

# ODF for GSM Quick Start Guide

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This guide will give instructions on how to configure a GSM device with Open Mobile, using Open Device Framework (ODF) integration.

In outline, the process of simple integration consists of the following:

- I. **Customize the GSM configuration file:** In an XML editor, customize the MBLiteGprs.xml file for your selected device. Then, copy the customized file to a system on which you will test the device.
- II. **Test:** Test the integration. Customize an AdminWWDevices\*.xml file for your operating system, copy it to your test system, and then attempt an Open Mobile connection with the device.
- III. **Upload the file to a profile and publish:** Include your customized MBLiteGprs.xml in an Open Mobile profile, and then push the profile to users so they can connect with the device.

## Technical Requirements

You will need a test system and a test GSM device of the type to be integrated.

- The device type must support standard AT commands.
- You will need an XML editor to modify the files.
- Microsoft Core XML Services (MSXML) 6.0 must be present on the test system to validate the customized XML files.

## Customizing the GSM Configuration File

To customize the configuration file for a GSM device,

1. Create a copy of the file SampleMBLiteGprs.xml.
2. Rename the copy to MBLiteGprs.xml.
3. Open MBLiteGprs.xml in an XML editor.
4. In the <Device> block, customize each data element for your selected device, as described in the table below.
5. Save the file.
6. Copy MBLiteGprs.xml to \Program Files\iPass\Open Mobile\bin.

7. Launch `\Program Files\iPass\Open Mobile\bin\ODFVerifier.html`.
8. From the drop-down list, select `MBLiteGprs.xml`. Then click **Validate File**.
9. If valid, proceed to testing the integration (see page 3). If the file does not pass validation, return to Step 4 and ensure your XML is valid. Then, repeat Step 8.

## Data Elements in MBLiteGprs.xml

Data Element	Description/Notes
<b>Device</b>	The <code>id</code> attribute uniquely identifies the device and must be in the range 3001 to 4000, inclusive. For example, <code>&lt;Device id="3001"&gt;</code> .
<b>RegInfo</b>	<p>Values for <code>&lt;PortName&gt;</code>, <code>&lt;PnPEnum&gt;</code>, and <code>&lt;PnPID&gt;</code> can be obtained from either Windows Device Manager. Alternatively, you can get values for <code>&lt;PnPEnum&gt;</code> and <code>&lt;PnPID&gt;</code> from the registry.</p> <p><b>Using Windows Device Manager:</b></p> <ul style="list-style-type: none"> <li>• For <i>Windows Vista, Windows 7, or Windows 8</i>: <ul style="list-style-type: none"> <li>○ For <code>&lt;PortName&gt;</code>, expand <b>Ports</b>. Right-click the AT Command port and pick <b>Properties</b>. On the <b>Details</b> tab, select <i>Device Description</i> from the drop-down list. Copy the name given.</li> <li>○ For <code>&lt;PnPEnum&gt;</code> and <code>&lt;PnPID&gt;</code>, expand <b>Ports</b>. Right-click the AT Command port and pick <b>Properties</b>. On the <b>Details</b> tab, select <i>Device Instance Path</i> from the <b>Property</b> list and note the value. <code>PnPEnum</code> is the entry before the first slash, and <code>PnPID</code> is the entry between the first slash and the second slash.</li> </ul> </li> <li>• For <i>Windows XP</i>: <ul style="list-style-type: none"> <li>○ For <code>&lt;PortName&gt;</code>, expand <b>Ports</b>. Right-click the AT Command port and pick <b>Properties</b>. On the <b>Details</b> tab, note the name displayed at the top.</li> <li>○ For <code>&lt;PnPEnum&gt;</code> and <code>&lt;PnPID&gt;</code>, expand <b>Ports</b>. Right-click the AT Command port and pick <b>Properties</b>. On the <b>Details</b> tab, select <i>Device Instance ID</i> from the list and note the value. <code>PnPEnum</code> is the entry before the first slash, and <code>PnPID</code> is the entry between the first slash and the second slash.</li> </ul> </li> </ul> <p><b>Using the Registry:</b></p> <ol style="list-style-type: none"> <li>1. In Regedit, navigate to <b>HKLM\SYSTEM\CurrentControlSet\Services\Modem\Enum</b>.</li> <li>2. In the <b>Enum</b> folder, locate two files named 0 and 1. One of these will not be present when the device is plugged out. Select this file.</li> <li>3. <code>PnPEnum</code> is the entry before the first slash, and <code>PnPID</code> is the entry between the first slash and the second slash.</li> </ol> <p>Any ampersand (&amp;) characters in a value must be followed by the string 'amp;'. For example, if the value of <code>PnPID</code> in the registry is <code>Vid103&amp;Pid1347&amp;Mi03</code>, it would be entered in the XML as <code>Vid103&amp;amp;Pid1347&amp;amp;Mi03</code>.</p> <p><code>&lt;DeviceClassGUID&gt;</code> can be left at its default value.</p> <p><b>Notes on Ports:</b></p> <ul style="list-style-type: none"> <li>• Devices from some families, such as Sierra, do not respond to AT commands when integrated using the modem port. For such devices, the integration must be performed using an additional port, such as the AT Command Port.</li> <li>• If the AT Command Port is not available, then locate a port through which the device will accept AT commands, and specify it as the primary, (<code>&lt;AdditionalPort PrimaryPort = "true"&gt;</code>) This example illustrates the proper format for specifying the additional port. <pre> &lt;ModemPort&gt;   &lt;PortName&gt;__Novatel Wireless Ovation HSDPA   Modem_ &lt;/PortName&gt; </pre> </li> </ul>

