

automatec REFALLER tracker

How Remotely Adjustable Interactive Kiosks Are Powering Sales

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McDonald's tests robotic fryers and voice ordering automation Page 9 (News and Trends)

How click-and-collect helps retailers challenge delivery giants Page 13 (Deep Dive)

table occontents



Supermarkets turn to automation to enable quick checkout and order fulfillment



FEATURE STORY

Bhushan Mehendale, vice president of engineering at Esper, on designing automated kiosk software for a variety of retail applications



NEWS & TRENDS

The latest automated retail headlines, including Kroger and Ocado's new automated order fulfillment centers and McDonald's experiment with robotic fryers



An examination of how automated buy online, pickup in store solutions can help retailers more effectively reach certain demographics, including Gen Z and rural consumers

SCORE-CARD

See the August edition's top scorers and a provider directory featuring 145 industry players

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ACKNOWLEDGMENT

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WHAT'S INSIDE

Supermarkets face increasing consumer demands for high-speed, in-store shopping and quick access to online purchases. Stores have turned to a variety of automated solutions to help meet these expectations and provide rapid-fire checkouts, quick order collections and speedy deliveries.

Amazon Go popularized the checkout-free shopping model concept in which consumers use apps to enter stores, and their accounts are charged automatically when they grab items to go. Pennsylvania-based grocery brand Giant Eagle is applying a similar approach at its supermarkets. The chain <u>plans</u> to introduce a shopping service that allows customers to collect items and leave without stopping at checkout stations. The stores' computer visioning and machine learning (ML) systems determine which products were taken and charge customers' app accounts accordingly.

Not all grocery customers have time to browse the aisles, however, and supermarkets are finding that automation can help them meet consumers' demands for delivery and pickup orders. About 12 percent of U.S. consumers <u>place</u> grocery orders online for pickup or delivery, a share that jumps to 18 percent for shoppers in urban areas. Eighteen percent of millennial shoppers also report doing so, suggesting that online grocery ordering will likely grow in the future. Grocery chain Kroger is addressing this trend by constructing facilities that <u>leverage</u> advanced artificial intelligence (AI) and robotics to quickly compile shoppers' orders.

Retailers worldwide are also reacting to the growing popularity of online grocery ordering. Israeli logistics technology startup CommonSense Robotics <u>seeks</u>

to help grocers deliver orders within an hour by using small-footprint robotic fulfillment centers located in urban areas. U.K.-based Morrisons similarly <u>improved</u> food delivery to its stores with robotics that quickly and carefully package delicate fruit and produce, ensuring that items arrived undamaged.

This month's Automated Retail Tracker explores these and other ways retailers are leveraging technologies to provide faster, more convenient services.

AROUND THE AUTOMATED RETAIL WORLD

McDonald's recently moved to <u>accelerate</u> meal preparation by introducing robots capable of operating fryers. The solution is being tested and follows on the company's other digitization efforts, including an automated system that can accept voice orders at the drive-thru.

Retailers outside the food sector are also drawn to self-service models, with photo services and products provider Kodak recently <u>launching</u> photo-printing kiosks retailers can deploy in their stores. The units give store owners affordable, scalable options for photo printing.

Fashion retailers recently <u>reported</u> that last year's test of a self-serve omnichannel concept reduced return rates and improved sales. Shoe company Sneaky Steve and clothing brand Wacay participated in a fall 2018 trial during which their items were sold online through a self-serve kiosk placed in a small store at a Swedish mall. The store included sample items customers could try on to assess fit.

For more on these stories and other headlines from the automated retail space, check out the Tracker's News and Trends section (p. 9).

REMOTELY ADJUSTABLE INTERACTIVE KIOSKS ARE BOOSTING SALES

Kiosks are increasingly popular sales channels and are being leveraged to facilitate everything from real estate purchases to bill payments. The solutions enable retailers to provide products and promotions without tying up staff or taking up much floorspace and have been shown to increase customer spend.

Bhushan Mehendale, vice president of engineering at Esper, believes the days of kiosks with fixed, designated functions could be over. Esper provides a platform that helps retailers manage and develop apps for kiosks. This lets retailers change the kiosks' functions as desired, swapping out one service for another or switching between different apps to meet customer needs that might vary by time of day or season. For this month's Feature Story (p. 6), Mehendale explains how Esper's platform supports businesses that wish to test out new retail ideas while enabling them to gather insights on kiosks' performances across a number of stores.

HOW BUY ONLINE, PICKUP IN STORE HELPS RETAILERS Compete Against Delivery Giants

Next-day shipping is not fast enough for many Generation Z consumers who want their items within hours — or sooner. These shoppers demand that the convenience of online browsing and item selection be paired with the immediacy of in-store shopping. Buy online, pickup in store (BOPIS) offerings are helping retailers appeal to this demographic, as well as to customer bases that are frequently locked out of quick eCommerce delivery options due to the expenses incurred by sending carriers out to each far-flung shopper. This month's Deep Dive (p. 13) examines how automated solutions like order collection towers can help retailers provide quick, compelling BOPIS offerings to better compete against major eCommerce marketplaces and eTailers.

EXECUTIVE INSIGHT

Retailers have used kiosks to sell products and provide services for decades, and kiosks have evolved to enable new capabilities and customer conveniences. How do you expect the technology to continue to develop, and how might such solutions affect retailers' relationships with their customers?

"Self-service in retail is nothing new. A famous example from the restaurant sector is the automat [which was present] in New York and other cities in the early 1900s. Diners inserted nickels in a ... slot to ... access their meals. The format was hugely popular, but died out due to the rise of fast food, which provided value-conscious consumers with more choice, and a more flexible way of paying, which was crucial in an age where inflation meant a single nickel didn't buy much anymore.

Things have changed a lot since those days. Consumers are now offered a much wider range of products, and the technology has evolved to an extent that payments can be completely invisible. In addition, the growth and impact of eCommerce on consumer expectations means that many customers – especially younger generations – now prefer self-service purchasing.

I expect self-service technology to continue the trend of merging the physical and digital worlds. The online experience will shape in-store expectations. Consumers these days have a digital identity and a digital footprint, which all retailers need to engage with. Retailers' future relationships with customers will need to be built on on a blend of coordinated digital and in-person touchpoints, and brick-and-mortar retailers need to invest in that omnichannel approach to keep up.

The real lesson from the automat example is that consumers lead the market, and the retailers who fail to follow consumer expectations risk being left behind."

TIM MORAN

senior vice president of product at Worldnet Payments

FIVE FAST FACTS

\$35M

Amount Standard Cognition recently raised in a Series B funding round

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20

Number of automated grocery order fulfillment centers Kroger intends to build in the U.S. by 2021



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Return rate for online orders bought at Sweden-based omnichannel concept store The Fitting Room

36%

Share of consumers who say shopping has become more convenient while customer experiences have worsened

12%

Share of U.S. consumers who order groceries online for pickup or delivery

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How Remotely Adjustable Interactive Kiosks Are Powering Sales

August 2019

Chicago-based Florsheim Shoe Company became one of the first companies to deploy retail kiosks to <u>sell</u> products in 1981. The company's machines <u>offered</u> digital product catalogues, played audio explanations of shoes' features and let customers place orders that would be delivered within several days. The technology has evolved and spread ever since, and today's interactive kiosks <u>enable</u> consumers to do everything from browsing real estate properties and paying bills to renewing vehicle registrations and taking healthcare surveys.

Kiosk-based shopping experiences may be convenient for consumers, but they also work out for retailers. These solutions provide consumers services without retailers having to designate staff or significant floorspace. Quick, anonymous self-serve experiences reportedly drive up customer spending, with a recent <u>study</u> finding that customers tend to spend 15 percent to 20 percent more when purchasing through kiosks as opposed to traditional checkouts.

Solution providers and retailers are not satisfied with resting on their laurels and continue to explore ways to advance the technology. Bhushan Mehendale, vice president of engineering for kiosk app management and development platform provider <u>Esper</u>, sees the next stage of retail kiosks as one in which businesses can remotely change machines' capabilities so they can support different purchasing or shopping functions as new needs or desires emerge. Esper installs an Android software platform onto kiosk hardware, enabling apps to be run, updated and swapped. This also gives retailers the ability to remotely manage and monitor their kiosks.

"I predict a future in which brick-and-mortar stores [will] have kiosks as very essential aspects," Mehendale said in a recent interview with PYMNTS.

THE KIOSK VALUE ADD

Kiosks give brick-and-mortar shops the opportunity to weave digital supports and offerings into in-person shopping experiences. These solutions can reach out to consumers and provide product information, helping shoppers better understand items so they feel more confident making purchases. Mehendale said that beauty stores may want to use camera-equipped kiosks to offer consumers 3D visualizations of how hair dye or makeup will look on them, for example.

Sellers can expand their kiosk-based marketing approaches to encompass more than just product visualizations, he said. Stores can create stronger calls to action by providing customers with discount coupons at kiosks where they virtually tried out an item, for example. Value adds like promotions and deals help push more customers to engage with the kiosks.

"They incentivize the customer to [buy] by saying, 'See how the lipstick looks on you and if you would like to ... buy right now, here's a 5 percent [off] coupon," Mehendale said.

Kiosk-issued discounts can be used to prompt customers to purchase items available in stores or to direct and encourage them to place online or phone orders for products that are not in stock. The machines give businesses the opportunity to sell items that may be inconvenient or expensive to keep in stores. Mehendale pointed out that a common use case is leveraging kiosks to sell gift cards that can then be texted or emailed to customers' intended recipients.

Big-box retailers and grocery stores can also use the machines to smooth out in-store shopping frictions. They could provide informational services such as maps – one of Esper's most popular use cases – customer surveys, payment acceptance, visual product simulations and more, he said.

MULTIPURPOSE APPROACHES AND REMOTE MONITORING

Businesses can explore new uses for the machines and adapt them to changing needs with remote updates. Single-purpose retail hardware has to be removed, and retailers have to install new software or entirely new kiosks to offer different self-serve capabilities. Machines with software that can support new apps being added and old app removal maintain flexibility, enabling retailers to redeploy already-purchased kiosks to new sections of the store. They could move kiosks from electronics to women's apparel and adjust the item catalogues accordingly, for example. Kiosks' software can also be updated to promote items according to the time of day as well as seasonal product lines to better appeal to customers.

"[With this approach, retailers] can say, 'You know what? From 9 p.m. to 12 a.m., I'd like my kiosk to show ads related to beer and diapers, and from 12 a.m. to 4 a.m. it's something different.' Everyone gets super granular control over each of their kiosks," Mehendale explained.

Kiosks are also adjustable based on location, should companies discover that shoppers in particular states or cities exhibit different preferences than those in other locales.

Remotely monitored devices and their performances give retail executives the chance to quickly gather information about how customers at stores across the country interact with the kiosks, including how many consumers engage with them and when. Businesses also get readings that let them quickly learn about any issues affecting machines' performances, such as if one unexpectedly turns off.

The kiosk retail landscape is continuing to develop as store owners and brands explore new ways to deliver their products, promotional offerings, maps and other supports that facilitate better in-store shopping experiences. Remote kiosk management and updates could be valuable tools in helping brands test new ideas and quickly roll out successful ones to more store locations.

HOOD

How does Esper work with kiosk manufacturers and retailers interested in deploying kiosk-based services that support self-service retail?

"Think of the industry as having three different kinds of [players]. One [is] the folks who actually create the hardware for the kiosks. Then there are folks like us who put software on the kiosk to help manage them and orchestrate a bunch of them [throughout] the world. Then there are folks who want to put experiences onto kiosks.

There is a thin boundary [between us] and the third type of demographic. We sometimes step into their world and help them succeed [at putting experiences] onto the kiosks [they choose]. Esper tries to give capabilities to these [retailer players] to make their apps simple to write. ... Most of the [retailers] who want to quickly try out an app [on a kiosk] already have web-based apps that work well on tablets, phones and so forth. With Esper, it's a two- or three-minute job to wrap that up into a [kiosk] app and push it to the kiosks [they choose].

On the other side of the spectrum, a quick app may not cut it [for some retailers]. They want something more involved. We can help them work with their engineering teams to develop more elaborate apps, such as apps that accept payments, print out ... receipts, do image recognition – [in which] the cameras see the individuals standing in front of them – and so forth."

> Bhushan Mehendale vice president of engineering at <u>Esper</u>

NEWS TRENDS

Automated grocery checkout developments

GIANT EAGLE PILOTS GRABANGO CHECKOUT-FREE SOLUTION

Pittsburgh-based supermarket Giant Eagle is currently piloting startup Grabango's checkout-free technology. The former, which has <u>approximately</u> 460 stores in Indiana, Maryland, Ohio, Pennsylvania and West Virginia, is testing the latter's system at a single store location. Grabango's solution uses computer visioning and ML to track items, improve inventory stocking and facilitate automated checkouts.

Consumers using the technology can have their purchases charged to their Grabango accounts, enabling them to leave the store without visiting cashiers. Traditional checkout stations will be retained to support customers who wish to pay with cash, cards or Supplemental Nutrition Assistance Program (SNAP) benefits. Grabango founder and CEO Will Glaser asserted that the solution can effectively monitor hundreds of thousands of stock-keeping units (SKUs) and operate in stores with more than 100,000 square feet of floor space.

STANDARD COGNITION DRAWS \$35M IN SERIES B FUNDING

Automated checkout startup Standard Cognition is also working on cashier-free purchasing, recently <u>raking</u> in new investment funds during a Series B funding round EQT Ventures led. The startup, which uses AI, computer visioning and a customer scan-and-go app to power its solution, took in \$35 million, raising its total funding to \$86 million. The company plans to use the money to expand into more countries and fuel efforts to appeal to customer bases in the United States and Japan. Standard Cognition introduced its cashierless store to San Francisco and opened an office in Tokyo last year.

The startup also recently announced that two retailers have decided to integrate its technology into several of their stores. This follows the company's January <u>purchase</u> of mapping and computer vision technology provider Explorer.ai, which has products that are helpful to automated checkout architecture.

Health and betting kiosks

RITE AID, INTOUCH HEALTH TEAM UP TO OFFER VIRTUAL CARE KIOSKS

Pharmacy chain Rite Aid recently <u>partnered</u> with telehealth company InTouch Health to expand its services. The former will be able to offer the latter's virtual care software platform in its stores via RediClinic Express kiosks that directly connect customers with clinicians over secure audio-video channels. The first kiosks were launched at Rite Aid's Drexel Hill and West Chester, Pennsylvania, locations, and the company plans to roll out the solution to three more sites in the state.

