



Value through Innovation



Outdoor Unattended EMV Payment Devices: Challenges and Solutions

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Executive Summary

Unattended payment acceptance systems are increasingly popular, not only at gas pumps, ATMs, and vending machines, but also airport self-service kiosks, parking lots, pay-at-the-table stations (and fast-food kiosks), public transit, and many other situations. Unique requirements apply to unattended payment devices, not only with regard to security, durability, and reliability, but also weather resistance, constraints involving electrical power, infrequent maintenance, and much more. The unusual demands of unattended operation have special implications for the design of card readers. ID TECH's VP5300, VP5300 NFC Antenna, and SmartPIN L100 PIN pad have been designed with the rigors of unattended operation in mind.

Introduction

Unattended payment solutions, involving (for example) kiosks, gas pumps, parking meters, ATMs, and vending machines, typically operate under the following circumstances:

- Locations with limited security, or poor law enforcement coverage, resulting in high vulnerability to vandalism and tampering
- Direct exposure to elements of weather (including moisture and temperature extremes)
- Located where power availability is poor, often requiring alternative sources of power, such as solar panels and batteries
- Longer-term deployment cycles, with infrequent maintenance and the need for reliable, future-proofed hardware

To succeed in such circumstances, specially designed hardware is essential. It's simply not feasible to repurpose "retail-oriented" payment devices to unattended scenarios.

ID TECH, with 30 years of experience (and customers on all continents), specializes in delivering exactly the kinds of solutions required for success in unattended payment acceptance.

The ID TECH Unattended Solution

While many unattended EMV payment solutions exist, no other currently available offering has been designed and engineered from the ground up to survive the rigors of outdoor operation such as ID TECH's PCI 5.x SRED and EMV L1/L2 certified payment solution for unattended and extreme-climate (-25°C to 70°C) environments.

ID TECH's groundbreaking solution consists of the following hardware devices that, taken together, effectively resolve all of the challenges facing outdoor unattended payment solutions:

- ID TECH VP5300: a PCI 5.x SRED certified, IP65-rated EMV Hybrid Insert Reader (capable of reading chip cards and magnetic stripes, using a single card slot)
- ID TECH SmartPIN L100: a PCI 4.x SRED-validated, IP65-rated secure PIN Pad
- ID TECH VP5300 NFC Antenna : an IP65-rated NFC contactless reader, compatible with all major contactless-wallet technologies

ID TECH's unattended outdoor payment solution is centered on the VP5300 Hybrid PCI 5.x SRED EMV Insert Reader, designed specifically for outdoor applications in harsh environments. VP5300 is IP65 rated (the highest possible intrusion-resistance rating for a mounted insert reader), for maximum water and dust ingress resistance, and IK10 rated in shock and tampering resistance. The VP5300 is also optimized for off-grid/solar-powered operations, with ultra-low idle power consumption of less than 10 micro-amperes.

For outdoor unattended applications where PIN entry is required, the ID TECH SmartPIN L100 PCI 4.x SRED certified PIN pad is designed to be paired with the VP5300 to provide secure PIN transactions for both Chip-PIN credit and debit transactions. Like VP5300 itself, the ID TECH SmartPIN L100 PIN pad is also IP65 rated for water and dust resistance. The stainless steel keypad provides exceptional durability even under the harshest conditions.

Moreover, ID TECH now also offers its smallest and most advanced NFC contactless antenna to pair with the VP5300 where contactless-EMV functionality is desired. When paired with the VP5300 NFC Antenna, the VP5300 is certified with MasterCard® MCL, AMEX® ExpressPay, Visa® VCPS, and Discover® DPAS contactless kernels. It also supports Apple Pay, Android Pay, and other mobile wallets. The VP5300 with NFC antenna supports contactless ticketing functionality, such as used in most transit systems worldwide, as well as NFC mobile phone payments and full compatibility with ApplePay VAS, Google SmartTap, and other loyalty technologies. Its powerful ARM processor and remote download capability allows for future scalability and upgradability. Operators can rest assured that the investment made today will support developments in contactless payments of the future.

A Unique Combination of Durability and Security

In addition to supporting the latest suite of industry-standard encryption technologies and being P2PE-ready, ID TECH's VP5300, SmartPIN L100 and VP5300 NFC antenna are all designed to be vandal-resistant, water-resistant, and dust-resistant; and they provide an industry-best operational temperature range of -25°C to +70°C. No other payment devices on the market today exceed these standards.

ID TECH's VP5300 unattended bundle is PCI PTS SRED-validated and EMV L1/L2 certified to provide years of certified security compliance; and components can be deployed separately, or as a package, to form a complete and dedicated unattended outdoor EMV payment solution. SRED validation means components can be part of a full P2PE solution. (All SRED components are full-time encrypting, run periodic self-checks at the firmware level, and include removal sensors and tamper-detection features, with automatic zeroization of keys and data in the event of tamper.)

Unmatched Support

With its proven track record of outstanding customer support and custom integration capability, ID TECH has built a reputation for providing unmatched technical expertise in secure payment solutions.

Another hallmark of ID TECH's success is customization. ID TECH owns every step of the design and manufacture of its products. As a result, customers and partners who look to maximize the value of their products through customization and localization can count on ID TECH to deliver in these critical areas. Whether you need off-the-shelf, ready-to-deploy solutions, or highly customized (and/or OEM) componentry, ID TECH stands ready to deliver.

The Leader in Unattended Solutions

ID TECH's track record in secure unattended payment solutions is well proven, with customers spanning the globe. The durability of ID TECH payment devices has been proven in real-world conditions ranging, literally, from brutal Canadian winters to hot California summers.

No matter what your self-service payment needs are, ID TECH has solutions that address all of the difficult challenges facing the outdoor unattended payment industry:

- **Security:** PCI 5.x SRED and EMV L1/L2 and EMV Contactless L1/L2 certified payment systems for limiting the payment transaction liability and audit scope on both the merchant and payment service providers, while providing SRED-level security.
- **Durability:** IP65-rated water and dust ingress protection on all hardware devices, to cope with the exposure to elements of weather and temperature extremes.
- **Ruggedized design:** Industrial-strength components can survive abuse, vandalism, and unauthorized tampering in settings where law enforcement may be lacking.
- **Ultra-low power consumption:** Idle and sleep modes allow devices to consume very little power, ideal for remote systems that need to be able to operate with solar panels and batteries.
- **Customization:** ID TECH is known for its ability to accommodate requests for customization of hardware.
- **Support:** All products come with ID TECH's legendary commitment for product and technical support, to ensure years of product service life.

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