

Card Magic

Module for Miva Merchant



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This document gives instructions on installing and using this module for Miva Merchant shopping-cart systems. If you need additional details, check with your Miva or hosting representative or documentation. You can also request help by email to support@TheMagicM.com.

This document applies to Card Magic version 1.10 for Miva Merchant version 4.x, released October 2007. For Merchant 5.x, there is a separate set of files (module and documentation).

What's new in version 1.10

- A new admin setting gives you the option of having batch reports include the entire credit card number, instead of only the last four digits.
- Card Magic is now compatible with Stone Edge Order Manager (SEOM), so that you can download orders placed with saved cards, and process them (charge the cards) off-line using SEOM. See "[Batch reports](#)" below for details.

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Introduction

Card Magic allows your customers to save their credit card numbers in secure encrypted storage. After saving a card, when customers return to your store, they can check out quickly and conveniently, by picking the card from a menu, instead of re-entering the numbers and expiration date.

name=Optional

Payment Information:

Visa

Name on Card:

Card Number:

Expiration Date: /

I want to save this credit card for quicker checkout the next time I visit the Magic Metal Productions Store.

Ship City, SC 4000
US

Code Product

test3 3-prong Ground Fault Tester

Ship Via:

Pay With:

Saved credit card ending in -1000
American Express
Discover
MasterCard
Visa

Card numbers are saved with strong RSA encryption to protect the confidential information. When a customer places an order with a saved credit card, the card is not immediately charged, because the card number and other essential data are encrypted. Card Magic provides a [Pending Orders display](#) where you can view these orders, enter the decryption password, and charge the cards with just a few clicks.

Card Magic is available for compiled Miva Merchant (version 4.14 or later). **It requires a customizable user interface**, such as OpenUI, or the template systems from Copernicus or Viking Coders. If your store does not have any of these (uses the standard Miva MMUI), you can still use Card Magic (see "[Initial Setup](#)" below).

Card Magic can be used with any payment module that communicates with a payment gateway in the background, i.e., the customers stay in your Miva store during checkout; they are not transferred to another Web site to enter their card number. Card Magic can also be used with "passive" payment modules that simply store the credit-card information, and don't communicate with a gateway. Card Magic has been successfully tested with the following Miva Merchant payment modules:

- Authorize.net
- Cardservice/LinkPoint Payment Gateway
- Verisign Payflow Pro (PaymentNet)
- Credit Card Payment With Simple Validation
- Credit Card Payment w/ Extra Fields (by Viking Coders)

Upon installation, Card Magic is pre-loaded with data to support these modules. To use a different module, you will need to manually collect and enter some data about the module (as explained in the section on "Payment modules" below).

Customer advisory

Storing credit card numbers places a responsibility on you to keep them safe. Be sure to turn on the Encryption feature of the Miva store. Also, use good practices for store security, such as changing passwords regularly, minimizing the number of people who have access, and updating your software as needed to remove any vulnerabilities.

Your bank or payment-processing company may have their own rules for handling credit cards. Failing to follow these rules could be a violation of your merchant-account contract, and could subject you to fines or other penalties. You may want to check with your account representative before you start using the module.

Internet crime and credit-card theft are serious problems today. For the sake of your business and your customers, please operate your store safely.

Installation

The procedure for installing this module is the usual one for Miva Merchant modules: add the module to the site, and assign it to the store. The procedure is explained below in a bit more detail. If you need more information, see your Miva representative or documentation.

NOTE: If you intend to use this module with OpenUI or any template modules, you should install them before installing this module.

Card Magic consists of two modules; you must install both of them for it to function properly. The two modules are:

- `cardmagic.mvc`: the primary module.
- `cardmagful.mvc`: the companion module.

To install the modules in your domain, follow the steps below for **each** module:

1. Log in to the Miva Merchant Administration page.
2. In the left-side menu, click the blue triangle next to the Modules link to open the Modules list.
3. Click the Add Module link at the top of the list.
4. In the right-side frame, click the Upload button.
5. In the Upload box, click the Browse button.
6. Navigate to the folder where the module file, `cardmagic.mvc`, is located, and select the file.
7. In the Upload box, click Upload. After a few moments, the Upload box will close.
8. In the right-side frame, click the Add button.

