

Magensa Web Services

Remote Services For SCRA
RemoteServicesv2 SCRAv2 Operations Manual

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Table 0-1 - Revisions

Rev Number	Date	Notes
10	January 22, 2015	Initial Release
20	July 22, 2020	Added additional input and output properties

Purpose of the document

The purpose of this document is to provide a description of how to call operations of the Magensa Remote Services web service.

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1 Introduction

The purpose of this document is to provide a description of how to call operations of the Magensa Remote Services web service.

2 SCRAv2 Operations

2.1 GetKeyList

2.1.1 INPUT PROPERTIES

Property(*)	Value	Value Description
CustomerCode *	<string>	Customer code
Username *	<string>	The User Identification credential created and assigned by MagTek.
Password *	<string>	The password for the credential.
BillingLabel	<string>	Billing Label
CustomerTransactionID	<string>	Customer transaction ID

Note: * = Required

2.1.2 OUTPUT PROPERTIES

Property	Value	Value Description
CustomerTransactionId	<string>	Customer transaction ID
MagTranId	<string>	Magensa assigned unique transaction ID in GUID form.
Description	<string>	Description
ID	int	Key ID
KSI	<string>	Key Serial ID
KeyName	<string>	Name of the Key
KeySlotNamePrefix	<string>	Name of the Slot E.g.: Prod or Test

GetKeyList Request:

```
<soapenv:Envelope
xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:v2="http://www.magensa.net/RemoteServices/v2/"
xmlns:rem="http://schemas.datacontract.org/2004/07/RemoteServicesv2.Co
re">
  <soapenv:Header/>
  <soapenv:Body>
    <v2:GetKeyList>
      <v2:request>
        <rem:Authentication>
          <rem:CustomerCode>customercode</rem:CustomerCode>
          <rem>Password>password</rem>Password>
          <rem:Username>username</rem:Username>
        </rem:Authentication>
        <rem:BillingLabel>Billing</rem:BillingLabel>
        <rem:CustomerTransactionID>456</rem:CustomerTransactionID>
      </v2:request>
    </v2:GetKeyList>
  </soapenv:Body>
</soapenv:Envelope>
```

GetKeyList Response:

```
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Body>
    <GetKeyListResponse
xmlns="http://www.magensa.net/RemoteServices/v2/">
      <GetKeyListResult
xmlns:a="http://schemas.datacontract.org/2004/07/RemoteServicesv2.Core
"
xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
        <a:CustomerTransactionId>456</a:CustomerTransactionId>
        <a:MagTranId>7c7ea90e-8a4b-48b1-9e31-dacabc0a14ca</a:MagTranId>
        <a:Keys>
          <a:Key>
            <a:Description>The test key for Magensa</a:Description>
            <a:ID>7</a:ID>
            <a:KSI>9999990</a:KSI>
            <a:KeyName>Magensa TEST Key</a:KeyName>
            <a:KeySlotNamePrefix>Test</a:KeySlotNamePrefix>
          </a:Key>
          <a:Key>
            <a:Description>the Test key for QwickKey</a:Description>
            <a:ID>8</a:ID>
            <a:KSI>9011400</a:KSI>
            <a:KeyName>QwickKey Test</a:KeyName>
            <a:KeySlotNamePrefix>Test</a:KeySlotNamePrefix>
          </a:Key>
          <a:Key>
            <a:Description>the test key we use for ANSI test</a:Description>
            <a:ID>12</a:ID>
            <a:KSI>9010010</a:KSI>
            <a:KeyName>ANSI Test Key</a:KeyName>
            <a:KeySlotNamePrefix>Test</a:KeySlotNamePrefix>
          </a:Key>
        </a:Keys>
      </GetKeyListResult>
    </GetKeyListResponse>
  </s:Body>
</s:Envelope>
```


2.2 GetKeyLoadCommand

A command used to calculate the command to change from one DUKPT key to another securely.

2.2.1 INPUT PROPERTIES

Property(*)	Value	Value Description
CustomerCode *	<string>	Customer code
Username *	<string>	The User Identification credential created and assigned by MagTek.
Password *	<string>	The password for the credential.
BillingLabel	<string>	Billing Label
CustomerTransactionID	<string>	Customer transaction ID
KSN *	<string>	Key Serial Number of the reader.
KeyID *	int	The ID of the Key to be loaded.
UpdateToken *	<string>	Update token obtained from the reader using command 19.

2.2.2 OUTPUT PROPERTIES

Property	Value	Value Description
CustomerTransactionId	<string>	Customer transaction ID
MagTranId	<string>	Magensa assigned unique transaction ID in GUID form.
CommandType	int	CommandType value
Description	<string>	Description of the command response.
ExecutionTypeEnum	<string>	Execution type enumeration
ID	int	ID of the command response.
Name	<string>	Name representing the function for Value.
Value	<string>	Value to be passed based on the type of command E.g. To change key for a SCRA device, ChangeKey value to be considered from response

GetKeyLoadCommand Request:

```
<soapenv:Envelope
xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:v2="http://www.magensa.net/RemoteServices/v2/"
xmlns:rem="http://schemas.datacontract.org/2004/07/RemoteServicesv2.Co
re">
  <soapenv:Header/>
  <soapenv:Body>
    <v2:GetKeyLoadCommand>
      <v2:request>
        <rem:Authentication>
          <rem:CustomerCode>customercode</rem:CustomerCode>
          <rem>Password>password</rem>Password>
          <rem:Username>username</rem:Username>
        </rem:Authentication>
        <rem:BillingLabel>Billing</rem:BillingLabel>
        <rem:CustomerTransactionID>456</rem:CustomerTransactionID>
        <rem:KSN>9010010B28C0DC000038</rem:KSN>
        <rem:KeyID>12</rem:KeyID>
        <rem:UpdateToken>423238433044433130313531344141004D53434B5453543030312
53035161C095998690C</rem:Upd
ateToken>
      </v2:request>
    </v2:GetKeyLoadCommand>
  </soapenv:Body>
</soapenv:Envelope>
```

GetKeyLoadCommand Response:

```
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Body>
    <GetKeyLoadCommandResponse
xmlns="http://www.magensa.net/RemoteServices/v2/">
      <GetKeyLoadCommandResult
xmlns:a="http://schemas.datacontract.org/2004/07/RemoteServicesv2.Core"
xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
        <a:CustomerTransactionId>456</a:CustomerTransactionId>
        <a:MagTranId>a37c9672-16e1-4774-921a-07b384ea876a</a:MagTranId>
        <a:Commands>
          <a:Command>
            <a:CommandType>0</a:CommandType>
            <a:Description>To SCRA Device</a:Description>
            <a:ExecutionTypeEnum>ALL</a:ExecutionTypeEnum>
            <a:ID>0</a:ID>
            <a:Name>ChangeKey</a:Name>
            <a:Value>223142323843304443313031353134414100019010010B28C0DC000000C8CA8836AC81EE8C45D9AAA6419B38A9E512F571090E</a:Value>
          </a:Command>
          <a:Command>
            <a:CommandType>0</a:CommandType>
            <a:Description>Key Check Value</a:Description>
            <a:ExecutionTypeEnum>ALL</a:ExecutionTypeEnum>
            <a:ID>0</a:ID>
            <a:Name>KCV</a:Name>
            <a:Value>00311A2A3D</a:Value>
          </a:Command>
        </a:Commands>
      </GetKeyLoadCommandResult>
    </GetKeyLoadCommandResponse>
  </s:Body>
</s:Envelope>
```

2.3 GetCommandList

A command used to retrieve the list of available configuration commands.

