

TRAI Assesses Network Quality Across Namchi and Gyalshing districts in the State of Sikkim under West Bengal Licensed Service Area (LSA)

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The Telecom Regulatory Authority of India (TRAI) released its Independent Drive Test (IDT) findings for the West Bengal LSA, covering extensive city routes of Namchi and Gyalshing districts in the State of Sikkim in the month of December 2025. The drive tests, conducted under the supervision of the TRAI Regional Office, Kolkata, were designed to capture real-world mobile network performance across diverse usage environments—institutional hotspots, secretariat areas, residential areas, tourist spots, etc.

Between **2nd December 2025 and 6th December 2025**, TRAI teams conducted detailed tests across city routes of Namchi and Gyalshing districts in the State of Sikkim in West Bengal LSA, covering **294.6 km of city drive tests, 10 hotspot locations, and 2.0 km of walk tests**. Technologies evaluated included 2G, 3G, 4G, and 5G, reflecting the service experience of users across multiple handset capabilities. The findings of the IDT have already been intimated to all the TSPs concerned.

Key Parameters Assessed:

a) **Voice Services:** Call Setup Success Rate (CSSR), Drop Call Rate (DCR), Call Setup Time, Call Silence Rate, Speech Quality (MOS), Coverage.

b) **Data Services:** Download/Upload Throughput, Latency, Jitter, Packet Drop Rate, and Video Streaming Delay.

The overall mobile network performance in city routes of Namchi and Gyalshing districts in the State of Sikkim in West Bengal LSA is summarized below:

Call Setup Success Rate: Airtel, BSNL, RJIL, and VIL have call setup success rates of 98.85%, 70.00%, 99.62%, and 85.83%, respectively, in auto-selection mode (5G/4G/3G/2G).

Drop Call Rate Airtel, BSNL, RJIL and VIL have drop call rate of 0.39%, 19.62%, 1.71% and 10.02% respectively in Auto-selection mode (5G/4G/3G/2G).

5G Data Services delivered a maximum average download speed of 59.26 Mbps and a maximum average upload speed of 8.74 Mbps in the overall drive test.

The **poor signal strength** in auto-selection mode (5G/4G/3G/2G) has been observed for 17.83%, 47.91%, 8.09%, & 27.22% of the total IDT route during **voice testing in city driving** in the case of Airtel, BSNL, RJIL, & VIL, respectively. The same, during **data testing in city driving**, was observed for 40.23%, 52.51%, 40.01%, & 46.43% in the case of Airtel, BSNL, RJIL, & VIL, respectively.

In the **Namchi and Gyalshing** districts, the assessment included the areas of Melli, Sumbuk, Jorethang, Nayabazar Namchi, Legship, Gyalsing, Darap, Thingle I, Labing, Chongrang, Tashiding, Kewzing, Barfung, Sangmo, Chemchery, Bomtar, Kitam, etc.

TRAI also evaluated real-world conditions at (i) (i) DC Office Gyalshing; (ii) District & Sessions Court Gyalshing; (iii) District Court Namchi; (iv) District Hospital Gyalshing; (v) District Hospital Namchi; (vi) Kanchenjunga Falls Thingle I Sikkim; (vii) Namchi Local Taxi Stand; (viii) Pemayangtse Monastery Sikkim; (ix) Temi Tea Garden South Sikkim; and (x) Zilla Panchayat West Sikkim through **static testing** and

at (i) Budha Park, Ravangla, Sikkim; (ii) Siddheshwar Dham (Char Dham Mandir), Namchi; and (iii) Skywalk Pelling, Sikkim, **through walk-test**.

Performance against key QoS parameters:

Summary-Voice services

Call Setup Success Rate: Airtel, BSNL, RJIL and VIL have call setup success rate of 98.85%, 70.00%, 99.62% and 85.83% respectively in Auto-selection mode (5G/4G/3G/2G).

Call Setup Time: Airtel, BSNL, RJIL and VIL have call setup time of 2.38, 5.82, 0.89 and 1.70 seconds respectively in Auto-selection mode (5G/4G/3G/2G).

