

# MagneFlex Browser

**Magensa Services Developer Tool  
Programmer's Reference (WEB API)**



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**Table 0.1 – Revisions**

Rev Number	Date	Notes
10	07/10/2017	Initial Release
20	10/10/2018	Added requestData resource and extended all resources to support requestLocation. Fixed requestManualCard options field.
30	10/28/2019	Corrected typo qwickChipMode to quickChipMode on pages 16,17, and 18

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## 1 Introduction

This document provides instructions on how to interact with the MagneFlex Browser.

### 1.1 About the MagneFlex Browser WEB API

The MagneFlex Browser, available from MagTek, is a full-function HTML browser application that is integrated with driver applications that allow the control of a set of MagTek payment card readers.

### 1.2 Nomenclature

In this document, the following nomenclature are used strictly as follows:

- **Device** refers to the MagTek device (eg. Dynamag, DynaPro, MICRSafe) that receives and responds to the command set specified in this document.
- **Host** refers to the piece of general-purpose electronic equipment the device is connected. Host types include PC and Mac computers/laptops, tablets, and smartphones.
- **User** refers to the cardholder.
- **Web App** refers to the application provided by the integrator of MagneFlex Browser. The web app will communicate with the MagneFlex browser via query strings. MagneFlex then controls and obtains data from the MagTek device.
- **Query string** refers to the web app's interface to MagneFlex WEB API sent as an HTTP request. The query string is added to the base URL. This string contains field-value pairs referred to as parameters and begins after the question mark character "?" at the end of the base URL. Each parameter is defined in the parameter table for each resource of the MagneFlex WEB API. In the following example, the place holder for `field` will be listed in the parameter column of the table and `value` will be explained in the description column.

Example query:

`https://192.168.10.100/magneflexdemo/default.aspx?field=value`

- **Postback** refers to the response from a request or command from the device. The web app shall consume the postback. MagneFlex sends the postback in two forms.
  - HTTP GET - returns the response data in the form of a query string.
  - HTTP POST - returns the response data in the form of a body message. POST is recommended for EVM related transactions or commands of lengthy response to accommodate limits on query string lengths.

### 1.3 System Requirements

Tested operating systems:

iOS 8 to iOS 10

Windows 7, 8.1, 10

### 1.4 Interfaces for Operating Systems

The following table matches the device interface to operating system.

Device	Interface	Operating System
DynaPro Mini	Bluetooth LE	iOS 8 – 10 Windows 8.1, 10
	USB	iOS 8 – 10 Windows 7, 8.1, 10

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Device	Interface	Operating System
DynaPro	Ethernet	iOS 8 – 10 Windows 7, 8.1, 10
	USB	iOS 8 – 10 Windows 7, 8.1, 10
DynaMAX	Bluetooth LE	iOS 8 – 10 Windows 8.1, 10
	USB	iOS 8 – 10 Windows 7, 8.1, 10
eDynamo	Bluetooth LE	iOS 8 – 10 Windows 8.1, 10
	USB	iOS 8 – 10 Windows 7, 8.1, 10
iDynamo	Lightning	iOS 8 – 10
uDynamo	Audio	iOS 8 – 10 Windows 7, 8.1, 10
MICRSafe	USB	Windows 7, 8.1, 10

## 2 - MagneFlex Browser WEB API Resources

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## 2 MagneFlex Browser WEB API Resources

### 2.1 requestCardSwipe

This query string instructs the device to prompt for a card swipe.

```
?operation=
&httpMethod=
&closeDeviceAfter=
&readerArgument=
&destinationURL=
&requestLocation=
&passInData=
```

Parameter	Description
operation	Operation to request from MagneFlex. Use: requestCardSwipe
httpMethod	HTTP method to be used for the HTTP postback from MagneFlex. Use: GET – returns the response data in the form of a query string. POST – recommended for EVM related transactions to accommodate limits on query string lengths.
closeDeviceAfter	Flag to close the device after the request. Use: true – close device false – do not close the device
readerArgument	Comma delimited list of arguments to be passed to MagneFlex. requestCardSwipe requires no arguments.
destinationURL	MagneFlex will send the postback to this URL.
requestLocation	Flag to send GPS location of the device from which Magneflex (iOS only) is hosted. Use: true – send location false – do not send location
passInData	Optional data to send to MagneFlex. This data will be passed back to the web application.

Each input parameter supplied in the request is delimited by an ampersand character ‘&’, and the value for a parameter begins after an equal character ‘=’. Where ever a parameter contains multiple values, each are delimited by a comma character ‘,’.

