



Self-Service Support: Improving Home Automation

IN PARTNERSHIP WITH  RouteThis



Introduction

Consumers want a smart and secure home that “just works.”

Unfortunately, 54% of US internet households experience technical issues with their home networks, and most smart home device owners report technical problems with their devices. The ability to quickly resolve networking and product issues is critical to making the connected home seamless and enjoyable, but providing that experience means increasing support costs for internet service providers and device manufacturers.

New technical support solutions aim to both improve the user experience across the connected home and bring down support costs with next-generation self-service support tools. Tools that proactively monitor network and device status can detect and alert users to potential issues and guide them through problem resolution. Providers can use self-service to help overcome staffing shortages while also providing technicians with more accurate data. That, in and of itself, will allow them to resolve issues more efficiently.

In this whitepaper, Parks Associates quantifies consumers’ support needs across the connected home at both the network and device level and shares consumer strategies today for addressing technical issues. It maps the evolution of self-service tools and explores the latest generation of proactive network and device monitoring that enables new self-service solutions. The paper assesses the impact of self-service tools on the user experience and provider support costs. Finally, it highlights internet service providers and smart home device manufacturers offering self-service solutions.



Connected Home: Rising Use but Challenging UX

The Connected Home Landscape Grows and Diversifies

After a strong increase between 2018 and 2019, the home security market continued slow-but-steady growth through the pandemic. Parks Associates' research finds 35% of US broadband households had a security system at the end of 2021. Additionally, households have more smart home devices than ever: 37% of US broadband households own a smart home device, up from 24% in 2018.

All indications are that COVID-19 and the civil unrest and economic uncertainty that have marked the past two years have been net drivers for the security industry. Consumers' desire for peace-of-mind solutions drives security product and system sales, and the availability of affordable DIY installation and self-monitoring systems give consumers more choice to meet their needs.

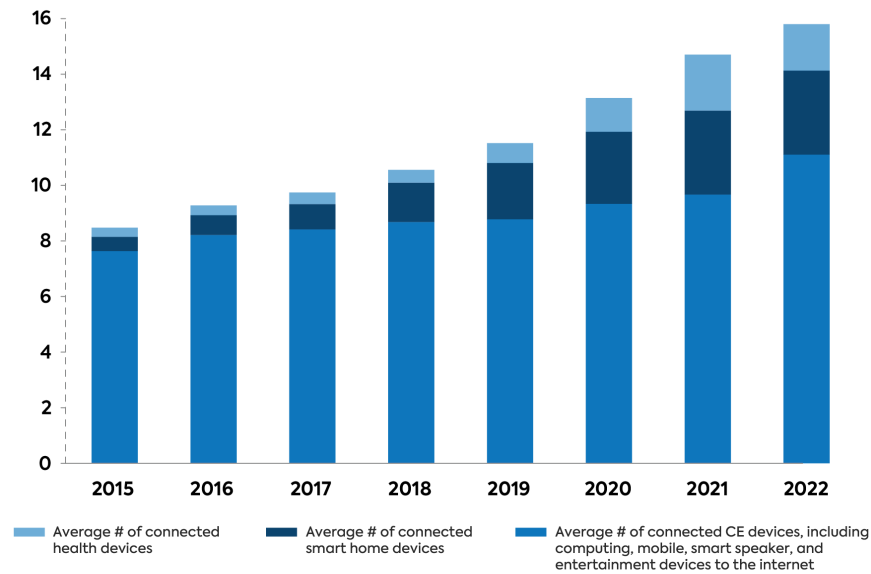
Consumers are also using more connected devices than ever. The average US household owns 16 connected devices, with particularly strong growth in connected health and smart home devices since 2019. As more households learn of new benefits, features, and potential use cases for

smart home devices, they are diversifying the types of devices in their home. Households that own at least one core smart home device, such as a smart thermostat, network camera, video doorbell, or smart light, now own, on average, 8 smart home devices.

The continuation of work-from-home coupled with increasing rates of connected devices across the home means a high-performing, reliable home network is critical for supporting consumers' connected lifestyles.

In 2Q 2022, 50%+ of consumers in US internet households said they have increased their broadband usage and 92% use Wi-Fi at home.

Total Average Number of Connected Devices Per US Internet Households



© Parks Associates

Technical Support Issues are on the Rise

As households adopt an ever-increasing number of connected devices, reported technical issues have also increased.

