HID®

Snapsportz™ Delivers Great Outdoor Experience with RFID Tags

Princeville Ranch Adventures, Kauai, Hawaii, USA

Snapsportz™ Uses HID Global RFID Technology to Help Capture the Thrill at Princeville Ranch Adventures.

HID Global® Explores New Heights with RFID Technology

Since 1978, family-owned Princeville Ranch Adventures has taken pride in offering world-class eco-adventures on the north shore of Kauai in the Hawaiian Islands. Guests from around the world travel here for horseback riding, hiking and waterfall tours through serene rainforest valleys steeped in tropical sounds, scents and sights.

Over the last 10 years, zip lining has grown to be the Ranch's most popular attraction, enabling guests to glide above lush treetops and across spectacular valleys. Princeville Ranch has nine zip lines presenting incomparable views of spectacular terrain, including the "King Kong" which enables adventurers to glide a span of 1,200 feet (366 m), side-by-side with a partner.

"Zip lining at Princeville Ranch is a life-changing experience in a breathtaking environment," says Patrick Nowak, general manager of Princeville Ranch Adventures. "Our guests want to capture the memory of this adventure, and share it with family and friends."

The desire to capture guest experiences led Princeville Ranch to partner with Snapsportz™ Media, Inc. Snapsportz specializes in using RFID to capture professional action images of people engaged in active endeavors – skiing, snowboarding, running, biking – and enabling each person to instantly view, save, share and purchase their individual photos on site, in real time or online.

A.C.C. Systems teamed with HID Global to help Snapsportz create a daring solution that uses HID Global's RFID tags to trigger cameras positioned along the zip line course so they can take photographs of the guests in action as they glide above rugged and remote terrain.

Challenges

The nature of zip lining at Princeville Ranch poses many obstacles to consistently and reliably capturing images of each unique guest experience. Equipment is subject to rugged treatment, and the Hawaiian terrain ensures environmental extremes - intense sunlight, heat, salt air, strong winds and heavy precipitation. Between excursions, helmets, harnesses and other safety equipment require cleaning and sanitation.

Additionally, the remote location of Princeville Ranch makes traditional power supplies unavailable. Further, there is no access to reliable communications, networking, or Wi-Fi to run the Snapsportz point-of-sale software that connects guests with their images.

In previous applications, Snapsportz had success with single-use tags that were issued to a participant for a day, and then discarded. For the zip line, tagging the Ranch-issued helmets seemed the optimal solution, but it meant that the tags had to perform day after day, while enduring rigorous use.

"Knowing that HID Global's SlimFlex tags perform exceptionally well in extreme environments gives us the confidence to deploy RFID technology anywhere…"

Ben Kottke
Founder
Snapsportz

Challenges (continued)

"The Princeville Ranch zip line course presented the toughest environment for RFID tag performance that we've encountered, so far, when implementing our system," said Ben Kottke, Snapsportz founder and CEO. "The weather conditions include extreme heat and driving rain. And even when users aren't hard on their helmets, the handlers certainly are."

Over the course of a year, pilot efforts by Snapsportz tested multiple RFID tags and fixation options – glues, resins, epoxies, tapes and rivets – with varying degrees of success. In early testing, the pilot Princeville Ranch solution was failing to capture as many as 1 out of every 4 guest images. Snapsportz turned to A.C.C. Systems to help solve the problem.

A.C.C. Systems is a distributor and integrator of full spectrum RFID solutions, including HID Global tags and readers. They have experience and knowledge in helping companies, like Snapsportz deploy RFID-based systems at cycling events, auto races and concerts. But the zip line application was unexplored territory.

"The first batch of tags we tested were sticker inlays that were affixed to the helmets using the sticker adhesive and an outer larger weatherproof sticker laid over. These tags initially delivered 90% readability," said Nicholas Addonisio, sales manager of A.C.C. Systems. "However, after a few days of exposure to Kauai sun and rain, rugged treatment, and sanitation between uses, many tags became damaged and readability dropped significantly."

Solutions

A.C.C. Systems talked to HID Global about the difficulties Snapsportz was having finding a tagging solution that was up to the zip line challenge. "When Nick described the harsh conditions – high heat, impact, exposure to rain and cleaning solutions – I immediately recognized that the SlimFlex™ tag would offer an ideal solution," remarked Jason D. Warschauer, sales engineering manager at HID Global.

Originally developed for industrial applications, HID Global SlimFlex RFID tags have unique thermoplastic elastomer (TPE) housings that are made from the same materials used worldwide to manufacture automobile pipes and hoses. SlimFlex tags tolerate repeated bending or torsion, while maintaining excellent performance characteristics. The durable housing safeguards embedded electronics, even under harsh conditions, and provides resistance to chemical exposure, like the Princeville Ranch's repeated use of a bleach solution to sanitize the zip line helmets.

Flexible SlimFlex tags fit snugly to the helmets' curved surface, and attach securely with rivets. The UHF electronics within the tags deliver reliable read ranges up to 26 feet (8 meters).

"With SlimFlex tags, our readability is approaching 100%," reports A.C.C. Systems' Addonisio. "This is incredible considering the abuse the tags receive on a daily basis, and the erratic movements of people who are about to plunge over a tree canopy!"

To connect each guest to his or her pictures, RFID technology in the Snapsportz system allows simultaneous triggering of image capture as well as each image's assignment to an individual guest's helmet number. This enables the Snapsportz software to automatically sort images, and retrieve each guest's photos on demand. Interactive kiosks enable guests to order prints or digital copies, upload one or all images to a USB drive or post to their Facebook page.

Results

Princeville Ranch Adventures is ecstatic with its near flawless image capture system on its zip line course. HID Global's SlimFlex tags help assure virtually every guest has the widest possible choice of images from his or her unique adventure. "The current system is working extremely well," reports Princeville Ranch's Nowak. "By ensuring high-quality image capture for our guests and making it effortless for them to find and share her images, we help ensure they get the most out of their zip line experience."

With negligible additional cost, the Snapsportz photo system, alone, has more than doubled revenue for Princeville Ranch's entire zip line operation.

In addition, Princeville Ranch gains a promotional lift from the images when guests share them on social media. "Approximately 85% of guests choose digital versions of their images that lead to great reviews on Trip Advisor, Facebook, Instagram and other sites, painting a picture of fun for our guests that also promotes our business," says Nowak.

For Snapsportz, conquering the zip line challenge is also leading the company to potential new markets for its system, from theme parks and waterparks to ski resorts, sports venues, and outdoor adventures. "Knowing that HID Global's SlimFlex tags perform exceptionally well in extreme environments gives us the confidence to deploy RFID technology anywhere people pursue their passions, empowering our clients to use the Snapsportz system to increase revenues and enhance the user experience while building brand identity and customer loyalty," Kottke says.