

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. |

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1 - Introduction

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 |

1 - Introduction

| 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

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
```


2 - MagneFlex Browser WEB API Resources

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

| | |
|------------|---|
| 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&err  
orMessage=OK&opType=SEND_COMMAND_RESULT&commandID=0900&commandResult=0  
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: requestSendExtendedCommand |
| 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 | 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: 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=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. |

2 - MagneFlex Browser WEB API Resources

| | |
|---------------|---|
| 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=000001A801A6FA8201A2DFDF2101105F2A0208405F360102DFDF5B010CDFDF5C0102DFDF75010CDFDF76010CDFDF6E010C9F150230309F1607303030303030309F1A0208409F1C0831313232333334349F33032028C89F3501219F4005720000B0019F4E0730303030303030DFDF0109A000000004F8001000DFDF025E9ADFDF289F025A899F109F159F169F4E828E5F245F259F069F079F0D9F0E9F0F9F269F279F369C9F339F349F379F399F40959B9F5BDFDF009F1E9F1A5F2A9F019F218ADF8120DF8121DF81225F20505F34849F039F099F1E9F359F419F53DFDF05299A829F369F1E9F109F5B9F339F35959F015F245A5F348A9F159F169F399F1A9F1C579F025F2A9F219CDFDF06028A91DFDF140400007530DFDF150400000001DFDF160400000080DFDF17599ADFDF289F029F035A899F109F159F169F4E828E5F245F259F069F079F0D9F0E9F0F9F269F279C9F339F349F359F369F379F399F409F419F53959B9F5BDFDF009F1E9F1A5F2A9F018ADF8120DF8121DF81225F205F349F0984DFDF20024328DFDF260E4D414754454B2044454641554C549F3C0209989F3D0102DFDF4704755EFA9B& 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.

| |
|---|
| <pre>?operation= &httpMethod= &closeDeviceAfter= &readerArgument= &destinationURL= &requestLocation= &passInData=</pre> |
|---|

| 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: false - do not close the device |

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| | |
|----------------|--|
| readerArgument | <p>Comma delimited list of arguments to be passed to MagneFlex.</p> <p>Arguments:</p> <pre>timeLimit:, cardType:, option:, amount:, transactionType:, cashBack:, currencyCode:, endSession:, qwickChipMode:, reserved:</pre> <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 quick Chip mode. “true” = Accommodate quick chip mode. “false” = Do not accommodate quick 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: 000000000000000000000000000000000840000100 – QuickDip Mode 000000000000000000000000000000000840000003 – PIN Verify 000000000000000000000000000000000840000004 – 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:000000000000000000000000000008400001  
&destinationURL=https://192.68.10.100/magneflexdemo/cardpostback.aspx  
&requestLocation=false  
&passInData=testData
```


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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:0030F92EDFDF540A000000000000000000DFDF
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&error  
Message=OK&opType=EMV_TRANS_RESULT&batchData=01023FF982023BDFDF540A0  
00000000000000000000DFDF550182DFDF250F423246363045413036313731364141FA8  
20211F082020DF105DFDF1A0100F8820176DFDF5982015888F3F2E7838F9B729FFED8D  
0866CB9C6CD06DC850B071ABF5184CFE9923B3F830D1BA6924B039DA9E75C8E717F9E0  
E95E45AC87A7BD94911F7E96CAE81E8A444F144714FF34B2C20E2F18D89D0616DBE355  
D808493488E2206273914A37833495A8C69DDEA90F182061CD7E7E416C20FBD2603483  
89EAD6AFFBC0A0FD81BBE2E0D1FC2CF65195E1A79EC73264941D8F42BC5CD6837B9CCD  
267BD1FD5C37A9352AAEB1A1346E6C9C18ACA9CB01156C12411759091146357A87A39F  
1B3FB415EFDAA48509E9A25003E54E87616F63F04C2484261B3A765E23AB7176FF6C1B  
08D8BFD23B6884835620BB175E366A54232598028FF24998186BAA0590B92DCF336623  
F881D66379219C535DA2721E77ECBA8ADF8675BE0B9C8AC56CC5A52B9FD8216A43EA43  
B2B7CE7D22E911AB107566A8F79A103677F16681DD811852332CFB92D313ECC851C36E  
6317E087C3AAD65D3CDBDD36C97F9252770DFDF560A9010010B2F60EA0001C3DFDF570  
180DFDF580106F78200885F25031606235F24031806305F2A0208409F020600000000  
9999F03060000000000009F0607A00000000410109F1C0831313232333334349F39010  
59C01009F34031E03005F20164D4153544552434152442F4155544F4D4154494F4E49D  
FDF4D263B353535353030303032303030343434343D313830363230313030303030303  
030303030303F0011223344&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: requestPIN |
| 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> <pre>timeLimit:, fieldseparator:, pinOption:, maxpinlength:, minpinlength:, tone:, pinmode:, endSession:</pre> <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. (≤ 0C)</p> <p>minpinlength - Min PIN length in hexadecimal format. (≥ 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

