RootMetrics®
By IHS Markit

RootMetrics November 5G scorecard

A look at the 5G race so far in 2H 2021

The 5G race in 2H 2021: who's currently in the lead after 60 markets?

	AT&T	T-Mobile	Verizon
Availability		✓	
Speed		✓	
Reliability	✓		✓

T-Mobile currently leads the competition for both 5G availability and speed through 60 markets, while the 5G reliability race is too close to call between AT&T and Verizon.

The 5G landscape can change quickly. RootMetrics tests 125 metropolitan markets in the US every six months, and so far in 2H 2021, we've tested 60 of those cities. To provide a snapshot of which carrier(s) is leading the 5G race to date in 2H 2021, we looked at the number of markets that each network delivered:

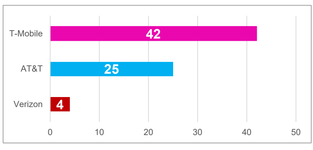
- Highest 5G availability
- Fastest 5G download speeds in the same city (5th percentile, median, and 95th percentile)
- Highest 5G data reliability success rates for both getting and staying connected in the same city

The carrier with the highest market tally in each category is the current leader. It's that simple.

To provide the best view of the typical end-user 5G experience, all results in this Scorecard reflect our Everyday 5G results, which factor in performance recorded on both 5G-only and 5G mixed mode, the common user experience of switching between 5G and LTE during the same data task. To learn more about the Everyday 5G experience, check out our blog.

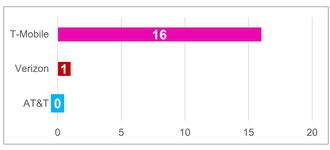
5G market tally leaderboard - 2H 2021 to date (60 recently tested cities)

Highest 5G availability - market tally



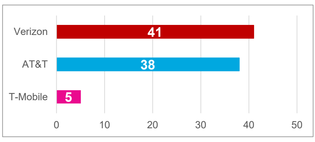
The chart above shows the number of cities in which each carrier registered the highest 5G availability.

Fastest 5G download speeds - market tally



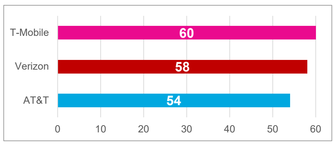
The chart above shows the number of cities in which each carrier delivered the fastest 5th percentile, median, and 95th percentile 5G download speeds in the same city.

Highest 5G data reliability success rates - market tally



The chart above shows the number of cities in which carrier registered the highest 5G data reliability success rates for both getting connected and staying connected in the same city.

Number of cities with 5G - market tally



The chart above shows the number of cities in which carrier registered 5G results during testing.

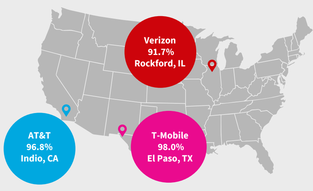
● First 60 markets tested-2H 2021

Note: 5G availability, speed, and reliability tallies can include ties.

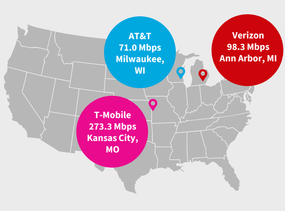
The market tally charts above show which carrier(s) is leading the 5G race in each performance category across 60 recently tested markets to date in 2H 2021 (including ties). See below for a list of all 60 cities included in this Scorecard.

Top 5G availability and 5G download speeds – 60 recently tested cities

Each carrier's highest 5G availability (%)



Each carrier's fastest 5G median download speed (Mbps)



Contact us to see which carrier had the highest 5G availability or fastest 5G download speeds in more cities.

Key improvement stories – 60 cities tested in 2H 2021 (Compared to the 60 same cities tested in 1H 2021)

AT&T: Tulsa, OK

Good news for AT&T 5G users in Tulsa: the carrier's 5G availability jumped by about 17% since 1H 2021, improving from 31.5% to 48.4% in 2H 2021. AT&T 5G median download speed in Tulsa also improved, moving from 42.8 Mbps in 1H 2021 to 57.2 Mbps this time. In short, AT&T users are seeing both more and faster 5G in Tulsa.

T-Mobile: Raleigh, NC

T-Mobile's 5G median download speed in Raleigh increased by a whopping 171.7 Mbps since our last visit, going from 54.8 Mbps in 1H 2021 to a sterling 226.5 Mbps this time. T-Mobile's 5G availability in the city also improved, jumping from 59.8% in 1H 2021 to 78.3% in 2H 2021, giving users in Raleigh more widespread access to 5G plus a faster experience.

Verizon: Indio, CA

Verizon users should see a boost to both 5G availability and speed in Indio. Verizon's 5G availability nearly doubled from 35.2% in 1H 2021 to a much broader 60.2% this time. Similarly, Verizon's 5G median download speed in the market was over twice as fast, improving from 22.7 Mbps to 48.2 Mbps in 2H 2021.

Carrier stories - 60 recently tested cities 2H 2021

AT&T and Verizon in an extremely close 5G reliability race through 60 markets tested to date.

AT&T delivers unbeatable reliability in 38 markets: With top marks in 5G data reliability in 38 markets—3 fewer than that of Verizon but 33 more than that of T-Mobile—the 5G reliability race is currently too close to call between AT&T and Verizon.

Good speeds in general but minor declines in many markets:
AT&T's 5G median download speeds decreased in 39 cities (out of 54 with 5G) since 1H 2021, but it's worth noting that many of those declines were minor and likely not noticeable to users.

