General Warranty

We warrant that the product will be free from defects in materials and workmanship for a period of 3 years from the date of purchase of the product by the original purchaser from our company. The warranty period for accessories such as probes is 12 months. This warranty only applies to the original purchaser and is not transferable to a third party.

If the product proves defective during the warranty period, we will either repair the defective product without charge for parts and labour, or will provide a replacement in exchange for the defective product. Parts, modules and replacement products used by our company for warranty work may be new or reconditioned like new. All replaced parts, modules and products become the property of our company.

To obtain service under this warranty, the customer must notify our company of the defect before the expiration of the warranty period. Customer shall be responsible for packaging and shipping the defective product to our designated service centre, a copy of the customer's proof of purchase is also required.

This warranty shall not apply to any defect, failure or damage caused by improper use or improper or inadequate maintenance and care. We shall not be obligated to furnish service under this warranty a) to repair damage resulting from attempts by personnel other than our company representatives to install, repair or service the product; b) to repair damage resulting from improper use or connection to incompatible equipment; c) to repair any damage or malfunction caused by the use of not our supplies; or d) to service a product that has been modified or integrated with other products when the effect of such modification or integration increases the time or difficulty of servicing the product.

Please contact the nearest sales and service offices for services.

Excepting the after-sales services provided in this summary or the applicable warranty statements, we will not offer any guarantee for maintenance definitely declared or hinted, including but not limited to the implied guarantee for marketability and special-purpose acceptability. We should not take any responsibilities for any indirect, special or consequent damages.

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1. General Safety Requirements

*! Before using the device, Lilliput strongly recommend to browse "**Safety Warnings**" carefully and completely, so as to avoid any possible human body injury, or any damages to the device, or its accessories, or communicated facility. !*

Safety Warnings

- The device only been allowed to work within specified application scenario.
- Before communicating the device with PC, please refer to the user manual to familiarize the allowed rating value completely.
- Making sure the allowed rating value of all terminals been well-followed, so as to avoid any potential short circuit or electric shock.
- NO direct human body touch with any naked conductor of device when working the device. The naked conductor covers joints, connecting probe tip, communication interface, and others.
- No further operation is allowed provided any undetermined failure appears when working the device, better to seek the assistance of qualified technicians.
- DO NOT work the device in humid environment.
- DO NOT work the device in the explosive atmospheres.
- Keep the device in good ventilation environment, and always keep the device surface clean and dry.
- Better to send the device to qualified technicians for necessary maintenance.

2. Safety Terms and Signs

Safety Terms

Terms in this quick guide.

Warning: which indicates the condition or the operation that may cause human body injury or permanent life loss.

Caution:which indicates the condition or the operation that may cause device damage, or its accessory damage, or communicated facility damage.

Terms on the device.

Danger:which indicates the operation may result in the immediate human body injury.

Warning:which indicates the operation may result in potential human body injury.

Caution:which indicates the operation may result in potential damage to the device, or its accessory, or communicating facility.

Safety Signs

Signs on the device.

Hazardous Voltage

(please refer to user manual for further details)

Protective Earth Terminal

Chassis Ground

Communication Interface Ground

To avoid possible human injury, and / or device damage, and / or its accessory or communicating facility damage, before working the device, Lilliput strongly recommend to read the following safety information.

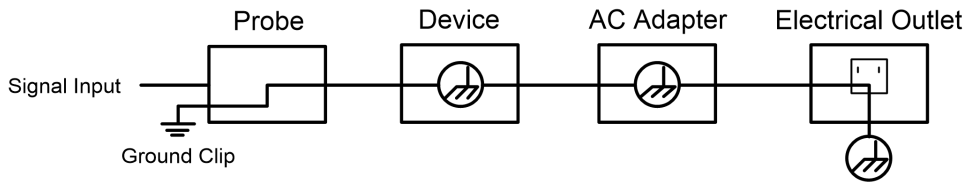
Warning

To avoid any potential short circuit or electric shock, DO use the power adapter of original local standard, or recommended by Lilliput.

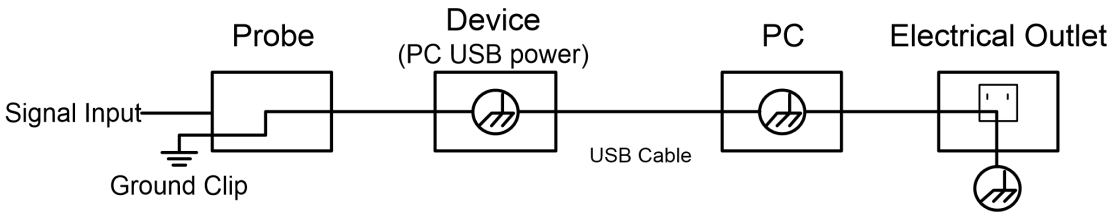
Warning

The channels of the device are non-isolated electrically. When working the device, to avoid possible short circuit, the ground of two probes are NOT allowed to connect to 2 different non-isolated DC level.

