



Telit WHQL Windows 11 Drivers Installer

Software User Guide

1VV0301779 Rev. 1 – 2022-11-23

APPLICABILITY TABLE

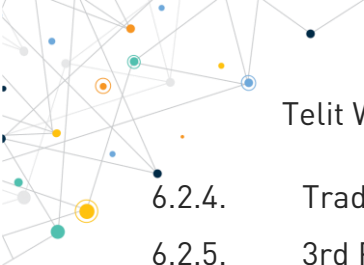
PRODUCTS
ATOP 3.5G
CE910 SERIES
DE910 SERIES
FD980 SERIES
FN980 SERIES
FN990 SERIES
GE910 SERIES
HE910 SERIES
LE866 SERIES
LE910 SERIES
LE910 V2 SERIES
LE910C1 SERIES
LE910C1-EUX SERIES
LE910C4 SERIES
LE910D1 SERIES
LE910S1 SERIES
LE910R1 SERIES
LE920 SERIES
LE920A4 SERIES
LE922A6 SERIES
LE940B6 SERIES
LM940 SERIES
LM960 SERIES
LN920 SERIES
ME910C1 SERIES
MEx10G1 SERIES
ML865G1 SERIES
UE910 SERIES



PRODUCTS
UL865 SERIES

CONTENTS

APPLICABILITY TABLE	2
CONTENTS	4
1. INTRODUCTION	6
1.1. Scope	6
1.2. Audience	6
1.3. Contact Information, Support	6
1.4. Symbol Conventions	7
1.5. Related Documents	7
2. TELIT WHQL WINDOWS 11 DRIVERS INSTALLER	8
2.1. Installer Details	8
2.2. How to Use the Installer	8
2.2.1. Attended Installation	8
2.2.2. Unattended Installation	8
2.2.3. USB Compositions with Network Interface	9
2.2.4. Avoid COM Port Proliferation	9
3. SUPPORTED MODEMS BY PRODUCT ID	10
3.1. Table of Product IDs	10
4. FEATURES	13
4.1. Table of Features	13
5. TROUBLESHOOTING	14
5.1. Debug information retrieval	14
6. PRODUCT AND SAFETY INFORMATION	15
6.1. Copyrights and Other Notices	15
6.1.1. Copyrights	15
6.1.2. Computer Software Copyrights	15
6.2. Usage and Disclosure Restrictions	16
6.2.1. License Agreements	16
6.2.2. Copyrighted Materials	16
6.2.3. High Risk Materials	16



6.2.4.	Trademarks	17
6.2.5.	3rd Party Rights	17
6.2.6.	Waiver of Liability	17
6.3.	Safety Recommendations	18
7.	GLOSSARY	19
8.	DOCUMENT HISTORY	20

1. INTRODUCTION

1.1. Scope

This document describes Windows 11 WHQL Drivers Installer. All the features and solutions described in this document are applicable to all the variants listed in the applicability table.

1.2. Audience

This document is intended for Telit customers, who need to use Telit products with Windows 11 operating system.

1.3. Contact Information, Support

For general contact, technical support services, technical questions and report of documentation errors contact Telit Technical Support at:

- TS-EMEA@telit.com
- TS-AMERICAS@telit.com
- TS-APAC@telit.com
- TS-SRD@telit.com
- TS-ONEEDGE@telit.com

Alternatively, use:

<https://www.telit.com/contact-us/>

For detailed information about where you can buy the Telit modules or for recommendations on accessories and components visit:

<https://www.telit.com>

Our aim is to make this guide as helpful as possible. Keep us informed of your comments and suggestions for improvements.

Telit appreciates the user feedback on our information.

1.4. Symbol Conventions



Danger: This information MUST be followed or catastrophic equipment failure or personal injury may occur.



Warning: Alerts the user on important steps about the module integration.



Note/Tip: Provides advice and suggestions that may be useful when integrating the module.



Electro-static Discharge: Notifies the user to take proper grounding precautions before handling the product.

