U.S. Home Broadband & Wi-Fi Usage Forecast, 2019 - 2024: More time at home, more data at home

Market Study Second Quarter 2020





# U.S. Home Broadband & Wi-Fi Usage Forecast, 2019 - 2024: More time at home, more data at home

# Market Study

Published Second Quarter 2020 Version 1.0 Report Number: 02Q2020-07

iGR 12400 W. Hwy 71 Suite 350 PMB 341 Austin TX 78738

## **Table of Contents**

Abstract	1
Executive Summary	3
Home Broadband Forecast	4
Table A: Forecast of Average Household BW Usage, 2019-2024, Pre-COVID and Po	
Figure A: Forecast of Average Household BW Usage, 2019-2024, Pre-COVID and P	ost-COVID
What This Means	
Methodology	6
U.S. Consumer Home Broadband Usage and Devices	
Home Internet Service	
Table 1: Telecom Services at Home among U.S. Mobile Consumers	
Figure 1: Telecom Services at Home among U.S. Mobile Consumers	
Table 2: Types of Home Internet Service among U.S. Mobile Consumers	
Figure 2: Types of Home Internet Service among U.S. Mobile Consumers	
Table 3: Interest in 5G Home Internet Service among U.S. Mobile Consumers	
Figure 3: Interest in 5G Home Internet Service among U.S. Mobile Consumers	10
Table 4: Speed of Home Internet Service among U.S. Mobile Consumers	11
Figure 4: Speed of Home Internet Service among U.S. Mobile consumers	
Home Wi-Fi Network	12
Table 5: Number of Wi-Fi Access Points at Home	12
Figure 5: Number of Wi-Fi Access Points at Home	13
Devices Used in the Home	13
Table 6: Devices Used in the Home	
Figure 6: Devices Used in the Home	
Table 7: Internet TV Set-up	15
Figure 7: Internet TV Set-up	15
Table 8: Number of In-Home Devices	16
Figure 8: Number of In-Home Devices	16
Table 9: Mobile Device Usage in the Home	17
Figure 9: Mobile Device Usage in the Home	17
Table 10: Locations of Automatic Wi-Fi Connection	18
Figure 10: Locations of Automatic Wi-Fi Connection	18
Online Activities at Home	
Table 11: Online Activities While at Home	19
Figure 11: Online Activities While at Home	20
Frequency of Activities	20
Table 12: Frequency of Online Activities While at Home	21
Figure 12: Frequency of Online Activities While at Home	22
Types of Connections for Activities	22

Quoting information from an *iG*illottResearch publication: external — any *iG*illottResearch information that is to be used in press releases, sales presentations, marketing materials, advertising, or promotional materials requires prior written approval from *iG*illottResearch. *iG*illottResearch reserves the right to deny approval of external usage for any reason. Internal-quoting individual sentences and paragraphs for use in your company's internal communications activities does not require permission from *iG*illottResearch. The use of large portions or the reproduction of any *iG*illottResearch document in its entirety does require prior written approval and may have some financial implications.

	Table 13: Type of Connection for Online Activities While at Home	22
	Figure 13: Type of Connection for Online Activities While at Home	23
	Expected Future Home Internet Usage	24
	Table 14: Future Home Internet Usage	24
	Figure 14: Future Home Internet Usage	24
	Impact of COVID-19 on Future Home Broadband Usage	25
	Table 15: Number of Days Working from Home	25
	Figure 15: Number of Days Working from Home	26
U.	S. Consumer Video Usage	27
	Frequency	
	Table 16: Frequency of Watching Video Content among U.S. Mobile Consumers	
	Figure 16: Frequency of Watching Video Content among U.S. Mobile Consumers	
	Locations	
	Table 17: Locations for Watching Video Content among U.S. Mobile Consumers	28
	Figure 17: Locations for Watching Video Content among U.S. Mobile Consumers	29
	Internet Video Services	29
	Table 18: Entertainment Programming Video Services Used among U.S. Mobile Consum	ers
		29
	Figure 18: Entertainment Programming Video Services Used among U.S. Mobile Consun	
		31
	Table 19: Sports Programming Video Services Used among U.S. Mobile Consumers	31
	Figure 19: Sports Programming Video Services Used among U.S. Mobile Consumers	32
	Frequency	33
	Table 20: Frequency of Internet Video Services Used among U.S. Mobile Consumers	33
	Figure 20: Frequency of Internet Video Services Used among U.S. Mobile Consumers	33
	Table 21: Percentage of Video Time on an Internet Video Service	34
	Figure 21: Percentage of Video Time on an Internet Video Service	34
Tŀ	e Trend to Disconnect TV Service	35
	Mobile Consumers without TV Service	
	Table 22: Disconnection of Previous TV Service among U.S. Mobile Consumers	
	Figure 22: Disconnection of Previous TV Service among U.S. Mobile Consumers	
	Table 23: Why Disconnected TV Service	
	Figure 23: Why Disconnected TV Service	
	Table 24: How Watch TV at Home without TV Service among U.S. Mobile Consumers	
	Figure 24: How Watch TV at Home without TV Service among U.S. Mobile Consumers	
	Mobile Consumers with TV Service	
	Table 25: Likelihood to Disconnect TV Service among U.S. Mobile Consumers	39
	Figure 25: Likelihood to Disconnect TV Service among U.S. Mobile Consumers	
	Table 26: Why Might Disconnect TV Service among U.S. Mobile Consumers	41
	Figure 26: Why Might Disconnect TV Service among U.S. Mobile Consumers	
Tr	ends Regarding Disconnection of Home Internet Service	42
••	Table 27: Regarding U.S. Mobile Consumers with No Home Internet Service	
	Figure 27: Regarding U.S. Mobile Consumers with No Home Internet Service	