Trained assistants will be on hand to gather patient diagnostic information and offer medical questionnaires. The assistants provide remote clinicians these details to help inform them while they are consulting and offering diagnoses. Clinicians can also send prescriptions to patients' preferred pharmacies.

DEL LAGO RESORT & CASINO TO OFFER SELF-SERVE SPORTS Betting

The del Lago Resort & Casino in Tyre, New York, is also making use of kiosks through a <u>partnership</u> with online sports betting company DraftKings. The 23 self-serve wagering kiosks will be available in the casino's new sports betting lounge. The lounge's restaurant will display live sporting events on 1,000-square-foot LED video screens and is capable of seating approximately 200 consumers. del Lago officials spoke on the lounge's creation, calling it a "high-tech, retail sports betting experience."

Fulfillment center and warehouse automation

KROGER, OCADO PLAN FOR 20 ROBOTICS-ENABLED Customer fulfillment centers by 2021

U.S. supermarket <u>chain</u> Kroger, which has 2,764 stores, and U.K.-based online grocery retailer Ocado recently <u>announced</u> plans to build new automated customer fulfillment centers in which the former will leverage the latter's automated "sheds." The facilities use advanced Al and robotics to quickly collect items for shoppers' online orders. The fourth fulfillment center is slated to open in Georgia, and additional locations will be added in Ohio and Florida. The two companies <u>intend</u> to open 20 such locations by 2021.

COMMONSENSE ROBOTICS BREAKS GROUND ON SMALL-SIZE Automated fulfillment center

Grocery stores seeking to meet customers' demands for rapid deliveries can struggle to find appealing fulfillment center locations. Brands must identify properties that are close enough to their customer bases to enable speedy transport, but do not incur high property costs.

Tel Aviv-based logistics technology startup Common-Sense Robotics <u>aims</u> to close this gap with two cost-saving methods: robotics and underused city properties. Such locations, including abandoned parking lots and storefronts, will be turned into small-footprint fulfillment centers for the startup's retail clients. The company recently began construction on an 18,000-square-foot parking garage in Tel Aviv, which it will use to deliver orders from local grocers within an hour. The fulfillment centers include temperature-controlled areas for handling chilled, frozen and room-temperature items. CommonSense Robotics already operates one 6,000-square-foot robotic center that fulfills about 400 orders daily for Israeli pharmacy chain Super-Pharm.

MORRISONS TURNS TO PACKAGING AUTOMATION FROM BRILLOPAK

Morrisons — the U.K.'s fourth-largest supermarket chain — is also <u>turning</u> to automation to serve its approximately 11 million weekly shoppers with fresh produce delivery to its retail shelves. The company needed to quickly package and move high volumes of fruit, vegetables and other produce to ensure freshness without damaging the products. Morrisons achieves this through a partnership with automated packaging and palletization machine manufacturer Brillopak. The supermarket chain spent the past 18 months installing automated and semi-automated Brillopak systems at three manufacturing sites for picking, packaging and palletizing items. It was especially important that the automated equipment occupied a small amount of floorspace, preventing the facility from becoming overcrowded among the large quantities of produce. Morrison executives reported that the Brillopak systems have reduced waste, streamlined workflows and improved product presentation, among other benefits.

WAKEFERN FOOD CORP., TAKEOFF TECHNOLOGIES OPEN Automated fulfillment center

Automated order fulfillment has also become crucial to Wakefern Food Corp., a retailer-owned cooperative comprising 50 supermarket member companies such as Dearborn Market and ShopRite. The co-op recently <u>tapped</u> advanced robotics technology from solution provider Takeoff Technologies for use in its first automated fulfillment center located in Clifton, New Jersey.

The two companies expect that the 24,300-square-foot center will be able to quickly prepare pickup and delivery

orders from customers who frequent 10 of Wakefern's New York and northern New Jersey stores. The warehouse's robots can reportedly assemble up to 60 grocery items within minutes.

Photos and fashion

INSIGHTS FROM THE FITTING ROOM OMNICHANNEL CONCEPT

Retailers and solution providers recently <u>reflected</u> on the impact of an experimental, omnichannel, proof-ofconcept shop that <u>sold</u> sneakers and apparel online out of a small store in a Swedish mall from October to November 2018. The Fitting Room, as it was called, was launched using a setup from retail technology companies Touchtech and Vertiseit. The approximately 678-squarefoot store featured try-on items from shoe brand Sneaky Steve and clothing company Wacay, and included a kiosk at which customers could read about these products, browse retailers' offerings and select and order items.

Shoes and clothes were available and allowed customers to test fits in all offered sizes, but not in every color.



The goal of this was to enable brands to stock less inventory, enabling them to save on costs and floorspace needs while ensuring that customers were better informed before they made eCommerce purchases. Customers could pay via their smartphones or credit cards at kiosks, and staff members were on hand to assist them as needed.

Vertiseit CEO and co-founder Johan Lind stated that Swedish eCommerce return rates are typically at 30 percent, while the return rate for items from The Fitting Room was approximately 1 percent. The participating retailers also reported eCommerce sales spikes, and while Wacay did not specify how big of an increase, Sneaky Steve saw a 43 percent boost.

KODAK MOMENTS DEPLOYS SELF-SERVE PHOTO-PRINTING KIOSKS

Photo services and products provider Kodak Moments recently announced a new self-serve kiosk retailers can place in their stores. The new solution helps merchants provide photo-printing offerings without having to dedicate staff or much floorspace to doing so. Kodak Moment's M1 Order Station kiosks, which run on Kodak Moments Retail Software, are free-standing or countertop units that customers can use to print photos from their smartphones, USBs, camera cards or the Kodak Moments app. Users can print regular photos or create cards and collages, which are paid for at stores' main registers. The company stated that the kiosks provide retailers with low-cost, scalable options for photo services.

Serving food fast

MCDONALD'S EXPLORES ROBOTIC FRYERS, VOICE ORDER AUTOMATION

McDonald's is <u>leveraging</u> automation by piloting robots that can fry foods. The machinery lowers chicken nuggets,

fish patties and fries into vats of heated oil, a move that appears to be primarily aimed at reducing labor costs and speeding processes. Some observers <u>suggest</u> that making machines responsible for frying could reduce workplace injuries, as well.

This comes as part of a larger digitization push that included the testing of an automated system that could accept voice orders at the drive-thru. McDonald's also previously declared <u>plans</u> to use ML technology to offer drive-thru menu recommendations based on factors such as the time of day and weather.

THE EXCHANGE BRINGS TWO SELF-SERVE MICROMARKETS TO TINKER AIR FORCE BASE

Military-focused retailer Army and Air Force Exchange Service, also known as The Exchange, recently <u>expanded</u> the number of automated micromarkets it operates at various Department of Defense (DOD) facilities. These self-service convenience stores are open 24/7 and offer healthy snacks, meals and drugstore items such as salads, sandwiches, fruit, aspirin and bandages. Customers scan items' barcodes at the checkouts, pay and leave.

The Exchange currently operates 40 grab-and-go micromarkets at 24 locations, and recently added two markets to Oklahoma City's Tinker Air Force Base. The retailer intends to construct 35 additional markets at other facilities this year, with two more being added to Tinker.

"Micromarkets offer much-needed sustenance to those serving in small or secure facilities where no dining options exist. [They are also available] late into the night, after other restaurants and retail stores have closed," said The Exchange's senior enlisted adviser, Air Force Chief Master Sgt. Luis Reyes.

HOW BUY ONLINE, PICKUP IN STORE HELPS RETAILERS COMPETE AGAINST DELIVERY GIANTS

Retailers seeking to provide rapid deliveries face an ever-moving target as consumers' definition of speed evolves. Customers who were once content to wait three to five business days for packages have become accustomed to Amazon Prime's free two-day delivery and expect to find such conveniences elsewhere, for example.

Studies <u>suggest</u> that even next-day delivery may be too slow. A significant share of Generation Z consumers those aged 18 to 25 — are turning to BOPIS purchasing models to meet their speed needs. This method allows consumers to use retailers' websites or apps to browse, select and pay for items, after which they then visit physical stores to collect their goods. Retailers are embracing the BOPIS — or click-and-collect trend as they seek to get an edge over Amazon and other eCommerce giants. Some stores are leveraging automation to make the click-and-collect experience faster as well as cheaper and easier to manage. This month's Deep Dive explores the growing demand for BOPIS options — particularly among Gen Z and rural consumers as well as busy professionals — and how retailers are looking to use automation to provide more robust, convenient services.

QUICK ACCESS AND IMPULSES

Retailers are adopting click-and-collect to appeal to younger consumers. A 2019 <u>survey</u> of 1,000 Gen Z consumers found that 58 percent had used BOPIS. An additional 60 percent said the availability of automated pickup lockers affected which retailers they chose to buy from. Young consumers appear drawn to this purchasing model because it provides the advantages of physical retail alongside the key benefits of eCommerce. Survey respondents highlighted the value of in-store collection because it offers immediate access to goods, while online purchasing ensured them that the products they want will be in stock and waiting for them. The survey also found that 59 percent of respondents turned to BOPIS to get items faster than online shopping can provide. Thirty-two percent <u>said</u> they would be willing to wait up to two days to receive purchases, 24 percent would wait only a few hours and 8 percent would not wait more than one hour.

Retailers can win doubly from click-and-collect shopping. Not only is it in demand, but those who come into stores are more prone to impulse buy than those who shop online. A 2017 <u>study</u> found that just 3 percent of shoppers browsing products online make purchases, whereas the browse-to-purchase conversion rate can be as high as 60 percent in some physical stores.

REACHING RURAL CUSTOMERS AND BUSY PROFESSIONALS

BOPIS also <u>appeals</u> to customers in rural locations who are less likely to have affordable home delivery options. Postal carriers must travel farther to reach these consumers, meaning it is not always profitable for carriers like FedEx and UPS to <u>serve</u> those locales. Rural customers may therefore see diminished online delivery offerings. Amazon Prime members in the 48 contiguous U.S. states <u>receive</u> free two-day shipping, while members in Alaska have access only to free shipping within three to seven business days.

Some retailers are looking to BOPIS to fill this service gap and compete against the likes of Amazon. These retailers have goods delivered to their brick-and-mortar locations rather than undergoing the more expensive prospect of delivering to each individual customer. Tractor Supply Co. is one such retail chain with a rural customer base that <u>embraced</u> this model for its equipment, bulk animal feed and other items. Steve Barbarick, the company's chief operating officer and president, credited Q2 2019's strong sales to BOPIS and in-store fulfillment. Even urbanites can struggle with eCommerce deliveries. Customers who work in offices during the day or are otherwise unable to be home to pick up packages may fear porch pirates. Some may be willing to <u>install</u> smart locks, allowing delivery drivers to bring packages inside, but many prefer to have items delivered securely to store staff for later pickup or to self-serve solutions such as <u>lockers</u> placed in convenience stores.

RISKS AND AUTOMATION SUPPORTS

Retailers may find it challenging to provide convenient and secure BOPIS services, however. Enabling this model could mean deploying new fraud-fighting strategies while also retraining staff to handle item pickups. Fraudsters could use stolen credit cards to <u>place</u> orders, then collect the items to keep or sell. Customers who discover such crimes can hit retailers with painful chargebacks. Card issuers are liable for in-store purchases, but BOPIS involves card-not-present (CNP) transactions, putting retailers on the hook for any fraud.

Behavioral analysis tools can identify instances of suspicious activity, while automation solutions can reduce the work retailers must undergo to provide BOPIS and accelerate pickup processes. A <u>study</u> of shopping experiences at 10 major U.S. retailers found that stores providing automated pickup — as opposed to staffed pickup — for BOPIS purchases had 28 percent quicker order collection. That acceleration was even more dramatic at Walmart, where researchers reported 60 percent faster pickups.

Retailers and solution providers have been exploring various models for fostering convenient, secure services. Walmart first <u>deployed</u> Pickup Tower kiosks at 200 of its stores in 2017 and has since <u>expanded</u> the service further. Customers scan order confirmation barcodes on their phones at sensors to retrieve their packages from the machines. Walmart recently enabled shoppers to make returns at the machines, and the company also announced plans to facilitate the retrieval of large items – such as televisions – via pickup lockers. Mark Ibbotson, executive vice president of Walmart's Realty and Central Operations divisions, <u>stated</u> in a 2018 presentation that the Pickup Towers' first round of deployment significantly increased the host stores' net promoter scores – a metric that assesses customer loyalty – and that some customers placed orders simply to try the machines.

Automated solutions provider Bell and Howell, refrigeration company KPS Global and food logistics firm Viscon Logistics have also dabbled in kiosks, collaborating on an automated grocery order collection solution. Shoppers drive up to and park at the kiosks, which measure 20-by-11 feet and are designed to stand alone or join existing stores, where customers then scan guick-response (QR) codes to retrieve their orders within 45 seconds. Larry Blue, president and CEO at Bell and Howell, explained that the 24/7 kiosks enable order collection from up to seven customers at a time and are intended to meet changing demands brought about by the popularity of online shopping. The kiosks hold groceries at the appropriate temperatures to ensure freshness, though this has not been a smooth development process. Walmart deployed an earlier version of the machines that drew customer complaints over condensation problems that hindered order retrieval doors from opening properly.

Blue said in an <u>interview</u> with PYMNTS' Karen Webster that it is important to sate shoppers' desires for quick service by placing automated kiosks at store entrances. Automation provides speed for click-and-collect customers as they no longer have to wait for employees to hunt through backroom shelves for orders. It also spares sales associates from splitting time between these customers and regular in-store shoppers, enabling them to provide more focused service to the latter. Gen Z consumers, rural residents, busy professionals and others are pressuring retailers for easy online shopping paired with quick access to their purchases. Retailers racing to meet these needs may find automated BOPIS to be an important strategy for gaining an edge over eCommerce giants.





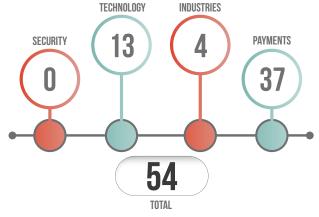
1800 VENDING

Company: 1.800.Vending Founded in: 1980 Headquarters: U.S.

1.800.Vending is a vending machine supplier which offers merchants a range of technologies. The firm vending equipment supports NFC technology and accepts Google Wallet, Apple Pay & PayPal Mobile as well as Visa PayWave & MasterCard PayPass, and credit and debit magnetic stripe cards and smart cards. The firm also offers a vending management software which helps merchants monitor and manage sales, profit margins, inventory, etc.

