

# Telit's DM Tester User Guide

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## APPLICABILITY TABLE

<p>UMTS   HSDPA 7.2</p> <p><b>UC864-E</b> Compact</p> 	<p>UMTS   WEDGE</p> <p><b>UC864-WDU</b> Compact</p> 
<p>UMTS   HSDPA 7.2</p> <p><b>UC864-E-AUTO</b> Compact</p> 	<p>UMTS   HSDPA 7.2</p> <p><b>UC864-K</b> Compact</p> 
<p>UMTS   WEDGE</p> <p><b>UC864-WD</b> Compact</p> 	<p>UMTS   HSDPA 7.2</p> <p><b>UC864-AK</b> Compact</p> 
<p>UMTS   HSDPA 7.2</p> <p><b>UC864-G</b> Compact</p> 	

**NOTE:** If it is not explicitly indicated, all the features described on the present document are applicable on all Telit Modules indicated in the tables above.



## Contents

<b>1. Introduction .....</b>	<b>6</b>
1.1 Scope .....	6
1.2 Document Organization .....	7
1.3 Document History .....	7
<b>2 Serial Communication .....</b>	<b>8</b>
2.1 Module on EVK2 .....	8
2.2 Module mounted on PCB .....	9
<b>3 Virtual port on PC .....</b>	<b>10</b>
<b>4 DMT connection. ....</b>	<b>12</b>
<b>5 Acronyms and Abbreviations .....</b>	<b>13</b>



Figure 1 USB position on interface board.....	8
Figure 2 Virtual serial port: UC864-E.....	10
Figure 3 virtual serial port: UC864-G.....	11
Figure 4 DMT dialog box.....	12



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# 1. Introduction

## 1.1 Scope

The purpose of this document is to describe the setup of the Telit DM Trace Tool and how to start and configure a Trace Session as it is supported by **Telit modules UMTS family**.

**DM Tester (DMT)** is a tool dedicated to tracing the behavior of the Telit module firmware (FW). To do this DMT has to be connected to the module by a USB serial link.

Once linked together, module can communicate with DMT and a sequence of binary data will be reported. For most scenarios and analysis we will not need to gather all the module traces, but rather only the traces related to the functionality of the investigation. This leads to the definition of “**Configuration file**” i.e. a file which define a subset of all the possible information that can be traced from the module. This is important because some of the information will not be useful in the investigation so it's important to gather the right amount of information by selecting the proper trace configuration.





## 1.2 Document Organization

This User Guide contains the following chapters:

- “Chapter 1 Introduction ”: provides a scope for this User Guide, text conventions, and related documents
- “Chapter 2 Serial Communication”: tutorial how to connect the **Telit module** to the DMT tool running on PC, with respect of the different type of connections it can exist
- “Chapter 3 Virtual port on PC ”: brief introduction to the concept of virtual port communication on PC
- “Chapter 4 DMT connection.”: shows how to set up a debug session with DMT application
- “Chapter 5 Acronyms and Abbreviations”: list of acronyms used

## 1.3 Document History

Revision	Date	Changes
0	28/01/2010	First release.
1	11/02/2010	DMT connection

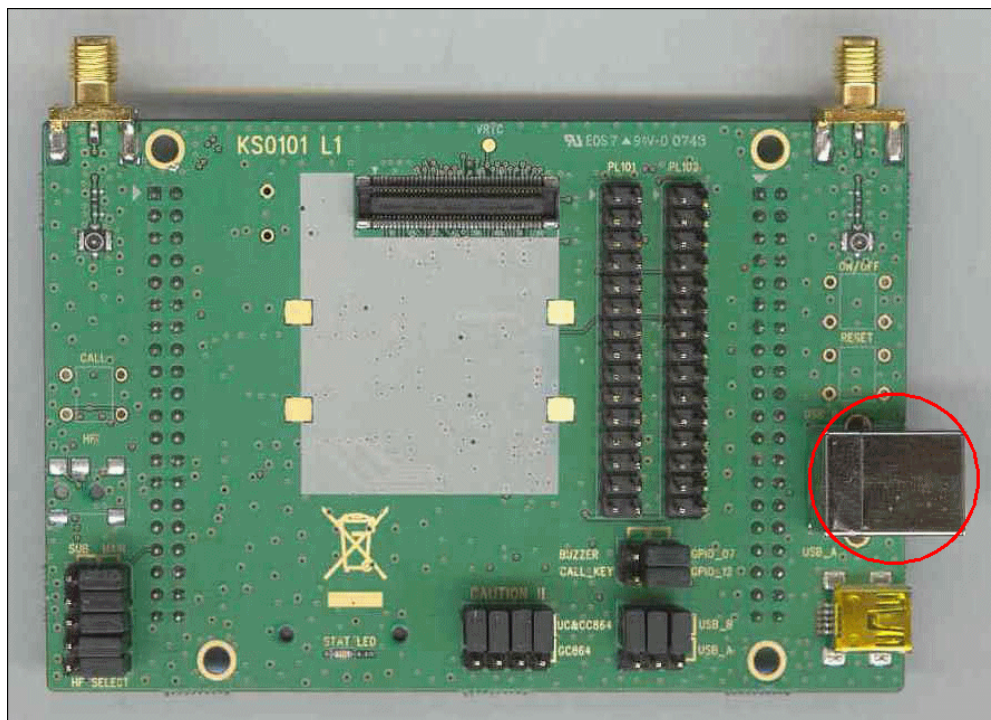


## 2 Serial Communication

The DMT tool communicates with UMTS modules via an USB connection.

