

5G Modem Performance Analysis Report

Analysis and Optimization Recommendations

Generated on March 27, 2025

Modem Intelligence Crew

Executive Summary

****Executive Summary:****

The analysis of the 5G modem's performance highlights commendable latency, throughput, signal strength, and connection stability attributes, despite minor anomalies in latency spikes, throughput drops, signal strength degradation, and packet loss surges. While the overall network health is robust, optimization recommendations are crucial to address these anomalies for sustained high performance. Key recommendations focus on resolving packet loss, mitigating latency issues, improving throughput, and enhancing signal strength.

****Key Findings:****

- ****Latency:**** Stable performance with occasional spikes.
- ****Throughput:**** Satisfactory data transfer capabilities.
- ****Signal Strength:**** Strong quality supporting communication.
- ****Packet Loss:**** Room for improvement for enhanced reliability.
- ****Connection Statistics:**** Stable network connectivity with reliable performance.

****Critical Issues:****

- ****Latency Anomaly:**** Likely attributed to network congestion or interference.
- ****Throughput Anomaly:**** Influenced by external factors like interference.
- ****Signal Strength Anomaly:**** Degradation due to environmental factors.
- ****Packet Loss Anomaly:**** Caused by congestion or radio interference.

****Prioritized Recommendations:****

1. Address packet loss for improved data reliability.
2. Continuously monitor signal quality for optimal communication.
3. Optimize latency and throughput for consistent network performance.
4. Improve signal strength through power control algorithms.

****Expected Benefits:****

Implementing these recommendations will lead to:

- Enhanced user experience across various applications.
- Maintenance of optimal network performance and reliability.
- Improved data reliability and communication efficiency.

****Next Steps:****

- Implement optimization strategies to address identified anomalies.
- Monitor network performance post-optimization to gauge improvements.
- Continuously assess and adjust strategies to maintain network efficiency.
- Regularly review signal quality and service reliability for sustained performance.

The visualizations provided offer insightful representations of key metrics and anomalies, aiding in

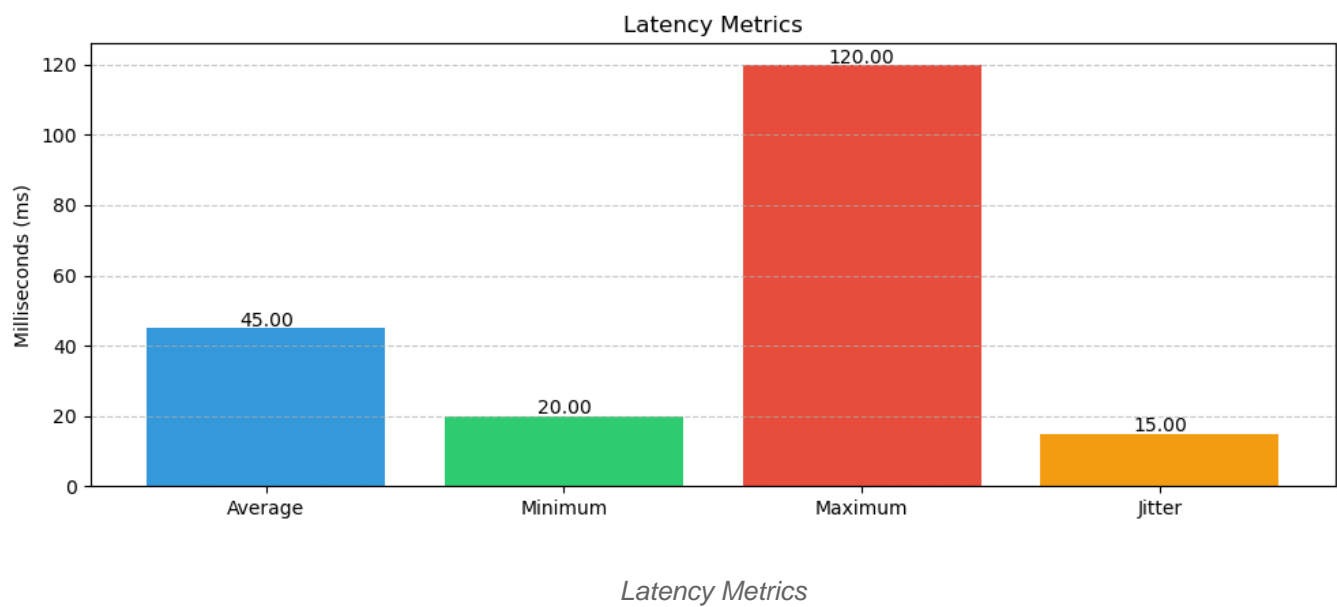
understanding and decision-making to optimize network performance effectively. Taking immediate action on the prioritized recommendations will ensure the 5G modem continues to deliver efficient and reliable network services.

End of Executive Summary.

