



## China - 2020 Forecast Highlights

### IP Traffic

- In China, IP traffic will grow 3-fold from 2015 to 2020, a compound annual growth rate of 21%.
- In China, IP traffic will reach 30.2 Exabytes per month in 2020, up from 11.6 Exabytes per month in 2015.
- China's IP networks will carry 994 Petabytes per day in 2020, up from 382 Petabytes per day in 2015.
- In China, IP traffic will reach an annual run rate of 362.9 Exabytes in 2020, up from an annual run rate of 139.6 Exabytes in 2015.
- In China, IP traffic will reach 22 Gigabytes per capita in 2020, up from 8 Gigabytes per capita in 2015.
- In China, average IP traffic will reach 92 Tbps in 2020, and busy hour traffic will reach 507 Tbps.
- In 2020, the gigabyte equivalent of all movies ever made will cross China's IP networks every 12 minutes.

### Internet Traffic

- In China, Internet traffic will grow 3.2-fold from 2015 to 2020, a compound annual growth rate of 26%.
- In China, busy hour Internet traffic will grow 4.7-fold from 2015 to 2020, a compound annual growth rate of 36%.
- In China, Internet traffic will reach 23.3 Exabytes per month in 2020, up from 7.3 Exabytes per month in 2015.
- China's Internet traffic will be 765 Petabytes per day in 2020, up from 240 Petabytes per day in 2015.
- China's Internet traffic in 2020 will be equivalent to 70 billion DVDs per year, 6 billion DVDs per month, or 8 million DVDs per hour.
- In 2020, the gigabyte equivalent of all movies ever made will cross the Internet every 15 minutes.

- Chinese Internet traffic in 2020 will be equivalent to 257x the volume of the entire Chinese Internet in 2005.
- In China, Internet traffic will reach 17 Gigabytes per capita in 2020, up from 5 Gigabytes per capita in 2015.
- In China, average Internet traffic will increase 3.2-fold by 2020 and will reach 71 Tbps.
- In China, busy hour Internet traffic will increase 4.7-fold by 2020 and will reach 390 Tbps.

### Wired Wi-Fi and Mobile Growth

- China's Fixed/Wi-Fi was 28% of total IP traffic in 2015, and will be 40% of total IP traffic in 2020.
- China's Fixed/Wired was 69% of total IP traffic in 2015, and will be 45% of total IP traffic in 2020.
- China's Mobile was 3% of total IP traffic in 2015, and will be 15% of total IP traffic in 2020.
- China's Fixed/Wi-Fi was 41.9% of total Internet traffic in 2015, and will be 50.3% of total Internet traffic in 2020.
- China's Fixed/Wired was 53% of total Internet traffic in 2015, and will be 30% of total Internet traffic in 2020.
- China's Mobile was 5.3% of total Internet traffic in 2015, and will be 19.9% of total Internet traffic in 2020.

### IP Video

- In China, IP video traffic will grow 3-fold from 2015 to 2020, a compound annual growth rate of 23%.
- In China, IP video traffic will reach 26.3 Exabytes per month in 2020, up from 9.2 Exabytes per month in 2015.
- In China, IP video will be 87% of all IP traffic in 2020, up from 79% in 2015.
- In China, Ultra HD will be 15.7% of IP Video traffic in 2020, up from 2.4% in 2015 (79.2% CAGR).
- In China, HD will be 64.2% of IP Video traffic in 2020, up from 42.4% in 2015 (34.0% CAGR).
- In China, SD will be 20.1% of IP Video traffic in 2020, compared to 55.2% in 2015 (0.8% CAGR).
- In China, consumer IP video traffic will be 90% of consumer IP traffic in 2020, up from 87% in 2015.
- In China, business IP video traffic will be 71% of business IP traffic in 2020, up from 49% in 2015.

### Internet Video

- In China, Internet video traffic will grow 4-fold from 2015 to 2020, a compound annual growth rate of 30%.
- In China, Internet video traffic will reach 19.6 Exabytes per month in 2020, up from 5.2 Exabytes per month in 2015.
- In China, total Internet video traffic (business and consumer, combined) will be 84% of all Internet traffic in 2020, up from 72% in 2015.
- In China, Ultra HD will be 12.3% of Internet video traffic in 2020, up from 2.3% in 2015 (82.1% CAGR).
- In China, HD will be 74.4% of Internet video traffic in 2020, up from 47.9% in 2015 (42.4% CAGR).
- In China, SD will be 13.3% of Internet video traffic in 2020, compared to 49.8% in 2015 (0.2% CAGR).
- In China, consumer Internet video traffic will be 87% of consumer Internet traffic in 2020, up from 78% in 2015.
- In China, business Internet video traffic will be 72% of business Internet traffic in 2020, up from 51% in 2015.
- In China, Internet-Video-to-TV traffic will be 24% of fixed consumer Internet video traffic in 2020, up from 21% in 2015.

- In China, Internet-Video-to-TV traffic will increase 4-fold between 2015 and 2020 (29.4% CAGR).
- In China, 307 billion minutes (584,961 years) of video content will cross the Internet each month in 2020. That's 116,992 minutes of video streamed or downloaded every second.
- In China, 46% of all Internet video traffic will cross content delivery networks in 2020, up from 32% in 2015.
- In China, 42% of all Internet traffic will cross content delivery networks in 2020, up from 24% in 2015.

## IP VOD

- In China, Ultra HD will be 28.3% of IP VOD traffic in 2020, up from 2.7% in 2015 (75.7% CAGR).
- In China, HD will be 37.5% of IP VOD traffic in 2020, up from 37.7% in 2015 (9.9% CAGR).
- In China, SD will be 34.2% of IP VOD traffic in 2020, compared to 59.6% in 2015 (-1.6% CAGR).

