



# TOP **TECH** TRENDS

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# INTRODUCTION

Despite the global setbacks of 2020, the year 2021 holds some promising developments for the technology industry. Tech-savvy buyers looking to source this year's hottest electronics ought to be aware of these trends.

In the mobile electronics sphere, 5G provision continues to grow and be adopted in various countries. Buyers can expect more 5G-enabled phones to be rolled out. The trend in foldable phones follows suit, as more manufacturers can incorporate flexible displays in their devices. Demand for smart wearables for health and fitness, as well as AR & VR gadgets, is also expected to increase.

Smart home products for entertainment, security and safety promise steady growth. In the continued fight against the pandemic, health and sanitization measures have become a priority. As such, building owners, companies and organizations are investing in imaging surveillance cameras, and digital signage with disinfection features. Robots are also proving to be highly useful, as they aid in hospitals, clinics, education and delivery.

Demand for a plethora of electronic components is inevitable at the rate of the technological advancement coming this year. The growth of 5G will catapult demand for connectors and cable assemblies. Foldable phones will be needing flexible AMOLED screens, chip-size components and better batteries. Electric vehicles continue to develop, and these require Li-ion and LiFePO<sub>4</sub> batteries, charging stations and supercapacitors. In the advent of Industry 4.0, buyers can expect smaller but highly efficient components and parts to be must-have items for a best-selling tech catalog.



# ABOUT THIS BOOK

This e-book aims to help smart buyers find the best electronic products to source and secure high-yielding sales in 2021. *Top Tech Trends* gives an overview of recent developments, popular and upcoming devices and accessories, and the latest advancements in mobile electronics, electronic components and smart electronics. By keeping buyers up to date with what's up and coming in the technology sphere, Global Sources aims to provide valuable information that will help make the best sourcing decisions this year.

# 2021

# Mobile electronics trends to watch out for





Growth and change are constant, especially when it comes to technology, wherein advancements just keep progressing year after year. The year 2021 is no different. Here are the biggest trends in mobile electronics that buyers need to be aware of.

# 5G



5G network has been the talk of the town for years, but its rollout is expected to mature by 2021 as more telecom companies like T-Mobile begin to offer this technology. 5G connections are expected to increase by up to 15 times more in 2021. With its speed reaching 100Gbps, the highly efficient 5G technology is said to be 100 times faster than 4G. With 5G's low latency feature, users will be able download and stream 4K videos with no issue, launch compute-intensive apps that use Augmented Reality (AR) and Virtual Reality (VR), and mobile app developers can add new features to enhance the business performance of their respective industries. 5G will pave the way for IoT. According to Analytics Insight, about 51 percent of businesses that use IoT will learn more about their customers' preferences and practices. Lastly, 5G-enabled smartphones can be easily integrated with AR glasses. This fusing of two technologies will allow users to run AR apps with highly advanced audio-visual entertainment functionalities, according to *Electronic Products*.

# Virtual Reality (AR & VR)

The mobile game Pokémon Go is one of the most well-known apps that incorporate AR. Unlike VR which immerses the users into a fully simulated environment by stimulating their hearing and vision, AR simply enhances a real-life view with digital images and is most often used with camera lenses. The overlay images blend into reality, which helps users tell the difference.

AR is set to grow further in 2021. For instance, IKEA's app lets users see how their furniture will look in their homes when they take a photo of their interior and add the furniture's photo. In the medical field, neurosurgeons use AR to project a 3D image of the brain when in surgery. Military pilots have AR helmets to check plane speed, altitude and more. The app of L'Oreal has a "virtual makeup" feature that allows users to see how they look with its makeup. In addition, the smart AR glasses will continue to gain traction. Police officers in China make use of smart glasses in identifying suspects or criminals in a crowd.

While VR is mostly associated with gaming platforms such as PlayStation VR and Oculus, this 2021, it is branching out to education like in museum galleries, medical surgery training and flight simulation in aviation training. In the US, the military uses a VR software called VirtualShip to train the Army, Coast Guard and Navy.