Data Element	Description/Notes
	<pre> &lt;PnPEnum&gt;__USB__&lt;/PnPEnum&gt; &lt;PnPID&gt;__VID_1410&amp;amp;PID_4400&amp;amp;MI_00__&lt;/PnPID&gt; &lt;DeviceClassGUID&gt;2c7089aa-2e0e-11d1-b114- 00c04fc2aae4&lt;/DeviceClassGUID&gt; &lt;/ModemPort&gt; &lt;AdditionalPort PrimaryPort = "true"&gt;   &lt;PortName&gt;__Novatel Wireless AT Command Port (UMTS)__&lt;/PortName&gt;   &lt;PnPEnum&gt;__USB__&lt;/PnPEnum&gt;    &lt;PnPID&gt;__VID_1410&amp;amp;PID_4400&amp;amp;MI_00__&lt;/PnPID&gt; &lt;/AdditionalPort&gt; </pre> <ul style="list-style-type: none"> <li>In rare cases, the modem port arrival notification may not be properly supplied by the operating system. If so, and the NDIS port is available, the NDIS port must be configured as an additional port so that Open Mobile can detect device arrivals through the port.</li> </ul>
<b>DeviceInfo</b>	<p>Using AT commands in PuTTY or HyperTerminal, determine the values of manufacturer and model and note them here, as follows:</p> <pre> &lt;DeviceInfo&gt;   &lt;Manufacturer&gt;Example Manufacturer&lt;/Manufacturer&gt;   &lt;Model&gt;Example Model&lt;/Model&gt; &lt;/DeviceInfo&gt; </pre>
<b>DeviceSettings</b>	<ul style="list-style-type: none"> <li>Set &lt;PnpIDShared&gt; to true when a device shares its PnPEnum and PnPID values with any other devices.</li> <li>For embedded devices, set &lt;RadioEnabled&gt; to true; otherwise, leave as false.</li> <li>Leave &lt;RatModeEnabled&gt; as true.</li> </ul>
<b>ResumeDelay</b>	<p>Represents the resume delay for the operating system, in milliseconds. Set the value to 45000 (45 seconds), as follows:</p> <pre> &lt;ResumeDelay&gt;   &lt;WinXP&gt;45000&lt;/WinXP&gt;   &lt;Vista&gt;45000&lt;/Vista&gt;   &lt;Win7&gt;45000&lt;/Win7&gt;   &lt;Default&gt;45000&lt;/Default&gt; &lt;/ResumeDelay&gt; </pre>
<b>DeviceFlags</b>	<ul style="list-style-type: none"> <li>If the device supports hot plug-out, set the value to 31: <pre> &lt;DeviceFlags&gt;   &lt;Flag&gt;31&lt;/Flag&gt;   &lt;Flag&gt;0&lt;/Flag&gt; &lt;/DeviceFlags&gt; </pre> </li> <li>If the device is embedded, set the value to 32: <pre> &lt;DeviceFlags&gt;   &lt;Flag&gt;32&lt;/Flag&gt;   &lt;Flag&gt;0&lt;/Flag&gt; &lt;/DeviceFlags&gt; </pre> </li> </ul>
<b>DeviceFunctionality</b>	<ul style="list-style-type: none"> <li>The Family attribute in &lt;GetNetworkType&gt; has a valid value of <i>Option</i>, <i>Huawei</i>, <i>Novatel</i>, or <i>Ericsson</i>. <ul style="list-style-type: none"> <li>Some device families include no AT commands to determine network type. For these devices, the &lt;GetNetworkType&gt; functionality can be specified as follows: <pre> &lt;GetNetworkType&gt;   &lt;DefaultOutput&gt;UMTS&lt;/DefaultOutput&gt; &lt;/GetNetworkType&gt; </pre> </li> </ul> </li> <li>The Family attribute in &lt;SetRatMode&gt; has a valid value of <i>Option</i>, <i>Huawei</i>, <i>Novatel</i>, <i>Ericsson</i>, or <i>Sierra</i>.</li> </ul>

