

State of Mobile Networks: Taiwan (July 2018)

In the world of 4G, fast speeds, responsive connections and great mobile broadband reach often go hand in hand. Taiwan is no exception to that trend, but the leader in each of those metrics in this report wasn't a single operator. We found a lot of diversity among the winners of our LTE metrics in Taiwan, speaking highly of the level of 4G competition on the island. Parsing more than 414 million data points, OpenSignal compared the 3G and 4G experience offered by Taiwan's five major mobile operators. (點擊此處查看此報告的中文版本)

Report Facts

- 414,874,529 Measurements
- 32,117 Test Devices
- Mar 1 - May 29, 2018 Sample Period
- Taiwan Report Location

Highlights

Chunghwa jumps into the lead in 4G download speed

Chunghwa has edged out FarEasTone and Taiwan Mobile in our 4G download speed metric, after the three were locked in a draw in our last report. Chunghwa's average LTE download connection of 35.1 Mbps was nearly 2 Mbps faster than its nearest rival in our measurements, FarEasTone.

GT and Taiwan Mobile battle for our 4G availability award

LTE-only operator GT may have stood alone at the top of our 4G availability rankings six months ago, but in our latest test period it faced a challenger. GT and Taiwan Mobile were tied for the 4G availability award as our testers on both operators' networks were able to find an LTE signal more than 91% of the time.

FarEasTone dominates 4G upload speed

While the contest for many of our awards was close, that was not the case for 4G upload speed. FarEasTone stood head and shoulders above its rivals in this metric, averaging LTE upload speeds of 13.4 Mbps.

4G's reach in Taiwan continues to grow

Taiwan is quickly becoming a global leader in LTE reach. Two Taiwanese operators now have 4G availability scores over 90% in our measurements, and two more were a hair's breadth away from crossing that threshold. Competition in 4G availability has become intense especially in the island's major cities.

Awards Table

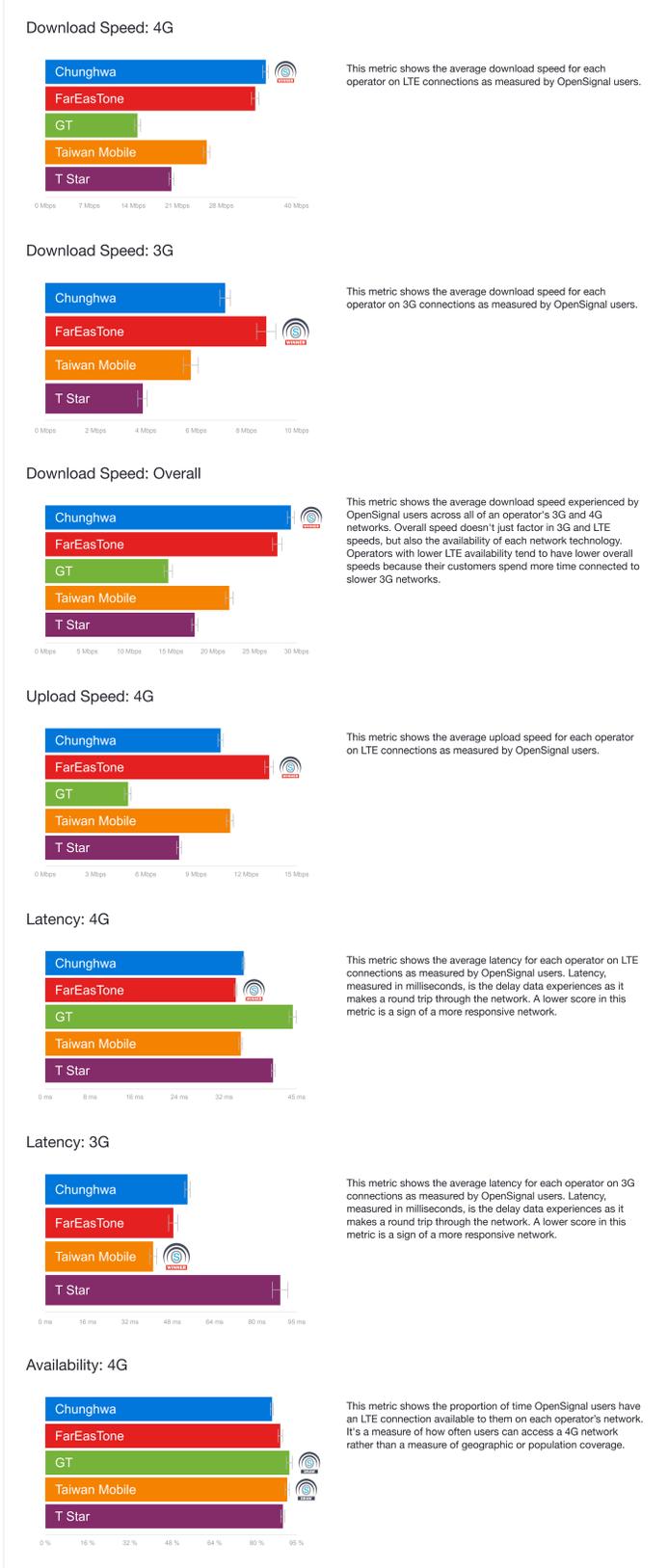
Operator	Download Speed: 4G	Download Speed: 3G	Download Speed: Overall	Upload Speed: 4G	Latency: 4G	Latency: 3G	Availability: 4G
Chunghwa	Winner		Winner				
FarEasTone		Winner		Winner	Winner		
GT							Winner
T Star							
Taiwan Mobile						Winner	Winner

