



AKTAKOM Power Manager Light

User's manual

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Part



1 Intriduction

1.1 Assignment



AKTAKOM ATH-XXXX series controlled power supplies are designed to supply wireless devices with stabilized voltage or current during the debug processes, repair and laboratory research in terms of temperate climate.

AKTAKOM Power Manager Light program is designed for the work with one of the following controlled power supply models:

- APS-1721L/1602L/1503L;
- APS-3103L/3310L/3320L/3605L/3610L;
- APS-7203L/7205L;
- APS-7303L/7305L;
- APS-7315/7313/7612;
- APS-7315L/7313L/7612L;
- ATH-1533/1535;
- ATH-7333/7335/7338.

The program work is possible in compatibility mode.

1.2 License contract

1. The present license contract is made between You and the Rightholder of the exclusive right on the present program, specified in the Operations manual to the device to which, or with which, the program was purchased (hereinafter referred to as “rightholder”). The conclusion of contract does not result in the lapse of exclusive right on the program to you.

2. While installing, making a copy, uploading, carrying out an access or somehow using the program, you understand and agree with the conditions of the present license contract. If you do not agree with the conditions of the present license contract, delete all program files from your information storage devices and stop using the program.

3. You have the right to install, use, display and run only one copy of the program for only one device to which, or with which, the program was purchased, the quantity of PCs at which the program can be installed is not limited. It is restricted to use the program for several devices. The access key to the program is indicated at the self-adhesive label with indication of device type and number, which is pasted up on the package, containing CD-disk with the program.

4. You do not have the right to decompile, disassemble, create new versions, make alterations in all parts of the program.

5. You do not have the right to sell, rent, on loan or somehow pass the copy of the

program, as well as to gain from the distribution of the program. You are not allowed to distribute this program together with any commercial programs and printing.

6. You are allowed to make one backup copy, and you have the right to use it only for archival purposes and for replacement of the legally acceptable purchased copy in cases, when this copy is lost, destroyed or get unsuitable to use. Herewith the copy of the program can not be used for other purposes and must be destroyed if the possession of the copy of such program is not lawful any more.

7. Lawful purchased copy of the program is a copy, which is obtained by one of the following ways:

a. With a set together with the device, on CD-disk.

The cost of the copy of the program is included in this case in the cost of the device. In case of loss of such a copy of the program it is not subject to free replacement. On the issue of the new version of the program the rightholder can provide you on your demand with the access to copy the new version of the program from the web site in Internet, additionally indicated by the rightholder. After getting the updates it is restricted to use the program, which is the base for getting updating.

Attention! Not all previously released devices and new versions of the program are compatible.

b. Separate from the device, on CD.

Here you meet the cost of such copy of the program in accordance with prices, actual at the moment of its purchasing. Programs, which copies are being distributed in the following way could have a demo version, which is being distributed in the same way as it is described in the subparagraph "c" of the present paragraph.

c. Separate from the device, by distributing on mailing or getting a copy of the program from the web site in Internet.

The obligatory condition for getting a copy of the program by means of coping the program from the web site in Internet is preliminary filling in of questionnaire. Having filled in a questionnaire you give your consent to using by the rightholder the data about your activity, which the rightholder gets as a result of the filling in of questionnaire.

The rightholder chooses the way of distributing of the program copies.

8. The copy of the program is distributed "AS IS".

a. THERE ARE NO GUARANTIES ENCLOSED AND PROVIDED.

b. YOU USE THE PROGRAM ON YOUR OWN ACCOUNT. THE COPY OF THE PROGRAM IS PROVIDED "IN THE WAY LIKE IT IS" WITHOUT ANY GUARANTEES, EVIDENT OR IMPLIED, INCLUDING, BUT NOT BEING LIMITED, BY IMPLIED WARRANTIES OF THE CONSUMER PROPERTIES OR OF FITNESS FOR CERTAIN PURPOSES.

c. THE RIGHTHOLDER DOES NOT GUARANTEE, THAT THE FUNCTIONS OF THE PROGRAM WOULD MEET ALL YOUR REQUIREMENTS, THAT THE PROGRAM WOULD WORK FAIL-SAFE OR THAT ERRORS WOULD BE DEBUGED. IF THE ERRORS IN THE PROGRAM WOULD CAUSE YOU DAMAGE, ALL REPAIR COSTS, MAINTENANCE AND SYSTEMS RECOVERY COSTS ARE BORNE BY YOU (BUT NOT THE RIGHTHOLDER.)

d. UNDER NO CIRCUMSTANCES THE RIGHTHOLDER IS RESPONSIBLE FOR ACCIDENTAL, DIRECT OR INDIRECT, MATERIAL OR ANY OTHER KIND OF DAMAGE (INCLUDING THE LOSS OF PROFIT, LOSS OF THE BUSINESS INFORMATION AND OTHER FINANCIAL LOSSES, REGARDLESS OF THEIR SIZE).

9. The present license contract is in effect on the whole territory of the Russian Federation.

10. The present license contract is gratuitous.

11. The present license contract is concluded for the term equal to the validity term of the exclusive right on the program.

12. The rightholder has the right to terminate the license contract in case of non-compliance with the terms and conditions of the contract. On termination of the contract you are obliged to destroy all copies of the program which you have.

13. The present license contract regulates the use of updates, addenda, which could be offered to you by the rightholder after your purchasing the initial copy of the program, if these updates and addenda are not accompanied by special conditions. The conditions of the present contract could be modified for other version of the program.

14. The present license contract does not give any rights in respect of any trademarks, belonging to the rightholder or third party.

1.3 PC requirements

The computer used for the device work should meet the following minimal requirements:

- 1 free USB port;
- installed Windows XP or the latest OS versions;

- VGA video system (resolution 640*480, 256 colors), recommended resolution: 800*600 and more, 24-bit color.