2.3.1 INPUT PROPERTIES

Property(*)	Value	Value Description
CustomerCode *	<string>	Customer code
Username *	<string>	The User Identification credential created and assigned by MagTek.
Password *	<string>	The password for the credential.
BillingLabel	<string>	Billing Label
CustomerTransactionID	<string>	Customer transaction ID

Property(*)	Value	Value Description
ExecutionType *	<string>	The Execution Type can be one of the following values: ALL,KSN,MUT

Note: * = Required

2.3.2 OUTPUT PROPERTIES

Property	Value	Value Description
CustomerTransactionId	<string>	Customer transaction ID
MagTranId	<string>	Magensa assigned unique transaction ID in GUID form.
CommandType	int	CommandType value
Description	<string>	Description of the command response.
ExecutionTypeEnum	<string>	The Execution Type can be one of the following values: ALL,KSN,MUT
ID	int	Command ID to be used for the following operations: GetCommandByMUT, GetCommandByKSN
Name	<string>	Name of the command.
Value	<string>	Value. Response may return a nil for this operation.

GetCommandList Request:

```
<soapenv:Envelope
xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:v2="http://www.magensa.net/RemoteServices/v2/"
xmlns:rem="http://schemas.datacontract.org/2004/07/RemoteServicesv2.Co
re">
  <soapenv:Header/>
  <soapenv:Body>
    <v2:GetCommandList>
      <v2:request>
        <rem:Authentication>
          <rem:CustomerCode>customercode</rem:CustomerCode>
          <rem>Password>password</rem>Password>
          <rem:Username>username</rem:Username>
        </rem:Authentication>
        <rem:BillingLabel>Billing</rem:BillingLabel>
        <rem:CustomerTransactionID>456</rem:CustomerTransactionID>
        <rem:ExecutionType>ALL</rem:ExecutionType>
      </v2:request>
    </v2:GetCommandList>
  </soapenv:Body>
</soapenv:Envelope>
```