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Performance by Metric



Regional Performance

This chart shows the regional winners in each category OpenSignal measures. Click on the icons to see a more detailed graph showing each operator's metrics in a particular region.

Legend: G GT, F FarEasTone, C Chunghwa, T Taiwan Mobile, P T Star

Region	Download Speed: 4G	Download Speed: Overall	Upload Speed: 4G	Latency: 4G	Availability: 4G
Kaohsiung	C	C	F	F, T	F, T
Taichung	F, C	F, C	F	F, T	G, F, C, T, P
Tainan	C	C	F, T	F, T	G, F, T, P
Taipei	C	F, C	F	C	G, T

Analysis

Taiwan is an island full of powerful LTE networks, but while in most of our State of Mobile Networks reports we can usually single out one or two dominant 4G operators, we can't do that for Taiwan. For the four 4G metrics we tracked in this report, we had four different winners. Chunghwa established itself as the leader in our 4G download speed metric. FarEasTone stood apart in both 4G upload speed and latency. Meanwhile GT and Taiwan Mobile tied for our 4G availability award. Those operators shared one thing in common though: all four prize winners had world-class scores in their respective categories.

For our Taiwan report, we analyzed more than 415 million data points collected by 32,117 users in a 90-day period starting March 1, 2018 to compare the 3G and 4G experience offered by Chunghwa Telecom, FarEasTone, Taiwan Mobile and T Star Telecom. We also examined the 4G metrics of LTE-only provider GT, the consumer brand of Asia Pacific Telecom. In addition to showing each operator's national results, we drilled down into our 4G measurements in Taiwan's four largest metro areas: Greater Taipei, Taichung, Kaohsiung and Tainan. Let's start first with our speed results.

Powerful networks, fast connections

Chunghwa grabbed our 4G download speed award, averaging LTE download connections of 35.1 Mbps in our tests. FarEasTone was less than 2 Mbps behind the leader though, with a measured average of 33.4 Mbps. The two were the only operators to break the 30 Mbps threshold in our results, and both operators' speed scores were double the global average for LTE download speed of 16.9 Mbps, as measured in our recent State of LTE report. Taiwan Mobile's measured 4G download average of 25.7 was also a very good result, but GT's score of 14.7 Mbps was on the slow side, more than 2 Mbps below the global average.