Example query:

```
https://192.168.10.100/magneflexdemo/default.aspx?
operation=requestCardSwipe
&httpMethod=GET
&closeDeviceAfter=true
```



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### 2.2 requestSendCommand

This query string sends a command to the device and returns the raw response from the device.

```
?operation=  
&httpMethod=  
&closeDeviceAfter=  
&readerArgument=  
&destinationURL=  
&requestLocation=  
&passInData=
```

Parameter	Description
operation	Operation to request from MagneFlex. Use: requestSendCommand
httpMethod	HTTP method to be used for the HTTP postback from MagneFlex. Use: GET – returns the response data in the form of a query string. POST – recommended for EVM related transactions to accommodate limits on query string lengths.
closeDeviceAfter	Flag to close the device after the request. Use: true – close device false – do not close the device
readerArgument	Comma delimited list of arguments to be passed to MagneFlex. Arguments: timeLimit:, command:, endSession:  Argument details: timeLimit - Seconds to wait before the operation times out. Value is in hexadecimal format. (00 - FF)  command - The command to send to the device.  endSession - Flag to end the session for the device. Default value is true. “true” = End the session after the request is processed. “false” = Do not end the session after the request is processed.
destinationURL	MagneFlex will send the postback to this URL.
requestLocation	Flag to send GPS location of the device from which Magneflex (iOS only) is hosted. Use: true – send location false – do not send location

## 2 - MagneFlex Browser WEB API Resources

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passInData	Optional data to send to MagneFlex. This data will be passed back to the web app.
------------	---

Each input parameter supplied in the request is delimited by an ampersand character ‘&’, and the value for a parameter begins after an equal character ‘=’. Where ever a parameter contains multiple values, each are delimited by a comma character ‘,’.

Example query:

```
https://192.168.10.100/magneflexdemo/default.aspx?  
operation=requestSendCommand  
&httpMethod=GET  
&closeDeviceAfter=true  
&readerArgument=  
    timeLimit:3C,  
    command:0900,  
    endSession:true  
&destinationURL=https://192.168.10.100/magneflexdemo/cardpostback.aspx  
&requestLocation=false  
&passInData=
```

Return Value:

The Command response output in Hex string format of device raw response for this command.

Parameter	Description
errorCode	Error status. 0 is Success. Non-Zero is an error.
errorMessage	Description of the errorCode.
opType	The type of operation. For this command the value is: SEND_COMMAND_RESULT
commandID	Command that was sent.
commandResult	Data returned from the command sent to the device.
passInData	Optional data to send to MagneFlex. This data will be passed back to the web app.

Example:

```
https://192.168.10.100/magneflexdemo/cardpostback.aspx?errorCode=0&errorMessage=OK&opType=SEND_COMMAND_RESULT&commandID=0900&commandResult=00A9010010B2F60EA0001BA& passInData=
```

### 2.3 requestSendExtendedCommand

This query string sends an extended command to the device and returns the raw response from the device.

```
?operation=  
&httpMethod=  
&closeDeviceAfter=  
&readerArgument=  
&destinationURL=  
&requestLocation=  
&passInData=
```

## 2 - MagneFlex Browser WEB API Resources

---

Parameter	Description
operation	Operation to request from MagneFlex. Use: <code>requestSendExtendedCommand</code>
httpMethod	HTTP method to be used for the HTTP postback from MagneFlex. Use: GET – returns the response data in the form of a query string. POST – recommended for EVM related transactions to accommodate limits on query string lengths.
closeDeviceAfter	Flag to close the device after the request. Use: <code>true</code> – close device <code>false</code> – do not close the device
readerArgument	Extended command to send to reader.
destinationURL	MagneFlex will send the postback to this URL.
requestLocation	Flag to send GPS location of the device from which Magneflex (iOS only) is hosted. Use: <code>true</code> – send location <code>false</code> – do not send location
passInData	Optional data to send to MagneFlex. This data will be passed back to the web app.

Each input parameter supplied in the request is delimited by an ampersand character ‘&’, and the value for a parameter begins after an equal character ‘=’. Where ever a parameter contains multiple values, each are delimited by a comma character ‘,’.

Example query:

```
https://192.168.10.100/magneflexdemo/default.aspx?  
operation=requestSendExtendedCommand  
&httpMethod=GET  
&closeDeviceAfter=true  
&readerArgument=03060003010F00  
&destinationURL=https://192.168.10.100/magneflexdemo/cardpostback.aspx  
&requestLocation=false  
&passInData=
```

Return Value:

The Extended Command response output in Hex string format of device raw response for this command.

Parameter	Description
errorCode	Error status. 0 is Success. Non-Zero is an error.
errorMessage	Description of the errorCode.

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opType	The type of operation. For this command the value is: SEND_EXTENDED_COMMAND_RESULT
commandID	Command that was sent.
commandResult	Result of a command sent to the device.
passInData	Optional data to send to MagneFlex. This data will be passed back to the web app.

Example:

```
https://192.168.10.100/magneflexdemo/cardpostback.aspx?errorCode=0&errorMessage=OK&opType=SEND_EXTENDED_COMMAND_RESULT&commandID=0306&commandResult=000001A801A6FA8201A2DFDF2101105F2A0208405F360102DFDF5B010CDFDF5C0102DFDF75010CDFDF76010CDFDF6E010C9F150230309F16073030303030309F1A0208409F1C0831313232333349F33032028C89F3501219F4005720000B0019F4E07303030303030DFDF0109A000000004F8001000DFDF025E9ADDFDF289F025A899F109F159F169F4E828E5F245F259F069F079F0D9F0E9F0F9F269F279F369C9F339F349F379F399F40959B9F5BDFDF009F1E9F1A5F2A9F019F218ADF8120DF8121DF81225F20505F34849F039F099F1E9F359F419F53DFDF05299A829F369F1E9F109F5B9F339F35959F015F245A5F348A9F159F169F399F1A9F1C579F025F2A9F219CDFDF06028A91DFDF140400007530DFDF150400000001DFDF160400000080DFDF17599ADDFDF289F029F035A899F109F159F169F4E828E5F245F259F069F079F0D9F0E9F0F9F269F279C9F339F349F359F369F379F399F409F419F53959B9F5BDFDF009F1E9F1A5F2A9F018ADF8120DF8121DF81225F205F349F0984DFDF20024328DFDF260E4D414754454B2044454641554C549F3C0209989F3D0102DFDF4704755EFA9B& passInData=
```

