

TELECOM REGULATORY AUTHORITY OF INDIA

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For Immediate Release

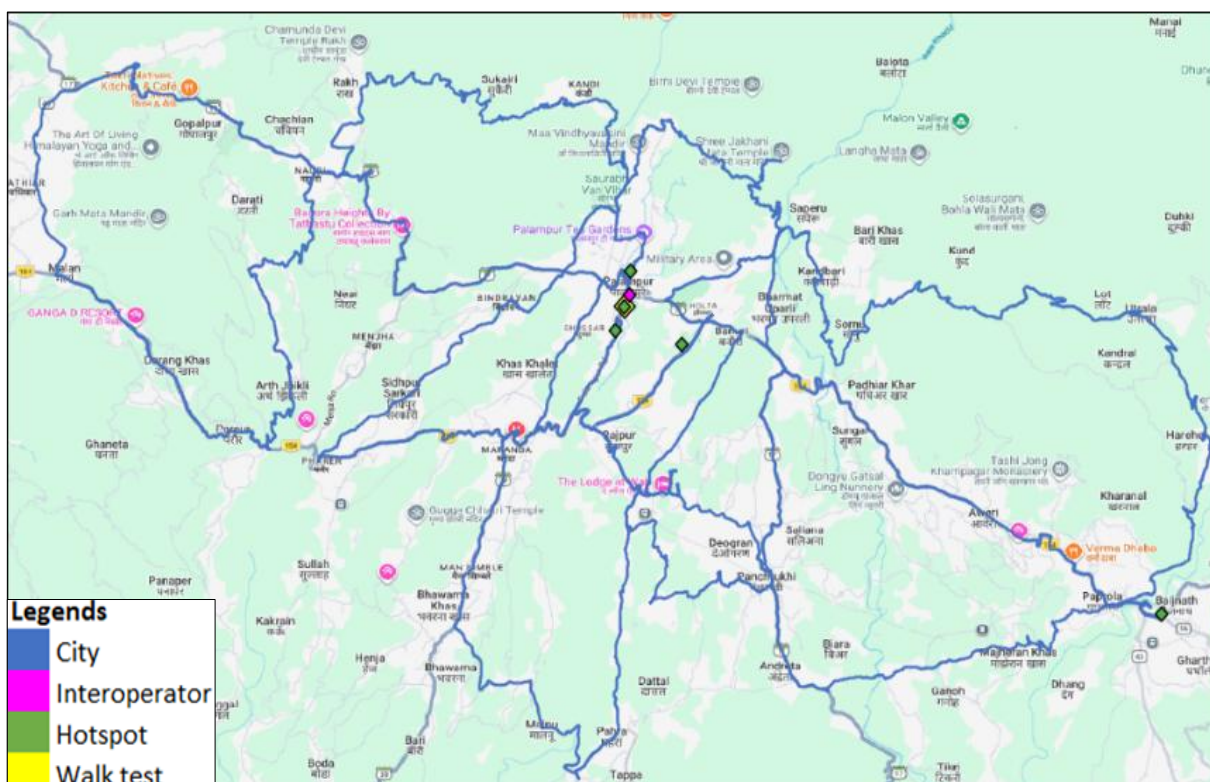
TRAI Assesses Mobile Network Quality Across Palampur, Maranda, Bhawarna Khas, Panchrukhi, Majheran Khas, Paprola, Baijnath, Aweri, Sungal, Bharamat Uparli, Sornu, Khas Khalet, Pharer, Bindravan, Nagri, Arth Jhilki, Darang Khas, Malan, Gopalpur, Sukairi, Kandi & Saperu etc. in Palampur City & Nearby areas and highway Route from Chandigarh to Palampur passing through Bilaspur, Ghumarwin, Hamirpur & Bhawarna etc.

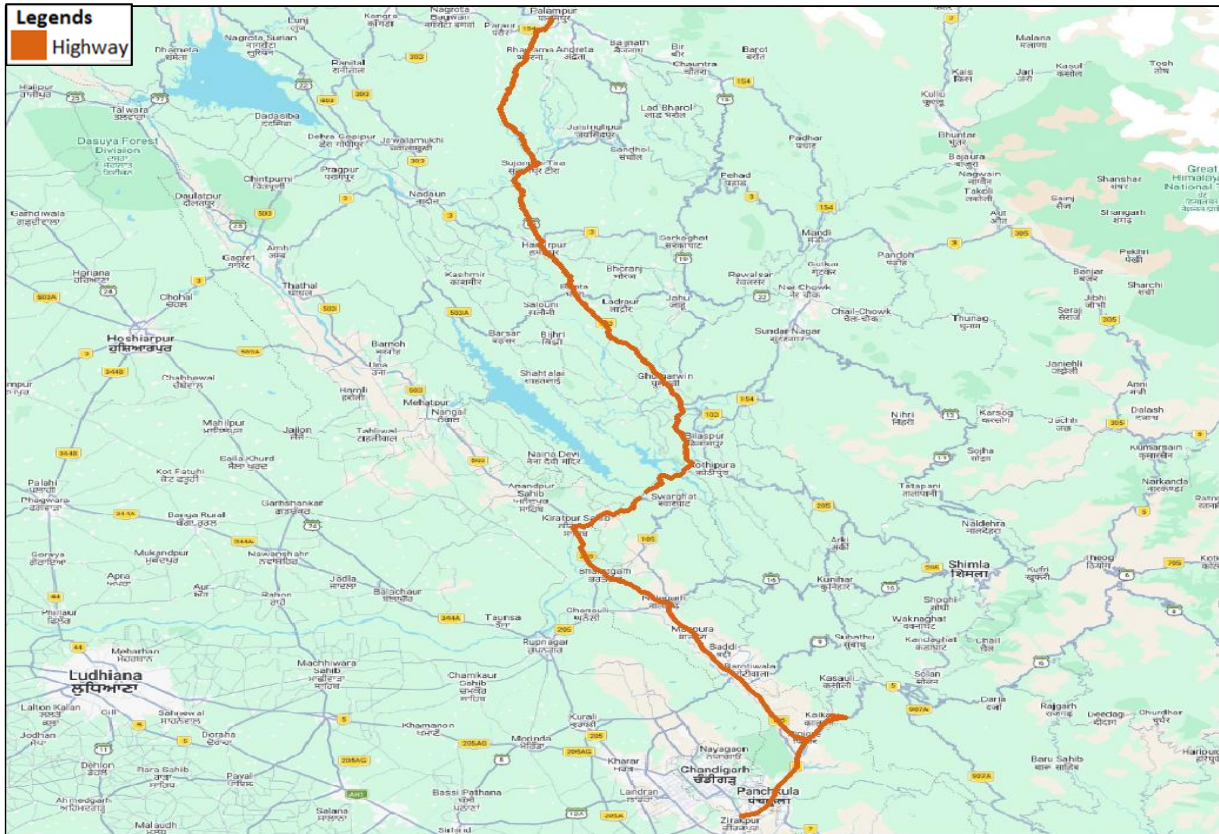
The Telecom Regulatory Authority of India (TRAI) has released findings of Independent Drive Test (IDT) conducted across Palampur City and Chandigarh to Palampur Highway Route under HP LSA, during the month of March 2026, for information of general telecom consumers. The purpose of this drive test is to assess and verify real time quality of mobile network services (both voice & data) provided by Telecom Service Providers (TSPs). During the IDT, TRAI captures performance of TSPs for key Quality of Service (QoS) parameters like Coverage, Call Drop Rate (CDR), Call Setup Success Rate (CSSR), data Download (DL) and Upload (UL) throughput etc., which are then published to inform Consumers and encourage TSPs to improve their services.

2. These IDTs have been designed to capture on ground mobile network performance of all TSPs across diverse usage environments like cities, hotspots, public transport hubs, etc. In this type of drive test, live data and voice sessions are established using SIM cards from all TSPs over 2G, 3G, 4G, and 5G networks. Multiple advanced test handsets are used, and the sessions are monitored and analysed in real-time using Advanced Software Systems.

3. TRAI, through its appointed agency, conducted drive tests across City drive – 197.4 KMs, Hotspot locations - 05, Walk Test - 1.6 Kms in Palampur City & nearby areas and Chandigarh to Palampur Highway Route - 242.1 Kms during 10th March 2026 to 13th March 2026 in HP LSA. These tests were conducted under the supervision of the TRAI Regional Office, Delhi. The observations presented in drive test reports represent the performance of the TSPs in the areas/ route under test on the day/ time of conduct of the drive test.

4. **Drive Test Route Map:** The following map provides overview of drive test routes indicating City drive, Inter-operator calling, Hotspots and Walk tests, as per the legends shown on the map: -





5. **Key Parameters Assessed**

- a) **Coverage Gap:** Percentage of samples for which signal strength observed was less than the minimum prescribed signal strength for respective technology (2G/ 3G/ 4G/ 5G).
- b) **Voice Services:** Call Setup Success Rate (CSSR), Drop Call Rate (DCR), Call Setup Time, Call Silence Rate, Speech Quality (MOS).
- c) **Call Silence Instance:** Number of call silence instances occurred during the calls.
- d) **Data Services:** Download/ Upload Throughput, Latency, Jitter, Packet Drop Rate.

