

By 2024, there will be **1.5 billion** 5G subscribers and the network will cover **>40%** of the world's population with **>22 billion** IoT connections

2G
VOICE TRANSMISSION

3G
MOBILE DATA & RICH CONTENT

4G
SPEED BOOST: APP & MOBILE-STREAMING REVOLUTION

Under certain conditions, 5G peak data rate could support up to 20 Gbit/s

PEAK DATA RATE
5G: 10 Gbit/s
4G: 1 Gbit/s

USER-EXPERIENCED DATA RATE
5G: 100 Mbit/s
4G: 10 Mbit/s

LATENCY
5G: 1 ms
4G: 10 ms

SPECTRUM EFFICIENCY
5G: 3x
4G: 1x

MOBILITY
5G: 500 km/h
4G: 350 km/h

Maximum motion speed of a device using the network

CONNECTION DENSITY
5G: 10⁶ devices/km²
4G: 10⁵ devices/km²

5G

UNMATCHED CONNECTIVITY

The tremendous speed and low latency of 5G will allow users to respond to ever-increasing volumes of data, and to remain connected around the clock to a world of devices beyond computers and phones.

NETWORK ENERGY EFFICIENCY
5G: 100x
4G: 1x

AREA TRAFFIC CAPACITY
5G: 10 Mbit/s/m²
4G: 0.1 Mbit/s/m²

Total traffic throughput served per geographical area

SpaceX's recent FCC approval to launch **7,500** StarLink satellites into space could eventually create a blanket connection across the electromagnetic spectrum

By 2035, the "multiplier effect" of 5G is expected to produce **US\$10 trillion** in revenue

A 5G WORLD: 24-Hour Connectivity and Evolution of Smart Cities/IoT

HOME: High-speed, on-demand streaming with 4K-8K video and gaming capabilities

PUBLIC SAFETY: Multi-angle, hi-res video streaming and surveillance with smart analytics and alerts

HEALTHCARE: Remote surgeries and real-time mobile delivery of rich medical data sets

ENERGY & UTILITIES: Resource management through smart meters and integrated sensors in micro grid

AGRICULTURE: Autonomous vehicles perform harvesting and predictive maintenance

FINANCIAL SERVICES: Real-time mobile trading and secure, remote sessions with financial advisors

RETAIL: Artificial- and virtual-reality shopping from anywhere

PUBLIC TRANSPORT: Connected traffic cloud aggregates and analyzes real-time data from networked autonomous vehicles

MANUFACTURING: Remote diagnostics of robots on factory floor with hi-res 3-D video or haptic feedback, thermal and other sensors