U.S. Home Broadband & Wi-Fi Usage Forecast, 2020 - 2025: Measuring the Pandemic's Continued Impact

Market Study Third Quarter 2021





# U.S. Home Broadband & Wi-Fi Usage Forecast, 2020 - 2025: Measuring the Pandemic's Continued Impact

# Market Study

Published Third Quarter 2021 Version 1.0

Report Number: 03Q2021-05

*iG*R 12400 W. Hwy 71 Suite 350 PMB 341 Austin TX 78738

## **Table of Contents**

Abstract	1
Executive Summary	3
Home Broadband Forecast	
Table A: Forecast of Average Household BW Usage, 2019-2025, Pre-Pandemic and Pandemic	
Figure A: Forecast of Average Household BW Usage, 2019-2025, Pre-Pandemic and F	Post-
What This Means	
Methodology	6
U.S. Consumer Home Broadband Usage and Devices	7
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	
Table 4: Speed of Home Internet Service among U.S. Mobile Consumers	
Figure 4: Speed of Home Internet Service among U.S. Mobile consumers	
Table 5: Most Important Internet Quality	
Figure 5: Most Important Internet Quality	13
Home Wi-Fi Network	
Table 6: Number of Wi-Fi Access Points at Home	13
Figure 6: Number of Wi-Fi Access Points at Home	14
Devices Used in the Home	14
Table 7: Devices Used in the Home	14
Figure 7: Devices Used in the Home	16
Table 8: Internet TV Set-up	16
Figure 8: Internet TV Set-up	17
Table 9: Number of In-Home Devices	17
Figure 9: Number of In-Home Devices	18
Table 10: Locations of Automatic Wi-Fi Connection	
Figure 10: Locations of Automatic Wi-Fi Connection	
Online Activities at Home	
Table 11: Online Activities While at Home	20
Figure 11: Online Activities While at Home	
Table 12: Frequency of Online Activities While at Home	
Figure 12: Frequency of Online Activities While at Home	
Table 13: Communications Applications	23

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.

Copyright © 2021 *iG*illottResearch, Inc. Reproduction is forbidden unless authorized.

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

Fig	ure 13: Communications Applications	24
Tab	ble 14: Frequency of Communications Applications Usage	24
Fig	ure 14: Frequency of Communications Applications Usage	25
	ble 15: Wi-Fi Calling	
U	ure 15: Wi-Fi Calling	
Impa	ct of the COVID-19 Pandemic on Home Broadband Usage	. 26
Tab	ble 16: Number of Days Working from Home	27
	ure 16: Number of Days Working from Home	
	ble 17: Typical Internet Service for Work at Home	
Fig	ure 17: Typical Internet Service for Work at Home	28
U.S. Co	nsumer Video Usage	.29
	uency	
•	ble 18: Frequency of Watching Video Content among U.S. Mobile Consumers	
Fig	ure 18: Frequency of Watching Video Content among U.S. Mobile Consumers	30
Locat	ions	. 30
Tak	ble 19: Locations for Watching Video Content among U.S. Mobile Consumers	30
Fig	ure 19: Locations for Watching Video Content among U.S. Mobile Consumers	31
Interr	net Video Services	. 31
Tak	ble 20: Entertainment Programming Video Services Used among U.S. Mobile Consume	ers
		31
Fig	ure 20: Entertainment Programming Video Services Used among U.S. Mobile Consum	ers
	ble 21: Sports Programming Video Services Used among U.S. Mobile Consumers	
_	ure 21: Sports Programming Video Services Used among U.S. Mobile Consumers	
	equency	
	ble 22: Frequency of Internet Video Services Used among U.S. Mobile Consumers	
_	rure 22: Frequency of Internet Video Services Used among U.S. Mobile Consumers	
	ble 23: Percentage of Video Time on an Internet Video Service	
Fig	ure 23: Percentage of Video Time on an Internet Video Service	3/
The Tre	end to Disconnect TV Service	.38
Mobi	le Consumers without TV Service	. 38
Tak	ble 24: Disconnection of Previous TV Service among U.S. Mobile Consumers	38
Fig	ure 24: Disconnection of Previous TV Service among U.S. Mobile Consumers	39
Tab	ble 25: How Watch TV at Home without TV Service among U.S. Mobile Consumers	39
Fig	ure 25: How Watch TV at Home without TV Service among U.S. Mobile Consumers	40
	le Consumers with TV Service	
	ble 26: Likelihood to Disconnect TV Service among U.S. Mobile Consumers	
Fig	ure 26: Likelihood to Disconnect TV Service among U.S. Mobile Consumers	41
Trends	Regarding Disconnection of Home Internet Service	.42
	ble 27: Regarding U.S. Mobile Consumers with No Home Internet Service	
	ure 27: Regarding U.S. Mobile Consumers with No Home Internet Service	
_	ble 28: Disconnection of Previous Home Internet Service among U.S. Mobile Consume	