There was a 13-percentage point increase in users who experienced two or more technical issues between 2018 and 2022. The increase in the number of technical issues is partially attributable to the rise both in number and diversity of devices in the household. Among those who experienced a technical problem with a smart home device, loss of wireless connectivity is number one difficulty, followed by technical issues resulting in poor device performance.

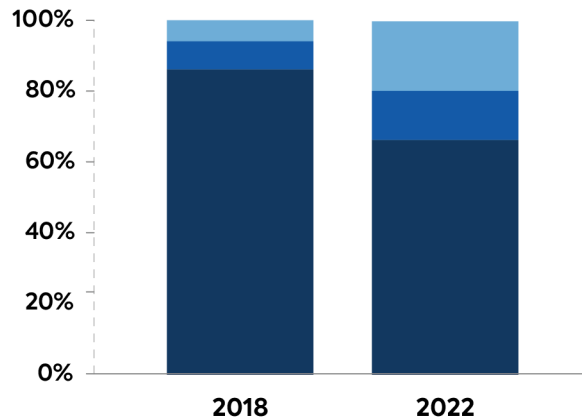
Growing technical difficulties with smart home devices are felt the most by those using smart home devices at a high rate. Parks Associates'

data demonstrate that households with head of households ages 35–44 years old are the most likely to experience technical issues with their devices. This age group also strongly correlates to above-average rates of smart home device ownership.

One-third of smart home device owners experienced technical difficulties in 2022, compared to only 14% in 2018.

Smart Home Devices: Number of Technical Problems Experienced

2+ Technical Problems 1 Technical Problem No Technical Problem



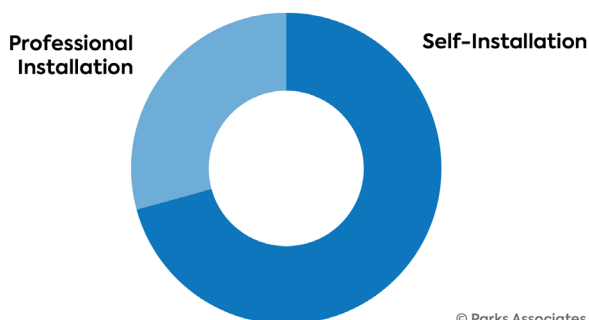
© Parks Associates

DIY Installation is Popular but Not Perfect

Consumers buy smart home devices through a variety of channels but buying at retail — either in-person or online — dominates for almost every category. Devices purchased at retail are commonly self-installed.

Self-installation removes costs associated with hiring professional help and gives consumers the ability to connect and use certain devices right out of the packaging. However, DIY setup is not immune to problems; consumers report facing difficulties with device installation. The degree of installation difficulty varies widely based on device type. For example, only 23% of smart thermostat self-installers say the installation was “very difficult,” compared with 55% of smart sprinkler system/controller self-installers.

