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R-450M Model Router machine

Operating Manual

东莞市玮创电子设备有限公司

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Preface

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Model ： R-450M Model Router Machine

Serials No.：_____

Spindle No.：_____

Software Version：_____

Date of Production：_____

The R-450M series and logo are owned by VECTRON. This manual is subject to change or update without notice.

一、R-450M Fuctions & Features:

The R-450M is a high-speed rotary cutter that separates a multi-piece PCB from the programmed path. Widely used in digital, communication, lighting and other fields. Improve the quality of manual folding, V-CUT, stamping, etc., to improve quality and reduce scrap.

1.Ultra-fast cutting speed. Designed for high-quality design, the high-speed drive platform and high-speed spindle provide you with the cutting speed ahead of the industry, solve the problem of slow multi-plate splitting, and achieve high efficiency and lean production.

2.Modular structure, high stability and convenient maintenance. Modular servo control system with high stability, equipped with advanced grinding screw and high-precision guide rail, cutting precision up to ±0.02mm, to meet various cutting

needs and ensure production quality. Modular electronic control system, quick troubleshooting, convenient equipment maintenance and upgrade.

3.Alarm light curtain, safe production. There are alarm light curtains on both sides of the working platform. When the equipment is running, the light curtain is blocked, and the equipment will automatically stop running to avoid the damage caused by the accidental operation of the equipment.

4.Multiple identical or different programs can be used on the same fixture and positioned by Mark to ensure cutting accuracy.

5.Self-diagnostic function. Error message self-diagnosis system, which can diagnose the fault during the operation of the device, find fault easily, and resume production in time.

6.Segmented undercut, low-cost production. Tool life management monitoring, after cutting a certain distance, the cutter will automatically rise/fall according to the setting to another uncut cutting edge position to extend the life of the milling cutter and reduce the cost of consumables.

二、Warrange period and Service scope:

This equipment has been commissioned and checked for OK before leaving the factory. The use of the company within the following conditions will guarantee it.

1.Warranty Period:

This equipment is one year after delivery.

2.Service Scope :

The company will repair it for free during the warranty period, but it will not be covered under the following conditions.

★Use materials and components that are not specified by

VECTRON company.

★Improper use by the operator or improper maintenance.

★Normal loss of consumables.

★Other natural disasters.

★The color of the machine casing is naturally faded.

★Does not affect the heating of the machine under normal operation, noise changes.

Notes: If you encounter problems that you don't understand in the actual process, please check the instructions or contact with VECTRON.

3.Free service range:

This machine will be free to service the following conditions after leaving the factory.

★Assembly commissioning and operation.

★Processing program production or education training and related technical guidance.

★Operation, circuit analysis and other related education training.

三、Technical Parameters

项　目 Items	技　术　参　数 Spec.
机器型号　Model	R-450M
外观尺寸 Mechanical Dimension	650*1250*1365mm(L*W*H)(不含地脚和灯塔) Excluding the anchor and Lighthouse
重量 Weight	约 450KG About450KG
重复精度 Repeat accuracy	±0.02mm
吸尘器尺寸　Vacuum Size	780*500*460mm(L*W*H)
吸尘器功率　Vacuum Power	0.75KW
吸尘方式 Dust Collection Method	下吸尘 Bottom Suction(External-vacuum/Built-in)optional
工作台尺寸　Work Table Size	390mm*560mm
最大切割尺寸　Max Route Size	310mm*480mm
传统系统 Drive System	X/Y/Z 三轴伺服马达控制 X/Y/Z Three axis servo motor control
切割主轴 Routing Spindle	60000 转/分钟　自冷式 60000rpm/min Automatic Cooling
切割速度　Routing Speed	1-100mm/sec
切割精度 Routing Accuracy	±0.02mm
坐标移动速度 Moving Speed	800mm/s
铣刀　Milling Cutter	Φ0.8-3.0 左旋 Φ0.8-3.0 L
刀具寿命 Tool Life Control	程序控制 Software Program Control
安全防护 Safety Protection	安全光幕 Safety ling curtain
异常报警功能 Error Alarm	是 YES
显示器 Monitor	17 寸戴尔显示器
编程方式 Programming Mode	通过键盘控制 CCD 移动、自动导航，简单易学 Through the Keyboard to control the CCD mobile, Automatic navigation,easy to learn.
电源 Power Supply	AC 220 2.2KW

Notes:The above parameters are standard configuration. If there are special requirements, they can be customized according to customer requirements. The technical parameters are subject

to change without prior notice. The final interpretation is owned by “VECTRON-TECH(DONGGUAN)ELECTRONICS EQUIP CO.,LTD.”.

四、Installation;

1.Environment setting

1.1 This equipment should be installed in a dry and ventilated place. Do not install it in a place subject to corrosion and flammability.

1.2 This equipment should be installed in a place where there is no sunlight and heat is large.

1.3 This equipment should be installed in a place free from vibration, maintenance and inspection.

1.4 This equipment should be installed in a place where there is less dust, oil and gas and metal dust.

1.5 This equipment should be installed in a place where there is no electromagnetic noise interference.

2.Equipment installation

2.1 Place the equipment in the specified location.

2.2 Use a spirit level to adjust the level of the equipment and then tighten the foot cup screws.

2.3 Connect the air intake pipe to the equipment air inlet.

2.4 Connect the power plug to the equipment.

2.5 Grounding requirements: Connect the device to the ground of the power distribution box separately. Do not connect it in series with other devices.

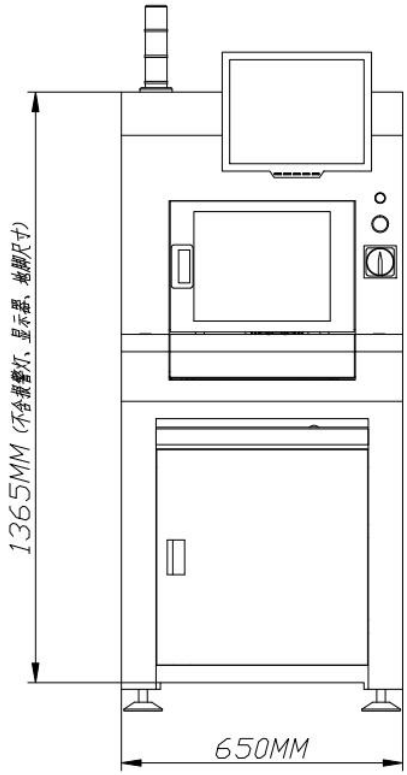
2.6 Check that the upper and lower signal lines are connected properly and that normal communication is possible.

3. Power supply, electrical configuration

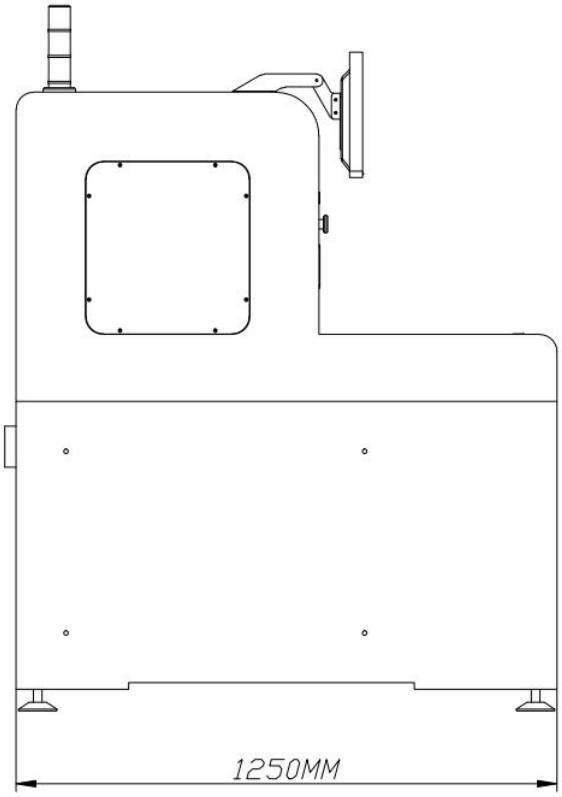
3.1 The standard input of this device is single phase 220V AC.

3.2 The standard pressure of this equipment is 0.3~0.7 MPa. Note: The ground wire of the power grid meets the international requirements of the equipment room to ensure good grounding of the equipment casing.

五、Machine Size



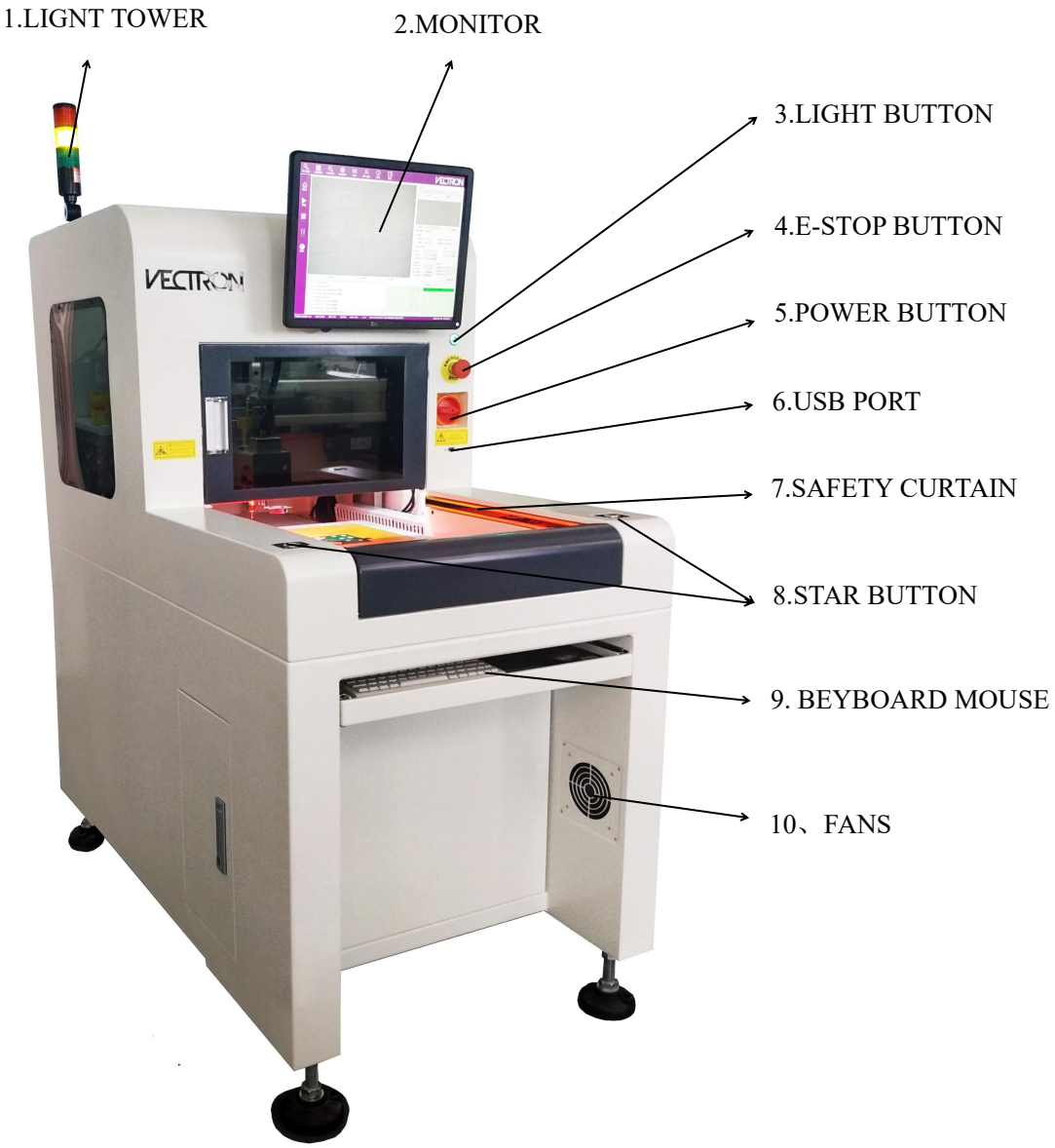
Front view



Side view

Chapter Ⅰ、Machine Description

一、Machine Appearance Description



1.1 LIGHT TOWER

RED: Lights up when the machine is not ready, the emergency stop button is pressed, the safety door is opened, or the fault occurs.

Yellow: The machine is normal and lights up while waiting for production.

Green: The light is on when the equipment is running normally.

1.2 Monitor

Used for displaying program interface buttons and production status.

1.3 The light switch

Turn on and off the lighting system in the equipment.

1.4 E-stop button

Whenever the button is pressed, the device will stop running. This switch is a self-locking switch. To eliminate it, turn it clockwise.

1.5 Power Button

Turn all power to the device on and off.

1.6 USB Port

Used for connection and communication between industrial computer and external equipment.

1.7 Satety curtain

When the light curtain is touched during the production process, the equipment immediately enters a stop state to prevent an accident.

1.8 STAR button

In the production state, press the two switch buttons at the same time, the device enters the processing and production state.

1.9 Keyboard、Mouse

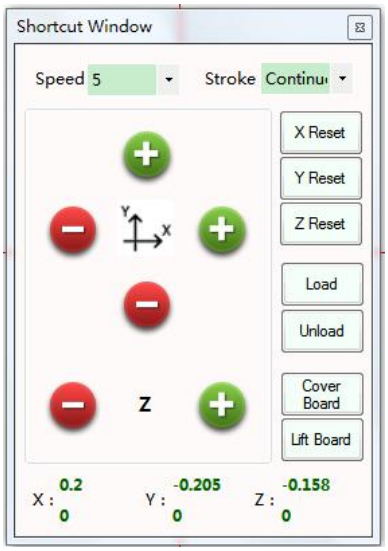
Used to manipulate and input data.

1.10 Fans

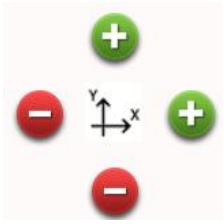
After the main power switch is turned on, the cooling fan will automatically run, mainly for the internal wiring of the device.Cooling of components such as the main unit.