GetCommandList Response:

```
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Body>
    <GetCommandListResponse
xmlns="http://www.magensa.net/RemoteServices/v2/">
      <GetCommandListResult
xmlns:a="http://schemas.datacontract.org/2004/07/RemoteServicesv2.Core"
  xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
        <a:CustomerTransactionId>456</a:CustomerTransactionId>
        <a:MagTranId>258e70ce-d331-40a6-bf6e-1875425739d1</a:MagTranId>
        <a:Commands>
          <a:Command>
            <a:CommandType>0</a:CommandType>
            <a:Description>Activity Timeout (Battery Operated
devices Only)</a:Description>
            <a:ExecutionTypeEnum>KSN</a:ExecutionTypeEnum>
            <a:ID>37</a:ID>
            <a:Name>AvtivityTimeout_2Min</a:Name>
            <a:Value>010B78</a:Value>
          </a:Command>
          <a:Command>
            <a:CommandType>0</a:CommandType>
            <a:Description>Activity Timeout (Battery Operated
devices Only)</a:Description>
            <a:ExecutionTypeEnum>KSN</a:ExecutionTypeEnum>
            <a:ID>38</a:ID>
            <a:Name>AvtivityTimeout_None</a:Name>
            <a:Value>010B00</a:Value>
          </a:Command>
          <a:Command>
            <a:CommandType>0</a:CommandType>
            <a:Description>Set Maximum Bound Count to
1</a:Description>
            <a:ExecutionTypeEnum>KSN</a:ExecutionTypeEnum>
            <a:ID>1248</a:ID>
            <a:Name>BOND_MAX_COUNT_1</a:Name>
            <a:Value>NOMAC 46050100011601</a:Value>
          </a:Command>
          <a:Command>
            <a:CommandType>0</a:CommandType>
            <a:Description>Set Maximum Bound Count to
2</a:Description>
            <a:ExecutionTypeEnum>KSN</a:ExecutionTypeEnum>
            <a:ID>1254</a:ID>
            <a:Name>BOND_MAX_COUNT_2</a:Name>
            <a:Value>NOMAC 46050100011602</a:Value>
          </a:Command>
          <a:Command>
            <a:CommandType>0</a:CommandType>
```

```
3</a:Description>
    <a:Description>Set Maximum Bound Count to
    <a:ExecutionTypeEnum>KSN</a:ExecutionTypeEnum>
    <a:ID>1255</a:ID>
    <a:Name>BOND_MAX_COUNT_3</a:Name>
    <a:Value>NOMAC 46050100011603</a:Value>
  </a:Command>
  <a:Command>
    <a:CommandType>0</a:CommandType>
    <a:Description>Set Maximum Bound Count to
4</a:Description>
    <a:ExecutionTypeEnum>KSN</a:ExecutionTypeEnum>
    <a:ID>1256</a:ID>
    <a:Name>BOND_MAX_COUNT_4</a:Name>
    <a:Value>NOMAC 46050100011604</a:Value>
  </a:Command>
  <a:Command>
    <a:CommandType>0</a:CommandType>
    <a:Description>Set Maximum Bound Count to
5</a:Description>
    <a:ExecutionTypeEnum>KSN</a:ExecutionTypeEnum>
    <a:ID>1249</a:ID>
    <a:Name>BOND_MAX_COUNT_5</a:Name>
    <a:Value>NOMAC 46050100011605</a:Value>
  </a:Command>
  <a:Command>
    <a:CommandType>0</a:CommandType>
    <a:Description>Set Maximum Bound Count to
6</a:Description>
    <a:ExecutionTypeEnum>KSN</a:ExecutionTypeEnum>
    <a:ID>1257</a:ID>
    <a:Name>BOND_MAX_COUNT_6</a:Name>
    <a:Value>NOMAC 46050100011606</a:Value>
  </a:Command>
  <a:Command>
    <a:CommandType>0</a:CommandType>
    <a:Description>Set Maximum Bound Count to
7</a:Description>
    <a:ExecutionTypeEnum>KSN</a:ExecutionTypeEnum>
    <a:ID>1258</a:ID>
    <a:Name>BOND_MAX_COUNT_7</a:Name>
    <a:Value>NOMAC 46050100011607</a:Value>
  </a:Command>
  <a:Command>
    <a:CommandType>0</a:CommandType>
    <a:Description>Set Maximum Bound Count to
8</a:Description>
    <a:ExecutionTypeEnum>KSN</a:ExecutionTypeEnum>
    <a:ID>1259</a:ID>
    <a:Name>BOND_MAX_COUNT_8</a:Name>
    <a:Value>NOMAC 46050100011608</a:Value>
  </a:Command>
```

```
<a:Command>
  <a:CommandType>0</a:CommandType>
  <a:Description>Set Maximum Bound Count to
9</a:Description>
  <a:ExecutionTypeEnum>KSN</a:ExecutionTypeEnum>
  <a:ID>1250</a:ID>
  <a:Name>BOND_MAX_COUNT_9</a:Name>
  <a:Value>NOMAC 46050100011609</a:Value>
</a:Command>
<a:Command>
  <a:CommandType>0</a:CommandType>
  <a:Description>Set Maximum Bound Mode to
FIFO</a:Description>
  <a:ExecutionTypeEnum>KSN</a:ExecutionTypeEnum>
  <a:ID>1251</a:ID>
  <a:Name>BOND_MAX_MODE_FIFO</a:Name>
  <a:Value>NOMAC 46050100011700</a:Value>
</a:Command>
<a:Command>
  <a:CommandType>0</a:CommandType>
  <a:Description>Set Maximum Bound Mode to Non
Pairable</a:Description>
  <a:ExecutionTypeEnum>KSN</a:ExecutionTypeEnum>
  <a:ID>1252</a:ID>
  <a:Name>BOND_MAX_MODE_NONPAIR</a:Name>
  <a:Value>NOMAC 46050100011701</a:Value>
</a:Command>
<a:Command>
  <a:CommandType>0</a:CommandType>
  <a:Description>Bulk Encryption
Restricted</a:Description>
  <a:ExecutionTypeEnum>MUT</a:ExecutionTypeEnum>
  <a:ID>43</a:ID>
  <a:Name>Bulk_Encryption_Restricted</a:Name>
  <a:Value>1B3001</a:Value>
</a:Command>
<a:Command>
  <a:CommandType>0</a:CommandType>
  <a:Description>Bulk Encryption
Unrestricted</a:Description>
  <a:ExecutionTypeEnum>MUT</a:ExecutionTypeEnum>
  <a:ID>44</a:ID>
  <a:Name>Bulk_Encryption_Unrestricted</a:Name>
  <a:Value>1B3000</a:Value>
</a:Command>
<a:Command>
  <a:CommandType>0</a:CommandType>
  <a:Description>Encrypt using Data
Variant</a:Description>
  <a:ExecutionTypeEnum>MUT</a:ExecutionTypeEnum>
  <a:ID>42</a:ID>
  <a:Name>ENC_VARIANT_DATA</a:Name>
```

```
        <a:Value>015401</a:Value>
    </a:Command>
    <a:Command>
        <a:CommandType>0</a:CommandType>
        <a:Description>Encrypt using PIN
Variant</a:Description>
        <a:ExecutionTypeEnum>MUT</a:ExecutionTypeEnum>
        <a:ID>41</a:ID>
        <a:Name>ENC_VARIANT_PIN</a:Name>
        <a:Value>015400</a:Value>
    </a:Command>
    <a:Command>
        <a:CommandType>0</a:CommandType>
        <a:Description>Change Reader to Firmware Loader
Mode</a:Description>
        <a:ExecutionTypeEnum>MUT</a:ExecutionTypeEnum>
        <a:ID>242</a:ID>
        <a:Name>FIRMWARE_LOADER_MODE_ENABLE</a:Name>
        <a:Value>91</a:Value>
    </a:Command>
    <a:Command>
        <a:CommandType>0</a:CommandType>
        <a:Description>Check Firmware Loader Mode
Status</a:Description>
        <a:ExecutionTypeEnum>MUT</a:ExecutionTypeEnum>
        <a:ID>243</a:ID>
        <a:Name>FIRMWARE_LOADER_STATUS_CHECK</a:Name>
        <a:Value>90</a:Value>
    </a:Command>
    <a:Command>
        <a:CommandType>0</a:CommandType>
        <a:Description>Set Firmware Loader Target to BLE
MCU</a:Description>
        <a:ExecutionTypeEnum>MUT</a:ExecutionTypeEnum>
        <a:ID>245</a:ID>
        <a:Name>FIRMWARE_LOADER_TARGET_BLE</a:Name>
        <a:Value>9701</a:Value>
    </a:Command>
    <a:Command>
        <a:CommandType>0</a:CommandType>
        <a:Description>Set Firmware Loader Target to MAIN
MCU</a:Description>
        <a:ExecutionTypeEnum>MUT</a:ExecutionTypeEnum>
        <a:ID>244</a:ID>
        <a:Name>FIRMWARE_LOADER_TARGET_MAIN</a:Name>
        <a:Value>9700</a:Value>
    </a:Command>
    <a:Command>
        <a:CommandType>0</a:CommandType>
        <a:Description>Verify Boot Firmware Check
Required</a:Description>
        <a:ExecutionTypeEnum>MUT</a:ExecutionTypeEnum>
```



```
<a:ID>246</a:ID>
<a:Name>FIRMWARE_LOADER_VERIFICATION_CHECK</a:Name>
<a:Value>92</a:Value>
</a:Command>
<a:Command>
  <a:CommandType>0</a:CommandType>
  <a:Description>Get UART Baud Rate</a:Description>
  <a:ExecutionTypeEnum>KSN</a:ExecutionTypeEnum>
  <a:ID>1295</a:ID>
  <a:Name>Get UART Baud Rate</a:Name>
  <a:Value>NOMAC 000169</a:Value>
</a:Command>
<a:Command>
  <a:CommandType>0</a:CommandType>
  <a:Description>Masking to
1234*****1234</a:Description>
  <a:ExecutionTypeEnum>KSN</a:ExecutionTypeEnum>
  <a:ID>12</a:ID>
  <a:Name>MASK_4*4</a:Name>
  <a:Value>0107303430342A4E</a:Value>
</a:Command>
<a:Command>
  <a:CommandType>0</a:CommandType>
  <a:Description>Masking to
1234000000001234</a:Description>
  <a:ExecutionTypeEnum>KSN</a:ExecutionTypeEnum>
  <a:ID>14</a:ID>
  <a:Name>MASK_4ZERO</a:Name>
  <a:Value>010730343034304E</a:Value>
</a:Command>
<a:Command>
  <a:CommandType>0</a:CommandType>
  <a:Description>Masking to
1234000x00001234</a:Description>
  <a:ExecutionTypeEnum>KSN</a:ExecutionTypeEnum>
  <a:ID>17</a:ID>
  <a:Name>MASK_4ZERO4_MOD10</a:Name>
  <a:Value>0107303430343059</a:Value>
</a:Command>
<a:Command>
  <a:CommandType>0</a:CommandType>
  <a:Description>Masking to
123456*****1234</a:Description>
  <a:ExecutionTypeEnum>KSN</a:ExecutionTypeEnum>
  <a:ID>13</a:ID>
  <a:Name>MASK_6*4</a:Name>
  <a:Value>0107303630342A4E</a:Value>
</a:Command>
<a:Command>
  <a:CommandType>0</a:CommandType>
  <a:Description>Masking to
1234560000001234</a:Description>
```

```

        <a:ExecutionTypeEnum>KSN</a:ExecutionTypeEnum>
        <a:ID>16</a:ID>
        <a:Name>MASK_6ZERO4</a:Name>
        <a:Value>010730363034304E</a:Value>
    </a:Command>
    <a:Command>
        <a:CommandType>0</a:CommandType>
        <a:Description>Masking to
1234560x00001234</a:Description>
        <a:ExecutionTypeEnum>KSN</a:ExecutionTypeEnum>
        <a:ID>18</a:ID>
        <a:Name>MASK_6ZERO4_MOD10</a:Name>
        <a:Value>0107303630343059</a:Value>
    </a:Command>
    <a:Command>
        <a:CommandType>0</a:CommandType>
        <a:Description>Masking to
123456789123456789</a:Description>
        <a:ExecutionTypeEnum>KSN</a:ExecutionTypeEnum>
        <a:ID>1253</a:ID>
        <a:Name>MASK_9*9</a:Name>
        <a:Value>0107303930392A4E</a:Value>
    </a:Command>
    <a:Command>
        <a:CommandType>0</a:CommandType>
        <a:Description>Masking AAMVA to
1234*****1234</a:Description>
        <a:ExecutionTypeEnum>KSN</a:ExecutionTypeEnum>
        <a:ID>20</a:ID>
        <a:Name>MASK_AMMVA_4*4</a:Name>
        <a:Value>0108303430342A4E</a:Value>
    </a:Command>
    <a:Command>
        <a:CommandType>0</a:CommandType>
        <a:Description>Masking AAMVA to
1234000000001234</a:Description>
        <a:ExecutionTypeEnum>KSN</a:ExecutionTypeEnum>
        <a:ID>22</a:ID>
        <a:Name>MASK_AMMVA_4ZERO4</a:Name>
        <a:Value>010830343034304E</a:Value>
    </a:Command>
    <a:Command>
        <a:CommandType>0</a:CommandType>
        <a:Description>Masking AAMVA to
1234000x00001234</a:Description>
        <a:ExecutionTypeEnum>KSN</a:ExecutionTypeEnum>
        <a:ID>25</a:ID>
        <a:Name>MASK_AMMVA_4ZERO4_MOD10</a:Name>
        <a:Value>0108303430343059</a:Value>
    </a:Command>
    <a:Command>
        <a:CommandType>0</a:CommandType>