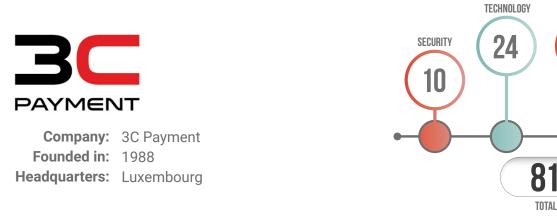


365 Retail Markets is a global provider of unattended and highly automated MicroMarket self-checkout solutions. The company offers PCI certified platforms for vending, food service and hospitality, and provides hardware and software. 365's kiosks offer capabilities such as a dual-sided credit card reader, EMV, NFC and mobile wallets acceptance (including Google Wallet, Apple Pay and Soft Card), a newly recessed fingerprint scanner, and a barcode scanner with the ability to scan coupons from mobile phones. Its software solution provides inventory management and tracking and reporting tools.

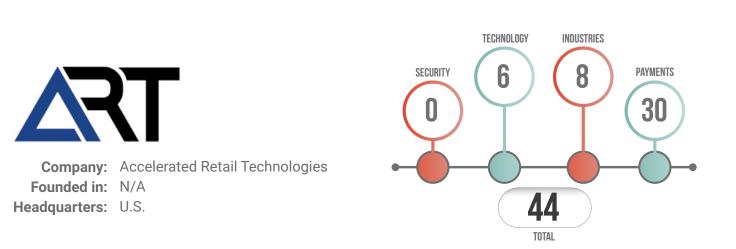


TECHNOLOGY

INDUSTRIES



3C Payment provides solutions that support EMV and tokenized transaction flows as well as in-person and online point-to-point encryption. Its self-service terminals support the parking and transportation industries with PIN entry, chip, magstripe and NFC contactless readers.



Accelerated Retail Technologies is a provider of automated retailing systems, micro stores, kiosks and self-service retail solutions. The company's offerings include an interactive touchscreen ordering system and back-end inventory management. They also allow for the opportunity to display product information and customizable item sizes.

INDUSTRIES

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PAYMENTS

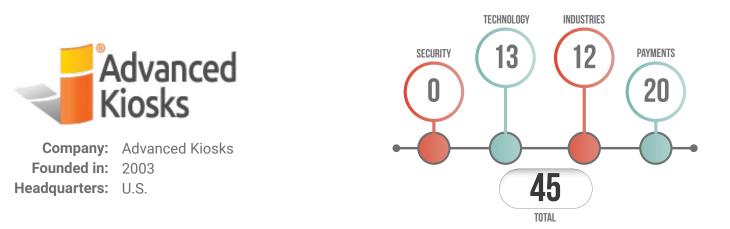
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Founded in: 2014 Headquarters: Australia

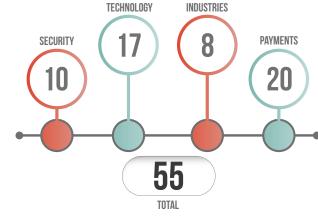
YOUR VISION OUR MISSION

Company: Advam





Advanced Kiosks develops self-service solutions for the education, healthcare, government and retail industries. The company designs hardware and software applications to create a made-to-order self-service kiosk. Among other features, their self-service kiosks count with barcode and QR readers as well as magnetic stripe card readers.

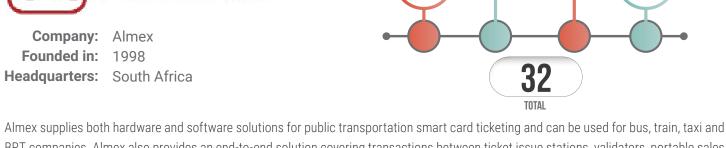


Agilysys.

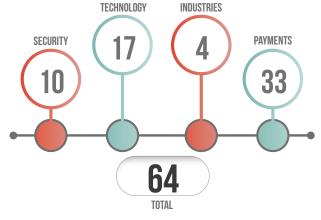
Almex

Company: Agilysys Founded in: 1963 Headquarters: U.S.

Agilysys is a developer and marketer of enterprise software, services and solutions to the hospitality industry. The company has developed the rGuest Buy solution, a self-service kiosk designed for casino resorts, cruise lines, corporate food service, healthcare and hotels, among other verticals. Accepted technologies include magnetic stripe, EMV chip cards and NFC contactless payments. Agilysys is a PCI-compliant firm and utilizes tokenization and fraud management tools.



BRT companies. Almex also provides an end-to-end solution covering transactions between ticket issue stations, validators, portable sales or validator devices and BRT and back office systems.



TECHNOLOGY

18

SECURITY

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INDUSTRIES

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PAYMENTS

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PAYMENTS

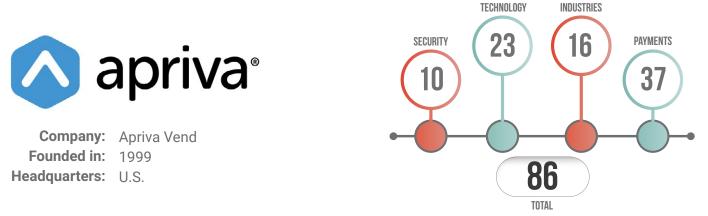
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scorecard

Company: Alps Innovations Group | MagexUSA Founded in: 2013 Headquarters: Canada

ΤΟΤΔΙ Alps Innovations Group | MagexUSA provides automated and self-service retail kiosks and automated retailing software systems. The company also offers machines designed for vending and remote retail, real-time inventory management tools and customer data analytics. Payments accepted include coins, bills and magnetic stripe as well as chip credit and debit cards.

TOTAL Apriva is a provider of wireless payment processing and mobile communications, as well as POS solutions for mobile merchants, small business, developers, vending machines and education markets. The Apriva Vend product includes hardware and software, wireless connectivity, transaction and alarm reporting capabilities, as well as integration with leading payment processors and financial institutions. Supported payment technologies are EMV, NFC, mobile wallets such as Apple Pay, Android Pay, Samsung Pay; SmartCard and BLE. Apriva's payment solutions is PCI-compliant, it's software encrypts and compresses all cashless payment data, ensuring it is transmitted securely and quickly.







PAYMENTS

scorecard

Controls Group

Company: APT Controls Group Founded in: 1961 Headquarters: United Kingdom

apt

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TECHNOLOGY

SECURITY

INDUSTRIES

PAYMENTS

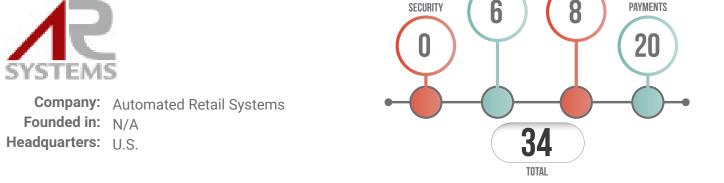
TECHNOLOGY

SECURITY

INDUSTRIES

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APT Controls Group, a company of the SWARCO Group, develops solutions to coordinate the movement and management of vehicles and people. It works in areas like parking and parking management, electrical vehicle charging, energy storage and crowd control systems.

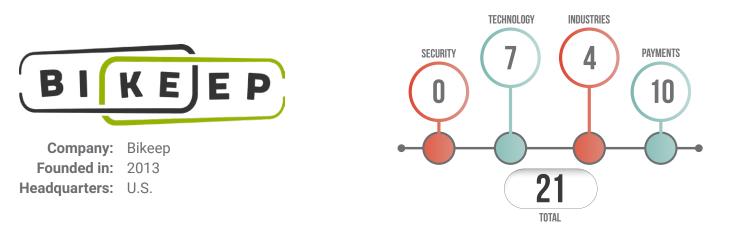


Automated Retail (AR) Systems offers automated retailing solutions that integrate computing, cloud-based monitoring and robotics. AR Systems' vending machines and self-service stores feature a touchscreen, LED lighting and a magnetic stripe card reader.

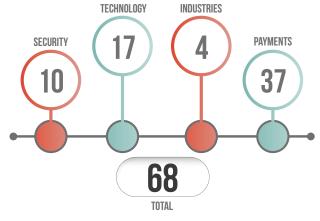
Company: Avanti Markets

Founded in: 2009 Headquarters: U.S.

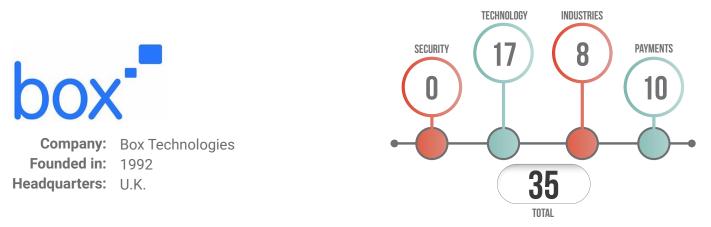
Offering services to the micro market industry, Avanti Markets aims to help merchants manage their businesses with a back-end software that integrates promotions, inventory management tools, pre-kitting systems and data warehousing infrastructure. The company also provides innovative and PCI complaint kiosks with internet access and enabled to support debit and credit cards and contactless payments such as Apple Pay. The micro markets also support payments through the Avanti Markets mobile app or by using the Avanti Market prepaid.



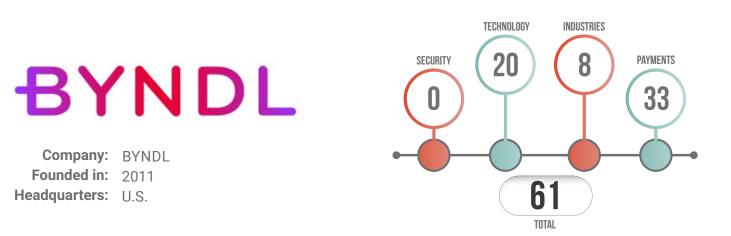
Bikeep produces a secure electronic bike rack with built-in locks and e-bike charging capability for municipalities and communities. Bikes can be locked for up to 24 hours using a mobile phone or local transportation card.



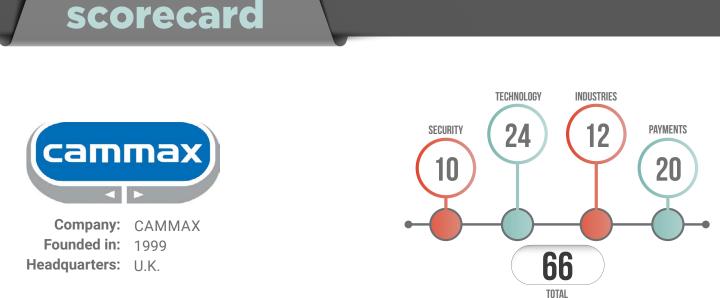
scorecard



Box Technologies provides clients with POS, mobile tablets, self-service kiosks and digital signage solutions. The company's kiosk products offer cashless payments and enable companies in several industries, including hospitality and transportation, to provide clients with an unattended commerce experience.



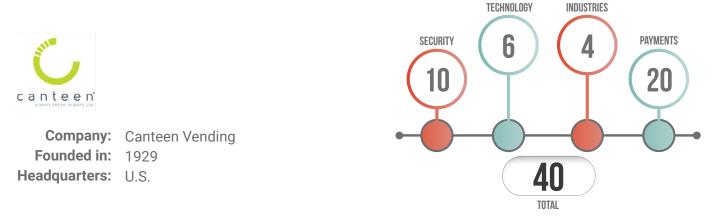
BYNDL is a payment processor that targets unattended retailers that want to support mobile transactions. BYNDL's main product is a mobile app that is currently available through vending machines and the integrated solution provides machine monitoring, cashless processing, VMS services and loyalty and offer programs. Supported payment technologies include BLE, QR Code and magnetic stripe and its supported wallet is PayPal. BYNDL's solutions focus exclusively on the vending industry.



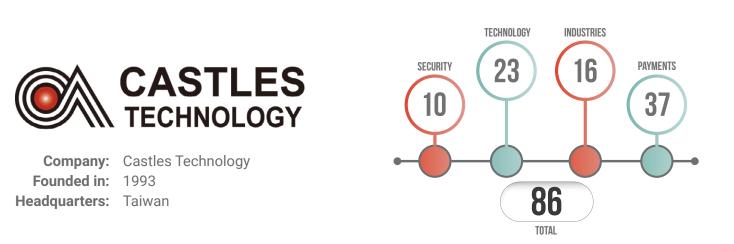
Cammax designs and manufactures touchscreen kiosks. The company's products have a wide range of applications including ticketing, council payments, payments for self check-in, access control and queue management.



Cantaloupe Systems is a provider of cloud-based, mobile technologies that deliver an integrated vending retail solution for cashless vending and inventory management. The company's vending solution includes its Seed Office management system and Seed Cashless smart card and mobile payment acceptance device. Cantaloupe Systems payments solution is PCI Level 1 certified and supports magnetic stripe and NFC technologies. Its supported wallets include Apple Pay, Google Wallet and Android Pay.



Canteen Vending is a vending machine operating company that provides vending, office coffee service and dining services. Canteen's interactive and cashless vending machines accept credit cards, debit cards and mobile payment option. The machines also feature intuitive touchscreens, LED lighting and are often equipped with energy-saving technologies. The company payments software offers secured card processing and is PA-DSS compliant per PCI SSC standards.



Castles Technology manufactures and provides payment solutions to the financial, retail, parking, hospitality and transportation industries. Its unattended payments terminals offer multifunctional capabilities for vending, ticketing, multimedia kiosks, public transportation, laundromats and other industries. The company provides EMV- and PCI-compliant payment devices with integrated PIN pad, magnetic stripe, BLE and contactless card reader that supports Apple Pay, Samsung Pay and Android Pay.

Company: Coinco Founded in: 1958

Headquarters: U.S. and U.K.

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scorecard

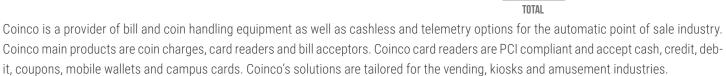
Company:CDS Worldwide Pty LtdFounded in:1990Headquarters:Austrailia

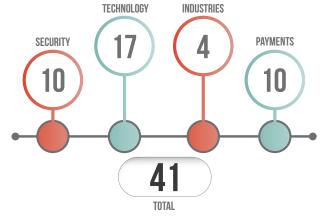
CDS WORLDWIDE

COinco

For A Changing World[™]

DS Worldwide manufactures, designs and develops parking solutions. The company's offerings include solar-powered parking meters, on-street kiosks and Parki, a mobile app for parking. CDS Worldwide also provides off-street car parking solutions integrated with license plate recognition.