二、Keyboard button operation instructions

Press the keyboard F2 (usually used when setting the program, please familiarize with this part), as shown below;



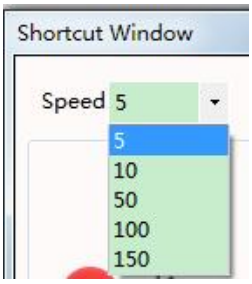
1.Each axis move key: Represents the direction keys for moving the X and Y axes, as shown in the following figure;
This function is consistent with pressing the upper, lower, left and right keys of the keyboard;



Represents the direction key of the moving Z axis, as shown in the following figure;Pressing the keyboard "UP" and "DOWN" in the movable state is consistent with this function;

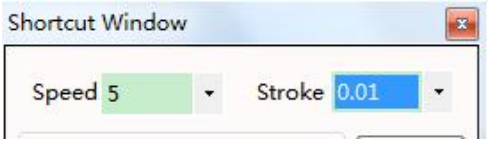
2. **Speed and stroke:** Select "5" position for speed and "Continuous Motion" for stroke, indicating that the current moving speed is 5mm/s, as shown in the figure below;

Speed selectable values, as shown below, (where 5 and 50 are default values,
Its value can be set through the "Advanced Window";

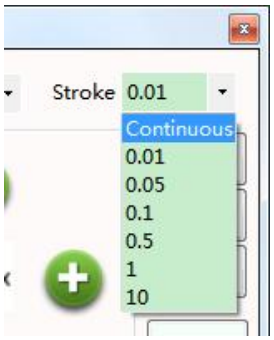


As shown in the figure below, the speed selects the "5" position

and the stroke selects “0.01”, indicating that when The distance of the previous movement is 0.01mm;



The selectable value of the stroke, as shown below, (where 0.05, 0.5, 1 are the default Value, other values can be set through the "Advanced Window");



3.Status of each axis: Display real-time coordinate values of each axis;

4.Function key:

（1）X reset: Click the button and the X axis returns to the original position;

（2）Y reset: Click the buttons and the Y axis returns to the original position;

（3）Z reset: Click the button and the Z axis returns to the origin position;

（4）Load: Click the button and the axes return to the loading position (some functions have cover function);

（5）Unload: Click the button and the axes return to the unloading position (some functions have a cover function);

（6）Cover board: Click the button and the axes return to the unloading position (some functions have a cover function);

三、Boot operation:

3.1 Confirm that the device is properly connected to the power and air supply;

3.2 Turn on the device's main power switch (rotate to the "ON" state), the indicator lights up, and the industrial master Machine start;

3.3 Press the "lighting switch" button to illuminate the

device lighting system;

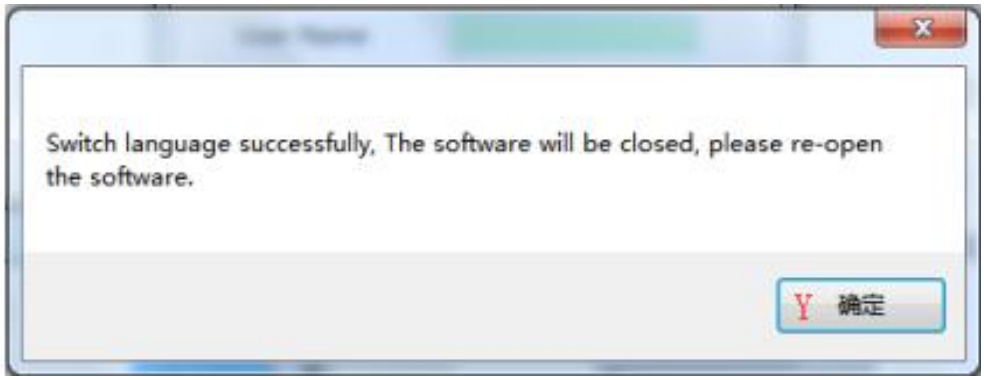
3.4 After the equipment industrial computer is started, double-click the Router control software on the windows system desktop. “ 

”, The login window shown below will pop up;

After entering the username and password (**Default username: 123; password: 123**)

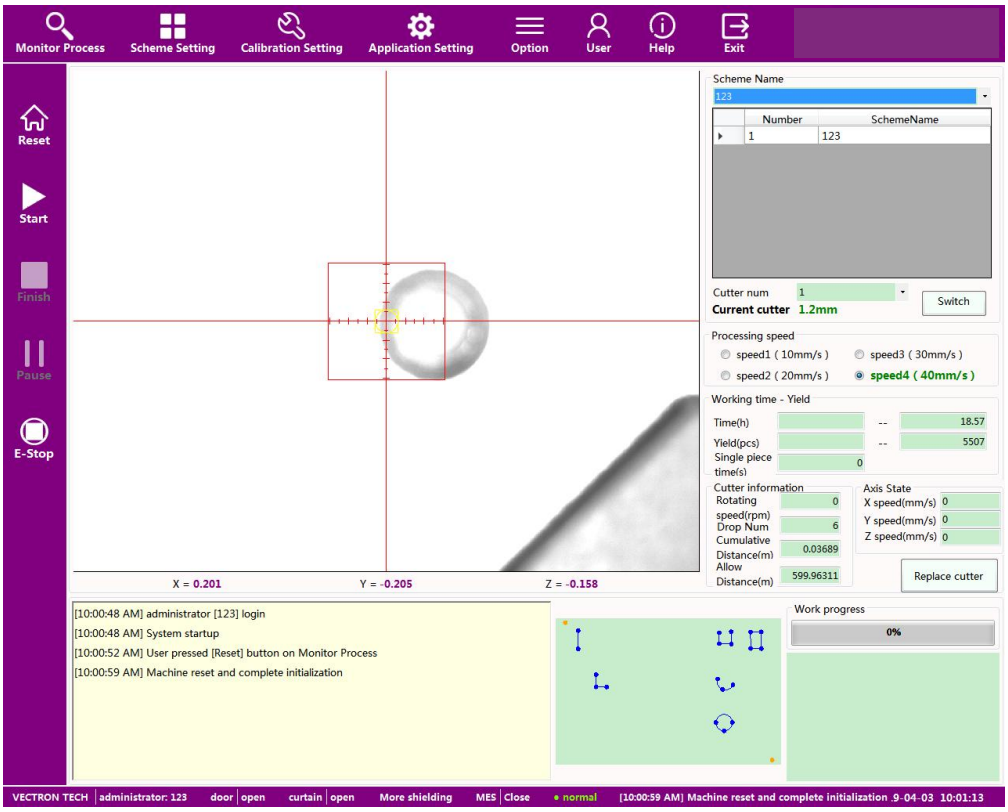
Select the corresponding language (Chinese and English version);

If you want to switch languages, the window shown below will pop up;



Click “Y”, the logout window will be exited and you need to log in again to switch successfully.

Select "Simplified Chinese" here, click "Login", enter the extension machine control software master interface. As shown below;



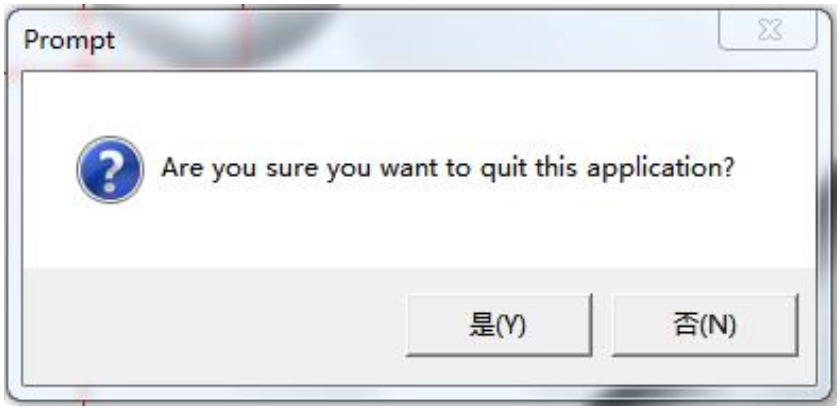
3.5 Click the “Reset” button at the top left of the main interface. After the device reset is completed, it can be operated normally.

四、Shutdown operation

4.1 Ensure that the fully router machine is in production stoppage;

4.2 Click on the top of the main interface “ 

”, Pop up the window shown below;



Click "Yes" to exit the control system;

4.3 Turn off the machine lighting system by pressing the "light switch" button;

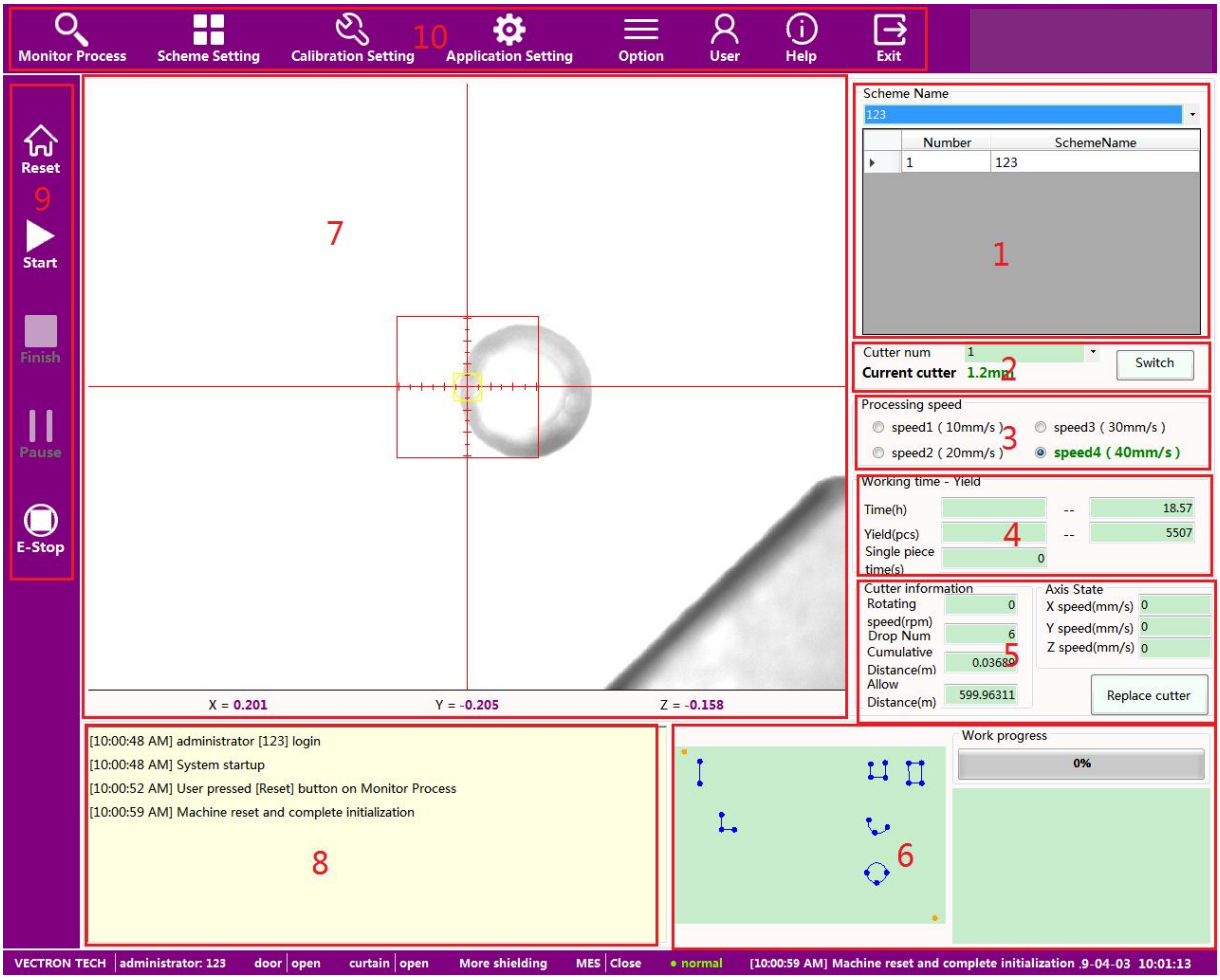
4.4 After the above steps are completed, turn the power switch of the machine (rotate to the "OFF" state).

The shutdown operation is all completed.

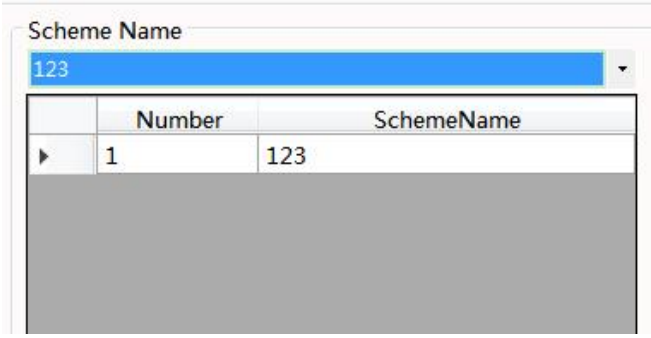
Chapter Ⅱ. Router Software Controll Desciption

一、Main Interface Software Fuctions Description

After starting the industrial control host, open the software control system and enter the user name and password. Display the interface shown below;

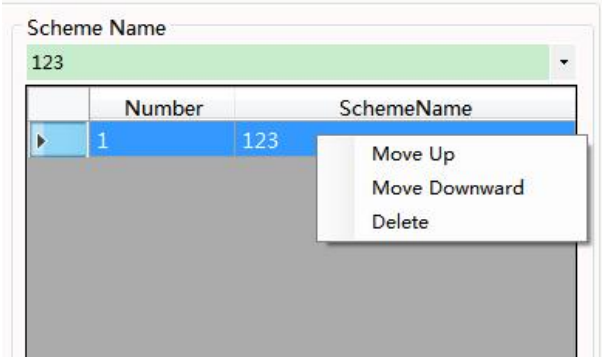


1.Processing list: Through the drop-down menu on the right, you can select the solution to be processed, as shown below;



After the processing plan is selected, it will be displayed in the processing list; at this time, move the mouse to a program.At the click of the right mouse button, you can change the processing order of the program or remove the program.

Processing list.



