2017

USB Dog Terminator



User's Manual

www.willem-ua.com

Short description



USB DOG Terminator was developed specifically for use in GPU farms and is designed to restart the computer, in the case of a freezing of the operating system (OS). If the computer does not reboot, with a hard OS hang, USB Dog Terminator will turn it off and then turn it on. And this will continue until the computer boots up the OS and the USB Dog Terminator service program starts up. The download timeout, hang time, and other values, if necessary, can be configured in the USB Dog Terminator service by the user. Due to the presence of LED indications, it is possible to visually observe various modes of operation, the description of which will be given below.

Connects USB Dog Terminator to the USB port, which is located on the motherboard of the internal USB connector. The computer is controlled by additional, connectable jumpers that connect to the RESET and POWER buttons and to the USB Dog Terminator to store computer control.



Device connection.



Label of an empty USB connector

+5V USB connector pin

See the documentation for your motherboard.

The USB Dog Terminator board contains labels for the correct installation of the device on the computer's motherboard. Before installation, it is necessary to study the manual of the motherboard, determine where the power supply is located, and where there is an empty pin of the USB connector.



Incorrect connection USB Dog Terminator will not disable the computer or the device itself, but the device will not work either!

The computer control buttons RESET and POWER are connected to the terminals of the USB Dog Terminator connectors, disconnecting them from the motherboard. And in their place connect wires-jumpers.



When connecting the RESET and POWER control signals from the computer to the USB Dog Terminator, using the jumper wires, it is necessary to observe the inscriptions of the connected functions RST-RESET, PWR-POWER.



Connecting jumpers from the buttons to the free terminals of USB Dog Terminator. The color marking of the wires (polarity), whether on the buttons side or on the contact side of the POWER and RESET control signals, is not necessary.



Note! The maximum load current of the outputs should not be more than 50mA !!! Therefore, it is not recommended to use USB Dog Terminator control outputs for other purposes without additional dedicated equipment!

At the first start of the computer, the USB Dog Terminator is in the "stop" mode and the RESET and POWER buttons are not operated.

For the USB Dog Terminator to work properly on the computer's motherboard, it is necessary to install a jumper that is responsible for supplying power to the USB ports when the computer is off, if it is provided by the motherboard manufacturer. Or pay attention to the availability of the corresponding function in the BIOS settings in the USB configuration section.

Installation and configuration of software.

After connecting, the first time the computer is started, the device is identified as a HID-compliant device.

You can view it through the "Control Panel" -> "Device Manager" -> "Device - HID"

ющие	Драйвер	Сведен	ия		
2	HID-совм	естимо	е устройство		
	Тип устройства:		Устройства HID (Human Interface Devices		
	Изготови	тель:	(Стандартные системные	устройства)	
	Размеще	ение:	USB-устройство ввода		
Уст	ройство раб	ботает н	ормально.	*	
∲ст	ройство раб	ботает н	ормально.	*	
∲ст	ройство раб	ботает н	ормально.	*	

Make sure that it is the USB Dog Terminator that can be selected by selecting the "Details" tab, and selecting "Equipment ID" from the "Properties" drop-down list.

щие Д	райвер	Сведени	1я				
	HD-совм	естимое	устройств	0			
зойство							
Ц ооор	удовани	4					i * j
начение	-					-	
HID\VID	16C0&F	21D 05DE	&REV 010	n			6
HIUMAN	100001	UD OSDE	0.121_010	U		-	
HID OF	VICE_UF	:FF00_U:	0001		_	-	
HID (VID HID_DE HID_DE	VICE_UF	UD_05DE :FF00_U:I	0001		_		
HID. DE HID_DE HID_DE	_100040 VICE_UF VICE	200_05DE	0001				
HID DE HID_DE HID_DE	_16C04F VICE_UF VICE	2:FF00_U:1	0001				
HID (VIB HID_DE HID_DE	VICE_UF	90_05DE 9:FF00_U:I	0001				
HID THE HID_DE HID_DE	VICE_UF	:FF00_U:	0001				
HID.Viid HID_DE HID_DE	VICE_UF	:FF00_U:	0001				
HID_DE HID_DE HID_DE	VICE_UF	UD_05DE :FF00_U:	0001				
HID.DE	VICE_UF	10_05DE 100_05DE	0001				

The value of this property must be VID 16C0 and PID 05DF or the full abbreviation HID \ VID_16C0 & PID_05DF & REV_0100. If there are several HID devices, you need to find with this VID and PID identifier.