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INDUSTRIES

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PAYMENTS

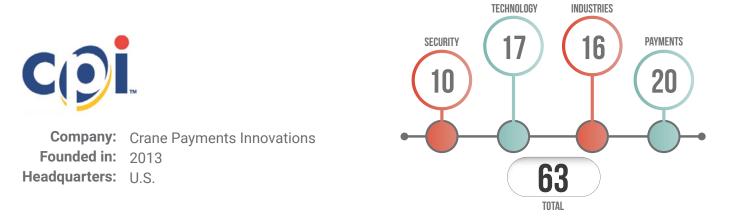
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TECHNOLOGY

6

SECURITY

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Crane Payments Innovations provides money-handling solutions, including a range of bill and coin validators and recyclers, coin hoppers and dispensers, cashless payment terminals, and asset management software. Supported payment technologies include EMV, contactless cards and magnetic stripe. CPI's solutions are aimed at the financial services, gaming, retail, transportation and vending markets. The company offers highly secured solutions with PCI certification.



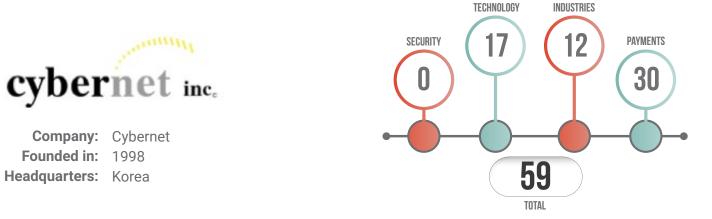
Creditcall is a payment acceptance solutions developer for attended, unattended, online or mobile retail. The company offers different types of solutions designed for industries such as retail, hospitality, parking and transportation. Creditcall's self-service solution offers EMV chip card acceptance and enables merchants to get finance and management reports. Creditcall is a validated PCI DSS Level 1 Service Provider and protects customers' data with Point to Point Encryption.

SERVICE SOLUTIONS



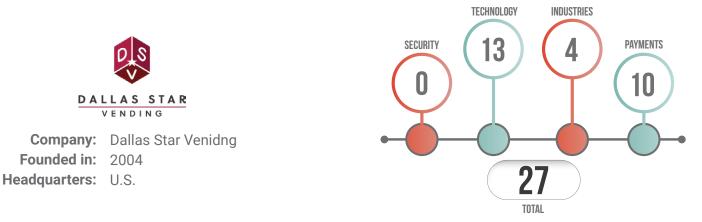


CSA is a technical service and professional solutions provider specializing in the self-service, critical power, laboratory and healthcare technology sectors. Its self-service products can be used in applications like bill payment, ticketing, ordering and payment.

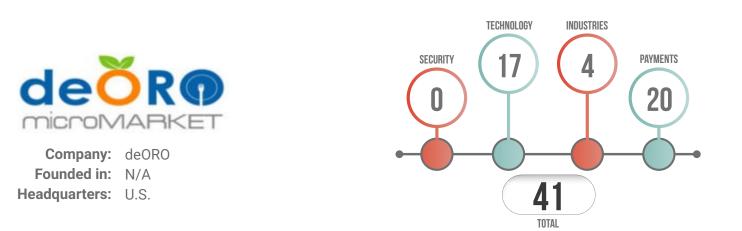


Cybernet is a provider of electronic payment solutions that designs, develops and manufactures electronic payment terminals, peripherals and applications for m-commerce, eCommerce, smart cards and traditional payments. Its unattended terminals accept multiple payment methods including cash, credit cards and debit cards and are able to support magnetic stripe and EMV cards, smart cards and NFC contactless payments with full P2P functionality. Cybernet delivers its payment solutions to vending and ticketing machines, petrol stations, and the parking industry.





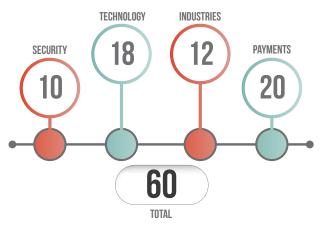
Dallas Star Vending is full-service vending and office coffee service provider. Its offerings are equipped to accept various payment methods, including both cash and cashless options.



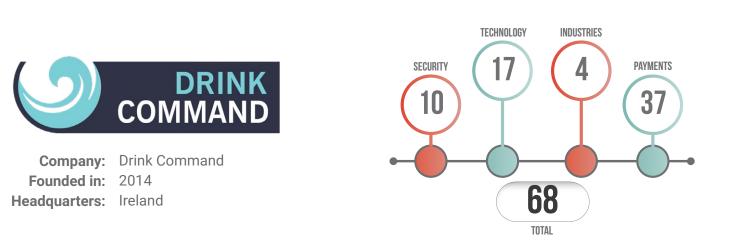
deORO markets is a developer of micro market kiosk solutions. The company's kiosks offer several features, including the ability to pay using EMV and NFC methods. Data is stored locally and backed up to the company servers on a regular basis, allowing the software to run even without an internet connection.



Company: Diebold-Cryptera Founded in: 1983 Headquarters: Denmark



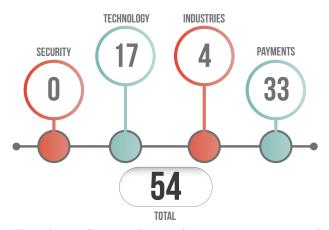
Diebold-Cryptera is a payments solution provider and OEM supplier. Its solutions include CryptoTouch, which enables secure PIN entry on a touchscreen, encrypting PIN pads, unattended payment OEM customized products and remote key loading. Diebold-Cryptera's solutions are supported by EMV and NFC technologies and are designed for use throughout the banking and ATM, drive-thru and QSR, parking, retail self-checkout, ticketing, gas stations, gaming and vehicle charger industries. The firm features PCI security standards.



Drink Command is a developer of self-serve beer systems. Its range of products provides different capabilities and payment methods, including contactless, chip and PIN cards and mobile wallets like Apple Pay and Android Pay.



Company: EazyCoin[™] Founded in: N/A Headquarters: U.S.



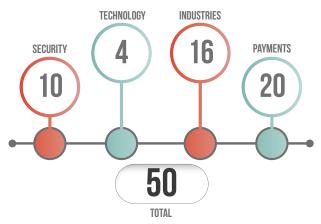
EazyCoin is a cashless payment solutions provider for vending machines. The solution allows vending machine owners to manage sales and inventory reports, and to improve customers' experiences. EazyCoin also allows consumers to purchase and interact with vending machines easily through their smartphones. Vending machines are equipped with an intelligent controller that communicates with the smartphone using Bluetooth technology. The smartphone in turn communicates with EazyCoin's servers via Wi-Fi or cellular network using highly secure encryption software to protect a customer's information. The Eazy Storage Account can be funded with multiple sources of payments like debit, credit, PayPal and even gift cards.



ECRS is a retail solutions developer. The company's products range includes front-of-store systems including point of sale and self-checkout, as well as back office, warehouse, inventory and supply chain automation solutions.



Company: Electronic Payment Exchange Founded in: 1979 Headquarters: U.S.



Electronic Payment Exchange provides tokenization and end-to-end encryption payment solutions for both the attended and unattended retail markets. EPX's solutions include a fully integrated payment technology that allows merchants to process payments at the point of sale or online via EMV cards, credit and debit cards and electronic checks. In addition, EPX solutions allow merchants to outsource PCI compliance to a third-party provider. The company serves the unattended kiosks, vending machines, gas station, quick-service restaurants, automotive and other self-service markets.

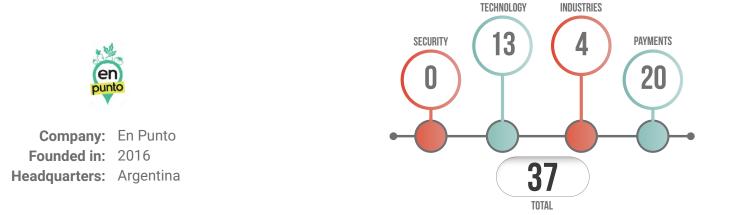


e-Nabler develops a range of point-of-sale (POS) devices under the brand name eMobilePOS. The company offers an iPad Kiok POS, a self-service checkout tool, which allows customers to place orders, select add-ons and modifiers, apply coupons, and earn and redeem rewards. The device accepts EMV chip-enabled debit and credit cards and allows for NFC-enabled payments such as Apple Pay and Google Wallet.

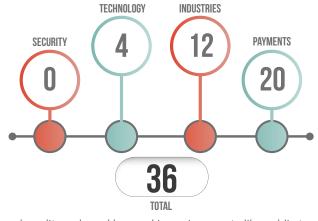
enzosystems

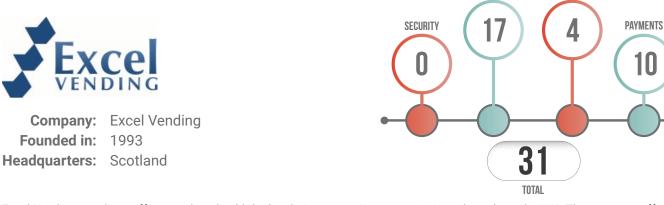
Company:EnzosystemsFounded in:1991Headquarters:Netherlands.

Enzosystems is a kiosk solution provider. Its products can accept debit and credit cards and be used in environments like public transport, hotels, shops, events and parking lots.



En Punto's touchscreen-enabled vending machines offer healthy food and drink items for employees, including beverages, salads and snacks. They accept credit and debit card payments.

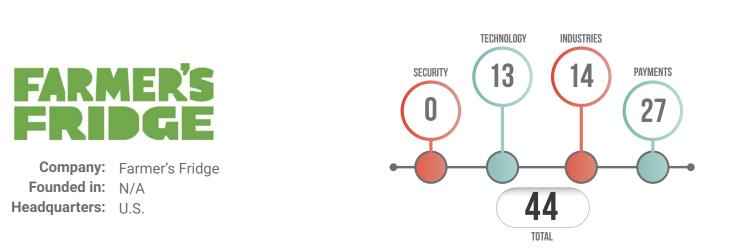




Excel Vending supplies coffee, snack and cold drink solutions to various organizations throughout the U.K. The company offers products ranging from small coffee dispensers for boardrooms to sophisticated vending machines for large, busy spaces.

TECHNOLOGY

INDUSTRIES



Farmer's Fridge provides healthy vending machines that offer ready-made salads and work in conjunction with a mobile app that enables customers to order in advance and pay with several payment options.

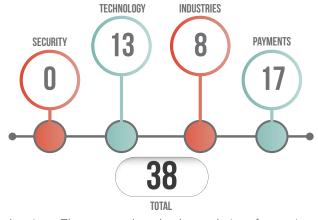
THROUGH ROBOTICS

Company: Fastcorp Founded in: 2005 Headquarters: U.S.

Fastcorp manufactures robotic vending equipment, including refrigerated options. The company's technology solutions feature interactive touch screens and cashless payment systems that can accept Apple Pay and Google Pay.



Florida Fresh Vending is a vending services and micro markets solutions provider. The company's products can accept cashless payments though credit and debit card readers, and allow for remote monitoring of sales.



TECHNOLOGY

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SECURITY

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INDUSTRIES

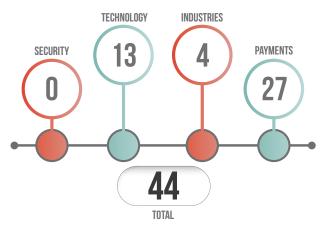
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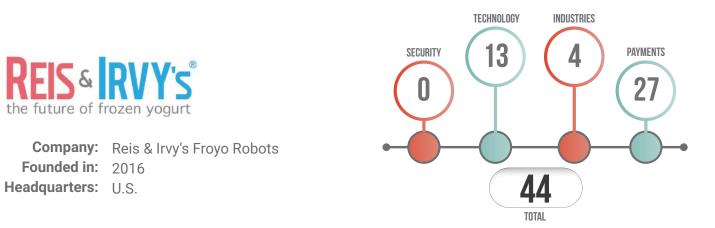
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Company: Fresh Healthy Vending Founded in: 2010 Headquarters: U.S.



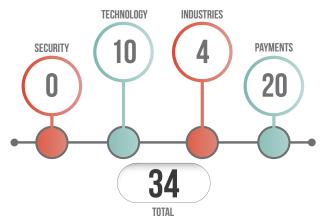
Fresh Healthy Vending is a vending machine and micro-market firm specializing in healthy alternatives to traditional vending machine snack foods and beverages. The micro markets and vending machines are unstaffed retail health food stores, placed in environments such as schools, workplaces, hospitals and medical facilities. The devices offer remote wireless sales monitoring and accept many payments options including: credit and debit cards, cash and coin, and mobile wallets.



Reis & Irvy's offers customizable frozen yogurt vending machines that provide instant desserts via robotic technology. The machines support credit card and digital wallet payment options.



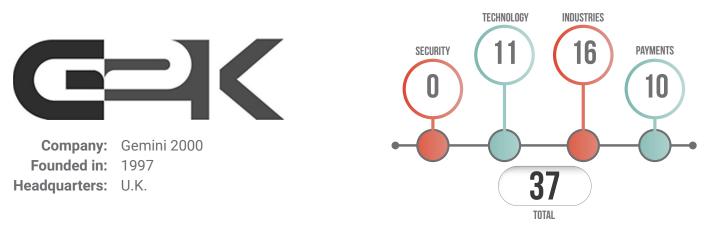
Company: Fujitsu Founded in: 1935 Headquarters: Japan



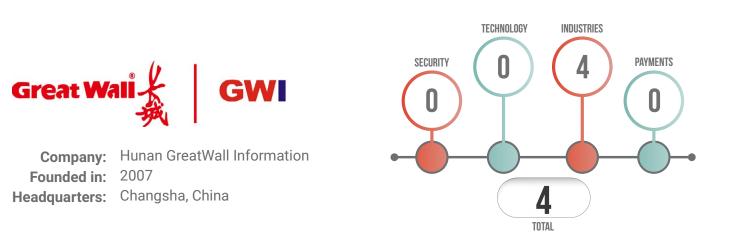
Fujitsu is a provider of information technology and communications solutions. Among a range of solutions, the firm has developed a self-checkout solution for the retail industry. Fujitsu self-service checkout solutions accept standard cash, cashless options as well as magnetic stripe and chip cards.