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.

Copyright © 2021 *iG*illottResearch, Inc. Reproduction is forbidden unless authorized.

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

	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	
	S. Home Broadband Background Information	
	Number of Household Connections	
	Household Connections by Technology	
	Table 30: Distribution of Fixed U.S. Residential Connections by Technology	
	Figure 30: Distribution of Fixed U.S. Residential Connections by Technology	
	Household Connections by Income	
	Table 31: Distribution of Fixed U.S. Residential Connections by Income Decile	
	Figure 31: Distribution of Fixed U.S. Residential Connections by Income Decile	
	Household Connections by Education	
	Table 32: Distribution of Fixed U.S. Residential Connections by Education Decile	
	Figure 32: Distribution of Fixed U.S. Residential Connections by Education Decile	
	Household Connections by Age	
	Table 33: Distribution of Fixed U.S. Residential Connections by Age Decile	
	Figure 33: Distribution of Fixed U.S. Residential Connections by Age Decile	
	Household Connections by Speed	
	Table 34: Distribution of U.S. Fixed Residential Connections by Downstream Speed	52
	Figure 34: Distribution of U.S. Fixed Residential Connections by Downstream Speed	53
	Table 35: Speed of Home Internet Service among U.S. Mobile Consumers	53
	Figure 35: Speed of Home Internet Service among U.S. Mobile consumers	54
	Figure 36: Distribution of U.S. Fixed Residential Connections by Speed (Percentage)	55
•	Trend Toward Higher Speeds	55
	Figure 37: Median Downstream Speed for Fixed Residential Connections, 2014-2018	55
iG	R Home Broadband Forecast Background Information	57
	Data Amounts Associated with Online Activities	
(	Quartiles	59
iG	R Home Broadband Forecast	60
	Number of Household Devices	
	Table 36: Devices per Household, 2020-2025	
	Figure 38: Devices per Household, 2020-2025	
	Number of Household Connections	
	Table 37: Penetration of Broadband in U.S. Households	
	Figure 39: Penetration of Broadband in U.S. Households	
:	Speed of Broadband Connections as a Determinant of Quartiles	
	Table 38: Home Internet Speed Tiers in <i>iG</i> R's Quartiles	
(	Quartile Descriptions	
	Table 39: First Quartile	
	Table 40: Second Quartile	
	Table 41: Third Quartile	
	Table 42: Fourth Quartile	67
	Forecast Assumptions and Drivers	67

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.

Copyright © 2021 *iG*illottResearch, Inc. Reproduction is forbidden unless authorized.