FarEasTone captured our 3G speed award with an average HSPA download speed of 8.8 Mbps in our measurements. But in a land chock-full of LTE signals, 3G connectivity is becoming a minor consideration. FarEasTone's 3G speed lead wasn't enough to overcome Chunghwa's 4G download advantage in our overall speed category, which measures the typical speeds consumers see across an operator's mobile data networks. Our Chunghwa users saw typical everyday speeds of 29.3 Mbps, though FarEasTone wasn't far off that mark as its users were able to tap into 27.7 Mbps overall speeds.

That competition between Chunghwa and FarEasTone in overall download speeds was mirrored in our city results. In Taiwan's two largest cities, Taipei and Taichung, Chunghwa and FarEasTone were statistically tied for our overall speed awards. In 4G download speed, FarEasTone drew with Chunghwa for our award in Taichung, but Chunghwa was the sole winner in Taipei, Kaohsiung and Tainan.

When we look at our final speed metric, there wasn't much of a contest. FarEasTone jumped ahead of all of its rivals in 4G upload speed, its score of 13.4 Mbps being more than 20% faster than its nearest competitor. FarEasTone also handily won our regional awards for 4G upload speed in three cities, drawing only in Tainan with Taiwan Mobile.

Passing the 90% mark in 4G reach

4G signals are certainly not hard to find in Taiwan. For the first time, all five operators achieved 4G availability scores of 85% or better in our measurements. Two operators, GT and Taiwan Mobile, passed the 90% threshold, while two others, FarEasTone and T Star, were less than a percentage point shy of the same mark. Signal for signal, Taiwan's operators are quickly joining the global elite in 4G availability. But GT and Taiwan Mobile were able to provide our users with a 4G connection more than 91% of the time, making the two operators joint winners of our 4G availability award.

Determining clear winners in Taiwan's cities was even more difficult as nearly every operator boosted their LTE reach in metro areas. We had draws in all four cities, and in the case of Taichung we recorded a five-way statistical tie. In Taipei the results were particularly impressive as four of the five operators racked up 4G availability scores over 90%.

For our final set of metrics, we examined latency, which is a measure of a network's response time. Low latency connections mean quicker load times on the mobile internet and less lag in real-time communications apps. FarEasTone won our 4G latency award with an impressive response time of 34.1 milliseconds, but Chunghwa and Taiwan Mobile also turned in sub-40ms scores in this metric. In addition, Taiwan Mobile grabbed our 3G latency award with a 40.7ms ping measurement, a particularly outstanding score that we would typically expect to see on LTE networks.

In terms of technological prowess, Taiwan is becoming a very competitive market. While Chunghwa and FarEasTone may have taken most of our awards, the close competition and diversity of winners in our key 4G metrics shows that no operator is emerging as the dominant mobile broadband threat. It will be interesting to see if Taiwan capitalizes on its gains to climb up global 4G rankings in future State of LTE reports. It hasn't yet joined the global 4G elite, but it's definitely on the cusp.

Our Methodology

OpenSignal measures the real-world experience of consumers on mobile networks as they go about their daily lives. We collect 3 billion individual measurements every day from tens of millions of smartphones worldwide.

Our measurements are collected at all hours of the day, every day of the year, under conditions of normal usage, including inside buildings and outdoors, in cities and the countryside, and everywhere in between. By analyzing on-device measurements recorded in the places where subscribers actually live, work and travel, we report on mobile network service the way users truly experience it.

We continually adapt our methodology to best represent the changing experience of consumers on mobile networks and, therefore, comparisons of the results to past reports should be considered indicative only. For more information on how we collect and analyze our data, see our methodology page.

For this particular report, 414,874,529 datapoints were collected from 32,117 users during the period: Mar 1 - May 29, 2018.

For every metric we've calculated statistical confidence intervals and plotted them on all of the graphs. When confidence intervals overlap for a certain metric, our measured results are too close to declare a winner in a particular category. In those cases, we show a statistical draw. For this reason, some metrics have multiple operator winners.

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