## Gaming

- In China, Internet gaming traffic will grow 6-fold from 2015 to 2020, a compound annual growth rate of 43%.
- In China, Internet gaming traffic will reach 19.6 Exabytes per month in 2020, up from 5.2 Exabytes per month in 2015.
- In China, Internet gaming traffic will be 3% of consumer Internet traffic in 2020, up from 2% in 2015.

## Mobile

- In China, mobile data traffic will grow 12-fold from 2015 to 2020, a compound annual growth rate of 64%.
- In China, mobile data traffic will reach 4.6 Exabytes per month in 2020, up from 385 Petabytes per month in 2015.
- Chinese mobile data traffic will grow 4 times faster than Chinese fixed IP traffic from 2015 to 2020.
- China's Mobile was 3% of total IP traffic in 2015, and will be 15% of total IP traffic in 2020.
- In China, mobile data traffic in 2020 will be equivalent to 39x the volume of the entire Chinese Internet in 2005.

## Devices

- In China, there will be 5.2 billion networked devices in 2020, up from 3.2 billion in 2015.
- In China, there will be 3.7 networked devices per capita in 2020, up from 2.4 per capita in 2015.
- In China, 40% of all networked devices will be mobile-connected in 2020.
- In China, M2M modules will account for 51% (2.6 billion) of all networked devices in 2020, compared to 36% (1.2 billion) in 2015, (17.9% CAGR).
- In China, PCs will account for 5% (263.2 million) of all networked devices in 2020, compared to 9% (288.0 million) in 2015, (-1.8% CAGR).
- In China, Tablets will account for 3% (143.7 million) of all networked devices in 2020, compared to 3% (102.1 million) in 2015, (7.1% CAGR).
- In China, Smartphones will account for 22% (1.1 billion) of all networked devices in 2020, compared to 25% (827.8 million) in 2015, (6.3% CAGR).

- In China, Connected TVs will account for 14% (743.0 million) of all networked devices in 2020, compared to 13% (422.0 million) in 2015, (12% CAGR).
- In China, Non-Smartphones will account for 4.1% (212.3 million) of all networked devices in 2020, compared to 13% (429.8 million) in 2015, (-13.2% CAGR).
- In China, Other Portables will account for 1% (39.1 million) of all networked devices in 2020, compared to 1% (25.1 million) in 2015, (9.3% CAGR).
- In China, 4K TVs will account for 51% (176.3 million) of all flat panel TVs in 2020, compared to 13.7% (17.7 million) in 2015, (58.3% CAGR).
- China's IP traffic from non-PC devices was 50% of total IP traffic in 2015, and will be 73% of total IP traffic in 2020.
- In China, PCs accounted for 50% of IP traffic in 2015, and will be 27% of IP traffic in 2020.
- In China, TVs accounted for 39% of IP traffic in 2015, and will be 29% of IP traffic in 2020.
- In China, Smartphones accounted for 6% of IP traffic in 2015, and will be 32% of IP traffic in 2020.
- In China, Tablets accounted for 4% of IP traffic in 2015, and will be 8% of IP traffic in 2020.
- In China, M2M modules accounted for 1.4% of IP traffic in 2015, and will be 4.0% of IP traffic in 2020.
- In China, PCs accounted for 66% of consumer Internet traffic in 2015, and will be 25% of consumer Internet traffic in 2020.
- In China, TVs accounted for 13% of consumer Internet traffic in 2015, and will be 14% of consumer Internet traffic in 2020.
- In China, TVs accounted for 10% of total Internet traffic in 2015, and will be 12% of total Internet traffic in 2020.

### Speed Evolution

- In China, the average fixed broadband speed will grow 2.1-fold from 2015 to 2020, from 23.1 Mbps to 47.7 Mbps.
- In China, 96% of fixed broadband connections will be faster than 5 Mbps in 2020, up from 75% today.
- In China, 91% of fixed broadband connections will be faster than 10 Mbps in 2020, up from 54% today.
- In China, 51.8% of fixed broadband connections will be faster than 25 Mbps in 2020, up from 27.8% today.
- In China, 42.3% of fixed broadband connections will be faster than 50 Mbps in 2020, up from 17.2% today.
- In China, the average Wi-Fi speeds from mobile devices will grow 2.3-fold from 2015 to 2020, from 10.5 Mbps to 24 Mbps.
- In China, the average mobile connection speed will grow 3-fold from 2015 to 2020, reaching 11 Mbps in 2020.

### Traffic per User and Household

- In China, the average Internet user will generate 22.0 gigabytes of Internet traffic per month in 2020, up 136% from 9.3 gigabytes per month in 2015, a CAGR of 19%.
- In China, the average Internet household will generate 58.9 gigabytes of Internet traffic per month in 2020, up 141% from 24.5 gigabytes per month in 2015, a CAGR of 19%.
- In China, the average FTTx Internet household will generate 78.5 gigabytes of Internet traffic per month in 2020, 98.3% more than other broadband households.

- In China, the average FTTx Internet household generated 40.2 gigabytes of Internet traffic per month in 2015, 117.3% more than other broadband households.
- In China, there will be 12 million Internet households (5.0% of all Internet households) generating more than 250 gigabytes per month in 2020.
- In China, there will be 2 million households (1.0% of all Internet households) generating more than 500 gigabytes per month in 2020.
- In China, there will be 2 million households (1.0% of all Internet households) generating more than a terabyte per month in 2020.
- In China, the average mobile connection will generate 2,906 megabytes of mobile data traffic per month in 2020, up from 278 megabytes in 2015.