The illustration of the device's built-in ground wire connection:



When the device communicating with PC via USB communication interface (with PC powered by AC power source), the illustration of the ground wire connection:



It is NOT allowed to measure AC power when the device been powered by AC power source through the adapter, or when the device powered by PC USB connection cable (via USB communication interface of PC, with PC powered by AC power source).

⚠ **Warning**

When the device input is getting through the voltage larger than 42 Vp-p (30Vrms), or on circuit of 4800+VA, to avoid any potential short circuit or electric shock -

- DO use probes and adapter come along with the original device, or those ones recommended by our company.
- Before working the device, DO check probes and accessories carefully to see whether any mechanical damages exist, making sure probes and accessories in normal-working status.
- When device in non-working condition, to remove probes and accessories firstly, then put them in suitable places.
- When working the device in CAT II environment, DO NOT get the 40+ V input voltage from earth surface through any non-isolated input; DO NOT get the 40+ V input voltage of dropout voltage through any non-isolated input DO NOT introduce input the voltage larger than the rated one, especially when probe attenuation set in 1:1, since the voltage from probe tip will go through to the device itself.
- NO NOT contact the exposed part of metal BNC terminal directly by hand or any other human body part.
  DO NOT insert any metal object into device connectors.
  - Note -
  i). The rated voltage mentioned in point v. is the fixed value of working voltage, matching VACrms / 50 - 60Hz under AC sine wave application, and VDC under DC sine wave application;
  ii). CAT II indicates local level for electrical appliance and portable device.

3. Communication Interface Introduction

VDS2252:

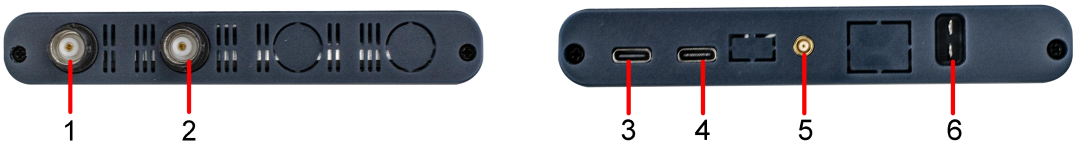


Figure 3- 1. Communication Interface of the Device

(1) CH1: for signal input.

(2) CH2: for signal input.

(3) Power Supply Type-C Input Port (Power Only).

(4) Type-C Interface (USB Device): For communication with computers; can provide power to devices when no power supply is connected.

(5) Multifunctional Interface: External Trigger Channel Input.

(6) Probe compensation: 3.3 V/1 kHz Signal Output.

VDS2252I:

Figure 3- 2. Communication Interface of the Device

(1) CH1: for signal input.

(2) CH2: for signal input.

(3) Power Supply Type-C Input Port (Power Only).

(4) Type-C Interface (USB Device): For communication with computers; can provide power to devices when no power supply is connected.

(5) Multifunctional Interface: External Trigger Channel Input.

(6) LAN: for PC communication within network.

(7) Probe compensation: 3.3 V/1 kHz Signal Output.

VDS2254:

Figure 3- 3. Communication Interface of the Device

(1) CH1: for signal input.

(2) CH2: for signal input.

(3) CH3: for signal input.

(4) CH4: for signal input.

(5) Power Supply Type-C Input Port (Power Only).

(6) Type-C Interface (USB Device): For communication with computers; can provide power to devices when no power supply is connected.

(7) Multifunctional Interface: External Trigger Channel Input.

(8) Probe compensation: 3.3 V/1 kHz Signal Output.

VDS2254I:

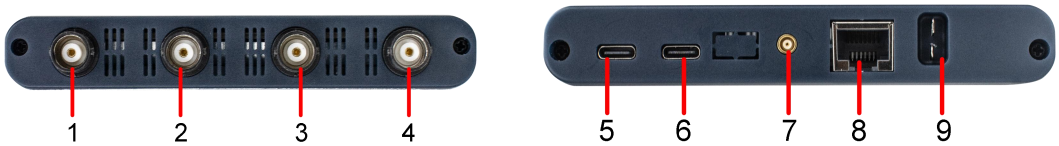


Figure 3-4. Communication Interface of the Device

(1) CH1: for signal input.

(2) CH2: for signal input.

(3) CH3: for signal input.

(4) CH4: for signal input.

(5) Power Supply Type-C Input Port (Power Only).

(6) Type-C Interface (USB Device): For communication with computers; can provide power to devices when no power supply is connected.

(7) Multifunctional Interface: External Trigger Channel Input.

(8) LAN: for PC communication within network.

(9) Probe compensation: 3.3 V/1 kHz Signal Output.

4. Device General Checking

After you get a new device, it is recommended that you should make a check on the instrument according to the following steps.

(1) Check whether there is any damage caused by transportation.

If it is found that the packaging carton or the foamed plastic protection cushion has suffered serious damage, do not throw it away first till the complete device and its accessories succeed in the electrical and mechanical property tests.

(2) Check the Accessories.

The supplied accessories have been already described in the "Appendix A: Accessories" of this Manual. You can check whether there is any loss of accessories with reference to this description. If it is found that there is any accessory lost or damaged, please get in touch with our distributor responsible for this service or our local offices.