After the modules are installed, you need to assign them to your store.

1. In the left-side menu, click the triangle next to the Stores link.
2. Click the triangle next to the link labeled with the name of your store.
3. Click the Order Fulfillment Configuration link.
4. In the right-side frame, check the box labeled **Card Magic companion module**.
5. Click the Update button in the lower right corner of the frame (you may need to scroll down to see it).
6. In the left-side menu, click the Payment Configuration link.
7. In the right-side frame, check the box labeled **Card Magic**.
8. Click the Update button in the lower right corner of the frame (you may need to scroll down to see it).

After the module is assigned to the store, a new "tab" link, labeled **Card Magic**, will be seen at the top of the right-side frame. Clicking this link will take you to the module's settings screen.

License key

After completing the installation steps listed above, the first time you click the Card Magic link on the Payment Configuration page, you will need to enter your license key code. You should have received this code when you purchased the module, probably in an email. If you didn't receive a key, check with the dealer from whom you purchased the module.

Enter the key code in the text box on the page, review the Terms and Conditions, and then click the **I agree** checkbox. Then click the Update button in the lower right corner of the frame (you may need to scroll down to see it).

Initial setup

After installing the module, you will need to take a few additional steps to get the Save-card checkbox onto the checkout page so customers can use it. How you do this depends on the type of user interface (UI) in your Miva store.

Module tokens

If you have a token-and-template UI, such as the Viking template modules or the Copernicus template engine, you must register Card Magic to provide tokens. For the Viking modules, this is done by clicking the Third-Party Tokens link. For Copernicus or OpenUI, use the Open Tokens link on your "store page" (the admin page whose link is labeled with the name of the store). In either case, add a new token with module code **MAGIC_CARD**, and token code **CardMagic**.

After registering the module, you will place a token in the appropriate location in your store's page templates. To generate the checkbox for saving a card, use the token:

```
%module | CardMagic | save | %
```

OpenUI without tokens

If you are using OpenUI without tokens (using "hook points"), you don't need to do any additional configuration. The checkbox will automatically appear on the third checkout page (OPAY), under the text boxes and menus where customers enter their card number, expiration date, etc.

Standard Miva (MMUI)

If you don't have any 3rd-party UI, you are using MMUI, the standard Miva Merchant UI. In this case, some custom programming will be required to make your store display the Save-card checkbox. For details on this, contact the developer at support@TheMagicM.com.

Additional setup

In order to help your customers use Card Magic, it's a good idea to put some additional messages on your store pages. Since customers must log in to use Card Magic, you may want to put some messages on your shopping or checkout pages to encourage users to create accounts.

If your store has support for Open Tokens, you can add a message on the Invoice page to confirm to customers that their card is saved, and to show them how to use it the next time they visit your store. The following set of Open Tokens and

HTML code can be used to for this.

```
%IF(g.CardMag_save)%  
<center>  
<table cellpadding="6" bgcolor="#ccffcc"><tr>  
<td align="center" valign="top">  
<h3> Your credit card has been saved </h3>  
<b>The next time you visit our store, you'll be able to check out quickly,  
by selecting the saved card from the payment menu:</b>  
</td><td align="center" valign="top">  
  
</td></tr></table></center>  
%IFEND%
```

The above code will generate a display like the one shown below. This will only be shown to customers who have just saved a credit card. The image file, **cardmagicmenu.jpg**, is included in the distribution ZIP file with the module; you are welcome to use this image in your store. You can use FTP to place it in a folder on your Web site. The exact path for the image will depend on what folder you put it in; it's a good idea to put it in the Miva **graphics** folder, or a sub-folder within it, as shown in the above code.



Overview

Card Magic allows customers to save their credit card numbers in your store, and to recall them for quick, convenient checkout. The saved card numbers are protected by the same strong encryption system that Miva Merchant uses for payment information in the Order Processing section of the admin pages.

After a customer saves a card, the next time they visit your store, when they check out, the "Pay with:" menu will contain a new option labeled "Your saved credit card ending in –" followed by the last four digits of the card number. If the customer chooses this option, they can complete their checkout with just two more clicks of the Continue button; they won't need to re-enter the card number, expiration date, etc.