Next, we install the driver management program and the driver itself. The driver contains versions for both x32bit OS and x64bit. Open the folder "WTD Dog Terminator \ Driver" and run the file libusb-win32-devel-filter-1.2.6.0.exe

The Security Warning window appears. We press start.



Then another dialog appears where you also need to agree to make changes to the computer. Click "OK"



After that, the driver installation welcome screen appears.



The next step is to agree with the license agreement.



Continue the installation, click Next.

Next, a window of technical information about the product version, etc. where also click Next.



The next window prompts you to select the path for installing the driver management program. Leave it as is, click Next.



The following window prompts you to change the name of the program with which it will be displayed in the "Start" menu. Press Next.



Another information window where we also click Next.



In the installation completion window, check the box to launch the application when the installation is complete and click Finish.

B Setup - LibUSB-Win32	
	Completing the LibUSB-Win32 Setup Wizard Setup has finished installing LibUSB-Win32 on your computer. The application may be launched by selecting the installed icons. Click Finish to exit Setup.
	Einish

Now the installation window for the USB Device Terminator driver itself appears. We mark the point of installation of the device filter and continue the installation.

This program adds/removes li installation.	busb-win32 as a driver to an existing device
The libusb-win32 filter driver a while maintaining compatibility	allows access to usb devices using the libusb-win32 ay with software which uses the original driver.
Install/Remove_Device Filter(s))
Install a device filter	
Remove a device filter	
Remove all device filters	

The following window will display the list of USB devices. In this list you need to find our device by the identifier, which we already considered early, it's VID 16C0 and PID 05DF (HID \ VID_16C0 & PID_05DF & REV_0100).

Connect your device and select it from device isn't listed, it may already be fil ncompatible with the libusb-win32 filte	the list of unfiltered devices below. I tered, be in a "driverless" state, or r driver.	f your
Hardware ID	Description	Ma
vid:275d.pid:0b=6.rov:0.100	USB-устройство ввода	(0
vid: 16c0 pid:05df rev:0100	USB-устройство ввода	(C
Vidiocito picito inconsoco mili00	USB-видеоустройство	Mi
vid:0c45 pid:6426 rev:0329	Составное USB устройство	(C
٠ []	۰.

Click OK in the warning window for the successful installation of the driver.



Close the window or click the Cancel button to complete the driver installation.



The driver installation is complete.

Installing, running the maintenance program and working algorithms USB Dog Terminator.

To run the program from the WTD Dog Terminator folder, you need to copy the Dog Terminator folder to any location on the hard disk of your computer. For example, in the root of drive C. Run the application.

After launching the program should start and after a few seconds hide in the system tray (Special area located next to the clock on the taskbar).

Usb dog te	ermii
197	
Настроить	

Double-clicking the mouse on the icon, you can deploy the program. The green label on the "Running" button indicates the status of the device. And the LED on the USB PC Terminator will flash a short flash approximately 1 time per second.

The following setting items are offered in the program window:

🔅 USB Dog Terminator	X
Run at startup windows	
Waiting for power on	1
Waiting to turn on	2 🔺
Hold POWER	5 🔺
POWER Attempts	0
Read Settings	
Record settings	Working
http://www.willem-ua.c	om Release 1.4

- Run when Windows starts this item does not need comments.
- "Waiting to turn on" The time to wait for the computer to start when it is turned on from 1 minute to 10 minutes. At the end of this time, the computer will be considered not running and an attempt will be made to enable it. In this case, the LED on the USB Dog Terminator board will be a long flashing (about half a second, half a second is off) to report that it does not receive a signal from the maintenance program and is waiting for its start. After the programmed time has elapsed, it will forcibly turn off (by long pressing the

"POWER" button) and re-enable, the events of pressing the button will light the LED for the duration of these presses;

- "Hold POWER" is the time from 1 to 10 seconds, which will be fixed by pressing the "POWER" button to force the computer to turn off. The moments of pressing the button will light the LED for the duration of these presses;
- "POWER Attempts" is the number of times the computer turns off when the previous attempts did not start the OS and the USB Dog Terminator control program. The number of attempts from 0 is infinite and up to 10 times. After 10 unsuccessful attempts to turn on the computer, the USB Dog Terminator device will go into stop mode and the LED will light continuously without blinking;
- "Read Settings" button reads the recorded settings of the control program from the internal USB memory of the Dog Terminator. This operation also occurs when the program is started.
- "Record Settings" button after all the changes in the time intervals of the wait intervals or any changes in the control program for these changes to take effect, it is necessary to write these settings to the USB Dog Terminator, and so that they can be saved in the device's non-volatile memory.