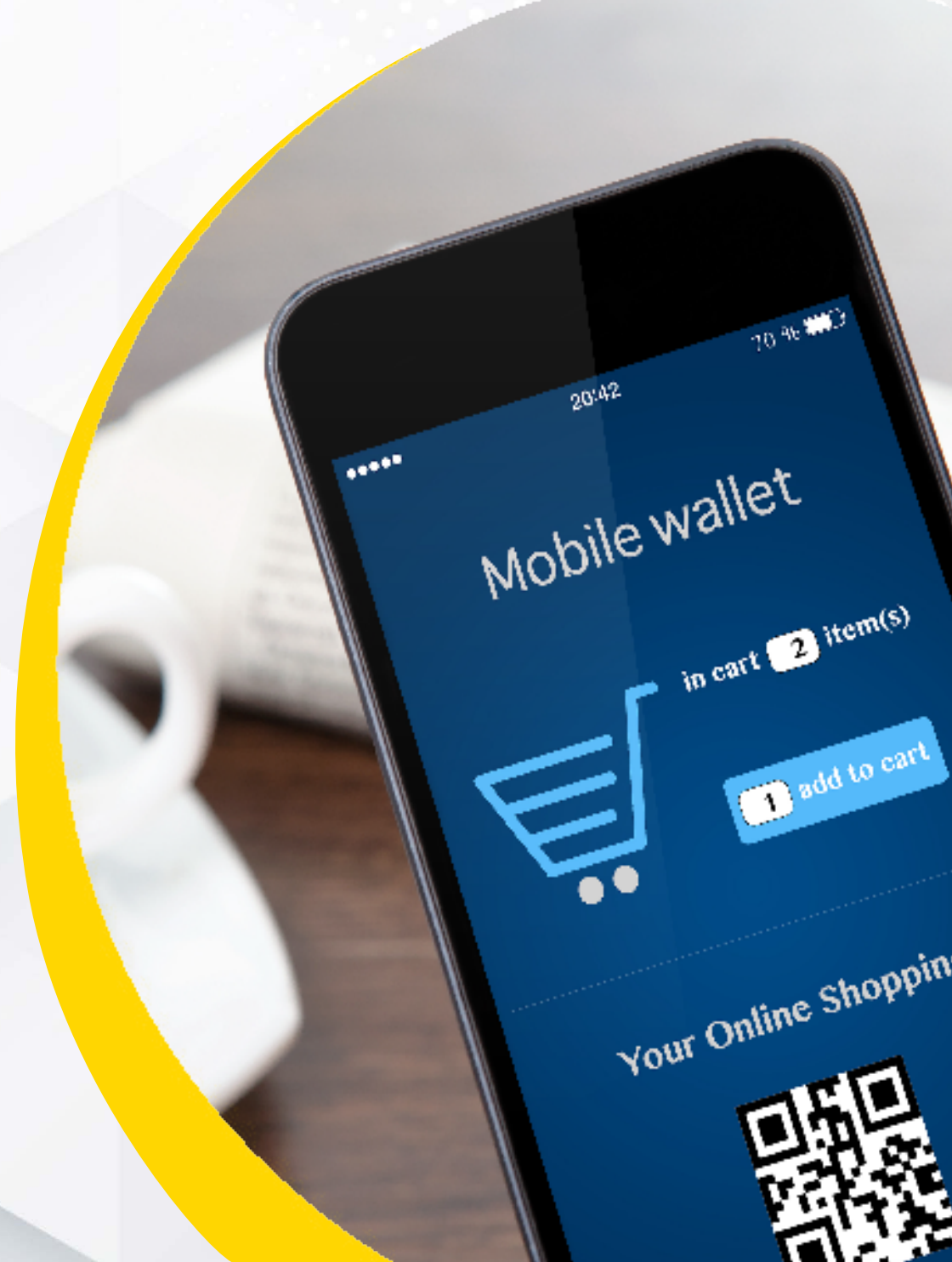


# CLOUD-BASED STORAGE & MOBILE APPS

At present, Salesforce, Google Drive and Slack are already a necessity. By 2021, cloud technology will be expanding to mobile apps. With data being stored mostly in the Cloud, less internal storage of the phone will be used, enabling users to save more memory in their phones. According to GrapeCity, the market worth of cloud services grew 17 percent, reaching US\$266.4 billion in 2020, and is expected to rise in value in the next five years. The flexibility and scalability of storing data in the Cloud make it more secure and convenient.

# M-commerce, mobile wallets & payment

The pandemic has pushed the use of cashless transactions even further. In the US, Google Pay, Android Pay and Apple Pay have become mobile wallet favorites, especially among millennials. These e-wallets store users' bank, and credit and debit card details for speedy access during purchase. The convenience, efficiency, safety and security mobile wallets offer when users pay bills, and purchase items online and offline are the top reasons why mobile e-commerce will continue to boom from 2021 onward.