Note that customers must create an account, and log in to it, in order to save credit cards. You may wish to put messages on some store pages to encourage customers to create accounts, so that they will be able to save their cards. Some merchants set up their stores to require customers to create accounts.

Customers can save more than one card if they wish. (If a customer happens to have two cards that end with the same four digits, they will only be able to save one of them.) Expired cards are automatically removed from the system.

Once encrypted, the credit-card data can only be decrypted by entering a password, usually referred to as a *passphrase* in this context. The passphrase is never stored in a file or database on your Web server; you must manually enter it whenever it is needed.

Because saved credit cards are encrypted this way, they can't be decrypted automatically when a customer checks out of your store. This means that the store can't "run" or charge the card when the customer checks out. When a customer makes a purchase using a saved card, Card Magic places the order into a Pending condition. To actually charge the credit card for a pending order, you must log in to the Miva admin, enter the passphrase, and click a button to charge the card.

Note that some payment modules, such as the Miva "Simple Validation" module, do not actually charge credit cards; they just save the card number and other information so that you can manually process it later. These modules **can** be used with Card Magic. If you are using such a module, while reading this document, keep in mind that for your store, "charging the card" just means storing the information so you can view it later.

There are two ways to charge a pending order:

- In the Order Processing section of the Miva admin, you can click a button to charge a single order.
- To quickly charge one or many orders with a minimum of typing and clicking, you can use the pending-orders display in the Payment Configuration section.

Both these options are described in detail below.

Order processing

If you use the Order Processing features of the Miva admin, you know that when you view an order, there are three links at the top of the page. The first one displays the customer information, such as name and address; the second one displays the items that were ordered; and the third one gives information about the payment processing. The third link is generally labeled with the name of the payment module. When a customer

The screenshot shows a web interface for editing order #2417. At the top right, there are 'EXTRAS' and 'HELP' buttons. Below the title bar, there are three navigation links: 'Customer Information', 'Order Information', and 'Card Magic'. The 'Card Magic' link is highlighted in green. The main content area displays the following information:

- Customer login: [kent](#)
- Last 4 digits of card number: 1000
- Expiration: 02/2008

A button labeled 'Charge credit card for this order' is positioned to the right of the card number and expiration date. At the bottom of the form, there are three buttons: 'Update', 'Delete', and 'Reset'.

checks out with a saved credit card, the third link will read **Card Magic**.

The Card Magic payment data includes the last four digits of the card number, expiration date, and the login name of the customer. The login name is a link that you can click to quickly access the Customers section of admin, in case you want to view additional details about this customer.

The payment data page also includes a Charge button. If you click this button, Card Magic will prompt you to enter the passphrase; then it will decrypt the data and charge the credit card. Once this is done, the payment data will change. Instead of "Card Magic," the third link on the page will now identify the payment module that was used.

After an order has been charged, all the data in the Miva order database will have the same contents that it would if the order had been placed normally, i.e. without using a saved card. You can run batch reports, export the data to other software, etc. The charged orders will be completely compatible with these applications.

Pending orders page

In the Payment Configuration section of the Miva admin, along with the Card Magic link, there is a link labeled **Pending orders**. Clicking this link displays a list of all the pending orders in the store. For each order, Card Magic displays:

- The order ID number. This number is a link; clicking it takes you to the order's page in the Order Processing section of the Miva admin.
- The date when the order was placed.
- The dollar amount of the order.
- The login name of the customer. This name is a link; clicking it takes you to the customer's page in the Customers section of the Miva admin.
- Last four digits of the credit card number.
- The expiration date of the credit card.

Charge	Order ID	Date	Amount	Customer	Last 4 digits of card	Expiration
<input type="checkbox"/>	16549	Sat., May 19, 2007	\$6.69	teatable	2007	07/2007
<input type="checkbox"/>	16618	Thu., May 24, 2007	\$49.90	kent	1111	02/2008

Each order also has a **Charge** checkbox. You can charge one or more orders by clicking the corresponding checkboxes, and then clicking the Update button at the bottom of the page. Card Magic will prompt you to enter any passphrases that are needed for the selected orders. Then it will decrypt the saved card numbers, charge the cards, and store the resulting data in the Miva order databases.

