

GENERAL QUESTIONS

Q. What is Loop?

A. Loop™ (LoopPay, Inc., based in Boston, Mass.) invented the world's first mobile wallet solution that allows consumers to securely store and organize all their cards (payment, gift, loyalty, ID, membership cards) with their LoopWallet App, and pay with their Loop enabled devices (smart accessories, smart phones, smart watches) virtually everywhere. Loop's patented Magnetic Secure Transmission (MST) technology turns existing mag stripe readers into mobile payment readers without any change or cost to merchants or their payment processors. Loop provides not only breakthrough convenience for consumers to organize and pay with mobile, but also the highest level of payment security to protect consumer's card data. Loop will also provide valuable account data to users, along with targeted promotions and rewards from card issuers and merchants over time. What makes Loop unique is its ability to work within the existing payment infrastructure that merchants use today to deliver better commerce experiences in the new mobile channel. It works today. And it works without disruption to merchants or processors. Loop is a Level One PCI Certified Payment Provider. To learn more and order Loop products, visit www.looppay.com.

Q. How do I use Loop?

A. Three simple steps. First, download free LoopWallet App from Apple App Store and order a Loop compatible device at looppay.com. Second, load your credit, debit, gift, membership and loyalty cards using the Fob or a card reader. You can also take photos of your IDs and membership cards, which are encrypted and saved for you in a Level One PCI certified data center. Third, at the merchant, pay with Loop by placing your Loop device against the credit card swipe slot and press the transmit button. It is that simple.

Q. How does Magnetic Secure Transmission (MST) technology work?

A. MST technology generates changing magnetic fields over a very short period of time. This is accomplished by putting alternating current through an inductive loop, which can then be received by the magnetic read head of the credit card reader. The signal received from Loop emulates the same magnetic field change as a mag stripe card when swiped across the same read head. Loop works within a 3-inch distance from the read head. The field dissipates rapidly beyond that point, and only exists during a transmission initiated by the user.

Q: Will Chip & PIN card (EMV) technology render mag stripe readers (MSR) obsolete?

A: No. There are 15.7 billion payment cards worldwide with mag stripes (not counting loyalty cards), out of which only 1.5 billion are integrated-circuit – commonly known as Europay, MasterCard and Visa (EMV) – enabled chip cards. The rest include private label cards, credit and debit cards from various networks, gift cards, etc. MSRs will be used for decades to come just to support that majority of the cards that are mag stripe only. Mag stripe readers (MSR) are on nearly 100 percent of the greater than 50 million point-of-sale (POS) terminals worldwide, and almost always co-exist with EMV chip readers that are used at fewer than 50 percent of these POS terminals, and with NFC readers that are used at

fewer than 8 percent of these POS terminals. Now that Loop has turned MSRs into contactless mobile-payment receivers, MSRs will be further leveraged for mobile payments for years to come. EMV technology has taken more than two decades to be adopted in other markets for enhanced security. It has taken billions of dollars industry wide to change our merchant POS systems with those that accept EMV technology. It will cost billions of dollars more to migrate the rest of the world to EMV. Now with Loop's new mobile payment solution leveraging existing MSRs and its ability to build on additional layers of security that is good as or better than EMV on mobile devices -- Loop is a more convenient and more secure solution for the payment industry.

Q: Compared to NFC, programmable cards, or barcodes, what are the unique benefits for Loop's mobile solution?

A: The low merchant acceptance for NFC and barcodes creates frustration for consumers, as they simply cannot pay at their everyday retailers with these technologies. As for programmable cards, it requires swiping and is not contactless, and therefore cannot be embedded in phones or other mobile devices. It is also fragile, brittle and battery draining, making it quite cost prohibitive for mass adoption. Loop's MST technology can be fitted into a multitude of form factors with universal acceptance, creating a unique opportunity to unlock mobile commerce. Best of all, it does not require merchants to make any changes on their systems.