### 2.4 requestSendBatchCommand (Reserved for Future Use)

This query string sends a batch of commands to the device and returns the raw response from the device.

```
?operation=
&httpMethod=
&readerArgument=
&destinationURL=
&passInData=
```

Parameter	Description
operation	Operation to request from MagneFlex. Use: requestSendBatchCommand
httpMethod	HTTP method to be used for the HTTP postback from MagneFlex. Use: GET – returns the response data in the form of a query string. POST – recommended for EVM related transactions to accommodate limits on query string lengths.
readerArgument	Batch of commands that should be sent to reader. Commands are delimited by the bar character ‘ ’. Example: readerArgument=0900 000100 1500
destinationURL	MagneFlex will send the postback to this URL.

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---

requestLocation	Flag to send GPS location of the device from which Magneflex (iOS only) is hosted. Use: true – send location false – do not send location
passInData	Optional data to send to MagneFlex. This data will be passed back to the web app.

Each input parameter supplied in the request is delimited by an ampersand character ‘&’, and the value for a parameter begins after an equal character ‘=’. Where ever a parameter contains multiple values, each are delimited by a comma character ‘,’.

Return Value:

The Batch Command response output in Hex string format of device raw response for this command.

Parameter	Description
errorCode	Error status. 0 is Success. Non-Zero is an error.
errorMessage	Description of the errorCode.
opType	The type of operation. For this command the value is: SEND_BATCH_COMMAND_RESULT
commandResult	Result of a command sent to the device formatted as: [command] - [result] For each command sent in a batch is returned a separate commandResult. Example: &commandResult=0900-000A9010010B355414000099 &commandResult=000100-000D31303030303033333534433033 &commandResult=1500-000103
passInData	Optional data to send to MagneFlex. This data will be passed back to the web app.

### 2.5 requestStartEMVTransaction (EMV Only)

This query string begins an EMV transaction.

```
?operation=
&httpMethod=
&closeDeviceAfter=
&readerArgument=
&destinationURL=
&requestLocation=
&passInData=
```

Parameter	Description
operation	Operation to request from MagneFlex. Use: requestStartEMVTransaction

## 2 - MagneFlex Browser WEB API Resources

---

httpMethod	HTTP method to be used for the HTTP postback from MagneFlex. Use: GET – returns the response data in the form of a query string. POST – recommended for EVM related transactions to accommodate limits on query string lengths.
closeDeviceAfter	Flag to close the device after the request. For requestStartEMVTransaction use: <code>false</code> – do not close the device

## 2 - MagneFlex Browser WEB API Resources

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readerArgument	<p>Comma delimited list of arguments to be passed to MagneFlex.</p> <p>Arguments:</p> <p>timeLimit:, cardType:, option:, amount:, transactionType:, cashBack:, currencyCode:, endSession:, quickChipMode:, reserved:</p> <p>Argument details:</p> <p>timeLimit - Seconds to wait before the operation times out. Value is in hexadecimal format. (00 - FF)</p> <p>transactionType - Type of transaction to be used in hexadecimal: 00 = Purchase (listed as "Payment" on ICS) 01 = Cash Advance (not supported for this reader) 02 or 09 = Cash back (09 not supported, contactless) 04 = Goods (Purchase) 08 = Services (Purchase) 10 = International Goods (Purchase) 20 = Refund 40 = International Cash Advance or Cash Back 80 = Domestic Cash Advance or Cash Back</p> <p>cardType - Card type that can be used for the transaction: 1 = Magnetic stripe 2 = Contact smart card 3 = Magnetic stripe or contact smart card</p> <p>amount - The amount to be used and authorized, EMV Tag 9F02. Format in decimal.</p> <p>cashBack - Amount of cash back to be used, EMV Tag 9F02. Format in decimal.</p> <p>currencyCode - Transaction Currency Code (EMV Tag 5F2A, format n4 string) Sample valid values: 0840 = US Dollar 0978 = Euro 0826 = UK Pound</p> <p>endSession - Flag to end the session for the device. Default value is true.</p>
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	<p>“true” = End the session after the request is processed. “false” = Do not end the session after the request is processed.</p> <p>quickChipMode - Flag to start the transaction to accommodate qwick Chip mode. “true” = Accommodate qwick chip mode. “false” = Do not accommodate qwick chip mode.</p> <p>reserved - These are the reserved bytes beginning at index 20 of the 0xA2 command. Reference device manual D99875585 for more details. Example: 0000000000000000000000000000840000100 – QuickDip Mode 0000000000000000000000000000840000003 – PIN Verify 0000000000000000000000000000840000004 – PIN Set</p>
destinationURL	MagneFlex will send the postback to this URL.
requestLocation	Flag to send GPS location of the device from which Magneflex (iOS only) is hosted. Use: true – send location false – do not send location
passInData	Optional data to send to MagneFlex. This data will be passed back to the web app.