2.Tool management

Select the tool required for the current plan. If you need to change, select it through the menu.After choice the tool, click “Transition Now” to switch over;

3.Processing speed：Select the speed at the time of cutting (can be set through the advanced window);

4.Working time - production

Time：Display current processing time and total processing time of the selected program;

Yield：Display current processing output and total processing output of selected equipment;

Single piece time：Shows the time required to complete a single piece of PCBA board for the selected soluti

on;

5.Tool informations and axis status: Monitor the information of the currently used tool and the state of each axis movement; when the current tool life reaches the set allowable value, a pop-up prompt window will pop up, click "Change Tool", the device will move to the set tool change position;

6.Processing information: Display the path information and completion rate of the current plan processing;

7.Perspective display window: Real-time display of images captured by the camera, providing viewing angle information when editing the cutting path;

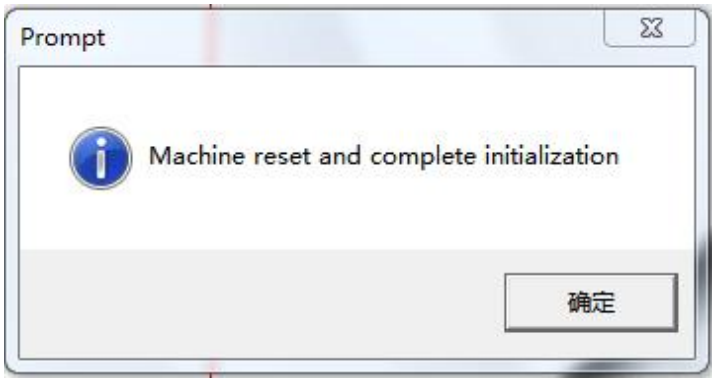
8.Log display window: Real-time display of equipment operating status, alarm information and recording operator operation process;

9.Equipment operation control:

Reset: After opening the system software, you must first perform a reset action, otherwise you will be in production and production. The operation of the case setting, etc., the system pops up the window shown in the figure below;

After the reset is successful, the window shown in the following

figure will be played;



Start: Select the plan to be produced, click "Start", you can produce normally;

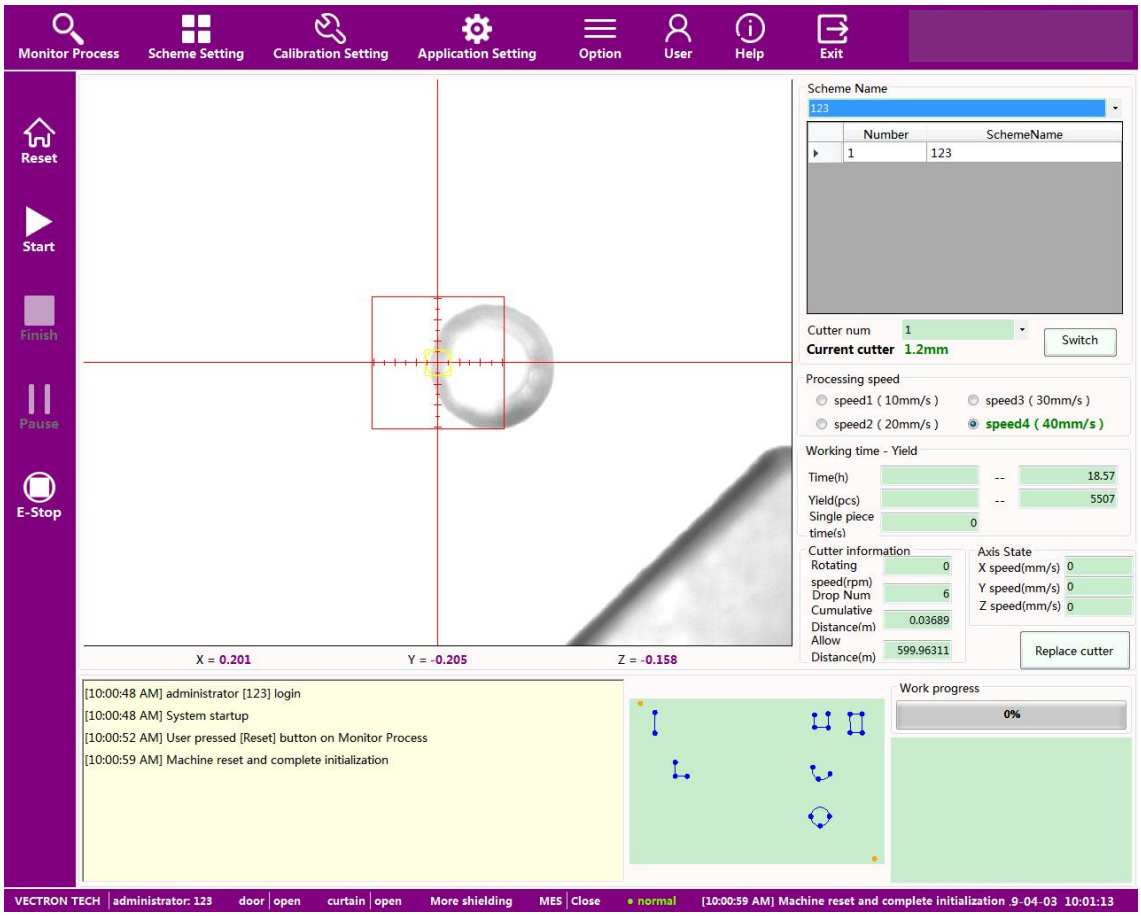
Stop: The device is in production, click "Stop", the device needs to complete all the current program Stop after cutting the path;

Pause: The device is in production, click "Pause", the device will be stopped immediately;To restore, click "Continue" and the device restarts cutting; (if the device is working To cut, click "Pause", the current position will be cut before suspending);

E-Stop: When the device is running, click "Emergency Stop" and the device will stop immediately; (If you need to continue production, you need to click "Reset", the reset will be successful).

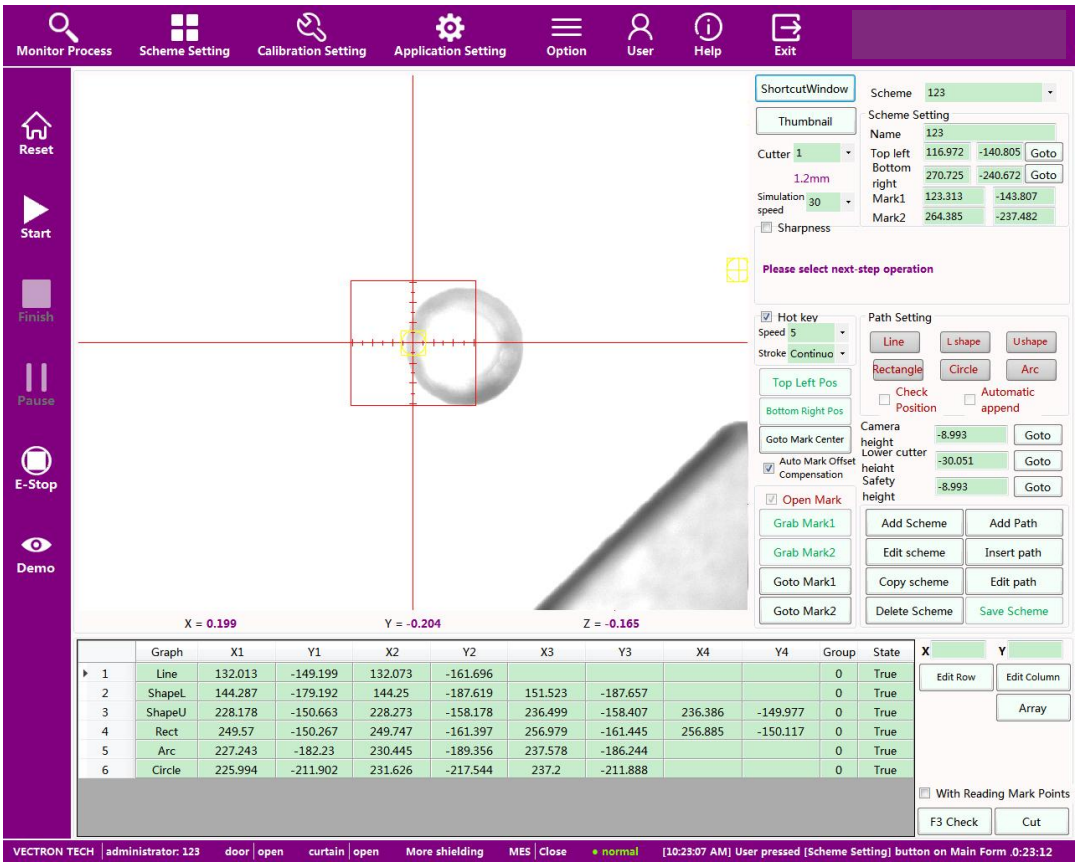
10. Setting window

10.1 Processing monitoring: Click "Processing Monitoring", as shown in the figure below;

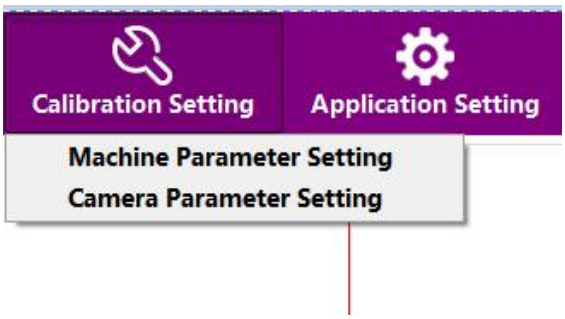


After the device is successfully reset, this interface is the default interface, which can select the program scheme and monitor the operation of each component of the device.

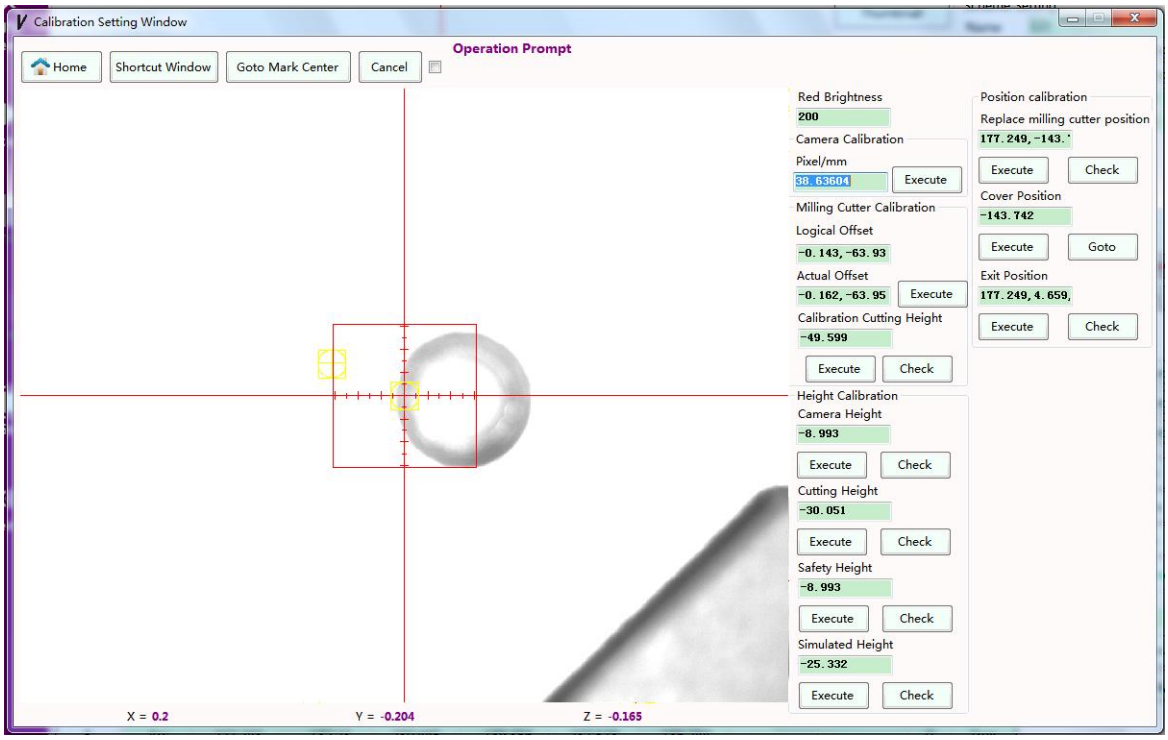
10.2 Scheme setting: Clicked "Scheme setting", The interface shown below is displayed; for this part, the following sections will be described in detail.



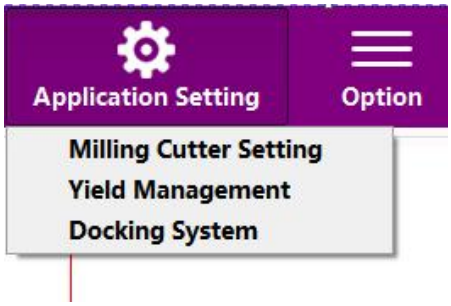
10.3 Calibration setting: Clicked “Calibration setting”, as shown in the figure below;



Clicked “Machine parameter setting”, as shown in the figure below; about the calibration setting will be introduceafter;

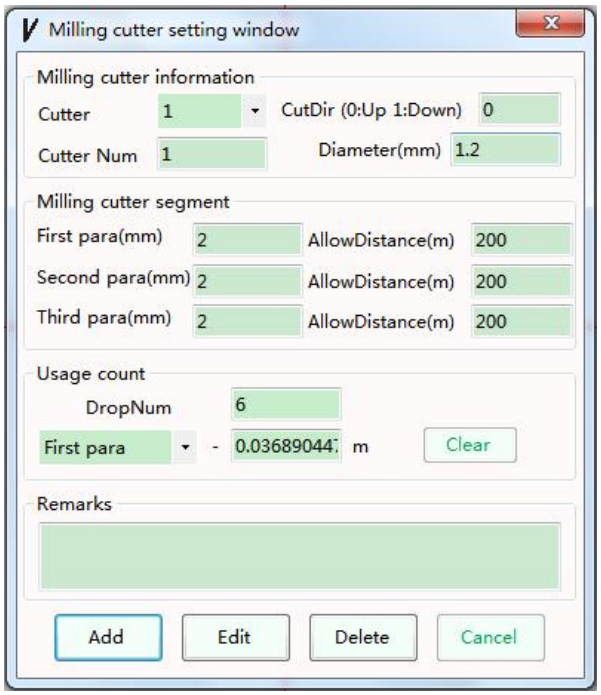


10.4 Application Setting: Clicked "Applications Setting", as shown in the figure below;

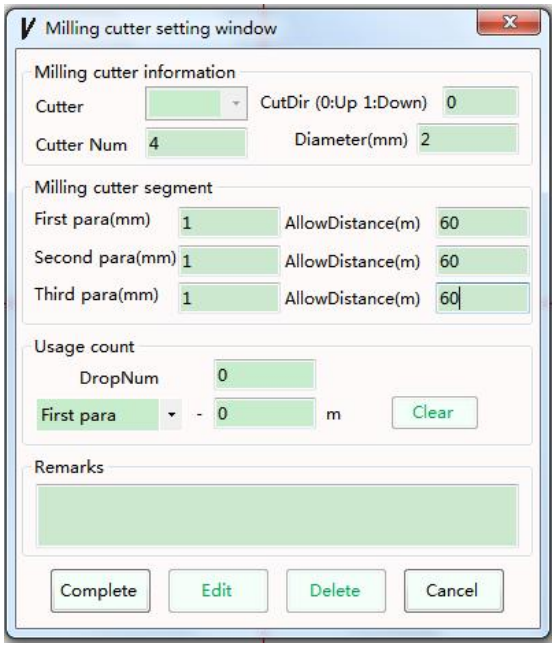


（1）Clicked "Milling cutter setting", as shown in the figure below;

