

# Telit UC864 SIM Access Profile User Guide

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Telit appreciates feedback from the users of our information.

## 1.4 Document Organization

This document contains the following chapters:

“Chapter 1: “Introduction” provides a scope for this document, target audience, contact and support information, and text conventions.

“Chapter 2: “System Overview” gives a brief overview about the spectrum of features.

“Chapter 3: “Software Architecture Details” provides a broad description of the software architecture of the entire system.

“Chapter 4: “SIM Access Profile” describes the profile as far as structure, entities, and protocols involved.

“Chapter 5: “Setup and installation” describes in details the step to take in order to set up the entire system.

“Chapter 6: “Connection with a SAP server” provides an example of the sequence of AT commands needed to connect the BT SAP Client Telit UC864 to the capable Bluetooth phone (SAP server).

“Chapter 7: “AT Commands” provides information about dedicated AT commands that activate the Remote SIM feature in the Telit module.





## 2 System Overview

### 2.1 General system

The External Host (which runs the customer application) controls directly Telit module with standard Telit AT command using BT profiles like Sim Access Profile.

The Sim Access Profile (SAP) defines a protocol and related procedures that allow access to a remote SIM card using Bluetooth (BT).

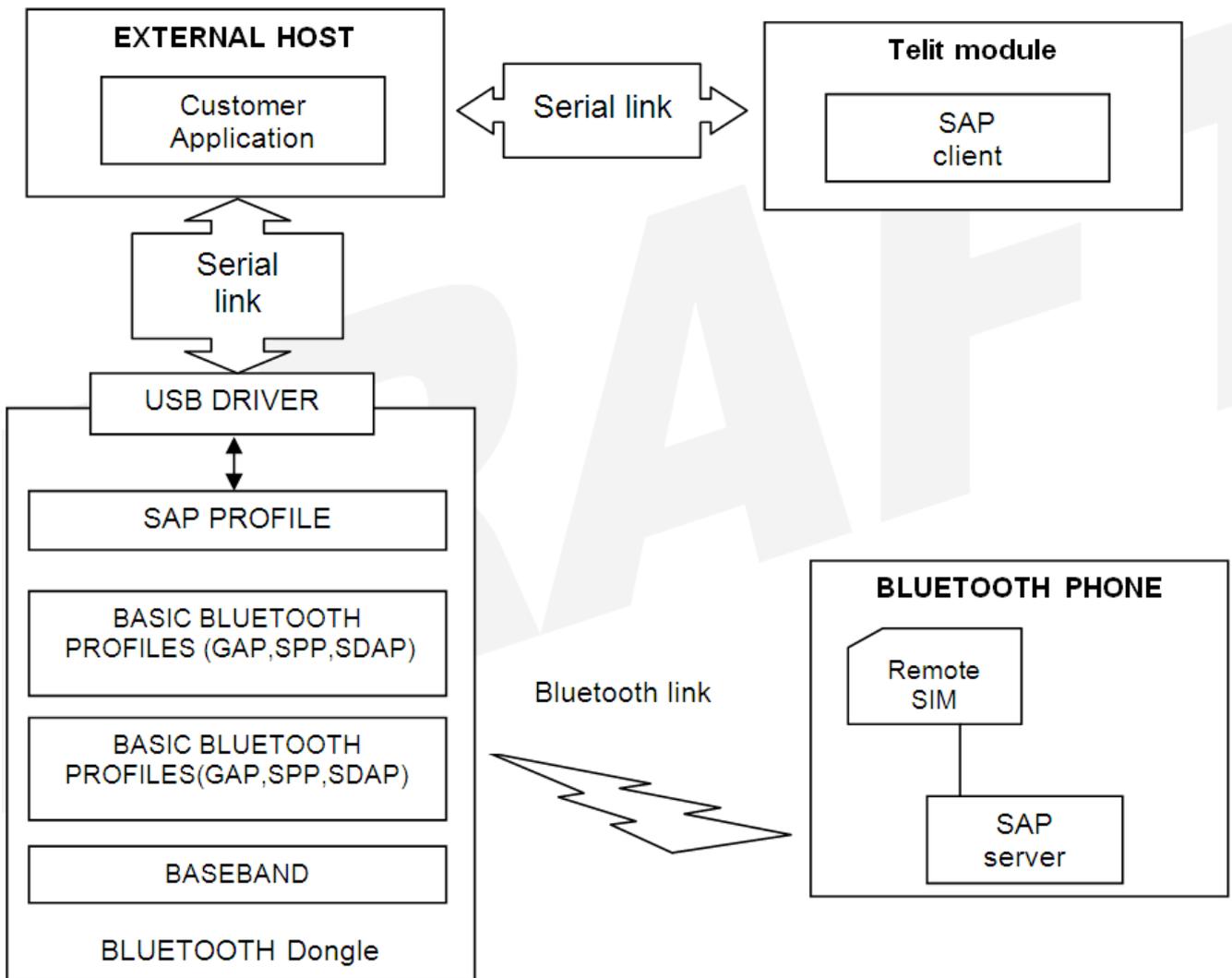
In such a system, the Telit module accesses the remote SIM, which is in the remote BT device, through the BT USB dongle, using a Bluetooth link.