Customer data

In the Customers section of the Miva admin, Card Magic adds a new "tab" link at the top of the right-side frame, labeled **Saved credit cards**. This link displays a list of all credit cards that the customer has saved. For each card, the list displays:

- The last four digits of the card number.
- The expiration date.
- Payment module that the customer used.
- Payment method (usually the type of card) that the customer used.

Last 4 digits	Expiration	Payment module	Payment method	Remove
0287 Details	03/2010	paynet	VISA	<input type="checkbox"/>
1111 Details	02/2008	paynet	VISA	<input type="checkbox"/>

For each card, there is a **Details** link that you can click to view additional information. The module will prompt you to enter the decryption passphrase; then it will display the card number, as well as any additional data that may have been saved, such as the cardholder name or billing address.

Each card also has a **Remove** checkbox. You can delete one or more cards by checking the box(es) and clicking the Update button at the bottom of the page.

Module settings

To view the module's settings screen, go to your store's Payment Configuration page in Miva admin. Then click the **Card Magic** link. The upper part of the screen displays the settings that control the module's operation. The lower section has a list of payment modules that Card Magic supports, and text boxes where you can add support for additional modules. The various settings in each section are described below.

Main settings

This part of the screen displays settings that control the operation of the module and the appearance of various page elements. When changing any settings, remember to click the Update button at the bottom of the page (you may need to scroll down to see it).

Companion module

As mentioned in the section on Installation, Card Magic requires a "companion" module. At the top of the settings page, Card Magic displays a message telling you the status of the companion module. If it is not installed or not active, the message is displayed in **red**; in this case, you must install the companion or change some store settings in order to use Card Magic. If the companion module is installed and active, the message is displayed in **green**, indicating that both modules are ready for use in your store.

Enable

This checkbox enables or disables the checkout features. If the box is unchecked, the "Save card" checkbox is not displayed to customers, and saved cards are not listed in the "Pay with" dropdown menu. However, you can still use Card Magic's admin features, such as charging cards or viewing data on the various pages. In order for your customers to use Card Magic's features, you must check this box.

Save cards

This set of radio buttons controls whether the "Save card" checkbox is initially checked or unchecked when it is displayed to customers. You can have the box be initially checked if you want to encourage customers to save their cards. Note that this may result in some customers saving their card unintentionally. Some customers are sensitive about having personal information stored on Web sites that they visit; to protect their privacy, you may prefer to have the checkbox be unchecked unless the customer manually chooses to check it.

Prompt for saving

This text box lets you set up the text and HTML code that is used to display the "Save card" checkbox. You may wish to include explanatory text, logo images, or use different fonts or colors to highlight this feature of your store. The text in this box must include the special token `%box%` to indicate the position of the checkbox itself. Upon installation, this text will consist of the token, plus a short message for customers, and some HTML codes to display the message neatly.

Payment message

This text box lets you set up the text and HTML code that is displayed to customers on the third checkout page (OPAY)

above the Continue button when they choose to pay for their order with a saved card. This text is optional; you can delete it if you want. However, since the store normally displays some text boxes or other input fields here, it's a good idea to give the customers a bit of explanation.

Batch reports

This text box lets you specify whether batch reports will contain the entire credit card number, or only the last four digits. For security, it's best to include only the last four digits, simply because the fewer places that you display card numbers, the less chance there is for theft or fraud.

NOTE: if you are using Stone Edge Order Manager (SEOM) for off-line processing of orders, and you want to use SEOM to charge the credit cards for orders that your customers place with saved cards, then you must select the "entire card number" setting for batch reports.

Write log file

If this box is checked, Card Magic writes information to a text file every time it saves a card or uses a saved card to charge an order. This information is mainly intended for troubleshooting in case any problems occur. You may wish to turn this feature on when you first install the module, and turn it off after a few days or weeks when you are satisfied that the module is working correctly.

The log file name is **MAGIC_CARD.log**. It will be found in the store data folder, which is usually a subfolder named **Merchant2/00000001** within your site's Miva data directory. The data directory is usually named **mivadata** or **htsdata**. The exact locations of the data directory and store folder will vary, depending on how your site is configured; if necessary, ask your hoster for help finding them.