Each input parameter supplied in the request is delimited by an ampersand character ‘&’, and the value for a parameter begins after an equal character ‘=’. Where ever a parameter contains multiple values, each are delimited by a comma character ‘,’.

Example query:

```
https://192.168.10.100/magneflexdemo/default.aspx?  
operation=requestStartEMVTransaction  
&httpMethod=GET  
&closeDeviceAfter=true  
&readerArgument=  
    timeLimit:3C,  
    cardType:02,  
    option:00,  
    amount:9.99,  
    transactionType:00,  
    cashBack:0.0,  
    currencyCode:0840,  
    endSession:true,  
    quickChipMode:false,  
    reserved:00000000000000000000000000008400001  
&destinationURL=https://192.68.10.100/magneflexdemo/cardpostback.aspx  
&requestLocation=false  
&passInData=testData
```

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Return Value:

The EMV ARQC response output in Hex string format of device raw response for this command.

Parameter	Description
errorCode	Error status. This parameter is only available when the status is not successful.
errorMessage	Description of the errorCode. This parameter is only available when the status is not successful.
opType	The type of operation. For this command the value is: EMV_ARQC_RESULT
arqcData	ARQC data from the device.
passInData	Optional data to send to MagneFlex. This data will be passed back to the web app.

Example:

```
https://192.168.10.100/magneflexdemo/cardpostback.aspx?opType=EMV_ARQC
&arqcData=0211F982020DDFDF540A000000000000000000DFDF550182DFDF250F42
3246363045413036313731364141FA8201E3708201DFDFDF5301005F20164D41535445
52434152442F4155544F4D4154494F4E49DFDF4D263B353535303030303230303034
3434343D313830363230313030303030303030303030303030303030303030303034
59820170A95450D8E8376FBF7105F641858BD1E5945ABB7196759757BE9923631B7C5A
3B530D27DB156E3321EEB740D5BC29EF85639CC678F4FB7FD1891FA6FFD6F696A9701A
F8FC9C3C84FF98B8C05DD386048426C1FD2892C092D17CAB172A47C0C95899EDF64388
6DC9DA910203D09186ABF09BE524ABE33A9AD73703F59C6FD5727C468650CB975D92D5
BB0DE359163527A8C04130626CC27A1B5C63598E3E7F26F367866A563AB091EC35A14D
4F392522132FC5097E3757EFC52174445090DE44100FB453FD4BE077DB24F6D99E00EE
BB92C9FD6604723C6E2393BA0F2F2A70F9A915D91E0A02D88A8807A77E7739F1CBDCA
791E647B56AD146C83AA57CD300589A60042A51BE3233C59F8AEE25F1D207F14FF8E0A
968560612654F7B944B8B63ADF3467B24445D5FBE40DE8A2C46171461FD1D577ADDC56
8EB21A13E2913CA19C0FAE06BD8FE16B9B349481721D365BE5EA68BBACA63CDD76A780
45ED1C128A90EF166F2DED19239ED6AF35DCA40128DADDF560A9010010B2F60EA0001
C3DFDF570180DFDF5801030000000000000011223344&passInData=testdata
```

### 2.6 sendARPC (EMV Only)

This query string sends the ARPC to the device during an EMV transaction.

```
?operation=
&httpMethod=
&closeDeviceAfter=
&readerArgument=
&destinationURL=
&requestLocation=
&passInData=
```

Parameter	Description
operation	Operation to request from MagneFlex. Use: sendARPC

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httpMethod	HTTP method to be used for the HTTP postback from MagneFlex. Use: GET – returns the response data in the form of a query string. POST – recommended for EVM related transactions to accommodate limits on query string length.
closeDeviceAfter	Flag to close the device after the request. Use: true – close device false – do not close the device
readerArgument	ARPC data to send to the device. issuerAuthenticationData:, endSession:  Argument details: issuerAuthenticationData – ARPC response to send to the device.  endSession - Flag to end the session for the device. Default value is true. “true” = End the session after the request is processed. “false” = Do not end the session after the request is processed.
destinationURL	MagneFlex will send the postback to this URL.
requestLocation	Flag to send GPS location of the device from which Magneflex (iOS only) is hosted. Use: true – send location false – do not send location
passInData	Optional data to send to MagneFlex. This data will be passed back to the web app.

Each input parameter supplied in the request is delimited by an ampersand character ‘&’, and the value for a parameter begins after an equal character ‘=’. Where ever a parameter contains multiple values, each are delimited by a comma character ‘,’.

Example query:

```
https://192.168.10.100/magneflexdemo/cardpostback.aspx?  
operation=sendARPC  
&httpMethod=GET  
&closeDeviceAfter=true  
&readerArgument=  
    issuerAuthenticationData:0030F92EDFDF540A0000000000000000000000DFDF  
550182DFDF250F423246363045413036313731364141FA0670048A0230300000000000  
00,  
        endSession:true  
&destinationURL=https://192.168.10.100/magneflexdemo/cardpostback.aspx  
&requestLocation=false  
&passInData=
```

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Return Value:

The EMV ARPC response output in Hex string format of device raw response for this command.