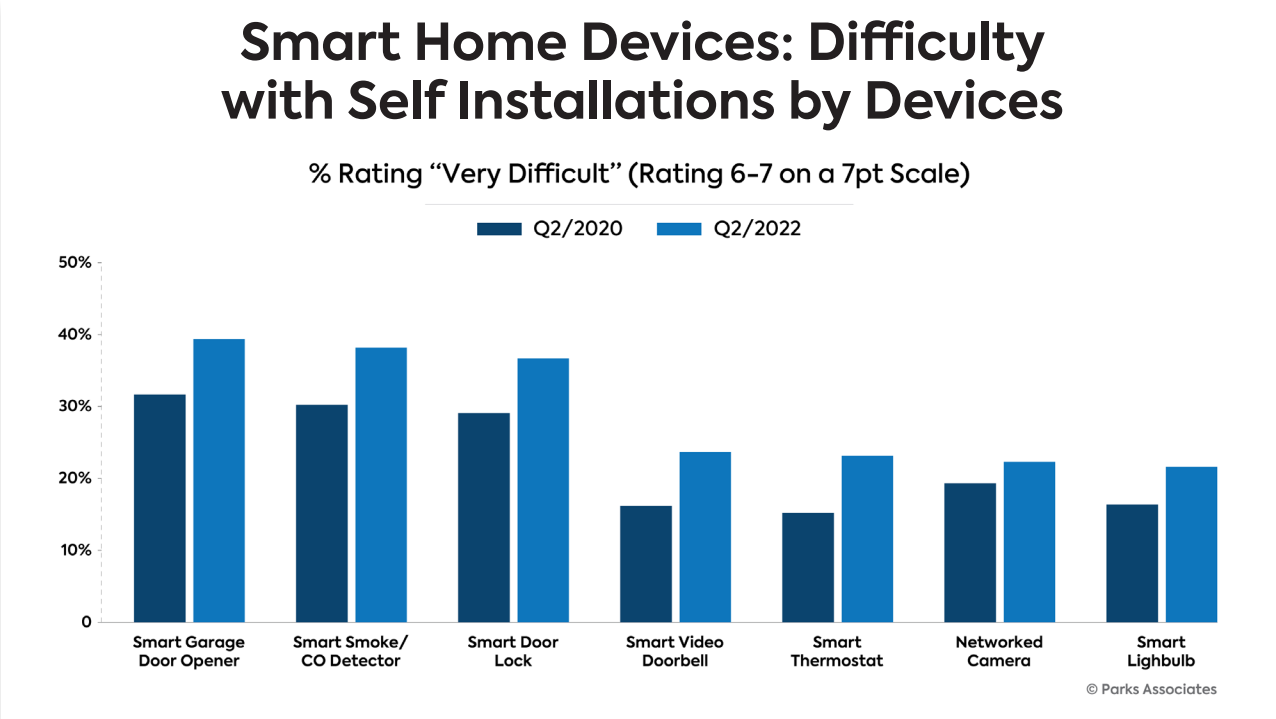
Smart Home Device Installation Method



© Parks Associates

On average, 71% of smart home devices are self-installed, with some categories like smart light bulbs reaching near 80% self-installation.

That said, perceived difficulty of installation has increased for nearly every device category from 2020 to 2022.



As a result, many DIYers turn to professional support services for help.

Consumers are likely to seek support for help with smart door locks, smart water leak detectors, and water shut off vales. DIY consumers having difficulty setting-up devices often turn to manufacturers for support. The second most often cited support source is the retailer or other organization that sold the device.

Professional Support Provider Used, Among Device Owners Who Had Difficulty with Self-Installation

- 55%** The Device Manufacturer
- 37%** The Company that Sold you the Device
- 7%** An Independent Tech Support Service or Contractor
- 0.5%** Other

© Parks Associates

76% of smart home device owners who experience difficulties with self-installation resort to professional channels for support.

DIY Support: Self-Service Tools Evolve with Consumer Preferences

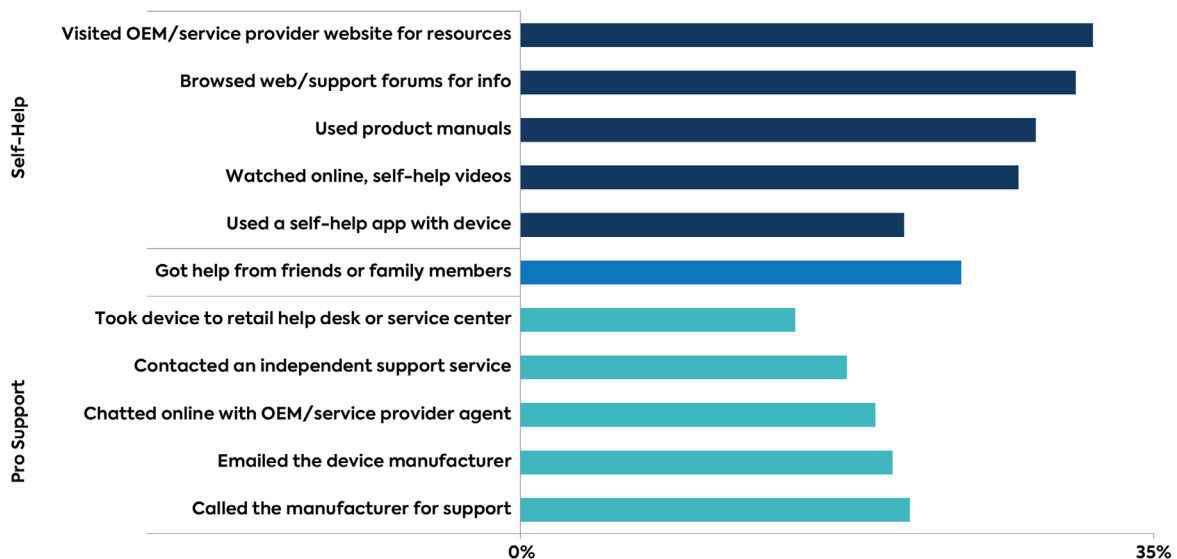
Whether at installation or later in the life of the product, technical problems will arise and smart home device owners need paths to resolve product issues that are quick, clear, and effective. At the same time, device manufacturers and service providers need to both keep support costs down as well as to reduce product returns. A new generation of self-service tools aims to serve both the user experience and industry needs.