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

Α	dditional Assumptions Related to the COVID-19 Pandemic	69
T	otal Home Broadband Usage Estimate	70
	Table 43: Forecast of Household BW Usage by Quartile, 2020-2025	71
	Figure 40: Forecast of Household BW Usage by Quartile, 2020-2025	71
	Table 44: Forecast of Average Household BW Usage, 2019-2025, Pre-Pandemic and Post	-
	Pandemic	72
	Figure 41: Forecast of Average Household BW Usage, 2019-2025, Pre-Pandemic and Pos	t-
	Pandemic	72
	Table 45: Number of U.S. Household Connections per Quartile, 2020-2025	73
	Figure 42: Number of U.S. Household Connections per Quartile, 2020-2025	73
	Table 46: Total U.S. HH Home Broadband Data Usage per Month by Quartile, 2020-2025	
	(PBs)	74
	Figure 43: Total U.S. HH Home Broadband Data Usage per Month by Quartile, 2020-2025	5
	(PBs)	75
	Table 47: Total U.S. HH Home Broadband Data Usage per Month by Quartile, 2020-2025	
	(Percentage)	75
	Figure 44: Total U.S. HH Home Broadband Data Usage per Month by Quartile, 2020-2025	5
	(Percentage)	76
:CD	Home Breadhand Wi Fi Heage Foreset	77
	Home Broadband Wi-Fi Usage Forecast Privers and Assumptions	
	Vi-Fi Usage Forecast	
V	VI-FI Osage Forecast	
	2025	
	Figure 45: Wi-Fi as Portion of First Quartile HH's Total Home Broadband Data Usage, 202	
	2025, (GB/month/HH)	
	Table 49: Wi-Fi as Percent of Second Quartile HH's Total Home Broadband Data Usage,	/ 5
	2020-2025	70
	Figure 46: Wi-Fi as Portion of Second Quartile HH's Total Home Broadband Data Usage,	/ 5
	2020-2025, (GB/month/HH)	٥r
	Table 50: Wi-Fi as Percent of Third Quartile HH's Total Home Broadband Data Usage, 20.	
	2025	
	Figure 47: Wi-Fi as Portion of Third Quartile HH's Total Home Broadband Data Usage, 20	
	2025, (GB/month/HH)	
	Table 51: Wi-Fi as Percent of Fourth Quartile HH's Total Home Broadband Data Usage,	01
	2020-2025	21
	Figure 48: Wi-Fi as Portion of Fourth Quartile HH's Total Home Broadband Data Usage,	01
	2020-2025, (GB/month/HH)	82
	Table 52: Average Wi-Fi Usage as Percent of Average Total Home Broadband Data Usage	
	2020-2025	
	Figure 49: Average Wi-Fi Usage as Portion of Average Total Home Broadband Data Usage	
	2020-2025	-
	Home Broadband Video Usage Forecast	
	Privers and Assumptions	
١.	lidan Usaga Forecast	25

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.

Copyright © 2021 *iG*illottResearch, Inc. Reproduction is forbidden unless authorized.

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

Table 53: Average Video Usage a	s Percent of Average Total Home Broadband Data Usage,
	85
	as Portion of Average Total Home Broadband Data Usage,
2020-2025	86
Survey Demographics	87
Demographic Profile of U.S. Consu	mer Respondents87
Table 54: Respondent Age	87
Figure 51: Respondent Age	88
Table 55: Respondent Gender	88
Figure 52: Respondent Gender	89
	itus89
Figure 53: Respondent Marital St	atus90
Table 57: Respondent Ethnic Bac	kground90
Figure 54: Respondent Ethnic Bac	ckground91
Table 58: Respondent Annual Ho	usehold Income91
	ousehold Income92
	lucation92
Figure 56: Respondent Level of E	ducation93
Table 60: Size of Household	93
Figure 57: Size of Household	94
Table 61: Age of Children in Hous	sehold94
Figure 58: Age of Children in Hou	sehold95
Table 62: Respondent Region	95
	96
Definitions	97
	97
Disciaimer	

### **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 and 2021 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 2020 to 2025. It incorporates the impact of the COVID-19 pandemic on home broadband usage throughout the forecast, according to *iG*R's assumptions about broadband consumers' current behaviors and their behaviors when the U.S. returns to a new '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 *iGR*'s October 2020 survey of over 1,000 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? How will the pandemic 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?

### Who should read this report?

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