```

```

    <a:Description>Masking AAMVA to
123456*****1234</a:Description>
    <a:ExecutionTypeEnum>KSN</a:ExecutionTypeEnum>
    <a:ID>21</a:ID>
    <a:Name>MASK_AMMVA_6*4</a:Name>
    <a:Value>0108303630342A4E</a:Value>
</a:Command>
<a:Command>
    <a:CommandType>0</a:CommandType>
    <a:Description>Masking AAMVA to
1234560000001234</a:Description>
    <a:ExecutionTypeEnum>KSN</a:ExecutionTypeEnum>
    <a:ID>23</a:ID>
    <a:Name>MASK_AMMVA_6ZERO4</a:Name>
    <a:Value>010830363034304E</a:Value>
</a:Command>
<a:Command>
    <a:CommandType>0</a:CommandType>
    <a:Description>Masking AAMVA to
1234560x00001234</a:Description>
    <a:ExecutionTypeEnum>KSN</a:ExecutionTypeEnum>
    <a:ID>26</a:ID>
    <a:Name>MASK_AMMVA_6ZERO4_MOD10</a:Name>
    <a:Value>0108303630343059</a:Value>
</a:Command>
<a:Command>
    <a:CommandType>0</a:CommandType>
    <a:Description>Mask Other Cards
False</a:Description>
    <a:ExecutionTypeEnum>KSN</a:ExecutionTypeEnum>
    <a:ID>28</a:ID>
    <a:Name>MASK_Other_False</a:Name>
    <a:Value>013100</a:Value>
</a:Command>
<a:Command>
    <a:CommandType>0</a:CommandType>
    <a:Description>Mask Other Cards True</a:Description>
    <a:ExecutionTypeEnum>KSN</a:ExecutionTypeEnum>
    <a:ID>27</a:ID>
    <a:Name>MASK_Other_True</a:Name>
    <a:Value>013101</a:Value>
</a:Command>
<a:Command>
    <a:CommandType>0</a:CommandType>
    <a:Description>Change Reader to HID
Mode</a:Description>
    <a:ExecutionTypeEnum>KSN</a:ExecutionTypeEnum>
    <a:ID>1</a:ID>
    <a:Name>MODE_HID</a:Name>
    <a:Value>011000</a:Value>
</a:Command>
<a:Command>
```

```

    <a:CommandType>0</a:CommandType>
    <a:Description>Change Reader to Keyboard
Emulation</a:Description>
    <a:ExecutionTypeEnum>KSN</a:ExecutionTypeEnum>
    <a:ID>2</a:ID>
    <a:Name>MODE_KBE</a:Name>
    <a:Value>011001</a:Value>
</a:Command>
<a:Command>
    <a:CommandType>0</a:CommandType>
    <a:Description>Change Reader to UART
Mode</a:Description>
    <a:ExecutionTypeEnum>KSN</a:ExecutionTypeEnum>
    <a:ID>1293</a:ID>
    <a:Name>MODE_UART</a:Name>
    <a:Value>011002</a:Value>
</a:Command>
<a:Command>
    <a:CommandType>0</a:CommandType>
    <a:Description>MSR Direction Both (Insert Reader
Only)</a:Description>
    <a:ExecutionTypeEnum>KSN</a:ExecutionTypeEnum>
    <a:ID>36</a:ID>
    <a:Name>MSR_Direction_Both</a:Name>
    <a:Value>013203</a:Value>
</a:Command>
<a:Command>
    <a:CommandType>0</a:CommandType>
    <a:Description>MSR Direction Insert (Insert Reader
Only)</a:Description>
    <a:ExecutionTypeEnum>KSN</a:ExecutionTypeEnum>
    <a:ID>33</a:ID>
    <a:Name>MSR_Direction_Insert</a:Name>
    <a:Value>013201</a:Value>
</a:Command>
<a:Command>
    <a:CommandType>0</a:CommandType>
    <a:Description>MSR Direction Withdraw (Insert Reader
Only)</a:Description>
    <a:ExecutionTypeEnum>KSN</a:ExecutionTypeEnum>
    <a:ID>34</a:ID>
    <a:Name>MSR_Direction_Withdraw</a:Name>
    <a:Value>013202</a:Value>
</a:Command>
<a:Command>
    <a:CommandType>0</a:CommandType>
    <a:Description>Change Reader polling time to 1
millisecond</a:Description>
    <a:ExecutionTypeEnum>KSN</a:ExecutionTypeEnum>
    <a:ID>6</a:ID>
    <a:Name>POLL_01MS</a:Name>
    <a:Value>010201</a:Value>