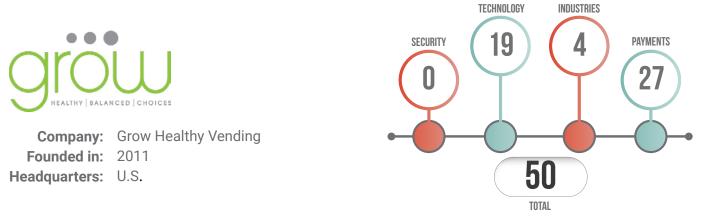
Gantner Technologies is a manufacturer of contactless NFC access control, electronic locking and cashless payment applications for the leisure industry. The firm offers systems specially designed for fitness clubs, attraction and water parks, public pools and spas, ski resorts, commercial applications, vending machines, as well as educational and health care institutions. Its cashless payment solution uses NFC technology and enables customers to purchase goods and services with credentials and pay without cash or cards.



Gemini 2000 develops a range of NFC-, EMV- and ITSO-compliant smart card readers; IP/Ethernet network readers; handheld smart card devices; and OEM products. The company's products power smart ticketing, secure cashless and contactless payments, access control, and an attendance system.



Hunan GreatWall Information Financial Equipment researches, develops, produces, sells and services financial electronics for self-service equipment. Its offerings include self-serve kiosks, passbook printers, card-dispensing kiosks, virtual teller machines and more.



Grow Healthy Vending combines healthy and traditional vending products with vending machine and micro markets technology. Customers buying at their unattended services an either pay at in-market tablets or they can checkout using their smartphones. Vending machines are equipped to accept cash, credit and debit cards, mobile wallets such as Apple Pay and Google Pay. The firm also offers loyalty/rewards programs and real-time inventory management tools.



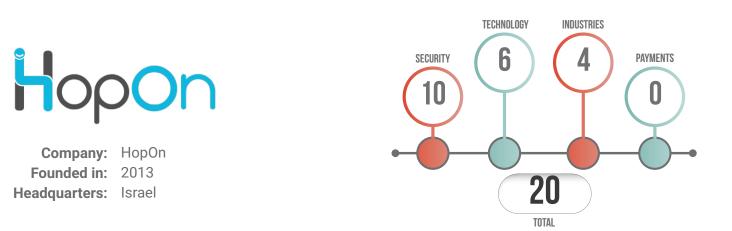
Heartland MicroPayments, a division of Global Payments, is a provider of cashless payment solutions in the small ticket unattended space. The company designs, manufactures, develops, sells and supports unattended devices.



Company: Hemisphere West Europe Ltd. Founded in: 2004 Headquarters: U.K.



Hemisphere West Europe Ltd (HWE) is a provider of attended and unattended payment products. HWE offers a complete solution of payments acceptance hardware and payment gateway for the kiosk, amusement, car parking and vending industries. The company enables customer to process many payment technologies including NF, EMV, magnetic stripe, bank notes and coins. HWE devices fulfill the PCI security standards.



HopOn develops mobile ticketing solutions for public transportation. The company offers a patent-pending Beacon system which transmits information over ultrasonic sound waves to passenger phones. The system also allows for multiple simultaneous validations.

Company: Hub Parking Technology Founded in: 1965 Headquarters: Italy

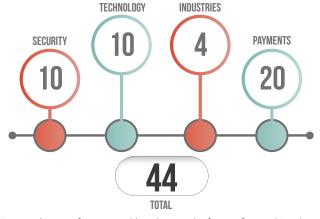
Parking

» HLB

Hub Parking Technology is a parking solutions provider, offering PCI-DSS compliant software and hardware platforms for parking located in universities, hospitals, hotels, airports, shopping centers, municipalities and more. The company provides multiple solutions, ranging from a simple carpark with one entry station and exit station, each with a barrier and a standard pay station, to complex systems incorporating contract parking, credit card in/out parking, prepaid parking online, license plate recognition or a combination of these. Its self-serve cashless payment stations accept a wide range of payment methods, including coins, bills/ bank notes, credit card, debit card, value or city cards or electronic purse, and read magnetic credit cards, chip and PIN.



ID TECH designs and manufactures automatic identification products and components, including magstripe, smart and contactless card reader/writers, barcode readers, CCD scanners, POS keyboards, and secure PIN entry products.





Company: Image Holders Founded in: 1996 Headquarters: U.K.

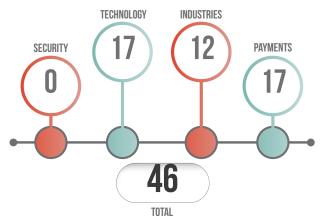


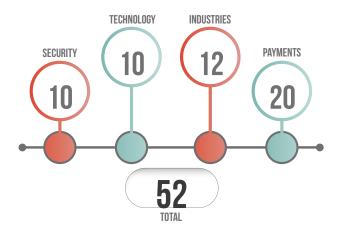
Image Holders is a tablet and iPad kiosk designer/manufacturer. The company develops self-service tablet kiosks that can accept payment via credit card, debit card and NFC/RFID contactless payments, among others.



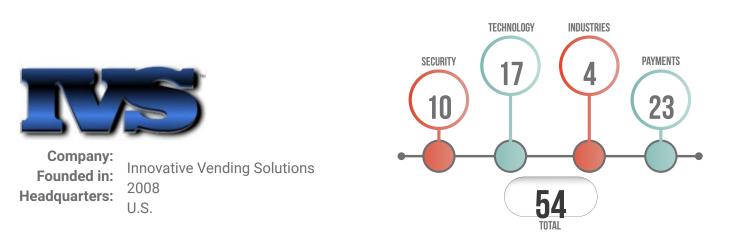
Impulsify is a retail technology company providing self-pay grab-and-go kiosks. The company's offerings feature room charge functions and the ability to accept payment in various forms – including EMV chip reading, magstripe and mobile wallets like Apple Pay and Android Pay, among others. Impulsify also provides front-office point-of-sale (POS) and back-office inventory solutions.



Company: Innova Founded in: 1999 Headquarters: Turkey



Innova develops self-service retail solutions. Its offerings include kiosks, software and hardware designed to serve hospitality, tax collection, airports, health facilities, retail and cinemas, among other industries.

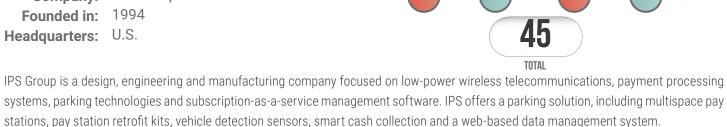


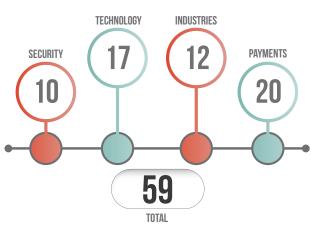
Innovative Vending Solutions (IVS) manufactures non-traditional vending and automated retail systems be featured that can in areas such as airports, casinos, malls and college campus-IVS machines accept several different methods of payment, including cash, coin, es. credit and debit cards, gift cards, student ID badges, and employee ID badges. The company supports magnetic stripe and chip cards and NFC technology and is PCI-compliant.

inv Enco

Company: Invenco Founded in: 2009 Headquarters: New Zealand

Invenco provides self-service payment solutions to the retail oil and self-service industries, including QSRs and vending. Among other products, the company develops outdoor payment terminals, electronic payment servers, payment switches and cloud services. Invenco's payments solutions accept EMV, magnetic stripe, smart card capability, NFC contactless (including mobile phones), barcode reading and mobile wallet payments and are PCI-compliant.





TECHNOLOGY

SECURITY

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INDUSTRIES

4

PAYMENTS

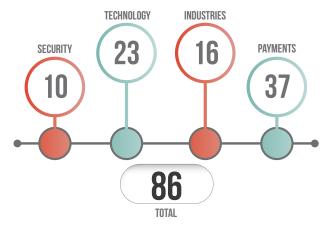
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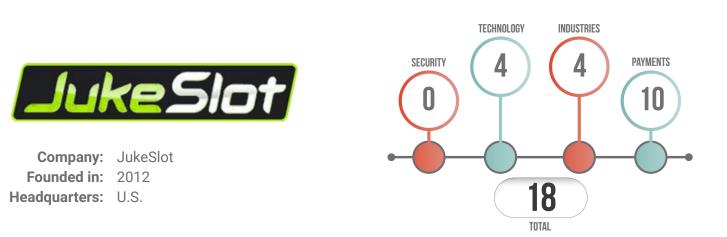
Company: IPS Group



Company: Iself-service.Ingenico Founded in: 1980 Headquarters: France



Ingenico offers iSelf-Service, unattended solutions that integrate cashless payments in the self-service market. The platform offers products ranging from unattended devices, secure operating technology and a complete service management system. Supported payment technologies include NFC and mobile wallets such as Apple Pay and Android Pay, Bluetooth (BLE), smart cards and EMV and magnetic stripe cards. Ingenico's iSelf-Service solutions cover the retail, hospitality, petrol, vending and transportation industries. The solutions offer PCI certification and compliancy with the latest contactless standards.



JukeSlot is a provider of restaurant POS system solutions, self-service tableside ordering technology and Tempo QSR Standalone kiosk-based POS offerings. In addition, the company produces iSlot products for casinos.

Information Systems **Company:** KIOSK Information Systems Founded in: 1993 Headquarters: U.S.

KIOSK

KIOSK Information Systems is a designer and manufacturer of self-service and kiosk solutions. The firm's solutions have been developed for industries including retail, security, healthcare, human resources, remote retail, bill payment, vending, financial, lockers, government, ticketing and check-in, and gaming. KIOSK offers various standard kiosks enabled to support magnetic stripe and chip card payments as well as smart cards and cash.

TECHNOLOGY

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TECHNOLOGY

13

SECURITY

INDUSTRIES

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PAYMENTS

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TOTAL

SECURITY

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INDUSTRIES

12

PAYMENTS

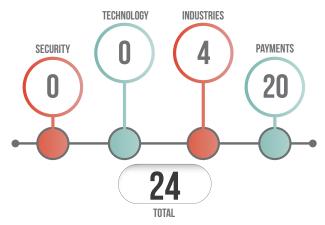
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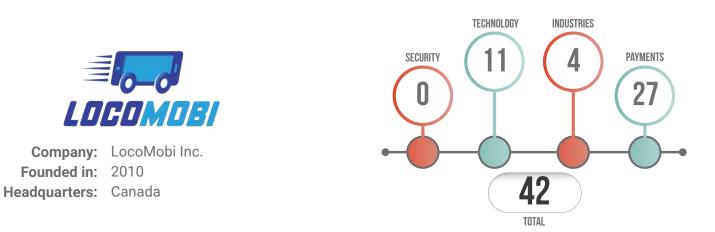
Klever Logic's app meets the requirements to achieve compliance as a PCI-DSS Level 1 Service Provider.



Company: Lane Jumper Founded in: N/A Headquarters: U.S.



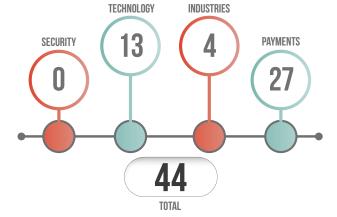
Lane Jumper is a self-checkout mobile payment and product management system that offers operators and retailers a self-branded mobile product scan-and-go option. By using an iPhone or Android mobile payment application, users can make purchases at the micro-markets by scanning the items they want to buy. The system also offers a market management system that allows owners to manage and track markets, and product and user performance.



LocoMobi Inc. provides unified physical, mobile and cloud-based parking technology. The company's products include parking meters, kiosks, gated systems, transit and tolling systems, cloud technology and license plate recognition, among others.

Loyal Vending Loyal to the last chip

Company: Loyal Vending Founded in: N/A Headquarters: U.S.



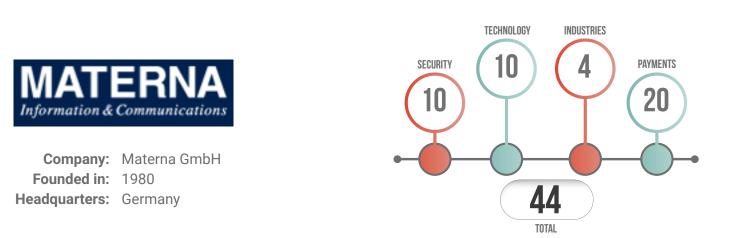
Loyal Vending is a vending machine service company. It installs vending machines, routinely stocks them and handles both service and management.



MagTek is a manufacturer of magnetic card and smart card readers for unattended terminals such as kiosks, vending machines and ticketing machines, among others.



Mark Vend Company is a food and beverage vending services provider. The company provides unattended retail services in the form of vending, coffee and beverage machines, micro markets and cashless pantries.



Materna develops solutions for airline companies and airports designed to simplify passenger processes. The firm offers solutions for check-in, bag drop, security and boarding, among other services. Matera's payment service provides a PCI-compliant payment system that can be used at check-in kiosks or self-service bag drop systems and supports chip and PIN technologies.

mecsel



Company: MatiPay Founded in: 2017 Headquarters: Italy

ay 48 TOTAL ment system providing a frictionless end-user experience. It creates an

SECURITY

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TECHNOLOGY

TECHNOLOGY

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SECURITY

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INDUSTRIES

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PAYMENTS

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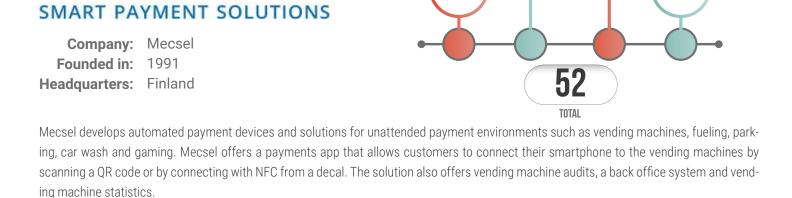
INDUSTRIES

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PAYMENTS

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MatiPay is an innovative payment system providing a frictionless end-user experience. It creates an immediate connection between a vending machine and a smartphone app, including a virtual wallet that is rechargeable via cash dispenser, credit card or PayPal.

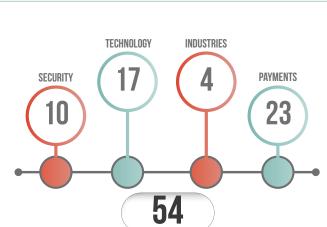


Company: Meridian Kiosks Founded in: 1999 Headquarters: U.S.

Meridian specializes in the design, engineering, fabrication, assembly, integration, staging, deployment and support of self-service kiosks.

Founded in: 1878 54 Headquarters: UK TOTAL METRIC Group Ltd is a manufacturer of ticketing solutions for the parking and public transport sectors. METRIC has developed multi-service

payment terminals accepting from coins and bank notes, to chip & PIN credit and debit payments, contactless payments including Apple pay, smart cards and vouchers. The parking terminals also offer discounts and special parking rates among other tools. METRIC offers PCI data security standards.



