



## Korea - 2021 Forecast Highlights

### IP Traffic

- In Korea, IP traffic will grow 2-fold from 2016 to 2021, a compound annual growth rate of 18%.
- In Korea, IP traffic will reach 8.8 Exabytes per month in 2021, up from 3.9 Exabytes per month in 2016.
- Korea's IP networks will carry 290 Petabytes per day in 2021, up from 127 Petabytes per day in 2016.
- In Korea, IP traffic will reach an annual run rate of 106.0 Exabytes in 2021, up from an annual run rate of 46.3 Exabytes in 2016.
- In Korea, IP traffic will reach 172 Gigabytes per capita in 2021, up from 76 Gigabytes per capita in 2016.
- In Korea, average IP traffic will reach 27 Tbps in 2021, and busy hour traffic will reach 144 Tbps.
- In 2021, the gigabyte equivalent of all movies ever made will cross Korea's IP networks every 40 minutes.

### Internet Traffic

- In Korea, Internet traffic will grow 2.3-fold from 2016 to 2021, a compound annual growth rate of 18%.
- In Korea, busy hour Internet traffic will grow 3.6-fold from 2016 to 2021, a compound annual growth rate of 29%.
- In Korea, Internet traffic will reach 7.7 Exabytes per month in 2021, up from 3.4 Exabytes per month in 2016.
- Korea's Internet traffic will be 253 Petabytes per day in 2021, up from 110 Petabytes per day in 2016.
- Korea's Internet traffic in 2021 will be equivalent to 23 billion DVDs per year, 2 billion DVDs per month, or 3 million DVDs per hour.
- In 2021, the gigabyte equivalent of all movies ever made will cross the Internet every 46 minutes.

- Korean Internet traffic in 2021 will be equivalent to 26x the volume of the entire Korean Internet in 2005.
- In Korea, Internet traffic will reach 149 Gigabytes per capita in 2021, up from 67 Gigabytes per capita in 2016.
- In Korea, average Internet traffic will increase 2.3-fold by 2021 and will reach 23 Tbps.
- In Korea, busy hour Internet traffic will increase 3.6-fold by 2021 and will reach 125 Tbps.

### Wired Wi-Fi and Mobile Growth

- Korea's Fixed/Wi-Fi was 47% of total IP traffic in 2016, and will be 52% of total IP traffic in 2021.
- Korea's Fixed/Wired was 46% of total IP traffic in 2016, and will be 35% of total IP traffic in 2021.
- Korea's Mobile was 7% of total IP traffic in 2016, and will be 13% of total IP traffic in 2021.
- Korea's Fixed/Wi-Fi was 53.2% of total Internet traffic in 2016, and will be 59.0% of total Internet traffic in 2021.
- Korea's Fixed/Wired was 39% of total Internet traffic in 2016, and will be 26% of total Internet traffic in 2021.
- Korea's Mobile was 7.4% of total Internet traffic in 2016, and will be 15.2% of total Internet traffic in 2021.
- In Korea, mobile data traffic will grow 5-fold from 2016 to 2021, a compound annual growth rate of 36%.
- In Korea, mobile data traffic will reach 1.2 Exabytes per month in 2021, up from 251 Petabytes per month in 2016.
- Korean mobile data traffic will grow 2 times faster than Korean fixed IP traffic from 2016 to 2021.
- Korea's Mobile was 7% of total IP traffic in 2016, and will be 13% of total IP traffic in 2021.
- In Korea, mobile data traffic in 2021 will be equivalent to 3x the volume of the entire Korean Internet in 2005.