Consumers Attempt to Solve Problems Themselves

Smart home and connected device owners use several options to address technical issues with their devices. **In fact, 91% of smart home device owners who experience technical problems with their devices will try at least one self-help approach.**

Parks Associates' consumer data below provide the top four actions smart home device owners take to resolve technical problems are variations of self-service support.

Smart Home Device: Actions Taken to Address Technical Problems



© Parks Associates

These initial steps do not always resolve the problem. Ultimately, 47% of technical issues are resolved by the end user on their own, or with the help of family and friends, but 42% of issues require support from a professional technician.

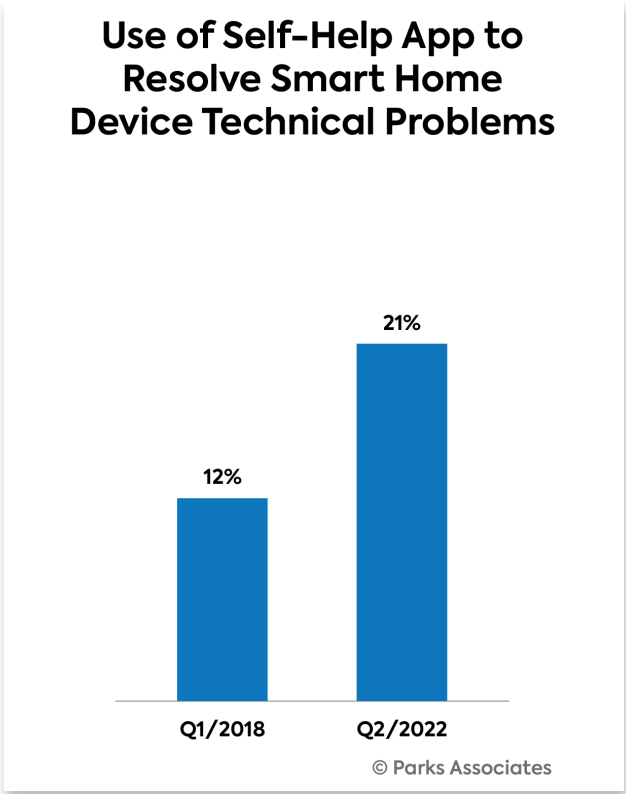
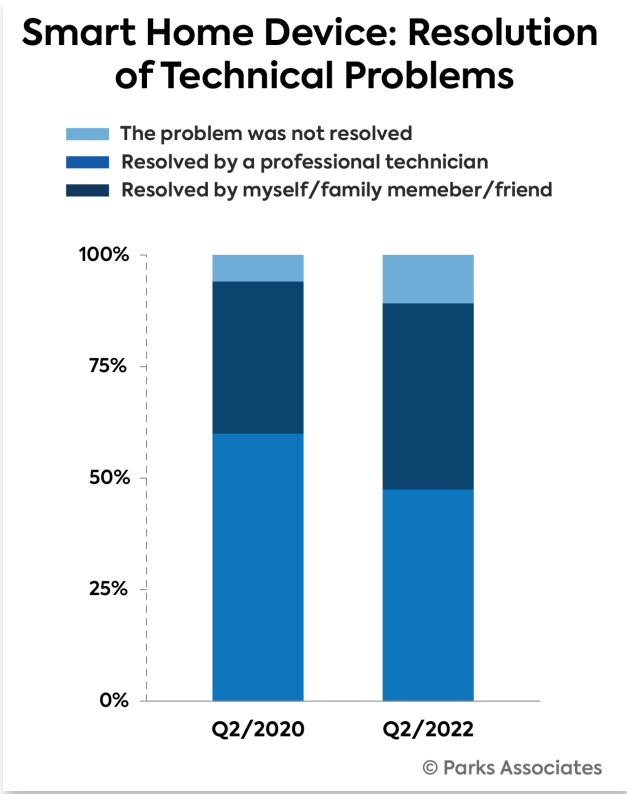
The increased need for professional support drives up costs for manufacturers and service providers and means more time and effort spent by the end-user on resolving issues.

Consumers clearly desire a self-help approach first but need more effective tools to solve the problems on their own.

Users need tools to discern what specific issues are impacting their networks and devices, with clear guidance about how to fix the specific problem. To that end, self-help apps, which often have advanced diagnostic features, have experienced strong growth in the last four years.