INDUSTRIES

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PAYMENTS

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TECHNOLOGY

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TOTAL

SECURITY

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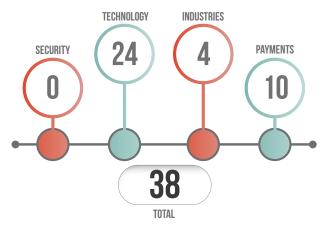


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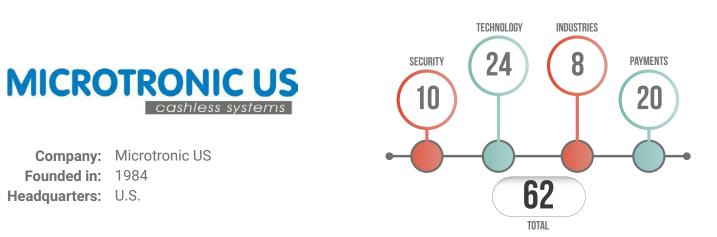
Company: Metric



Company: MikroElektronika Founded in: 1991 Headquarters: Czech Republic



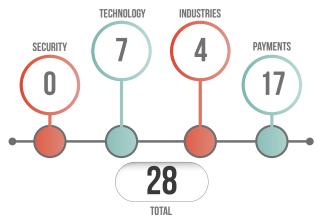
MikroElektronika develops unattended fare collection systems, including fare collection management software, contactless cards validators, ticket vending machines and ticket validators and processors.



Microtronic is a cashless technology provider for the vending retail space. The company's solutions include prepaid systems for vending, marketing systems and the "e-vending" mobile application. The company supports magnetic stripe and chip cards, NFC, QR Code and SmartCard payment technologies. Microtronic products are PCI compliant.



Company: Mr Lee's Noodles Company Founded in: 2015 Headquarters: U.K.



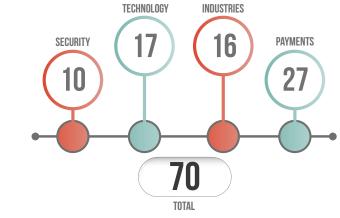
Mr Lee's Noodles Company is a gluten-free instant noodles-in-a-cup brand. The company offers a Noodles Kiosk enabling customizable orders and accepting cashless payments, including Apple Pay, PayPal and NFC card.



Moneris is a provider of payment terminals as well as eCommerce, integrated payments and business management solutions for the parking, vending and retail industry. Moneris' solutions work with Verifone's line of unattended payment devices to enable its customers in the unattended retail market to securely accept payments with customizable and versatile hardware options. Supported payment technologies include EMV, PIN, magnetic stripe and contactless readers, loyalty transactions, private labels and Apple Pay. The company offers PCI data security standards.

MONEX group

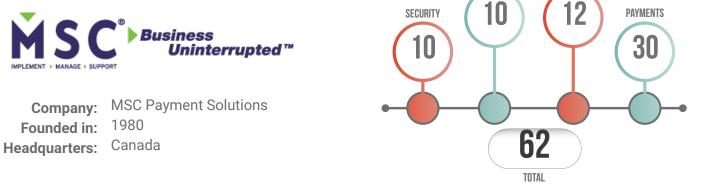
Company: Monex Group Founded in: 2001 Headquarters: Canada



TECHNOLOGY

INDUSTRIES

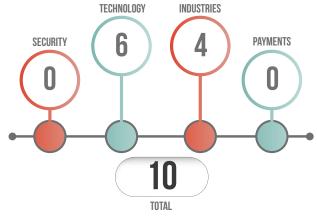
Monex Group offers vending payment solutions for carwash and gas stations, vending and coffee machines, parking, restaurants self-order kiosks, gaming and laundry facilities. The company has developed a complete vending solution that accepts contactless payments and supports credit and debit cards as well as mobile wallets such as Apple Pay and Android Pay, magnetic strip, chip & pin and smart cards. Monex payment systems are PCI compliant.



MSC is a service and hardware provider of POS and payment solutions for the retail merchant, multi-store, parking and unattended kiosks markets. MSC solutions are PCI compliant and support magnetic stripe, PIN and EMV payments.

sco<u>recard</u>





N & W Global Vending is a world leader in the market of drinks and snack vending machines and plays a key role in the HoRe.Ca (Hotels, Restaurants and Cafes) and office Coffee Service markets.



NCR Corporation is a omnichannel solutions developer working across retail, financial, travel, hospitality, telecom and technology industries. The company develops self-service checkout and kiosks solutions for the retail industry that offer for POS integration and accept cash, credit cards or contactless payments.



Olea's kiosk solutions can be used for check-in services, order entry, retail and ticketing services in industries such as healthcare and government.

TECHNOLOGY

SECURITY

INDUSTRIES

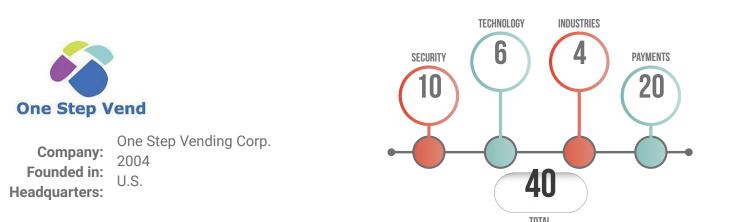
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TOTAL

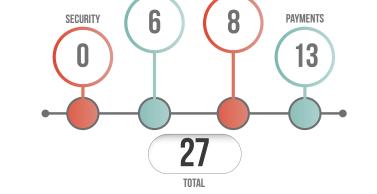
PAYMENTS

10



One Step Vending manufactures and services micro markets. The company's self-checkout solutions are payment card industry (PCI)compliant and accept credit or debit card payments. One Stop Vending also provides software designed to report usage data.

Company: Online Vending Founded in: 1976 Headquarters: Kansas, US



INDUSTRIES

TECHNOLOGY

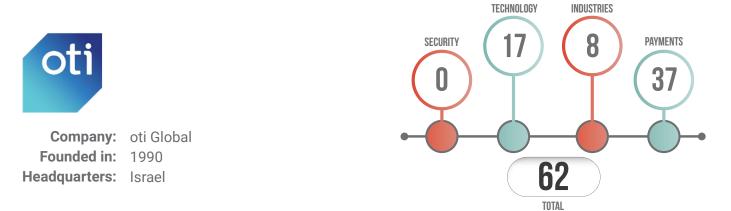
TECHNOLOGY

INDUSTRIES

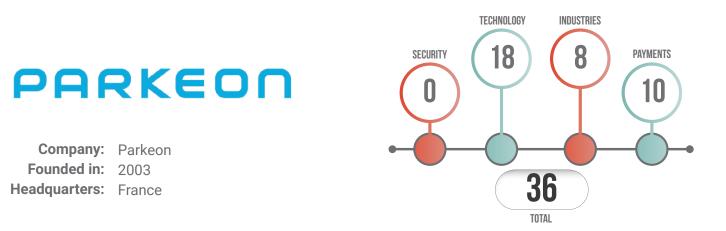
Online Vending Machine Sales & Service, Inc. distributes new and pre-owned vending machines and equipment. It also provides related products and services.



utilize API's third-party software platforms. The solution allows merchants to quickly sell food, clothing, memberships and more. Orbose nose enables businesses to customize branding, receive customers' online reviews through the integrated kiosk and sell products straight from kiosk with a MagTek credit card swipe or QR code synced to their custom branded mobile application. The solution is PCI compliant and encrypts all credit card data upon card swipe.



oti is a developer of cutting-edge cashless payment solutions including near field communication products and solutions. oti's cashless credit card readers for vending provide an easy to integrate merchant services and solutions, allowing unattended-market operators to accept magnetic stripe credit cards, EMV chip cards, smart cards, NFC and mobile payments including Apple Pay and Android Pay. The solutions are designed for vending machines, kiosks, gas stations, car washes, air pumps and more.



Parkeon is a developer of parking and transit systems. The company offers a range of solutions including multi-space parking meters, mobile phone payment, ticket vending machines, fare collection devices and fare validation.

Company: ParLevel Systems Founded in: 2012 Headquarters: U.S.

54 TOTAL

SECURITY

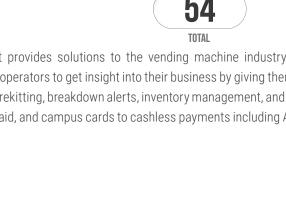
SECURITY

O

ParLevel Systems is a hardware and software developer that provides solutions to the vending machine industry. ParLevel offers a cloud-based vending management system that enables vending operators to get insight into their business by giving them control over operations. The system provides tools such as dynamic scheduling, prekitting, breakdown alerts, inventory management, and more. Furthermore, ParLevel accepts many payment options from credit, debit, prepaid, and campus cards to cashless payments including Apple Pay, Samsung Pay, and Android Pay.



sales and inventory, create new marketing categories, track purchase history, manage a family account, locate a machine or product, check calories and nutrition information and set up parental controls.



TECHNOLOGY

13

INDUSTRIES

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PAYMENTS

TECHNOLOGY

13

INDUSTRIES

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PAYMENTS

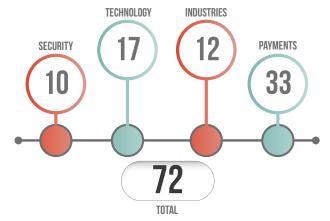
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payment express



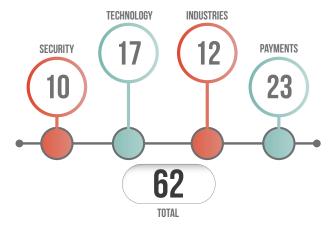


Payment Express is a payment technology service provider for the unattended retail market that offers a global end-to-end platform. Its product offerings range from a POS terminal to an unattended retail solution. It supports payment technologies include EMV, NFC, magnetic stripe and SmartCard, and its supported wallet is Apple Pay. The firm's solutions are focused within the vending, eCommerce, parking, kiosk, fuel and OPT equipment industries. Payment Express is a Level 1 Service Provider and is compliant to PCI DSS Version 3.1 standard.



PayRange works as a mobile payment acceptance solution. The solution features a plug-and-play setup and supports a platform that includes hardware, free mobile application and back-end service to accept mobile payments including Android Pay and Apple Pay. Its supported payment technology is BLE. PayRange's solutions serve the vending, parking, transit ticketing, laundry, amusement parks and other industries.

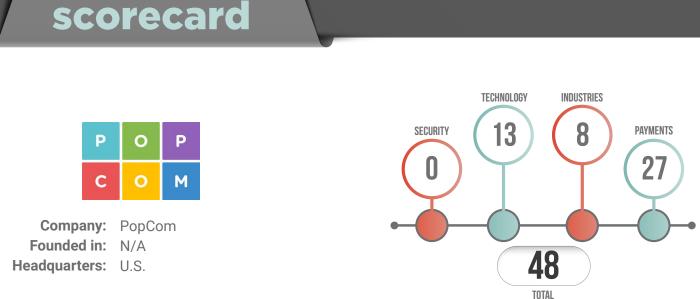




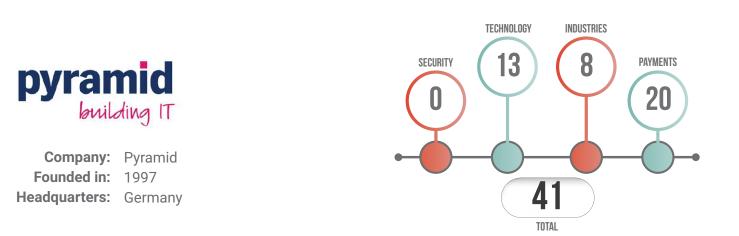
PayTec AG is a payment processing manufacturer, offering a range of POS solutions enabled to accept from traditional credit and debit cards to contactless payments. For unattended point of sale, PayTec has developed space-saving terminals that can process payments without PIN entry and contactless payments. PayTec solutions have been designed for the demands of outdoor use (parking, petrol stations, ticketing, vending machines) as well as indoor use (vending machines and self-check-in, e.g. cinema box offices, theaters, swimming pools, ice rinks). The firm offers PCI and EMV certified solutions.



Payter provides a multifunctional payment terminal for contactless and mobile transactions at unattended points of sale such as food or soda vending machines, charging stations and parking machines. Payter terminals support debit and credit cards, chip cards, NFC, Apple Pay and Android Pay, as well as smart cards.



PopCom is a retail technology company that provides solutions for smart vending machines and digital kiosks. It also provides point-of-sale tracking and reports information that details machine performance and consumer insights.



Pyramid Consulting provides various food chains with self-ordering kiosk solutions, along with other services. The kiosks can be customized and accept magnetic stripe, QR codes and additional payment options.

ikServe

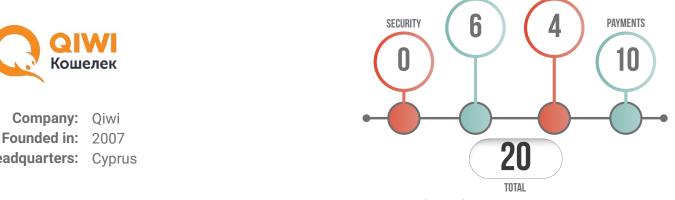
🗮 The Waiter in Your Pocket

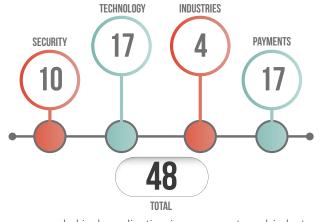
Company: QikServe Founded in: 2011 Headquarters: U.K.

QikServe develops self-service solutions for the hospitality sector. The company's kiosk application is a payment card industry (PCI)compliant solution integrated with an EMV-enabled terminal. It allows restaurant customers to order and pay with near field communication (NFC), magstripe, chip and PIN technology or mobile wallets like Apple Pay and Android Pay.

Headquarters: Cyprus TOTAL Qiwi is a publicly traded Russian payment service provider headquartered in Nicosia (Cyprus), that operates

electronic onliné payment systems primarily in Russia, Ukraine, Kazakhstan, Moldova, Belarús, Romania, the United States, and the United Arab Emirates.