### 2.1 Module on EVK2

USB port is available on EVK2 interface board trough USB B-type connector.



**Figure 1 USB position on interface board**





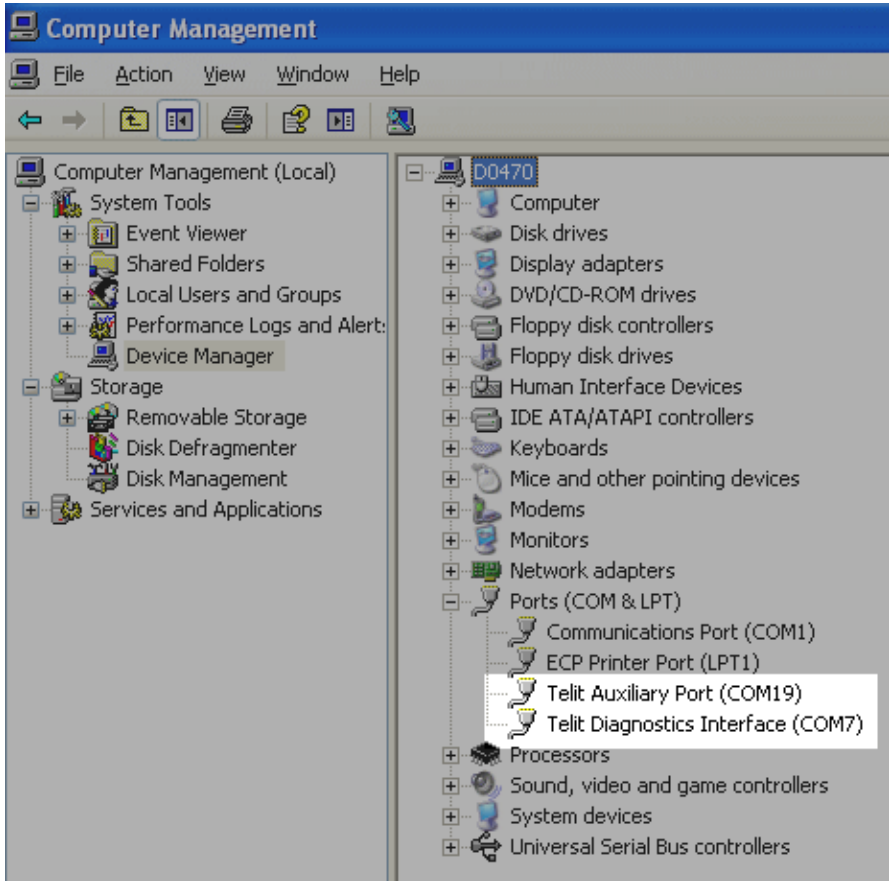
## 2.2 Module mounted on PCB

When UMTS module has been mounted on PCB the USB port can be reached at USB pins. Those pins of course have to be available externally. For this reason, at least in a first design phase it is suggested to connect them to a set of test points for debug reason.

Signal	UC864 Family Pad No	Description
USB_VBUS	48	Power supply for the internal USB transceiver. This pin is configured as an analog input or an analog output depending upon the type of peripheral device connected.
USB_D-	80	Minus (-) line of the differential, bi-directional USB signal to/from the peripheral device
USB D+	79	Plus (+) line of the differential, bi-directional USB signal to/from the peripheral device
USB_ID (for future use)	45	<p>Analog input used to sense whether a peripheral device is connected and if connected, to determine the peripheral type, host or slave</p> <p>UC864 Family does NOT support host device operation at the moment, that is, it works as a slave device. Consequently USB_ID must be opened (not connected).</p>