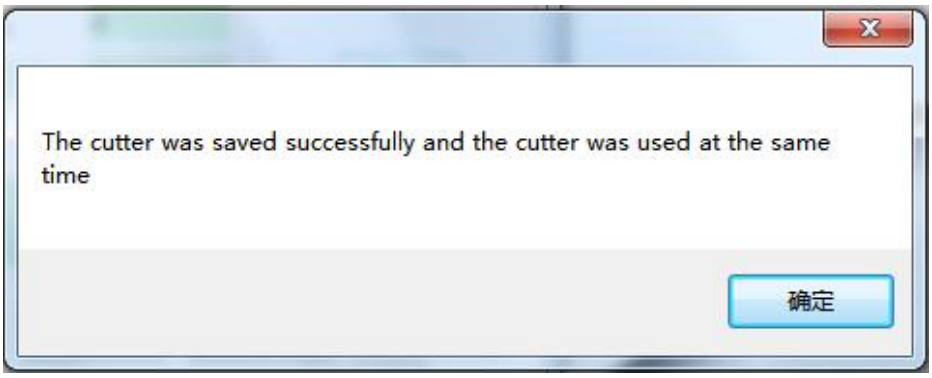
（2）



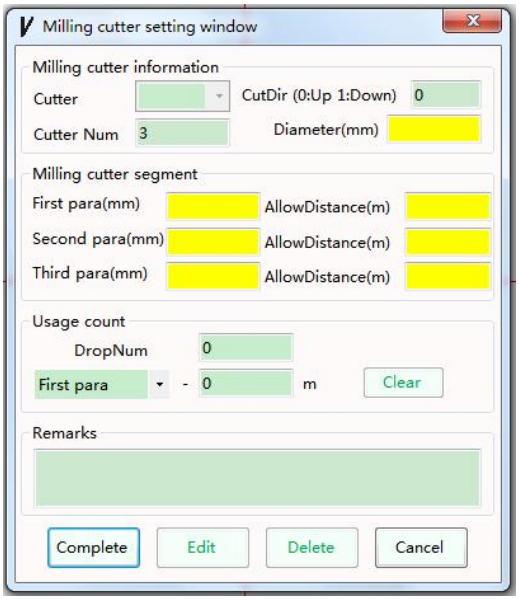
①Clicked“Add”, as shown in the figure below;



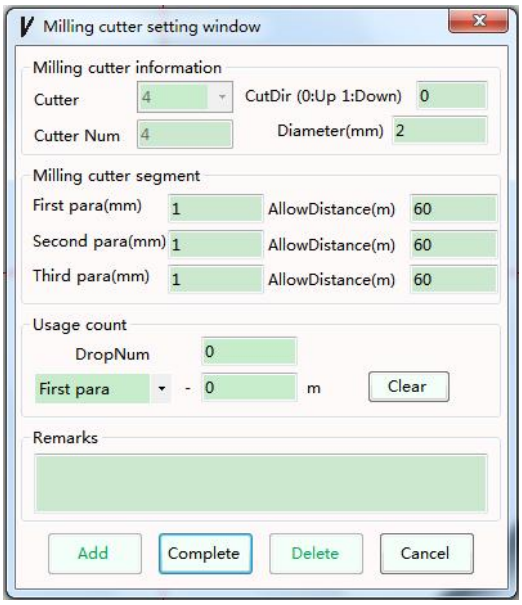
Setting“Cutter No.”、“Cutter Diameter”、“Cutter segment” informations, clicked “complete”, if all of the information are correct, you can see as shown in the figure below ;



If all of the information are incorrect,you can see as shown In the figure below,must be fill up the yellow area;



②Choice the Cutter tool, Clicked “Edit”, as shown in the figure below,you can modify this cutter tool information;



③Choice you need delete cutter tool,Clicked“Delete”, can delete all of the information of this cutter tool item;

（2）Clicked“Setting Yield Managment”, as shown in the figure blown;

Total Time(h): Machine working time（including all of the project total productions time）;

Total Yield: Machine production total yield（including all Of the project total yield）;

Time(h): Current project production time;

Preset Yield: After setting the quantity to be produced, the equipment will automatically stop production.;

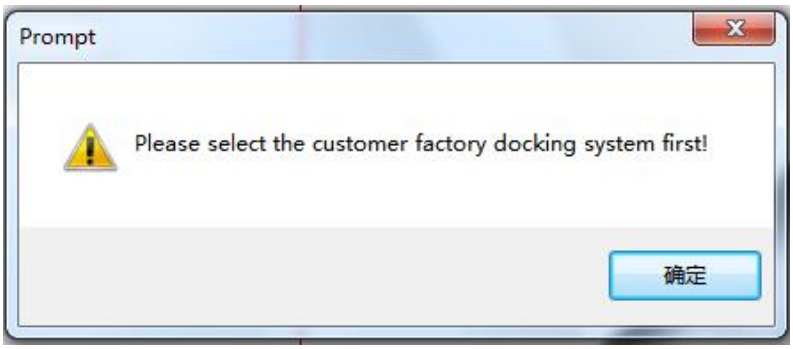
Actual Yield: Actual production of current production

equipment;

（About the “Preset Yield” parameter can modify but other parameter can not , just clear only;

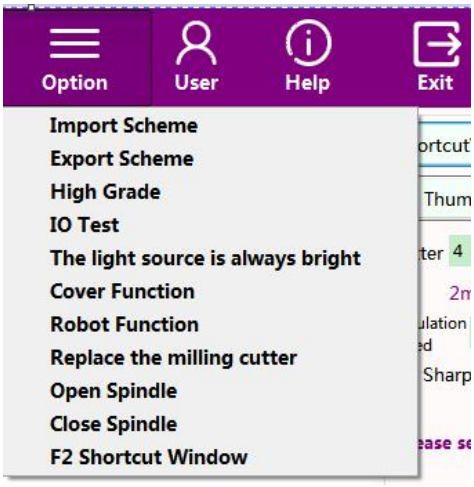
If need to clear,clicked “Clear” and save is ok.

（3）Clicked “Docking system”, as shown in the figure below;

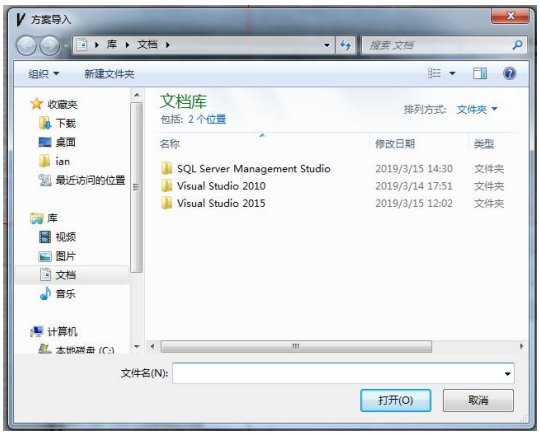


This functions is customize,use it need contact with us;

10.5 Option：Clicked“Option”, As shown in the figure below;



（1）Clicked “Import Scheme”, as shown in the figure below;

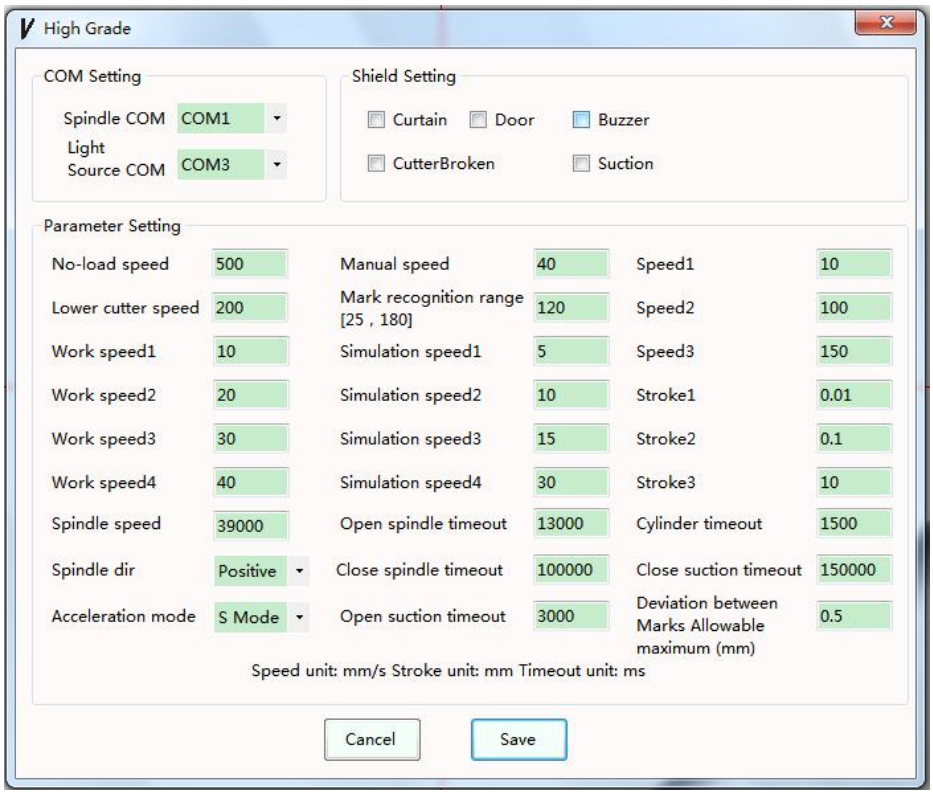


From the document choice import scheme（save scheme before）, Click “Open”; This function convenience import or export scheme from one machine to other machine for production, reduce the edit project steps and times.

（2）Clicked “Export Scheme”, as shown in the figure below;

Ensure the document save location,clicked “yes” is ok ; this function convenience export scheme from one machine to other machine for production.

（3）Clicked “High Grade”, as shown in the figure below;



COM setting: including“ spindle COM”、“light source COM”, use for connect signal only, can not modify;

Shield Setting: Clicked option,this function can’t use,and the color change to gray;

Parameter Setting: Setting parameters of the machine;

⑴No-load speed: Machine standby,without production X,Y axis moving speed（mm/s）;

⑵Lower cutter speed:Machine standby,without productions Z axis moving speed（mm/s）;

⑶work speed: Machine working status,X,Y axis moving speed（mm/s）;

⑷Spindle speed: Machine working status the spindle working speed, Default setting“39000”（r/min）;

⑸ Spindle Direction: spindle working direction, D

efault setting“clockwise”;

(6) Acceleration model: Motor working accelerati on model,defaultsetting“S model”;

(7)Manual speed: setting scheme, clicked “cuttin g”, X、Y axis moving speed (: mm/s);

(8)Mark Recognition range: Set the search area of the search mark, Unit is "pixel";

(9)Simulation speed: Select "Demo Mode" in the sc heme settings, X、Y axis simulation cutting moving speed(m m/s);

(10) Open spindle timeout: when machine productio n, with the setting time spindle unable to start,the machi ne will Alarm(ms);

(11)Close spindle timeout: with setting time, with out received the production signal, spindle auto closed(m s);

(12)Open suction timeout: setting the suctions st art of waitingtime, within this time machine won't for pr oduction(ms);

(13)Speed: Set shortcut window, each axis moving speed(ms);

(15)Stroke: Set shortcut window, each axis single steps moving distance(mm);

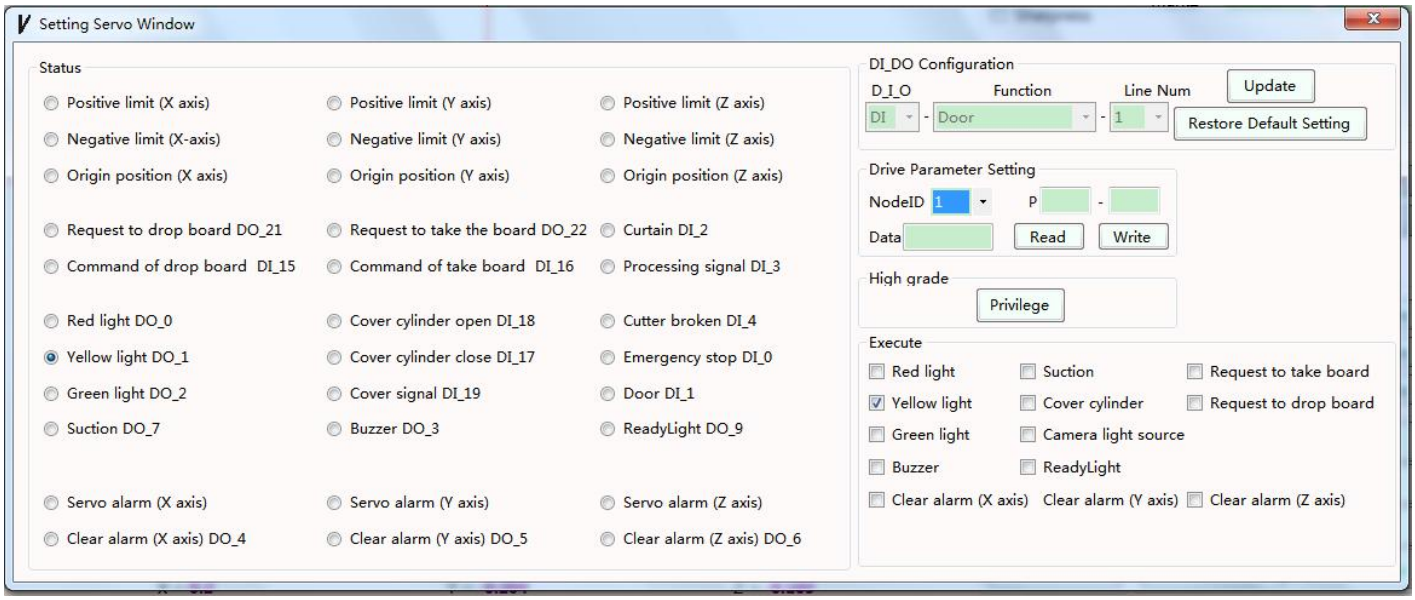
(16)Cylinder timeout: within setting time cylinder not working,machine will be alarm(mm);

(17)Close suction timeout: within setting time,mac

hine without received the production signal, suction will be auto closed（ms）;

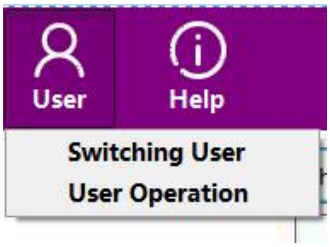
⑱Mark deviation allows maximum: when marking mark,if Mark, If the deviation exceeds the set value, machine will be alarm（mm）;

（4）Clicked“High Grade”, as shown in the figure below;



Drive board parameter:This interface shows the status of each axis, the limit switch positive, the limit switch negative, the origin, the switch, the input IO, the output IO, etc.When the general equipment is faulty, in order to facilitate the inspection of the cause of the fault; if the IO signal needs to be changed, please contact our staff, and there is no detailed explanation here.