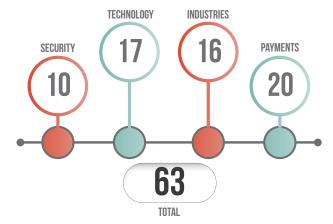


TECHNOLOGY

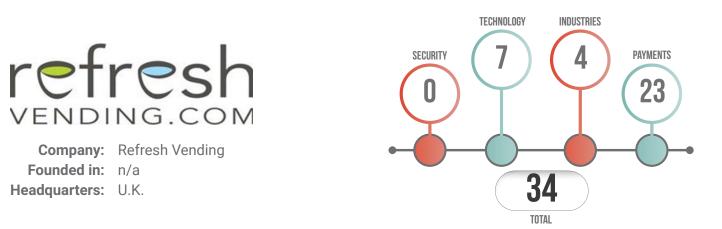
INDUSTRIES



payment systems



Quest provides a range of payment solutions, including fixed line and mobile payment terminal hardware, software and professional consulting services. The company's unattended payment solution has been designed for many business sectors including parking, transportation and ticketing, automated fuel dispensing, supermarkets self-checkouts, quick service drive-thru, car wash, kiosks and vending. The solution provides an option for combined EMV chip, contactless, NFC, smart cards and magnetic stripe card acceptance. Quest solutions are compliant with the latest PCI-PTS 3.x security requirements.

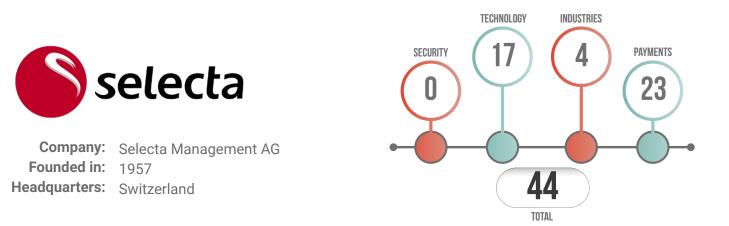


Refresh Vending provides vending machines that offer hot drinks and other products such as cakes, snacks and fresh food. The company's machines payment via cash, debit cards, credit cards or contactless payments. They also offer touchscreen technology that can display promotions or nutritional information to customers.

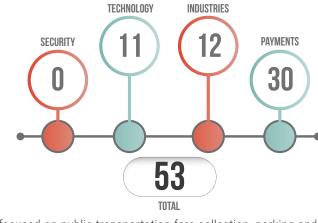


Company: Scheidt & Bachmann Founded in: 1872 Headquarters: Germany

Scheidt & Bachmann is a global systems provider offering solutions focused on public transportation fare collection, parking and access systems, signaling systems and petrol station systems. Its solutions also include automatic pay stations and public transit ticketing kiosks.



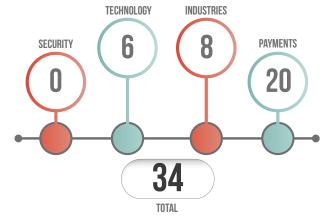
Selecta is a vending and coffee services company that offers food and drinks vending solutions for several industries The company provides products and concepts for out-of-home food and beverage services. Supported payment technologies include contactless payments, magnetic strip and EMV cards.



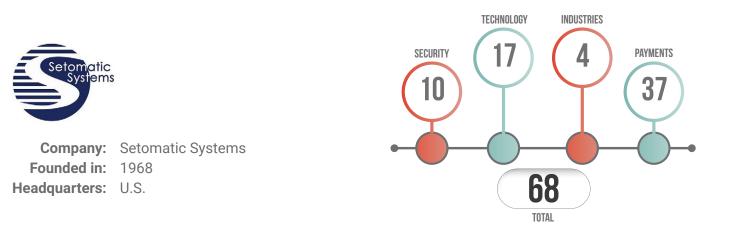
sco<u>recard</u>

SEAGA





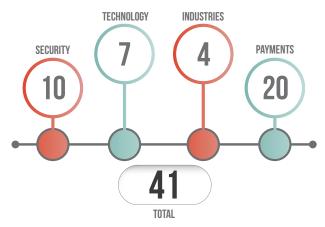
Seaga is a U.S.-based vending machine company offering solutions ranging from digital kiosks to custom vending and retail machines, as well as bill change machines.



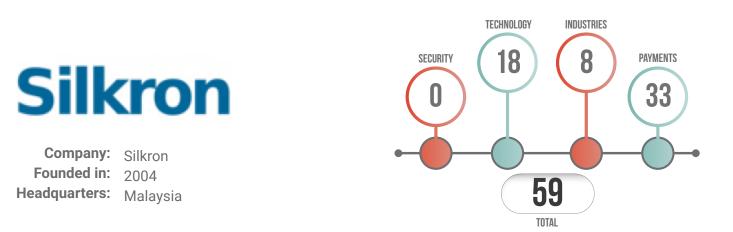
Setomatic Systems offers the laundry industry its SpyderWash Payment System. The system accepts all major credit and debit cards, including closed-loop/private-label, smart and loyalty cards. It is PCI-compliant and utilizes Bluetooth encryption and offers marketing and loyalty card applications, money management tools, and cloud hosting, among other features.



Company: ShelfX Founded in: 2011 Headquarters: U.S.



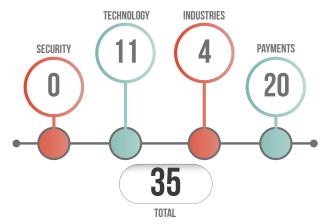
ShelfX provides automated merchandising and inventory management technology based on weight sensing shelves and NFC identification technology. Acceptable methods of payment are credit and debit cards, NFC devices, smart cards, Xcard and mobile phones. The company also provides a cloud-based software ecosystem that lets users manage their account online and allows merchants to manage their operations and inventory.



Silkron is a vending solutions developer. The company offers a range of capabilities, including cash and cashless payments, product and sales management tools, and interactive features like games and social media integrations.



Company: Sir Steward Founded in: 2017 Headquarters: Canada



Sir Steward develops solutions for restaurants, bars, hotels and retail merchants. The company's customizable self-ordering system enables users to engage through kiosks and smartphones apps, and can accept both credit and debit payment options.



Operating as a subsidiary of SIX Group AG, SIX Payment Services Ltd. provides comprehensive services in the areas of securities trading, clearing and settlement, as well as financial information and payment transactions. Its unattended and self-service solutions have been designed for many industries including parking, petrol stations, transportation and vending and accept all major local and global cards including closed-loop/ private label cards, EMV and cashless payments. The solutions are certified to the highest security standards (including PCI and tokenization across the entire payment chain) to minimize payment risks. SIX Payment Services also offers tools to reduce costs, improve customers' experiences and maximize sales and revenues.

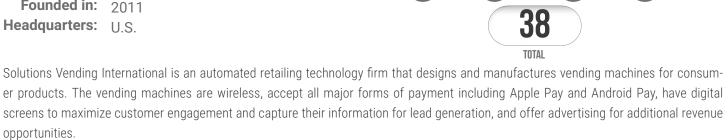
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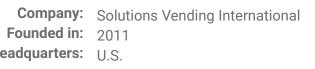
<u>SVI</u>

scorecard

Company: SlabbKiosks Founded in: N/A Headquarters: U.S.

SlabbKiosks manufactures and distributes interactive self-service solutions including self-service check-in solutions for the hospitality, health care and airline industries; self-service checkout and micro-markets solutions; information kiosks for ticketing and exhibits; and government kiosks and financial solutions, including loyalty programs, prepaid credit cards, transactional kiosks and donation kiosks, among other products.





olutions Vending



TECHNOLOGY

SECURITY

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INDUSTRIES

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PAYMENTS

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TECHNOLOGY

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TOTAL

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INDUSTRIES

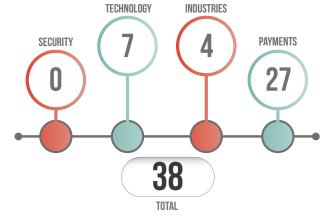
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PAYMENTS

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Company:Smart RetailFounded in:2009Headquarters:Singapore



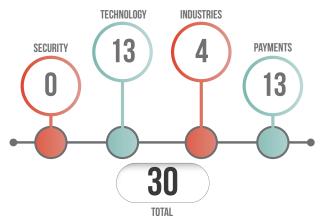
Smart Retail provides customizable vending machines in various sizes, each enabled with remote management, inventory tracking and item marketing display capabilities. The machines accept credit card payments as well as various digital wallets.



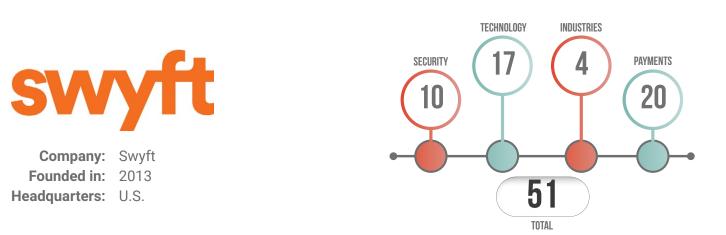
Spire Payments is a POS solutions provider developing electronic payment solutions ranging from fixed, portable and mobile payment solutions to PIN pads and unattended terminals for integration with cash register systems and self-service kiosks. Its unattended payment solution allows card payment capability to be integrated in new or existing machines. It supports several card and transaction types, including chips, PINs, contactless and NFC.



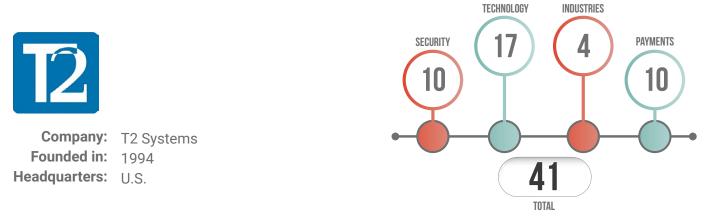
Company: StrongPoint Founded in: 2002 Headquarters: Norway



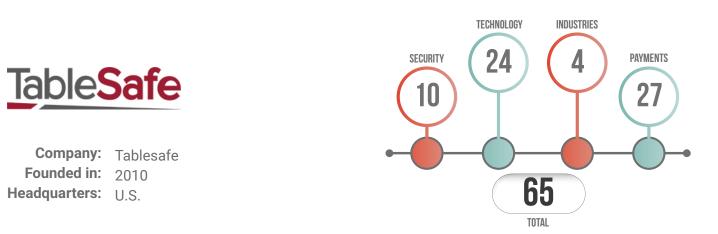
StrongPoint develops retail and cash security solutions including cash management, click and collect, select and collect and self-checkout products. Its self-checkout hardware solution offers various payment options, from magnetic stripe cards to NFC and mobile payment options.



Swyft is an unattended retail solutions developer. The company's X2 vending machine accepts EMC, NFC and magnetic strip payments, and is equipped with cameras allowing for traffic monitoring and contextual advertising.



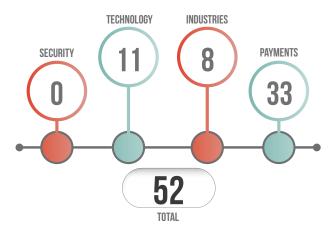
T2 Systems is an unattended parking technology developer. The company offers the UNIFI Parking Management Platform, which enables users to manage permits, enforcement, PARCS, multi-space meters, events and vehicle counting.



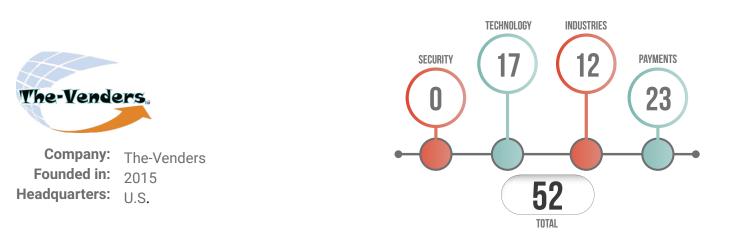
Tablesafe designs, builds and integrates hardware and software products intended to eliminate credit and identity theft in restaurants. The company offers RAIL, an unattended restaurant payment technology that allows guests to split their bill, auto-calculate tips, email receipts and pay via a card reader or NFC device.



Company:Terminal Technologies Ltd.Founded in:2004Headquarters:Czech Republic



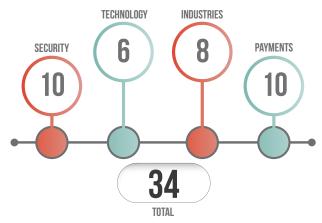
Terminal Technologies Ltd. is a payment solutions developer. The company is involved in the design, prototyping, testing, certification, manufacturing, and distribution of payment hardware and software for the card payments business. Terminal Technologies offers Vendotek, an integrated cashless solution for vending. Vendotek processes a wide range of payment methods including EMV and MIFARE contactless dual technology support as well as NFC payments. The solution also provides vending remote management and marketing campaign management tools.



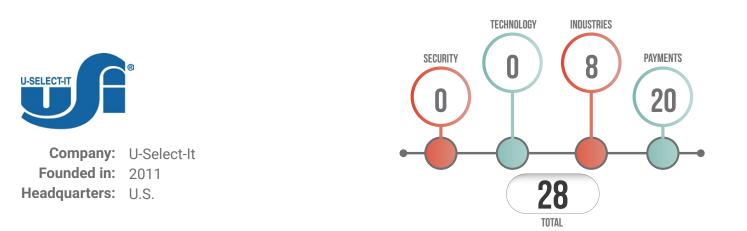
The-Venders is a vending machine technology provider. The company develops "The Ven," a line of small-profile vending machines designed to fit in locations including airports, hotels, campuses and convenience stores, among others.



Company: Three Square Market Founded in: 1995 Headquarters: U.S.



Three Market Square is a micromarket developer that works across North America, Europe, Asia and Australia. The company offers a set of four different kiosks with automatically updating software and can accept credit cards and cash.



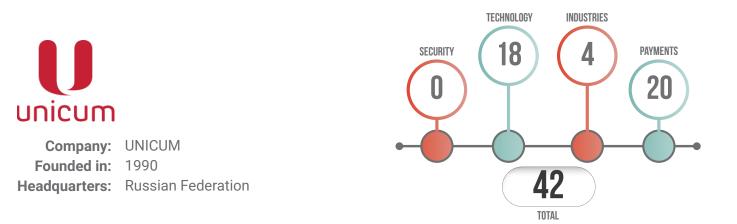
U-Select-It offers a variety of integrated, full-line vending equipment, services and technology. Its clients include vending equipment distributors, large vending operators and national food service and facilities management companies.

UNATTENDED CARD

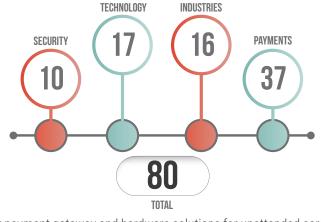
AYMENTS INC

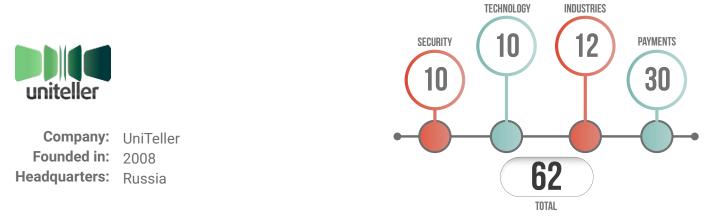
Company:Unattended Card Payments Inc.Founded in:2013Headquarters:U.S.