| | |
|-----------------|--|
| 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&err
orMessage=OK&opType=PIN_RESULT&operationStatus=00&pinEPB=1098FF7ECABD1
1F3&pinKSN=9A006300000001200010&passInData=testData
```

2 - MagneFlex Browser WEB API Resources

2.8 requestManualCard (PinPad Only)

This query string instructs 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: <code>timeLimit:</code>, <code>option:</code>, <code>tone:</code>, <code>endSession:</code></p> <p>Argument details:</p> <p><code>timeLimit</code> - Seconds the device will wait for the user to complete the operation in hexadecimal: (1 - 255)</p> <p><code>option</code> - 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 Quick 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><code>tone</code> – Beep behavior of prompt: 0 = None 1 = Single beep 2 = Double beep</p> <p><code>endSession</code> - 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 | <p>Flag to send GPS location of the device from which Magneflex (iOS only) is hosted.</p> <p>Use: <code>true</code> – send location <code>false</code> – do not send location</p> |

2 - MagneFlex Browser WEB API Resources

```
&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 |

2 - MagneFlex Browser WEB API Resources

| | |
|-----------------|---|
| readerArgument | <p>Comma delimited list of arguments to be passed to MagneFlex.</p> <p>Arguments: timeLimit:, command:, commandType:, waitForReport:, endSession:</p> <p>Argument details: 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. 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 | <p>Flag to send GPS location of the device hosting Magneflex (iOS only).</p> <p>Use: true – send location false – do not send location</p> |
| 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

```

&closeDeviceAfter=true
&readerArgument=
    timeLimit:30,
    command:070501,
    commandType:SET,
    waitForReport:27,
    endSession:true
&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: 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&err
orMessage=OK&opType=SEND_COMMAND_RESULT&commandID=070501&commandResult
=270000401F3F12006034F70080F8FFFFF6034F70080F8FFFFF70E6530F80FAFFFFF20F34
40D80FAFFFFF287EF40080F8FFFFF10B4480D80FAFFFFF78B4480D80FAFFFFF80B4480D80F
AFFFFF0000000000000000000000000000000000000000000000000000000000000000
0000000000000000000000000000000000000000000000000000000000000000000000
0000000000000000000000000000000000000000000000000000000000000000000000
&passInData=testdata
    
```

2.10 requestSignature (PinPad Only)

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

```

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

| Parameter | Description |
|-----------|--|
| operation | Operation to request from MagneFlex. Use: requestSignature |

2 - MagneFlex Browser WEB API Resources

| | |
|------------------|---|
| httpMethod | <p>HTTP method to be used for the HTTP postback from MagneFlex.</p> <p>Use:</p> <p>GET - returns the response data in the form of a query string.</p> <p>POST - recommended for EVM related transactions to accommodate limits on query string lengths.</p> |
| closeDeviceAfter | <p>Flag to close the device after the request.</p> <p>Use:</p> <p>true - close device</p> <p>false - do not close the device</p> |
| readerArgument | <p>Comma delimited list of arguments 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:</p> <p>0 = Timeout clears any signature data 1 = Timeout returns timeout status plus length collected. Sig Data can be requested.</p> <p>tone - Type of prompt tone: 0 = No sound 1 = One beep 2 = Two beeps</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 | <p>MagneFlex will send the postback to this URL.</p> |
| requestLocation | <p>Flag to send GPS location of the device from which Magneflex (iOS only) is hosted.</p> <p>Use:</p> <p>true - send location</p> <p>false - do not send location</p> |
| passInData | <p>Optional data to send to MagneFlex. This data will be passed back to the web app.</p> |

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

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: SIGNATURE_RESULT |
| 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=283E293F29402B422B442C462E4B2F4F30513257335A345D346035633769376B386D386E386F376C376937663663365F36573653374F384B39473A443C413E3F403D463A493A4D3B513C553E58406046684D6B506E547057725B7361736473666F696C6A696A656A60695C68FFFF8E629063916392639264936494649564FFFF813882388337853787378A378B368D3690369236953599359C34A333A732AB32B230B62FB92FBD2EC02DC62CC82CFFFA827A828A929AA2AAA2BAB2CAD2FAE31AF35B037B138B23BB33EB542B748B84CB852B855B75AB65CB55EB05FAE60AA5FA75EA35DFFFFD156CF54CE53CD52CC51CB4FC94EC64BFFFF&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 (eDyanmo)

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)