(3) Check the Complete Instrument.

If it is found that there is damage to the appearance of the instrument, or the instrument can not work normally, or fails in the performance test, please get in touch with our distributor responsible for this business or our local offices. If there is damage to the instrument caused by the transportation, please keep the package. With the transportation department or our distributor responsible for this business informed about it, a repairing or replacement of the instrument will be arranged by us.

5. How to Communicate Device with PC

to communicate the device with PC, it's a must to install software firstly.

Download web：
https://files.owon.com.cn/software/pc/VDS6Series_PC_Software.zip

i. software installation solution

i). full installation

Target user(s): general PC oscilloscope user(s), and programmer(s) get secondary development need

Installation process -

- On the basis that NI-VISA driver or similar VISA driver already worked normally onto PC, to install "VDS2000Series_PC_Software.exe" from accompanying CD which comes along with device.

- Provided no proper VISA driver found onto target PC, as first step, to install "ni-visa_19.5_online_repack.exe*" from accompanying CD which comes along with device.

*. This .exe file will instruct the user(s) to download NI-VISA driver, and the user(s) could choose necessary NI package kit in the process as well.

The second step is to run "VDS2000Series_PC_Software.exe".

Note: According to the user(s) preferences, different version NI-VSA available via - visit www.ni.com through web browser, type "NI-VISA" onto search column, click NI-VISA Download web linkage from searching results, in accordance with the PC operation system and its version, to choose preferred suitable NI-VISA version.

ii). simple installation

Target user(s): general PC oscilloscope user(s)

Installation process -

To install Runtime version NI-VISA driver from accompanying CD which comes along with device firstly, after that, to run "VDS2000Series_PC_Software.exe".

iii). minimum installation

Target user(s): PC oscilloscope user(s) who only need to communicate the device with PC via direct network cable (no requirements for USB communication)

Installation process -

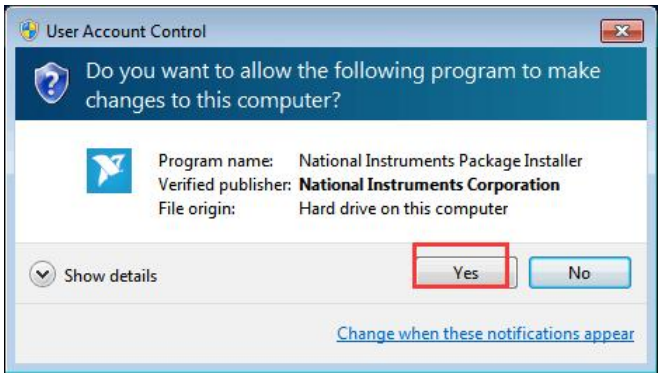
To run "VDS2000Series_PC_Software.exe" from accompanying CD which comes along with device directly.

Note: The users could refer to **xiii.how to use socket connection** for "**when the device communicates with PC by direct network cable**" under VII. Device Operation please refer to user manual.

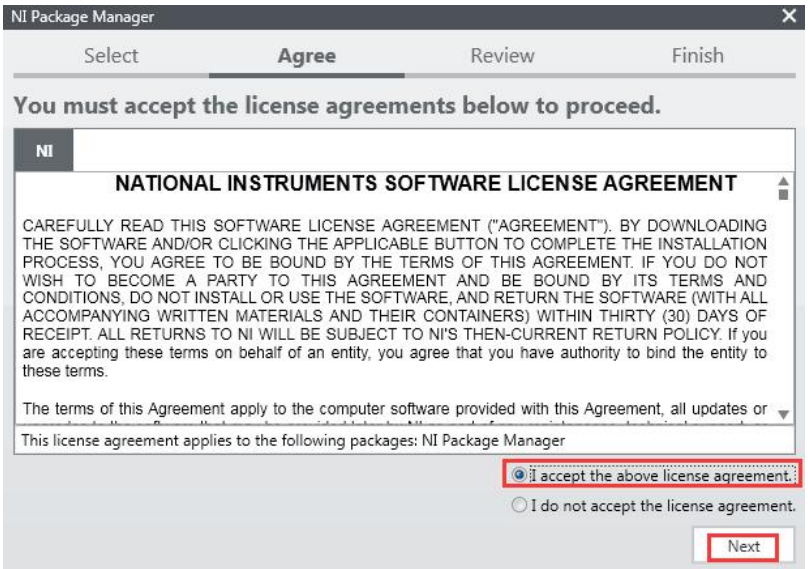
ii. to install NI-VISA driver

To assure PC software running normally, and smoothly, it is a must to install NI-VISA driver firstly.
Note: On condition that NI-VISA driver, or similar VISA driver already worked normally onto the target PC, step ii could be skipped.