### IP Video

- In Korea, IP video traffic will grow 3-fold from 2016 to 2021, a compound annual growth rate of 23%.
- In Korea, IP video traffic will reach 7.0 Exabytes per month in 2021, up from 2.4 Exabytes per month in 2016.
- In Korea, IP video will be 79% of all IP traffic in 2021, up from 63% in 2016.
- In Korea, Ultra HD will be 20.7% of IP Video traffic in 2021, up from 3.2% in 2016 (79.6% CAGR).
- In Korea, HD will be 61.2% of IP Video traffic in 2021, up from 45.2% in 2016 (31.1% CAGR).
- In Korea, SD will be 18.1% of IP Video traffic in 2021, compared to 51.6% in 2016 (0.0% CAGR).
- In Korea, consumer IP video traffic will be 81% of consumer IP traffic in 2021, up from 66% in 2016.
- In Korea, business IP video traffic will be 67% of business IP traffic in 2021, up from 45% in 2016.

### Internet Video

- In Korea, Internet video traffic will grow 3-fold from 2016 to 2021, a compound annual growth rate of 24%.
- In Korea, Internet video traffic will reach 5.9 Exabytes per month in 2021, up from 2.0 Exabytes per month in 2016.
- In Korea, total Internet video traffic (business and consumer, combined) will be 77% of all Internet traffic in 2021, up from 59% in 2016.
- In Korea, Ultra HD will be 20.4% of Internet video traffic in 2021, up from 3.8% in 2016 (73.6% CAGR).

- In Korea, HD will be 59.4% of Internet video traffic in 2021, up from 40.0% in 2016 (34.2% CAGR).
- In Korea, SD will be 20.2% of Internet video traffic in 2021, compared to 56.3% in 2016 (1.0% CAGR).
- In Korea, consumer Internet video traffic will be 78% of consumer Internet traffic in 2021, up from 61% in 2016.
- In Korea, business Internet video traffic will be 68% of business Internet traffic in 2021, up from 47% in 2016.
- In Korea, Internet-Video-to-TV traffic will be 22% of fixed consumer Internet video traffic in 2021, up from 13% in 2016.
- In Korea, Internet-Video-to-TV traffic will increase 4-fold between 2016 and 2021 (33.7% CAGR).
- In Korea, 133 billion minutes (253,260 years) of video content will cross the Internet each month in 2021. That's 50,652 minutes of video streamed or downloaded every second.
- In Korea, 99% of all Internet video traffic will cross content delivery networks in 2021, up from 84% in 2016.
- In Korea, 85.1% of all Internet video traffic will be long-form video (including live) in 2021, up from 87.7% in 2016.

### IP VOD

- In Korea, Ultra HD will be 23.2% of IP VOD traffic in 2021, up from 0.4% in 2016 (171.7% CAGR).
- In Korea, HD will be 72.2% of IP VOD traffic in 2021, up from 72.4% in 2016 (21.1% CAGR).
- In Korea, SD will be 4.6% of IP VOD traffic in 2021, compared to 27.2% in 2016 (-15.1% CAGR).

### Gaming

- In Korea, gaming traffic will grow 4-fold from 2016 to 2021, a compound annual growth rate of 30%.
- In Korea, gaming traffic will reach 217 Petabytes per month in 2021, up from 58 Petabytes per month in 2016.
- In Korea, gaming traffic will be 3% of consumer Internet traffic in 2021, up from 2% in 2016.

### Devices

- In Korea, there will be 617.1 million networked devices in 2021, up from 339.8 million in 2016.
- In Korea, there will be 12.0 networked devices per capita in 2021, up from 6.7 per capita in 2016.
- In Korea, 30% of all networked devices will be mobile-connected in 2021.
- In Korea, M2M modules will account for 72% (446.6 million) of all networked devices in 2021, compared to 60% (204.2 million) in 2016, (16.9% CAGR).
- In Korea, PCs will account for 3% (17.9 million) of all networked devices in 2021, compared to 6% (19.9 million) in 2016, (-2.2% CAGR).
- In Korea, Tablets will account for 1% (8.0 million) of all networked devices in 2021, compared to 2% (7.4 million) in 2016, (1.5% CAGR).
- In Korea, Smartphones will account for 9% (56.5 million) of all networked devices in 2021, compared to 14% (47.3 million) in 2016, (3.6% CAGR).
- In Korea, Connected TVs will account for 13% (78.3 million) of all networked devices in 2021, compared to 14% (48.0 million) in 2016, (10.3% CAGR).