Twenty-one percent of those experiencing a technical issue with a smart home device used a self-help application with the device to resolve the problem; this is nearly double the rate of self-help app usage in 2018.

Professional support usage is up from 2020, when merely 34% of users relied on professional assistance.



Evolution of Self-Service Tools

Before the rise of connected devices, the product manual was typically the only resource available for users to solve product problems themselves. With the rise of home internet, self-service evolved to include options such as FAQ pages and support chat bots on product and service websites. Support forums and user-generated or expert-generated video tutorials on YouTube are also commonplace. These resources help users with general issues, but do not diagnose a user's specific issue.

The next generation of self-service tools offer proactive monitoring, user alerts, and guided resolution techniques, among others:

- **Network monitoring solutions** provide visibility into the home network operation and performance, along with some level of remote control. With these, service providers and manufacturers can detect connectivity issues and troubleshoot device and network issues more efficiently.
- **Guided resolution** is an emerging feature of support service tools, giving end-users specific steps to take to solve the identified issue themselves.
- **Evolving database of issues.** Storing the resolutions and diagnostics from self-service support session(s) provides a clearer picture to support staff and consumers alike when subsequent issues occur. The ability to run and track metrics such as device discovery, endpoint monitoring, network tests/reports, and general device alerts will provide a clearer, real-time view of the device(s) on the network.



RouteThis Self-Help: Your smart in-home connectivity solution.

With the demand for self-resolution, it's essential for smart home brands to get self-service support options right—and part of that is ensuring that you have the right support solutions. That means providing customers with a solution that's fast, works for all users no matter where they are or what devices they own... a solution that will identify the true root cause of the issue and eliminate the need for users to spend their valuable time self-diagnosing through chat bots, FAQs, online forums and videos.

The [RouteThis Self-Help](#) application gathers data points on the home network, identifies and analyzes potential issues, and offers customers step-by-step instructions on how to resolve Wi-Fi challenges, directly—without ever having to speak to an agent.



Empower Customers

Help customers save time, improve device experiences, and ultimately improve those CSAT scores.



Reduce Product Returns

Giving customers the power to diagnose and solve issues directly means lower support demand, fewer product returns, and 100% happier customers.



Improve Operational Efficiency

Up to 45% fewer calls means drastically lower demand on your support team, allowing agents to focus their attention on more high-complexity cases.

Smart Support Solutions for Smart Home Brands

Retailers, device manufacturers, broadband service providers, and security software companies also offer a variety of premium support services that build on self-service elements. For those needing additional support, for instance, a support agent may resolve the problem remotely or guide the user through a fix.

Internet service providers and consumer IoT device manufacturers rolling out advanced self-service tools:



Smart sprinkler controller brand Rachio offers its users remote network troubleshooting. Rachio users having issues connecting their controller to the internet can use RouteThis to run a diagnostic on the device and network. Once the diagnostic is complete, users are provided with a step-by-step guide to resolve the issue. If the problem persists, a unique key is sent to the individual's RouteThis app. The diagnostic report also helps the Rachio support team understand the individual system's problem(s).



Smart baby monitoring brand Owlet also offers self-service support to help users address connectivity issues between the home network and the smart sock, as well as monitoring for poor video streaming quality.



RouteThis Self-Help empowers customers to resolve WiFi connectivity issues on their own without ever needing to contact your support team—making it the industry's most effective self-service solution.

“RouteThis has been an invaluable addition to our support team. We’ve lowered our AHT and RMA requests drastically since we’ve started using the platform. This is highly recommended for ANY tech company with users that need to onboard devices to Wi-Fi.”

Krista Wojciechowski-Yakemonis, Customer Experience Manager, **Rachio**

“We had such fantastic results with self-service. Our agents can push customers to our self-service content and app if they can’t resolve the issue, and customers can use RouteThis Self-Help to find specific issues with their Wi-Fi.”

Andrew Watt, Director of Customer Care, **Owlet**



Industry Implications: Transform the UX, Transform Operations

Users want to solve problems themselves when possible, and next generation self-service tools can increase product value by improving the user experience:

- **Productize alerts as a feature** – monitoring the users’ network and device in order to alert the user of a problem can be productized as an added feature, adding value to overall solution.
- **Build brand loyalty with positive support experiences** – proactive monitoring gives the end-user reassurance that the service provider or manufacturer is invested in the user experience. Successfully guiding users through problem resolution on their own is an opportunity to build user loyalty.
- **Educate the end-user** — support tools with built-in diagnostics take away the mystery of device functionality. Support tools that can identify specific issues with the network or a connected device helps to educate the end-user, to help them get more out of their product and prepare them to better handle future issues.