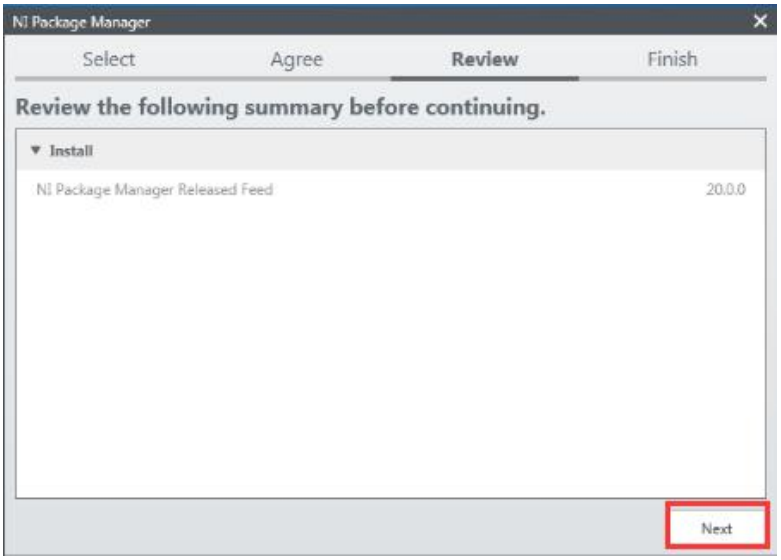
To run ni-visa_19.5_online_repack.exe from accompanying CD which comes along with device, to start NI-VISA driver installation,



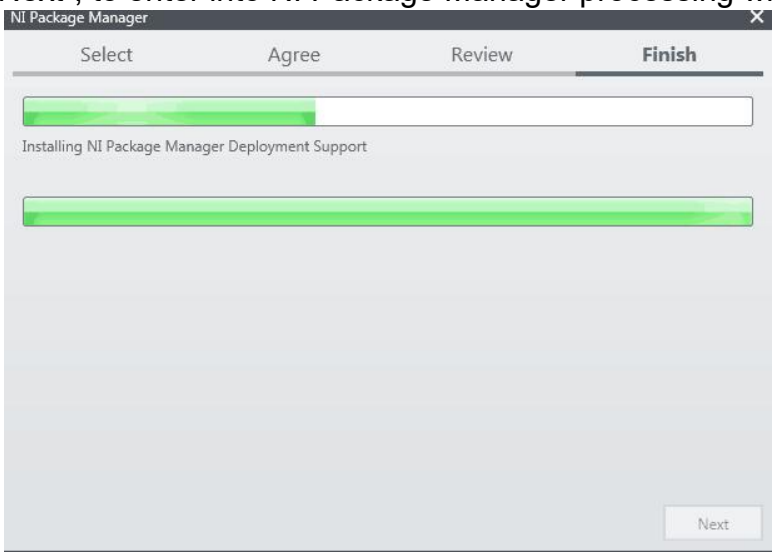
click "Yes" to continue, and following window comes,



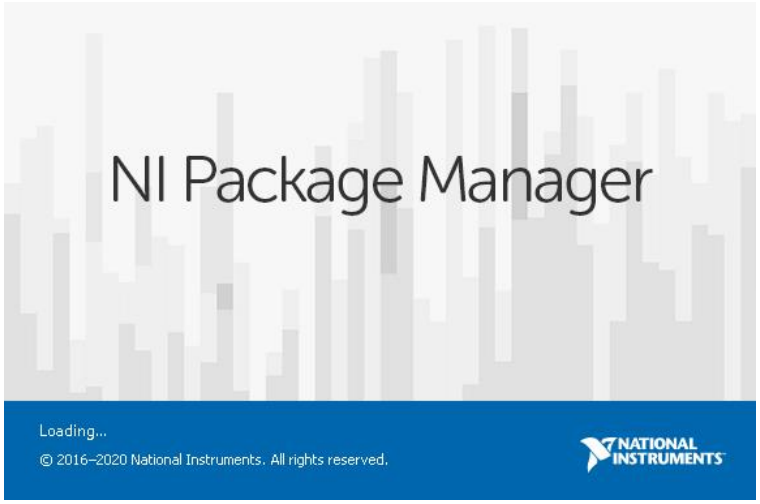
dot-tick "**I accept the above license agreement**", then "**Next**",



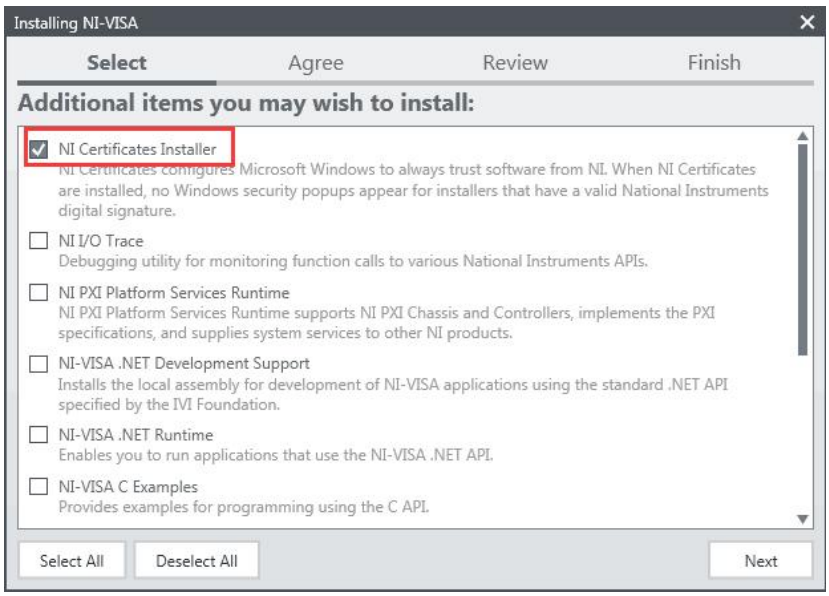
another “Next”, to enter into NI Package Manager processing window,