This feature allows the registration of the Telit module in GSM, GPRS and UMTS networks using all the subscription information stored in the remote SIM.



### 3 Software architecture details

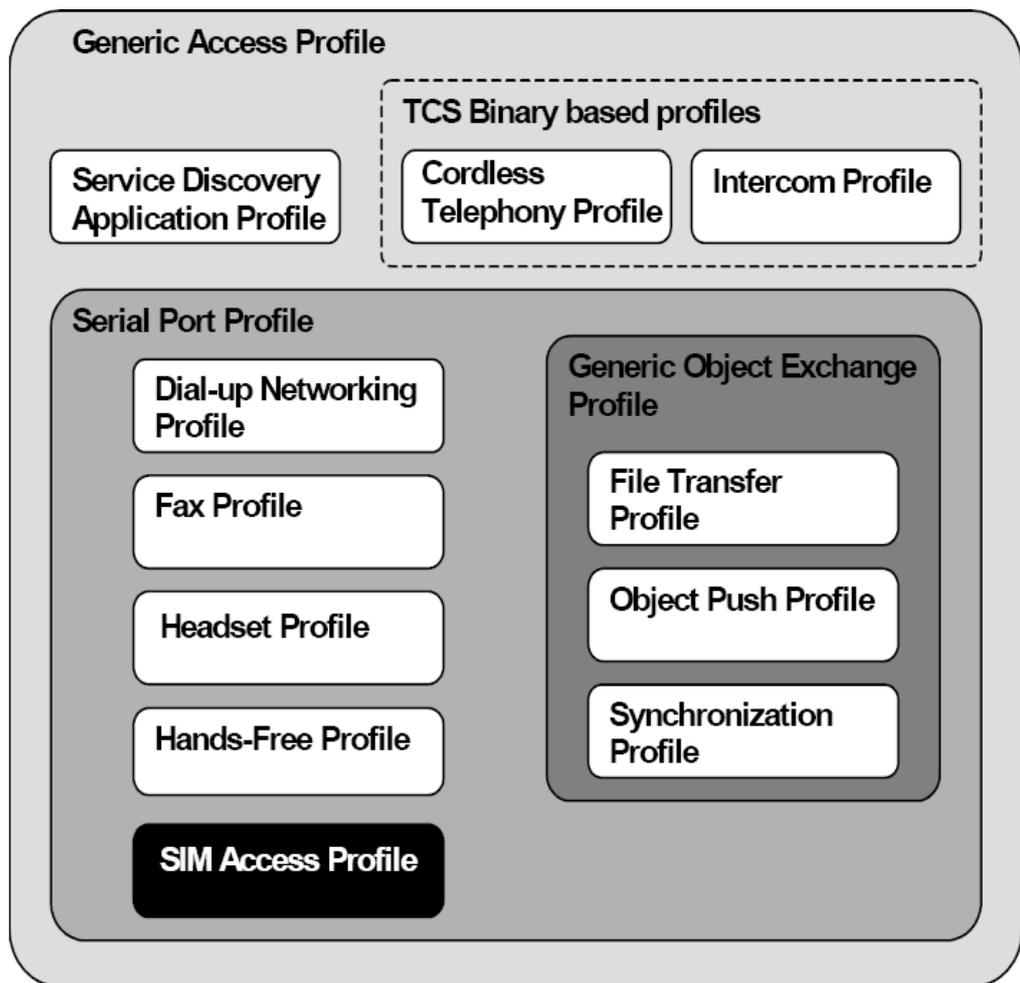
The following picture shows the software architecture of the entire system, when Telit SAP Client is not yet activated:





## 4 Sim Access Profile

This picture shows the Bluetooth profile structure and the dependencies of the profiles.



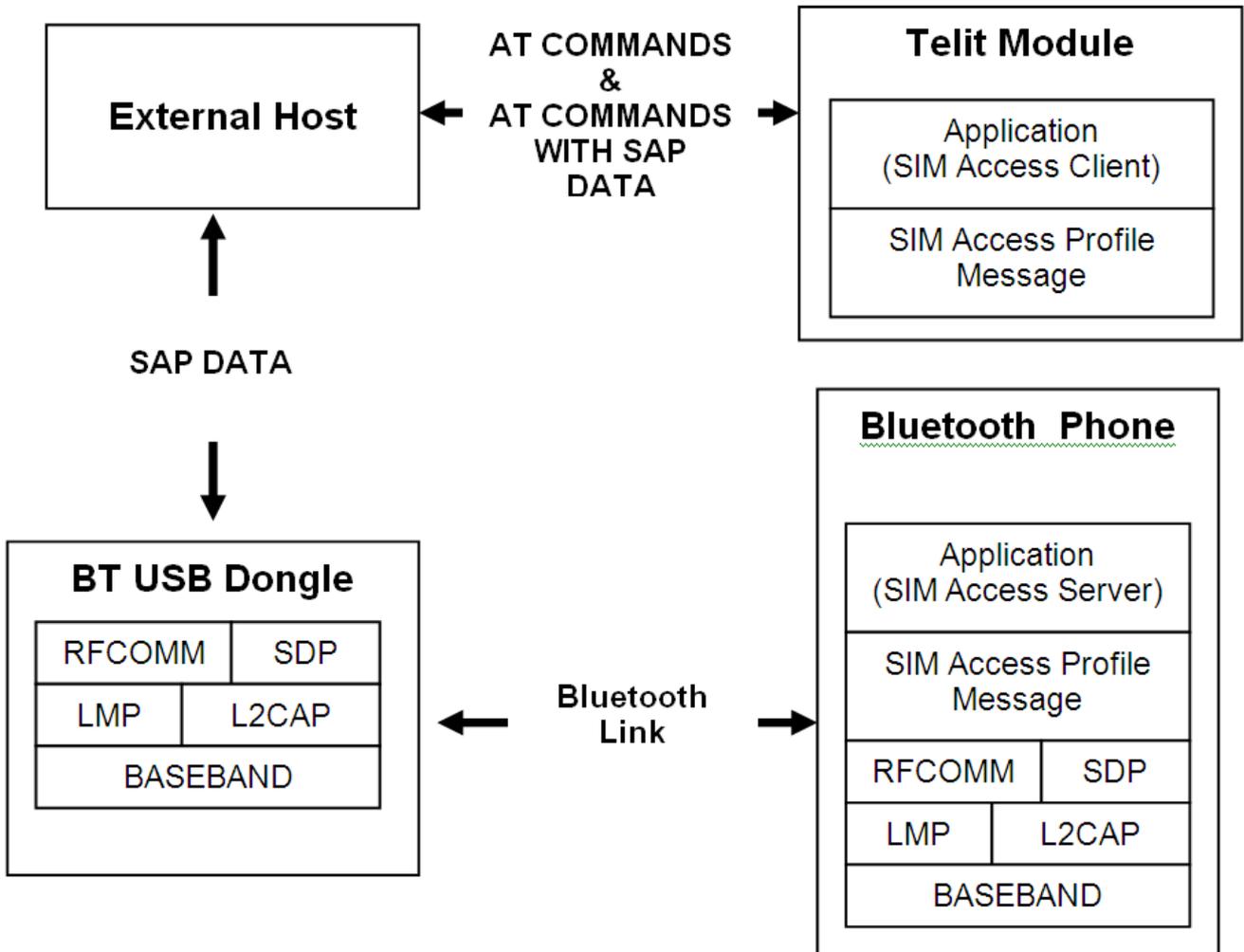
The Sim Access Profile is an extension of both the Serial Port Profile and the Generic Access Profile.