```

```
    </a:Command>
    <a:Command>
      <a:CommandType>0</a:CommandType>
      <a:Description>Polling time to 5
millisecond</a:Description>
      <a:ExecutionTypeEnum>KSN</a:ExecutionTypeEnum>
      <a:ID>7</a:ID>
      <a:Name>POLL_05MS</a:Name>
      <a:Value>010205</a:Value>
    </a:Command>
    <a:Command>
      <a:CommandType>0</a:CommandType>
      <a:Description>Polling time to 7
millisecond</a:Description>
      <a:ExecutionTypeEnum>KSN</a:ExecutionTypeEnum>
      <a:ID>8</a:ID>
      <a:Name>POLL_07MS</a:Name>
      <a:Value>010207</a:Value>
    </a:Command>
    <a:Command>
      <a:CommandType>0</a:CommandType>
      <a:Description>Polling time to 10
millisecond</a:Description>
      <a:ExecutionTypeEnum>KSN</a:ExecutionTypeEnum>
      <a:ID>10</a:ID>
      <a:Name>POLL_10MS</a:Name>
      <a:Value>01020A</a:Value>
    </a:Command>
    <a:Command>
      <a:CommandType>0</a:CommandType>
      <a:Description>Polling time to 15
millisecond</a:Description>
      <a:ExecutionTypeEnum>KSN</a:ExecutionTypeEnum>
      <a:ID>11</a:ID>
      <a:Name>POLL_15MS</a:Name>
      <a:Value>01020E</a:Value>
    </a:Command>
    <a:Command>
      <a:CommandType>0</a:CommandType>
      <a:Description>This is a sample
Command</a:Description>
      <a:ExecutionTypeEnum>KSN</a:ExecutionTypeEnum>
      <a:ID>240</a:ID>
      <a:Name>Sample Command 2</a:Name>
      <a:Value>Sample Command Value</a:Value>
    </a:Command>
    <a:Command>
      <a:CommandType>0</a:CommandType>
      <a:Description>Change Reader to Security Level
3</a:Description>
      <a:ExecutionTypeEnum>KSN</a:ExecutionTypeEnum>
      <a:ID>3</a:ID>
```

```
    <a:Name>SECLEV_3</a:Name>
    <a:Value>1503</a:Value>
  </a:Command>
  <a:Command>
    <a:CommandType>0</a:CommandType>
    <a:Description>Change Reader to Security Level
4</a:Description>
    <a:ExecutionTypeEnum>KSN</a:ExecutionTypeEnum>
    <a:ID>5</a:ID>
    <a:Name>SECLEV_4</a:Name>
    <a:Value>1504</a:Value>
  </a:Command>
  <a:Command>
    <a:CommandType>0</a:CommandType>
    <a:Description>Send Clear AAMVA
False</a:Description>
    <a:ExecutionTypeEnum>KSN</a:ExecutionTypeEnum>
    <a:ID>32</a:ID>
    <a:Name>Send_Clear_AAMVA_CardData_False</a:Name>
    <a:Value>013400</a:Value>
  </a:Command>
  <a:Command>
    <a:CommandType>0</a:CommandType>
    <a:Description>Send Clear AAMVA True</a:Description>
    <a:ExecutionTypeEnum>KSN</a:ExecutionTypeEnum>
    <a:ID>30</a:ID>
    <a:Name>Send_Clear_AAMVA_CardData_True</a:Name>
    <a:Value>013401</a:Value>
  </a:Command>
  <a:Command>
    <a:CommandType>0</a:CommandType>
    <a:Description>Set UART Baud Rate to
115200</a:Description>
    <a:ExecutionTypeEnum>KSN</a:ExecutionTypeEnum>
    <a:ID>1294</a:ID>
    <a:Name>Set UART Baud Rate to 115200</a:Name>
    <a:Value>01690401</a:Value>
  </a:Command>
  <a:Command>
    <a:CommandType>0</a:CommandType>
    <a:Description>Set UART Baud Rate to
19200</a:Description>
    <a:ExecutionTypeEnum>KSN</a:ExecutionTypeEnum>
    <a:ID>1297</a:ID>
    <a:Name>Set UART Baud Rate to 19200</a:Name>
    <a:Value>01690101</a:Value>
  </a:Command>
  <a:Command>
    <a:CommandType>0</a:CommandType>
    <a:Description>Set UART Baud Rate to
38400</a:Description>
    <a:ExecutionTypeEnum>KSN</a:ExecutionTypeEnum>
```

```
        <a:ID>1298</a:ID>
        <a:Name>Set UART Baud Rate to 38400</a:Name>
        <a:Value>01690201</a:Value>
    </a:Command>
    <a:Command>
        <a:CommandType>0</a:CommandType>
        <a:Description>Set UART Baud Rate to
57600</a:Description>
        <a:ExecutionTypeEnum>KSN</a:ExecutionTypeEnum>
        <a:ID>1299</a:ID>
        <a:Name>Set UART Baud Rate to 57600</a:Name>
        <a:Value>01690301</a:Value>
    </a:Command>
    <a:Command>
        <a:CommandType>0</a:CommandType>
        <a:Description>Set UART Baud Rate to
9600</a:Description>
        <a:ExecutionTypeEnum>KSN</a:ExecutionTypeEnum>
        <a:ID>1296</a:ID>
        <a:Name>Set UART Baud Rate to 9600</a:Name>
        <a:Value>01690001</a:Value>
    </a:Command>
    <a:Command>
        <a:CommandType>0</a:CommandType>
        <a:Description>Stay Powered after Good Swipe
False (Battery Operated devices Only)</a:Description>
        <a:ExecutionTypeEnum>KSN</a:ExecutionTypeEnum>
        <a:ID>40</a:ID>
        <a:Name>StayPoweredAfterSwipe_False</a:Name>
        <a:Value>010E00</a:Value>
    </a:Command>
    <a:Command>
        <a:CommandType>0</a:CommandType>
        <a:Description>Stay Powered after Good Swipe
True (Battery Operated devices Only)</a:Description>
        <a:ExecutionTypeEnum>KSN</a:ExecutionTypeEnum>
        <a:ID>39</a:ID>
        <a:Name>StayPoweredAfterSwipe_True</a:Name>
        <a:Value>010E01</a:Value>
    </a:Command>
    <a:Command>
        <a:CommandType>0</a:CommandType>
        <a:Description>Tracks 1 and 3 are not
swapped</a:Description>
        <a:ExecutionTypeEnum>KSN</a:ExecutionTypeEnum>
        <a:ID>1260</a:ID>
        <a:Name>SWAP_TRACKS_1and3_False</a:Name>
        <a:Value>016C00</a:Value>
    </a:Command>
</a:Commands>
</GetCommandListResult>
</GetCommandListResponse>
```

```
</s:Body>
</s:Envelope>
```

2.4 GetCommandByMUT

A command used to calculate the command to change a configuration option by requesting a MagTek Update Token from the SCRA Reader (Command 19) securely.

2.4.1 INPUT PROPERTIES

Property(*)	Value	Value Description
CustomerCode *	<string>	Customer code
Username *	<string>	The User Identification credential created and assigned by MagTek.
Password *	<string>	The password for the credential.
BillingLabel	<string>	Billing Label
CustomerTransactionID	<string>	Customer transaction ID
CommandID *	int	The Command ID obtained from the GetCommandList response.
KSN *	<string>	Key Serial number obtained by sending a command 09 to the reader. For this operation, the KSN should be obtained from the reader before obtaining the update token.
UpdateToken *	<string>	Update token obtained from the reader using command 19.

Note: * = Required

2.4.2 OUTPUT PROPERTIES

Property	Value	Value Description
CustomerTransactionId	<string>	Customer transaction ID
MagTranId	<string>	Magensa assigned unique transaction ID in GUID form
CommandType	int	CommandType value
Description	<string>	Description of the command response.
ExecutionTypeEnum	<string>	The Execution Type can be one of the following values: ALL,KSN,MUT
ID	int	The ID echoed back from CommandID in the request.
Name	<string>	Name of the command.
Value	<string>	Value to be sent to the SCRA device.

GetCommandByMUT Request:

```
<soapenv:Envelope
xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:v2="http://www.magensa.net/RemoteServices/v2/"
xmlns:rem="http://schemas.datacontract.org/2004/07/RemoteServicesv2.Co
re">
  <soapenv:Header/>
  <soapenv:Body>
    <v2:GetCommandByMUT>
      <!--Optional:-->
      <v2:request>
        <rem:Authentication>
          <rem:CustomerCode>customercode</rem:CustomerCode>
        <rem>Password>password</rem>Password>
        <rem:Username>username</rem:Username>
        </rem:Authentication>
        <!--Optional:-->
        <rem:BillingLabel></rem:BillingLabel>
        <!--Optional:-->
        <rem:CustomerTransactionID></rem:CustomerTransactionID>
        <rem:CommandID>34</rem:CommandID>
        <rem:KSN>9011400B487DBC0000E8</rem:KSN>

        <rem:UpdateToken>423438374442433032323131394141004D53434B5052443030312
        A1C911F8E301F4F953C</rem:UpdateToken>
      </v2:request>
    </v2:GetCommandByMUT>
  </soapenv:Body>
</soapenv:Envelope>
```

GetCommandByMUT Response:

```
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Body>
    <GetCommandByMUTResponse
xmlns="http://www.magensa.net/RemoteServices/v2/"
  <GetCommandByMUTResult
xmlns:a="http://schemas.datacontract.org/2004/07/RemoteServicesv2.Core
" xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
      <a:CustomerTransactionId/>
      <a:MagTranId>04faaf5d-e138-4da5-8875-
a654a47c3b2a</a:MagTranId>
      <a:Command>
        <a:CommandType>0</a:CommandType>
        <a:Description>Encrypt using Data
Variant</a:Description>
        <a:ExecutionTypeEnum>MUT</a:ExecutionTypeEnum>
        <a:ID>34</a:ID>
        <a:Name>ENC_VARIANT_DATA</a:Name>
        <a:Value>0106540107978E40</a:Value>
      </a:Command>
    </GetCommandByMUTResult>
```

```
</GetCommandByMUTResponse>
</s:Body>
</s:Envelope>
```

2.5 GetCommandByKSN

A command used to calculate the command to change a configuration option by requesting the current key serial number KSN from the SCRA Reader (Command 09) securely.