Parameter	Description
errorCode	Error status. 0 is Success. Non-Zero is an error.
errorMessage	Description of the errorCode.
opType	The type of operation. For this command the value is: EMV_TRANS_RESULT
batchData	Batch data from the device to be passed to MagneFlex.
passInData	Optional data to send to MagneFlex. This data will be passed back to the web app.

Example:

[https://192.168.10.100/magneflexdemo/cardpostback.aspx?errorCode=0&errorMessage=OK&opType=EMV\\_TRANS\\_RESULT&batchData=01023F982023BDFDF540A000000000000000000DFDF550182DFDF250F423246363045413036313731364141FA820211F082020DF105DFDF1A0100F8820176DFDF5982015888F3F2E7838F9B729FFED8D0866CB9C6CD06DC850B071ABF5184CFE9923B3F830D1BA6924B039DA9E75C8E717F9E0E95E45AC87A7BD94911F7E96CAE81E8A444F144714FF34B2C20E2F18D89D0616DBE355D808493488E2206273914A37833495A8C69DDEA90F182061CD7E7E416C20FBD260348389EAD6AFFBC0A0FD81BBE2E0D1FC2CF65195E1A79EC73264941D8F42BC5CD6837B9CCD267BD1FD5C37A9352AAEB1A1346E6C9C18ACA9CB01156C12411759091146357A87A39F1B3FB415EFDA48509E9A25003E54E87616F63F04C2484261B3A765E23AB7176FF6C1B08D8BFD23B6884835620B175E366A54232598028FF24998186BAA0590B92DCF336623F881D66379219C535DA2721E77ECBA8ADF8675BE0B9C8AC56CC5A52B9FD8216A43EA43B2B7CE7D22E911AB107566A8F79A103677F16681DD811852332CFB92D313ECC851C36E6317E087C3AAD65D3CDBDD36C97F9252770DFDF560A9010010B2F60EA0001C3DFDF570180DFDF580106F78200885F25031606235F24031806305F2A0208409F02060000000009999F0306000000000009F0607A00000000410109F1C083131323233334349F3901059C01009F34031E03005F20164D4153544552434152442F4155544F4D4154494F4E49DFDF4D263B353535303030323030343434343D313830363230313030303030303030303030303030303F0011223344&passInData="](https://192.168.10.100/magneflexdemo/cardpostback.aspx?errorCode=0&errorMessage=OK&opType=EMV_TRANS_RESULT&batchData=01023F982023BDFDF540A000000000000000000DFDF550182DFDF250F423246363045413036313731364141FA820211F082020DF105DFDF1A0100F8820176DFDF5982015888F3F2E7838F9B729FFED8D0866CB9C6CD06DC850B071ABF5184CFE9923B3F830D1BA6924B039DA9E75C8E717F9E0E95E45AC87A7BD94911F7E96CAE81E8A444F144714FF34B2C20E2F18D89D0616DBE355D808493488E2206273914A37833495A8C69DDEA90F182061CD7E7E416C20FBD260348389EAD6AFFBC0A0FD81BBE2E0D1FC2CF65195E1A79EC73264941D8F42BC5CD6837B9CCD267BD1FD5C37A9352AAEB1A1346E6C9C18ACA9CB01156C12411759091146357A87A39F1B3FB415EFDA48509E9A25003E54E87616F63F04C2484261B3A765E23AB7176FF6C1B08D8BFD23B6884835620B175E366A54232598028FF24998186BAA0590B92DCF336623F881D66379219C535DA2721E77ECBA8ADF8675BE0B9C8AC56CC5A52B9FD8216A43EA43B2B7CE7D22E911AB107566A8F79A103677F16681DD811852332CFB92D313ECC851C36E6317E087C3AAD65D3CDBDD36C97F9252770DFDF560A9010010B2F60EA0001C3DFDF570180DFDF580106F78200885F25031606235F24031806305F2A0208409F02060000000009999F0306000000000009F0607A00000000410109F1C083131323233334349F3901059C01009F34031E03005F20164D4153544552434152442F4155544F4D4154494F4E49DFDF4D263B353535303030323030343434343D313830363230313030303030303030303030303030303F0011223344&passInData=)

### 2.7 requestPIN (PinPad Only)

This query string instructs the device to prompt for a PIN.

```
?operation=
&httpMethod=
&closeDeviceAfter=
&readerArgument=
&destinationURL=
&requestLocation=
&passInData=
```

## 2 - MagneFlex Browser WEB API Resources

---

Parameter	Description
operation	Operation to request from MagneFlex. Use: <code>requestPIN</code>
httpMethod	HTTP method to be used for the HTTP postback from MagneFlex. Use: GET – returns the response data in the form of a query string. POST – recommended for EVM related transactions to accommodate limits on query string lengths.
closeDeviceAfter	Flag to close the device after the request. Use: <code>true</code> – close device <code>false</code> – do not close the device