1.4 Setting-up procedures

1.4.1 Hardware installation

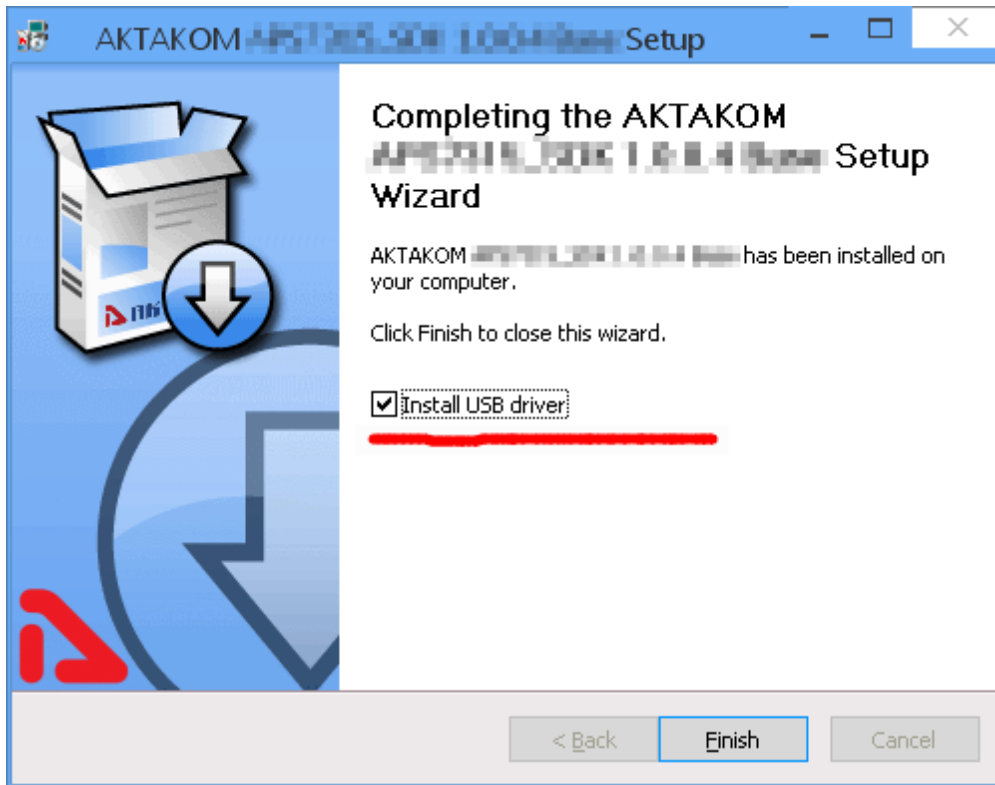
To setup the device first switch it off, connect the PC USB port to the appropriate connector of the controllable power supply with the help of A-B type USB cable.
For models APS-7203/7205 check the communication settings installed via computer:

1. Press SHIFT on the front panel of the device, then press COMM.
2. Using the arrow buttons and the rotary switches set the following parameters:
address: 000
speed: 9600
bit count: 8
3. Press Enter to save the settings
4. Power OFF and then ON again the device to activate the settings.

1.4.2 Software installation

Find and run the installation program and then follow the further instruction accordingly.

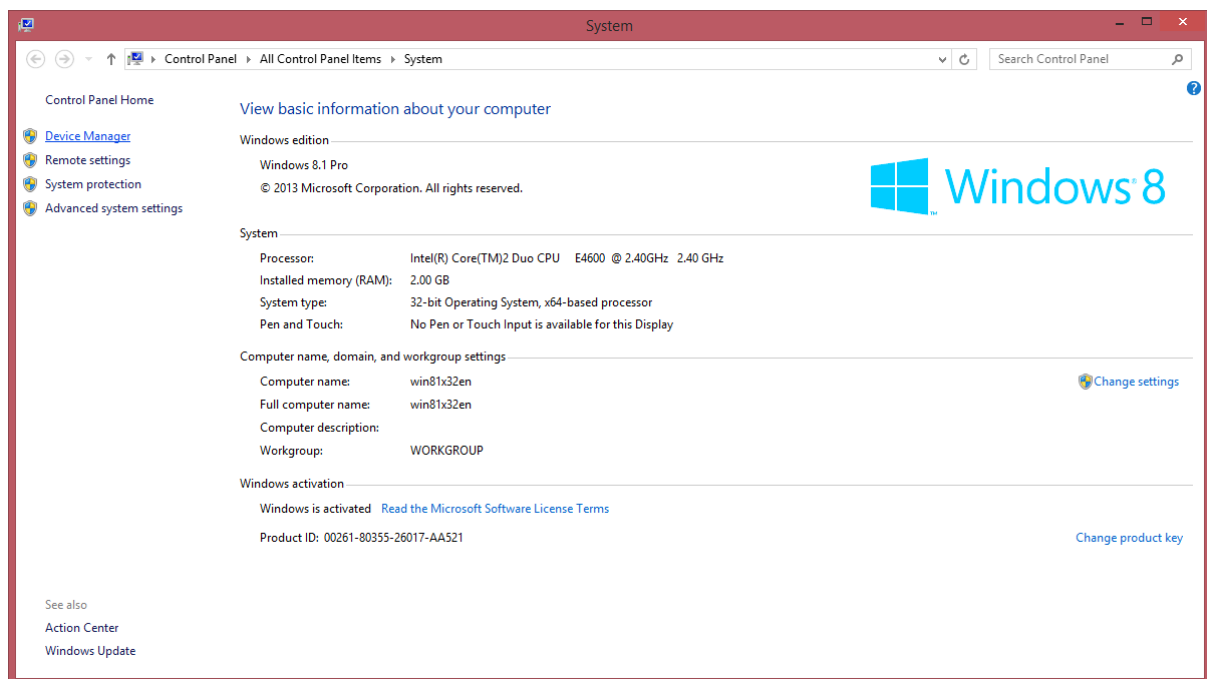
When the installation process is finished there will be program group created with the shortcuts for the device program and its Help. You can run them with the help of "Start" menu. Before the device use you should install the USB interface driver. During the software installation all necessary files will be placed into the program working folder, into the Driver subfolder, and after that the setup program will suggest you to install the driver automatically.