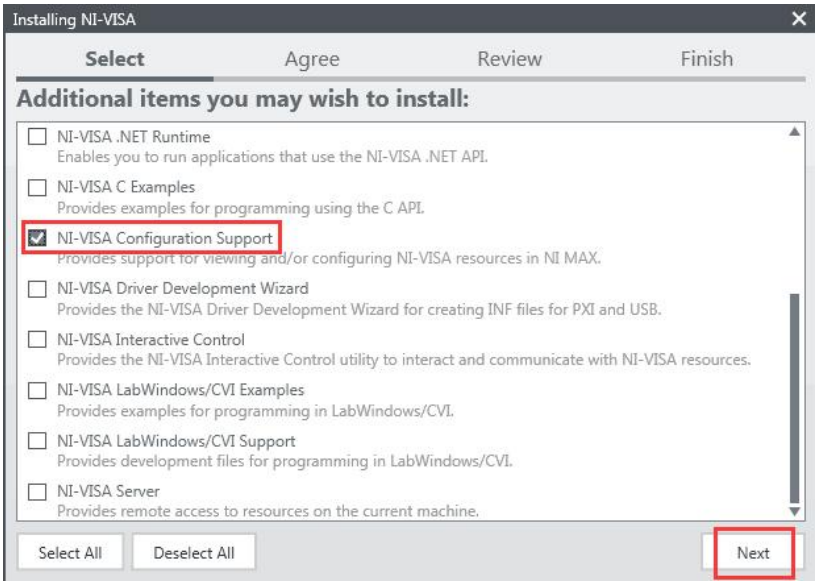
then this window,



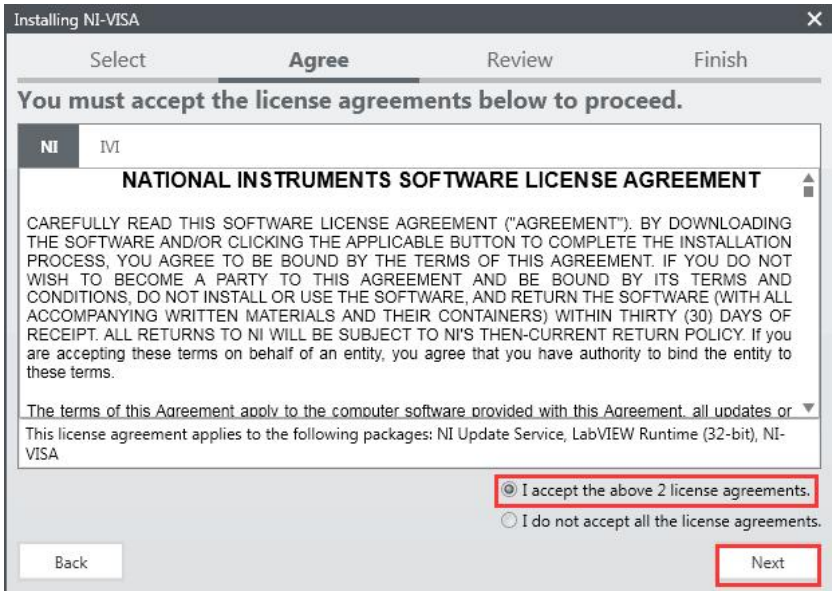
later, when following window appears,



to select additional items you may wish to install,

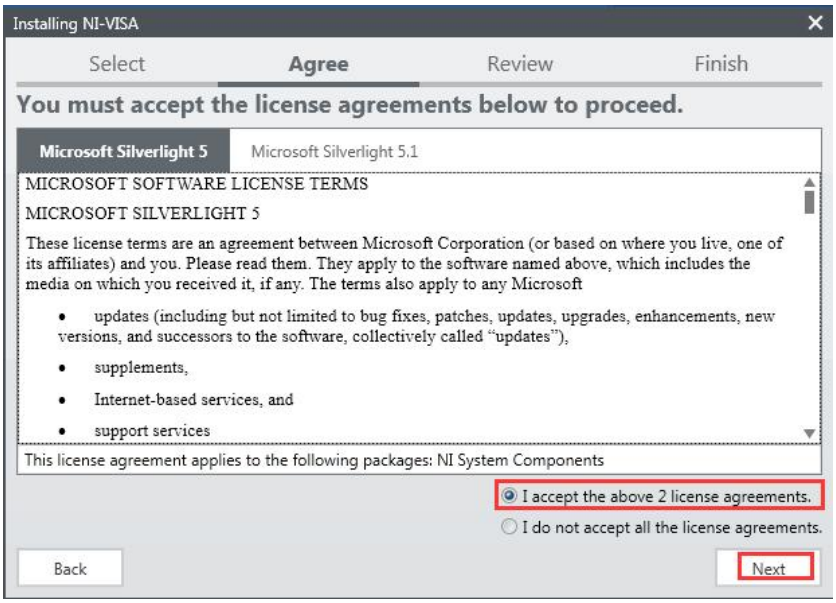


via scroll bar, to select more necessary options,from here,

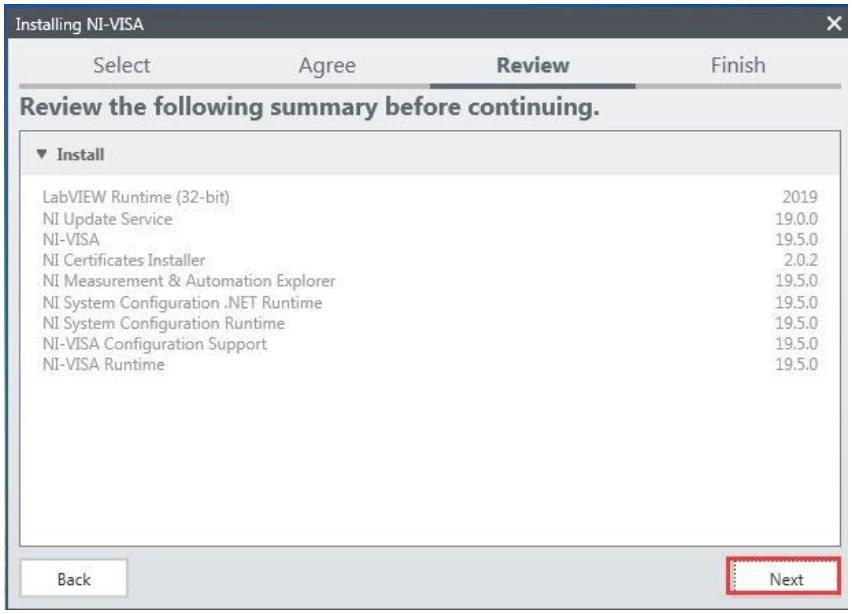