Table 1: Symbol Conventions

All dates are in ISO 8601 format, that is YYYY-MM-DD.

1.5. Related Documents

- AT Commands User Guide of the modem in use

2. TELIT WHQL WINDOWS 11 DRIVERS INSTALLER

2.1. Installer Details

This document covers Telit WHQL Drivers Installer version 11.01.0002.

Telit provides the following installer:

- **x64:** Telit WHQL Windows 11 Drivers for x64 architecture
 - **Upgrade Code:** {DEE28AA4-E060-4ED1-B0C8-33C4AF0EB189}
 - **Product Code:** {D49F8221-FD79-416A-BDC8-BC8D1AE561D6}

2.2. How to Use the Installer

Telit WHQL Drivers Installer supports both attended and unattended installation processes. Administrative rights are required to install the package.

2.2.1. Attended Installation

Run the installer package and, after the welcome screen, choose the preferred installation choice:

- **Complete:** all the drivers are installed.
- **Custom:** only the selected drivers are installed.

Click the *Next* button to start the installation.

2.2.2. Unattended Installation

Type the following line to install all the drivers:

```
> msixexec /i <package name> /qn
```

e.g.

```
> msixexec /i TelitWHQLDriversx64_Win11.msi /qn
```

To install a subset of drivers type:

```
> msixexec /i <package name> /qn ADDLOCAL=<features set>
```

e.g.

```
> msixexec /i TelitWHQLDriversx64_Win11.msi /qn ADDLOCAL=FlashUSB
```

Table 3: Features lists all the available features.

2.2.3. USB Compositions with Network Interface

Some USB compositions present a network interface that can be used for establishing a data connection.

When the data connection is up, the USB network interface could conflict with other network interfaces already available in the operating system: Windows network configuration should be managed in order to have all the interfaces to coexist properly.

2.2.4. Avoid COM Port Proliferation

When modems with different serial numbers are plugged into the same host system, a new set of serial ports will be created. In order to avoid this behavior and reuse the same port numbers the registry should be modified according to the file:

```
C:\Program (x86)\Telit\WHQLDrivers_Win11\usb_xhci_avoid_COM_port_proliferation.reg
```

Files

In order to avoid COM port proliferation:

- If already installed, from Device Manager uninstall all devices for which COM port proliferation should be avoided.
- Verify that the module is not connected to the host.
- Customize the registry according to the instructions in the file.
- Double click on the customized registry file and accept to modify registry.
- Connect the module.



Warning: these keys modify a Windows behavior and they are not strictly related to Telit drivers. Not all the host controllers support this feature, so they can be ineffective. Further information in [Microsoft Hardware Dev Center](#).

3. SUPPORTED MODEMS BY PRODUCT ID

3.1. Table of Product IDs

Following a list of Product IDs (PIDs) supported by the installer.

When a composition requires an inbox driver, the device type is reported. Inbox drivers are not installed by Telit installer since they belong natively to the operating system.

For details on the composition please refer to the AT Commands User Guide of the modem in use.

Product ID	Inbox Driver
0x0021	N/A
0x0022	N/A
0x0023	N/A
0x0024	N/A
0x0025	N/A
0x0032	MBIM
0x0035	N/A
0x0036	N/A
0x0037	N/A
0x0100	N/A
0x1000	N/A
0x1001	N/A
0x1002	N/A
0x1003	N/A
0x1004	N/A
0x1005	N/A
0x1006	N/A
0x1010	N/A
0x1011	MBIM
0x1012	N/A
0x1013	N/A
0x1014	N/A
0x1015	N/A
0x1017	N/A

0x1018	N/A
0x1019	N/A
0x101B	MBIM
0x1031	N/A
0x1032	N/A
0x1034	N/A
0x1036	N/A
0x1037	N/A
0x1038	N/A
0x103A	N/A
0x103B	N/A
0x103C	N/A
0x1040	N/A
0x1041	MBIM
0x1042	RNDIS
0x1044	MBIM
0x1045	RNDIS
0x1050	N/A
0x1051	MBIM
0x1052	RNDIS
0x1054	N/A
0x1055	N/A
0x1056	RNDIS
0x1057	N/A
0x1058	N/A
0x1060	N/A
0x1061	MBIM
0x1062	RNDIS
0x1066	MBIM
0x1070	N/A
0x1071	MBIM
0x1072	RNDIS
0x1075	N/A

