Dtu Driver

Windows Device Driver Installation

1. Introduction

Dtu is the Windows device driver for DekTec's line of digital-video USB Devices. The driver is generic to all DekTec USB Devices that have a type number starting with "DTU-". The Dtu driver supports operation of multiple devices.

1.1. USB Devices Supported by the Dtu Device Driver

The **Dtu** device driver supports the following DekTec devices:

DTU-205	FantASI USB-2 ASI/SDI Output Adapter
DTU-215	Multi-standard Modulator for USB-2
DTU-225	FantASI USB-2 ASI/SDI Input Adapter
DTU-234	FantASI USB-2 VSB/QAM-B Input Adapter
DTU-235	FantASI USB-2 DVB-T Input Adapter
DTU-236	FantASI USB-2 VSB/QAM Input Adapter
DTU-238	FantASI USB-2 DVB-T/T2, DVB-C Input Adapter
DTU-245	FantASI USB-2 ASI/SDI Input+Output Adapter
DTU-315	USB-3 VHF/UHF/L-band Modulator
DTU-351	USB-3 HD-SDI Input Adapter

1.2. Files

The `Dtu.zip` archive contains the following files:

`DtuInstall.exe`	Setup program that installs the **Dtu** device driver.
`Dtu Installation.pdf`	This installation document.

The setup program copies two **Dtu** device-driver files into a selectable directory, defaulting to `C:\Program Files\DekTec\Drivers`.

`Dtu##.inf`	`v4.15.4.92`	Device driver information file (".inf").
`Dtu##.sys`	`v4.15.4.92`	Device driver 'system' file (executable).
`DtapiService32.exe`	`v5.0.1.117`	DTAPI Service executable

Thereafter, setup instructs the Windows XP/Vista Plug'n Play manager to install the device driver files. A log file is created, to aid debugging in case of an install failure.

`DtDrivInstall.log`	Log of installation events.

2. Installing the Software

The **Dtu** setup program is self-contained. Installing the device driver is as simple as running the setup executable and pressing "Next" a few times.

NOTE

- A Windows device driver can only be installed by a user account with the privilege to *load and unload device drivers*, e.g. administrator.
- Please make sure that no application is currently running that uses a DekTec device.
- Windows 7 and Windows Server 2008 requires updates to support SHA 256: https://support.microsoft.com/en-us/help/4472027/2019-sha-2-code-signing-support-requirement-for-windows-and-wsus

Please *disconnect* all DTU-XXX devices *before* running this installation. No DTU-XXX device should be connected to the system while running this installation.

After having the installed the driver files the following should be performed to complete the installation:

1. Connect the **DTU-xxx** adapter to a USB port using the supplied USB cable.

Windows recognizes a new **DTU-xxx** (no firmware) device and the 'install new hardware wizard' will prompt you for the location of the DTU driver files.

2. If Windows XP with SP2 is used Windows will ask if: "Windows can connect to Windows Update to search for software". Select **No, not this time** and press **Next**.
3. Choose **install software automatically** and press **Next**.
4. The Wizard will now install the driver needed for configuring the **DTU-xxx** device.
5. Press **Finish** when completed.

At this point windows will recognize the configured **DTU-xxx** device and will prompt you again to install a driver for this device.

6. Repeat Steps 2 to 5 to complete the installation.

3. Troubleshooting

3.1. Device Status LED

At start-up the device led (the left led) will flash red, green and orange to indicate the power-up sequence. After the power-up sequence the device led gives an indication about the driver status. When the driver is correctly installed and all firmware is correctly downloaded the device led indicator should be constant green.

If the device led is orange the driver is probably not correctly installed. See 3.2 for verification of the device status.

When the device led keeps flashing red or not lit at all make sure the device is correctly connected to the USB port. If the device is correctly connected and the problem persists please contact DEKTEC for support at fantasi@dektec.com or support@dektec.com.