- In Korea, Non-Smartphones will account for 0.0% (279305) of all networked devices in 2021, compared to 2% (7.0 million) in 2016, (-47.5% CAGR).
- In Korea, Other Portables will account for 2% (9.6 million) of all networked devices in 2021, compared to 2% (5.9 million) in 2016, (10% CAGR).
- In Korea, 4K TVs will account for 46% (10.6 million) of all flat panel TVs in 2021, compared to 10.6% (1.4 million) in 2016, (49.3% CAGR).
- Korea's IP traffic from non-PC devices was 37% of total IP traffic in 2016, and will be 69% of total IP traffic in 2021.
- In Korea, PCs accounted for 63% of IP traffic in 2016, and will be 31% of IP traffic in 2021.
- In Korea, TVs accounted for 16% of IP traffic in 2016, and will be 23% of IP traffic in 2021.
- In Korea, Smartphones accounted for 16% of IP traffic in 2016, and will be 38% of IP traffic in 2021.
- In Korea, Tablets accounted for 3% of IP traffic in 2016, and will be 5% of IP traffic in 2021.
- In Korea, M2M modules accounted for 1.0% of IP traffic in 2016, and will be 3.4% of IP traffic in 2021.
- In Korea, PCs accounted for 73% of consumer Internet traffic in 2016, and will be 37% of consumer Internet traffic in 2021.
- In Korea, TVs accounted for 7% of consumer Internet traffic in 2016, and will be 15% of consumer Internet traffic in 2021.
- In Korea, TVs accounted for 6% of total Internet traffic in 2016, and will be 13% of total Internet traffic in 2021.

### Speed Evolution

- In Korea, the average fixed broadband speed will grow 1.8-fold from 2016 to 2021, from 69.1 Mbps to 121.7 Mbps.
- In Korea, 99% of fixed broadband connections will be faster than 5 Mbps in 2021, up from 94% today.
- In Korea, 99% of fixed broadband connections will be faster than 10 Mbps in 2021, up from 85% today.
- In Korea, 95.1% of fixed broadband connections will be faster than 25 Mbps in 2021, up from 68.1% today.
- In Korea, 81.4% of fixed broadband connections will be faster than 50 Mbps in 2021, up from 52.4% today.
- In Korea, the average Wi-Fi speeds from mobile devices will grow 1.7-fold from 2016 to 2021, from 37.2 Mbps to 63 Mbps.
- In Korea, the average mobile connection speed will grow 1-fold from 2016 to 2021, reaching 44 Mbps in 2021.

### Traffic per User and Household

- In Korea, the average Internet user will generate 113.3 Gigabytes of Internet traffic per month in 2021, up 87% from 60.6 Gigabytes per month in 2016, a CAGR of 13%.
- In Korea, the average Internet household will generate 280.3 Gigabytes of Internet traffic per month in 2021, up 87% from 149.5 Gigabytes per month in 2016, a CAGR of 13%.
- In Korea, the average FTTx Internet household will generate 314.1 Gigabytes of Internet traffic per month in 2021, 85.7% more than other broadband households.
- In Korea, the average FTTx Internet household generated 175.1 Gigabytes of Internet traffic per month in 2016, 92.2% more than other broadband households.

- In Korea, there will be 6 million Internet households (31.0% of all Internet households) generating more than 250 Gigabytes per month in 2021.
- In Korea, there will be 4 million households (22.0% of all Internet households) generating more than 500 Gigabytes per month in 2021.
- In Korea, there will be 1 million households (6.0% of all Internet households) generating more than a terabyte per month in 2021.
- In Korea, the average mobile connection will generate 17,395 Megabytes of mobile data traffic per month in 2021, up from 4,280 Megabytes in 2016.

### Traffic Topology and Traffic Patterns

- In Korea, 82% of all Internet traffic will cross content delivery networks in 2021, up from 56% in 2016.
- In Korea, peak Internet traffic will grow at a compound annual growth rate of 29% from 2016 to 2021, compared to 18% for average Internet traffic.