0x1100	N/A
0x1101	N/A
0x110A	N/A
0x1200	N/A
0x1201	N/A
0x1203	RNDIS
0x1204	MBIM
0x1205	MBIM
0x1207	N/A
0x1212	N/A
0x1216	N/A
0x1217	N/A
0x1221	N/A
0x1222	N/A
0x1223	N/A
0x1227	N/A
0x1228	N/A
0x1250	N/A
0x1251	RNDIS
0x1252	MBIM
0x1254	N/A
0x1255	N/A
0x1260	N/A
0x1261	N/A
0x1262	N/A
0x1400	N/A
0x1401	N/A
0x2300	RNDIS
0x7010	RNDIS
0x701A	RNDIS
0x8000	MBIM
0x800A	N/A

Table 2: Supported PIDs

4. FEATURES

4.1. Table of Features

Following the list of features exposed by the installer.

Feature	Description
MultipleInterface	Composite device driver for Intel-based modems
ACM	Serial port driver for Intel-based modems (requires MultipleInterface)
ECM	ECM network interface driver for Intel-based modems (requires MultipleInterface)
FlashUSB	Flashing device driver for Intel-based modems
ModemACM	Modem driver for Intel-based modems (requires MultipleInterface)
NCM	NCM network interface driver for Intel-based modems (requires MultipleInterface)
Filter	Composite device driver for Qualcomm-based modems
wwan	Rmnet mobile broadband adapter driver for Qualcomm-based modems (requires Filter)
Serial	Serial port driver for Qualcomm-based modems (requires Filter)
Modem	Modem driver for Qualcomm-based modems (requires Filter)
adb	Android debug bridge driver for Qualcomm-based modems (requires Filter)
qdbus	Logging device driver for Qualcomm-based modems (requires Filter)
InboxComposite	Inbox composite device driver
InboxRNDIS	Inbox RNDIS network interface driver
InboxACM	Inbox serial port driver
Tools	Qualcomm MTU service
Registry	Registry example to avoid COM port proliferation
ASRSerial	Serial port driver for ASR-based modems
ASRModem	Modem driver for ASR-based modems
ASRDiag	Diagnostic device driver for ASR-based modems

Table 3: Features

5. TROUBLESHOOTING

5.1. Debug information retrieval

When contacting customer support for help on troubleshooting issues, please make sure to carefully describe the scenario and provide the following logs:

- msixexec log output with /l*v option



Tip: In order to have a better support and solve the issue quickly, please follow these guidelines when collecting logs:

- Provide a brief description of the scenario captured in the logs
-

6. PRODUCT AND SAFETY INFORMATION

6.1. Copyrights and Other Notices

SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE

Although reasonable efforts have been made to ensure the accuracy of this document, Telit assumes no liability resulting from any inaccuracies or omissions in this document, or from the use of the information contained herein. The information contained in this document has been carefully checked and is believed to be reliable. Telit reserves the right to make changes to any of the products described herein, to revise it and to make changes from time to time without any obligation to notify anyone of such revisions or changes. Telit does not assume any liability arising from the application or use of any product, software, or circuit described herein; neither does it convey license under its patent rights or the rights of others.

This document may contain references or information about Telit's products (machines and programs), or services that are not announced in your country. Such references or information do not necessarily mean that Telit intends to announce such Telit products, programming, or services in your country.