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The picture below shows the protocols and entities used in this profile; it also shows where each part is implemented.



The following roles are defined for this profile:

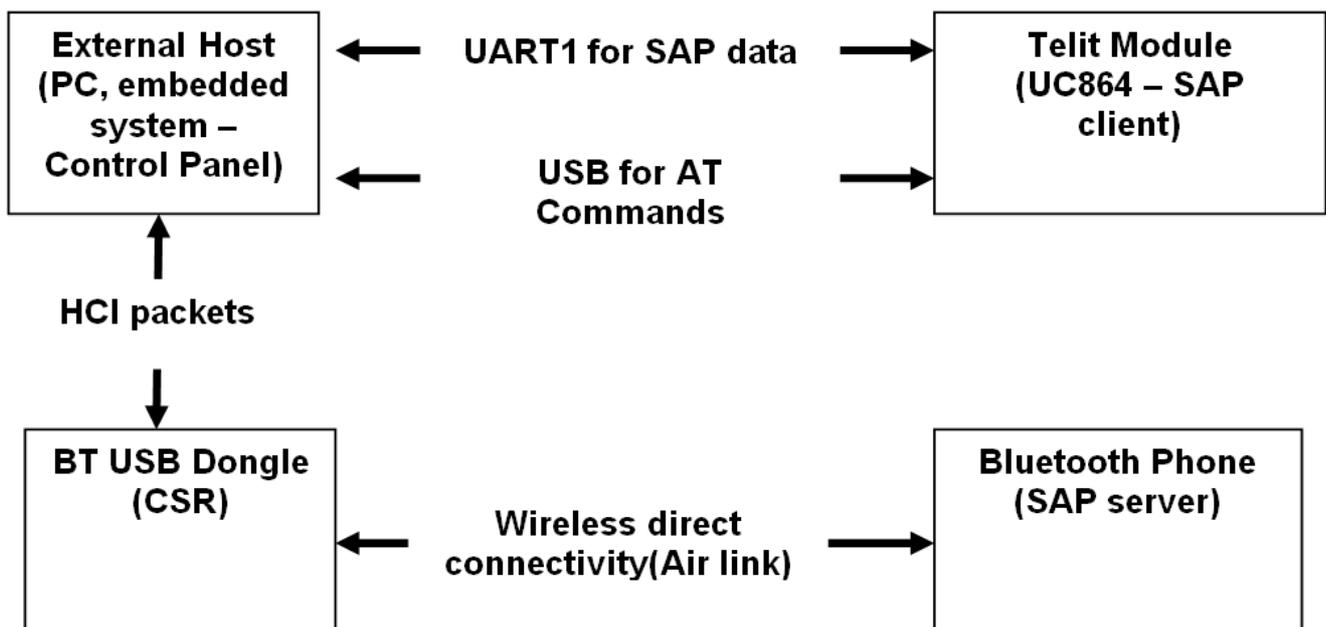




## 5 Setup and Installation

In order to setup the entire system, the next steps shall be followed:

- 1) Install the UC864 USB drivers
- 2) Note the numbers of the 3 COM ports in Control Panel. (e.g. COM4, COM1, COM6)
- 3) Install JAVA
- 4) Plug in the Bluetooth dongle and install the CSR drivers. It may be necessary to manually intervene and point Windows at 'usbspi.inf'. Don't allow any automatic installation of Widcom, Toshiba or other stacks. Check in Windows Control Panel that driver is CSR 1.24



## 6 Connection with a SAP server

This chapter provides an example of the sequence of AT commands needed to connect the BT SAP Client Telit UC864 to the capable Bluetooth phone (SAP server).