6. The overall mobile network performance in Palampur city route for the key parameters has been summarised below: -

- a) Coverage Gap - The signal strength observed during voice testing on the drive test route in auto-selection mode (5G/4G/3G/2G), measured as the number of samples having poor signal strength out of the total samples collected, was 918/ 30794 for Airtel, 15526/ 29977 for BSNL, 1358/ 30530 for RJIL and 4287/ 30018 for VIL. Details of the coverage gaps have been provided in the map attached as **Annexure-I**.
- b) Dropped Calls - Dropped calls in auto-selection mode (5G/ 4G/ 3G/ 2G), measured as the number of dropped calls out of the number of successfully established calls, were 2/ 277 for Airtel, 12/ 266 for BSNL, 1/ 279 for RJIL and 9/ 271 for VIL. Details of the dropped call locations have been provided in the map attached as **Annexure-I**.
- c) Call Silence Instance - Call silence instances in Auto-selection mode (5G/4G), measured as the total number of silence instances observed for > 3 seconds out of the total calls established, were 5/ 263 for Airtel, 03/ 270 for RJIL and 10/ 261 for VIL. Details of the call silence instance locations have been provided in the map attached as **Annexure-I**.
- d) Data Download and Upload Throughput:
 - i) Data Download performance (Overall): Average download speed was observed as 155.87 Mbps for Airtel (5G/4G), 6.95 Mbps for BSNL (3G), 194.17 Mbps for RJIL (5G/4G) and 12.66 Mbps for VIL (5G/4G/2G). Details of Download throughput has been provided in the map attached as **Annexure-I**.
 - ii) Data Upload performance (Overall): Average upload speed was observed as 16.40 Mbps for Airtel (5G/4G), 2.52 Mbps for BSNL (3G), 16.73 Mbps for RJIL (5G/4G) and 04.00 Mbps for VIL (5G/4G/2G). Details of Upload throughput has been provided in the map attached as **Annexure-I**.

Locations of Dropped Calls and Call Silence instances can be seen by clicking red dot on the map attached as **Annexure-I**.

7. The overall mobile network performance in Chandigarh to Palampur Highway Route for the key parameters has been summarised below: -


- a) Coverage Gap - The signal strength observed during voice testing on the drive test route in auto-selection mode (5G/4G/3G/2G), measured as the number of samples having poor signal strength out of the total samples collected, was 372/24378 for Airtel, 7641/23479 for BSNL, 483 /24520 for RJIL and 4269 / 23713 for VIL. Details of the coverage gaps have been provided in the map attached as **Annexure-II**.
- b) Dropped Calls - Dropped calls in auto-selection mode (5G/ 4G/ 3G/ 2G), measured as the number of dropped calls out of the number of successfully established calls, were 2/ 122 for Airtel, 14/ 130 for BSNL, 1/ 122 for RJIL and 12/ 122 for VIL. Details of the dropped call locations have been provided in the map attached as **Annexure-II**.
- c) Call Silence Instance - Call silence instances in Auto-selection mode (5G/4G), measured as the total number of silence instances observed for > 3 seconds out of the total calls established, were 11/ 124 for Airtel, 00/ 122 for RJIL and 11/ 124 for VIL. Details of the call silence instance locations have been provided in map attached as **Annexure-II**.
- d) Data Download and Upload Throughput:
 - i) Data Download performance (Overall): Average download speed was observed as 145.87 Mbps for Airtel (5G/4G), 10.40 Mbps for BSNL (3G), 199.45 Mbps for RJIL (5G/4G) and 11.56 Mbps for VIL (5G/4G/2G). Details of Download throughput has been provided in the map attached as **Annexure-II**.
 - ii) Data Upload performance (Overall): Average upload speed was observed as 22.49 Mbps for Airtel (5G/4G), 3.80 Mbps for BSNL (3G), 21.97 Mbps for RJIL (5G/4G) and 6.35 Mbps for VIL (5G/4G/2G). Detail of Upload throughput has been provided in the map attached as **Annexure-II**.

Locations of Dropped Calls and Call Silence instances can be seen by clicking the red dot on the map attached as **Annexure-II**.

8. Details of drive test route and area covered during the IDT is as under: -

- a) **City** - The areas covered in the city drive are Palampur, Maranda, Bhawarna Khas, Panchrukhi, Majheran Khas, Paprola, Baijnath, Aweri, Sungal, Bharamat Uparli, Sornu, Khas Khalet, Pharer, Bindravan, Nagri, Arth Jhilki, Darang Khas, Malan, Gopalpur, Sukairi, Kandi & Saperu etc.
- b) **Highway** - The areas covered in the highway drive from Chandigarh to Palampur included Bilaspur, Ghumarwin, Hamirpur, & Bhawarna etc.
- c) **Hotspot** - The hot spot locations, capturing stationary user experience, are Baijnath Temple, Chaudhary Sarwan Kumar Krishi Vishwavidyalaya, Palampur, Civil Court Complex, Palampur, Palampur Bus Stand and Palampur Market.
- e) **Walk Test** - The walk tests conducted on 11th March 2026, covered Palampur Main Market capturing mobile network behaviour in crowded pedestrian environments.

9. The findings of this IDT report have been shared with respective TSPs for taking further necessary action at their end. Detailed reports of IDT are made available on the TRAI website at www.trai.gov.in. For any clarification or additional information, an email can be sent to adv.ca@traai.gov or Regional Office of TRAI at Delhi RO can be contacted on telephone no. +91-11-20907772.


(Vivek Khare)
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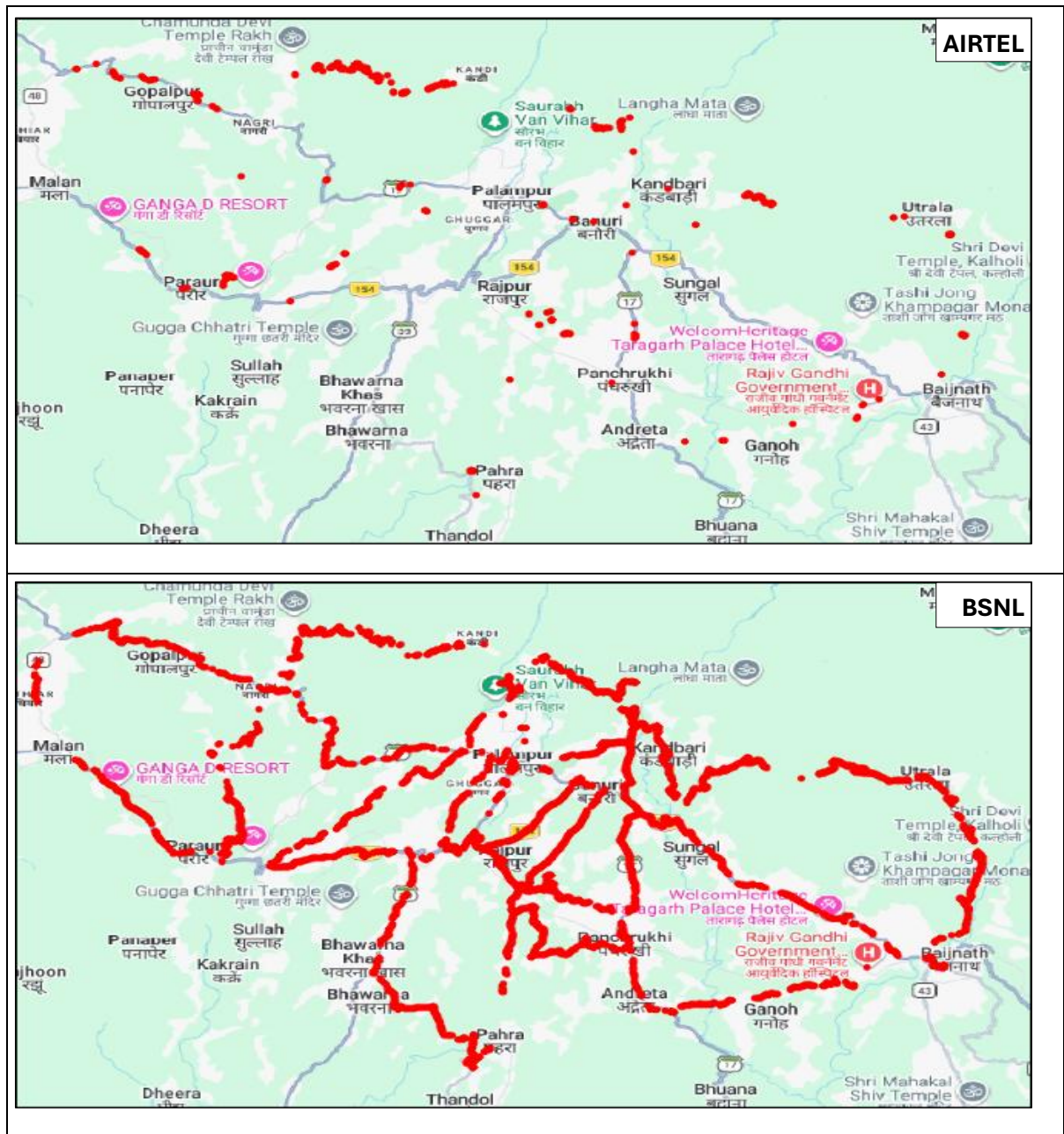
Palampur City & Nearby areas:

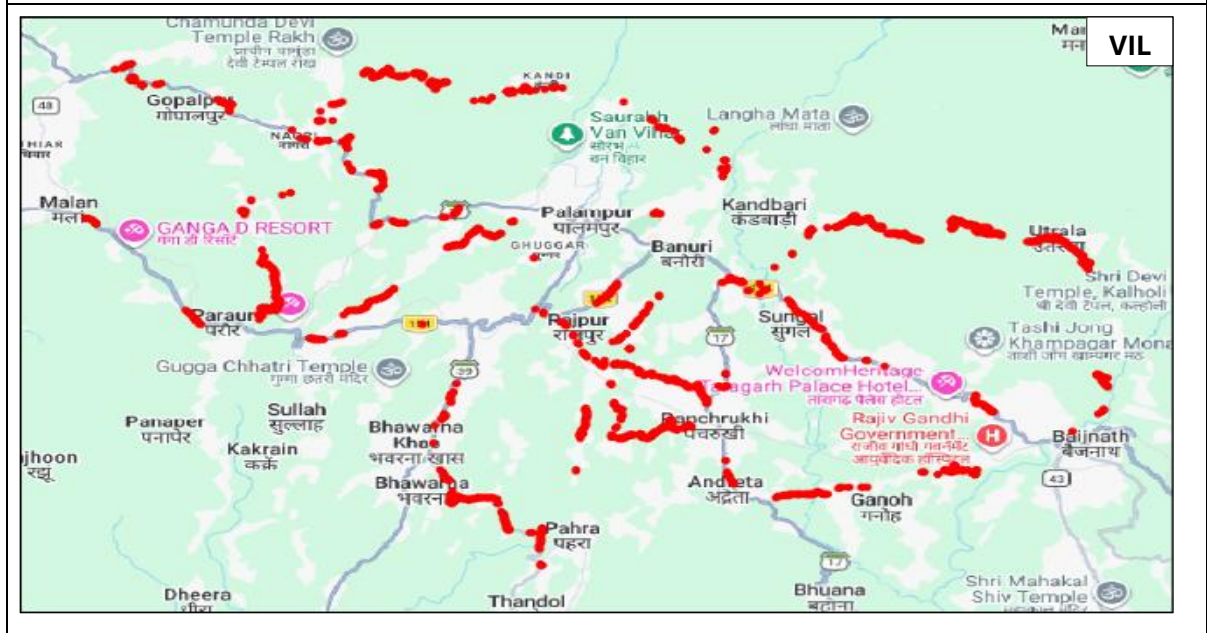
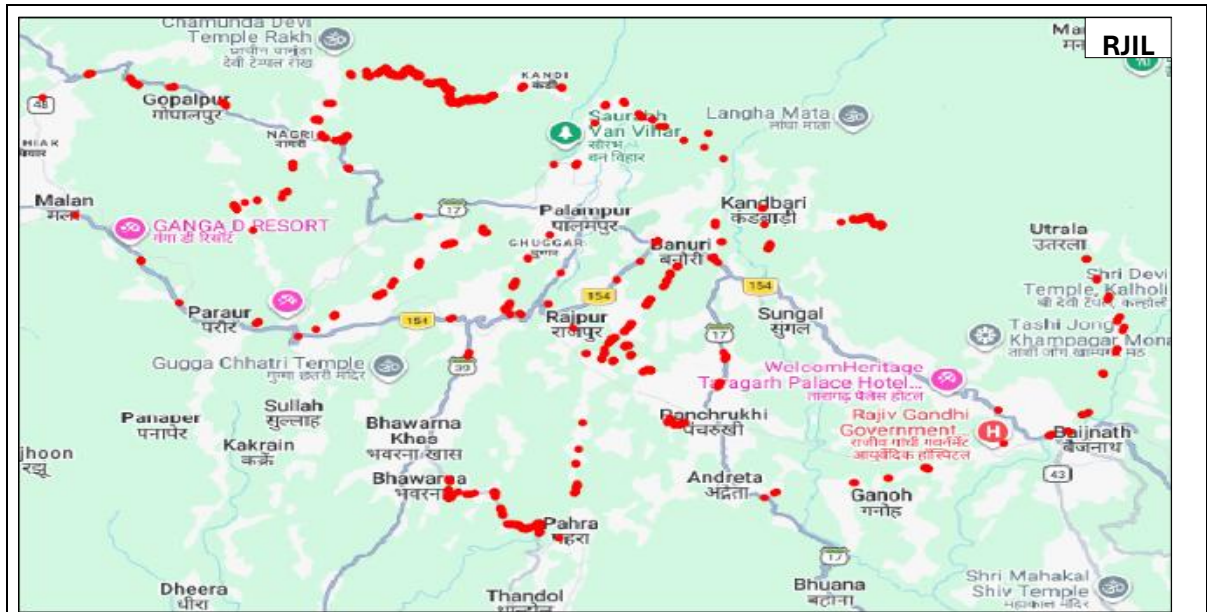
- a) **Coverage Gap** – The coverage distribution found less than the minimum specified signal strength for the drive test route in auto-selection mode (5G/4G/3G/2G) during voice testing, is as below: -

Parameter	AIRTEL	BSNL	RJIL	VIL
Total Number of Samples captured on Drive test route	30794	29977	30530	30018
Number of Samples having poor signal strength	918	15526	1358	4287

Note: Signal strength has been considered poor if it falls below -110 dBm for 5G & 4G, -90 dBm for 3G, and -85 dBm for 2G.

Coverage Gap observed





Note: Plot is based on Dynamic Drive Test results only

b) Dropped Calls - The TSP-wise details of dropped calls in auto-selection mode (5G/ 4G/ 3G/ 2G) are as below: -

Parameter	AIRTEL	BSNL	RJIL	VIL
Number of successful Calls Established	277	266	279	271
Number of dropped Calls	2	12	1	9

Locations of Dropped Calls



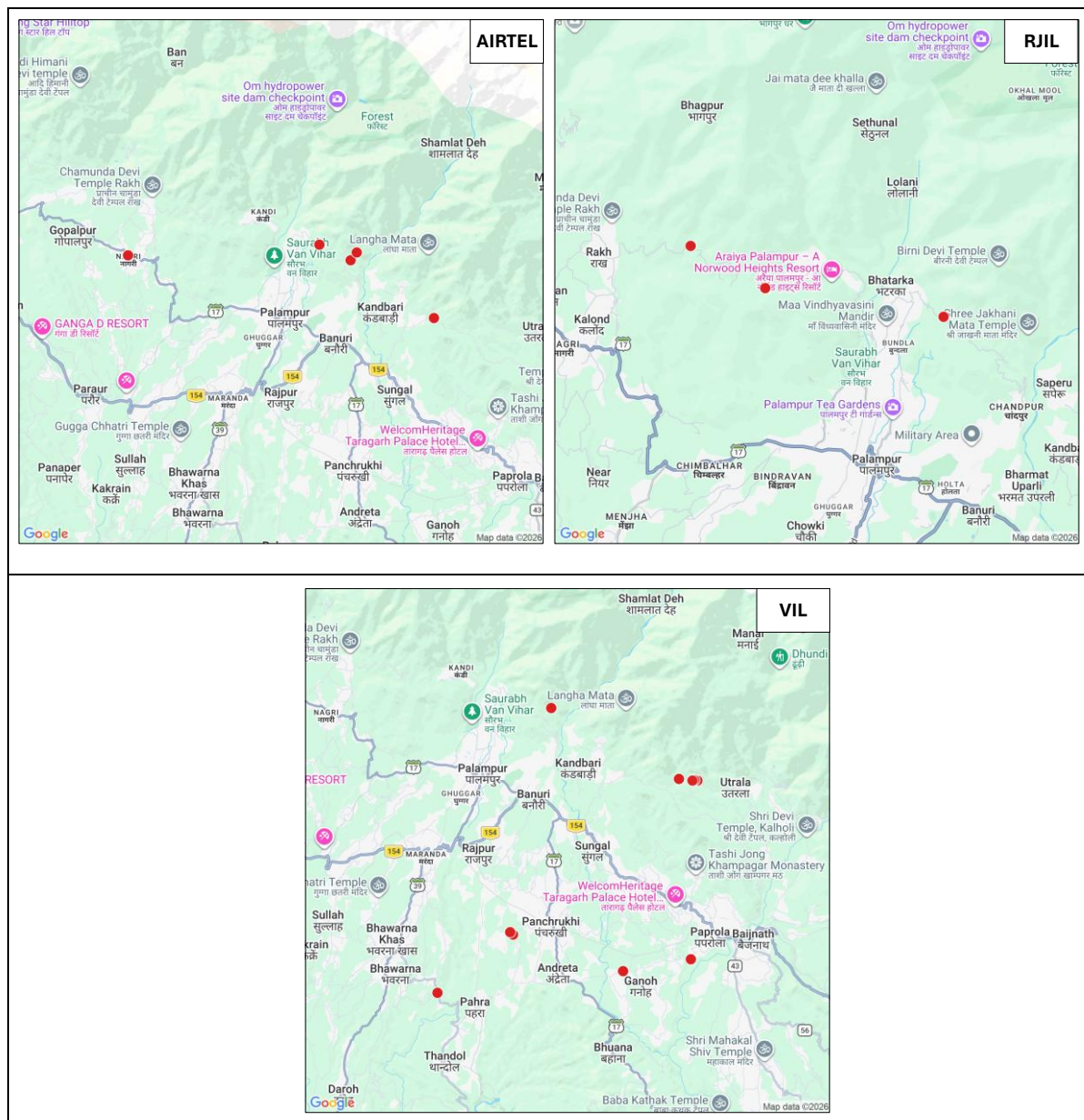
Note: Dropped calls locations are shown in red colour and which can be clicked to know the exact location (latitude and longitude) on the map

c) **Call Silence Instance** - The TSP-wise details of Call silence instance in Auto-selection mode (5G/4G) are as below: -