## 2 - MagneFlex Browser WEB API Resources

---

readerArgument	<p>Data to send for the device to be passed to MagneFlex.</p> <p>Arguments:</p> <p>timeLimit:, fieldseparator:, pinOption:, maxpinlength:, minpinlength:, tone:, pinmode:, endSession:</p> <p>Argument details:</p> <p>timeLimit - Seconds to wait before the operation times out. Value is in hexadecimal format. (1 - 255)</p> <p>fieldseparator - Delimiter to separate the output data.</p> <p>pinOption - PIN verification and format: 0 = ISO0 Format, No verify PIN 1 = ISO3 Format, No verify PIN 2 = ISO0 Format, Verify PIN 3 = ISO3 Format, Verify PIN</p> <p>maxpinlength – Max PIN length in hexadecimal format. (&lt;= 0C)</p> <p>minpinlength – Min PIN length in hexadecimal format. (&gt;= 04)</p> <p>tone – Beep behavior of prompt: 0 = None 1 = Single beep 2 = Double beep</p> <p>pinmode - Message to display as a user prompt: 0 = PINMsgEnterPIN 1 = PINMsgEnterPINAmt 2 = PINMsgReenterPINAmt 3 = PINMsgReenterPIN 4 = PINMsgVerifyPIN</p> <p>endSession - Flag to end the session for the device. Default value is true. “true” = End the session after the request is processed. “false” = Do not end the session after the request is processed.</p>
destinationURL	MagneFlex will send the postback to this URL.

## 2 - MagneFlex Browser WEB API Resources

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requestLocation	Flag to send GPS location of the device from which Magneflex (iOS only) is hosted. Use: true – send location false – do not send location
passInData	Optional data to send to MagneFlex. This data will be passed back to the web app.

Each input parameter supplied in the request is delimited by an ampersand character ‘&’, and the value for a parameter begins after an equal character ‘=’. Where ever a parameter contains multiple values, each are delimited by a comma character ‘,’.

Example query:

```
https://192.168.10.100/magneflexdemo/default.aspx?  
operation=requestPIN  
&httpMethod=GET  
&closeDeviceAfter=true  
&readerArgument=  
    timeLimit:3C,  
    fieldseparator:|,  
    pinOption:00,  
    maxpinlength:0C,  
    minpinlength:04,  
    pinmode:00,  
    endSession:true  
&destinationURL=https://192.168.10.100/magneflexdemo/cardpostback.asp  
&requestLocation=false  
&passInData=testData
```

Return Value:

The Response output in Hex string format of device raw response for this command.

Parameter	Description
errorCode	Error status. 0 is Success. Non-Zero is an error.
errorMessage	Description of the errorCode.
opType	The type of operation. For this command the value is: PIN_RESULT
operationStatus	Status of the operation.
pinEPB	Encrypted PIN block.
pinKSN	PIN KSN.
passInData	Optional data to send to MagneFlex. This data will be passed back to the web app.

Example:

```
https://192.168.10.100/magneflexdemo/cardpostback.aspx?errorCode=0&errorMessage=OK&opType=PIN_RESULT&operationStatus=00&pinEPB=1098FF7ECABD11F3&pinKSN=9A006300000001200010&passInData=testData
```

## 2 - MagneFlex Browser WEB API Resources

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### 2.8 requestManualCard (PinPad Only)

This query string instructions the device to prompt for a manual card entry.

```
&operation=  
&httpMethod=  
&closeDeviceAfter=  
&readerArgument=  
&destinationURL=  
&requestLocation=  
&passInData=
```

Parameter	Description
operation	Operation to request from MagneFlex. Use: requestManualCard
httpMethod	HTTP method to be used for the HTTP postback from MagneFlex. Use: GET – returns the response data in the form of a query string. POST – recommended for EVM related transactions to accommodate limits on query string lengths.
closeDeviceAfter	Flag to close the device after the request. Use: true – close device false – do not close the device

## 2 - MagneFlex Browser WEB API Resources

---

readerArgument	<p>Data to send for the device to be passed to MagneFlex.</p> <p>Arguments:</p> <p>timeLimit:, option:, tone:, endSession:</p> <p>Argument details:</p> <p>timeLimit - Seconds the device will wait for the user to complete the operation in hexadecimal: (1 - 255)</p> <p>option - This is an ORed combination of flags that changes the device's data entry request behavior. Value is decimal equivalent of the binary value.</p> <p>Bits 0 and 1 0 = Acct,Date,CVC 1 = Acct,Date 2 = Acct,CVC 3 = Acct</p> <p>Bit 2 1=Use Qwick Codes entry</p> <p>Bit 3 1=Use PAN in PIN block creation</p> <p>Bit 4 0=Use PAN min 9, max 19 1=Use PAN min 14, max 21</p> <p>tone – Beep behavior of prompt: 0 = None 1 = Single beep 2 = Double beep</p> <p>endSession - Flag to end the session for the device. Default value is true. “true” = End the session after the request is processed. “false” = Do not end the session after the request is processed.</p>
destinationURL	MagneFlex will send the postback to this URL.
requestLocation	Flag to send GPS location of the device from which Magneflex (iOS only) is hosted. Use: true – send location false – do not send location

## 2 - MagneFlex Browser WEB API Resources

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passInData	Optional data to send to MagneFlex. This data will be passed back to the web app.
------------	---

Each input parameter supplied in the request is delimited by an ampersand character ‘&’, and the value for a parameter begins after an equal character ‘=’. Where ever a parameter contains multiple values, each are delimited by a comma character ‘,’.