2.5.1 INPUT PROPERTIES

Property(*)	Value	Value Description
CustomerCode *	<string>	Customer code
Username *	<string>	The User Identification credential created and assigned by MagTek.
Password *	<string>	The password for the credential.
BillingLabel	<string>	Billing Label
CustomerTransactionID	<string>	Customer transaction ID
CommandID *	int	The Command ID obtained from the GetCommandList response.
KSN *	<string>	Key Serial number obtained by sending a command 09 to the reader. For this operation, KSN should be obtained from the reader before obtaining the update token.
KeyID *	int	The ID of the Key to use for the calculation. This is obtained from the GetKeyList Response.

Note: * = Required

2.5.2 OUTPUT PROPERTIES

Property	Value	Value Description
CustomerTransactionId	<string>	Customer transaction ID
MagTranId	<string>	Magensa assigned unique transaction ID in GUID form
CommandType	int	
Description	<string>	Description of the command response.
ExecutionTypeEnum	<string>	The Execution Type can be one of the following values: ALL,KSN,MUT
ID	int	The ID echoed back from CommandID in the request.
Name	<string>	Name of the command.
Value	<string>	Value to be sent to the SCRA device.

GetCommandByKSN Request:

```
<soapenv:Envelope
xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:v2="http://www.magensa.net/RemoteServices/v2/"
xmlns:rem="http://schemas.datacontract.org/2004/07/RemoteServicesv2.Co
re">
  <soapenv:Header/>
  <soapenv:Body>
    <v2:GetCommandByKSN>
      <v2:request>
        <rem:Authentication>
          <rem:CustomerCode>customercode</rem:CustomerCode>
          <rem:Password>password</rem:Password>
          <rem:Username>username</rem:Username>
        </rem:Authentication>
        <rem:BillingLabel></rem:BillingLabel>
        <rem:CustomerTransactionID></rem:CustomerTransactionID>
        <rem:CommandID>1</rem:CommandID>
        <rem:KSN>9011400B487DBC0000E0</rem:KSN>
        <rem:KeyID>8</rem:KeyID>
      </v2:request>
    </v2:GetCommandByKSN>
  </soapenv:Body>
</soapenv:Envelope>
```

GetCommandByKSN Response:

```
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Body>
    <GetCommandByKSNResponse
xmlns="http://www.magensa.net/RemoteServices/v2/"
  <GetCommandByKSNResult
xmlns:a="http://schemas.datacontract.org/2004/07/RemoteServicesv2.Core
" xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
      <a:CustomerTransactionId i:nil="true"/>
      <a:MagTranId>ca7ecd71-f470-4edd-8e99-
f2882d23d3a4</a:MagTranId>
      <a:Command>
        <a:CommandType>0</a:CommandType>
        <a:Description>Change Reader to HID
Mode</a:Description>
        <a:ExecutionTypeEnum>KSN</a:ExecutionTypeEnum>
        <a:ID>1</a:ID>
        <a:Name>MODE_HID</a:Name>
        <a:Value>010610006B289C6A</a:Value>
      </a:Command>
    </GetCommandByKSNResult>
  </GetCommandByKSNResponse>
</s:Body>
</s:Envelope>
```

2.6 GetFirmwareList

2.6.1 INPUT PROPERTIES

Property(*)	Value	Value Description
CustomerCode *	<string>	Customer code
Username *	<string>	The User Identification credential created and assigned by MagTek.
Password *	<string>	The password for the credential.
BillingLabel	<string>	Billing Label
CustomerTransactionID	<string>	Customer transaction ID
FirmwareType	<string>	Type of Firmware

Note: * = Required

2.6.2 OUTPUT PROPERTIES

Property	Value	Value Description
CustomerTransactionId	<string>	Customer transaction ID
MagTranId	<string>	Magensa assigned unique transaction ID in GUID form
Description	<string>	Description of the command response.
ID	int	The ID echoed back from CommandID in the request.
DateCreated	<string>	Created Date
DateModified	<string>	Modified Date
Name	<string>	Name of Firmware
PartNumber	int	PartNumber value
File	<string>	This field is always null for this operation
PreloadCommands	<string>	This field is always null for this operation
PostloadCommands	<string>	This field is always null for this operation
TargetID	byte	
Type	<string>	Firmware Type
Version	<string>	Version of firmware

GetFirmwareList Request:

```
<soapenv:Envelope
xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:v2="http://www.magensa.net/RemoteServices/v2/"
xmlns:rem="http://schemas.datacontract.org/2004/07/RemoteServicesv2.Co
re">
  <soapenv:Header/>
  <soapenv:Body>
    <v2:GetFirmwareList>
      <!--Optional:-->
      <v2:request>
        <rem:Authentication>
          <rem:CustomerCode>customercode</rem:CustomerCode>
        <rem>Password>password</rem>Password>
        <rem:Username>username</rem:Username>
        </rem:Authentication>
        <!--Optional:-->
      <rem:BillingLabel>?</rem:BillingLabel>
        <!--Optional:-->
        <rem:CustomerTransactionID>?</rem:CustomerTransactionID>
        <!--Optional:-->
        <rem:FirmwareType></rem:FirmwareType>
      </v2:request>
    </v2:GetFirmwareList>
  </soapenv:Body>
</soapenv:Envelope>
```