Parameter	AIRTEL	BSNL	RJIL	VIL
Call Established (within service provider network)	263	NA*	270	261
Number of silences calls for >3 Sec	5	NA*	3	7
Total number of silence instances for >3 Sec	5	NA*	3	10

* NA – Not Applicable

Locations of Call Silence Instance

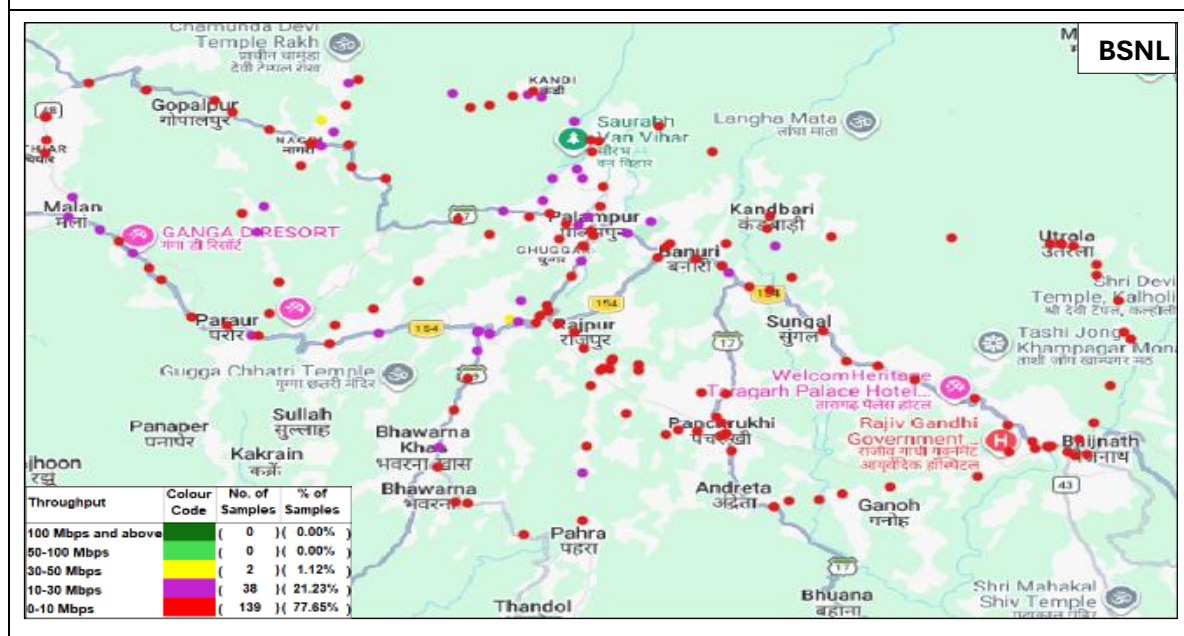
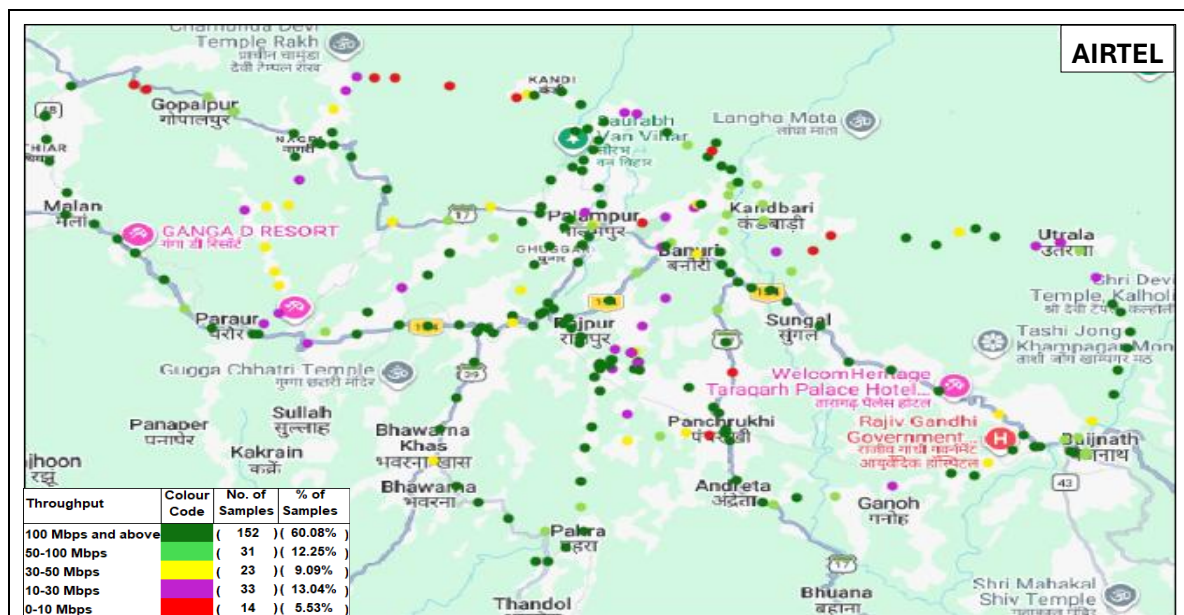


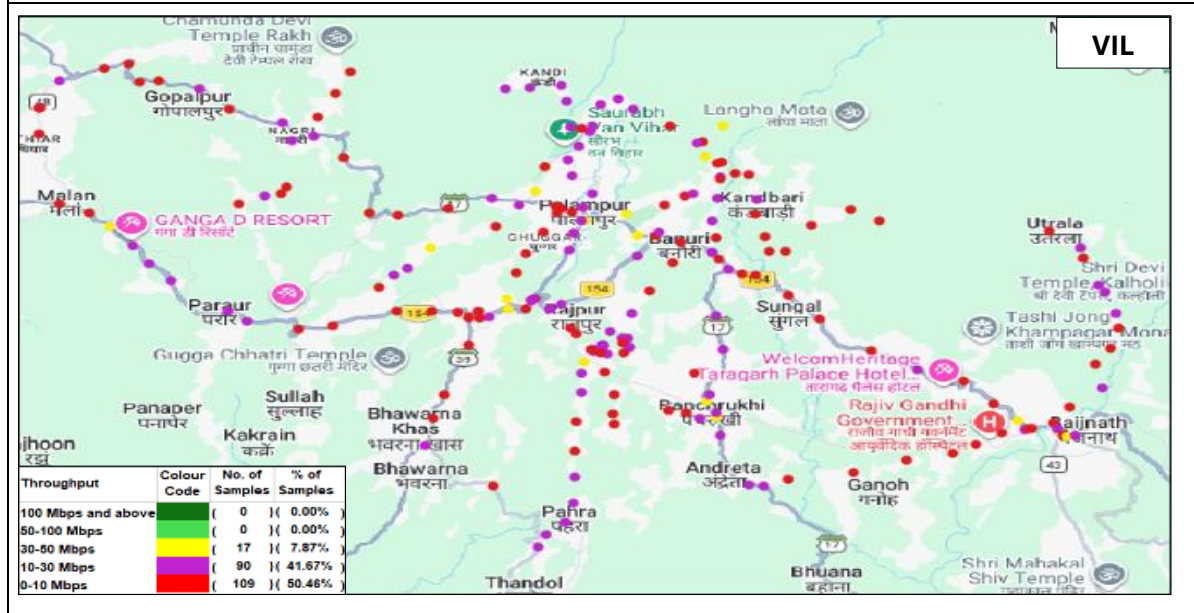
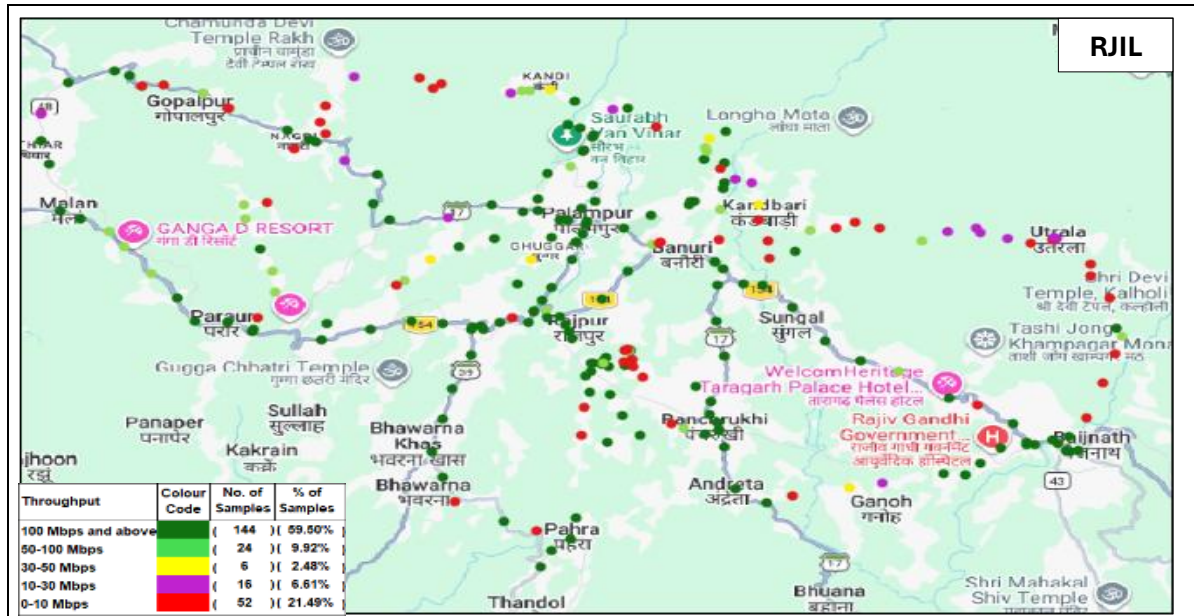
Note: Call silence instances are shown in red colour and which can be clicked to know the exact location (latitude and longitude) on the map