Drop Call Rate: Airtel, BSNL, RJIL and VIL have drop call rate of 0.39%, 19.62%, 1.71% and 10.02% respectively in Auto-selection mode (5G/4G/3G/2G).

Call Silence/Mute Rate: Airtel, BSNL, RJIL and VIL have silence call rate of 8.60%, 4.58%, 3.49% and 19.46% respectively in packet switched network (5G/4G).

Mean Opinion Score (MOS): Airtel, BSNL, RJIL and VIL have Average MOS of 3.76, 3.01, 4.13 and 3.94 respectively.

Summary-Data services

Data Download performance (Overall): Average download speed of Airtel (5G/4G/2G) is 36.13 Mbps, BSNL (4G/3G/2G) is 8.89 Mbps, RJIL (5G/4G) is 59.26 Mbps and VIL (4G/2G) is 13.72 Mbps.

Data Upload performance (Overall): Average upload speed of Airtel (5G/4G/2G) is 7.73 Mbps, BSNL (4G/3G/2G) is 3.24 Mbps, RJIL (5G/4G) is 8.74 Mbps and VIL (4G/2G) is 6.51 Mbps.

Latency (Overall): Airtel, BSNL, RJIL & VIL 50th percentile latency is 64.65 ms, 67.14 ms, 42.75 ms, 65.93 ms respectively.

Data performance - Hotspots (in Mbps):

Airtel- 4G D/L: 24.63 4G U/L: 5.78

5G D/L: 20.27 5G U/L: 19.50

BSNL- 4G D/L: 10.43 4G U/L: 7.24

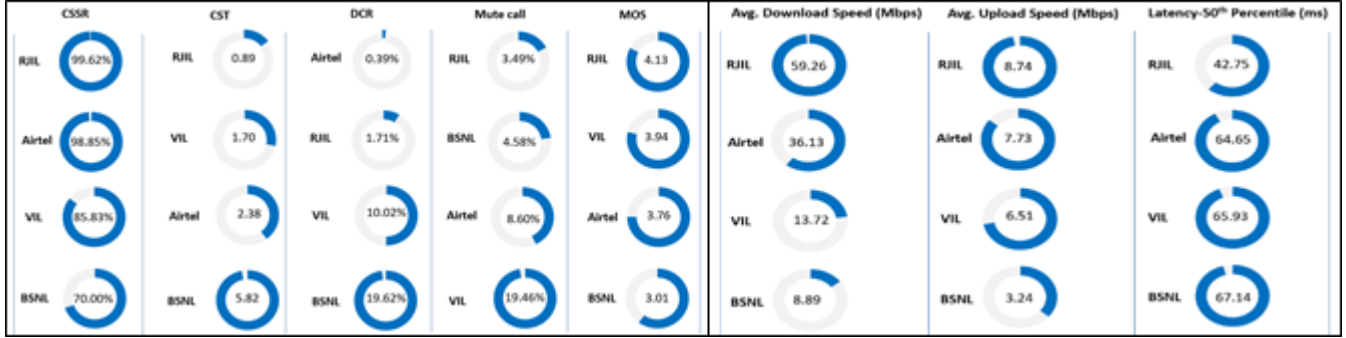
RJIL- 4G D/L: 10.81 4G U/L: 3.51

5G D/L: 123.24 5G U/L: 6.89

VIL- 4G D/L: 6.46 4G U/L: 4.59

Note- “D/L” Download speed, “U/L” Upload speed

CSSR: Call Setup Success Rate (in %), **CST:** Call Setup Time (in seconds), **DCR:** Drop Call Rate (in %) & **MOS:** Mean Opinion Score



The tests were conducted using TRAI-suggested equipment and standardized protocols in real-time environments. The detailed report is available at the TRAI website, www.trai.gov.in. For any clarification/information, Shri Kaushik Mukherjee, Advisor (Regional Office, Kolkata), TRAI, may be contacted by email at adv.kolkata@trai.gov.in or at Tel. No. +91-33-22361401.

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(रिलीज़ आईडी: 2219024) आगंतुक पटल : 225
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