3.2. Checking Device Status in the Device Manager

The Windows-XP/Vista device manager can be used to check whether the Dtu driver runs properly. To check the device status of a DTU-2XX:

1. Open the Windows-XP/Vista device manager: right-click **My Computer**, select **Manage**, and go to **Device Manager** under **System Tools**.
2. Locate the DEKTEC device in category **Professional audio/video interfaces**.
3. Right-click the device, select **Properties**, and check the **Device status** pane.

The status should be: This device is working properly. If not, don't try the Windows Troubleshooter (it does not know anything about DekTec cards), but inspect the event log (§3.3) and the install log (§3.4). If the problem persists, please contact DekTec at fantasi@dektec.com or support@dektec.com.

3.3. Checking the Event Log

The System Event Log can be consulted to check whether the **Dtu** device driver has been loaded and started properly. To open the System Event Log:

1. Right-click **My Computer**, select **Manage**, and open **Event Viewer** under **System Tools**.
2. Select the **System** log.
3. Driver messages from DekTec USB devices have `Dtu` in the **Source** column.

If the driver loads successfully, the following event message is logged:

The Dtu driver (Rev 4.15.4.92) has loaded successfully.

The device-driver version listed in this message should match the `Dtu`-version number listed in the file overview in 1.2.

For each DekTec USB-2 device connected in the system, a start-up message listing USB Device Type and Firmware Version should be logged, e.g.:

The DTU-245 (Firmware Version 9) started successfully.

Obviously, if the Dtu driver detects an error while trying to start the USB Device, the message above will not occur. Instead, an error message is logged, which may be helpful to find the source of the problem.

3.4. Checking the Install Log

The install log is a text file (`DtDrivInstall.log`) written into `C:\Program Files\DekTec\Drivers` (or a redirected path). In case of installation troubles, please contact DekTec at fantasi@dektec.com or support@dektec.com, attaching the install log.

4. Dtu WDM Device Driver Revision History

Version	Date	Change Description
v4.15.4.92	2023.08.30	• DTU-315: Allow 15MHz as absolute minimum RF-frequency and 20ksps as absolute minimum sample rate
v4.15.3.91	2023.06.16	• DTU-245B installer fix; in some cases the driver did not update
v4.15.2.90	2022.11.24	• New driver build for Jun2022 SDK, no functional changes
v4.15.1.89	2022.06.08	• Included latest DTAPI service in installer, no functional changes
v4.15.0.88	2021.09.16	• DTU-245B: support for firmware v2: bug fix for 188+16 ASI output mode
v4.14.1.86	2021.07.05	• July 2021 SDK release; fixing Linux build issues
v4.14.0.85	2020.07.08	• Support for Digital Radio Mondial (DRM/DRM+)
v4.13.7.84	2020.05.06	• New driver build based on SDK May2020
v4.13.6.83	2019.11.06	• DTU-351: Disabled auto correction of errors (CRC checksum) in SDI input signal
v4.13.5.82	2019.07.26	• Includes update for DtapiService (July2019 release)
v4.13.4.81	2019.02.20	• DtapiService crash was seen on older PC's that did not support AVX instruction set
v4.13.3.80	2019.01.25	• DTU-245: bugfix junk bytes were seen at start of the buffer in some cases • DTU-315: bugfix for underflow reported sometimes for DVB-S2X/ISDB-S3
v4.13.2.78	2018.05.25	• SHA256 driver signing fix for Win7,8 and Server2012
v4.13.1.77	2018.05.17	• SHA256 driver signing support
v4.13.0.76	2018.02.12	• DTU-245B: support for firmware V1
v4.12.1.74	2017.11.28	• Windows10 Secureboot support • DTU-351: bugfix driver error due to June2017 SDK changes
v4.12.0.73	2017.06.30	• DTU-315: cross platform source code changes for Linux support
v4.11.0.71	2017.02.20	• DTU-315: Support for DVB-CID modulation
v4.10.1.70	2016.08.18	• Support for DT_EVENT_TYPE_IOCONFIG • Bug fix for memory leak on each SetIoConfig call
v4.10.0.69	2016.06.01	• DTU-245B: Initial support • DTU-315: Support for firmware V1
v4.9.1.68	2016.03.15	• Few small bug fixes
v4.9.0.67	2016.01.29	• DTU-315: Support for Dual software modulation • DTU-236: Bug fix for QAM annex not reported correctly in StreamXpert
v4.8.3.66	2015.10.30	• DTU-238: Support for new DVB-C2 statistics • DTU-238: Support for latest hardware revision 1
v4.8.2.65	2015.09.10	• DTU-236: bug fix for DtInpChannel::Equalise failing • DTU-238: bug fix for invalid ISDB-T statistics BER PRE-RS and PER • DTU-238: bug fix for failing DVB-C2 relock
v4.8.1.64	2015.08.18	• Bug fix for possible license program issue
v4.8.0.63	2015.08.07	• Support for DTU-315 VHF/UHF/L-band modulator for USB-3 • DTU-236A/DTU-238 DtInputChannel::SpectrumScan() improvements
v4.7.0.61	2015.06.04	• DTU-236A/DTU-238 bug fix for DtInputChannel::SpectrumScan() issues • DTU-236A bug fix for incorrect levels in some cases • DTU-238 bug fix for lock fail in certain situations • Bug fix for DtDemodEvent DTAPI_EV_TUNE_FREQ_HAS_CHANGED not triggered in some conditions
v4.6.1.59	2015.05.01	• Support for the DTU-238
v4.5.1.57	2015.04.15	• DTU-351 Bug fix incorrect HD-SDI PSF formats handling