### 6.1 Procedure to activate and run Telit SAP Client

In a first phase, the External host has established a bluetooth link to the USB dongle using SAP profile.

Now the system is ready to enter in SAP mode.

The following command starts the Telit SAP client. It uses some specific parameters.

More details about this command are given in Chapter 8.

```
AT#RSEN=1,1,0,2,0  
OK
```

If the Telit SAP Client starts successfully, the following URC (Unsolicited Result Code) message will be sent toward the External Host if the SAP :

```
#RSEN=1
```

After that, SIM data will be exchanged between Client and Server using SAP messages.

### 6.2 Use SAP feature

Once the SAP is active the External Host can send standard AT COMMAND in order to place a call, send and receive SMS, connect via GSM, GPRS and UMTS network.

Before using these functions, if required, the SIM PIN must be issued with the standard AT COMMAND:

```
AT+CPIN=1234  
OK
```



## 6.3 Exit from SAP mode

Once the preliminary exchange of SAP messages between SAP Client and SAP Server is completed, the External Host can stop the Telit SAP Client, issuing the specific AT Command:

```
AT#RSEN=0  
OK
```



### NOTE:

It has been seen that this command works properly only after the module finishes reading completely the remote SIM.

If the Telit SAP Client stops successfully, the following URC (Unsolicited Result Code) message will be sent to the External Host:

```
#RSEN=0
```

### 6.3.1 Link supervision

Each physical link has a timer that is used for link supervision. This timer is used to detect physical link loss caused by devices moving out of range, or being blocked by interference, a device's power-down, or other similar cases of failure.



## 7 AT commands

In the following paragraph you can find more information about dedicated AT commands that activate the Remote SIM feature in the Telit module.

### 7.1 #RSEN – Remote SIM Enable

#RSEN – Remote SIM Enable	
<b>AT#RSEN=&lt;mode&gt;[, &lt;sapformat&gt;[, &lt;role&gt;[, &lt;muxch&gt;[, &lt;beacon&gt;]]]]</b>	<p>Set command is used to enable/disable the Remote SIM feature.</p> <p>Parameters:</p> <p><b>&lt;mode&gt;</b> 0 - disable 1 - enable</p> <p><b>&lt;sapformat&gt;</b> 0 - X-SAP 1 - binary SAP (default)</p> <p><b>&lt;role&gt;</b> 0 - remote SIM Client (default) 1 - remote SIM Server (unsupported)</p> <p><b>&lt;muxch&gt;</b> - MUX Channel Number; mandatory if <b>&lt;mode&gt;=1</b> and <b>&lt;sapformat&gt;=1</b> 1..3 - dummy value</p> <p><b>&lt;beacon&gt;</b> - retransmission timer of SAP Connection Request 0 - only one transmission (default) 1..100 - timer interval in seconds.</p> <p>NOTES: If the module has a SIM inserted, when it receives the enable Command: - de-register from the actual network - de-initialize the current SIM.</p> <p>NOTE for <b>&lt;sapformat&gt;=1</b> (binary SAP): while RSEN is activate SAP connection status is signalled with following URC:</p> <p><b>#RSEN: &lt;conn&gt;</b></p>



#RSEN – Remote SIM Enable	
	where <b>&lt;conn&gt;</b> - connection status 0 - disconnected 1 - connected
AT#RSEN?	Read command returns the connection status of Remote SIM feature
AT#RSEN=?	Test command returns all supported values of Remote SIM Enable command



