



EMV Acquiring at the ATM: Early Planning for Credit Unions

EMV Adoption

Recent data breaches and planned Network Liability shifts have increased the interest in EMV at the ATM and have affected the planned adoption timelines for issuers, merchants, and ATM acquirers alike. Although EMV acquiring at the ATM for financial institutions would not have reduced the fraud associated with recent merchant data breaches, liability shifts have directed additional focus on EMV adoption. Accepting EMV cards at the ATM machines in your fleet is going to be like assembling a puzzle with multiple pieces. Sections of the puzzle will include hardware, software, operating systems, payment networks and the associated vendors and partners, along with testing. Once all the pieces have been assembled EMV can be enabled.

ATM Hardware

Early planning for EMV at the ATM implementation should include developing an implementation plan with budgetary considerations, technical planning elements and implementation lead times. Starting with a list of the machines in your ATM fleet we recommend that you build a spreadsheet (See the sample worksheet at the end of this document) that lists the ATM ID along with the manufacturer (Diebold, NCR, Triton, Wincor, etc.) and models of ATMs, and the firmware/software installed on the ATMs. Consulting with your ATM 3rd party vendor or ATM manufacturer you will be able to determine which of the machines will need hardware updates in order to support EMV. This may also be a good opportunity to determine what is in your "inventory" and which ATMs can be upgraded, replaced, or removed. Ensure your project schedule allows time for budget/board approval, and for ordering and installing new

parts or devices. You will want to make plans to replace any hardware, including card readers, so that each machine is capable of accepting and reading data from an EMV card.

As you develop your ATM hardware plan it offers an opportunity to evaluate your credit union self-service channel strategy. Will this be an opportunity to re-evaluate the supported types of ATMs (manufacturers and models), and the number and location of ATMs in your network? Are you looking to remodel or transform your branches to include self-service devices? These changes can have a substantial impact on your timeline and budget that should be carefully considered.

Motorized card readers and Dip card readers

Motorized card readers pull the inserted card into the machine for reading of the data contained on the chip or magnetic stripe. Dip card readers let the consumer dip the card into the reader and then remove the card. When a cardholder performs an EMV transaction at the ATM, the chip card must be in contact with the card reader throughout the entire transaction. Dip readers, depending on the ATM manufacturer, may require the cardholder to re-insert the card and keep it in the reader until the transaction has been completed. Other dip card readers will latch onto the card to prevent its removal if it is an EMV capable card. ATM screens will be updated to instruct cardholders on the transaction flow. This will be a change for your users and will likely require user education. If you have motorized readers today, the impact to installing motorized EMV capable readers will have a smaller impact on your users. The card reader must be able to support a contact chip card.



Software

Adding the software and operating system to your spreadsheet will also be helpful. The operating system in conjunction with the ATM software operating on the ATM machine may also require upgrades in order to use the EMV hardware and to successfully read EMV cards and send request messages to the various networks that participate on your machine. Consulting with your ATM manufacturer or ATM 3rd party vendor concerning software and operating systems will allow you to generate the list of upgrades needed. Initially you will want to complete any of these upgrades with EMV turned off until you are ready to roll out EMV. Sending EMV traffic before all the pieces are in place could result in higher decline rates and cardholder impact.

Code development will be necessary from the terminal manufacturers and terminal drivers to support the new US Common AIDs. The terminal must be able to recognize the presence of the Common AID on a card and to override standard EMV priority selection of AIDs to make the Common AID the default in order to enable routing to networks other than the Global card networks. We will talk about AIDs again in the Networks section of this document. Be aware that there will very likely be changes to ATM loads and device configuration to support EMV. The nature and complexity of the changes will depend on the features and functions that will be offered at the devices. The ATM software running on your ATM may also need to be upgraded to support EMV. This may also include an upgrade to the operating system of the machine to a new windows environment and adding new Kernel software. It is important to make your upgrades with EMV options turned off.

Host Systems

Key requirements

No changes to the current key process should be required.

Core Processor

Supporting EMV means more than just upgrading or replacing your devices to accept chip cards. The interaction of the chip card and chip-enabled device will produce EMV-specific data, which must be passed in the transaction request from the device to the acquirer and then to the issuer. Issuers will pass EMV-specific data back to the acquirer in the transaction response. CO-OP specifications for support of EMV transactions have been published for some time. CO-OP chose to use existing data fields to limit the work required for credit unions. You will want to review those data fields with your core processor to ensure that the EMV transaction data will be transmitted in the proper data fields.