Q. Which Loop products are available today?

A. The Loop Fob and the Loop ChargeCase. The Loop Fob is a small, handy device that inserts into a smartphone's audio jack and features an integrated credit card reader that allows users to safely store and encrypt their cards into a secure memory module. The built-in microprocessor and magnetic induction loop within the Loop Fob allow users to transmit their card data at 90 percent of today's merchants and every-day retailers. The Loop Fob is compatible with both Apple iOS and Android devices (Android app available in April 2014). The Loop Fob is capable of transmitting card data while attached to a smartphone, or it can be used without a phone in detached mode. For a convenient and stylish carry, the Fob Bumper, in a variety of color, is available to users. And, there's another important Loop product – the Loop ChargeCase. It's an iPhone case that combines protection and additional battery life, and comes embedded with Loop technology that enables payments with an iPhone. The built-in microprocessor and a magnetic induction loop in the ChargeCase allows users to protect, power and pay with Loop while on the go. It is compatible with iPhone 5 and 5s and delivers up to 60-percent battery power.

Loop plans to bring additional accessories to market, and is working with OEMs to embed Loop in various smartphones and smart devices. Loop believes in giving consumers the freedom to securely pay with what is most convenient for them.

Q. How secure is Loop?

A. The LoopWallet, Loop Fob and Loop ChargeCase are designed with multiple layers of encryption, and multiple means of authentication. The information associated with your credit cards is encrypted and

stored in a dedicated hardware module, called a secure memory, within the Loop Fob or ChargeCase - not your phone. With LoopWallet, users must properly authenticate themselves by entering PIN before using to pay at the POS terminal. Every user must undergo an identity check to create a Loop Account, and the app requires password to open it. In addition, each Loop Appcesorry device must be bound to an individual account. So if you lose your Loop enabled device, others cannot access the card data on the lost device with their accounts. When loaded, each payment card is also verified by matching the name on the card to the name of the account. Loop is also working with card issuers to generate dynamic card data every time a payment is made, making such data unusable for those trying to clone a card.

Q. How long will the Fob's battery last?

A. The fob battery will power 300 to 400 transmissions before needing a recharge. At five transactions per day, the battery will last for approximately two to three months. The LoopWallet App, which runs on your smartphone, indicates a battery level from 0 to 100-percent. An automatic recharge prompt appears when the battery is at 20-percent capacity, with about 60 transactions remaining. Battery charging is accomplished via a micro USB cord and requires 100 mA of charging current. A full charge takes approximately 80 minutes.

Q. What happens if I run out of power in my phone?

A. The Loop Fob and Loop ChargeCase have their own power source. If you have a Loop Fob timer set to indefinite, you can use the Fob detached from your phone to make purchases with the card you select as the default card. With the Loop ChargeCase, you can remove the power jack plug from the ChargeCase and insert it into your iPhone 5 or 5s for more power should you need it.

Q. What happens if I don't have a Wi-Fi or cellular connection?

A. The LoopWallet, Loop Fob and Loop ChargeCase will function without a direct connection to a Wi-Fi or cellular network. If you are without connectivity and cellular coverage, you can still access and pay with your cards stored inside the secure memory in the Loop device, as long as you have properly authenticated yourself first. However, you won't be able to fully access other LoopWallet functions that require a network connection, like adding another card into your LoopWallet.

Q. What if the POS terminal doesn't accept my payment using the LoopWallet?

A. The LoopWallet, coupled by Loop Fob or Loop ChargeCase, is currently accepted at more than 90-percent of all POS mag-stripe readers in retail environments. It will also work with vending machines that accept credit card payments, but not in certain POS devices like gas station pumps or certain readers that do not have properly configured software. Other POS readers that will not accept Loop are those that physically draw the card into the reader and hold it until the transaction is complete, like ATM machines. We recommend you carry at least one credit card to use conventionally should you be

unable to complete a transaction at a particular POS reader. It is the major priority that we continue to improve our MST technology or partner with retail partners with POS incompatibilities to increase the Loop acceptance rate over time.

Q. What happens when I replace or update my smartphone with another one?

A. As long as you acquire a smartphone that is compatible with the LoopWallet App, the Loop Fob or ChargeCase, you simply have to go through the process again of installing the app and performing the Loop registration process. This will pair (we call it 'Bind') the LoopWallet account with your Loop Fob or ChargeCase. Once you have done that you will be able to use Loop as before. We plan to program the Loop Fob to also backup your cards, and with more Loop devices coming to the market, you can use the Loop Fob to transfer your cards to new Loop enabled devices.