d) Data Download and Upload throughput: The TSP-wise details of **Average Download (DL)** and **Upload (UL) throughput** against declared typical DL/UL Throughput for month, in Auto-selection mode (5G/4G/3G/2G) are as below: -

(i) Download Throughput

Parameter	Measured in	AIRTEL (upto 5G)	BSNL (upto 4G)	RJIL (upto 5G)	VIL (upto 4G)
Typical Download throughput declared by TSP	(Mbits/s)	12.69	3.00	15.00	15.00
Average Download Throughput measured during IDT	(Mbits/s)	155.87	6.95	194.17	12.66

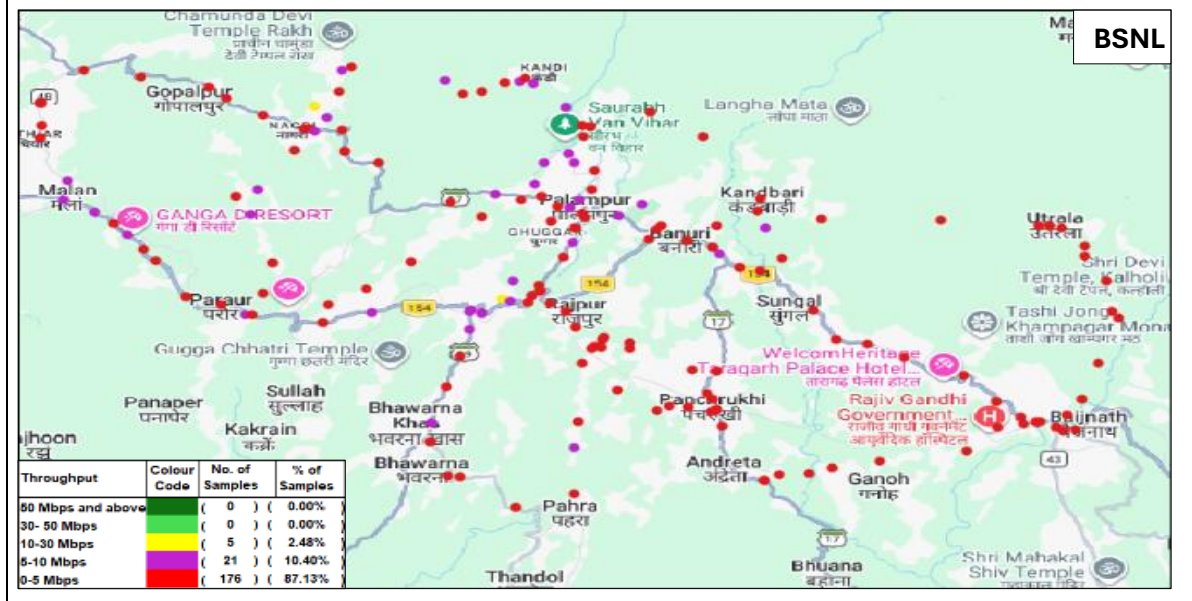
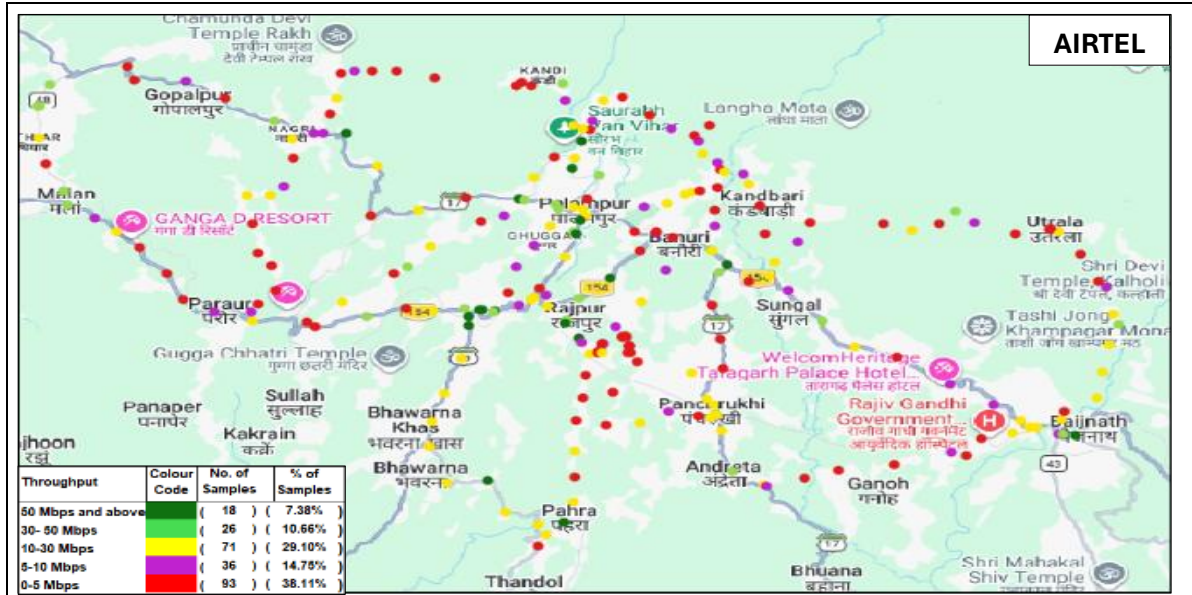