Intercept Processors will need to analyze their terminal driving, online transaction processing software, as well as any host and batch processing software, to determine whether these systems currently support EMV data, and if not, what is required in order to do so. Time to upgrade and test these internal software changes must be factored into your EMV project. Intercept Processors must use the PI-ISO-I specifications if enabling EMV.

In addition to development requirements, testing will be required to meet the payment networks requirements. Intercept Processors must also perform MTIP Certification with MasterCard and ADVT certification with Visa. CO-OP will facilitate the end-to-end testing. Completing these certifications is the responsibility of the acquirer. Time and resources must be allocated for these certifications, and the right tools must be purchased to execute them.



Payment Networks

The payment network card brands that your ATM machines can accept and be considered for EMV should be engaged in your EMV project. There may be network forms that will be required to be completed and network participation in the acquiring process will be necessary for completion of the project. CO-OP Financial Services has completed the EMV certification for the following:

ATM Vendors/Kernels	MasterCard Certified	VISA Certified
NCR Aprta Edge Software Kernel V6.0 (XP and W7 OS)	Y	Y
Diebold Software Kernel V5.00 (XP and W7 OS)	Y	Y
Wincor ATM-912 Software Kernel V3.0 (XP and W7 OS)	Y	Y
Nautilus Hyosung Software Kernel V5.5 (CE OS)–Standard 3 (Triton Format)	Y	Y
Hanmega/Genmega Software Kernel V1.3–Triton Format	Y	Y
Triton Software Kernel V1.0.0–Triton Format (Software V3.2 has V1.0.0 Kernel inherent within it)	Y	Y

Note: Kernel certifications expire and will need to be periodically recertified

Cardholder Verification Methods

Cardholder verification methods, or CVM, let the issuer prioritize which verification methods they support, as well as the order of preference. ATM terminals always use Online PIN, where the encrypted PIN is verified online by the issuer (host), just as is done in the magstripe world today.

Application ID (AID)

AIDs tell the EMV Reader (POS device or ATM) which applications and networks are available to route transaction requests to for authorization. They also tell those devices which cardholder verification methods the issuer prefers. The matching AIDs between the card and the terminal will provide the list of networks available for transaction routing. The types of

AIDs included on your ATM are determined by the networks in which you participate. AIDs can be specific to a network or be common among different networks.

Common AID

Visa debit cards require the Visa Global AID and the Visa U.S. Common AID. MasterCard debit cards require the MasterCard Global AID and the MasterCard Maestro AID. Any networks participating in the U.S. Common AIDs will be able to have transactions routed to them. CO-OP has signed a license agreement to use the common AID but you will want to check with your other networks as well. CO-OP debit cards are required to have the Common AIDs personalized on an EMV card. Your ATM must support the Common AID as well as the association branded AIDs.



Transaction Flows

Routing of transactions is determined by which AID is chosen. Your first choice of AID must be the common AID on the chip if available. Once the common AID is selected you will be able to use your standard BIN routing tables to determine where to send the transaction for authorization. If there is only one AID on the card then routing would be to the network that owns that AID if it is a network available to cardholders on your terminal. Transaction flows will occur as they do today with the request moving from the ATM to the host, the host sending it to a network, the network getting the request approval or decline and sending the response back through the same channels.

Implementation Process

Once the credit union is ready to upgrade your ATMs to support EMV, you will need to open a work order on the CO-OP Extranet using the "EMV at the ATM" work order type. CO-OP will provide the pricing to the credit union for review and signature. Once the credit union returns the signed pricing letter to CO-OP, a project will be opened with CO-OP Network Implementation. During project implementation process, the CO-OP ATM Analysts will assist you with all the necessary paperwork including payment network paperwork and coordinate installation date(s). When rolling out your EMV ATMs, consider a pilot or a controlled deployment to ensure that the credit union staff and members adapt to this change.

Live Testing

During the live testing day the credit union must perform self end-to-end testing for Visa® and MasterCard® to demonstrate that the ATM can support EMV transactions. This can be accomplished by performing required live transactions and checking the pass criteria using a live card.

Live Test Cards—Credit unions may choose to use any EMV cards to perform the live testing. International EMV Prepaid Card may be purchased at any financial institutions offering this product.

Required live transactions are cash withdrawal and/or cash advance.

Training and Education

As mentioned previously, when a cardholder performs an EMV transaction at the ATM, the chip card must be in contact with the card reader throughout the entire transaction. Member experience will vary depending on the type of card reader the ATM supports. Credit union staff and branch personnel should be made aware of the new technology being deployed and ensure that they are familiar with terminology, technology and process flows so that they can educate cardholders. Your branch personnel must be prepared to assist cardholder who is uncertain how to use their cards at your chip-capable ATMs.