Example query:

```
https://192.168.10.100/magneflexdemo/default.aspx?  
operation=requestManualCard  
&httpMethod=GET  
&closeDeviceAfter=true  
&readerArgument=  
    timeLimit:3C,  
    option:8,  
    tone:00,  
    endSession:true  
&destinationURL=https://192.168.10.100/magneflexdemo/cardpostback.aspx  
&requestLocation=false  
&passInData=
```

Return Value:

The CardSwipe output in TVL format.

Parameter	Description
errorCode	Error status. 0 is Success. Non-Zero is an error.
errorMessage	Description of the errorCode.
opType	The type of operation. For this command the value is: CARD_MANUAL_SWIPE
cardDataIn	Manual card entry data in TLV format.
passInData	Optional data to send to MagneFlex. This data will be passed back to the web app.

Example:

```
https://192.168.10.100/magneflexdemo/cardpostback.aspx?errorCode=0&errorMessage=OK&opType=CARD_MANUAL_SWIPE&cardDataIn=FA81EBDFDF25103938444  
6323041393034313230423045F481D4DFDF30020000DFDF3139254D313131313030303  
0303430303030303131315E4D414E55414C20454E5452592F5E323232323030303  
03030303030303030303030303030303030303030303030303030303030303034303  
0303030313131313D323232323030303030303030303030303030303030303030303  
500DFDF371C%M1110000400001111^MANUAL  
ENTRY/^22220000000000000000?DFDF3913;1110000400001111=2222000000000  
0000?DFDF3B00DFDF3C00DFDF430400000000DFDF500A950003000000120000C&pass  
InData=
```

### 2.9 requestSendCommand (PinPad Only)

This query string sends a command to the device and returns the raw response from the device.

?operation=
-------------

## 2 - MagneFlex Browser WEB API Resources

---

```
&httpMethod=
&closeDeviceAfter=
&readerArgument=
&destinationURL=
&requestLocation=
&passInData=
```

Parameter	Description
operation	Operation to request from MagneFlex. Use: <code>requestSendCommand</code>
httpMethod	HTTP method to be used for the HTTP postback from MagneFlex. Use: GET – returns the response data in the form of a query string. POST – recommended for EVM related transactions to accommodate limits on query string lengths.
closeDeviceAfter	Flag to close the device after the request. Use: <code>true</code> – close device <code>false</code> – do not close the device

## 2 - MagneFlex Browser WEB API Resources

---

readerArgument	<p>Comma delimited list of arguments to be passed to MagneFlex.</p> <p>Arguments:</p> <p>timeLimit:, command:, commandType:, waitForReport:, endSession:</p> <p>Argument details:</p> <p>timeLimit - Seconds to wait before the operation times out. Value is in hexadecimal format. (1 - 255)</p> <p>command – Command to be sent in hexadecimal.</p> <p>commandType – Type of command to be sent. “SET” = For commands where the ACK status is to be returned. “GET” = For commands where the data is to be returned.</p> <p>waitForReport - The report number to wait for before returning the response.</p> <p>Example: Command 30 00 (Set KSN) will respond with an ACK (01) or with data in Get Mode (30). “01” = will return the response for ACK report (01). “30” = will return the data report (30).</p> <p>endSession - Flag to end the session for the device. Default value is true. “true” = End the session after the request is processed. “false” = Do not end the session after the request is processed.</p>
destinationURL	MagneFlex will send the postback to this URL.
requestLocation	Flag to send GPS location of the device hosting Magneflex (iOS only). Use: true – send location false – do not send location
passInData	Optional data to send to MagneFlex. This data will be passed back to the web app.

Each input parameter supplied in the request is delimited by an ampersand character ‘&’, and the value for a parameter begins after an equal character ‘=’. Where ever a parameter contains multiple values, each are delimited by a comma character ‘,’.

Example query:

`https://192.168.10.100/magneflexdemo/default.aspx?  
operation=requestSendCommand  
&httpMethod=GET`



## 2 - MagneFlex Browser WEB API Resources

---

httpMethod	HTTP method to be used for the HTTP postback from MagneFlex. Use: GET – returns the response data in the form of a query string. POST – recommended for EVM related transactions to accommodate limits on query string lengths.
closeDeviceAfter	Flag to close the device after the request. Use: true – close device false – do not close the device
readerArgument	Comma delimited list of arguments to be passed to MagneFlex. Arguments: timeLimit:, option:, tone:, endSession:  Argument details: timeLimit - Seconds the device will wait for the user to complete the operation in hexadecimal. (1 - 255)  option: 0 = Timeout clears any signature data 1 = Timeout returns timeout status plus length collected. Sig Data can be requested.  tone – Type of prompt tone: 0 = No sound 1 = One beep 2 = Two beeps  endSession - Flag to end the session for the device. Default value is true. “true” = End the session after the request is processed. “false” = Do not end the session after the request is processed.
destinationURL	MagneFlex will send the postback to this URL.
requestLocation	Flag to send GPS location of the device from which Magneflex (iOS only) is hosted. Use: true – send location false – do not send location
passInData	Optional data to send to MagneFlex. This data will be passed back to the web app.