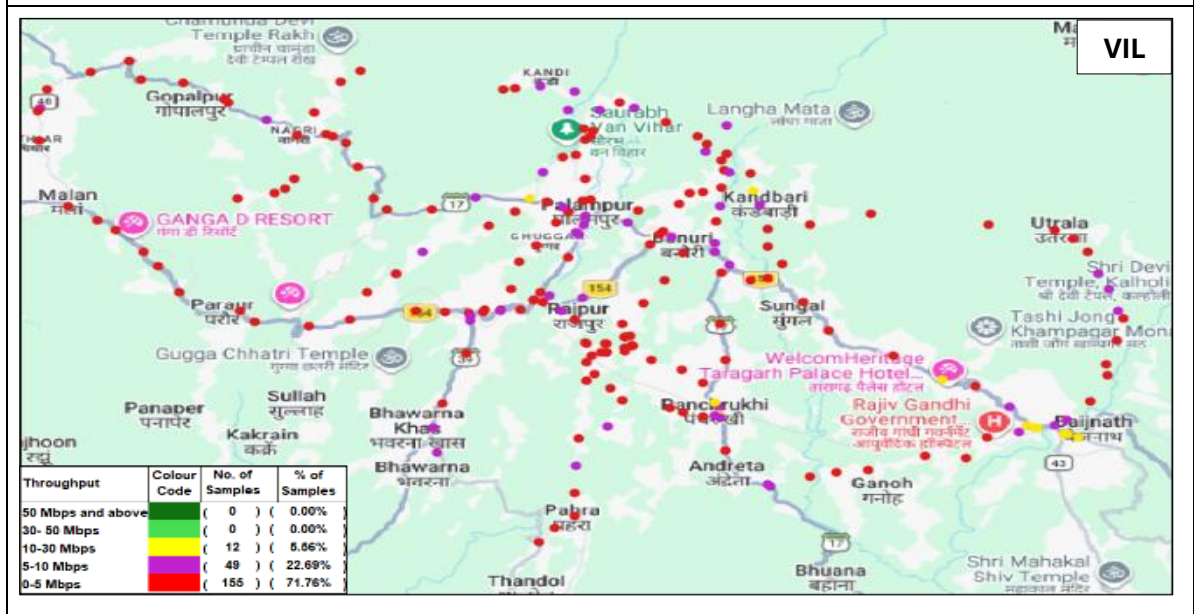
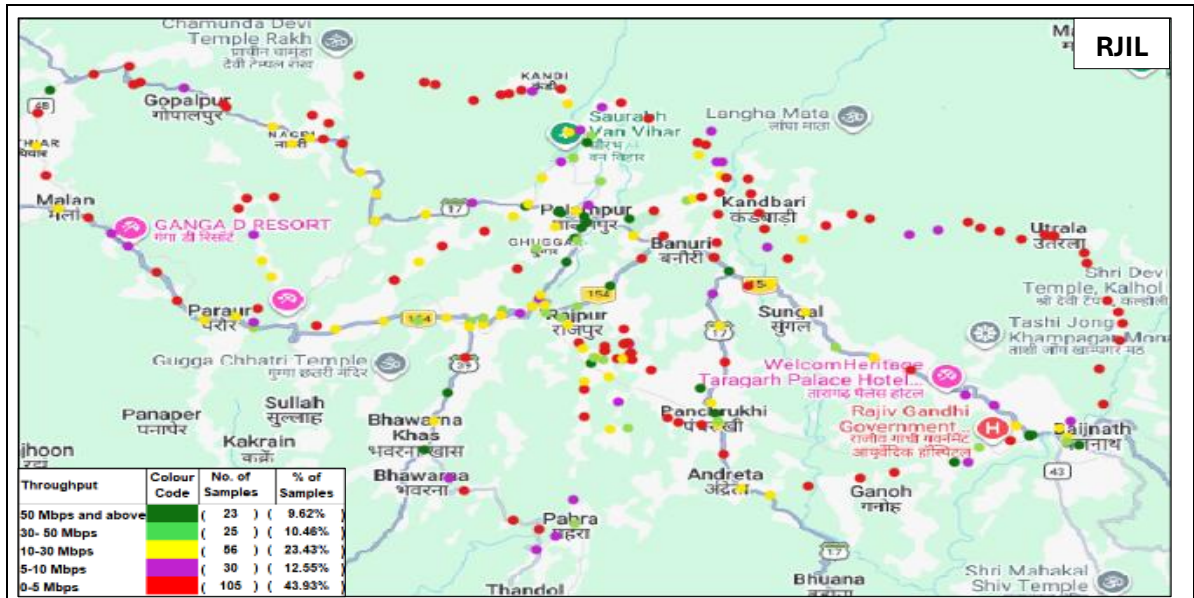


Note: Plot is based on Dynamic Drive Test results only

(ii) Upload Throughput

Parameter	Measured in	AIRTEL (upto 5G)	BSNL (upto 4G)	RJIL (upto 5G)	VIL (upto 4G)
Typical upload throughput declared by TSP	(Mbits/s)	0.79	3.00	7.00	8.00
Average Upload Throughput measured during IDT	(Mbits/s)	16.40	2.52	16.73	4.00





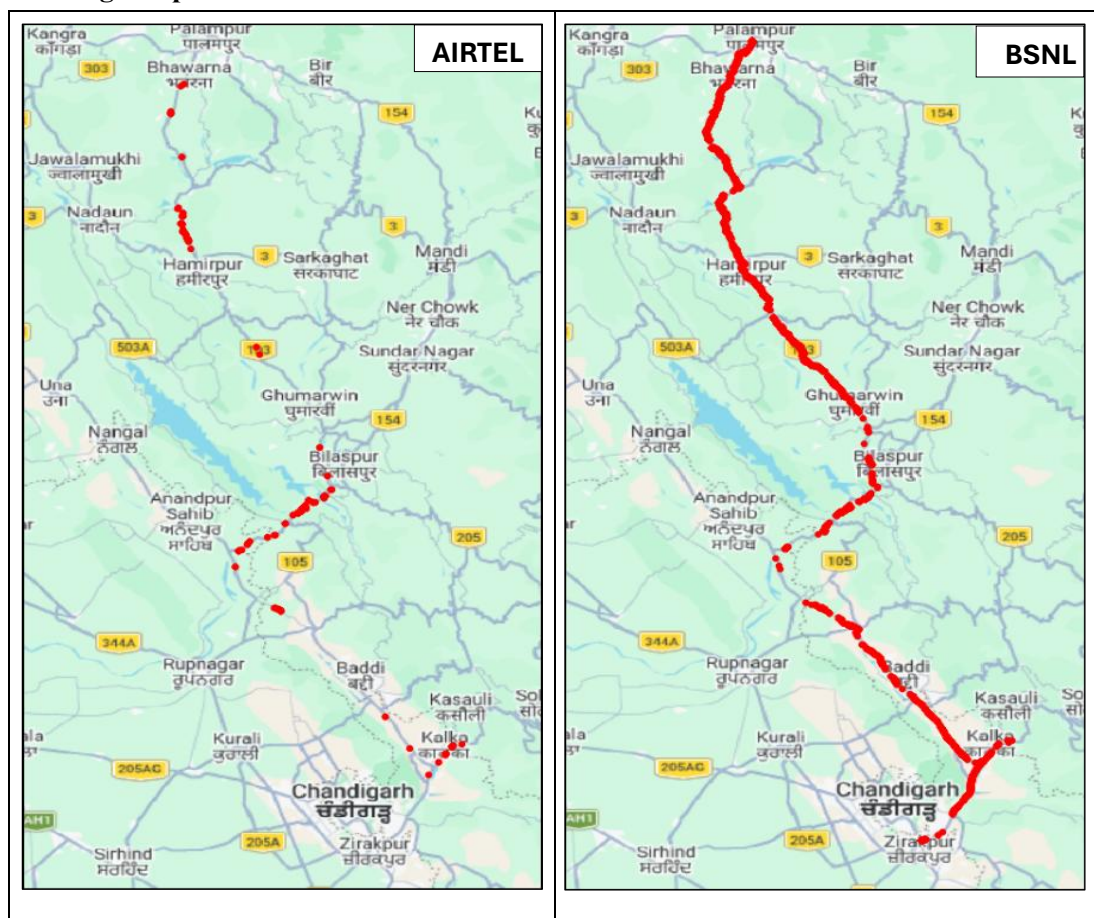
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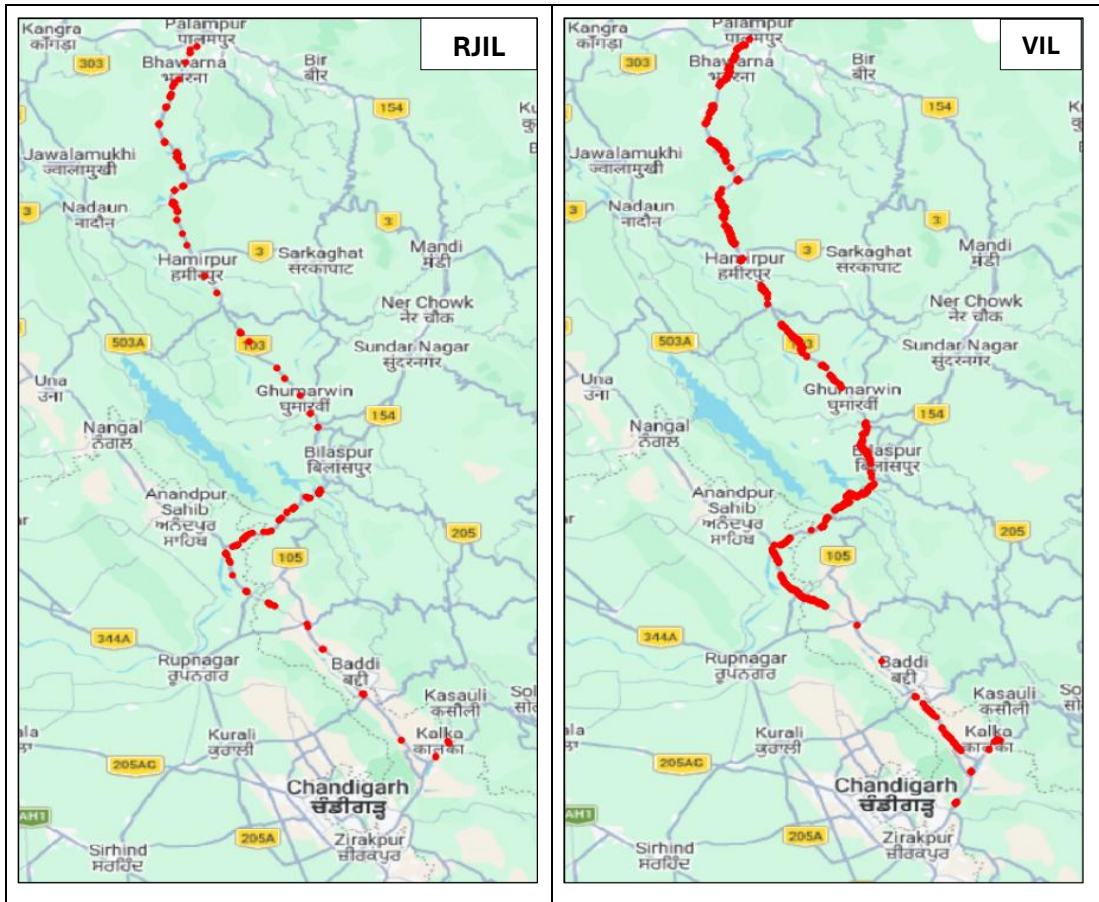
Chandigarh to Palampur Highway Route: -

- a) **Coverage Gap** – The coverage distribution found less than the minimum specified signal strength for the drive test route in auto-selection mode (5G/4G/3G/2G) during voice testing, is as below: -

Parameter	AIRTEL	BSNL	RJIL	VIL
Total Number of Samples captured on Drive test route	24378	23479	24520	23713
Number of Samples having poor signal strength	372	7641	483	4269

Note: Signal strength has been considered poor if it falls below -110 dBm for 5G & 4G, -90 dBm for 3G, and -85 dBm for 2G.