Card Magic writes a line of text to the log file whenever a customer checks out of your store and saves a credit card, or uses a saved card to pay for an order, as well as when you charge a saved card from the admin. Each line of text consists of several data fields separated by tab characters:

- Time and date
- Operation code: tells what the module was doing at the time
- Order ID number
- Customer login name
- Last four digits of card number
- Error message, if any

Payment modules

To save a customer's card, Card Magic collects information from the payment module that processes the order. Later, when you charge an order that was placed with a saved card, Card Magic passes this information back to the payment module. All payment modules have their own unique way of processing this data, so Card Magic needs to have some information about how to communicate with any payment module that you want to use.

Upon installation, Card Magic is pre-loaded with information about many of the most popular payment modules that are used with Miva Merchant. This information is displayed in the Payment Modules table in the lower part of the settings page. If your module is listed in the table, Card Magic is ready to use; you don't need to add any data to the table. If your payment module is not listed in the table, you will need to enter the required data in the text boxes at the bottom of the table.

	exp. year	MOD10_CardExp_Year	
	Others	MOD10_CardName	
linkpt Cardservice/LinkPoint Payment Gateway	Card number	LinkPoint_CardNumber	<input type="checkbox"/>
	Exp. month	LinkPoint_CardExp_Month	
	Exp. year	LinkPoint_CardExp_Year	
New module code <input type="text"/>	Card number:	<input type="text"/>	
	Exp. month:	<input type="text"/>	
	Exp. year:	<input type="text"/>	
	Others:	<input type="text"/>	

NOTE: the procedure for collecting and entering payment-module data requires reading the

HTML code for two store pages. If you are not familiar enough with HTML to do this yourself, your hoster or Web developer should be able to do it in just a few minutes by following the instructions below.

1. Open a browser window and go to your store (the shopping pages, not the admin). Put an item in your basket, and proceed to checkout.
2. On the first checkout page, enter enough data so that you can continue to the next page. (You will not be completing this purchase, so there's no need to enter a real, correct name and address.)
3. Click Continue to get to the second checkout page (Shipping and Payment Selection).
4. View the HTML code for this page, either by using your browser's View Source function, or by saving the page into an HTML file on your computer and opening it with a text editor.
5. Find the code for the payment-selection menu. It will be near the end of the page, and will look something like this:

```
<SELECT NAME="PaymentMethod"><OPTION VALUE=""><Select One></OPTION> <OPTION
VALUE="mod10:American Express">American Express</OPTION><OPTION
VALUE="mod10:Discover">Discover</OPTION><OPTION
VALUE="mod10:MasterCard">MasterCard</OPTION><OPTION VALUE="mod10:Visa">Visa</OPTION>
<OPTION VALUE="cod:COD">COD</OPTION> </SELECT>
```

It's easier to read if you put in some Newlines:

```
<SELECT NAME="PaymentMethod">
<OPTION VALUE=""><Select One></OPTION>
<OPTION VALUE="mod10:American Express">American Express</OPTION>
<OPTION VALUE="mod10:Discover">Discover</OPTION>
<OPTION VALUE="mod10:MasterCard">MasterCard</OPTION>
<OPTION VALUE="mod10:Visa">Visa</OPTION>
</SELECT>
```

The **VALUE** attribute of each **OPTION** tag contains a module code and a method code, separated by a colon. In some cases, the method code is the actual card name, such as **American Express**. In other cases, the method code may be an abbreviation such as **AX**.

6. Make note of the module code for the credit-card module. You'll need to type it in later.

If your store contains more than one payment module, you may see more than one module code here. In that case, make note of all codes for modules that do credit-card processing.

7. Once you have written down or saved the module codes, go back to the checkout page in the browser. On the "Pay with" menu, make a selection that uses the payment module whose code you just saved. Then pick something from the shipping menu (again, it doesn't matter what; anything that lets you continue to the next page is fine). Click

Continue to go on to the third checkout page (Payment Information).