Self-service support tools promise multiple operational benefits:

- **Reduce product returns** – Smart home devices face high return rates relative to more established product categories. The top reason consumers cite for smart home device returns is that the product does “not working as advertised.” Self-support solutions that help users address technical issues or inform them where a specific problem might lie (for instance, with the network, not the device) may bring down product return rates.
- **Lower support costs** – More self-service options aim to resolve issues before they escalate to support agents, freeing up resources for other aspects of the business as well as helping organizations manage rising support requests while facing staffing shortages.
- **Redefine the role of the technician** — Comprehensive network and device diagnostic reports offer technicians insight into the precise problem the end-user is experiencing; a history of previous device issues helps point technicians in the right direction. With better monitoring and diagnostic tools, providers reduce service times, improve the efficiency of support operations, and enable support staff to address more complicated issues that end-users cannot resolve on their own.



New Reliance on Self-Support as Device Landscape Grows

The ever-growing number of connected devices in the home and the rise of work-from-home have brought about new challenges around technical support. The challenges of the COVID-19 pandemic coupled with a transforming work environment increased the reliance individuals place on their connected devices and home networks.

Device owners, makers, and broadband providers know all too well the pain points that can be associated with technical support and device failure. Users become frustrated when their devices can't function as designed, Providers incur extra costs when technicians need to rectify the issues.

Consumers will try to solve issues with their home network and connected devices themselves before seeking professional support. Self-service support options put better tools in the end-user's hands from the get-go.

An improved support experience means a better overall customer experience, more brand loyalty, and a more efficient support operation.



For more information, visit www.parksassociates.com or contact us at 972.490.1113, info@parksassociates.com.



About Parks Associates

Parks Associates, a woman-founded and certified business, is an internationally recognized market research and consulting company specializing in emerging consumer technology products and services. Founded in 1986, Parks Associates creates research capital for companies ranging from Fortune 500 to small start-ups through market reports, primary studies, consumer research, custom research, workshops, executive conferences, and annual service subscriptions.

The company's expertise includes new media, digital entertainment and gaming, home networks, internet and television services, digital health, mobile applications and services, consumer apps, advanced advertising, consumer electronics, energy management, and home control systems and security.

About RouteThis

RouteThis, a leading platform for diagnosing and troubleshooting in-home Wi-Fi connectivity issues, is transforming the way smart home brands deploy, manage, and support the connected home. We offer agent- and subscriber-facing tools tailored specifically for smart home brands to help your devices perform at their full potential. Through device diagnostics, automated troubleshooting, and customer education, RouteThis helps your support team minimize product returns, improve handle time, and convert customers into brand ambassadors.

We're proud to be a trusted partner to hundreds of smart home brands worldwide.

About the Authors



Jennifer Kent, Vice President, Research, Parks Associates

Jennifer manages the research department and Parks Associates' process for producing high-quality, relevant, and meaningful research. Jennifer also leads and advises on syndicated and custom research projects across all connected consumer verticals and guides questionnaire development for Parks Associates' extensive consumer analytics survey program. Jennifer is a certified focus group moderator, with training from the Burke Institute.

Jennifer earned her PhD in religion, politics, and society and an MA in church-state studies from Baylor University. She earned her BA in politics from the Catholic University of America in Washington, DC.



Frank Saldana, Analyst, Parks Associates

Frank Saldana is on the Parks Associates research team and is currently working on a variety of projects, including syndicated deliverables such as the Smart Home Tracker. Frank graduated from Tulane University in New Orleans, Louisiana, with a degree in Political Economy.

ATTRIBUTION

Authored by Jennifer Kent and Frank Saldana. Published by Parks Associates. © Parks Associates, Addison, Texas 75001. All rights reserved. No part of this book may be reproduced, in any form or by any means, without permission in writing from the publisher. Printed in the United States of America.

DISCLAIMER

Parks Associates has made every reasonable effort to ensure that all information in this report is correct. We assume no responsibility for any inadvertent errors.

RESEARCH & ANALYSIS

for Emerging Consumer Technologies

With over 35 years of experience, Parks Associates is committed to helping our clients with reliable and insightful consumer and industry research.



Smart Home Devices and Platforms



Digital Media and Platforms



Home Networks



Digital Health



Support Services



Entertainment & Video Services



Consumer Electronics



Energy Management



Home Control Systems



Home Security