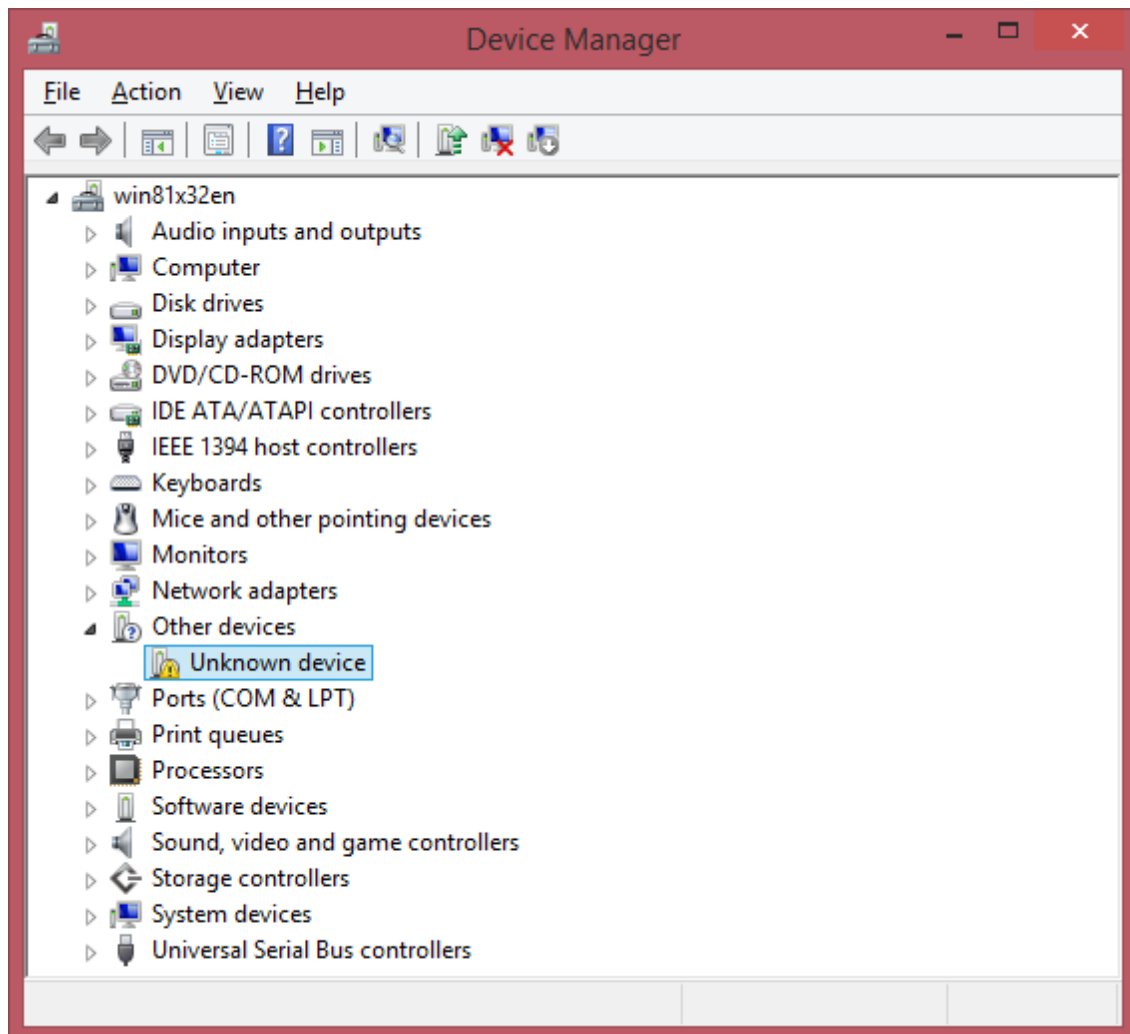
If you refused the automatic driver installation or it has failed due to some reasons you may install the driver manually later. Driver installation process is shown below.

Manual installation of USB driver (for Windows 8)

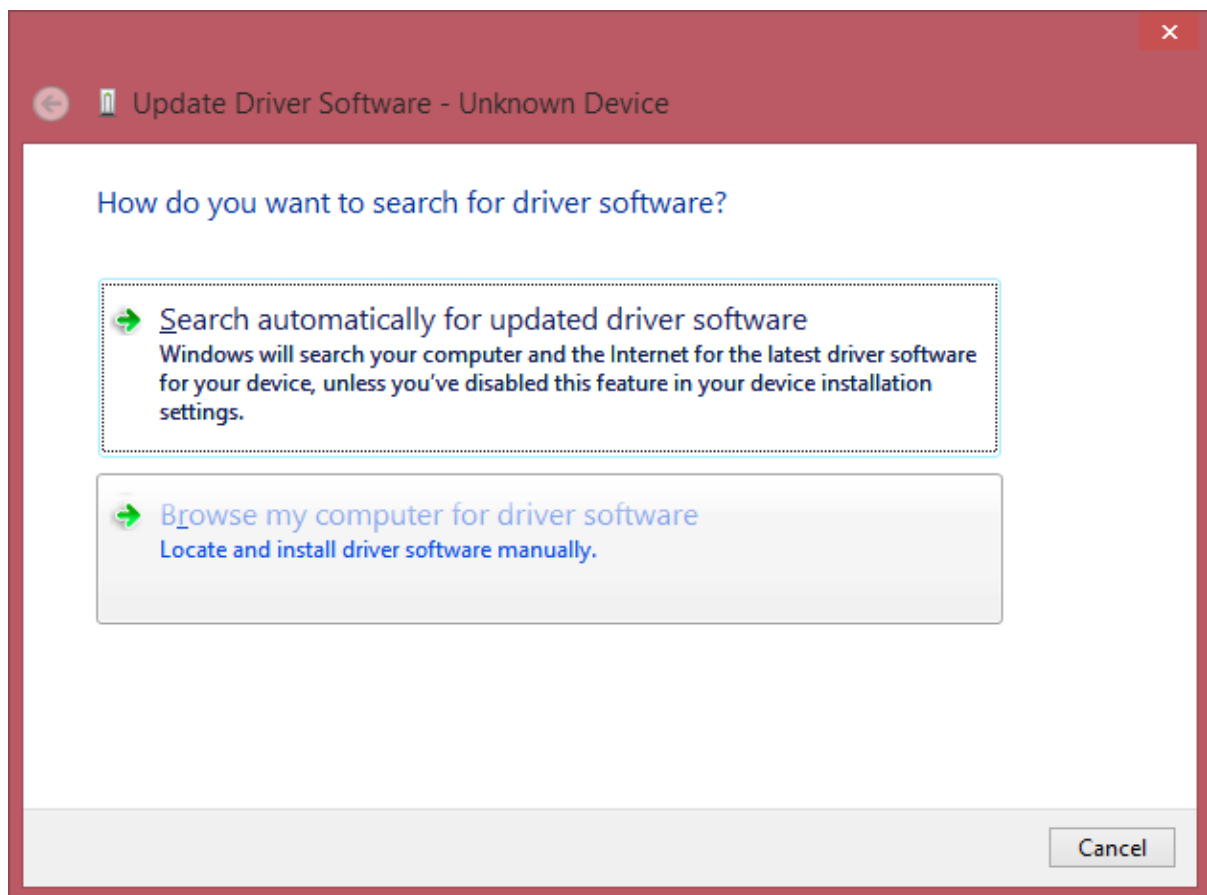
Enter Windows as an administrator, connect the device to the PC.
Call Control panel from Start menu, chose System (or just press Win+Pause combination on the keyboard):