Coverage Gap observed



Note: Plot is based on Dynamic Drive Test results only

b) Dropped Calls - The TSP-wise details of dropped calls in auto-selection mode (5G/ 4G/ 3G/ 2G) are as below: -

Parameter	AIRTEL	BSNL	RJIL	VIL
Number of successful Calls Established	122	130	122	122
Number of dropped Calls	2	14	1	12

Locations of Dropped Calls



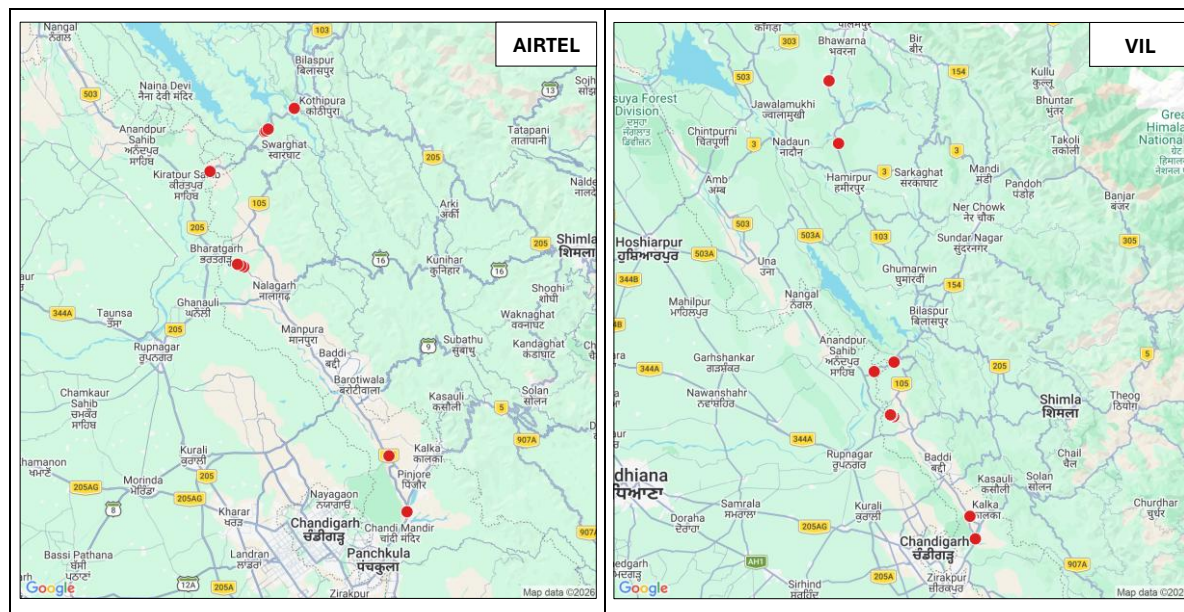
Note: Dropped calls locations are shown in red colour and which can be clicked to know the exact location (latitude and longitude) on the map

c) **Call Silence Instance** - The TSP-wise details of Call silence instance in Auto-selection mode (5G/4G) are as below: -

Parameter	AIRTEL	BSNL	RJIL	VIL
Call Established (within service provider network)	124	NA *	122	124
Number of silences calls for >3 Sec	6	NA *	0	7
Total number of silence instances for >3 Sec	11	NA *	0	11

* NA – Not Applicable

Locations of Call Silence Instance

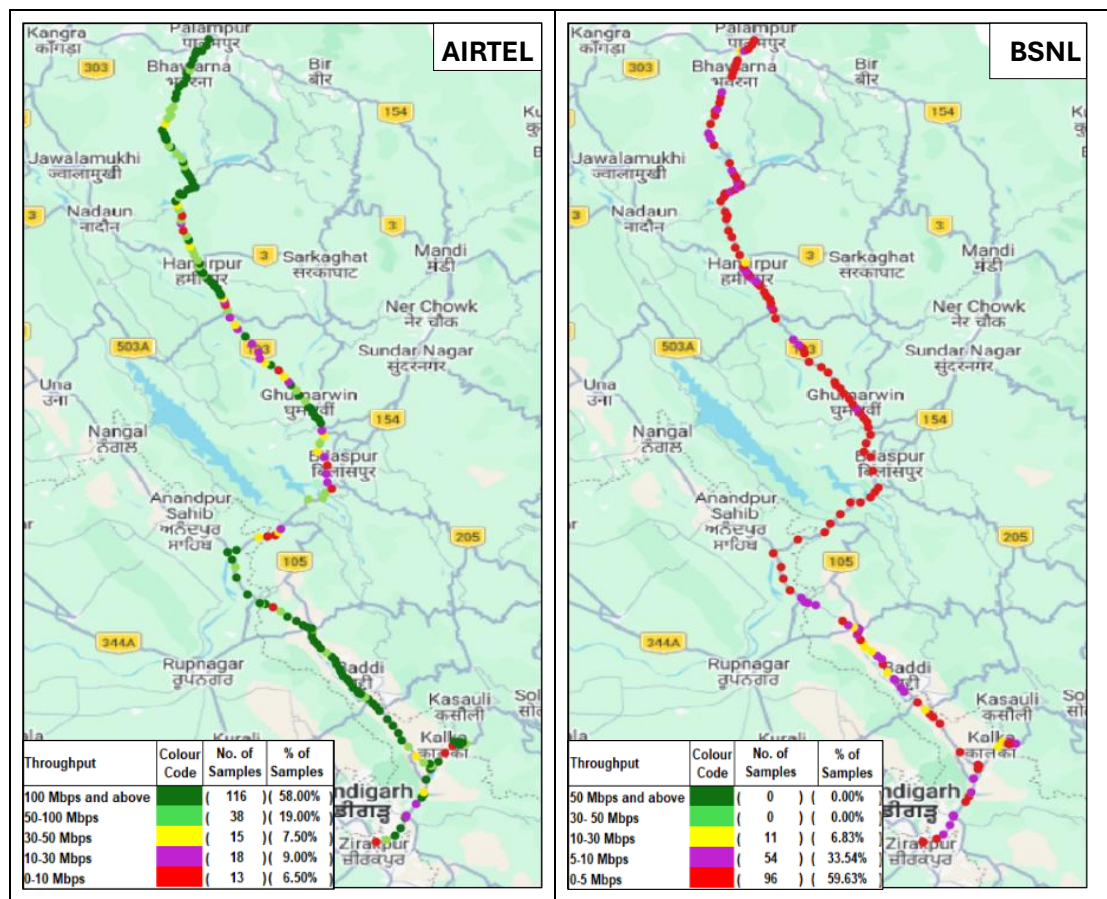


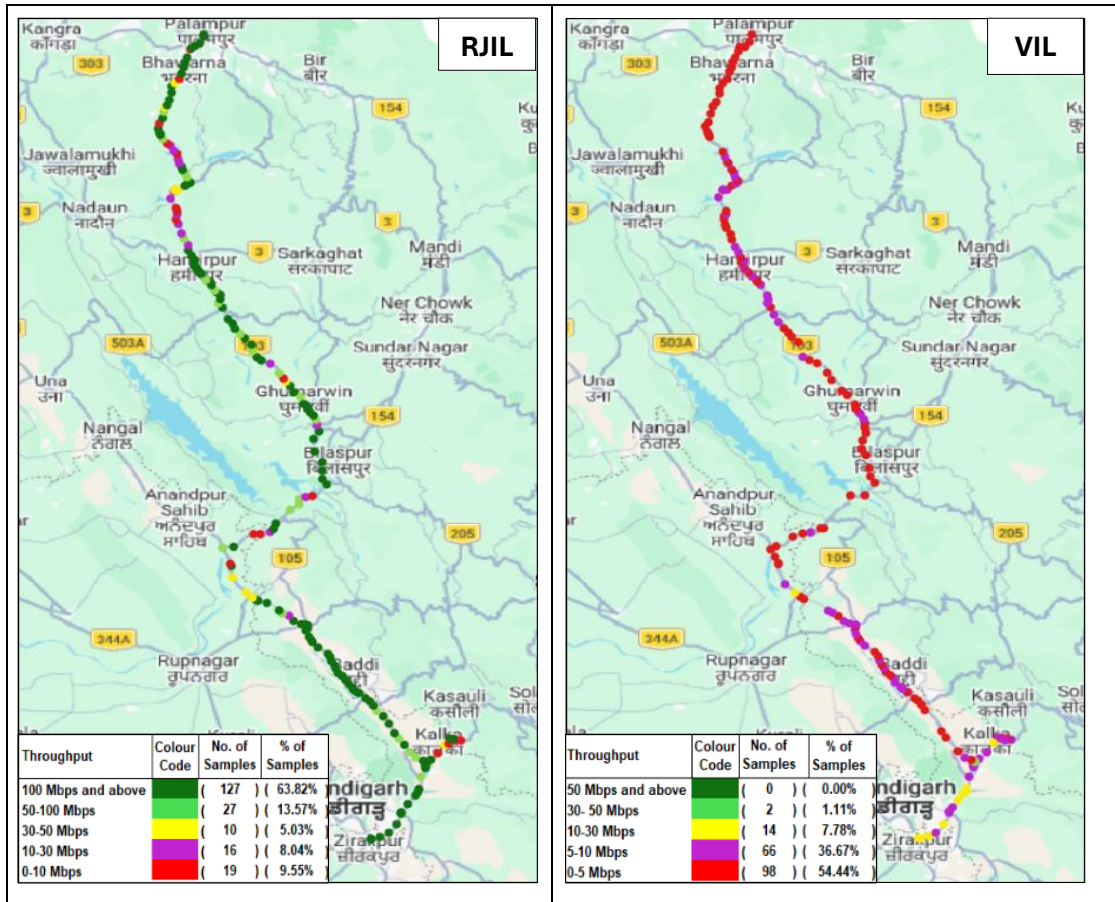
Note: Call silence instances are shown in red colour and which can be clicked to know the exact location (latitude and longitude) on the map