dot-tick "**I accept the above 2 license agreements**", again "**Next**",until this

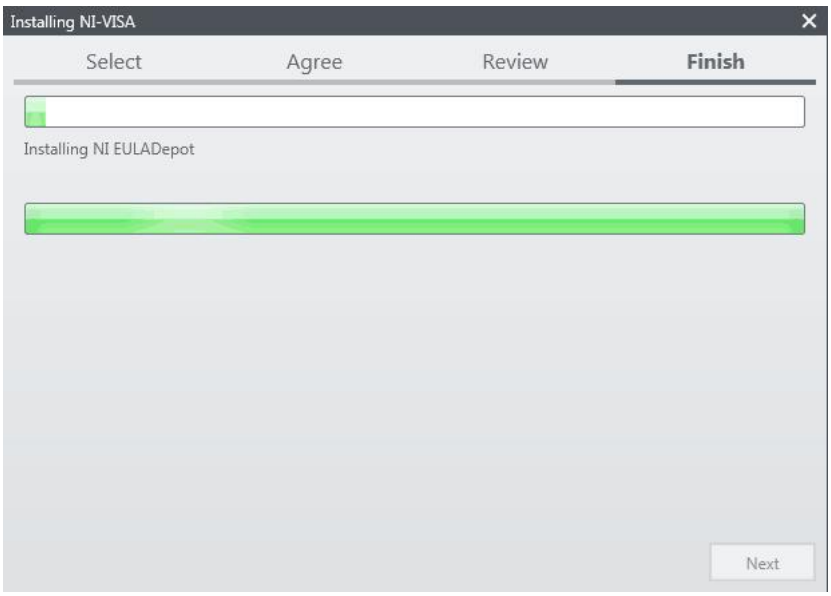
window,



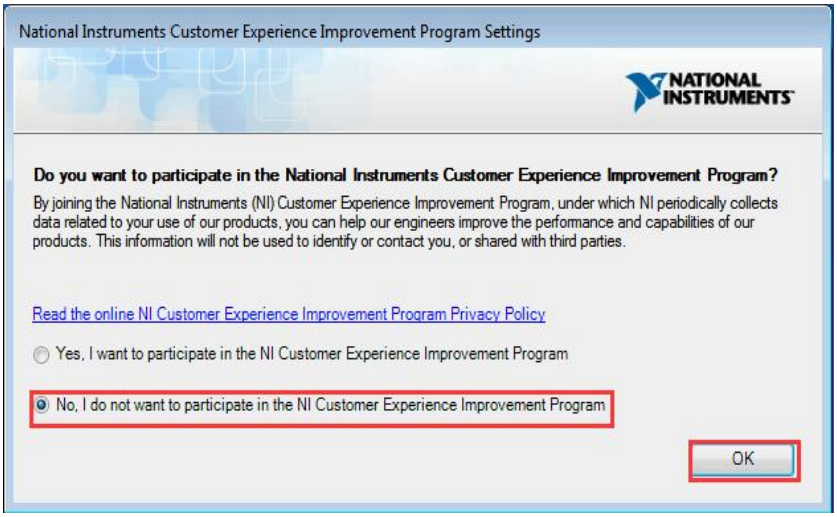
dot-tick "**I accept the above 2 license agreements**" for another time, and another "**Next**", welcomes "Review" window,