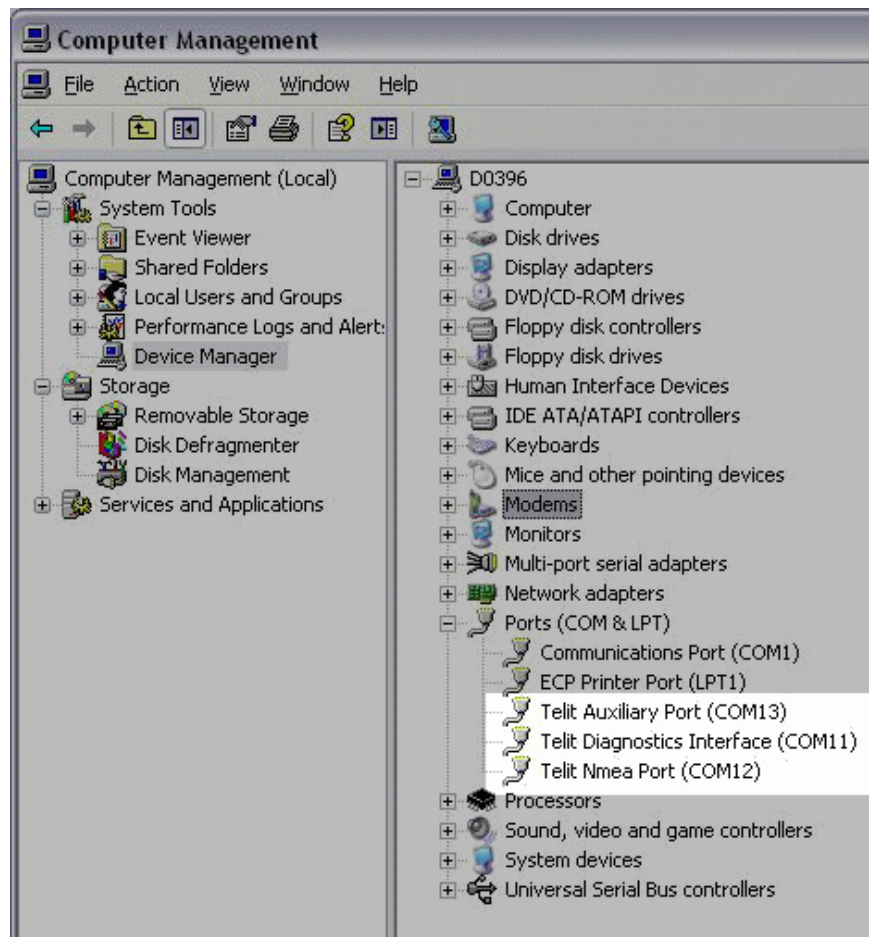


Once USB drivers have been installed on PC a set of Virtual port appears as soon as the UMTS module has been connected via USB port. Opening the Computer Management window, it is possible to see the installed ports and numbers used to identify them (see figg. 2 and 3). Please notice that UC864-G install 3 port rather than 2.



**Figure 2 Virtual serial port: UC864-E.**





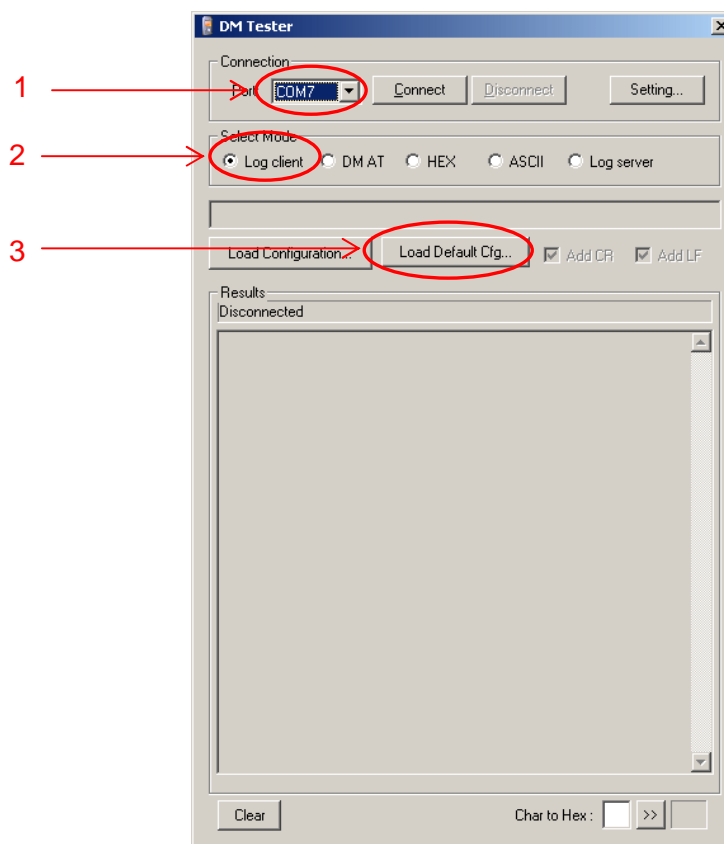
**Figure 3 virtual serial port: UC864-G**



## 4 DMT connection.

In order to activate DMT debug session do the following:

1. Power on the module.
2. Execute "DMtester.exe". The DMtester dialog box will appear.



**Figure 4 DMT dialog box**

3. On Port selector ( 1 ) select the Telit Diagnostic Port (in Fig 2, COM 7).
4. Click on Connect button.
5. Select Log client ( 2 ).
6. Click on Load Default Cfg... ( 3 ), If you want to change dmc(QXDM configuration file), Click on Load Configuration and open the configuration file supplied with the tool.
7. Debug data start to be collected in binary form saved in a file in the same folder where the tool has been started, named automatically ( eg 01-28-16-54-08.bin ).
8. Debug file will be closed after Disconnect button press and ready to be sent.



## 5 Acronyms and Abbreviations

DMT	DM Tester
ME	Mobile Equipment
TE	Terminal Equipment (DTE or User Terminal)
UART	Universal Asynchronous Receiver Transmitter
FW	Telit module embedded firmware