d) Data Download and Upload throughput: The TSP-wise details of **Average Download (DL)** and **Upload (UL) throughput** against declared typical DL/UL Throughput for month, in Auto-selection mode (5G/4G/3G/2G) are as below: -

(i) Download Throughput

Parameter	Measured in	AIRTEL (upto 5G)	BSNL (upto 4G)	RJIL (upto 5G)	VIL (upto 5G)
Typical Download throughput declared by TSP	(Mbits/s)	12.69	3.00	15.00	15.00
Average Download Throughput measured during IDT	(Mbits/s)	145.87	10.40	199.45	11.56

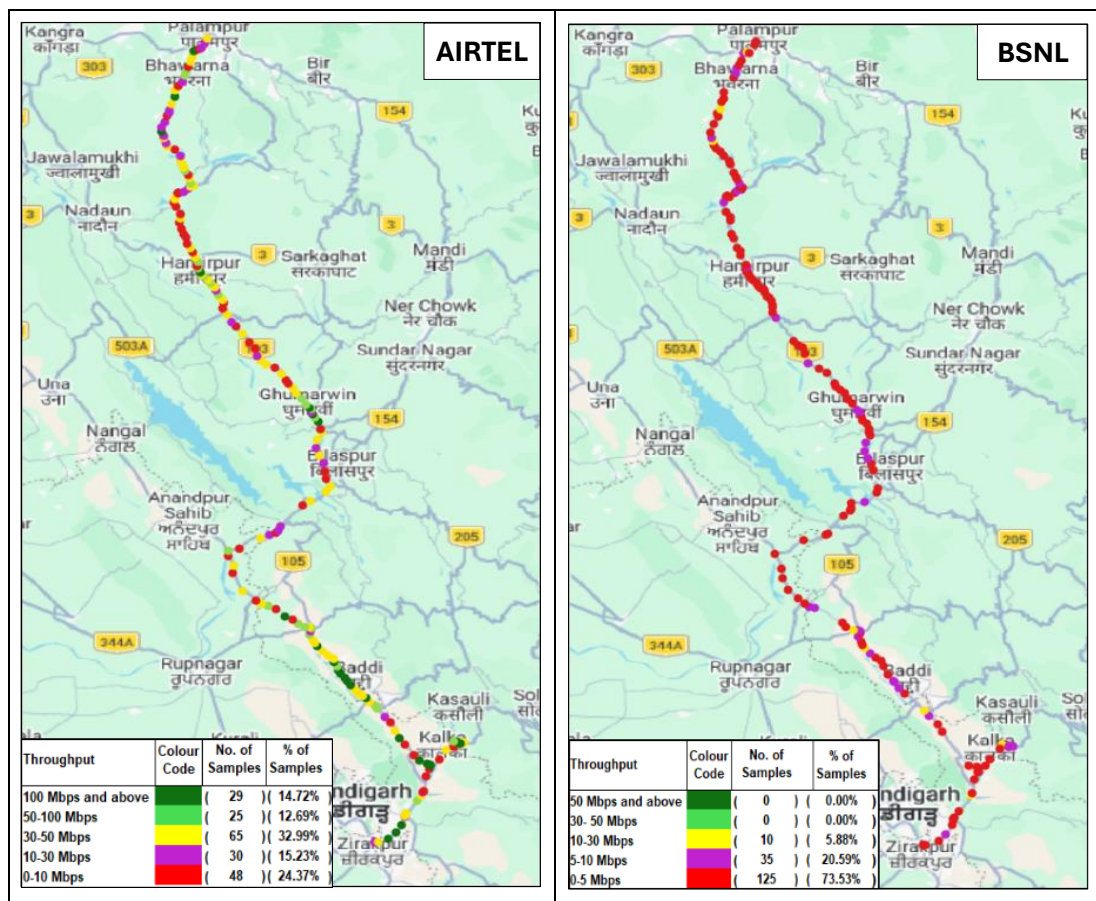


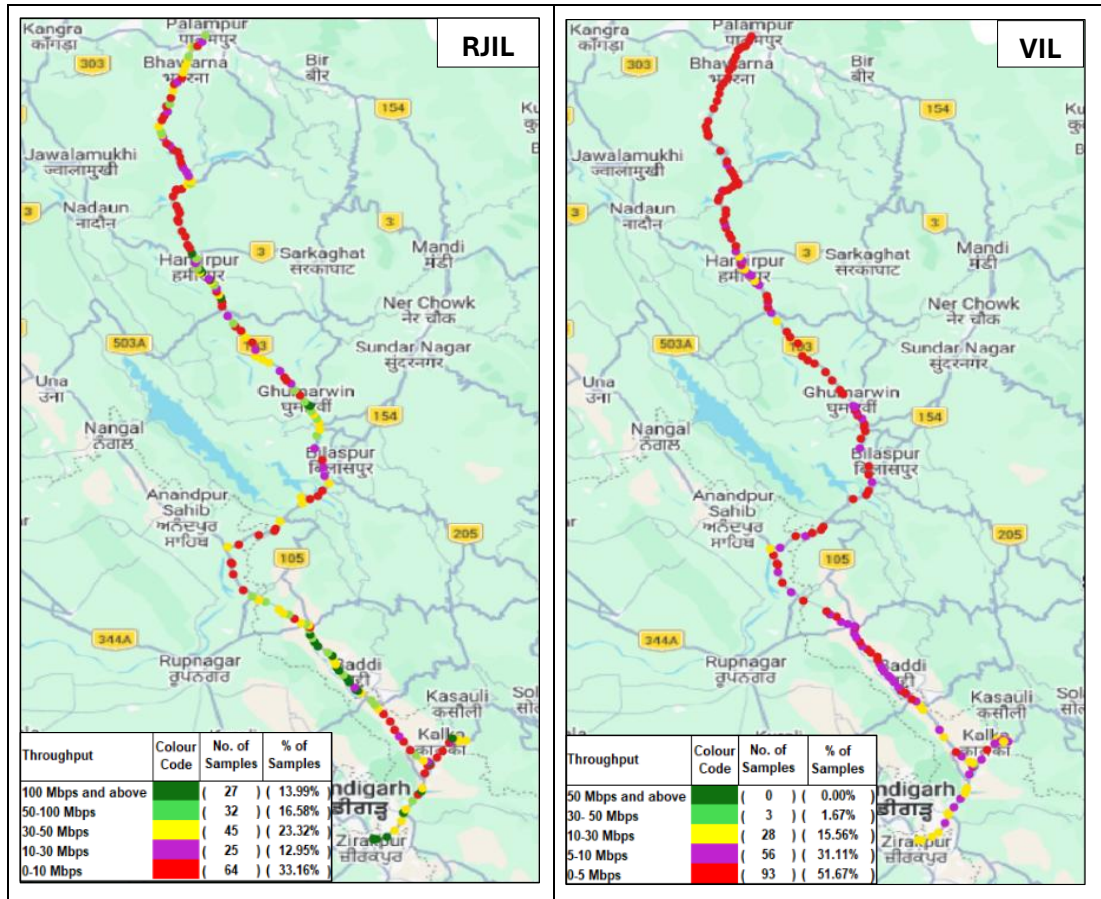


Note: Plot is based on Dynamic Drive Test results only

(ii) Upload Throughput

Parameter	Measured in	AIRTEL (upto 5G)	BSNL (upto 4G)	RJIL (upto 5G)	VIL (upto 5G)
Typical upload throughput declared by TSP	(Mbits/s)	0.79	3.00	7.00	8.00
Average Upload Throughput measured during IDT	(Mbits/s)	22.49	3.80	21.97	6.35





Note: Plot is based on Dynamic Drive Test results only.