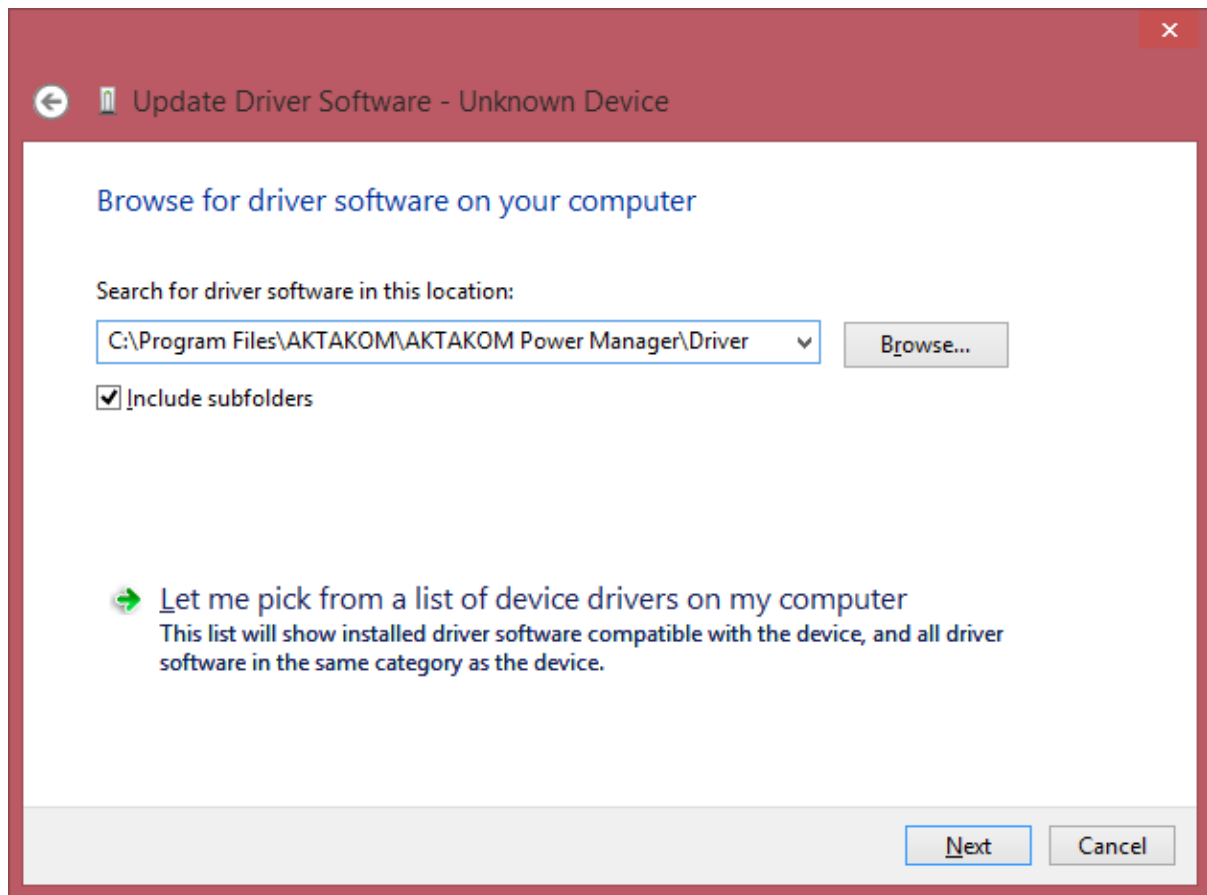
Call Device manager. Find AKTAKOM USB LAB device (it will be marked with a warning icon since the driver has not been installed for it yet):



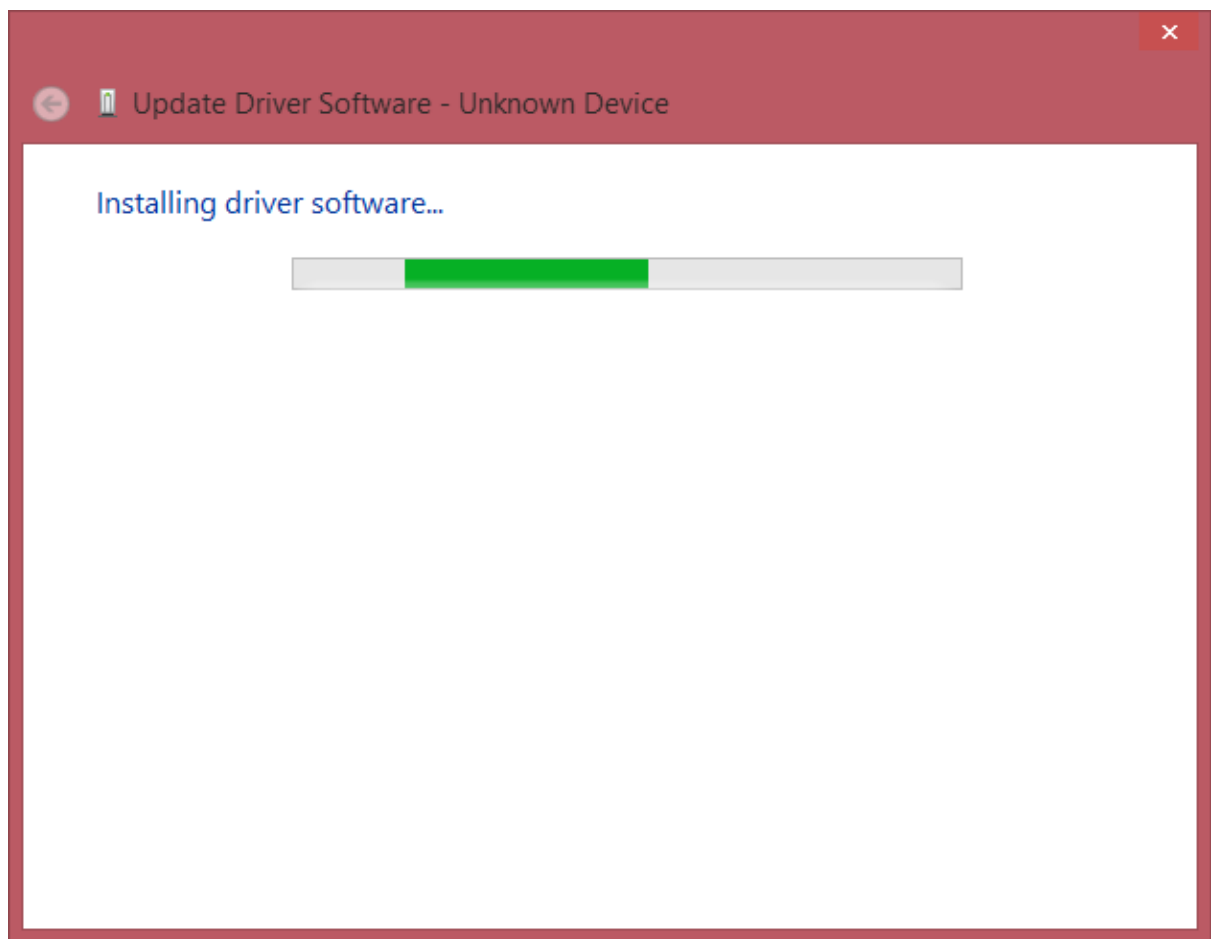
Open its properties (with double click), click Update Driver. You will see the following window:



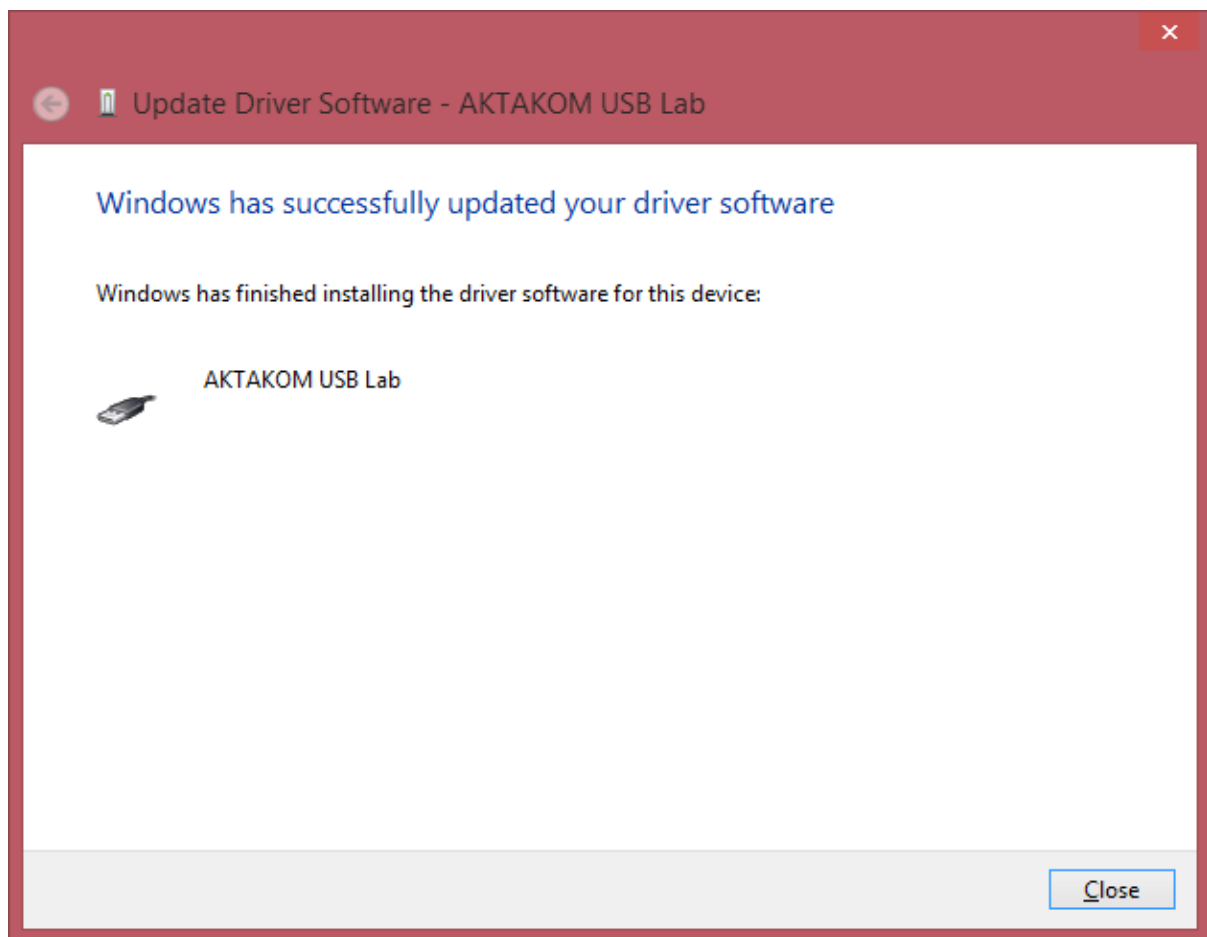
Select "Browse my computer for driver software" and afterwards specify the location of the driver folder:



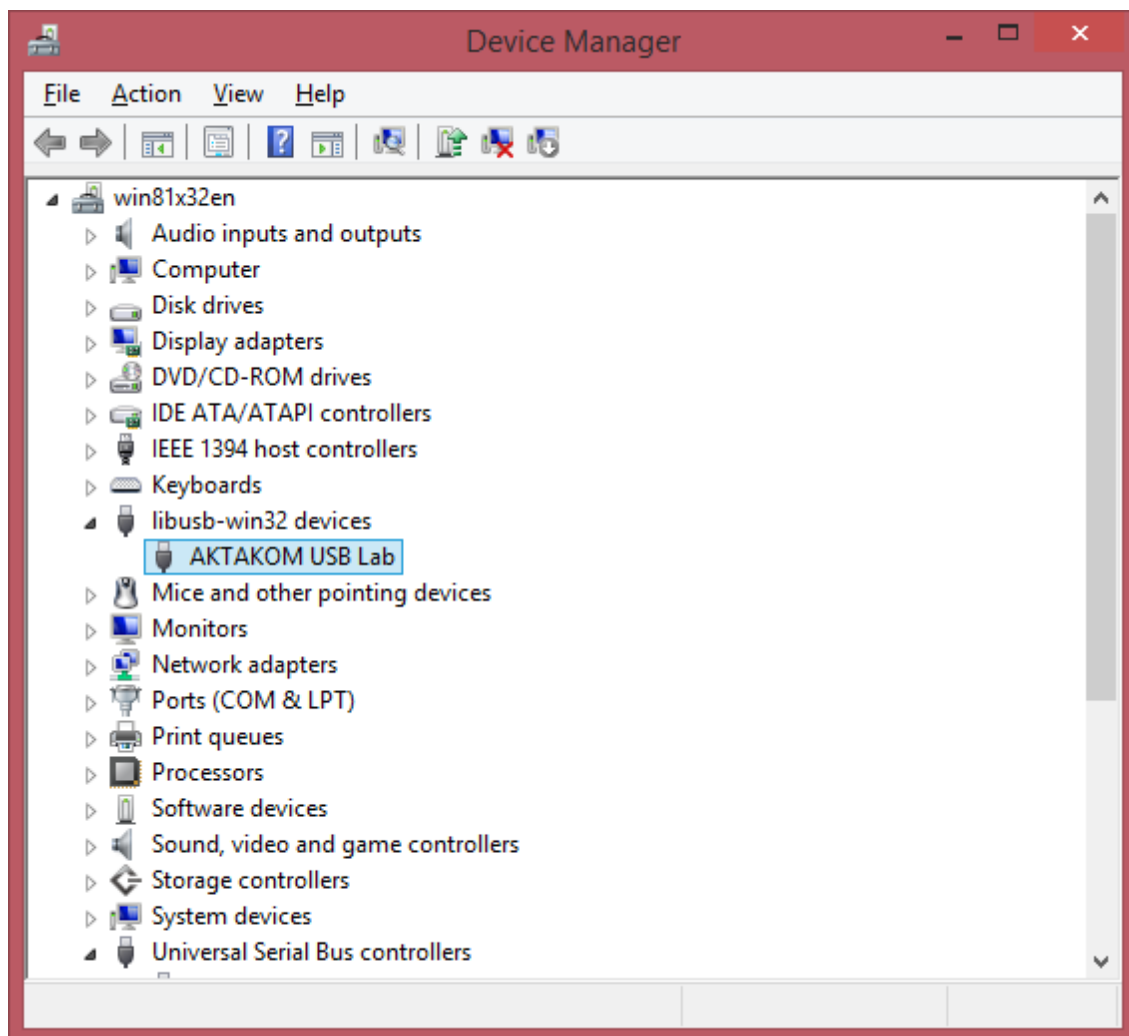
Press Next for start installation:



Wait till the installation is completed. Press Close:

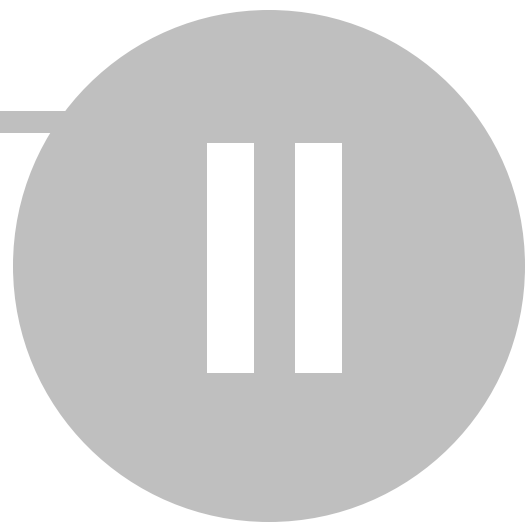


As a result there should be the following images:



At this stage the driver may be considered ready for further work.

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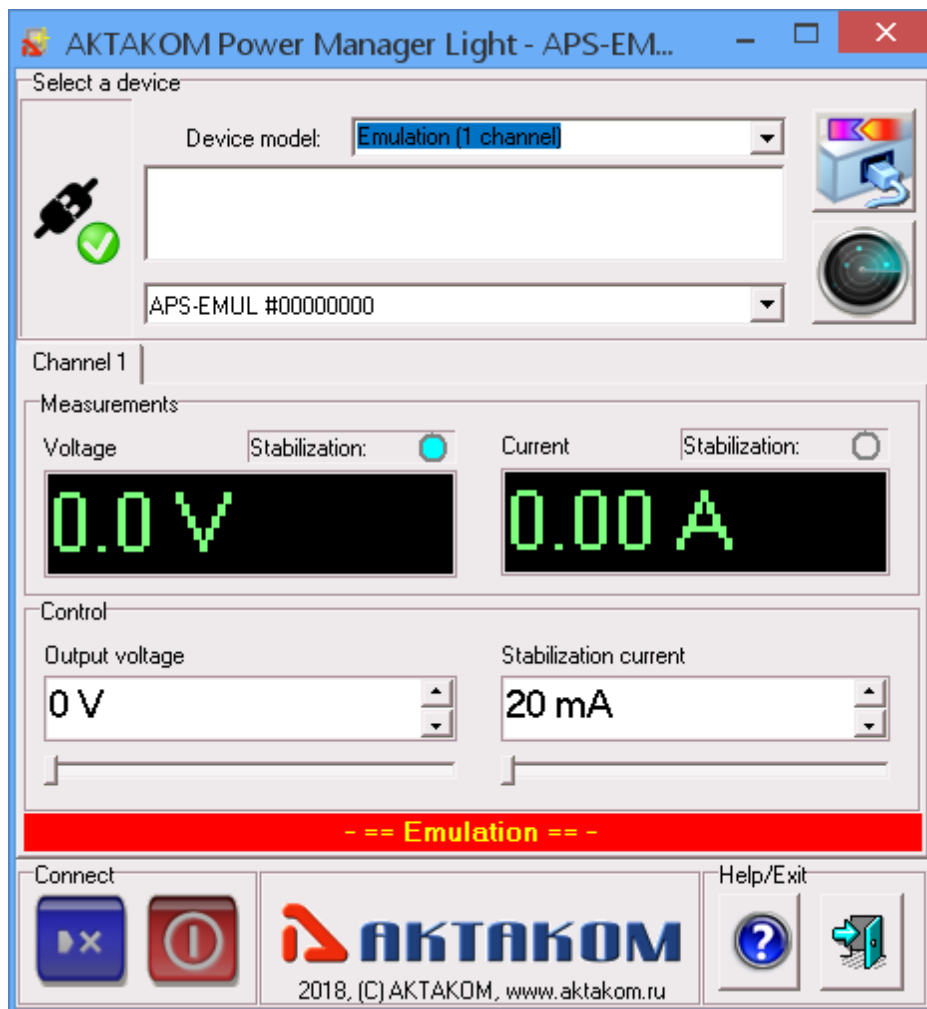


