U.S. Home Broadband & Wi-Fi Usage Forecast, 2018 - 2023: Unlimited data on increasingly faster speeds

Market Study First Quarter 2019





U.S. Home Broadband & Wi-Fi Usage Forecast, 2018 - 2023: Unlimited data on increasingly faster speeds

Market Study

Published First Quarter 2019 Version 1.0

Report Number: 02Q2019-12

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 Household BW Usage, 2018-2023 (GB/Month/HH)	4
Figure A: Forecast of Household BW Usage, 2018-2023 (GB/Month/HH)	4
Table B: Forecast of Household BW Usage on Wi-Fi, 2018-2023 (GB/Month/HH)	5
Figure B: Average Wi-Fi Usage as Portion of Average Home Broadband Data Usage,	
2023	
What This Means	6
Methodology	7
U.S. Consumer Home Broadband Usage and Devices	8
Home Internet Service	8
Table 1: Telecom Services at Home among U.S. Mobile Consumers	8
Figure 1: Telecom Services at Home among U.S. Mobile Consumers	9
Table 2: Types of Home Internet Service among U.S. Mobile Consumers	10
Figure 2: Types of Home Internet Service among U.S. Mobile Consumers	10
Table 3: Interest in 5G Home Internet Service among U.S. Mobile Consumers	11
Figure 3: Interest in 5G Home Internet Service among U.S. Mobile Consumers	11
Table 4: Speed of Home Internet Service among U.S. Mobile Consumers	12
Figure 4: Speed of Home Internet Service among U.S. mobile consumers	12
Home Wi-Fi Network	13
Table 5: Number of Wi-Fi Access Points at Home	13
Figure 5: Number of Wi-Fi Access Points at Home	14
Devices Used in the Home	14
Table 6: Devices Used in the Home	15
Figure 6: Devices Used in the Home	15
Table 7: Internet TV Set-up	16
Figure 7: Internet TV Set-up	16
Table 8: Number of In-Home Devices	17
Figure 8: Number of In-Home Devices	18
Table 9: Mobile Device Usage in the Home	18
Figure 9: Mobile Device Usage in the Home	19
Table 10: Locations of Automatic Wi-Fi Connection	19
Figure 10: Locations of Automatic Wi-Fi Connection	20
Online Activities at Home	20
Table 11: Online Activities While at Home	20
Figure 11: Online Activities While at Home	21
Frequency of Activities	
Table 12: Frequency of Online Activities While at Home	22
Figure 12: Frequency of Online Activities While at Home	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. *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 © 2019 *iG*illottResearch, Inc. Reproduction is forbidden unless authorized.

1	Types of Connections for Activities	23
7	Table 13: Type of Connection for Online Activities While at Home	23
F	Figure 13: Type of Connection for Online Activities While at Home	24
H	Home Internet Usage Caps	25
7	Table 14: Home Internet Usage Caps	25
F	Figure 14: Home Internet Usage Caps	25
E	Expected Future Home Internet Usage	25
7	Table 15: Future Home Internet Usage	26
F	Figure 15: Future Home Internet Usage	26
U.S. (Consumer Video Usage	27
	equency	
7	Table 16: Frequency of Watching Video Content	27
F	Figure 16: Frequency of Watching Video Content	28
	cations	
7	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	
	ernet Video Sources	
	Table 18: Internet Video Services Used among U.S. Mobile Consumers	
	Figure 18: Internet Video Services Used among U.S. Mobile Consumers	
	Frequency	
	Table 19: Frequency of Internet Video Services Used among U.S. Mobile Consumers	
	Figure 19: Frequency of Internet Video Services Used among U.S. Mobile Consumers	
	Table 20: Percentage of Video Time on an Internet Video Service	
F	Figure 20: Percentage of Video Time on an Internet Video Service	33
The T	Frend to Disconnect TV Service	34
Мо	obile Consumers without TV Service	34
7	Table 21: Disconnection of Previous TV Service among U.S. Mobile Consumers	34
F	Figure 21: Disconnection of Previous TV Service among U.S. Mobile Consumers	35
7	Table 22: Why Disconnected TV Service	35
F	Figure 22: Why Disconnected TV Service	36
7	Table 23: How Watch TV at Home without TV Service among U.S. Mobile Consumers	37
F	Figure 23: How Watch TV at Home without TV Service among U.S. Mobile Consumers	37
Mo	obile Consumers with TV Service	38
7	Table 24: Likelihood to Disconnect TV Service among U.S. Mobile Consumers	38
F	Figure 24: Likelihood to Disconnect TV Service among U.S. Mobile Consumers	38
7	Table 25: Why Might Disconnect TV Service among U.S. Mobile Consumers	39
F	Figure 25: Why Might Disconnect TV Service among U.S. Mobile Consumers	40
Trend	ds Regarding Disconnection of Home Internet Service	41
	Table 26: Regarding U.S. Mobile Consumers with No Home Internet Service	
	Figure 26: Regarding U.S. Mobile Consumers with No Home Internet Service	
	Table 27: Disconnection of Previous Home Internet Service among U.S. Mobile Consumer	·s
F	Figure 27: Disconnection of Previous Home Internet Service among U.S. Mobile Consume	rs