Q. Does Loop charge additional fees for the LoopWallet?

A. No, there are no fees for your LoopWallet App and Account. There are no per-transaction fees or recurring costs. To transmit cards to pay at the POS, you'll need a Loop Fob or another Loop Appcessory.

Q. How do I use Fob in detached mode?

A. When the Loop Fob is plugged into your phone, you can use it to pay with a card of your choice stored in the LoopWallet. When it is detached from your phone, you pay with your designated default card with a press of the transmit button. Within the LoopWallet app, you can set the timer for Fob detached mode (we call it 'Button Pay') to 10 minutes, 8 hours, or Always. If Button Pay is set for 10 minutes -- for use by a waiter for example -- the button on the Fob will be active for 10-minutes. After 10 minutes, the Fob cannot transmit card data. Some users have Button Pay set to Never, which means it can never be used when detached from the phone. Others have the time limit set to Always, which is equivalent to having a credit card. You decide the level of security vs. convenience.

Q. What happens if my phone is stolen?

A. Your information, as stored, is encrypted and tokenized to prevent use with anything other than your LoopWallet and Loop Fob or ChargeCase. What's more, the PIN assigned while registering your LoopWallet must be used in order to make a payment. If you have a separate PIN or password set for your smartphone, that too would need to be known by the individual attempting to use your phone to access apps or other information.

SECURITY

Q. Where does Loop store the mag stripe track data? Does it comply with PCI rules?

A. Loop integrates the highest level of Payment Card Industry (PCI) security. With MST technology, payment card (mag stripe) track data is encrypted and stored in dedicated hardware secure memory, within the Loop Fob or ChargeCase. Loop denies the storage of standard payment cards that do not match the LoopWallet account holder's name. Every Loop device is linked (we call it 'Bind') to a single LoopWallet account holder. Once a user swipes a card to store it, the encrypted track data goes to the Loop server to be decrypted. Loop then runs a name match of the name on the track data, against the name of the account holder. If the name does not match, Loop denies the storage attempt and flags it for security review. This is another sturdy security barrier in place to protect cardholder information.

Note that there is a difference between the mag stripe track data on the card and the card numbers that merchants often keep on file in their servers. The track data contains additional information that a card issuer provides to authenticate that the data came from the magnetic stripe beyond manual card number entry. In Loop's case, the track data is stored in secure memory. Separately, Loop stores a copy of the card number in an encrypted format in our PCI Level 1 data center, per PCI requirements. When you want to view the card number in the LoopWallet app, you must authenticate yourself for the app to contact our servers for that information which is then decrypted and displayed for up to 60 seconds. On the occasions when you order products online or from your smartphone when your physical cards are not readily accessible, the LoopWallet allows quick access to the card information.

Q. Is my Loop device safe when transmitting? Can Loop provide added dynamic security?

A. The transmission between Loop and the POS reader is done over a very short distance (1 to 4 inches) and within a fraction of a second. The transmission must be initiated by the user actively, and cannot be initiated by a separate reader like RF or NFC protocol. Therefore it is not susceptible to being "sniffed." Partnering with payment card issuers, Loop's technology can also generate dynamic card data every time a payment is made, making such data unusable for those trying to clone a card from data breach incidents.

More on Chip & PIN (EMV)

Q: Will I be able to use chip cards with Loop when the EMV migration occurs in late 2015?

A: Yes. You can store chip cards in Loop today and use them at mag stripe readers (MSR) just like any other non-chip card. You may wonder if MSR will disappear as the market starts to adopt EMV technology. The short answer is No. EMV cards only represent approximately 10 percent of all payment cards in circulation worldwide. Even in Europe where EMV cards are pervasive, each terminal has a mag stripe reader to accept cards that only have mag stripes such as gift cards and local private label cards. This will be true for the U.S. market when it starts to adopt EMV. EMV was created more than 30 years ago to authenticate transactions in an environment where telecommunication infrastructure was not accessible. In the U.S. market, telecommunication was comparatively better; the need to adopt EMV was therefore less urgent. The cost/benefit analysis resulted in slow adoption. This will hold true for a majority of merchants who struggle to justify the cost and benefit of changing their systems in the coming years. Further, EMV cards do not provide the same level of security when it comes to online and mobile transactions, as the world is moving from physical store shopping to online and mobile.

Q: What's the history of the EMV solution?