## Testing the Integration

After MBLiteGprs.xml is created and validated, the device integration may be tested locally before inclusion in an Open Mobile profile. This will require the creation of an AdminWWDevices\*.xml file for your test operating system. (To test on multiple operating systems, create one file for each and repeat this process.)

### To create an AdminWWDevices\*.xml file:

1. Depending on the test OS, create a copy of the sample file:
  - For Windows XP, copy SampleAdminWWDevices.xml.
  - For Windows Vista, copy SampleAdminWWDevicesVista.xml.
  - For Windows 7 or Windows 8, copy SampleAdminWWDevicesWin7.xml.
2. Depending on the test OS, rename the copy.
  - For Windows XP, rename to AdminWWDevices.xml.
  - For Windows Vista, rename to AdminWWDevicesVista.xml.
  - For Windows 7 or Windows 8, rename to AdminWWDevicesWin7.xml.
3. Open the renamed file in an XML editor.
4. Add a `<wwdfdb:Device>` XML block to the renamed file. The block needs to include these tags:
  - `wwdfdb:Device`: The `id` attribute must match the `id` attribute value given value given in MBLiteGprs.xml.
  - `wwdfdb:Mfg`: Device manufacturer.
  - `wwdfdb:Model`: Device model.
  - `wwdfdb:Bin`: Path to MBLiteGprs.dll. Use a value of `%Application%\MBLiteGprs.dll`.
  - `wwdfdb:ImplType`: Implementation type. Use a value of `Impl-V2`.
  - `wwdfdb:Ver`: ODF version. Use a value of `1.0.0.1`.
  - `wwdfdb:Status`: Device status. Use a value of `InUse`.

An example is shown below:

```
<wwdfdb:Device id="3001">
<wwdfdb:Mfg>Novatel Wireless</wwdfdb:Mfg>
<wwdfdb:Model>Ovation MC950D</wwdfdb:Model>
<wwdfdb:Bin>%Application%\MBLiteGprs.dll</wwdfdb:Bin>
<wwdfdb:ImplType>Impl-V2</wwdfdb:ImplType>
<wwdfdb:Ver>1.0.0.1</wwdfdb:Ver>
<wwdfdb:Status>InUse</wwdfdb:Status>
</wwdfdb:Device>
```

5. Save the file.
6. Copy the file to \Program Files\iPass\Open Mobile\bin.
7. Launch \Program Files\iPass\Open Mobile\bin\ODFVerifier.html.
8. From the drop-down list, select the modified *AdminWWDevices\*.xml* for your operating system. Then click **Validate File**.
9. If the file does not pass validation, return to Step 4 and ensure your XML is valid. Then repeat Step 8.

### **Next Steps**

Ensure that MBLiteGprs.xml is also copied to \Program Files\iPass\Open Mobile\bin.

Now you can restart the Open Mobile service and test the ODF integration locally, by attempting to connect with the device using Open Mobile.

If the connection and any other required tests are successful, you can include MBLiteGprs.xml in an Open Mobile profile.

## **Additional Information**

- For more information on including ODF files in an Open Mobile profile, consult [http://help.ipass.com/doku.php?id=device\\_support#my\\_devices\\_support](http://help.ipass.com/doku.php?id=device_support#my_devices_support).
- For a more detailed discussion of ODF integration, consult the [ODF Integration Workbook](#).

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