Table 28: Disconnection of Previous Home Internet Service among U.S. Mobile Consume	
Figure 28: Disconnection of Previous Home Internet Service among U.S. Mobile Consum	
Table 29: When Home Internet Service was Disconnected	
Figure 29: When Home Internet Service was Disconnected	
Table 30: Why Home Internet Service was Disconnected	
Figure 30: Why Home Internet Service was Disconnected	
U.S. Home Broadband Background Information	47
Number of Household Connections	
Household Connections by Technology	
Table 31: Distribution of Fixed U.S. Residential Connections by Technology	
Figure 31: Distribution of Fixed U.S. Residential Connections by Technology	
Household Connections by Income	
Table 32: Distribution of Fixed U.S. Residential Connections by Income Decile	
Figure 32: Distribution of Fixed U.S. Residential Connections by Income Decile	
Household Connections by Education	
Table 33: Distribution of Fixed U.S. Residential Connections by Education Decile	
Figure 33: Distribution of Fixed U.S. Residential Connections by Education Decile	
Household Connections by Age	
Table 34: Distribution of Fixed U.S. Residential Connections by Age Decile	
Figure 34: Distribution of Fixed U.S. Residential Connections by Age Decile	
Household Connections by Speed	
Table 35: Distribution of U.S. Fixed Residential Connections by Downstream Speed	
Figure 35: Distribution of U.S. Fixed Residential Connections by Downstream Speed	
Table 36: Speed of Home Internet Service among U.S. Mobile Consumers	
Figure 36: Speed of Home Internet Service among U.S. mobile consumers	
Figure 37: Distribution of U.S. Fixed Residential Connections by Speed (Percentage)	
Trend Toward Higher Speeds	
Figure 38: Percentage of Fixed Residential Connections with speeds over 3 Mbps, 2011-	
2017	
Figure 39: Median Downstream Speed for Fixed Residential Connections, 2014-2017	57
iGR Home Broadband Forecast Background Information	59
Data Amounts Associated with Online Activities	59
Quartiles	61
iGR Home Broadband Forecast	62
Number of Household Devices	
Table 37: Devices per Household, 2019-2024	
Figure 40: Devices per Household, 2019-2024	
Number of Household Connections	
Table 38: Penetration of Broadband in U.S. Households	
Figure 41: Penetration of Broadband in U.S. Households	
Speed of Broadband Connections as a Determinant of Quartiles	
Table 39: Home Internet Speed Tiers in <i>iG</i> R's Quartiles	

Quoting information from an *iG*illottResearch publication: external — any *iG*illottResearch information that is to be used in press releases, sales presentations, marketing materials, advertising, or promotional materials requires prior written approval from *iG*illottResearch reserves the right to deny approval of external usage for any reason. Internal-quoting individual sentences and paragraphs for use in your company's internal communications activities does not require permission from *iG*illottResearch. The use of large portions or the reproduction of any *iG*illottResearch document in its entirety does require prior written approval and may have some financial implications.

