <b>Road</b>                                     | <b>Latency [milliseconds]</b> |                |              |             | <b>Compliant (Yes/No)</b> |                |              |             |
|   | <b>Jazz</b>                   | <b>Telenor</b> | <b>Ufone</b> | <b>ZonG</b> | <b>Jazz</b>               | <b>Telenor</b> | <b>Ufone</b> | <b>ZonG</b> |
| <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**

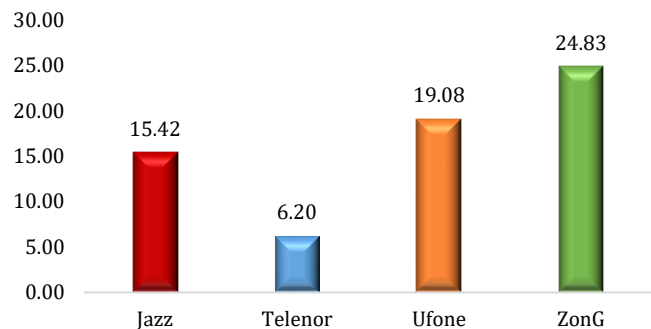
| <b>LATENCY IN 3G TECHNOLOGY LOCKED MODE</b> |                               |                |              |             |                           |                |              |             |
|---|-------------------------------|----------------|--------------|-------------|---------------------------|----------------|--------------|-------------|
| <b>Road</b>                                 | <b>Latency [milliseconds]</b> |                |              |             | <b>Compliant (Yes/No)</b> |                |              |             |
|   | <b>Jazz</b>                   | <b>Telenor</b> | <b>Ufone</b> | <b>ZonG</b> | <b>Jazz</b>               | <b>Telenor</b> | <b>Ufone</b> | <b>ZonG</b> |
| <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**

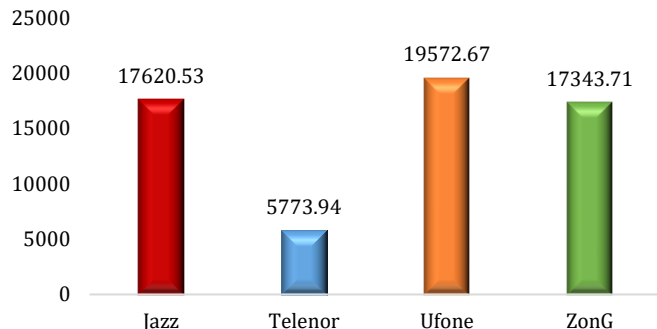
4.6. During the survey, the deployed technologies by Cellular Mobile Operators (CMOs), Success Rate of http Transfer Download Tests and Resource Block Utilization have been recorded. The details can be seen in attached graphs.

## QUALITY OF SERVICE SURVEY RESULTS (AUTOMODE) – LAHORE TO ISLAMABAD

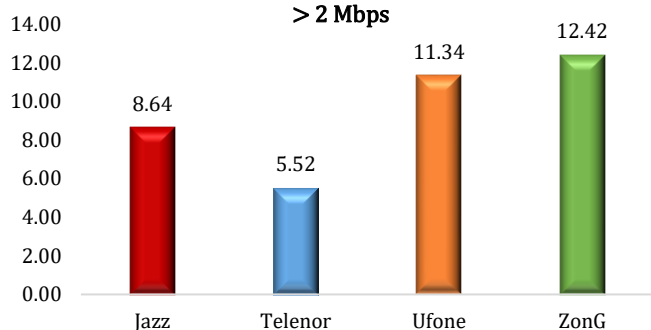
**User Data Throughput Download - Fixed Duration  
> 2 Mbps**



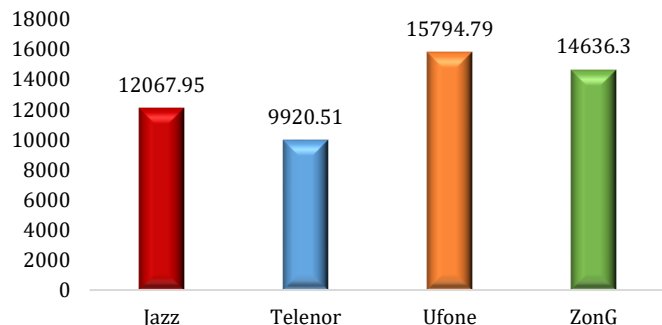
**User Data Throughput Upload - Fixed Duration  
> 512 Kbps**



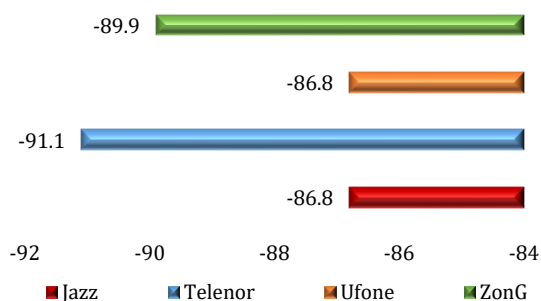
**User Data Throughput Download - Fixed Size  
> 2 Mbps**



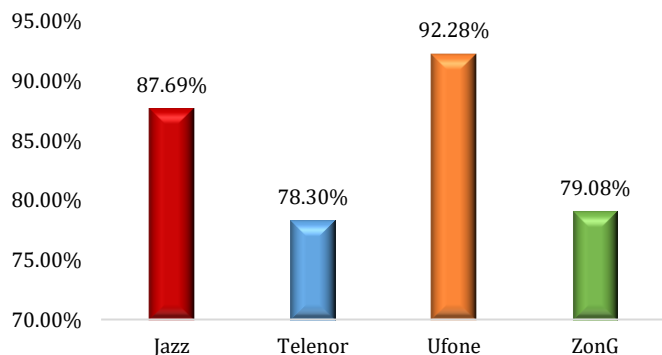
**User Data Throughput Upload - Fixed Size  
> 512 Kbps**



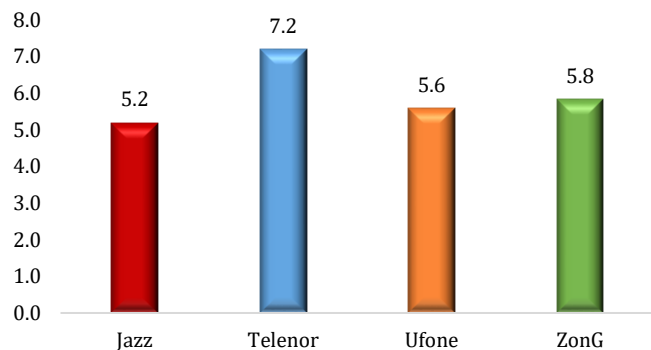
**Signal Strength (RSRP) > -100dBm**



**Signal Strength (RSRP) Confidence Level > 90%**



**Webpage Loading Time < 5 Seconds**



**Latency < 75 ms**