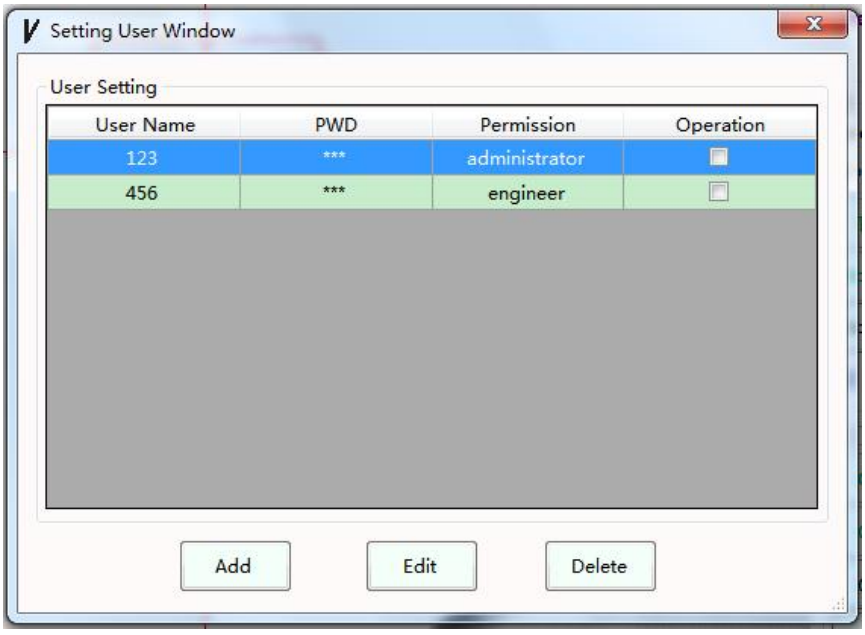
10.6 User setting: clicked “User”, as shown in the figure below;



（1）Switching User：Click this function，as shown in the figure below；

Enter user name and password login only.

（2）User Operation：Clicked this function,as shown in the figure blow；

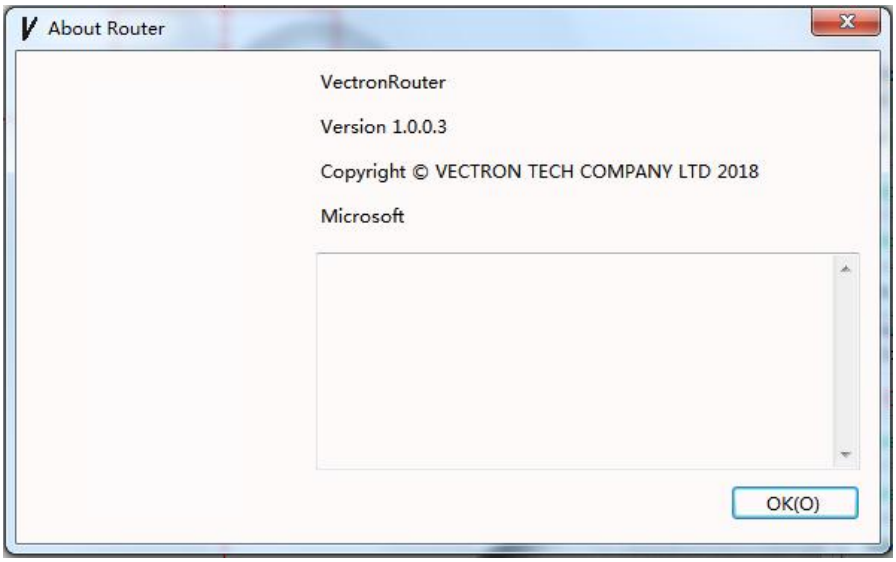


This window can add different level account,such as: manager、engineer、operator,etc.

10.7 Help：clicked “Help”，as shown in the figure blown；

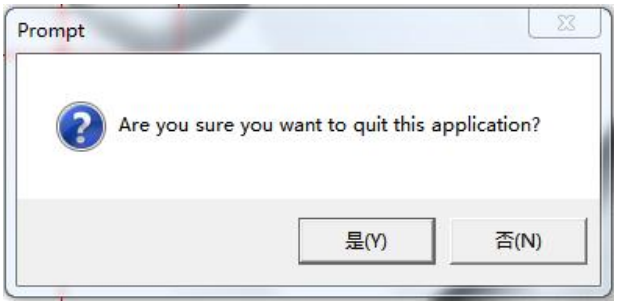
（1）Registered Product： Registered production and update software only.

（2）About Router：Clicked this function,as shown in the figure blown;



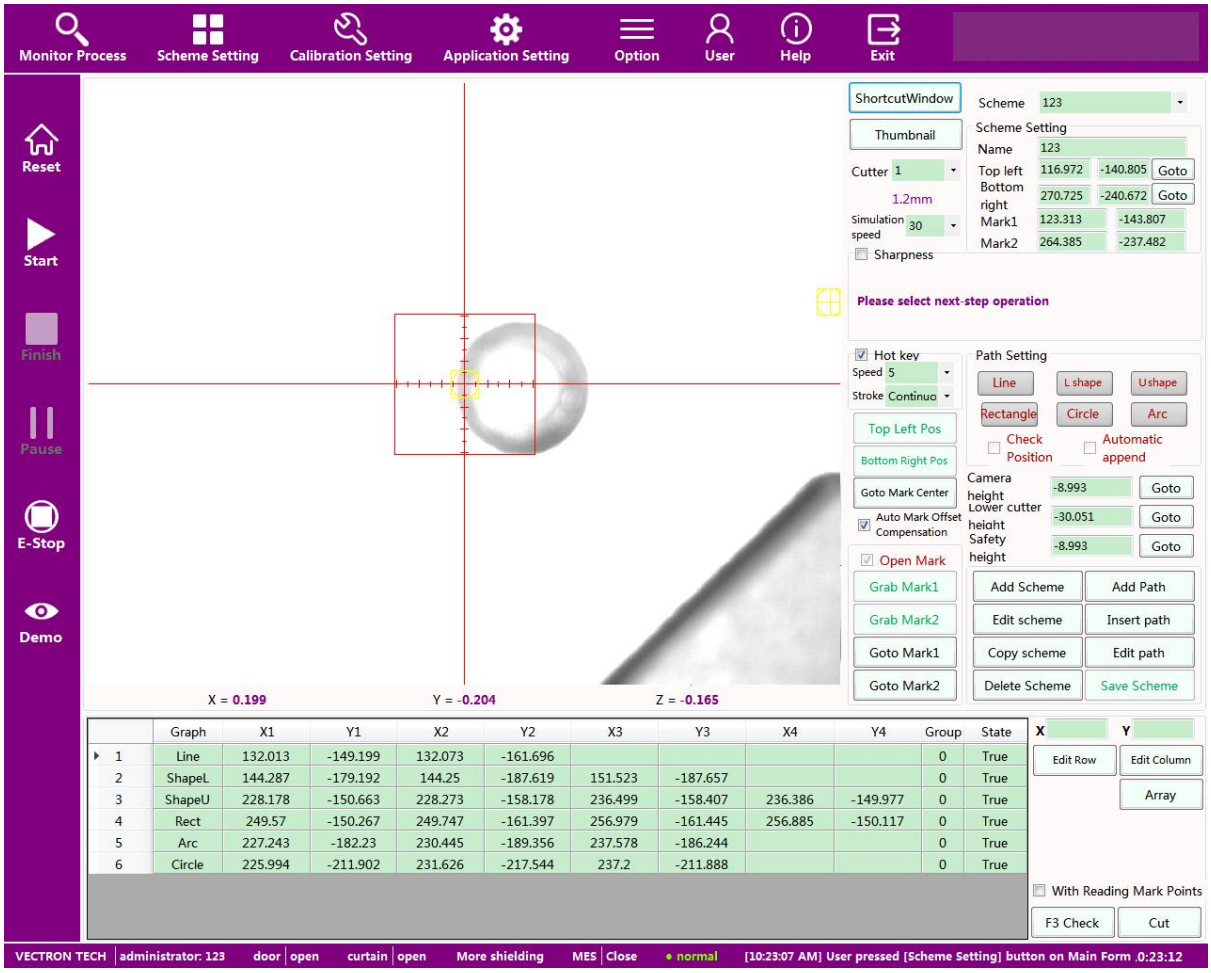
Software version and company informations.

10.8 Exit: Clicked “Exit”, as shown in the figure blown;



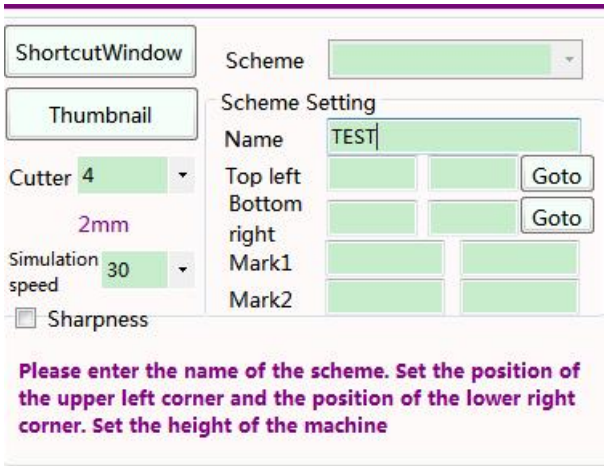
Clicked “Y”, Exit system.

二、Project setting

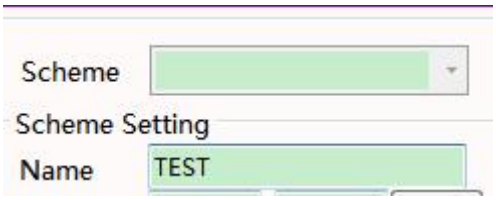


Put the PCBA on the table,add a new scheme

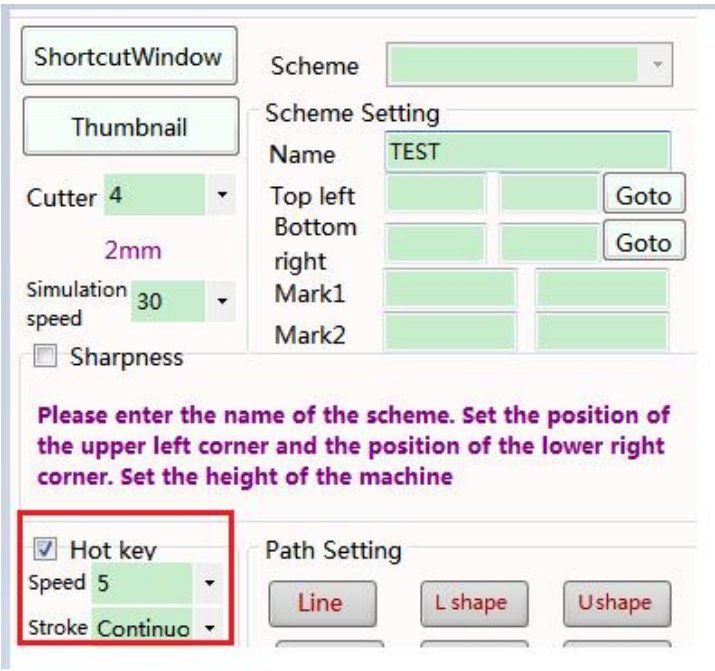
（1）“Add Scheme”, according to the interface guide,as shown With red circle guide in the figure below;



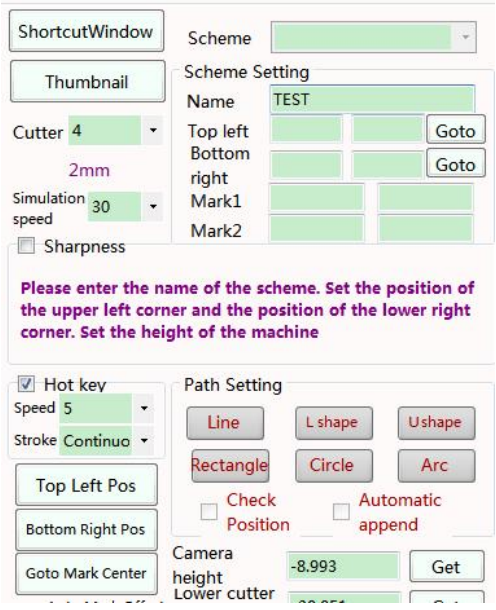
Within interface top of the right corner,input scheme name,as shown in the figure below;



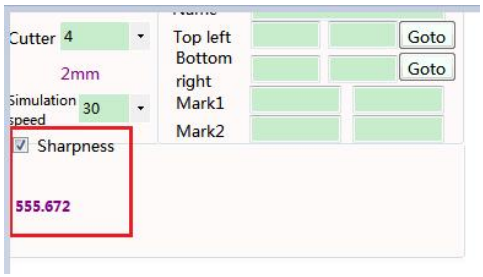
Clicked top of the right corner within interface “Shortcut window”; or click red circle as shown in the figure below hot key,press the keyboard direction key;



Moving the camera cross to the upper left corner of the PBCA, Clicked“Top left Pos ”; and then moved to button right pos,Clicked “button right pos”, as shown in the figure below; Clicked “Go to”, Check the position;



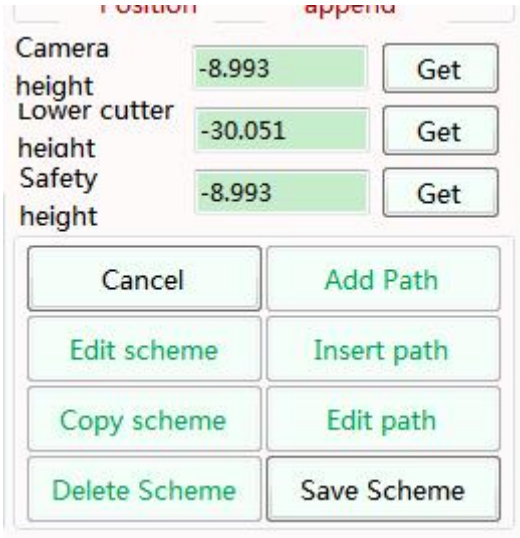
As shown red circle in the figure below: Clicked “Sharpness”, the prompt language will change to a series of numbers that will change.as shown red circle in the figure below;



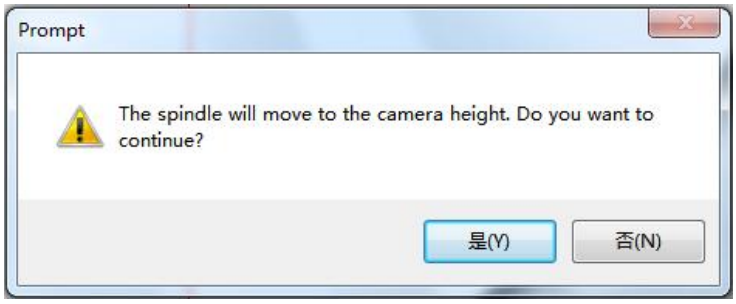
Through the shortcut window, Moved Z axis up and down,（Because the sharpness is sensitive, Move to near maximum, Turn the "stroke" down a bit and slowly move the Z axis）, When this number is the maximum , moved to “Camera Height” setting,Clicked “Get”;

As the same way, setting“Lower cutter height”（Lower Cutter height means when the machine working,the router bit Cutting max position）; as the same way, setting“Safety height”（Safety height means when the machine working,The position where the milling cutter is raised must be higher than the highest position of any component on the PCBA board; when open “Broken knife sensor”, “Safety height ”Need to correspond to the height of the sensor）;