Qı	uartile Descriptions	.67
	Table 40: First Quartile	.67
	Table 41: Second Quartile	.67
	Table 42: Third Quartile	. 68
	Table 43: Fourth Quartile	. 69
Fo	recast Assumptions and Drivers	.69
Ac	dditional Assumptions Related to the COVID-19 Pandemic	.71
To	otal Home Broadband Usage Estimate	.72
	Table 44: Forecast of Household BW Usage by Quartile, 2019-2024	.72
	Figure 42: Forecast of Household BW Usage by Quartile, 2019-2024	.73
	Table 45: Forecast of Average Household BW Usage, 2019-2024, Pre-COVID and Post-	
	COVID	.73
	Figure 43: Forecast of Average Household BW Usage, 2019-2024, Pre-COVID and Post-COVID	.74
	Table 46: Number of U.S. Household Connections per Quartile, 2019-2024	
	Figure 44: Number of U.S. Household Connections per Quartile, 2019-2024	
	Table 47: Total U.S. HH Home Broadband Data Usage per Month by Quartile, 2019-2024	
	(PBs)	
	Figure 45: Total U.S. HH Home Broadband Data Usage per Month by Quartile, 2019-2024	ļ
	(PBs)	.76
	Table 48: Total U.S. HH Home Broadband Data Usage per Month by Quartile, 2019-2024	
	(Percentage)	.76
	Figure 46: Total U.S. HH Home Broadband Data Usage per Month by Quartile, 2019-2024	Ļ
	(Percentage)	.77
<i>G</i> R	Home Broadband Wi-Fi Usage Forecast	78
Dr	rivers and Assumptions	.78
W	i-Fi Usage Forecast	.79
	Table 49: Wi-Fi as Percent of First Quartile HH's Total Home Broadband Data Usage, 2019	}-
	2024	.79
	Figure 47: Wi-Fi as Portion of First Quartile HH's Total Home Broadband Data Usage, 201	9-
	2024, (GB/month/HH)	.80
	Table 50: Wi-Fi as Percent of Second Quartile HH's Total Home Broadband Data Usage,	
	2019-2024	.80
	Figure 48: Wi-Fi as Portion of Second Quartile HH's Total Home Broadband Data Usage,	
	2019-2024, (GB/month/HH)	
	Table 51: Wi-Fi as Percent of Third Quartile HH's Total Home Broadband Data Usage, 201	.9-
	2024	
	Figure 49: Wi-Fi as Portion of Third Quartile HH's Total Home Broadband Data Usage, 201	19-
	2024, (GB/month/HH)	. 82
	Table 52: Wi-Fi as Percent of Fourth Quartile HH's Total Home Broadband Data Usage,	
	2019-2024	.82
	Figure 50: Wi-Fi as Portion of Fourth Quartile HH's Total Home Broadband Data Usage,	
	2019-2024, (GB/month/HH)	
	Table 53: Average Wi-Fi Usage as Percent of Average Total Home Broadband Data Usage	
	2010 2024	00

Figure 51: Average Wi-Fi Usage as Portion of Average Total Home Broadband	
2019-2024	84
iGR Home Broadband Video Usage Forecast	85
Drivers and Assumptions	85
Video Usage Forecast	86
Table 54: Average Video Usage as Percent of Average Total Home Broadband 2019-2024	•
Figure 52: Average Video Usage as Portion of Average Total Home Broadband	Data Usage,
2019-2024	87
Survey Demographics	88
Demographic Profile of U.S. Consumer Respondents	
Table 55: Respondent Age	88
Figure 53: Respondent Age	89
Table 56: Respondent Gender	89
Figure 54: Respondent Gender	90
Table 57: Respondent Marital Status	90
Figure 55: Respondent Marital Status	91
Table 58: Respondent Ethnic Background	91
Figure 56: Respondent Ethnic Background	92
Table 59: Respondent Annual Household Income	92
Figure 57: Respondent Annual Household Income	93
Table 60: Respondent Level of Education	93
Figure 58: Respondent Level of Education	
Table 61: Size of Household	94
Figure 59: Size of Household	95
Table 62: Age of Children in Household	95
Figure 60: Age of Children in Household	96
Table 63: Respondent Region	96
Figure 61: Respondent Region	97
Definitions	98
Definitions Table	98
About <i>iG</i> R	117

### **Abstract**

Home broadband usage in the U.S. has increased continuously over the last decade as U.S. consumers have expanded their use of the Internet and now engage in many high usage activities, such as video chatting, video conferencing and video streaming services on a variety of devices on their home Wi-Fi networks.

In 2020, the industry saw an even greater increase in home broadband usage, as many students and workers in the U.S. were forced to stay at home during the COVID-19 pandemic.

This market study estimates the amount of data used over home broadband connections in U.S. households from 2019 to 2024. It incorporates the expected impact of the COVID-19 stay-at-home mandates on home broadband usage in 2020 and future years, according to *iGR*'s assumptions about when and how the U.S. will return to 'normal.'

Additionally, the forecast divides the data usage into that provided by wired Ethernet or Wi-Fi, and it is also splits usage between video and non-video content. In addition to the five-year forecast, this market study discusses the home broadband usage behaviors of U.S. consumers, using results from *iG*R's May 2020 survey of over 1,500 U.S. mobile consumers.

### Key questions addressed:

- What are the home broadband usage characteristics of U.S. consumers in iGR's survey? Specifically, what type of Internet connection, Wi-Fi, and devices do they use?
- What activities do U.S. consumers engage in on their home broadband connection?
- What are the video usage habits of U.S. consumers?
- How have subscription rates to cable TV services and home Internet services changed over the last two years?
- How many U.S. households have broadband Internet service? How is this adoption rate related to age, income and education level?
- Which broadband technologies are being used and what connection speeds are being provided to U.S. households?
- How much home broadband is used today by U.S. households, and how will this amount change over the five-year forecast period?

- How has home broadband usage in U.S. households been impacted by the COVID-19 pandemic in 2020? How much will it affect later years of the forecast.
- How does usage compare between four quartiles of households that range from low-usage households to high-usage households?
- How many different Wi-Fi-enabled devices are typically used in a household?
- How much home broadband is driven by devices connected to a Wi-Fi network in U.S. households?
- How much home broadband is driven by video applications and non-video applications?

### Who should read this report?

- Mobile operators
- Cable MSOs and other fixed broadband providers
- Device OEMs
- Content providers and distributors
- Financial analysts and investors.

FOR INFORMATION PLEASE CONTACT IAIN GILLOTT (512) 263-5682.