



Telit WHQL Drivers Installer

Software User Guide

1VV0301360 Rev. 18 – 2022-11-22

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

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1. INTRODUCTION

1.1. Scope

This document describes Windows 10 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 10 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 DRIVERS INSTALLER

2.1. Installer Details

This document covers Telit WHQL Drivers Installer version **2.19.0002**.

Telit provides two different installers according to the architecture of the host system:

- **x64:** Telit WHQL Drivers for x64 architecture
 - **Upgrade Code:** {0CCC495A-8F6D-43F2-997F-6DF5F564EEEEB}
 - **Product Code:** {FB5463A3-5882-4A4C-BB3E-49FCA8C2D18C}
- **x86:** Telit WHQL Drivers for x86 architecture
 - **Upgrade Code:** {1585B625-2BED-43F5-A17E-34DBCFCB6C53A}
 - **Product Code:** {BD366353-D284-4750-8C1D-EB2D0316EDF7}

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 Telit_WHQL_Drivers_x64.msi /qn
```

To install a subset of drivers type:

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

e.g.


```
> msixexec /i Telit_WHQL_Drivers_x64.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 Files (x86)\Telit\WHQLDrivers\usb_xhci_avoid_COM_port_proliferation.reg

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
ASRSerail	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
-

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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:

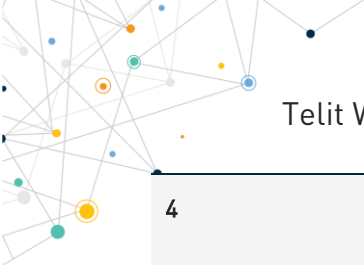
https://ec.europa.eu/growth/sectors/electrical-engineering_en

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
18	2022-11-22	Added LE910Cx Thread-x PID 0x103A, 0x103B, 0x103C Updated msi installers version and product codes
17	2022-04-26	Added LN920 PID 0x1066 Updated msi installers version and product codes
16	2022-03-01	Added LE910R1 to Applicability Table Added FN990 PCI UDE composition 0x800A Added LE910R1 PID 0x701A Added FN980 composition 0x1058 Updated msi installers version and product codes
15	2021-11-29	Added FN990 compositions 0x1070, 0x1071, 0x1072, 0x1075 Added FN980 composition 0x1057 Updated msi installers version and product codes
14	2021-09-01	Added LE910S1 compositions 0x1037, 0x1038 Added PCI UDE composition 0x8000 Updated msi installers version and product codes
13	2021-08-12	Updated msi installers version and product codes
12	2021-04-19	Added FD980 and LE910S1 to Applicability Table Added support for compositions 0x1056 and 0x7010 Added ASRModem, ASRSerial and ASRDiag Features Updated msi installers version and product codes
11	2021-01-26	Added LN920 to Applicability Table Added support for compositions 0x1060, 0x1061, 0x1062 Updated msi installers version and product codes
10	2020-12-16	Added support for composition 0x1262 Updated msi installers version and product codes
9	2020-11-13	Added Tools and Registry Features Updated msi installers version and product codes
8	2020-09-17	Added support for compositions 0x1055, 0x1034 and 0x1036 Updated msi installers version and product codes
7	2020-03-13	Changed Applicability Table Added paragraph 2.4 Added qdbus Feature Updated msi installers version and product codes
6	2019-12-09	Added ME310 and LE910x1 in the Applicability Table Added support for composition 0x1054 Updated msi installers version and product codes
5	2019-07-12	Added support for compositions 0x1250, 0x1251, 0x1252 and 0x110A




4	2019-03-22	Added support for compositions 0x1260 and 0x1261 Updated msi installers version and product codes
3	2018-09-14	Updated msi installer product codes
2	2018-05-18	Added support for new LE910C1 PIDs
1	2017-12-19	Added support for new PIDs
0	2017-02-24	First issue

From Mod.0817 rev.3



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