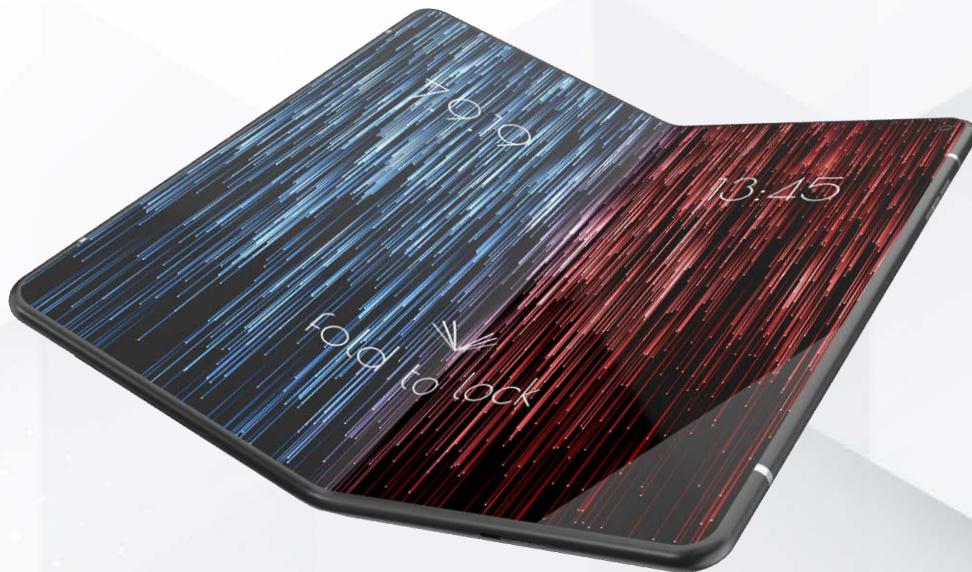
# WEARABLE DEVICES & HEALTH APPS



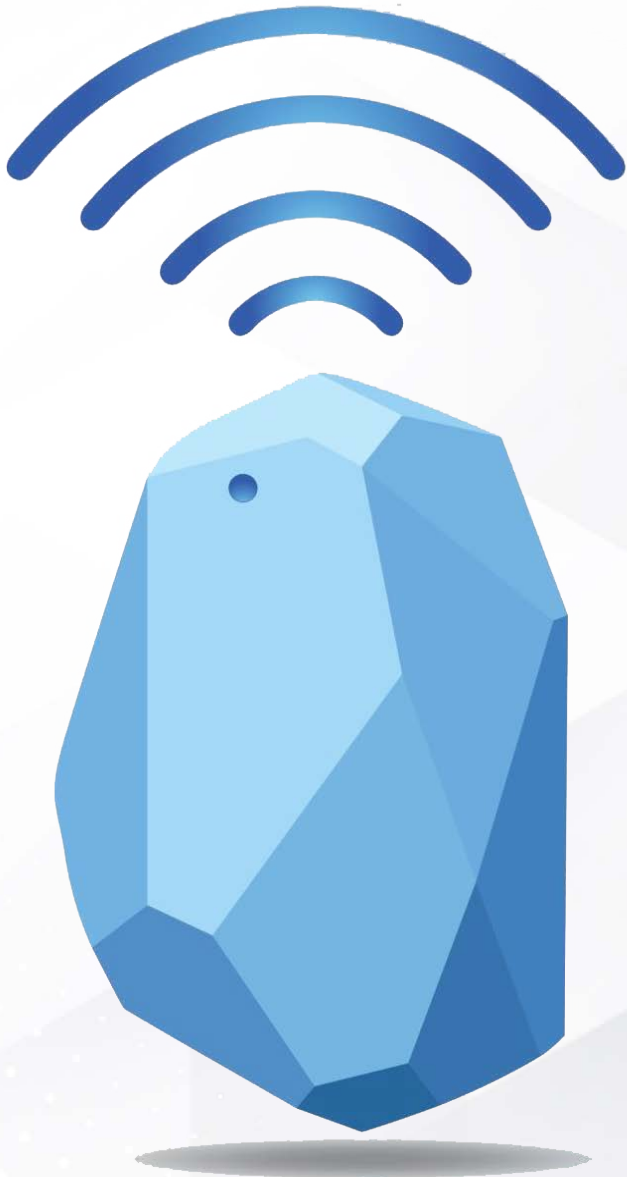
Wearable devices have been in the market for a few years now, and in 2021, more apps that sync with wearable products will be developed. These include more user-friendly health and social fitness apps. Users will then be able to download them to their smart watches. Smart bracelets, smart watches, GPS watch trackers and other smart wearables have been gaining popularity since 2019 as people are becoming more health-conscious and fitness-driven.

# Foldable phones + integrated apps

Back in 2019, Samsung made waves with its first-ever foldable phone, the Galaxy Fold. Since then, the South Korea company has released follow-ups like the Z-Flip and the Fold 2 in 2020. By 2022, it is estimated that about 50 million foldable phone units will be sold. According to an *Electronic Products* article, smartphone manufacturers will continue to develop their foldable phones as the production of flexible AMOLEDs also expands.