GetFirmwareList Response:

```
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Body>
    <GetFirmwareListResponse
xmlns="http://www.magensa.net/RemoteServices/v2/"
  <GetFirmwareListResult
xmlns:a="http://schemas.datacontract.org/2004/07/RemoteServicesv2.Core
" xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
      <a:CustomerTransactionId>?</a:CustomerTransactionId>
      <a:MagTranId>5aa604e0-69bd-48b1-95d0-
92da6b92bcb3</a:MagTranId>
      <a:Firmwares>
        <a:Firmware>
          <a:DateCreated>2016-08-
29T17:12:26.753</a:DateCreated>
          <a:DateModified>2016-08-
29T17:12:26.753</a:DateModified>
          <a:Description>BLE 1000002650 version C04
firmware</a:Description>
          <a:File/>
          <a:ID>1</a:ID>
          <a:Name>BLE_1000002650</a:Name>
          <a:PartNumber>1000002650</a:PartNumber>
          <a:PostloadCommands i:nil="true"/>
```

```
    <a:PreloadCommands i:nil="true"/>
    <a:TargetID>2</a:TargetID>
    <a:Type>Test</a:Type>
    <a:Version>C04</a:Version>
  </a:Firmware>
  <a:Firmware>
    <a:DateCreated>2018-06-
11T23:06:13.180</a:DateCreated>
    <a:DateModified>2018-06-
11T23:06:13.180</a:DateModified>
    <a:Description i:nil="true"/>
    <a:File/>
    <a:ID>20</a:ID>
    <a:Name>eDynamo Firmware-1000003354-G0-VG02</a:Name>
    <a:PartNumber>100003354</a:PartNumber>
    <a:PostloadCommands i:nil="true"/>
    <a:PreloadCommands i:nil="true"/>
    <a:TargetID>1</a:TargetID>
    <a:Type>Production</a:Type>
    <a:Version>G0</a:Version>
  </a:Firmware>
  <a:Firmware>
    <a:DateCreated>2017-06-
21T16:02:04.507</a:DateCreated>
    <a:DateModified>2017-06-
21T16:02:04.507</a:DateModified>
    <a:Description>Main_1000003354 version E00
firmware</a:Description>
    <a:File/>
    <a:ID>13</a:ID>
    <a:Name>Main_1000003354</a:Name>
    <a:PartNumber>1000003354</a:PartNumber>
    <a:PostloadCommands i:nil="true"/>
    <a:PreloadCommands i:nil="true"/>
    <a:TargetID>1</a:TargetID>
    <a:Type>Production</a:Type>
    <a:Version>E00</a:Version>
  </a:Firmware>
  <a:Firmware>
    <a:DateCreated>2017-09-
08T15:02:24.070</a:DateCreated>
    <a:DateModified>2017-09-
08T15:02:24.070</a:DateModified>
    <a:Description>Main_1000003358 version F0
firmware</a:Description>
    <a:File/>
    <a:ID>15</a:ID>
    <a:Name>Main_1000003358</a:Name>
    <a:PartNumber>1000003358</a:PartNumber>
    <a:PostloadCommands i:nil="true"/>
    <a:PreloadCommands i:nil="true"/>
    <a:TargetID>1</a:TargetID>
```

```
        <a:Type>Production</a:Type>
        <a:Version>F01</a:Version>
    </a:Firmware>
    <a:Firmware>
        <a:DateCreated>2017-07-
24T17:59:09.863</a:DateCreated>
        <a:DateModified>2017-07-
24T17:59:09.863</a:DateModified>
        <a:Description>MAIN_21030088 production version C01
firmware</a:Description>
        <a:File/>
        <a:ID>14</a:ID>
        <a:Name>MAIN_21030088</a:Name>
        <a:PartNumber>21030088</a:PartNumber>
        <a:PostloadCommands i:nil="true"/>
        <a:PreloadCommands i:nil="true"/>
        <a:TargetID>1</a:TargetID>
        <a:Type>Production</a:Type>
        <a:Version>C01</a:Version>
    </a:Firmware>
    <a:Firmware>
        <a:DateCreated>2017-06-
01T22:17:22.560</a:DateCreated>
        <a:DateModified>2017-06-
01T22:17:22.560</a:DateModified>
        <a:Description>MAIN 21042840 production version J01
firmware</a:Description>
        <a:File/>
        <a:ID>11</a:ID>
        <a:Name>MAIN_21042840</a:Name>
        <a:PartNumber>21042840</a:PartNumber>
        <a:PostloadCommands i:nil="true"/>
        <a:PreloadCommands i:nil="true"/>
        <a:TargetID>1</a:TargetID>
        <a:Type>Production</a:Type>
        <a:Version>J01</a:Version>
    </a:Firmware>
    <a:Firmware>
        <a:DateCreated>2017-11-
28T19:05:15.033</a:DateCreated>
        <a:DateModified>2017-11-
28T19:05:15.033</a:DateModified>
        <a:Description>MAIN_21042876 production version E00
firmware</a:Description>
        <a:File/>
        <a:ID>16</a:ID>
        <a:Name>MAIN_21042876</a:Name>
        <a:PartNumber>21042876</a:PartNumber>
        <a:PostloadCommands i:nil="true"/>
        <a:PreloadCommands i:nil="true"/>
        <a:TargetID>1</a:TargetID>
        <a:Type>Production</a:Type>
```

```
        <a:Version>E00</a:Version>
      </a:Firmware>
    <a:Firmware>
      <a:DateCreated>2018-03-
16T15:04:40.567</a:DateCreated>
      <a:DateModified>2018-03-
16T15:04:40.567</a:DateModified>
      <a:Description>MAIN 21165822 version E01
(Production) firmware</a:Description>
      <a:File/>
      <a:ID>17</a:ID>
      <a:Name>MAIN_21165822</a:Name>
      <a:PartNumber>21165822</a:PartNumber>
      <a:PostloadCommands i:nil="true"/>
      <a:PreloadCommands i:nil="true"/>
      <a:TargetID>1</a:TargetID>
      <a:Type>Production</a:Type>
      <a:Version>E01</a:Version>
    </a:Firmware>
  </a:Firmwares>
</GetFirmwareListResult>
</GetFirmwareListResponse>
</s:Body>
</s:Envelope>
```


2.7 GetFirmwareCommands

A command used to get the command which is to be sent to the device for device authentication.

2.7.1 INPUT PROPERTIES

Property(*)	Value	Value Description
CustomerCode *	<string>	Customer code
Username *	<string>	The User Identification credential created and assigned by MagTek.
Password *	<string>	The password for the credential.
BillingLabel	<string>	Billing Label
CustomerTransactionID	<string>	Customer transaction ID
DeviceType	<string>	Type of Device
Firmware *	<string>	Firmware
KSN *	<string>	Key Serial number obtained by sending a command 09 to the reader. For this operation the KSN should be obtained from the reader before obtaining the update token
KeyID *	int	Key Id value
SerialNumber *	int	
AdditionalRequestData	Key/Value pair	

Note: * = Required

2.7.2 OUTPUT PROPERTIES

Property	Value	Value Description
CustomerTransactionID	<string>	Customer transaction ID
MagTranId	<string>	Magensa assigned unique transaction ID in GUID form.
Commands	<string>	Commands
PostloadCommands	<string>	list of Firmware commands
PreloadCommands	<string>	list of Firmware commands

GetFirmwareCommands Request:

```
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Body>
    <GetFirmwareCommands
xmlns="http://www.magensa.net/RemoteServices/v2/">
      <request
xmlns:a="http://schemas.datacontract.org/2004/07/RemoteServicesv2.Core
" xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
        <a:Authentication>
          <a:CustomerCode>customercode</a:CustomerCode>
          <a>Password>password</a>Password>
          <a:Username>username</a:Username>
        </a:Authentication>
        <a:BillingLabel i:nil="true"/>
        <a:CustomerTransactionID i:nil="true"/>
        <a:AdditionalRequestData i:nil="true"
xmlns:b="http://schemas.datacontract.org/2004/07/System.Collections.Ge
neric"/>
          <a:DeviceType>tDynamo</a:DeviceType>
          <a:Firmware>MTAwMDAwMzM1OA==</a:Firmware>
          <a:KSN>9010010B50860200000A</a:KSN>
          <a:KeyID>119</a:KeyID>
          <a:SerialNumber/>
        </request>
      </GetFirmwareCommands>
    </s:Body>
  </s:Envelope>
```