2 Application description

2.1 Application operation description


AKTAKOM Power Manager Light program is designed for the work with one of the following controlled power supply models:

- APS-1721L/1602L/1503L;
- APS-3103L/3310L/3320L/3605L/3610L;
- APS-7203L/7205L;
- APS-7303L/7305L;
- APS-7315L/7313L/7612L;
- APS-7315L/7313L/7612L;
- ATH-1533/1535;
- ATH-7333/7335/7338.



Before the operation starts it's necessary to select the model of the connected device using command Device model in Device selection block and then to search for



connected devices using  button, to select the required device sample from the



list below the block and connect it pressing the connection button .

Note: if there is only one device of the selected type connected to the PC it's not necessary to make a search.

Note 2: when the program is launched it tries to find and connect to the available device automatically. In case the search has been successfully completed this connected device name will appear in the title bar of the program window.

Note 3: for the device connection via TCP/IP network it's necessary to enter its address into the text field "Device name" (located under the model selection menu). The address is specified in accordance with the rules described in section "[Computer network operation](#)"¹⁸". For example enter "AULNET::@N198.162.0.84@P1024::*" to connect the device by 198.162.0.84 address through 1024 port.

Connection status is displayed as a pictogram in the left part of "Device selection" block:



- no connection;



- device is connected.

Manual control of voltage and stabilization current is made with the controls of Control block (do not forget to select the right channel in case you operate a multichannel device).



In Connection block there are buttons to switch ON/OFF remote control ( / )



and power supply buttons ( / ).

"**Help**" button calls for this help file.

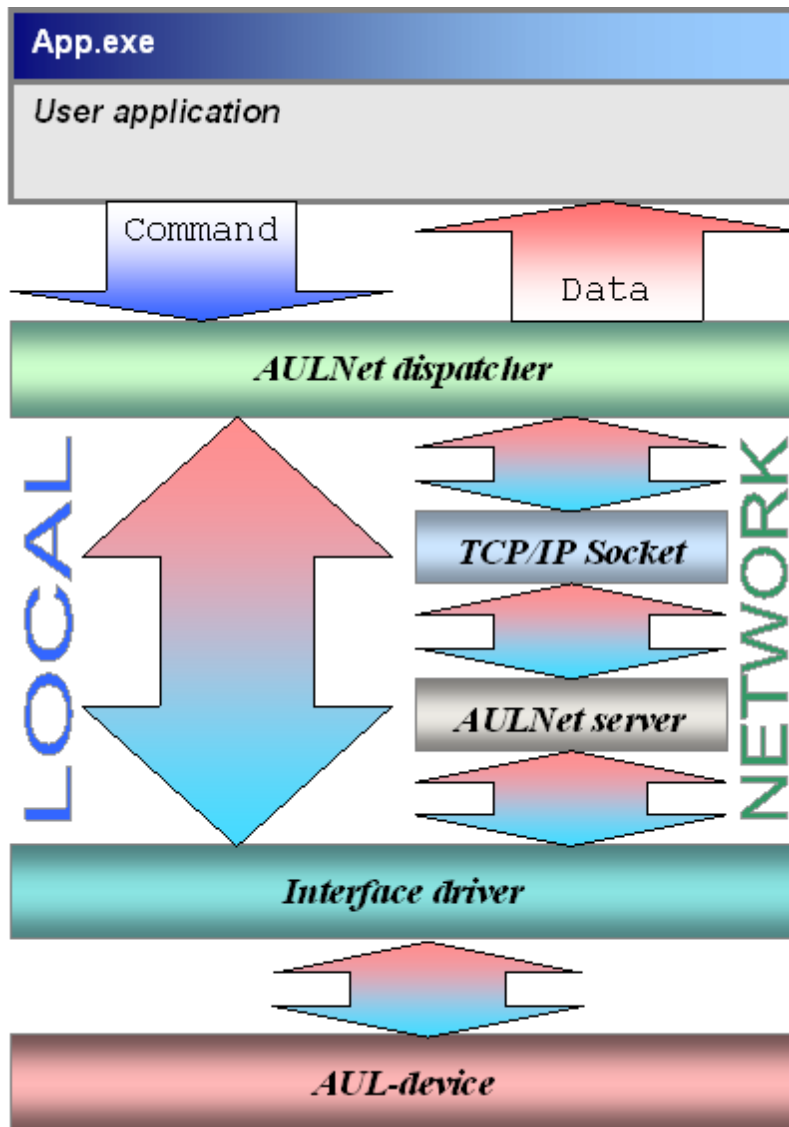
"**Exit**" button stops the program operation.

2.2 Computer network operation

The current software version allows operating in "server-client" mode even for devices without built-in LAN-interface: meanwhile the device itself is physically connected to the computer-server and data reading is available from any computer of the network. Therefore there should be separate application run on the server – "AKTAKOM AULNet server" which is a part of the delivery set of this software which serves as a transmitter between the locally attached device and the connected customer application. Customer application launch is acceptable on the same computer

used for server application. Devices equipped with built-in LAN-interface can be connected to the network directly without using the computer-server.

For a remote device and control program communication there is AULNet technology used which uses TCP/IP-socket subset, as network communication end points, familiar to both users of UNIX and Windows.



To user's point of view, accessing to the instrument with AULNet at an arbitrary point of the network doesn't practically differ from a local access. The "full" name used during the device initialization (in this program - at the connection to the device) is the only difference.

The device full name contains its unique ID (device type and model + serial number), physical connection method (system driver type which provides the device to the local OS connection) and the server name. Name parts are separated with a double colon.

This program fully automates both the socket list operation and the process of full device names creation. However you may specify the name of the connected device manually. Therefore follow the below rules.

Syntax:

Angle brackets (<>) are used for names and parameters entered by user; square brackets ([]) - optional fields. The remaining characters must be used without modification. A vertical bar (|) separates alternative methods of parameter input: "either | or."