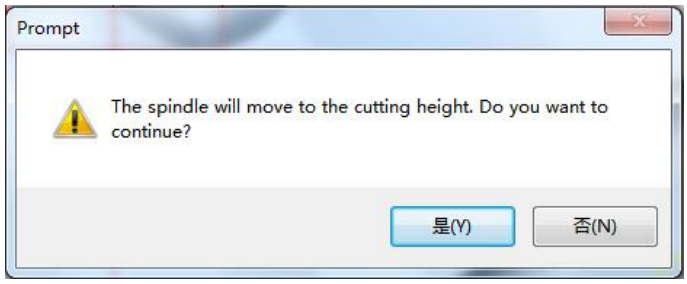
After the above steps are set,, Clicked finish “SAVE”, as shown in the figure below;



Clicked“Camera height setting”clicked “check” setting parameter（Note：Click“check”，the system will display remind window，as shown in the figure below；parameter is correct，click“Y”，Z axis will moved to the height value before setting；

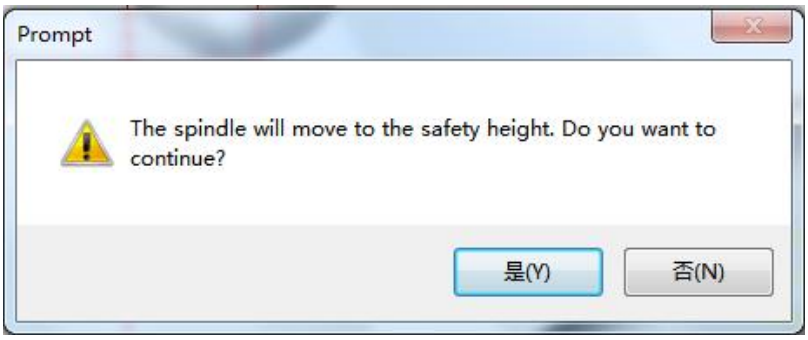


Clicked“Lower cutter height”Click“check” setting parameter（Note：Click“check”，the system will display remind window，as shown in the figure below；parameter is correct，click“Y”,Z axis will moved to the height value before setting）；

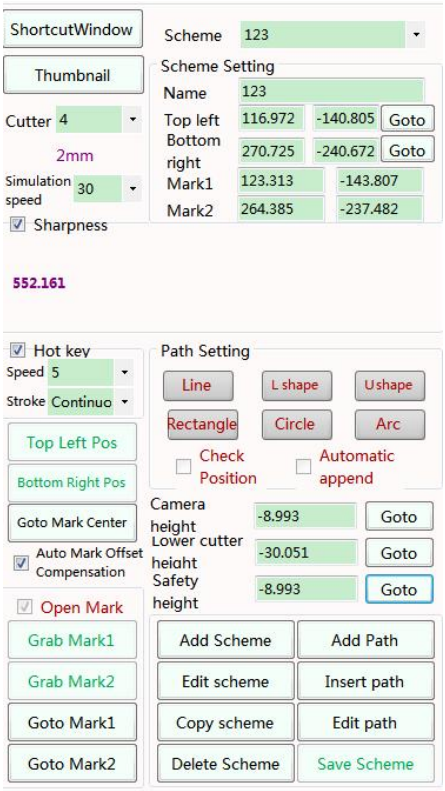


Clicked “Safety height setting”Clicked“Check”

setting parameter(Note:Click“Check”,the system will display remind window, as shown in the figure below; parameter is correct,click“Y”,Z axis will moved to the height value before setting）;

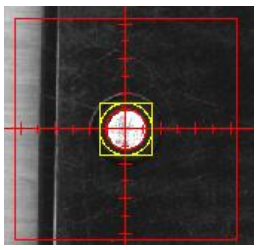


（2）“Edit Scheme”, can modify all of the setting parameters; if need to open check Mark function, Clicked“Open Mark”, as shown in the figure below;



Moved camera cross to Mark1, Clicked“Goto Mark Center”, Camera search “Mark1”, as shown in the figure below,（if the camera search the Mark,will display red circle; or need

to setting“Calibration setting”wihtin“Camera setting window” adjust Mark parameter.



Click again“ Grab Mark1”,Remind area will be display “Grab Mark 1 Finish”; as the same way,setting MARK2;then check “ Goto Mark1”and“ Goto Mark2”, check the camera Grab Mark is it stable, if it not stable need repeat adjust Mark parameter;Note:Open Mark after,“Automatic Mark Offset Compensation feature can also be enabled。

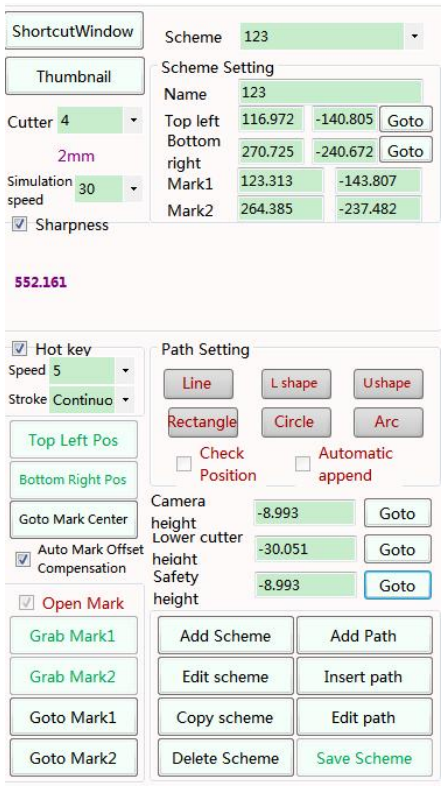
If "Auto Mark Offset Compensation" is not clicked, the system does not make "Mark" during the production process.Offset compensation action;

If “Auto Mark offset compensation” is selected, during the production process, the system offsets the path according to the obtained Mark deviation value to prevent the components in the PCBA from being cut.

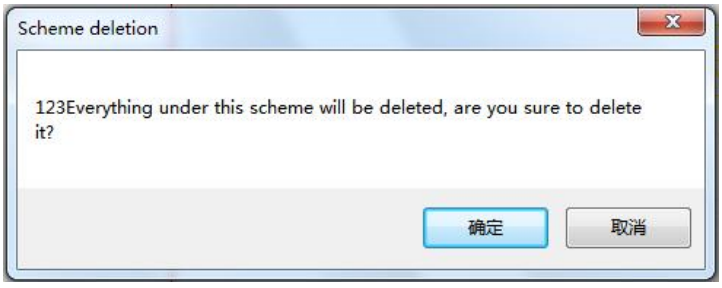
After "Auto Mark Offset Compensation" is turned on, if you need to modify the Mark information, you can't click twice or more when "Grab Mark2", otherwise the system will prompt to "grab Mark1" again;After confirming that the modified value is correct, click “Save Scheme” to complete the modification operation;

If clicked cancel, as show in the figure below;

（3）“Copy Scheme”，enter new scheme name and save scheme，as show in the figure below；through the copy scheme all of the parameter same except the scheme name；



（4）“Delete scheme”，the system will delete the current scheme,as shown in the figure below.Click "OK", the current scheme will be deleted;



（5）“Add Path”，Select the line shape to cut in the path settings (before setting the path,Select the

corresponding tool as needed);

Straight Line:Press the "Enter" key in the front and back positions to be cut to confirm the two points.

L Shape: Press "Enter" at the front, middle, and back positions to be cut to confirm the three points.

U Shape: Press "Enter" at the top, bottom, left, and right positions to be cut to confirm the four points (the U shape cuts only three sides).

Rectangle Shape:Press "Enter" at the top, bottom, left, and right positions to be cut to confirm the four points (the rectangle cuts four sides).

Circle Shape:Press "Enter" at the front, middle, and back positions to be cut to confirm three points (the system will automatically determine the unique circle based on the three-point position).

Arc Shape:Press "Enter" at the front, middle, and back positions to be cut to confirm three points (the system will automatically determine the unique arc based on the three-point position).

The path is successfully edited, and "True" is displayed in the status bar, otherwise "False" is displayed;

As shown in the figure below;

Graph	X1	Y1	X2	Y2	X3	Y3	X4	Y4	Group	State
Line	133.656	-146.806	133.073	-159.03					0	True

（True）

Line	250.583	-229.816							0	False

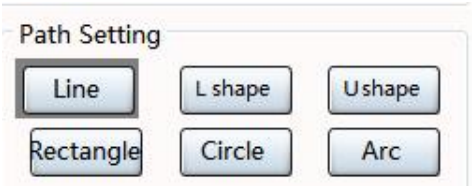
（False）

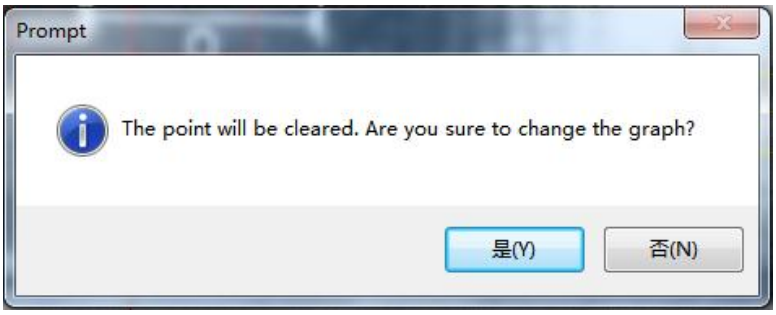
When setting the path, check "Automatically append",

it will automatically increase the current path of the same type after the current path is set, as shown in the figure below;

	Graph	X1	Y1	X2	Y2	X3	Y3	X4	Y4	Group	State
1	Line	133.656	-146.806	133.073	-159.03					0	True
2	Line									0	False

When setting the path, if you need to modify a path, select the path to be modified, and then click the line to be switched, as shown in the figure below;





Clicked “Y”.

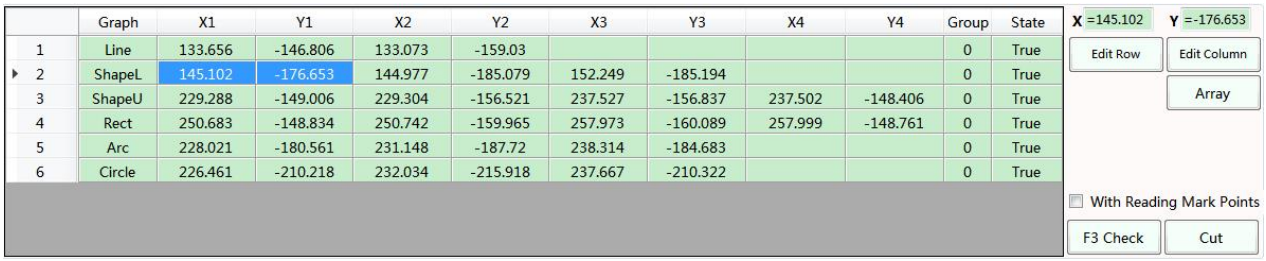
After the path is set, click Save Path. If the line status is False, the system does not save the path and saves only the path with the status "True".

In the non-modified path state, select a line of the path, click the right mouse button, click "Delete", the path may be deleted, as shown in the figure below;

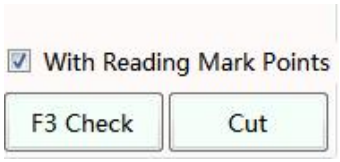
	Graph	X1	Y1	X2	Y2	X3	Y3	X4	Y4	Group	State
1	Line	133.656	-146.806	133.073	-159.03					0	True
2	Delete		-176.653	144.977	-185.079	152.249	-185.194			0	True
3	ShapeU	229.288	-149.006	229.304	-156.521	237.527	-156.837	237.502	-148.406	0	True

To check if a cutting point is edited correctly, just select the coordinates of the point, click “F3 View” or press the keyboard “F3”, the camera cross cursor will move to

the point position;



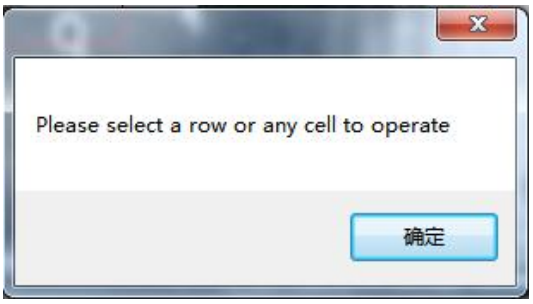
If you check "With Mark point", the camera will first take Mark and then move to that point;



If you click "cut" in the above figure, the cutter will cut according to the set lower knife height (this function should be used with caution);

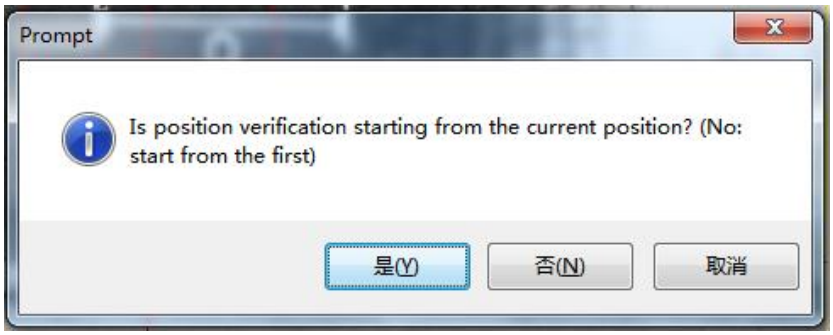
(6) "Insert path", insert a new path above the selected path;otherwise, the prompt box shown below will pop up;

(7) "Modify path", the path that may be set is used for position and line modification; to use these functions, you need to select a point coordinate or a line; otherwise, the prompt box shown below will pop up.;



Enter the path modification interface, select any point coordinate, click “F3 check”, move the camera cross cursor to the position, move the X and Y axes, press “Enter” to correct the point; or select For any point coordinates, check "Position Check" as shown below;

Press the “G” key on the keyboard, and the system will pop up the prompt box as shown in the figure below;



Click "Yes" and the camera cross cursor will move to the coordinate position of the selected cutting point;

Click "No" and the camera cross cursor will move to the coordinates of the first cut point of the program position;

Each time the “G” key is pressed, the camera cross cursor will automatically move to the next cutting point position; when moving to the last cutting point position of the current plan, the camera cross cursor will not automatically switch;

In the modified path state, select a line of the path and click the right mouse button to display the following figure;

	Graph	X1	Y1	X2	Y2	X3	Y3	X4	Y4	Group	State
1			-146.806	133.073	-159.03					0	True
2			-176.653	144.977	-185.079	152.249	-185.194			0	True
3			-149.006	229.304	-156.521	237.527	-156.837	237.502	-148.406	0	True
4			-148.834	250.742	-159.965	257.973	-160.089	257.999	-148.761	0	True
5	Arc	228.021	-180.561	231.148	-187.72	238.314	-184.683			0	True
6	Circle	226.461	-210.218	232.034	-215.918	237.667	-210.322			0	True