v4.5.0.56	2015.02.12	• Support for HD-SDI Progressive Segmented Frame (PSF) formats
v4.4.16.55	2014.10.30	• Few small bug fixes
v4.4.15.54	2014.09.05	• Few small bug fixes
v4.4.14.53	2014.06.24	• Robustness improvements
v4.4.13.52	2014.04.02	• Few small bug fixes
v4.4.11.50	2014.02.20	• DTU-351 bug fix for lost frames on SD-SDI reception
v4.4.7.46	2013.12.20	• DTU-236 Support for GetTunerFrequency() and GetDemodControl() • DTU-351 fixes possible dropped frame issue seen on some PC's
v4.4.4.42	2013.11.26	• DTU-351 fixes dropped frame issue seen at high CPU load
v4.4.3.41	2013.11.13	• Few small bug fixes
v4.4.2.40	2013.10.11	• DTU-351 official release • DTU-236 bug fix for QAM initialization • DTU-236 bug fix for tuner frequency limit (now set to 885MHz)
v4.4.0.38	2013.08.12	• DTU-351 USB3 HD-SDI support
v4.3.1.37	2013.06.26	• Few small bug fixes
v4.3.0.36	2013.05.22	• DTU-236A: Support for individually tuning of both ports • Minor changes for min FW version check
v4.2.3.35	2013.02.28	• Fixed DTU-234 lock problem
v4.2.2.34	2013.02.15	• Support for new DTAPI capability names introduced in DTAPI V5.2.0.21
v4.2.1.33	2012.12.21	• Bug fix for input not working, on a DTU-225/234/235/236/245, after a "warm" reboot • Bug fix for slower driver start-up of all DTU's (i.e. restored start-up time to pre- V4.2.0.30 start-up time) • Bug fix for not being able to enable loop-through mode for port 2 of a DTU-245
v4.2.0.30	2012.12.10	• Bug fix DTU-215 was not started on a "warm" reboot
v4.1.2.26	2012.10.31	• Bug fix for not being able to tune a DTU-236a to frequencies above 862MHz • Few small bug fixes
v4.1.0.24	2012.09.28	• Few small bug fixes
v4.0.8.23	2012.06.07	• Few small bug fixes
v4.0.7.22	2012.05.15	• First release based on new cross-platform driver architecture NOTE: this version supports DTAPI v5 or higher only