A: EMV is a greater than 30-year-old integrated circuit, or chip card technology intended to make it difficult for people to clone cards. This solution has been struggling to make it into the United States since the 1996 Summer Olympics when Visa first announced it will be "in the United States in three years." EMV represents only 1.6 billion cards worldwide. Of the 15.7 billion payment cards in circulation, including gift cards, private label, and other card networks, nearly all have mag stripes on them, and almost 90-percent are mag stripe only. Every EMV card issued today even in Europe also contains a mag stripe because the vast majority of the world still has terminals that only read mag stripes.

Q: Why the long delay in converting to chip cards for the United States. and other countries?

A: It's a very long, expensive process to convert merchant POS systems.

Q: What about backward and future compatibility?

A: Even in Europe where EMV is pervasive, every EMV POS terminal has a mag stripe reader integrated because it must support all existing cards – whether for American, Chinese, Japanese tourists or for local private label cards, gift cards, and loyalty cards that use only a mag stripe. When the U.S. eventually migrates to EMV – which will take many more years – those terminals will also have mag stripe readers for the same reasons, but there's one additional factor. The mag stripe readers are now also contactless mobile payment receivers, thanks to Loop.

Q: What about using Loop around the world?

A: Today, Americans can load their own "static" mag stripe cards into Loop and it works worldwide even in EMV countries, because the service code on that mag stripe tells the POS it's a mag stripe-only card so "accept me". EMV cards can be used in the U.S. and other non-EMV countries because the POS terminals can only accept mag stripe. That's how Europeans shop at our stores here, by swiping.

Q: What are the benefits of mobile dynamic data?

A: Tomorrow, as we work with card issuers to implement "mobile tokenization" where the card data can be dynamically recognized in every transaction, card issuers can provide Loop users with more secure dynamic data payment tokens, and also help deliver better data to consumers and better services through mobile interactive smartphones than any piece of plastic. This, again, is all possible without waiting for tens of millions of merchants to change-out their POS systems. Loop can also help drive down eCommerce fraud over time with faster and more secure checkouts. While starting with static data transmission, Loop is working with issuers now to implement dynamic tokenized data later this year so Loop can achieve even higher levels of security sooner and cheaper than with EMV chip cards.

Q: Why isn't Loop a highly-disruptive "leapfrog" kind of innovation?

A: The mobile super computer in our hand is capable of providing better security than plastic chip cards, as seen with Loop. It is capable of providing a more convenient and engaging experience for cardholders and consumers, too. What's needed is a secure solution that encourages immediate adoption with today's in-market infrastructure. Anything else is prohibitively expensive and difficult, resulting in anemic adoption rates as seen with EMV over the past 30 years. With Loop, think of all the restaurants, bars, dry cleaners, salons, and specialty shops that can now participate in the new mobile payment lifestyle without having to reinvest in new, expensive POS systems.

Q: What are some of the challenges facing EMV and NFC?

A: EMV chip cards do not help curb eCommerce fraud issues at all, and it doesn't address mobile commerce, either. NFC is a completely different interface and standard, and it comes with different hardware, software and certification requirements. Almost ten years ago, the ISO 14443 contactless interface was introduced and billions of dollars collectively have been spent on NFC implementation. It still struggles with single-digit percentage of merchant adoption. For consumers, getting an NFC card on their phone is too complex and it doesn't get rid of their plastic since it only deals with very few card issuers. Even with one or two cards working we can't expect consumers to adopt with less than 10-percent merchant acceptance. If they can't use NFC at 90-percent of today's merchants it means they still have to carry all their plastic cards. You couldn't call that a real mobile "wallet" by definition.

Q: What do merchants think?

A: Merchants have no real incentives to adopt yet another POS change, especially for all those merchants that recently changed their POS systems to EMV in Canada and Europe. Barcodes have the same issue as NFC when it comes to getting merchants to change POS infrastructure. What gets a merchant's attention is that Loop leverages standard MSR readers on existing POS systems with zero change to hardware, software, networks or processors. Loop offers an instant 90-percent acceptance rate with no migration required. And by working with issuers, MST can be made to transmit dynamic tokenized data that is as secure as EMV. Over time, with additional factors of authentication provided by the mobile device, Loop will continue to provide even greater security than what a chip card alone is capable of.

As always, visit www.LoopPay.com for more information.