GetFirmwareCommands Response:

```
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Body>
    <GetFirmwareCommandsResponse
xmlns="http://www.magensa.net/RemoteServices/v2/">
      <GetFirmwareCommandsResult
xmlns:a="http://schemas.datacontract.org/2004/07/RemoteServicesv2.Core
" xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
        <a:CustomerTransactionId i:nil="true"/>
        <a:MagTranId>9846cb59-3f92-4063-9d8c-
092eec4e8579</a:MagTranId>
        <a:Commands
xmlns:b="http://schemas.microsoft.com/2003/10/Serialization/Arrays">
          <b:string>610E313030303030333335380674CAE4</b:string>
        </a:Commands>
        <a:PostloadCommands>
          <a:FirmwareCommand>
            <a:Operation>NOMAC</a:Operation>
            <a:Value>6200</a:Value>
          </a:FirmwareCommand>
          <a:FirmwareCommand>
            <a:Operation>NOMAC</a:Operation>
            <a:Value>6600</a:Value>
          </a:FirmwareCommand>
          <a:FirmwareCommand>
            <a:Operation>NOMAC</a:Operation>
            <a:Value>6700</a:Value>
          </a:FirmwareCommand>
          <a:FirmwareCommand>
            <a:Operation>WAIT</a:Operation>
            <a:Value>10000</a:Value>
          </a:FirmwareCommand>
        </a:PostloadCommands>
        <a:PreloadCommands>
          <a:FirmwareCommand>
            <a:Operation>NOMAC</a:Operation>
            <a:Value>6800</a:Value>
          </a:FirmwareCommand>
          <a:FirmwareCommand>
            <a:Operation>WAIT</a:Operation>
            <a:Value>10000</a:Value>
          </a:FirmwareCommand>
          <a:FirmwareCommand>
            <a:Operation>DETECTDEVICE</a:Operation>
            <a:Value/>
          </a:FirmwareCommand>
          <a:FirmwareCommand>
            <a:Operation>NOMAC</a:Operation>
            <a:Value>6000</a:Value>
          </a:FirmwareCommand>
        </a:PreloadCommands>
      </GetFirmwareCommandsResult>
    </GetFirmwareCommandsResponse>
  </s:Body>
</s:Envelope>
```

```

        </GetFirmwareCommandsResult>
    </GetFirmwareCommandsResponse>
</s:Body>
</s:Envelope>

```

2.8 GetFirmwareByMUT

2.8.1 INPUT PROPERTIES

Property(*)	Value	Value Description
CustomerCode *	<string>	Customer code
Username *	<string>	The User Identification credential created and assigned by MagTek.
Password *	<string>	The password for the credential.
BillingLabel	<string>	Billing Label
CustomerTransactionID	<string>	Customer transaction ID
FirmwareID *	int	The Firmware ID obtained from the GetFirmwareList response.
KSN *	<string>	Key Serial number obtained by sending a command 09 to the reader. For this operation, the KSN should be obtained from the reader before obtaining the update token.
UpdateToken*	<string>	Update token obtained from the reader using command 19.

Note: * = Required

2.8.2 OUTPUT PROPERTIES

Property	Value	Value Description
CustomerTransactionId	<string>	Customer transaction ID
DateCreated	<string>	Created Date
DateModified	<string>	Modified Date
ID	int	ID of firmware
Description	<string>	Description
File	<string>	Hex
Name	<string>	Name of the firmware
PartNumber	<string>	PartNumber value
PostloadCommands	<string>	List of Firmware commands
PreloadCommands	<string>	List of Firmware commands
TargetID	byte	TargetID of firmware
Type	<string>	Type of firmware
Version	<string>	Version of firmware

GetFirmwareByMUT Request:

```
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Body>
    <GetFirmwareByMUT
xmlns="http://www.magensa.net/RemoteServices/v2/">
      <request
xmlns:a="http://schemas.datacontract.org/2004/07/RemoteServicesv2.Core
" xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
        <a:Authentication>
          <a:CustomerCode>customercode</a:CustomerCode>
          <a:Password>password</a:Password>
          <a:Username>username</a:Username>
        </a:Authentication>
        <a:BillingLabel/>
        <a:CustomerTransactionID/>
        <a:FirmwareID>1</a:FirmwareID>
        <a:KSN>9010010B50860200000A</a:KSN>

<a:UpdateToken>423530383630323037313631394141004D53434B545354303031F59
7EDF043A30956DF93</a:UpdateToken>
      </request>
    </GetFirmwareByMUT>
  </s:Body>
</s:Envelope>
```

GetFirmwareByMUT Response:

```
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Body>
    <GetFirmwareByMUTResponse
xmlns="http://www.magensa.net/RemoteServices/v2/">
      <GetFirmwareByMUTResult
xmlns:a="http://schemas.datacontract.org/2004/07/RemoteServicesv2.Core"
xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
        <a:CustomerTransactionId/>
        <a:MagTranId>e4aaf294-47e1-48b7-a5eb-7290cbe2cf94</a:MagTranId>
        <a:Firmware>
          <a:DateCreated>2016-08-29T17:12:26.753</a:DateCreated>
          <a:DateModified>2016-08-29T17:12:26.753</a:DateModified>
          <a:Description>BLE 1000002650 version C04 firmware</a:Description>
          <a:File>File Response value</a:File>
          <a:ID>1</a:ID>
          <a:Name>BLE_1000002650</a:Name>
          <a:PartNumber>1000002650</a:PartNumber>
          <a:PostloadCommands>
            <a:FirmwareCommand>
              <a:Operation>NOMAC</a:Operation>
              <a:Value>0200</a:Value>
            </a:FirmwareCommand>
            <a:FirmwareCommand>
              <a:Operation>WAIT</a:Operation>
              <a:Value>5000</a:Value>
            </a:FirmwareCommand>
            <a:FirmwareCommand>
              <a:Operation>DETECTDEVICE</a:Operation>
              <a:Value/>
            </a:FirmwareCommand>
            <a:FirmwareCommand>
              <a:Operation>NOMAC</a:Operation>
              <a:Value>970101</a:Value>
            </a:FirmwareCommand>
            <a:FirmwareCommand>
              <a:Operation>DETECTDEVICE</a:Operation>
              <a:Value/>
            </a:FirmwareCommand>
          </a:PostloadCommands>
          <a:PreloadCommands>
            <a:FirmwareCommand>
              <a:Operation>NOMAC</a:Operation>
              <a:Value>970101</a:Value>
            </a:FirmwareCommand>
            <a:FirmwareCommand>
              <a:Operation>MAC</a:Operation>
              <a:Value>91040A3F1434</a:Value>
            </a:FirmwareCommand>
          </a:PreloadCommands>
        </a:GetFirmwareByMUTResult>
      </GetFirmwareByMUTResponse>
    </s:Body>
  </s:Envelope>
```

```
        </a:FirmwareCommand>
        <a:FirmwareCommand>
          <a:Operation>DETECTDEVICE</a:Operation>
          <a:Value/>
        </a:FirmwareCommand>
        <a:FirmwareCommand>
          <a:Operation>WAIT</a:Operation>
          <a:Value>5000</a:Value>
        </a:FirmwareCommand>
      </a:PreloadCommands>
      <a:TargetID>2</a:TargetID>
      <a:Type>Test</a:Type>
      <a:Version>C04</a:Version>
    </a:Firmware>
  </GetFirmwareByMUTResult>
</GetFirmwareByMUTResponse>
</s:Body></s:Envelope>
```

3 Status Codes and Messages

Status Codes and Messages returned by Magensa for PPSCRAv2 Operations.

Internal errors

Property	StatusMsg	Notes
5000	Unknown Error	

Input Validation Errors

Property	StatusMsg	Notes
602	KSN is required	
603	CustomerCode is required	
604	Username is required	
605	Password is required	
607	KSN is not valid	Either the value was not HEX, or the value was too long.
615	CustomerTransactionID is not valid	Occurs if the length is more than 256 characters.
616	BillingLabel is not valid	Occurs if the length is more than 64 characters.
617	KeyID is not valid	Value was 0
618	UpdateToken is not valid	Value was not HEX or too long.
619	UpdateToken is required	
620	CommandID is not valid	Value was 0.

Other Errors

Property	StatusMsg	Notes
701	Access Denied	Returned, when user cannot be authenticated or authorized for any reason such as invalid username, invalid password or account locked.
702	Device Not Allowed	The device is not active in the database.
704	Invalid command type for this	

Appendix A