Table 28: When Home Internet Service was Disconnected	43
Figure 28: When Home Internet Service was Disconnected	44
Table 29: Why Home Internet Service was Disconnected	44
Figure 29: Why Home Internet Service was Disconnected	45
U.S. Home Broadband Background Information	46
Number of Household Connections	
Household Connections by Technology	46
Table 30: Distribution of Fixed U.S. Residential Connections by	Technology47
Figure 30: Distribution of Fixed U.S. Residential Connections b	y Technology48
Household Connections by Income	48
Table 31: Distribution of Fixed U.S. Residential Connections by	Income Decile48
Figure 31: Distribution of Fixed U.S. Residential Connections b	y Income Decile49
Household Connections by Education	
Table 32: Distribution of Fixed U.S. Residential Connections by	Education Decile50
Figure 32: Distribution of Fixed U.S. Residential Connections b	-
Household Connections by Age	
Table 33: Distribution of Fixed U.S. Residential Connections by	Age Decile51
Figure 33: Distribution of Fixed U.S. Residential Connections b	. •
Household Connections by Speed	52
Table 34: Distribution of U.S. Fixed Residential Connections by	
Figure 34: Distribution of U.S. Fixed Residential Connections b	•
Figure 35: Distribution of U.S. Fixed Residential Connections b	
Trend Toward Higher Speeds	
Figure 36: Percentage of Fixed Residential Connections with s	• •
2017	
Figure 37: Median Downstream Speed for Fixed Residential Co	onnections, 2014-2017 54
iGR Home Broadband Forecast Background Information	56
Data Amounts Associated with Online Activities	56
Quartiles	58
iGR Home Broadband Forecast	59
Number of Household Devices	59
Table 35: Devices per Household, 2018-2023	61
Figure 38: Devices per Household, 2018-2023	
Number of Household Connections	
Table 36: Penetration of Broadband in U.S. Households	62
Figure 39: Penetration of Broadband in U.S. Households	62
Speed of Broadband Connections	
·	63
Table 37: Actual Peak Download Speeds Compared to Adverti	
Table 37: Actual Peak Download Speeds Compared to Adverting Table 38: Actual Peak Download Speeds Compared to Adverting Table 38: Actual Peak Download Speeds Compared to Adverting Table 37: Actual Peak Download Speeds Compared to Adverting Table 37: Actual Peak Download Speeds Compared to Adverting Table 37: Actual Peak Download Speeds Compared to Adverting Table 37: Actual Peak Download Speeds Compared to Adverting Table 38: Actual Peak Download Speeds Compared to Adverting Table 38: Actual Peak Download Speeds Compared to Adverting Table 38: Actual Peak Download Speeds Compared to Adverting Table 38: Actual Peak Download Speeds Compared to Adverting Table 38: Actual Peak Download Speeds Compared to Adverting Table 38: Actual Peak Download Speeds Compared to Adverting Table 38: Actual Peak Download Speeds Compared to Adverting Table 38: Actual Peak Download Speeds Compared Table 38: Actual Peak Download Speeds Table 38: Actual Pea	sed Rates by Provider63
·	sed Rates by Provider63 sed Rates by Service Tiers66
Table 38: Actual Peak Download Speeds Compared to Adverti	sed Rates by Provider63 sed Rates by Service Tiers66
Table 38: Actual Peak Download Speeds Compared to Adverti Speed of Broadband Connections as a Determinant of Quartile	sed Rates by Provider63 sed Rates by Service Tiers 66 s67
Table 38: Actual Peak Download Speeds Compared to Advertion Speed of Broadband Connections as a Determinant of Quartiles Table 39: FCC Data Rates by <i>iGR</i> Quartiles, 2018	sed Rates by Provider63 sed Rates by Service Tiers 66 s
Table 38: Actual Peak Download Speeds Compared to Advertion Speed of Broadband Connections as a Determinant of Quartiles Table 39: FCC Data Rates by iGR Quartiles, 2018	sed Rates by Provider 63 sed Rates by Service Tiers 66 sed Rates by Service Tiers 67 67 68

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 © 2019 *iG*illottResearch, Inc. Reproduction is forbidden unless authorized.