The events of reading and writing the settings are accompanied by a double flashing of the LEDs.

 Button "Running" - means the current status of the USB Dog Terminator device, by pressing this button you can forcefully stop the USB Dog Terminator if necessary. For example, to configure a computer or other needs. The LED will stop blinking and light constantly. The program icon changes color to red. And the inscription of the button "Works" changes to "Stopped"



If you do not press this button again, to start the USB Dog Terminator and restart the computer, after the USB reboot, the Dog Terminator will go into normal operation. Because the auto start (if there is a tick in the corresponding item) will launch the program, which in turn will output the USB Dog Terminator from the "stopped" mode to the "work" mode.

💐 USB Dog Terminator	
Run at startup windows	
Waiting for power on	1
Waiting to turn on	2
Hold POWER	5 🚔
POWER Attempts	0
Read Settings	
Record settings	Stopped
http://www.willem-ua.c	com Release 1.4

When you click the close icon, the program is minimized to the system tray. If you need to close (unload from memory) the program, you need to right-click on the program icon in the tray, the context menu "exit" appears. Clicking on this item will close the program.

spacesca	pes
A. HUBBLE, SPIT	Stop
	Exit

Possible errors and ways to eliminate them.

If the computer is constantly rebooted, the USB Dog Terminator is connected to the USB port and works fine, you need to disconnect the wires from the motherboard board to the connectors of the POWER and RESET buttons and connect the wires from the corresponding buttons to your place on the motherboard. Turn on the computer, wait for the OS to boot.

If after the start of the OS an error occurred:



An error may occur when the USB Dog Terminator is not connected to the USB port, and attempting to start the program caused this error.

And the second reason is if the device driver was not installed or the device driver refused to work. In this case, the device driver needs to be tested or reinstalled.

To test or reinstall the USB Device Terminator driver, open the start menu and find the item with the LibUSB-Win32 program.



Select the test program for the Test (Win) Program driver, provided that the USB Dog Terminator is connected to the USB port and is operating normally.

Click on the program Test (Win) Program.



If the test program displays as shown in the picture, it means that the device driver is not found, and it needs to be reinstalled.

To do this, perform the following steps. Again, open the Start menu and run the Filter Wizard.



Select the item "remove filter device." Click Next.



Next in the list choose our device, checking its VID 16C0 and PID 05DF. Click "Remove".

Select your device fr does not have a dev	om the list of fill ice filter.	tered devices be	elow. If your dev	ice isn't listed, it
Hardware ID		Description	_	Ma
vid: 16c0 pid: 05df r	ev:0100	USB-устро	ойство ввода	(C
				,

Close the window.

To install, restart the Filter Wizard and repeat the driver installation, as described above.

After installing the driver, if you start the program Test (Win) Program, it should turn out, as shown in the figure below.

DLL version: 1.2.6.0			
Driver version: 1.2.6.0			
bus/device idvendor/id	Product	1600/0505	
- Manufacturer - willer	-ORIGEO-OROSGI	1000/0301	
- Product - MtdMis	TOHID		
wTotalLength:	34		
bNumInterfaces:	1		
bConfigurationValue:	1		
iConfiguration:	0		
bmAttributes:	80h		
MaxPower:	25		
bInterfaceNumber:	0		
bAlternateSetting:	0		
bNumEndpoints:	1		
bInterfaceClass:	3		
bInterfaceSubClass:	0		
bInterfaceProtocol:	0		
iInterface:	0		
bEndpointAddress:	81h		
bmAttributes:	OSh		
wMaxPacketSize:	8		
bInterval:	10		
bRefresh:	0		
bSynchAddress:	0		
			1

Test (Win) Program reports that the driver has been successfully installed. It is necessary to turn off the computer to return the wires from the buttons and to the motherboard in accordance with the instruction and turn on the computer.