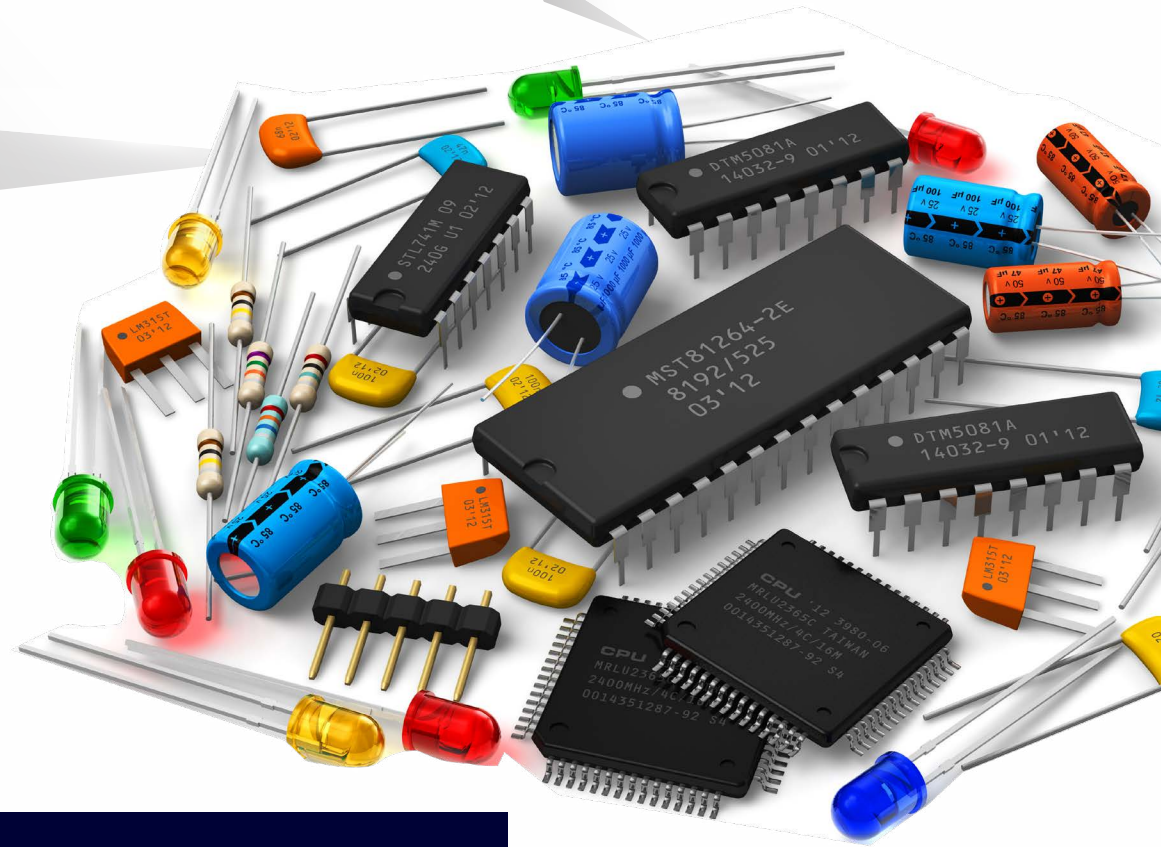
# BEACON TECHNOLOGY




Beacons are miniscule transmitters that send Bluetooth signals to other devices like what indoor positioning systems do. Beacon technology is mostly used by businesses in retail, hotels and healthcare since it adds a high-level functionality to mobile apps as noted in *Hyperlink Info System*. Most commonly, entrepreneurs use beacons to track buyer behavior in brick-and-mortar stores. They are able to gauge how much time buyers lend their attention to a specific product. The use of beacons is expected to expand in more industries in 2021.

Buyers who are on the lookout for the leading products in 2021 may want to keep an eye out on 5G-enabled smartphones, foldable phones, mobile accessories, AR and VR devices, Bluetooth beacons and smart wearables. Verified suppliers on [Global Sources.com](https://www.globalsources.com) readily offer source-worthy electronics.

# COMPONENTS FOR ROADMAPMED TECH PROJECTS



The pandemic may have dimmed market prospects in the electronics industry for now, but there remains an overall optimism that previously announced technology trends will eventually come to fruition. In the electronic components sector, this outlook spurs product development, which emphasizes higher reliability and stability, and greater miniaturization.



**A** wider 5G deployment almost assures a boom in many segments starting in 2021. The global 5G market is projected to reach US\$11 trillion in 2026 from US\$31 billion in 2020, according to ReportsnReports.

5G



In connectors and cable assemblies, the race toward solutions that can handle 5G download and upload speeds is underway. This segment covers copper-based and fiber-optic products. Smartphone displays also stand to benefit from the 5G trend as compliant models are expected to use AMOLED screens, with some possibly adopting flexible displays, as will chip-size passive components, such as resistors and capacitors. And for backup power in 5G base stations, there are LiFePO<sub>4</sub> batteries as a viable power reserve.

A futuristic car is shown in a tunnel-like environment with blue and red lighting. The car is sleek and modern, with a prominent side mirror and a curved body. The background features a curved wall with blue lights and a red light source on the left. The overall scene is high-tech and futuristic.

# ELECTRIC VEHICLES

**E**lectric vehicles (EVs) are another trend to watch. Together with hybrid vehicles (HEV), this market is projected to outsell its traditional gas-powered counterpart by 2040, and will fuel demand for batteries, EV charging stations, and electromechanical and passive components.

In the battery category, there are Li-ion and LiFePO<sub>4</sub> types. Manufacturers of Li-ion batteries are working on boosting energy density, and rate and cycle performance. A Li-ion subcategory, LiFePO<sub>4</sub> batteries present better thermal performance, higher safety and longer cycle life for EV use.

EV batteries, in turn, will demand charging stations with high power to enable fast charging. Experts in the charging station industry are predicting the next trend will be for products to have 1,000V output voltage, 350A charging current and 350kW rated power. These units can provide up to 80 percent of battery capacity in 15 minutes. And on the horizon is wireless charging, which can eventually lead to the realization of autonomous vehicles.

Greener, cleaner vehicles are steering R&D in automotive relays toward high-voltage types, which have enhanced load and shock resistance, and rupture capability, in addition to being lightweight.

For having the best qualities of capacitors and batteries, supercapacitors have advanced as backup devices or replacements to batteries. Applications now extend beyond consumer electronics and communications products to HEVs and EVs, power storage systems, and the medical and military fields.



# ROBOTICS

**G**earmotors, which account for nearly 40 percent of total robotics costs, will be the biggest beneficiary of the robotics market. Those for industrial robotics will have surpassed US\$588 million by the end of 2020 and post 30 percent CAGR within the next five years, according to Sohu News.

Unlike conventional gearmotors, types for robotics are smaller and lighter, have a shorter drive chain and are easier to control. Based on the accompanying speed reducers, there are rotate-vector, harmonic and planetary types, with the first two widely adopted. Between these two leading variants, rotate-vector units are expected to prevail in the Industry 4.0 sphere, owing to better stiffness and precision features.

Brushless motors are also widely used in robotics and drones, and are expected to gradually replace stepper and brushed kinds in the coming years. R&D will continue to focus on high-reliability ultrasmall and integrated units.





# SMART MANUFACTURING

The move toward smart manufacturing or the application of Industry 4.0 – otherwise known as the Industrial Internet of Things – will eventually happen. This will be driven by the potential advantages of high efficiency and, ultimately, a low-cost production solution based on mega-data, AI and robotics.

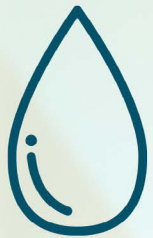
To prepare for revitalized demand and accelerated roadmapped projects in 5G, electric vehicles, robotics and drones, start sourcing electronic components on [GlobalSources.com](https://www.globalsources.com).

Which smart devices will lead the

# TECHNOLOGY SPACE IN 2021?



Technology advances for the new normal. The global health crisis has given rise to a stay-at-home lifestyle, and regular disinfection and health checks in public places. As such, various smart home devices, disinfecting machines, temperature scanners and robots are expected to lead in sales in 2021.





# THE SMART HOME SPACE

There is no stopping the massive growth of the Internet of Things (IoT). By 2030, each person is expected to have about 15 connected devices, with these mostly in the smart home space. Juniper Research estimates the smart home market revenue will reach US\$195 billion by 2021. With most people working and staying at home, their investments are leaning toward smart devices, which provide safety, security and convenience, and help manage power consumption.

