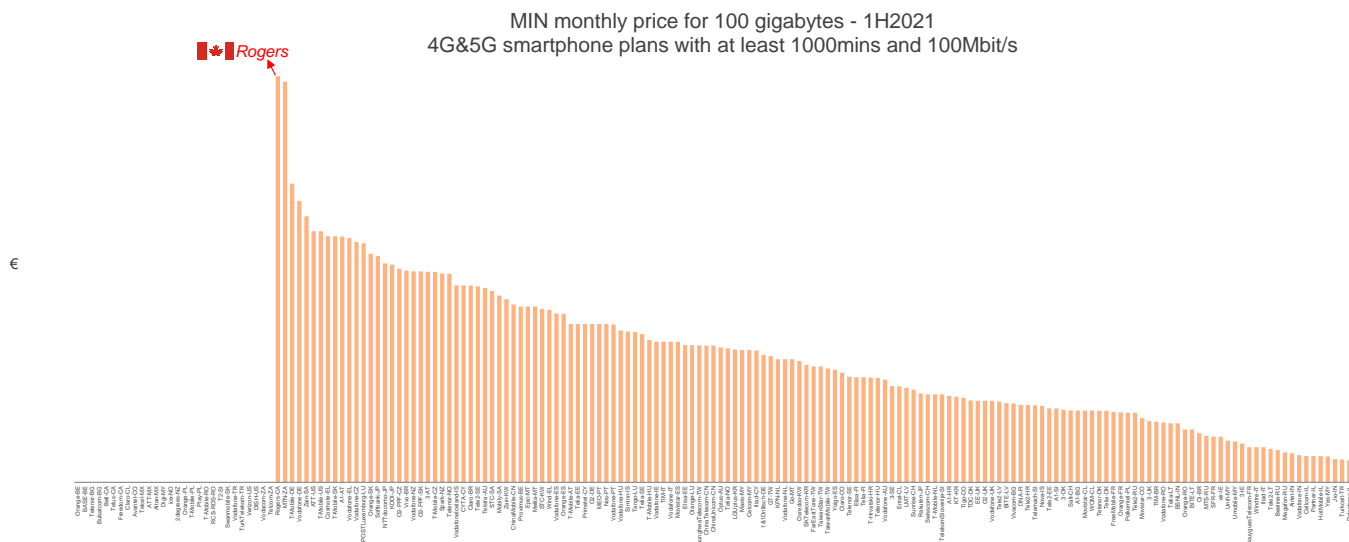


The state of 4G and 5G pricing, 1H2021 – operator rankings

4G and 5G prices from 179 operators in 51 European, American, Asia Pacific, Middle East and African countries. Who are the operators with the highest and lowest monthly prices in the world?

Rewheel research PRO study, Digital Fuel Monitor 15th release – April 2021



Minimum monthly retail price (incl. VAT & tax) for a given gigabyte allowance and peak speed among all eligible tariffs logged in the database for operator. The chart depicts the minimum monthly price that meets the criteria from the operator main brand, sub-brands or any of the MVNOs hosted by the operator. Unlimited data volume tariffs had no finite gigabyte volume (i.e. no throttling or deprioritization).