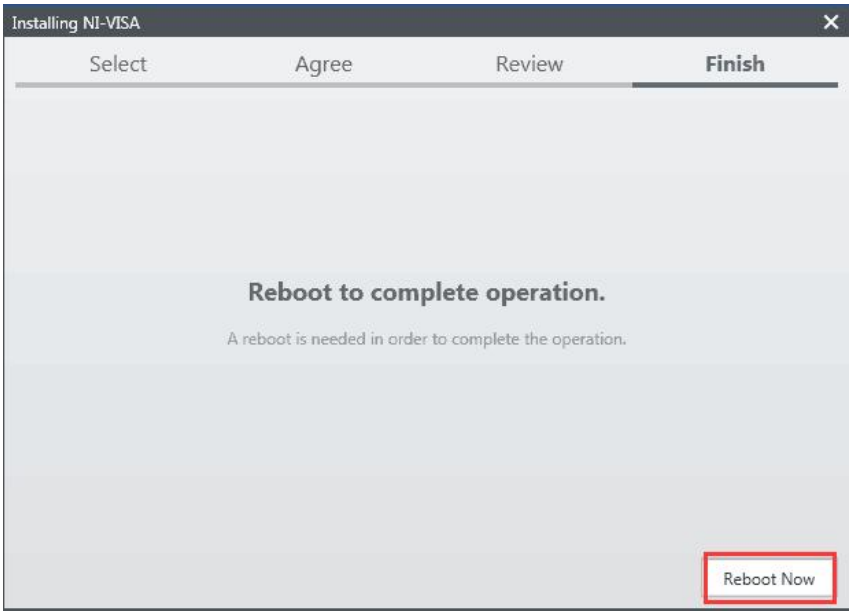
via "Next",get access to NI-VISA installation,



one more “Next”,to make your decision at this window,



press “OK” to finish the whole process,this window indicates the successful installation,



to reboot the PC through mouse-clicking “Reboot Now”

After PC restarts, the NI-VISA driver been installed onto target PC successfully.

iii. to install PC Software

To run “VDS2000Series_PC_Software.exe” from accompanying CD which comes along with device directly, to install PC software accordingly.

iv. to work PC Software

Via short-cut to PC software from the desktop of target PC, double-click “VDS2000 DSO” to start the software.

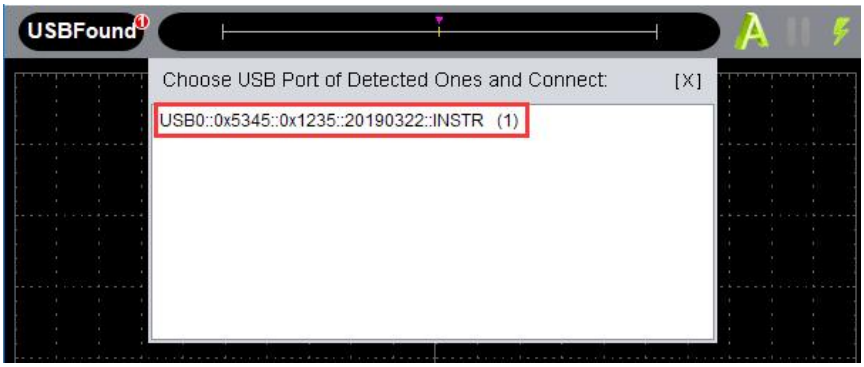
v. to communicate the device with PC

The user(s) gets 2 options to communicate the device with PC: through USB communication port, or through LAN port.

to communicate the device with PC through USB communication port

After powering the device via AC-DC adapter, its status indicator lights red for seconds.

Via USB connection cable (type-C), through matching communication interface, to connect the device with PC. When the status indicator lights green, PC software detects effective USB port, mouse-click the detected option to communicate the device with PC.



to communicate the device with PC through LAN port

2 solutions available to communicate the device with PC through LAN port -

Solution 1. By socket connection, upon with the combination of IP address and port, please refer to xiii. how to use socket connection under VII. Device Operation from page 41 - 43 of e-format user manual.

Solution 2. By adding LAN/LXI network device, please refer to xiv. how to use LAN communication interface and xv. how to work WiFi with PC software under VII. Device Operation from page 44 - 51 and page 52 - 58 of e-format user manual.