[AULNET[<interface_type>]::<socket>::]<device_name>

where:

<interface_type>≡one of the symbolic AUL interface designation, e.g.: **AUN** (AUNUsb.sys standard driver), **AUXPR** (USB Xpress driver), **AVCOM** (virtual COM-port), **AEPP** (parallel EPP-port driver).

<socket>≡<socket_number>|<socket_parameters>

It specifies the socket used to communicate with the device. Socket number comes from the server list processing function, or socket options are directly described (see below). Socket number from the list is specified with a decimal number.

<socket_parameters>≡@N<server>[@P<port>][@T<timeout>][@L<username>]

@N<server> - domain name (DNS, 256 characters at most) or IP-address of the server which the device is physically connected to.

@P<port> - the socket port number (decimal number, by default - 1024). **@T<timeout>** - socket connection timeout value (in milliseconds, default value - 5000).

@L<username> - login to connect to the server (248 characters at most, default name - AULNetPass).

For example: **@Nwww.user123.aktakom.com@P1080@Llogin123**

or: **@N127.0.0.1@P1024**

<device_name>≡<model_name>[#<serial_number>]

AUL-device name composed of the model name (8 characters) and an optional serial number (16 characters at most), separated with a space with a "hash" sign - #. For example: **AHP-3121#2310768**.

Substitutional characters and defaults

Some parts of the full device name can be omitted or replaced with an asterisk - *.

If either an AULNET part is completely omitted (only *device_name* is given), or socket

string is omitted or empty, the device is considered to be local and AULNET technology is not used to communicate with it.

If *<interface_type>* field is omitted, the default interface is selected depending on the device model.

If *<device_name>* field does not contain serial number, the attempt is made to the first suitable device ready for use instead of the initial one.

If there is an asterisk symbol *<*>* instead of the *<socket>* field, the search of the specified device is made on all of the servers from the list (set by special functions).

If there is an asterisk symbol *<*>* instead of the *<serial_number>* field, the resort attempt is made to the first ready for use one-to-one corresponding device.

Specific device drivers can additionally support defaults for supported models.

Examples:

ACK-3106

access to the first ready device, which can be used as ACK-3106 (including oscillographic modules ACK-4106, ACK-4166 and ACK-3107 with USB-hub module) and connected to the local machine. A direct connection (without the use of AULNET) is used.

AULNET::@N127.0.0.1@P1024::ACK-3106 #*

access to the first vacant device of ACK-3106 type (oscillographic modules ACK-4106, ACK-4166, ACK-3107 with USB-hub module are ignored), connected to a local machine (IP-address to access the network "itself to itself" - 127.0.0.1) by port 1024. If there is no socket server with such parameters, then it will be added to the list. Added socket list number can be obtained from the open device handler interface. AULNET connection is used.

AULNETAUN::2::AME-1204 #123456789

Access to the specific device of AME-1204 type with exact serial number 123456789 and connected through the AUNusb interface to a socket, determined by record number 2 from the previously entered server list. If such entry is not listed, the error will be returned EAULNET_SOCKET_INDEF(-25) - «The socket is not defined».

AULNET::*::AHP-3121 #123456789

search of the specific device of AHP-3121 type with serial number 123456789 on all servers from the previous list (direct local connections are checked first).

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3 Service

3.1 Operation conditions

- Supply and input voltages, storage and operation temperature should be in accordance with the general technical specifications section.
- Relative humidity is not more than 90% at 25° C.
- Atmospheric pressure is from 495 to 795 mm of mercury.
- There should be no dust, acid fume, alkali and gases capably of causing corrosion in the storage and operation areas.
- Fall and vibration are not admitted.
- After being in limiting conditions (storage, transportation) the device cure time in normal (operation) conditions is not less than 2 hours.

3.2 Manufacturer's (provider's) warranty

1. The warranty provides free repair or parts and components replacement within the whole warranty period indicated on website <http://www.aktakom.ru> or in the warranty service coupon.
2. The provider guarantees the product features compliance with the requirements specified in the "Technical specifications" section within the warranty period following all of the operation conditions specified in the present instruction.
3. Warranty service is provided at the presence of the waybill and fulfilled warranty coupon which contain the information about the device serial number and warranty term.
Information about the date of sale in the warranty coupon or in the waybill is the basis for the beginning of the calculation of the warranty service term. Warranty service is made on the territory of enterprise-provider because after repair or replacement the product should be tested on an engineering test bed.
4. Defected product delivery is made by and at the expense of the consumer unless the special supply contract contains other terms.
5. Provider is obliged to make warranty repair within the reasonable time period. Calculation of the warranty repair term begins after the receipt of spare parts from the manufacturer for the repair unless otherwise specified in the supply contract.
6. Warranty obligations for the standard and optional accessories, connecting

wires, thermocouples, probes etc. are valid within 3 months following the operation conditions.

7. Warranty obligations don't cover consumables, diskettes, software unless it has been paid for separately.

8. Replaced (broken) spare parts and components are considered the provider's property. The provider's decisions concerning the warranty should be final.

9. Warranty repair is not made in the following cases:

9.1. the warranty period specified above has expired;

9.2. waybill or warranty coupon contain no information about the device serial number or the serial number specified within the mentioned documents doesn't correspond to the serial number of the device presented for warranty service.

9.3. there is damage of the factory seal or special paper marker; there is damage of warranty stickers or there are marks of their repositioning, there are any other stickers hiding the present stickers of the manufacturer's device (except those cases when a sticker was changed in the authorized service centre);

9.4. customer has violated the operation conditions including the exceeding of power and input voltage and frequency that caused the breakdown of the protective power circuits and defects of highly sensitive input front ends, use of input and network wires, probes etc. not specified within the current instruction;

9.5. there are mechanical damages, including cracks, chips, fractures in the device housing or board etc.; thermal damage including marks of soldering, reflow, solder splashes etc.; foreign objects, substances or insects or animals, moisture or liquids in the device; chemical damage, including oxidation corrosion, metallization, corrosion marks, condensation of sea salt mist etc.;

9.6. there are signs of outside interference, violation of the factory installation;

9.7. the device was used in the areas of high influence of electromagnetic field and radiation.

3.3 Updates and technical support



 For the software update and AKTAKOM technical support visit our website: <http://www.aktakom.com>

 Also you may ask your questions, send requirements and offers via e-mail: [e-mail: aktakom@gmail.com](mailto:aktakom@gmail.com)

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