Unattended Card Payments Inc. (UCP) provides PCI and EMV compliant payment gateway and hardware solutions for unattended card payment terminals. UCP offers devices to accept chip, magstripe, contactless and NFC technology and to support private label gift and loyalty cards. The company offers its solutions to the vending, parking, hospitality and services markets.



UNICUM is a designer and manufacturer of smart vending machines and a provider of a wide range of vending technologies. UNICUM offers a vending software configurator that enable customers to manage and develop their business more efficient and profitable. The vending machine configurator allows to set individual names for each product, set different prices, manage coin acceptor and bill acceptor, set expiration date for individual products and more. Supported payment technologies include NFC, EMV, QR code reader and smart cards. The company is PCI compliant.





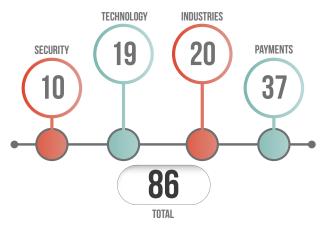
UniTeller offers payment processing services for the self-service industry. Its solutions for unattended services support all major credit cards including closed-loop and EMV cards. UniTeller's self-service solutions are designed for banking, ticketing, parking, gas stations, vending, supermarkets and other fields where credit card payments are processed in the self-service mode. The solution includes anti-skimming protection and is PCI-compliant.



Unixfor provides self-service solutions to a range of business sectors including retail banking and shops, petrol stations, public transportation, educational institutes, casinos, sports and entertainment venues, and public utility companies. The company designs and develops self-service application and monitoring software, as well as engineering, building and assembling hardware for their self-service solutions. Unixfor payment solution accepts NFC, EMV, magnetic stripe cards and smart cards.



Company: USA Technologies Founded in: 1992 Headquarters: U.S.



USA Technologies (USAT) provides wireless, cashless micro-transactions and networking services, as well as telemetry and customer engagement services for the unattended market. Its main product is the ePort solution, a PCI-compliant, end-to-end suite of cashless payment, telemetry and value-added services. USAT's solutions support mobile wallets Apple Pay and Google Wallet and payment technologies including EMV, magnetic stripe, NFC and BLE technologies.



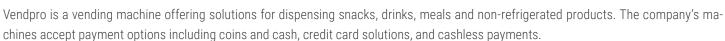
VE Global Vending Inc. is an interactive vending and automated retail solutions provider. The company offers merchants software tools such as content management systems and UCB applications, allowing them to control and monitor their vending transactions. VEGV's vending machines accept multiple payments including credit and debit cards, EMV chip cards, Google Wallet and Apple Pay. Moreover, vending machines count with QR/barcode reader for coupons and social media authentication, touchscreen and Bluetooth LE (PayPal, V.me, iBeacon).

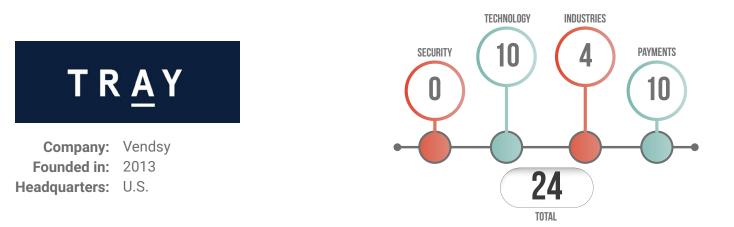
endoro

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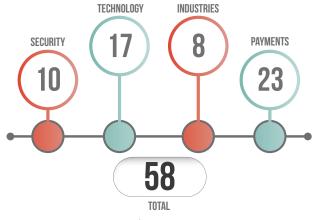
Company: Vendpro Founded in: 1995 Headquarters: Australia

VENDING



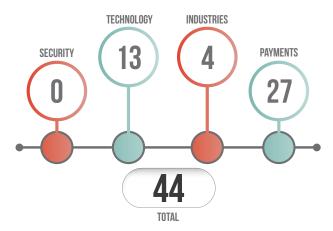


Tray by Vendsy develops self-service ordering and checkout technology for the hospitality and service industry. The company's self-service POS kiosk allows the client to order, pay and interact with other clients in the store.

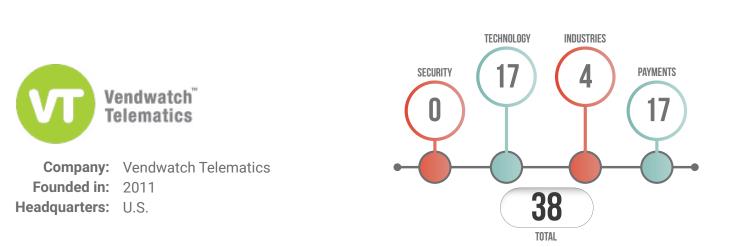




Company: Vendwatch Telematics Founded in: N/A Headquarters: U.S.



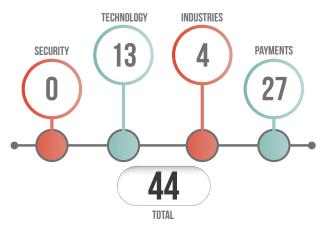
VendReady is a vending machine supplier based in Haltom City, Texas, that buys and sells new and refurbished equipment from across the world.



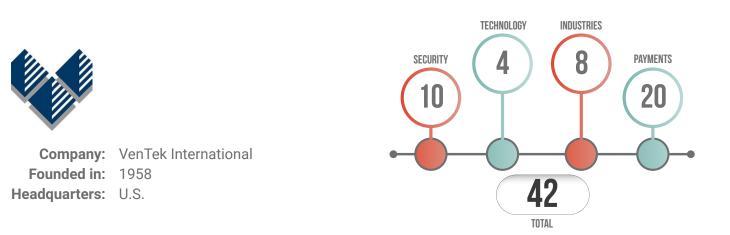
Vendwatch Telematics is a products and services company providing sales and operations optimization tools exclusively for the vending machine industry. The company offers VM Pay, which allows vending machines to accept smartphone payments from Apple Pay and Android Pay and includes chip card readers.



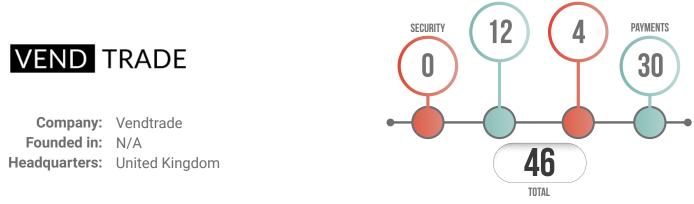
Company: Vengo Labs Founded in: 2012 Headquarters: U.S.



Vengo Labs offers an interactive consumer engagement platform combined with a point-of-purchase hardware. The company enables merchants to create an innovative and interactive digital customer experience, providing information and videos about their products through a touchscreen device with a slim compact design. Vengo Labs also offers tools to understand purchasing patterns and cloud-based inventory monitoring. Payments accepted include credit, debit, NFC and campus cash via Blackboard or CBORD.



VenTek International is an unattended parking solutions developer. The company also offers solutions for ticketing for parks and recreation as well as public transport. Together with software solutions, Ventek also provides automated pay stations.



TECHNOLOGY

TECHNOLOGY

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INDUSTRIES

Vendtrade is a major U.K. buyer and seller of new and used vending machines, coffee machines and water coolers.

Verifone is a provider of electronic payment transactions and other POS value-added services designed for different industries including retail, hospitality, health care and transportation. It supports unattended payment devices and self-service nayment systems. The firm also

verirone is a provider of electronic payment transactions and other POS value-added services designed for different industries including retail, hospitality, health care and transportation. It supports unattended payment devices and self-service payment systems. The firm also supports equipment and deployment, installation and training, and post-sales services. Supported payment technologies include EMV, NFC, magnetic stripe, contactless cards and prepaid gift cards. Verifone's payment solutions are PCI compliant and count with authentication software, payment data tokenization & end-to-end encryption. Company: Verii, LLC Founded in: N/A Headquarters: U.S.

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Verii offers Verii NanoMarket, a small, unattended store that utilizes a mobile app as the form of payment. The NanoMarket offers a variety of snacks and drinks, including healthy food options. The Verii mobile app gives companies' employees the ability to make purchases using their iOS or Android smartphones, shop in the market and view their full purchase history. Verii also provides management tools such as real-time inventory, reports with the most popular items purchased, one-click auto-refill order option, price adjustment and more.

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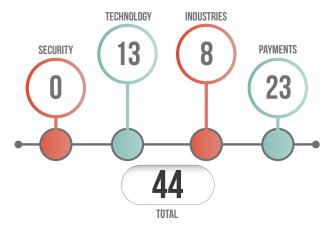
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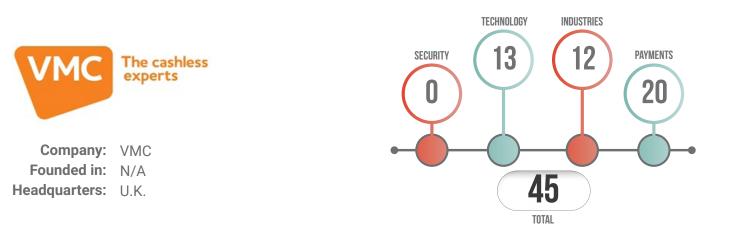


VeriSoft offers payment technology. Its solutions support credit and debit cards, EMV and NFC contactless payments, and QR code readers. The firm meets PCI security standards on unattended payment terminals.





ViaTouch Media is a vending machine producer. The company's solutions include features like loyalty programs, discounts, targeted user ads, the ability to upsell products and user tracking. One of the company's developments is Lisa, a vending machine that allows users to pay by scanning their thumbs.



VMC designs, builds, installs, and maintains cashless systems for catering and vending operators, and end users. The firm develops cashless payment solutions by using NFC technology, and accepting traditional payment methods such as magnetic stripe. Its systems work on and offline and provide users with all the sales analysis and audit information they need to improve their service and profits.



Founded in: N/A Headquarters: U.S.

TECHNOLOGY **INDUSTRIES** PAYMENTS SECURITY 8 17 23 10 58 TOTAL

TECHNOLOGY

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WashCard Systems works directly with business operators. Ensuring their business is fitted with the necessary software and equipment they need. They aim to improve their consumer experience.



tions. Its unattended payment platforms are EMV-and PCI-compliant and have the ability to process chip and magnetic stripe credit cards, NFC contactless cards, mobile wallets such as Apple Pay, and others. In addition, Wayne's payment terminals offer media and marketing capabilities, enhancing the customer experience and offering a range of marketing opportunities.

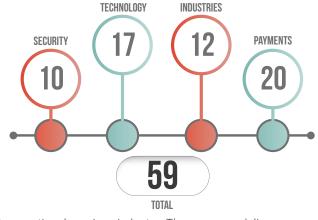
worldline

Company: Worldline Founded in: 1970 Headquarters: France

TOTAL Worldline offers a range of end-to-end services for the payments and transactional services industry. The company delivers payment terminals and accessories for shop-based and mobile retailers, attended and unattended petrol stations and financial institutions, among others. The company also offers a range of unattended terminals, which are suitable for use both indoors and outdoors. Wordline's terminals are PCI compliant and accept all major type of cards, including debit, credit, e-purse, Mifare™, loyalty and prepaid, as well as EMV and NFC payments.



sion of the Worldnet Platform that delivers EMV-enabled products and services. Its platform is scalable and provides both multicurrency processing and multilingual support.



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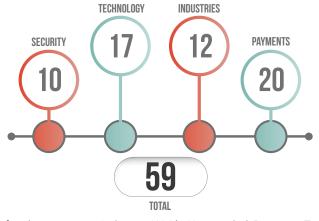
A Partner You Can Trust

Company: XAC Automation Corporation Founded in: 1993 Headquarters: Taiwan

XAC Automation Corp. manufactures transaction automation devices for the payments industry. XAC's Unattended Payment Terminal has been developed for integration into self-service applications such as gas pumps, vending machines, parking meters, kiosks and other outdoor transaction solutions. Payments accepted include PIN and EMV cards and NFC/contactless payments. XAC's solutions are PCI compliant.



Xafax is a supplier of cashless payment services and IT solutions for education, libraries, government, health care institutions and retail companies. The firm offers payment solutions for vending machines and self-service kiosks. Xafax solutions accept smartcards, EMV chip and pin credit and debit cards, as well as NFC cashless payments.



TECHNOLOGY

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Ziosk[®]

Headquarters: N/A

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SECURITY 7 4 PAYMENTS 0 13 24 TOTAL

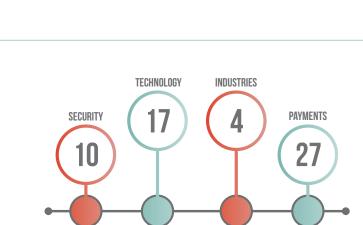
TECHNOLOGY

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Yo-Kai Express is a high tech company which is changing the traditional restaurant industry with autonomous solutions.



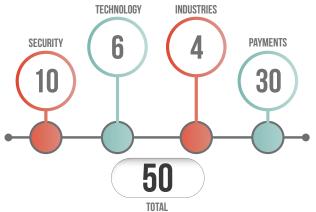
Android Pay and Samsung Pay. Ziosk's tablet solution is PCI-compliant and counts with encrypted credit card reader.







Company: ZoomSystems Founded in: 2001 Headquarters: U.S.



ABOUT

PYMNTS.com

<u>PYMNTS.com</u> is where the best minds and the best content meet on the web to learn about "What's Next" in payments and commerce. Our interactive platform is reinventing the way in which companies in payments share relevant information about the initiatives that shape the future of this dynamic sector and make news. Our data and analytics team includes economists, data scientists and industry analysts who work with companies to measure and quantify the innovation that is at the cutting edge of this new world.



<u>Worldnet</u> provides omnichannel payments platform solutions to corporate clients in North America and Europe, offering a fully hosted version of the Worldnet Platform that delivers EMV-enabled products and services. Its platform is scalable and provides both multicurrency processing and multilingual support.

We are interested in your feedback on this report. If you have questions or comments, or if you would like to subscribe to this report, please email us at <u>automatedretail@pymnts.com</u>.

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