6. Device Function Checking

To verify whether the device in normal-working status, better to do a fast function check. After communicating device with PC successfully, please follow up following steps to do a fast function check -

i. From PC software operation interface, mouse-click to restore the device to factory settings. The default probe attenuation value in PC software reads x10.

ii. To switch the probe attenuation in x10, work probe with Channel 1 via communication interface. The operation step goes in -

i) to align the probe slot with the BNC connector of CH1 communication interface, insert it through, then rotate the probe rightwards, to make the connection tightly.

ii) to connect the probe tip and its ground clamp with the coupler of the probe compensator.

iii. Mouse-click from right top of the PC software operation interface, the square wave of 1 kHz / 3.3 V will come.

These 3 steps are to check the status of device's Channel 1, the user(s) may repeat these 3 steps to check the status of device's Channel 2, and remember to choose the Channel 2 communication interface in the checking process.

7. Probe Compensation

Before working the probe with either of input channels (Channel 1 / Channel 2), better to adjust its compensation, to assure ideal measurement effect. Since the probe in non-compensated, or improperly-compensated (overcompensated / under-compensated) status always cause possible error or mistake to the measurement result.

Following operation steps to adjust probe compensation -

i. From PC software operation interface, mouse-click to get access to device function menu, choose "**Channel**", then "**CH1**", set the "**Probe Rate**" as "**X10**". Switch probe attenuation to **X10** option, then get the probe through Channel 1 input via device communication interface. Provided the probe hook tip been introduced, make sure it is in close touch with the probe. Connect the probe tip with the signal output coupler of probe compensator, and connect the reference wire clamp with the ground wire coupler of the probe compensator, and then click to do auto set.

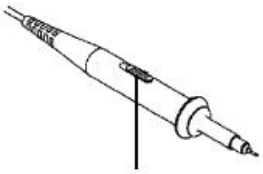
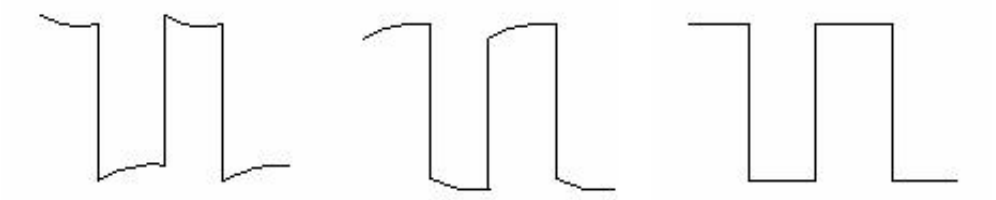


Figure 7-1. Probe Attenuation Switch Position (could set in 1X or 10X option)

ii. The probe compensation goes in 3 different status (as *Figure 7-2* shows),



Overcompensated **Under-compensated** **Well-compensated**

Figure 7-2. Different Status of Probe Compensation

provided probe in overcompensated or under-compensated status, use probe adjust (from device accessories) to adjust the screw (leftwards or rightwards) of probe body (*Figure 7-3*).

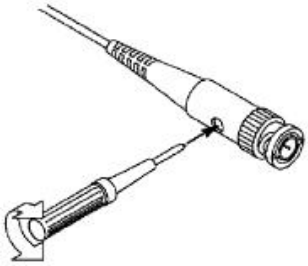


Figure 7-3. Probe Screw Adjusting

For different brand-new probe, please repeat these steps to get ideal compensation.

8. How to Use the Probe Safely

The safety guard ring around the probe body protects human finger from any electric shock, its location as *Figure 8-1*.

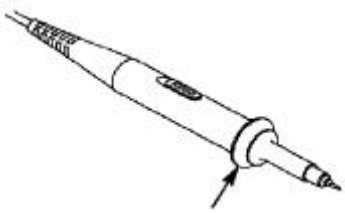


Figure 8-1 Finger Guard Location

Warning:

To avoid possible electric shock, when working the probe, always keep human finger behind the safety guard ring.

To avoid possible human body injury from electric shock, DO NOT touch any metal part of the probe tip when probe working with voltage source.

Before any measurement operation, always connect the probe to the device, and connect the ground terminal to the earth.

9. Appendix

Appendix I. Device Accessory List

Accessories -

- passive probe

  VDS2252/VDS2252I: 2 x passive probe
  VDS2254/VDS2254I: 4 x passive probe

- 1 x type-C cable
- 1 x hard copy quick guide

Appendix II. Device Maintenance

Storage

To avoid any possible damage to the device, and probe, keep these items FAR AWAY from sprays, liquids, or solvents.

Surface Cleaning

As per the operation condition requirements, DO check the device and probe surface from time to time.

When cleaning the device / probe surface, please follow up with operation steps as follows -

i. Before the surface cleaning, making sure the device is powered off, without any accessory / outer communicating facility connected; making sure probe not working with the device / outer communicating facility.

ii. DO use non-electrostatic soft cloth to remove the surface dust.

iii.For further surface cleaning, recommend to use a wet-but-no-water-dripping soft cloth, or soft detergent.

Note: To avoid permanent damage to the surface of device and probe, DO NOT introduce any corrosive chemical cleaner / detergent.

Warning:

After device surface cleaning, before working the device for next time, please confirm that the device surface in a relative dry condition, so as to avoid any possible short circuit risk, or possible human body injury caused by electric conduction from the wet surface.

09/2025, V1.0.0