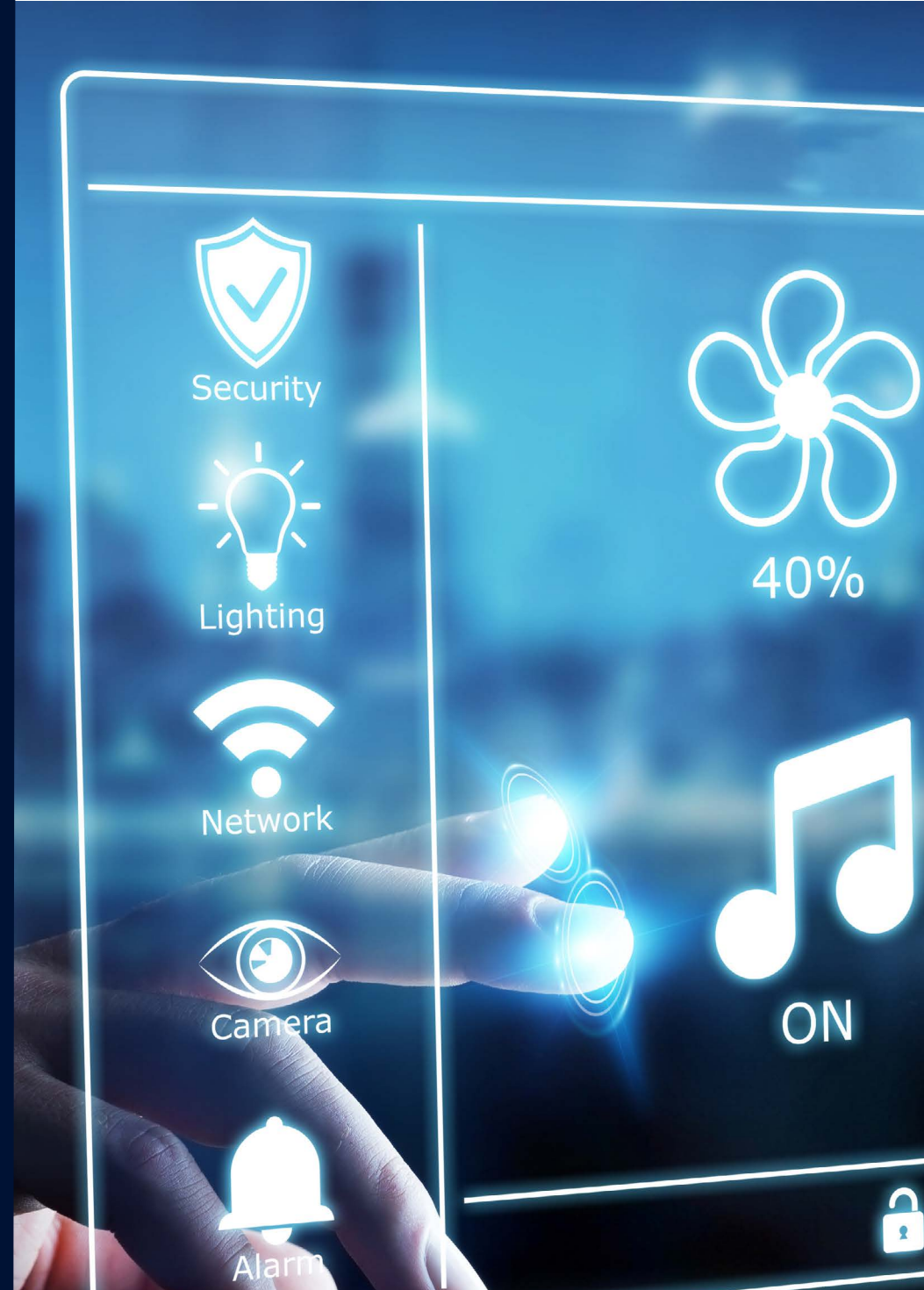
One of the first smart home purchases that consumers make is a smart hub. It acts as the “brain” that automates and connects all the smart devices inside the house, and allows users control via a single mobile app.

**F**or entertainment and smart lighting, Google Home- and Alexa-enabled smart speakers, smart TVs, Bluetooth LED bulbs, Wi-Fi-enabled LED strip lights and motion sensor lights top the list of what consumers are searching online. Through voice control and motion, these devices enable users to dictate what needs to be done, whether the lights should be switched on or off, if a song or movie should be played, and many more. In video calls and livestreams, smart LED bulbs add a decorative flair to a home.



Home security products, such as smart doorbells and video cameras, help avoid face-to-face interaction between homeowners and visitors. Conversations can be carried out via these video doorbells and smart intercom systems. Deliveries dropped at the doorstep can be verified directly. Smart locks, on the other hand, don't require keys since these modern devices can be unlocked via a mobile app. This convenience decreases the likelihood of people touching surfaces.

Furthering safety, today's wireless security camera systems are equipped with night vision, object tracking, facial recognition and motion sensors with built-in alarms in case of suspicious activities. They are also water-resistant and can be installed anywhere. Wi-Fi-enabled CCTVs allow users to monitor what's happening remotely and save data via the Cloud.