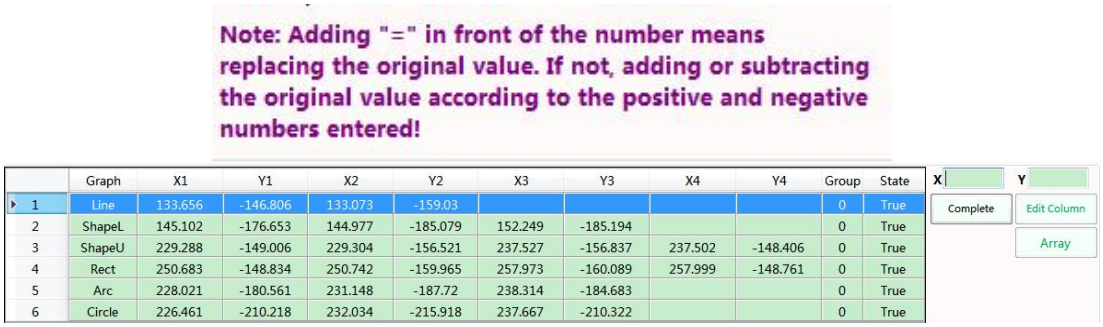
① Move up: the selected line path will move up one line;

② Move down: the selected line path will move down one line;

③ Enabled: disabled path re-enabled;

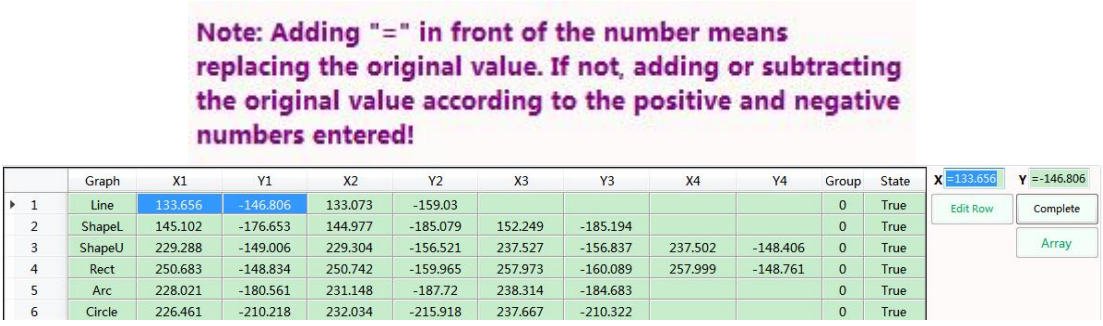
④ Disabled: Checking the line path will disable cutting and will be grayed out;

（8）"Line editing", you can modify the coordinate value of a selected line path, as shown below;



	Graph	X1	Y1	X2	Y2	X3	Y3	X4	Y4	Group	State
1	Line	133.656	-146.806	133.073	-159.03					0	True
2	ShapeL	145.102	-176.653	144.977	-185.079	152.249	-185.194			0	True
3	ShapeU	229.288	-149.006	229.304	-156.521	237.527	-156.837	237.502	-148.406	0	True
4	Rect	250.683	-148.834	250.742	-159.965	257.973	-160.089	257.999	-148.761	0	True
5	Arc	228.021	-180.561	231.148	-187.72	238.314	-184.683			0	True
6	Circle	226.461	-210.218	232.034	-215.918	237.667	-210.322			0	True

（9）"Column editing", you can modify the coordinate value of a selected column path, as shown in the following figure;



	Graph	X1	Y1	X2	Y2	X3	Y3	X4	Y4	Group	State
1	Line	133.656	-146.806	133.073	-159.03					0	True
2	ShapeL	145.102	-176.653	144.977	-185.079	152.249	-185.194			0	True
3	ShapeU	229.288	-149.006	229.304	-156.521	237.527	-156.837	237.502	-148.406	0	True
4	Rect	250.683	-148.834	250.742	-159.965	257.973	-160.089	257.999	-148.761	0	True
5	Arc	228.021	-180.561	231.148	-187.72	238.314	-184.683			0	True
6	Circle	226.461	-210.218	232.034	-215.918	237.667	-210.322			0	True

（1）

	Graph	X1	Y1	X2	Y2	X3	Y3	X4	Y4	Group	State
1	Line	133.656	-146.806	133.073	-159.03					0	True
2	ShapeL	145.102	-176.653	144.977	-185.079	152.249	-185.194			0	True
3	ShapeU	229.288	-149.006	229.304	-156.521	237.527	-156.837	237.502	-148.406	0	True
4	Rect	250.683	-148.834	250.742	-159.965	257.973	-160.089	257.999	-148.761	0	True
5	Arc	228.021	-180.561	231.148	-187.72	238.314	-184.683			0	True
6	Circle	226.461	-210.218	232.034	-215.918	237.667	-210.322			0	True

（2）

(10) "Array", when the processed PCBA is multi-piece specification, and the X and Y spacing are regular; after setting the cutting path of the first small board, it is easy to operate

through the "array" function. ; Select the path to the array and click on "Array" as shown below;

(11)

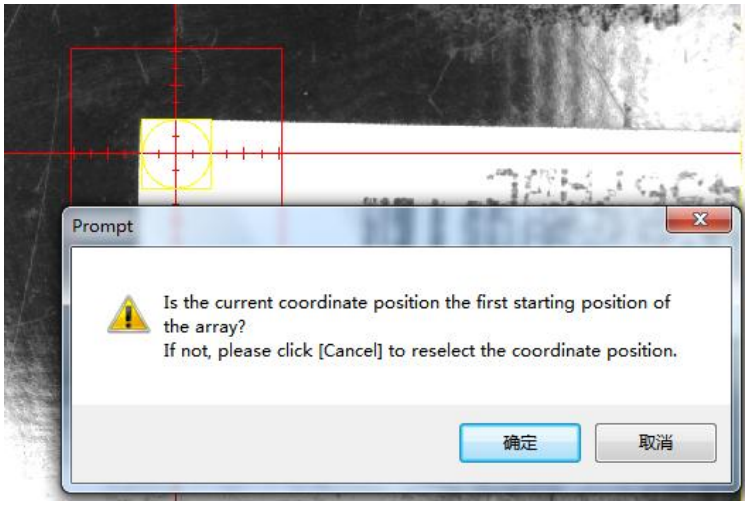
	Graph	X1	Y1	X2	Y2	X3	Y3	X4	Y4	Group	State
1	Line	133.656	-146.806	133.073	-159.03					0	True
2	ShapeL	145.102	-176.653	144.977	-185.079	152.249	-185.194			0	True
3	ShapeU	229.288	-149.006	229.304	-156.521	237.527	-156.837	237.502	-148.406	0	True
4	Rect	250.683	-148.834	250.742	-159.965	257.973	-160.089	257.999	-148.761	0	True
5	Arc	228.021	-180.561	231.148	-187.72	238.314	-184.683			0	True
6	Circle	226.461	-210.218	232.034	-215.918	237.667	-210.322			0	True

X Y

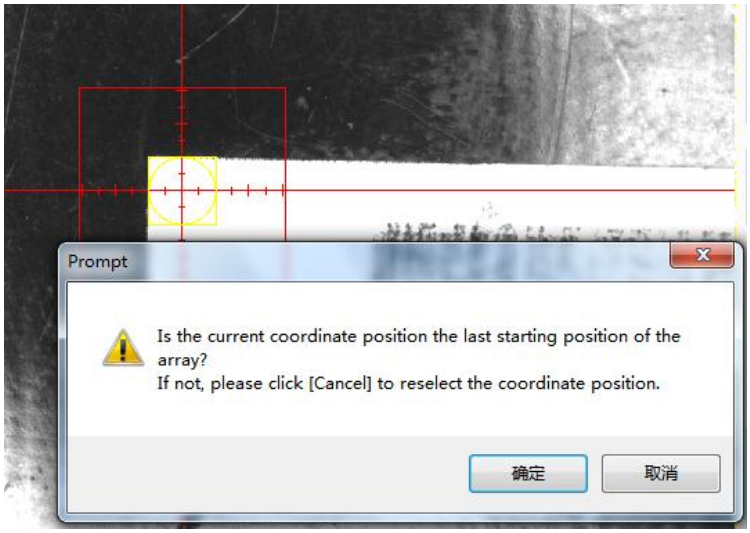
Edit Row | Edit Column

Cancel | TLP1

At this point, the "array" becomes "TLP1". In the first small board, find the feature position common to other small boards, and move the camera cross cursor to the position. Click "TLP1", the system will pop up as shown below. Prompt box;



After the location is confirmed, click "OK", otherwise click "Cancel" to re-acquire; after clicking "OK", "TLP1" will change to "TLP2"; at this time, move the camera cross cursor to the last small board and the first block. The location of the common features of the small board, click "TLP2", the system will pop up the prompt box shown below;



After the location is confirmed, click "OK", otherwise click "Cancel" to re-acquire; click "OK", the system will pop up

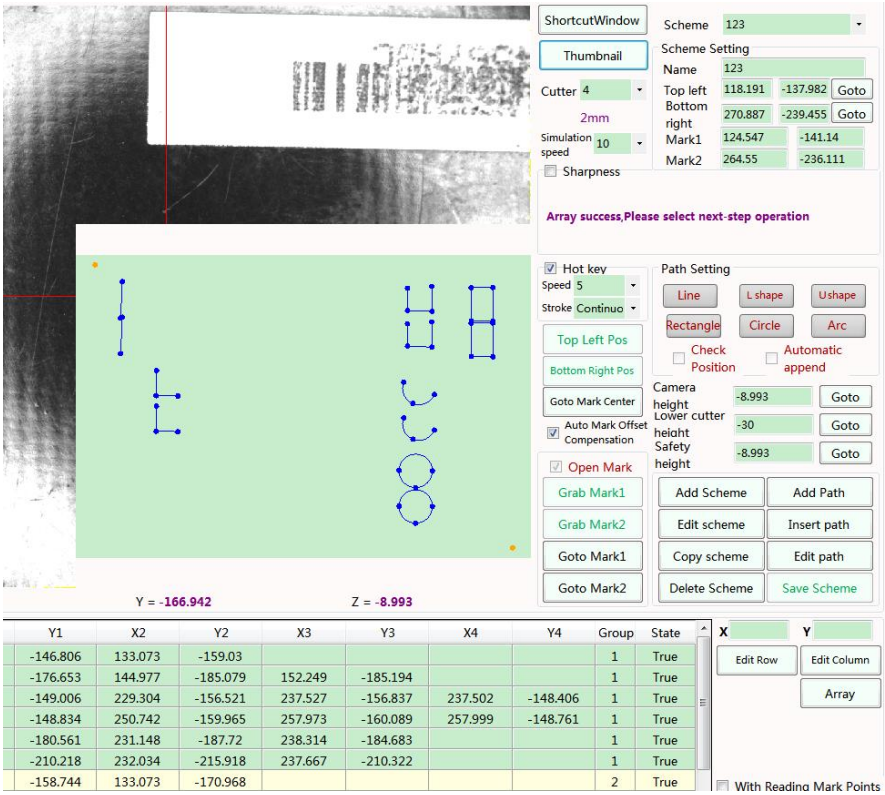
the dialog box shown below;

According to the PCBA board, enter “number of rows” and “number of columns”, enter 2x2 here, click “OK”, the system will copy the cutting path of the first small board to other small boards, as shown in the following figure;

	Graph	X1	Y1	X2	Y2	X3	Y3	X4	Y4	Group	State
1	Line	133.656	-146.806	133.073	-159.03					1	True
2	ShapeL	145.102	-176.653	144.977	-185.079	152.249	-185.194			1	True
3	ShapeU	229.288	-149.006	229.304	-156.521	237.527	-156.837	237.502	-148.406	1	True
4	Rect	250.683	-148.834	250.742	-159.965	257.973	-160.089	257.999	-148.761	1	True
5	Arc	228.021	-180.561	231.148	-187.72	238.314	-184.683			1	True
6	Circle	226.461	-210.218	232.034	-215.918	237.667	-210.322			1	True
7	Line	133.656	-158.744	133.073	-170.968					2	True
8	ShapeL	145.102	-188.591	144.977	-197.017	152.249	-197.132			2	True
9	ShapeU	229.288	-160.944	229.304	-168.459	237.527	-168.775	237.502	-160.344	2	True

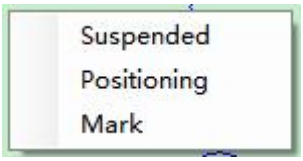
Each small board will be distinguished by different colors, and the group of each path will be listed in which group; the path of the array is not 100% correct, so each path needs to be checked and corrected;

(11) “Thumbnail”, click this button, in the lower right corner of the visual interface, as shown below;



When the thumbnail coordinates are selected and the path coordinates are selected, the thumbnails are displayed in red;

On the thumbnail, click the right mouse button to move the thumbnail position as needed, as shown below.;



①Hover: Check to move the thumbnail window arbitrarily by holding down the left mouse button;

②Positioning: Check to fix the thumbnail to the lower right corner of the visual window by default;

③Mark: Check to display the selected path on the thumbnail;

（12）"Demo mode", click this button on the left side of the scheme setting interface, check the corresponding

function Effective, as shown below;

① Camera mode: Check the camera cross cursor to simulate whether the path is correct (the Z axis is repeated simulation at the camera height).