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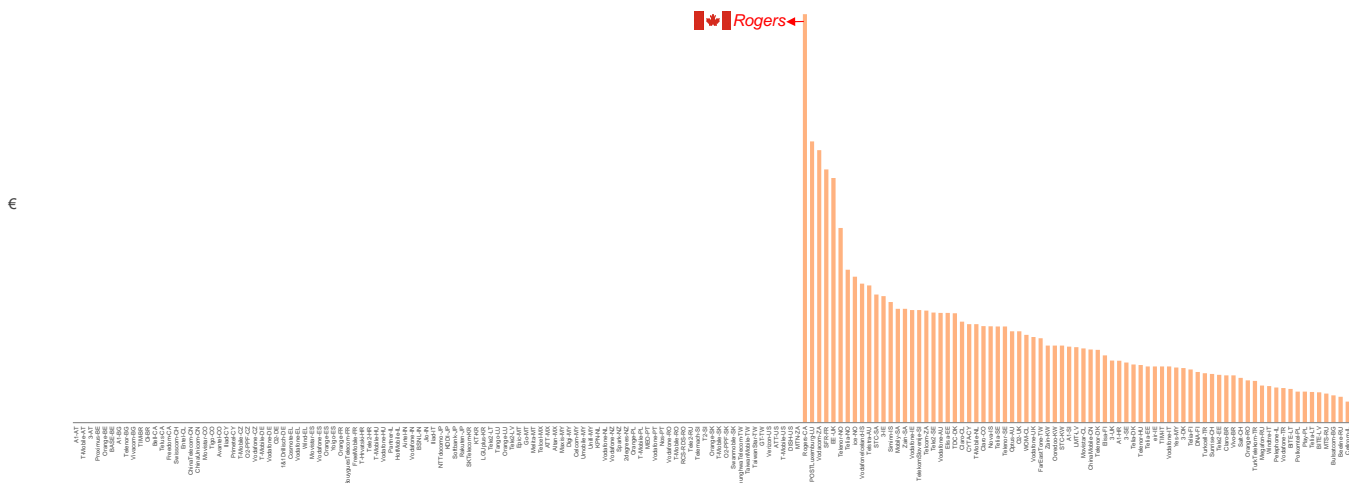
Operators with lowest monthly prices

- Jio India had the lowest monthly prices for 4G smartphone/mobile broadband plans with up to 50 gigabytes.
- Megafon Russia had the lowest monthly prices for 4G smartphone plans with 1000 or unlimited gigabytes.
- Pelephone Israel had the lowest monthly prices for 5G smartphone plans with 1000 or unlimited gigabytes.
- Jio India, Pelephone Israel, Megafon Russia, Vodafone India, Cellcom Israel, MTS Russia, Orange Romania, BITE Lithuania, Three UK sold during March 2021 smartphone, mobile broadband or wireless broadband plans with the lowest monthly prices.

Operators with highest monthly prices

- Rogers Canada had the highest monthly prices for smartphone and mobile broadband plans with 100 gigabytes.
- Bell Canada had the highest monthly prices for smartphone plans with 10 and mobile broadband plans with 50 gigabytes.
- Rogers, Bell and Telus Canada, Zain Kuwait, MTN South Africa, A1 Austria, Verizon US, STC Saudi Arabia, AT&T US, Telenor Norway sold during March 2021 smartphone, mobile broadband or wireless broadband plans with the highest monthly prices.

MIN monthly price for 100 gigabytes - 1H2021
4G&5G mobile broadband plans with at least 100Mbit/s



Minimum monthly retail price (incl. VAT & tax) for a given gigabyte allowance and peak speed among all eligible tariffs logged in the database for operator. The chart depicts the minimum monthly price that meets the criteria from the operator main brand, sub-brands or any of the MVNOs hosted by the operator. Unlimited data volume tariffs had no finite gigabyte volume (i.e. no throttling or deprioritization).

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Mobile data pricing, mobile operator competitiveness rankings, market modelling & analysis, competition analysis (consolidation, 4 to 3 mobile mergers, effective remedies, new market entries), MNO near-zero marginal data cost, MVNO economics, mobile capacity-only play, mobile centric convergence (MCC) pro-competitive strategies and 4th MNO business case.

Founded in 2009 and incorporated in Finland, Rewheel is a privately owned independent telecom research firm and boutique management consultancy. Our clients are mobile network operators, telco groups, MVNO groups, competition authorities, telecom sector regulators, governments, global internet firms, mobile data-centric start-ups, PE and VC investors.

Rewheel has delivered management consultancy work for clients in the United Kingdom, United States, Ireland, Switzerland, Finland, Sweden, Belgium, Greece, Poland, Slovenia, Hungary, Russia, Romania.

The following authorities have acquired access to Rewheel's independent pricing, mobile market competitiveness, 4 to 3 merger analysis and remedy assessment research: The European Commission Directorate for Competition, the United States Department of Justice, the New York, California and many other US State Attorney General Offices, the national competition authorities of Canada, Australia, the Netherlands and Greece, the Ministry of Economic Affairs of the Netherlands, the Ministry of Industry and Trade of Czechia, the Korean Electronics and Telecommunication Research Institute, the sector regulators of the United Kingdom, Germany, France, the Netherlands, Ireland, Finland, Portugal, etc.