6.1.1. Copyrights

This instruction manual and the Telit products described herein may include or describe Telit copyrighted material, such as computer programs stored in semiconductor memories or other media. The laws in Italy and in other countries reserve to Telit and its licensors certain exclusive rights for copyrighted material, including the exclusive right to copy, reproduce in any form, distribute and make derivative works of the copyrighted material. Accordingly, any of Telit's or its licensors' copyrighted material contained herein or described in this instruction manual, shall not be copied, reproduced, distributed, merged or modified in any way without the express written permission of the owner. Furthermore, the purchase of Telit products shall not be deemed to grant in any way, neither directly nor by implication, or estoppel, any license.

6.1.2. Computer Software Copyrights

Telit and the Third Party supplied Software (SW) products, described in this instruction manual may include Telit's and other Third Party's copyrighted computer programs stored in semiconductor memories or other media. The laws in Italy and in other countries reserve to Telit and other Third Party, SW exclusive rights for copyrighted

computer programs, including – but not limited to – the exclusive right to copy or reproduce in any form the copyrighted products. Accordingly, any copyrighted computer programs contained in Telit’s products described in this instruction manual shall not be copied (reverse engineered) or reproduced in any manner without the express written permission of the copyright owner, being Telit or the Third Party software supplier. Furthermore, the purchase of Telit products shall not be deemed to grant either directly or by implication, estoppel, or in any other way, any license under the copyrights, patents or patent applications of Telit or other Third Party supplied SW, except for the normal non-exclusive, royalty free license to use arising by operation of law in the sale of a product.

6.2. Usage and Disclosure Restrictions

6.2.1. License Agreements

The software described in this document is owned by Telit and its licensors. It is furnished by express license agreement only and shall be used exclusively in accordance with the terms of such agreement.

6.2.2. Copyrighted Materials

The Software and the documentation are copyrighted materials. Making unauthorized copies is prohibited by the law. The software or the documentation shall not be reproduced, transmitted, transcribed, even partially, nor stored in a retrieval system, nor translated into any language or computer language, in any form or by any means, without prior written permission of Telit.

6.2.3. High Risk Materials

Components, units, or third-party goods used in the making of the product described herein are NOT fault-tolerant and are NOT designed, manufactured, or intended for use as on-line control equipment in the following hazardous environments requiring fail-safe controls: operations of Nuclear Facilities, Aircraft Navigation or Aircraft Communication Systems, Air Traffic Control, Life Support, or Weapons Systems (“High Risk Activities”). Telit and its supplier(s) specifically disclaim any expressed or implied warranty of fitness eligibility for such High Risk Activities.

6.2.4. Trademarks

TELIT and the Stylized T-Logo are registered in the Trademark Office. All other product or service names are property of their respective owners.

6.2.5. 3rd Party Rights

The software may include Third Party's software Rights. In this case the user agrees to comply with all terms and conditions imposed in respect of such separate software rights. In addition to Third Party Terms, the disclaimer of warranty and limitation of liability provisions in this License, shall apply to the Third Party Rights software as well.

TELIT HEREBY DISCLAIMS ANY AND ALL WARRANTIES EXPRESSED OR IMPLIED FROM ANY THIRD PARTY REGARDING ANY SEPARATE FILES, ANY THIRD PARTY MATERIALS INCLUDED IN THE SOFTWARE, ANY THIRD PARTY MATERIALS FROM WHICH THE SOFTWARE IS DERIVED (COLLECTIVELY "OTHER CODES"), AND THE USE OF ANY OR ALL OTHER CODES IN CONNECTION WITH THE SOFTWARE, INCLUDING (WITHOUT LIMITATION) ANY WARRANTIES OF SATISFACTORY QUALITY OR FITNESS FOR A PARTICULAR PURPOSE.