# PUBLIC AREAS

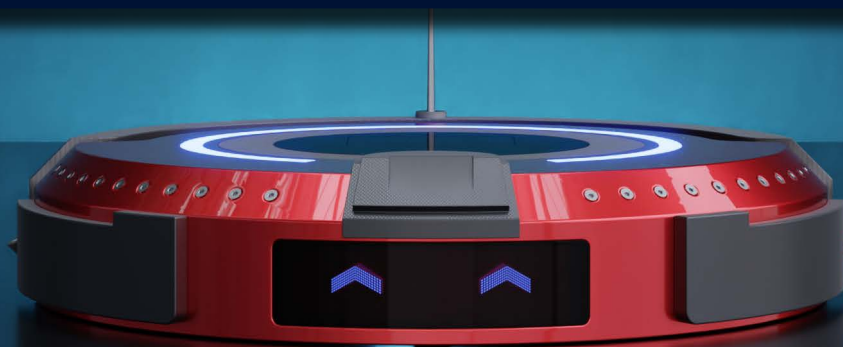
A woman with blonde hair and glasses is shown in profile, smiling as she touches a transparent screen. The screen is part of a kiosk or interactive display. The background is blurred, showing what appears to be a public space with lights.

**F**or safety protocols, various face recognition and temperature systems with biometric functions, thermal imaging surveillance cameras and contactless kiosks are now installed in entrances of buildings, malls, airports and schools to check body temperatures. There are also digital signages with alcohol or sanitizer dispensers in public places.

# INSIDE & OUT

Robotics is proving to be highly important in day-to-day life, healthcare and education and has an estimated market of about US\$23 billion in 2021, according to ABI Research.

Indoors, robotic vacuum cleaners help homeowners sanitize without touching surfaces. Educational robots are teaching children the alphabet, conversational skills, counting, writing, drawing and more in the comfort and safety of their homes. And with online classes going on, these robots serve as an additional learning tool for students. Their market value is projected to grow 28 percent from 2020 to 2024.




Outside, ground robots are used to deliver goods to people's homes, eliminating the need to go to brick-and-mortar stores. This lifestyle change is helping reduce the risks of human-to-human transmissions. Service robots in clinics and hospitals help disinfect surrounding areas, monitor patients' vital signs and even act as a telepresence medium between patients and healthcare professionals to avoid face-to-face interactions.

The technology space in 2021 is all about the convenience and safety that electronics can provide to consumers and businesses. Buyers looking to push their e-commerce forward further must consider importing these high-demand smart electronics, and they can find them here on [GlobalSources.com](https://www.globalsources.com).





# Consumer electronics trends for 2021: **LIFE IN THE CLOUD**

A close-up photograph of a silver metal shopping cart resting on a white laptop keyboard. A red plastic handle is visible at the top of the cart. In the background, a white computer mouse is partially visible. The scene is set against a dark background, likely a desk.

Consumer electronics leapt into the Cloud in 2020, as the pandemic pushed locked-down people around the world to move more of their lives online. Many began shopping online for the first time or for previously offline-only product categories, and using videoconferencing and related technologies to communicate with family and friends, for work and study.

Supporting this transformation were both software, thanks to improvements in AI, machine learning and cloud computing, and hardware – the rollout of 5G and improved Wi-Fi speeds enable service providers, as well as consumers, to enjoy the benefits of those improvements.

Moving into 2021, this digital transformation will see wider adoption and a deeper penetration into the fabric of everyday life. While much will be behind the scenes, in the server farms and software development offices of online service providers, sourcing professionals in the consumer electronics field will see new demand for products from end users.





Smart speakers are already widespread, if not quite mainstream, in the world's wealthier consumer markets. There are now an estimated 35 billion smart speakers and other Internet of Things (IoT) devices connected around the world, and Statista forecasts some 75 billion connected devices in use by 2025 – almost three times as many as in 2019.

Currently dominated by Alexa, Ring and Nest, security remains a major chink in IoT's armor. Concerns over privacy and identity theft remain a major stumbling block for consumer adoption. Amazon acknowledged this in its most recent Amazon Live event, announcing a slew of options for users to control their Alexa data, with Apple also emphasizing privacy issues in recent marketing efforts.

# SMART SPEAKERS – WITH SECURITY

“As we head into the new year, we’ll likely see an increase in the security surrounding smart devices, including AI-driven, automated ability to scan networks for IoT devices,” wrote Futurum Research analyst Daniel Newman in a November 2020 *Forbes* article. “I expect amongst big tech for this to be a trend as we seek to build consumer confidence around the applications and experience, while data safety and privacy must also be a consideration.”



Demand for smart speakers will be strong in 2021. Market research firm Canalys expects the global smart speaker market, including smart displays, to reach 163 million units in 2021. However, it will be difficult for brands outside the core market leaders to meet this demand directly. That is, if consumers want to buy an Alexa speaker, they'll almost certainly get it from Amazon.

But while Amazon and Google maintain a vice-like grip on the core products, the rest of the ecosystem offers a range of opportunities. Smart lighting, security, plugs, sound systems, appliances and more are wide open for businesses who are aware of consumers' pain points with existing IoT products and are ready to solve those problems on price, function or quality. Buyers sourcing IoT-enabled consumer electronics must stay abreast of the demand in their markets for specific products and ecosystems, as well as the latest standards and regulations.