Table 42: Third Quartile	70
Table 43: Fourth Quartile	70
Forecast Assumptions and Drivers	71
Total Home Broadband Usage Estimate	72
Table 44: Forecast of Household BW Usage by Quartile, 2018-2023	73
Figure 40: Forecast of Household BW Usage by Quartile, 2018-2023	74
Table 45: Number of U.S. Household Connections per Quartile, 2018-2023	74
Figure 41: Number of U.S. Household Connections per Quartile, 2018-2023	75
Table 46: Total U.S. HH Home Broadband Data Usage per Month by Quartile, 201	.8-2023
(PBs)	75
Figure 42: Total U.S. HH Home Broadband Data Usage per Month by Quartile, 20 (PBs)	
Table 47: Total U.S. HH Home Broadband Data Usage per Month by Quartile, 201	.8-2023
(Percentage)Figure 43: Total U.S. HH Home Broadband Data Usage per Month by Quartile, 20	
2023(Percentage)	
iGR Home Broadband Wi-Fi Usage Forecast	78
Drivers and Assumptions	
Wi-Fi Usage Forecast	
Table 48: Wi-Fi as Percent of First Quartile HH's Total Home Broadband Data Usa	
2023	O ,
Figure 44: Wi-Fi as Portion of First Quartile HH's Total Home Broadband Data Usa	
2023, (GB/month/HH)	•
Table 49: Wi-Fi as Percent of Second Quartile HH's Total Home Broadband Data U	
2018-2023	•
Figure 45: Wi-Fi as Portion of Second Quartile HH's Total Home Broadband Data	
2018-2023, (GB/month/HH)	
Table 50: Wi-Fi as Percent of Third Quartile HH's Total Home Broadband Data Us	age, 2018-
2023	81
Figure 46: Wi-Fi as Portion of Third Quartile HH's Total Home Broadband Data Us	age, 2018-
2023, (GB/month/HH)	82
Table 51: Wi-Fi as Percent of Fourth Quartile HH's Total Home Broadband Data U	sage,
2018-2023	82
Figure 47: Wi-Fi as Portion of Fourth Quartile HH's Total Home Broadband Data U	Jsage,
2018-2023, (GB/month/HH)	83
Table 52: Average Wi-Fi Usage as Percent of Average Total Home Broadband Dat	a Usage,
2018-2023	83
Figure 48: Average Wi-Fi Usage as Portion of Average Total Home Broadband Date	:a Usage,
2018-2023	84
iGR Home Broadband Video Usage Forecast	85
Drivers and Assumptions	
Video Usage Forecast	
Table 53: Video and Non-Video Percent of First Quartile HH Total Home Broadba	
Usage, 2018-2023	86

Fi	gure 49: Video and Non-Video Home Broadband Data Usage for First Quartile HH, 2018	-
	23	
	ble 54: Video and Non-Video Percent of Second Quartile HH Total Home Broadband Da	
	age, 2018-2023	. 87
-	gure 50: Video and Non-Video Home Broadband Data Usage for Second Quartile HH,	
	18-2023	
	ble 55: Video and Non-Video Percent of Third Quartile HH Total Home Broadband Data	
	age, 2018-2023	
•	gure 51: Video and Non-Video Home Broadband Data Usage for Third Quartile HH, 201	
	23	
	ble 56: Video and Non-Video Percent of Fourth Quartile HH Total Home Broadband Da	
	age, 2018-2023	.88
-	gure 52: Video and Non-Video Home Broadband Data Usage for Fourth Quartile HH,	00
	18-2023	
	ble 57: Average Video Usage as Percent of Average Total Home Broadband Data Usage	
	18-2023	
-	gure 53: Average Video Usage as Portion of Average Total Home Broadband Data Usago 18-2023	-
20	18-2023	.90
Survey	Demographics	91
Dem	ographic Profile of U.S. Consumer Respondents	.91
Ta	ble 58: Respondent Age	.91
-	gure 54: Respondent Age	
	ble 59: Respondent Gender	
	gure 55: Respondent Gender	
	ble 60: Respondent Ethnic Background	
-	gure 56: Respondent Ethnic Background	
	ble 61: Respondent Annual Household Income	
	gure 57: Respondent Annual Household Income	
	ble 62: Respondent Level of Education	
	gure 58: Respondent Level of Education	
	ble 63: Age of Children in Household	
-	gure 59: Age of Children in Household	
	ble 64: Respondent Region	
-	gure 60: Respondent Region	
	ble 65: Respondent Marital Status	
FI	gure 61: Respondent Marital Status	.99
Definit	ions 1	.00
De	finitions Table	L00
Δhou+	<i>iG</i> R	20
	aimer	
	~	



Abstract

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

This market study estimates the amount of data used over home broadband connections in U.S. households from 2018 to 2023. 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 January 2019 survey of over 1,000 U.S. mobile consumers.

Key questions addressed:

- What defines the home broadband usage 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 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.