

Volta Digital Hybrid Charging Stations

Peerless-AV[®] Works with Volta Industries to Create Custom Charging Stations for Retail Centers in the Chicagoland Area



The Challenge

In the summer of 2015, Volta Industries, a designer of vehicle charging stations aimed at bettering the world one community at a time, was looking to make a change. The company was embarking on a transition from static to digital signage as well as an expansion of its charging station locations to retail centers across the Midwest. Volta wanted to combine digital signage displays with its electric vehicle charging stations to create the ultimate revenue generating, advertising solution. Further, Volta wanted to stick to its mission of offering free electric car charging to customers and free installation and maintenance to retail centers with its ad-supported stations.

Volta's desire to combine charging stations and digital advertising would prove to be very beneficial for the company, particularly because digital advertising is shown to be more effective than static advertising. A recent study found that sixty-three percent of adults report that digital signage



Case Study: Volta Digital Hybrid Charging Stations

advertising catches their attention more than any other method of advertising, and forty-four percent said they paid more attention to digital signage advertising than any other method of advertising.

In hopes of growing its business by adding digital signage solutions, Volta needed to find reliable and secure digital charging stations that would be fully operational in the harsh outdoor environment of the Midwest, namely Illinois, while still offering retail centers a way to digitally connect with ecofriendly customers prior to entering their stores. In addition, based on its mission to cover all station costs, Volta was focused on finding a product that offered ease of installation, maintenance, and security features to deter tampering or theft.

The Solution & Installation

To make this idea a reality, Volta reached out to Peerless-AV® in hopes of creating custom charging stations to fit its unique list of needs. The custom solution presented was a combination of many different components – a Peerless-AV 47" Xtreme™ Outdoor Daylight Readable Display inside an Xtreme™ Outdoor Portrait Kiosk, with a 6' tall backlit poster box, a Chromebox media player, a EKM power meter, and a cellular modem. Peerless-AV's solution addressed all of Volta's needs, with features including:



Weather Resistance

Peerless-AV's digital charging stations easily withstand the extreme outdoor elements of the Midwest. The Xtreme™ Outdoor Display and Kiosk's fully-sealed weatherproof design completely seals all inside components including cable entry, providing the utmost protection against outdoor conditions such as rain, snow, sleet, dust, insects, and even pressure washing.



The Xtreme™ Display is IP68 rated, which means the internal components are completely protected against outdoor elements such as water, dirt, or dust. The operating temperature ranges from -40°F to 140°F, ideal for the temperatures in Illinois. Plus, the patented Dynamic Thermal Transfer™ system passively cools and thermally heats the display, eliminating the need for filters, vents, or fans. Corrosion was also a non-issue for the stations as the kiosks were designed to be all stainless steel with aluminum construction.



Visibility

Visibility is not a concern with the Xtreme™ Outdoor Display. The optically bonded display is equipped with ambient light sensors to automatically and gradually adjust the screen's brightness based on the surrounding conditions, providing a clear, crisp picture, even in direct sunlight.



Security

The charging stations were built to fit the space – public parking lots. The Xtreme™ displays are equipped with anti-reflective, impact-resistant safety glass that protects the screen against damages. And, the stations were equipped with highly secure barrel locks that prevent unintended access to the inside.



Installation & Maintenance

Assembly is made easy with Peerless-AV kiosks, so it was no surprise that the stations were designed to arrive pre-assembled to simplify installation. Ease of maintenance was another aspect Volta requested, a key marker for all Peerless-AV products. Secure, removable doors on both sides of the unit allowed for convenient access to the display, media player, and other internal components. Once inside the unit, there is a fold out tray that can be used to place tools on while working on repairs.



Customizable

Peerless-AV is proud to have a fully staffed custom solutions team that works diligently to create solutions, such as the Volta charging stations. The kiosks were designed with the end-user in mind and the final solution had design and maintenance at the forefront, offering sleek, modern, digital charging stations. The stations are two-sided, which allows for digital advertising on one side and static advertising on the other. The illuminating blue light located at the top of the kiosk allows electric vehicle drivers to easily identify where a charging station is located within a crowded parking lot. Also, the stations are equipped with an EKM power meter for charging and a cellular modem that allows for real time content updates and power consumption records.



“Working with Peerless-AV to create our custom charging stations was an excellent choice for Volta,” said Michael Menendez, CTO, Volta Industries. “They offered us not only a long track record of success, but a full custom kiosk team and state-of-the-art outdoor solutions that fully met our needs.”

The Install

Installation of the custom charging stations took place during the summer of 2015 with the help of Chicagoland electrical services company, JNS Power & Control Systems, Inc. Volta had previously worked with the reliable company and hired them for installation of the custom stations. JNS Power & Control Systems, Inc. brought over five years of electric vehicle station installation expertise to the project, along with a resume boasting the installation of 168 stations in Chicago.

Before installation of the stations could begin, there were numerous steps that needed to be taken by all parties involved. The electrical services company first conducted a walkthrough of the installation areas to assess what was needed and the potential problems, a key step to ensure a positive end solution for customers. The next step was to get approval for the installation by the retail center and the city, which can be a lengthy process.

Once approvals were received, the installation began. The first installation took place inside a parking garage at Oakbrook Center, located in Oak Brook, IL. Two digital hybrid units were installed, creating new spaces for hybrid charging and advertising opportunities. The parking garage was the ideal location for the installation as it is a high traffic area that provides protection for customers from the inclement weather Illinois is known for, making it a perfect spot for advertising.

After Oakbrook was complete, two units were installed in the parking lot of Northbrook Court, located in Northbrook, IL. With no ceiling or beams to run the necessary equipment, the Northbrook installation proved to be a challenge. JNS Power & Control Systems, Inc. utilized their expertise and ran pipes underground to hold the necessary electrical equipment required to power the charging stations.

According to Brian Howe of JNS Power, “In running larger pipes, Volta now has the infrastructure in these locations to easily expand in the future.”

Once the parking areas were ready for the units, installation of the charging stations began. The units came pre-assembled and preconfigured, allowing for a quick installation, and the media players offered a seamless plug and play set-up.



The Results



By fall 2015, 10 Volta charging stations had been set up across 3 locations in Illinois.

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Howe called the Peerless-AV kiosks “spot on genius” when asked about the product’s ease of installation and maintenance, further stating, “I admire the fact that you have means to maintain your products easily. The design and maintenance were at the forefront compared to other stations I have worked with in the past. Peerless-AV really did think of everything.”

Today, electric vehicle owners are able to charge their vehicles for free while shopping at Oakbrook Center and Northbrook Court, and the stores within the retail centers are able to continually promote their products and create new and lasting customer relationships, without the worry surrounding the costs of maintaining the units. With four more free charging stations installed in the Midwest, Volta is that much closer to making communities better by using technology as a force for social change.

About Peerless-AV®

Peerless-AV®, a Peerless Industries, Inc. company, is a leading designer, manufacturer and distributor of audiovisual solutions. From its award-winning mounts and wireless audio systems to indoor/outdoor kiosks and the industry’s first fully sealed outdoor displays, Peerless-AV aims to Get it Right by fulfilling both integrators’ needs for ease of installation and service, and end-users’ dreams in residential and commercial applications.

Based in Aurora, IL, Peerless-AV manufactures over 3,600 products that serve original equipment manufacturers, commercial integrators and consumer retailers in 22 vertical markets through direct sales representatives and authorized distribution. For more information, visit www.peerless-av.com.

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