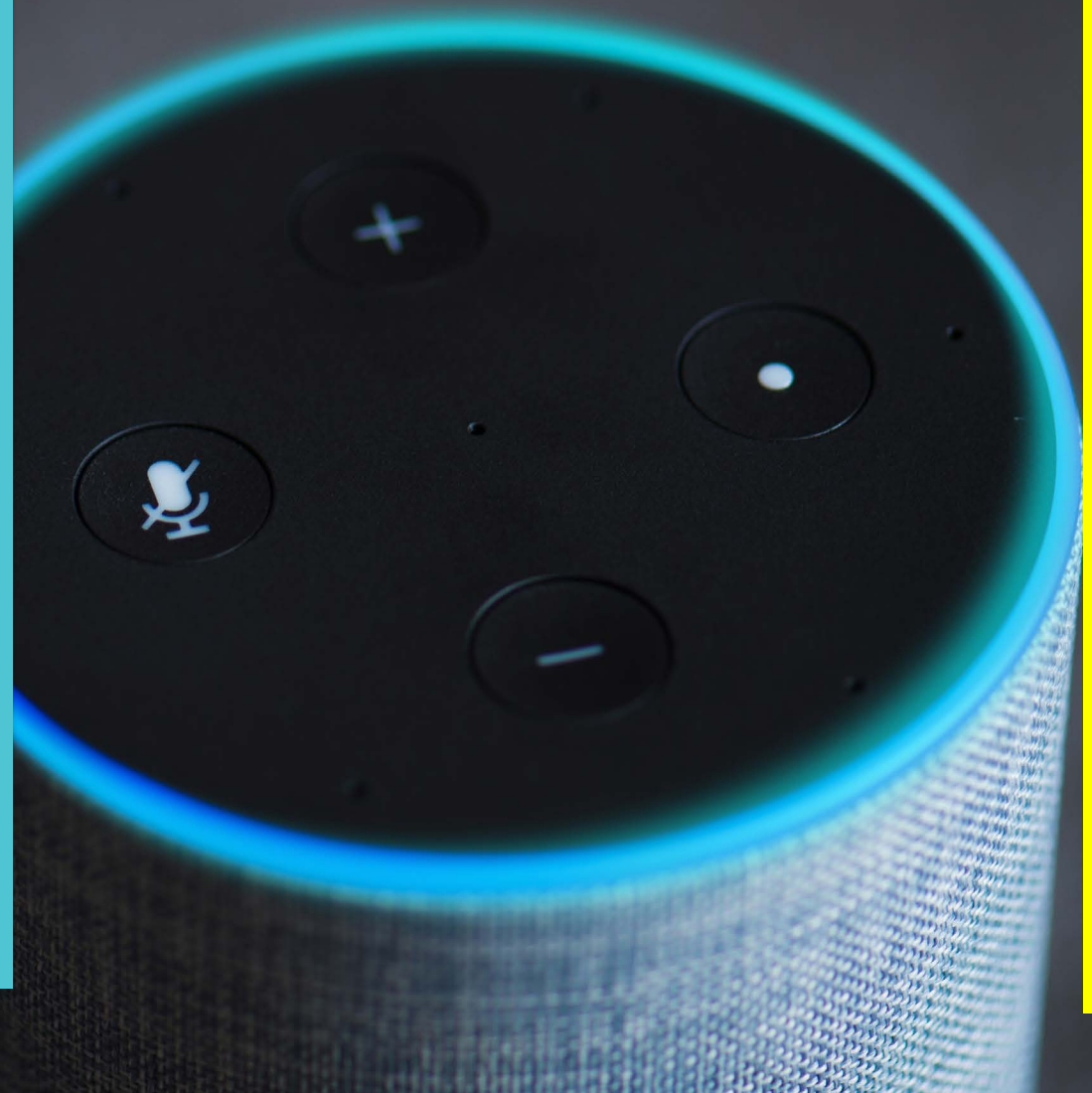


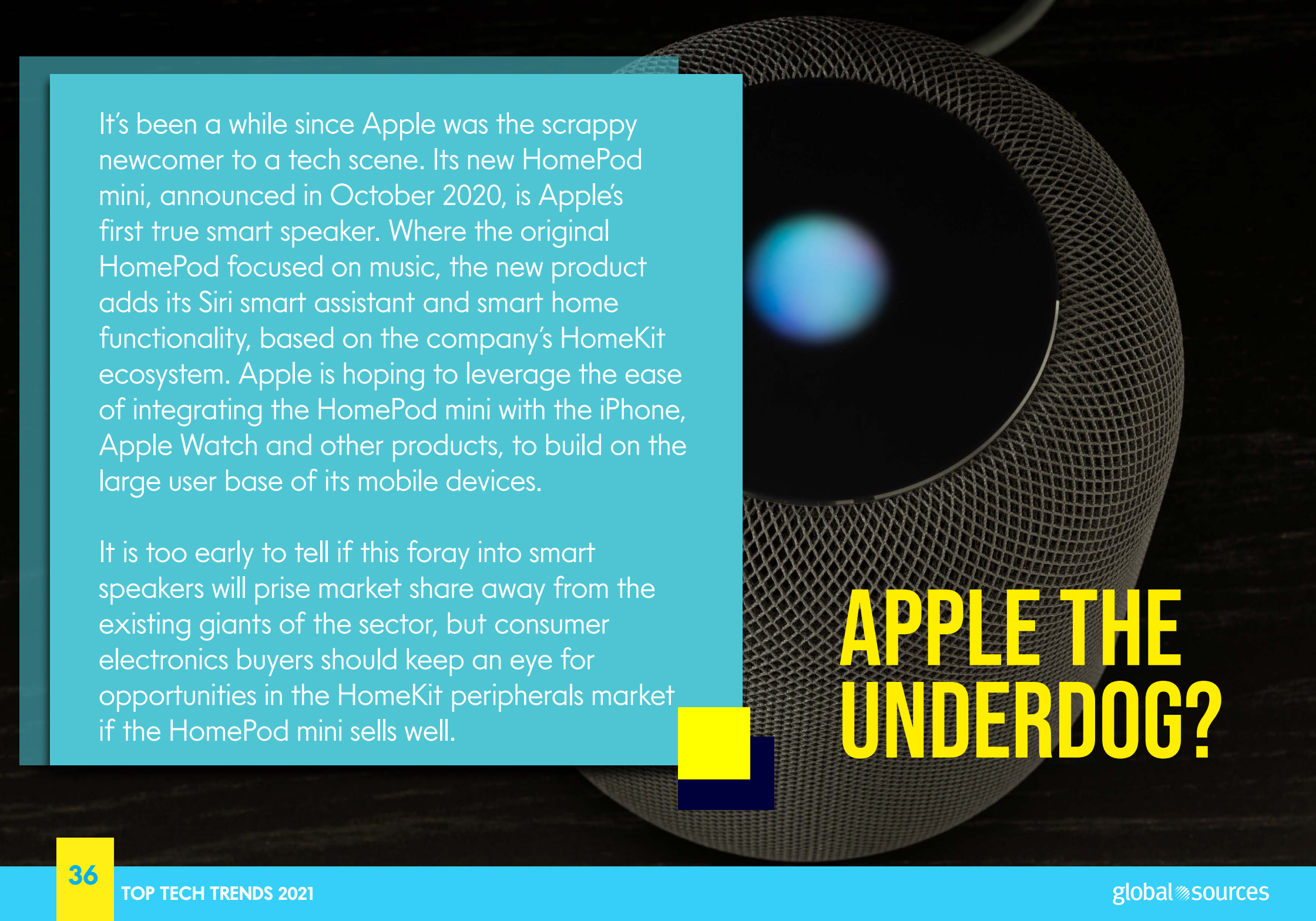


**Smart speakers** continue to improve despite the simplicity of the form factor. The challenge is to bring noticeable improvements and innovation with minimal increase in costs. ... Amazon and Google are striving to spark interest by breaking the speaker mold, each taking different design routes aimed to obtain sound quality improvements, not only with physical design changes, but also introducing additional elements of computational audio. In the future, a customer's listening experience will be increasingly adaptable and driven by AI."



Canals Research Manager  
Jason Low, October 2020





It's been a while since Apple was the scrappy newcomer to a tech scene. Its new HomePod mini, announced in October 2020, is Apple's first true smart speaker. Where the original HomePod focused on music, the new product adds its Siri smart assistant and smart home functionality, based on the company's HomeKit ecosystem. Apple is hoping to leverage the ease of integrating the HomePod mini with the iPhone, Apple Watch and other products, to build on the large user base of its mobile devices.