Performance Metrics

Latency Analysis

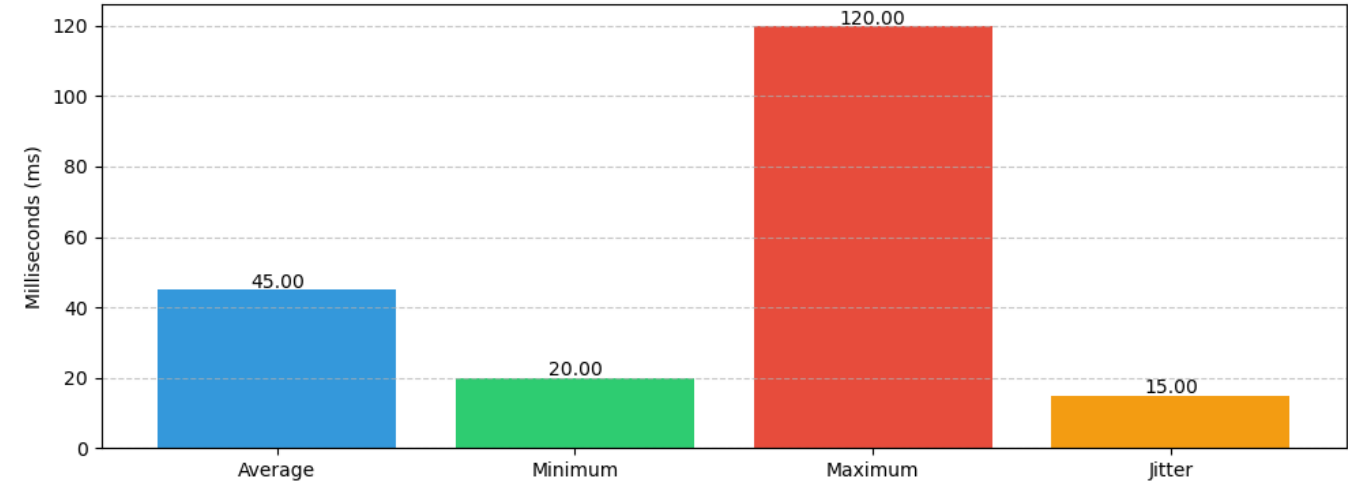
Metric	Value
Average Latency	45 ms
Minimum Latency	20 ms
Maximum Latency	120 ms
Jitter	15 ms



Throughput Analysis

Metric	Value
Average Throughput	650000 kbps
Peak Throughput	950000 kbps

Latency Metrics

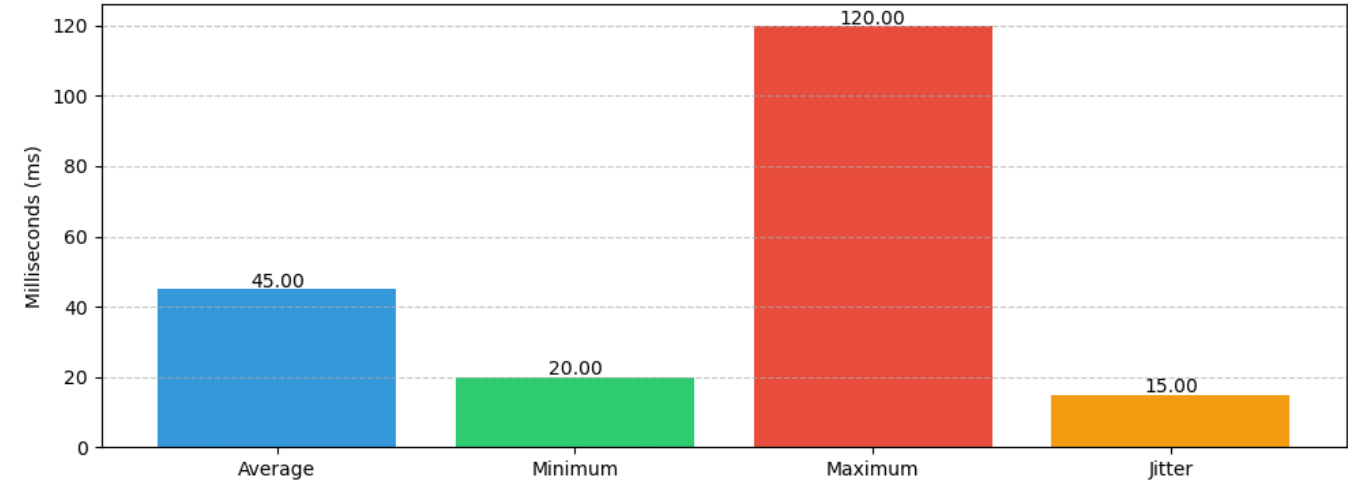


Throughput Metrics

Signal Strength Analysis

Metric	Value
RSSI	-65 dBm
SINR	15 dB

Latency Metrics



Signal Strength Metrics

Conclusion

The analysis has been completed successfully. For more detailed metrics and raw data, please refer to the analysis logs.