Each input parameter supplied in the request is delimited by an ampersand character ‘&’, and the value for a parameter begins after an equal character ‘=’. Where ever a parameter contains multiple values, each are delimited by a comma character ‘,’.

## 2 - MagneFlex Browser WEB API Resources

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Example query:

```
https://192.168.10.100/magneflexdemo/default.aspx?  
&operation=requestSignature  
&httpMethod=GET  
&closeDeviceAfter=true  
&readerArgument=  
    timeLimit:3C,  
    option:00,  
    tone:01,  
    endSession:true  
&destinationURL=https://192.168.10.100/magneflexdemo/cardpostback.aspx  
&requestLocation=false  
&passInData=testData
```

Return Value:

The Signature capture output in TVL format.

Parameter	Description
errorCode	Error status. 0 is Success. Non-Zero is an error.
errorMessage	Description of the errorCode.
opType	The type of operation. For this command the value is: <code>SIGNATURE_RESULT</code>
signatureDataIn	Signature data from the device in hexadecimal format.
signatureResult	Result of the signature capture.
passInData	Optional data to send to MagneFlex. This data will be passed back to the web app.

Example:

```
https://192.168.10.100/magneflexdemo/cardpostback.aspx, Data=opType=SIGNATURE_RESULT&signatureDataIn=283E293F29402B422B442C462E4B2F4F30513257335A345D346035633769376B386D386E386F376C376937663663365F36573653374F384B39473A443C413E3F403D463A493A4D3B513C553E58406046684D6B506E547057725B7361736473666F696C6A696A656A60695C68FFFF8E629063916392639264936494649564FFFF813882388337853787378A378B368D3690369236953599359C34A333A732AB32B230B62FB92FBD2EC02DC62CC82CFFFFA827A828A929AA2AAA2BAB2CAD2FAE31AF35B037B138B23BB33EB542B748B84CB852B855B75AB65CB55EB05FAE60AA5FA75EA35DFFFFD156CF54CE53CD52CC51CB4FC94EC64BFFFF&signatureResult=0&passInData=test data
```

### 2.11 requestData (MICR Only)

This query string retrieves data from user interaction with the device.

```
?operation=  
&httpMethod=  
&customDisplayMessage=  
&closeDeviceAfter=  
&readerArgument=
```

## 2 - MagneFlex Browser WEB API Resources

---

```
&destinationURL=  
&requestLocation=  
&passInData=
```

Parameter	Description
operation	Operation to request from MagneFlex. Use: requestData
httpMethod	HTTP method to be used for the HTTP postback from MagneFlex. Use: GET – returns the response data in the form of a query string. POST – recommended for EVM related transactions to accommodate limits on query string lengths.
customDisplayMessage	Message to display within the browser to instruct user interaction (iOS only).
closeDeviceAfter	Flag to close the device after the request. Use: true – close device false – do not close the device
readerArgument	Comma delimited list of arguments to be passed to MagneFlex. Arguments: timeLimit:  Argument details: timeLimit - Seconds the device will wait for the user to complete the operation in hexadecimal. (1 - 255)
destinationURL	MagneFlex will send the postback to this URL.
requestLocation	Flag to send GPS location of the device from which Magneflex (iOS only) is hosted. Use: true – send location false – do not send location
passInData	Optional data to send to MagneFlex. This data will be passed back to the web app.

Each input parameter supplied in the request is delimited by an ampersand character ‘&’, and the value for a parameter begins after an equal character ‘=’. Where ever a parameter contains multiple values, each are delimited by a comma character ‘,’.

Example query:

```
https://192.168.10.100/magneflexdemo/default.aspx?  
operation=requestData  
&httpMethod=GET  
&customDisplayMessage=Please Swipe Card or Scan a Check
```

## 2 - MagneFlex Browser WEB API Resources

---

```
&closeDeviceAfter=true  
&readerArgument=  
    timeLimit:3C  
&destinationURL=https://192.168.10.100/magneflexdemo/cardpostback.aspx  
&requestLocation=false  
&passInData=testData
```

Return Value:

The Command response output in TVL format.

Parameter	Description
errorCode	Error status. 0 is Success. Non-Zero is an error.
errorMessage	Description of the errorCode.
opType	The type of operation. For this command the value is: REQUEST_DATA_RESULT
dataResponse	Data received from the device.
passInData	Optional data to send to MagneFlex. This data will be passed back to the web app.

Example:

```
https://192.168.10.100/magneflexdemo/cardpostback.aspx?errorCode=0&err  
orMessage=OK&opType=REQUEST_DATA_RESULT&dataResponse=  
%B5999991234567891^MAGTEK/TEST  
^21042011000000819000000?;5999991234567891=210420110000819?<13>  
&passInData=testdata
```

### 3 Status Codes and Responses

For SCRA V5 devices please refer to respective command reference:

**D998200115 (eDynamo)**

**D998200176 (Dynamag)**

**D998200175 (DynaMAX)**

**D99875483 (iDynamo)**

**D99875466 (MicrSafe)**

For PINPAD devices please refer to the respective command reference:

**D99875585 (DynaPro)**

**D99875629 (DynaPro Mini)**

**D998200136 (DynaPro Go)**