8. View the HTML for this page, and find the **INPUT** and **SELECT** tags for the card number and expiration date. The tag for the card number will look something like this:

```
<INPUT TYPE = "text" NAME = "MOD10_CardNumber" SIZE = 20 VALUE = "">
```

The expiration month and year are probably set by drop-down menus; the HTML for each one will look something like this:

```
<SELECT NAME = "MOD10_CardExp_Month">  
<OPTION VALUE = ""><Select One></OPTION>  
<OPTION VALUE = "1">1</OPTION>  
<OPTION VALUE = "2">2</OPTION>  
<OPTION VALUE = "3">3</OPTION>  
<OPTION VALUE = "4">4</OPTION>  
<OPTION VALUE = "5">5</OPTION>  
<OPTION VALUE = "6">6</OPTION>  
<OPTION VALUE = "7">7</OPTION>  
<OPTION VALUE = "8">8</OPTION>  
<OPTION VALUE = "9">9</OPTION>  
<OPTION VALUE = "10">10</OPTION>  
<OPTION VALUE = "11">11</OPTION>  
<OPTION VALUE = "12">12</OPTION>  
</SELECT>
```

9. Make note of the **NAME** attributes for the **INPUT** and/or **SELECT** tags. You will need to type these names in later.
10. If the payment module collects any other information, such as the cardholder name or Zip code, make note of the **NAME** attributes for these inputs as well. Also, some payment modules place **HIDDEN** input tags in this part of the page. If there are any, make note of the names of these, too.
11. If your store has more than one payment module for processing credit cards, repeat steps 7 thru 10 for each module, and save each one's module code and input tag names.
12. Once you have saved all the codes and tag names, go back to the Card Magic admin page, and scroll to the bottom. You will see a set of text boxes for entering module codes and tag names.
13. In the **New module code** text box, enter the module code that you saved in step 6.
14. In the first three text boxes on the right side, enter the tag names that you saved in step 9 for the card number, expiration month, and expiration year.
15. If you saved any other tag names in step 10, enter these names in the "Others" text box. If there is more than one name, separate them with spaces or commas, or by pressing the Enter key after each one.
16. Click the Update button to save the payment module's information. When the screen refreshes, you will see that the table of payment modules has a new row containing the information you just entered.
17. If your store has more than one payment module for processing credit cards, repeat steps 14 thru 16 for each module, and enter each set of codes and tag names.

Compatibility with other modules

This section describes Card Magic's features for integration with other Miva modules.

Open Tokens

Card Magic provides two tokens for use on page templates.

- The token for the "save this card" checkbox is written:
`%module|CardMagic|save|%`
This token should be used on the third checkout page (OPAY), near the input tags where customers enter their credit card number, expiration date, etc.
- The token to display the last four digits of a credit card number is written:
`%module|CardMagic|digits|%`
Note that this can only be used when the Miva order data is available, such as on the Invoice page or in batch reports.

In Card Magic's admin page, you can place Open Tokens within the admin text boxes for "Prompt for saving" and "Payment message." This allows you to add special features to these messages, such as including the total purchase amount, customer's name, etc. If you use Open Tokens in either text box, remember to put the special token `%OUI%` at the very beginning of the text.

Truxoft

Card Magic is compatible with the Truxoft batch-report and email modules. These modules include an admin setting to include the last four digits of a customer's card in reports or emails; no tokens or custom programming are required.

Stone Edge Order Manager

Card Magic is compatible with Stone Edge Order Manager and its companion Miva module. See "[Batch reports](#)" above for details.

Frequently asked questions (FAQ)

Is Card Magic compatible with (*insert your favorite module name here*)?

See [the section on "Compatibility"](#). Open Tokens are very versatile, and can often be used to provide interaction between modules that support them.

What happens if a credit card is expired?

Whenever a customer goes to checkout, the module automatically checks the saved cards for that customer, and deletes any that have expired. When you view saved cards on the admin pages, expired cards are marked in red, but they are not automatically deleted. You can manually delete them as described [above](#).

Why doesn't the module store card security codes (CVV)? Can I make it do that?

Card security codes should **never** be stored in a file or database. They should only be saved long enough to transfer the information to the payment gateway, which is a matter of moments for Web stores. **Saving these codes could be a violation of your merchant-account contract, and could subject you to fines or other penalties.**