NO THIRD PARTY LICENSORS OF OTHER CODES MUST BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING WITHOUT LIMITATION LOST OF PROFITS), HOWEVER CAUSED AND WHETHER MADE UNDER CONTRACT, TORT OR OTHER LEGAL THEORY, ARISING IN ANY WAY OUT OF THE USE OR DISTRIBUTION OF THE OTHER CODES OR THE EXERCISE OF ANY RIGHTS GRANTED UNDER EITHER OR BOTH THIS LICENSE AND THE LEGAL TERMS APPLICABLE TO ANY SEPARATE FILES, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

6.2.6. Waiver of Liability

IN NO EVENT WILL TELIT AND ITS AFFILIATES BE LIABLE FOR ANY DIRECT, INDIRECT, SPECIAL, GENERAL, INCIDENTAL, CONSEQUENTIAL, PUNITIVE OR EXEMPLARY INDIRECT DAMAGE OF ANY KIND WHATSOEVER, INCLUDING BUT NOT LIMITED TO REIMBURSEMENT OF COSTS, COMPENSATION OF ANY DAMAGE, LOSS OF PRODUCTION, LOSS OF PROFIT, LOSS OF USE, LOSS OF BUSINESS, LOSS OF DATA OR REVENUE, WHETHER OR NOT THE POSSIBILITY OF SUCH DAMAGES COULD HAVE BEEN REASONABLY FORESEEN, CONNECTED IN ANY WAY TO THE USE OF THE PRODUCT/S OR TO THE INFORMATION CONTAINED IN THE PRESENT DOCUMENTATION, EVEN IF TELIT AND/OR ITS AFFILIATES HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES OR THEY ARE FORESEEABLE OR FOR CLAIMS BY ANY THIRD PARTY.

6.3. Safety Recommendations

Make sure the use of this product is allowed in your country and in the environment required. The use of this product may be dangerous and has to be avoided in areas where:

- it can interfere with other electronic devices, particularly in environments such as hospitals, airports, aircrafts, etc.
- there is a risk of explosion such as gasoline stations, oil refineries, etc. It is the responsibility of the user to enforce the country regulation and the specific environment regulation.

Do not disassemble the product; any mark of tampering will compromise the warranty validity. We recommend following the instructions of the hardware user guides for correct wiring of the product. The product has to be supplied with a stabilized voltage source and the wiring has to be conformed to the security and fire prevention regulations. The product has to be handled with care, avoiding any contact with the pins because electrostatic discharges may damage the product itself. Same cautions have to be taken for the SIM, checking carefully the instruction for its use. Do not insert or remove the SIM when the product is in power saving mode.

The system integrator is responsible for the functioning of the final product. Therefore, the external components of the module, as well as any project or installation issue, have to be handled with care. Any interference may cause the risk of disturbing the GSM network or external devices or having an impact on the security system. Should there be any doubt, please refer to the technical documentation and the regulations in force. Every module has to be equipped with a proper antenna with specific characteristics. The antenna has to be installed carefully in order to avoid any interference with other electronic devices and has to guarantee a minimum distance from the body (20 cm). In case this requirement cannot be satisfied, the system integrator has to assess the final product against the SAR regulation.

The equipment is intended to be installed in a restricted area location.

The equipment must be supplied by an external specific limited power source in compliance with the standard EN 62368-1:2014.

The European Community provides some Directives for the electronic equipment introduced on the market. All of the relevant information is available on the European Community website:

https://ec.europa.eu/growth/sectors/electrical-engineering_en


7. GLOSSARY

ACM	Abstract Control Model
ECM	Ethernet Control Model
MBIM	Mobile Broadband Interface Model
NCM	Network Control Model
RNDIS	Remote Network Device Interface Specification
USB	Universal Serial Bus
WHQL	Windows Hardware Quality Labs

8. DOCUMENT HISTORY


Revision	Date	Changes
1	2022-11-23	Add LE910Cx Thread-x PID 0x103A, 0x103B, 0x103C Updated MSI version number and product code
0	2022-04-26	First issue

From Mod.0817 rev.3



Connect to our site and contact our
technical support team for any question

www.telit.com



Telit reserves all rights to this document and the information contained herein. Products, names, logos and designs described herein may in whole or in part be subject to intellectual property rights. The information contained herein is provided "as is". No warranty of any kind, either express or implied, is made in relation to the accuracy, reliability, fitness for a particular purpose or content of this document. This document may be revised by Telit at any time. For most recent documents, please visit www.telit.com

Copyright © 2021, Telit