Rewheel's mobile data pricing, strategy, competition analysis, merger assessment, network economics, spectrum, profitability and competitiveness focused reports have been cited by OECD Economic Surveys, The Economist, The Financial Times, The New York Times, Reuters, Bloomberg, WSJ and publicly referenced by the UK telecoms regulator Ofcom, BIPT, Vodafone, Telefonica, Tele2, Elisa, DNA, GSMA, VPs of the EU Commission responsible for Competition, MEPs, IEEE, ITU.

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1 Methodology

On April 2021 we released a study titled “*The state of 4G and 5G pricing, 1H2021 – country rankings*”. Therein we presented the country rankings (March 2021 prices) of 51 European, American, Asia Pacific, Middle East and African countries for smartphone, mobile broadband and wireless broadband plans using a number of metrics such as the minimum monthly price for a given gigabyte volume, median monthly price, median gigabyte allowance, median gigabyte price, maximum gigabytes a given monthly EUR amount bought, minimum/median monthly price for unlimited data etc.

Herein, we present and discuss the rankings (March 2021 prices) of the 179 mobile network operators that were present across the 51 European, American, Asia Pacific, Middle East and African countries.

The data collection and analysis methodology used in this study is identical to the methodology we used in the 1H2021 country rankings study¹ that was released on the 1st of April 2021.

1.1 Price metrics for operator 1H2021 rankings

Herein we use the *MIN monthly price for a given gigabyte volume and peak speed* (e.g., 100 gigabytes at 100Mbit/s) to rank the 179 operators present in the 51 European, American, Asia Pacific, Middle East and African countries. The *MIN monthly price for a given gigabyte volume and peak speed* is the lowest monthly retail price (including VAT and other applicable taxes) per operator among all eligible tariffs that were logged in the database that included the given gigabyte volume at the specified peak speed. Please note that the charts presented herein depict the minimum monthly price (i.e., the tariff with the lowest price that meets the criteria) from the operator main brand, sub-brands or any of the MVNOs hosted by the operator.

For smartphone plans we present the *MIN monthly price* rankings for:

- 1 gigabyte at 1Mbit/s
- 5 gigabytes at 5Mbit/s
- 10 gigabytes at 10Mbit/s
- 25 gigabytes at 25Mbit/s
- 50 gigabytes at 50Mbit/s
- 100 gigabytes at 100Mbit/s,
- 1000 gigabytes at 100Mbit/s
- 1000 5G gigabytes at 500Mbit/s

For mobile broadband plans we present the *MIN monthly price* rankings for:

- 10 gigabytes at 10Mbit/s
- 25 gigabytes at 25Mbit/s
- 50 gigabytes at 50Mbit/s
- 100 gigabytes at 100Mbit/s,
- 1000 gigabytes at 100Mbit/s
- 1000 5G gigabytes at 500Mbit/s

For wireless broadband plans we present the *MIN monthly price* rankings for:

- 100 gigabytes at 10Mbit/s
- 250 gigabytes at 25Mbit/s
- 500 gigabytes at 50Mbit/s
- 1000 gigabytes at 100Mbit/s,
- 1000 5G gigabytes at 500Mbit/s

¹http://research.rewheel.fi/downloads/The_state_of_4G_5G_pricing_15_release_1H2021_countries_PUBLIC_VERSION.pdf

Rewheel research subscribers that purchase the 4G and 5G tariff database (Excel spreadsheet) could automatically create charts/tables for any price metric, including historic development, detailed above for smartphone, mobile broadband, and wireless broadband plans for any country or mobile network operator. Subscribers could freely choose to include in the charts 4G plans only, 5G plans only, 4G&5G plans, the operator main brands only, the operator sub-brands only, the MVNOs only or all brands. Subscribers could determine freely the peak speed tier (e.g., 1, 10, 100, 500, 1000Mbit/s) rule, the minimum gigabyte basket rule (e.g., 1, 10, 100, 1000 or unlimited gigabytes) or the maximum monthly EUR basket rule (e.g., 5, 10, 20, 30, 40, 50 EUR).