It is too early to tell if this foray into smart speakers will prise market share away from the existing giants of the sector, but consumer electronics buyers should keep an eye for opportunities in the HomeKit peripherals market if the HomePod mini sells well.

# APPLE THE UNDERDOG?

# ABOUT GLOBAL SOURCES

Global Sources is a trusted, internationally recognized B2B sourcing platform that has been driving global trade for more than 50 years. The company connects authentic buyers and verified suppliers worldwide with tailored solutions and trusted market intelligence through trade shows, digital platforms and magazines.

## VISION

To be the most trusted, customer-centric, multi-channel B2B trade platform that promotes authentic global trade geared towards enhancing the quality of human lives

## MISSION

Connect authentic buyers and suppliers worldwide with tailored sourcing solutions and actionable market intelligence. Help them meet the rapidly changing dynamics of the global trade, source more effectively and seize new opportunities

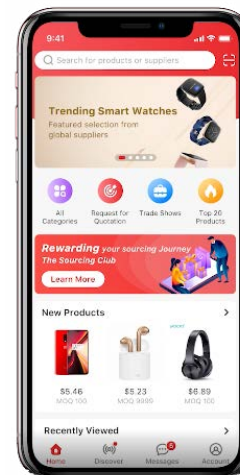
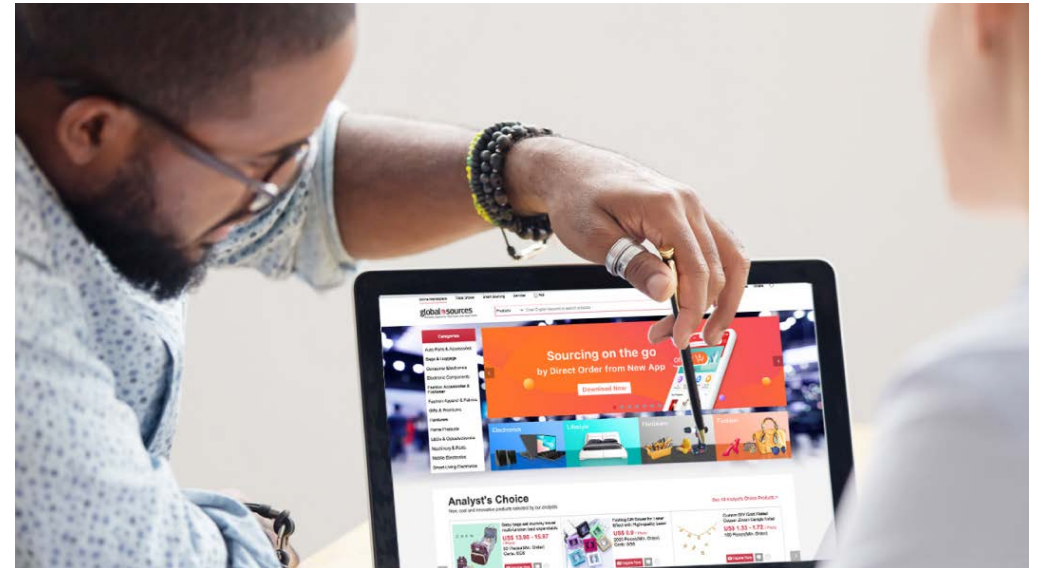
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