5G availability trailing only T-Mobile: AT&T posted the highest 5G availability in 25 markets and exceeded 80% in 19 cities, a number higher than that of Verizon (3) but trailing that of T-Mobile (43).

T-Mobile takes an early lead for both 5G availability and speed after 60 markets, posting speeds above 100 Mbps in 21 cities.

T-Mobile continues to lead for 5G availability: Picking up where it left off in 1H 2021, T-Mobile offered the most widespread 5G availability of any carrier through 60 markets tested to date in 2H 2021.

Leading the 5G speed race, with improved speeds in all 60 metros: Delivering the fastest 5G download speed experience (across all three speed metrics) in more cities than any other carrier, T-Mobile currently sits atop the 5G speed standings through 60 markets in 2H 2021. T-Mobile's speeds have shown serious improvement since 1H 2021: its 5G median download speeds increased in all 60 markets since last time.

The only carrier to exceed 100 (or 200) Mbps: T-Mobile's increased usage of mid-band spectrum once again led to outstanding speeds. T-Mobile clocked 5G median download speeds of at least 100 Mbps in 21 cities and even hit the 200 Mbps mark in four (including a remarkable speed of 273.3 Mbps in Kansas city).

Verizon delivers great 5G reliability, with improved speeds since 1H 2021.

The 5G reliability co-leader: Finishing neck and neck with AT&T in a 5G reliability race currently too close to call, Verizon registered outstanding 5G data reliability across the board, including the top 5G reliability success rates for both getting and staying connected in 41 of its 58 markets with 5G.

Faster speeds since 1H 2021: In general, Verizon 5G users should have quicker access to content in 2H 2021. Verizon's 5G median download speeds improved in 53 markets since 1H 2021, with significant jumps (at least 20 Mbps) in 23 of those cities, including a huge increase of 54.0 Mbps in Tucson, AZ.

5G availability expands in over half the cities tested: Verizon's 5G availability improved in 30 of its 58 markets with 5G since 1H 2021. The carrier's most impressive jump came in Austin, TX, with an availability increase of 48.5% since 1H 2021.

Shifting 5G strategies as the networks mature?

Our data shows that 5G availability might appear to be in a 'two-step forward, one-step back' scenario in 2H 2021. Across all carriers, for example, we recorded increases in 5G availability in some markets but noticeable declines in others. That might seem odd at first glance, but it could ultimately be a good thing for consumers. In short, our results suggest that the carriers may have implemented a strategy to switch from 5G to LTE for low-payload data activities that don't require the high speeds or capacity that 5G can offer—tasks like browsing the web or using apps, where LTE is more than fast enough. Instead, we're seeing that carriers in some markets are using 5G for only the most data-intensive tasks—like downloading large files—and those are exactly the type of activities for which consumers need 5G the most. If this is indeed a strategy, then switching from 5G to LTE for lighter data tasks could in fact be a mark of maturing networks and optimization to deliver 5G to consumers when and where it is needed most.

60 recently tested cities

Testing across all 60 markets took place between July 13 – September 23, 2021.

Akron, OH
Albuquerque, NM
Allentown, PA
Ann Arbor, MI
Antelope Valley, CA
Atlanta, GA
Augusta, GA
Austin, TX
Bonita Springs, FL
Charlotte, NC
Colorado Springs, CO
Columbus, OH
Corpus Christi, TX
Dayton, OH
Denton, TX
Denver, CO
El Paso, TX
Fort Myers, FL
Fresno, CA
Grand Rapids, MI
Greenville, SC
Indio, CA
Jacksonville, FL
Kansas City, MO
Kissimmee, FL
Lancaster, PA
Lansing, MI
Las Vegas, NV
Little Rock, AR
Los Angeles, CA
Louisville, KY
Madison, WI
Milwaukee, WI
Ogden, UT
Oklahoma City, OK
Orlando, FL
Oxnard, CA
Pensacola, FL
Philadelphia, PA
Phoenix, AZ
Port St. Lucie, FL
Portland, OR
Provo, UT
Raleigh, NC
Riverside, CA
Rockford, IL
Sacramento, CA
Salt Lake City, UT
San Antonio, TX
Sarasota, FL
Scranton, PA
Seattle, WA
Spokane, WA
St. Louis, MO
Temecula, CA
Toledo, OH
Tucson, AZ
Tulsa, OK
Victor Valley, CA
Youngstown, OH

The fine print about our 5G scorecard results

To provide a current look at the 5G race in 2021, the 5G leaderboard above is based on testing across 60 total cities to date in 2H 2021 and may include ties.

To determine the leaders, we looked at the total number of cities that each carrier registered the:

- Highest 5G availability
- Fastest 5G download speeds in the same city across three key download speed metrics: 5th percentile, median, and 95th percentile
- Highest 5G data reliability success rates for both connected and staying connected in the same city

If one carrier records the fastest 5G median download speed in a market but another network has the fastest 5th or 95th percentile speed, no speed leader is awarded in that city. Similarly, in markets where one carrier has the highest 5G data reliability success rate for getting connected but another is best for staying connected, there is no reliability leader in that city.

Results in this scorecard should not be used to infer which carrier is the leader across a larger set of markets, within individual cities, for additional performance metrics, or over a longer period of time.

To see which carrier(s) led the 5G race in the first half of 2021 across all 125 markets tested, visit our 1H 2021 5G summary report. To learn how we test network performance, visit the methodology page of our website.