②With cutting: check, the Z axis is simulated by the simulated cutting height set by the machine;

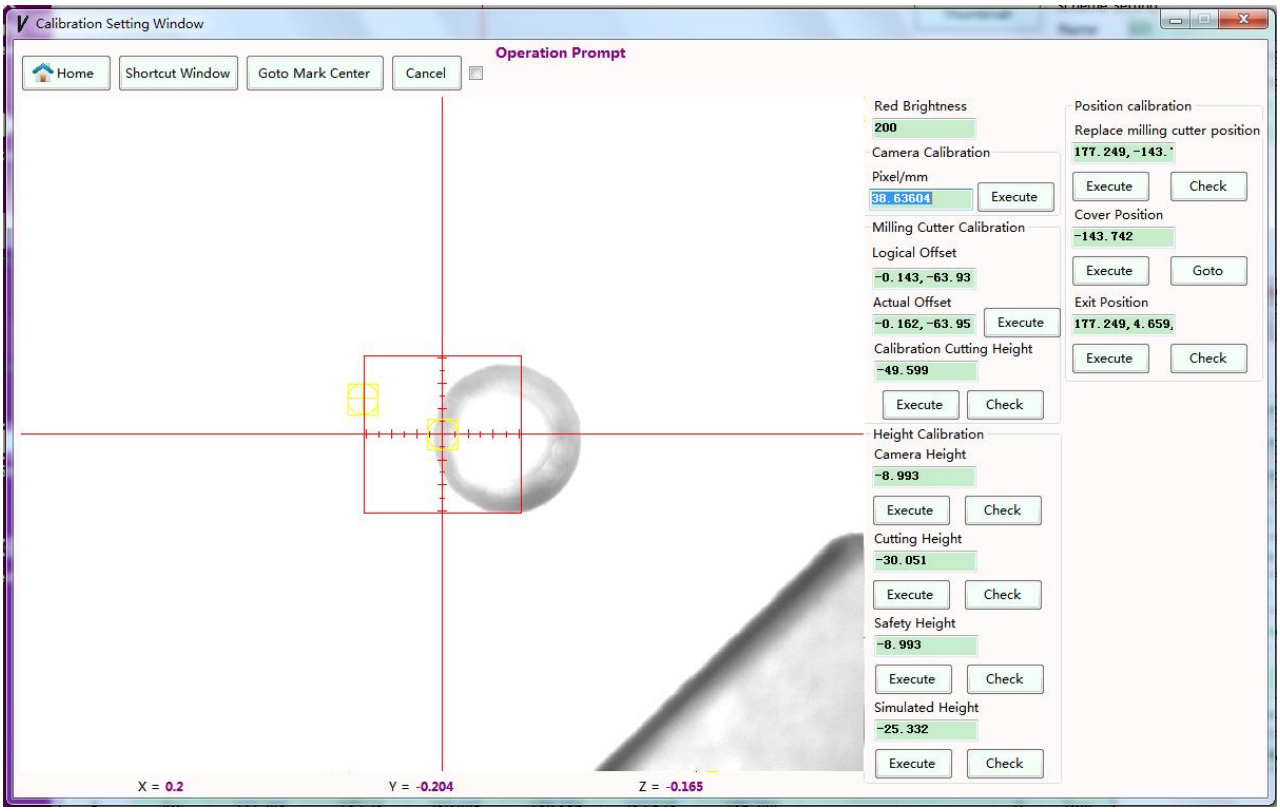
③Processing signal: check, you need to provide the signal to simulate;

Chapter Ⅲ、Calibration Setting

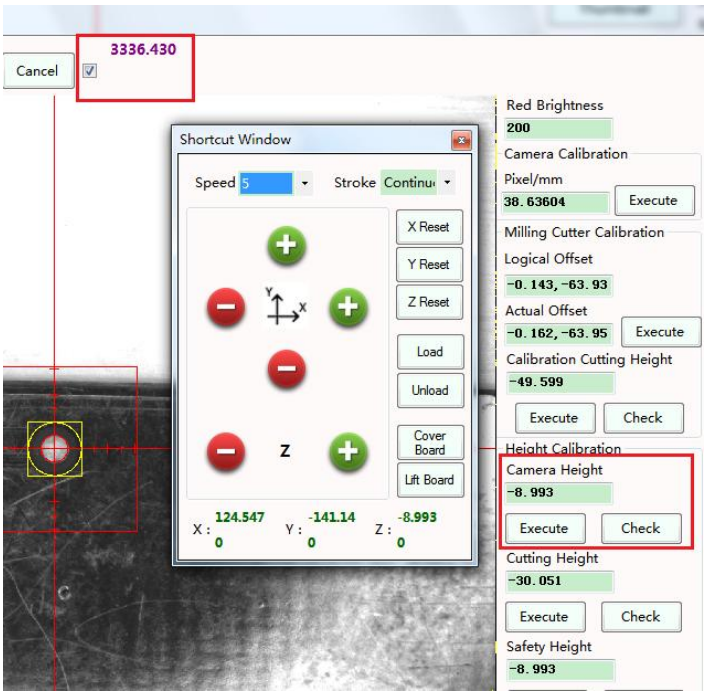
After the equipment is assembled, calibration settings are required. Generally, without disassembly, it is generally not Need to recalibrate. Let's explain each function of the calibration settings below.

一.Machine parameter setting

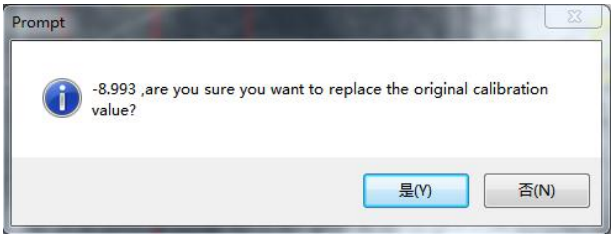
Place a PCBA board with Mark points on the equipment processing platform, click "machine parameter setting", pop up the interface shown in the figure below;



（1）Camera Height：When adding a new scheme, the default camera height value is added; in the red box below, check the box to display a series of changed values, move the camera cross cursor to the vicinity of the Mark point, and slowly adjust the Z-axis height through the shortcut window. The value here is the maximum value. Click “Execute” to display the following figure;

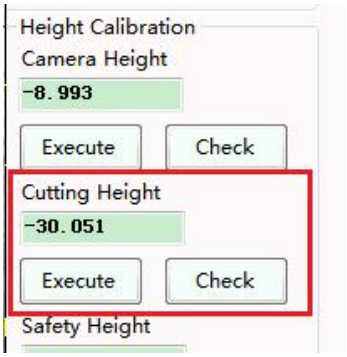


Click "Get", the system will pop up the prompt box shown below;



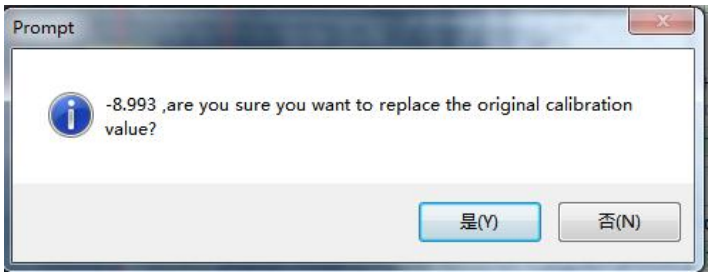
Click "OK"; click "check" to verify that it is correct;

（2）Lower knife height: the value of the lower knife height added by default when adding a new scheme; through the shortcut window, slow Slowly adjust the height of the Z axis, click "Execute", as shown below;



Click "Get", the system will pop up the p

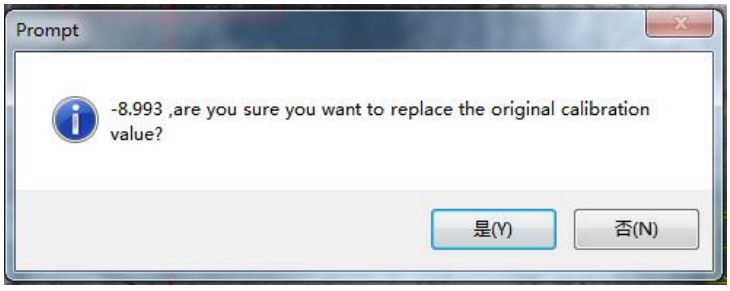
rompt box shown below;



Click "OK"; click "check" to verify that it is correct;

（3）Safety Height: When adding a new scheme, the safe height value is added by default; through the shortcut window, slowly adjust the height of the Z-axis, and click "Execute" to display the following figure;

Click "Get", the system will pop up the prompt box shown below;

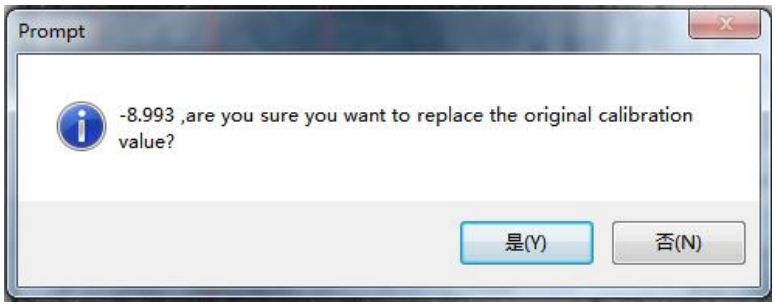


Click "OK"; click "check" to verify that it is correct;

（4）Simulation height: set the lower knife height value when the simulation is set; slowly adjust

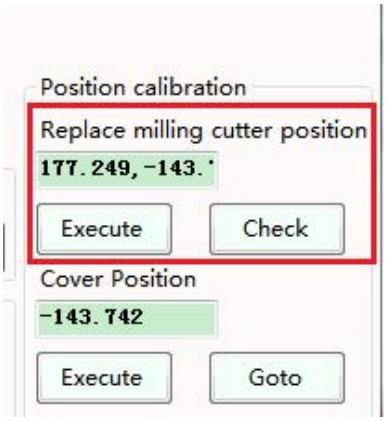
the Z axis height through the shortcut window, click “Execute” to display as shown below;

Click "Get", the system will pop up the prompt box shown below;



Click "OK"; click "check" to verify that it is correct;

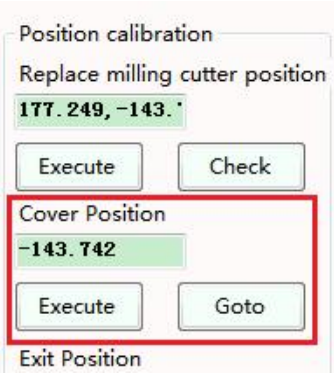
（5）Replace milling cutter position: the position coordinate of each axis of the device when the tool is changed; move through the shortcut window Move the cutter to the replacement position to be set, click “Execute” to display as shown below;



Click "Get", the system will pop up the prompt box shown below;

Click "OK"; click "check" to verify that it is correct;

（6）Cover Position：Set the processing platform to move to the position of the cover automatically, let the cover be properly put down, and then carry out the production processing (this setting needs to have the cover function to take effect); through the shortcut window, move the processing platform to the cover position, click “Execute” , as shown below;

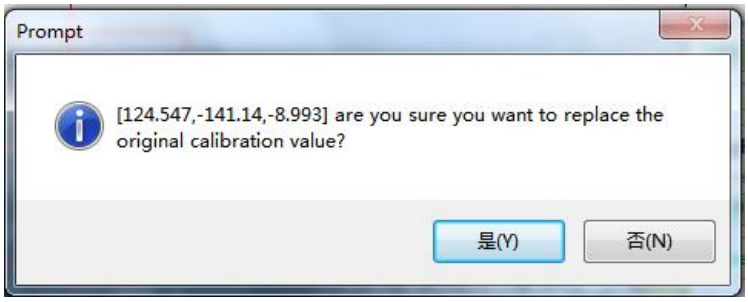


Click "Get", the system will pop up the prompt box shown below;

Click "OK"; click "check" to verify that it is correct;

（7）Exit Position：After setting the processing, the position where the processing platform is moved out; through the shortcut window, move the processing platform to the desired position, click "Execute", and the display is as shown below;

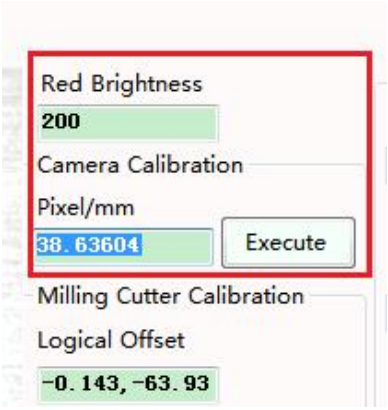
Click "Get", the system will pop up the prompt box shown below;



Click "OK"; click "check " to verify that it is correct;

（8）Red Brightness：Adjust camera light source；

（9）Camera Calibration：The camera pixels are mainly calibrated here. This value is related to the accuracy of the grab Mark, because this value must be accurate; click “View” at “Camera Height” to move the camera to the set optimal imaging position, and the camera cross cursor Move to the Mark Center of the PCBA board and click on “To Mark Center” to make the camera recognize Mark well. (If you can’t recognize it, you need to adjust the Mark parameter in “Camera Settings”), click “Execute”, then click “Pixel Calibration”. , as shown below;

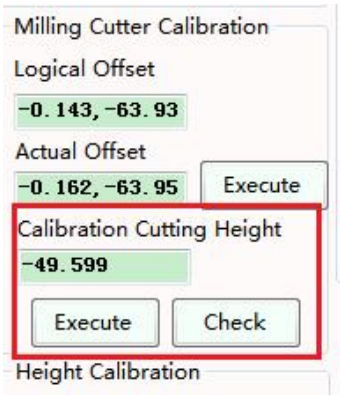


At this point, the camera cross cursor moves around the center of Mark to obtain relevant data. (If the camera does not move when Mark can be recognized, the value of "Mark Recognition Range" should be set larger in the advanced window). , the system will pop up the prompt box shown below;

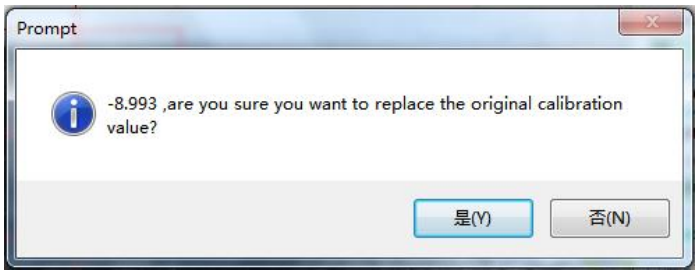
Clicked “ Y” ;

（10）Milling Cutter Calibration: In the assembly, there is a certain deviation between the camera and the spindle, and the system compensates by the calibrated value;

① Calibration Cutting Height: According to the thickness of the placed PCBA board, slowly adjust the Z-axis height through the shortcut window, so that the milling cutter can cut a complete circular hole on the PCBA board, as shown in the figure below;



Clicked “Execute”, as shown in the figure below;



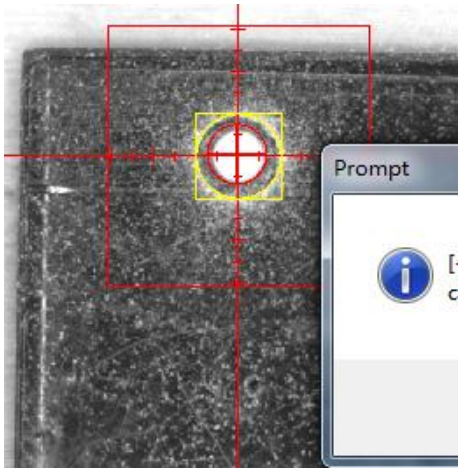
Clicked “Y” is ok; Click ″check″ to verify that it is co

rrect;

2 actual deviation: according to the position of the cutting hole of the milling cutter, the system automatically calculates between the camera and the spindle Deviation value;

Move the camera cross cursor to the cuttable position through the shortcut window, click “Execute”, the device will cut a hole on the PCBA board according to the value on “Logical deviation”. After cutting, the camera will automatically move to the cutting. Nearby location;

If the center position of the camera cross cursor deviates too much from the center of the hole, you need to align the center positions of the two through the shortcut window, as shown in the following figure;



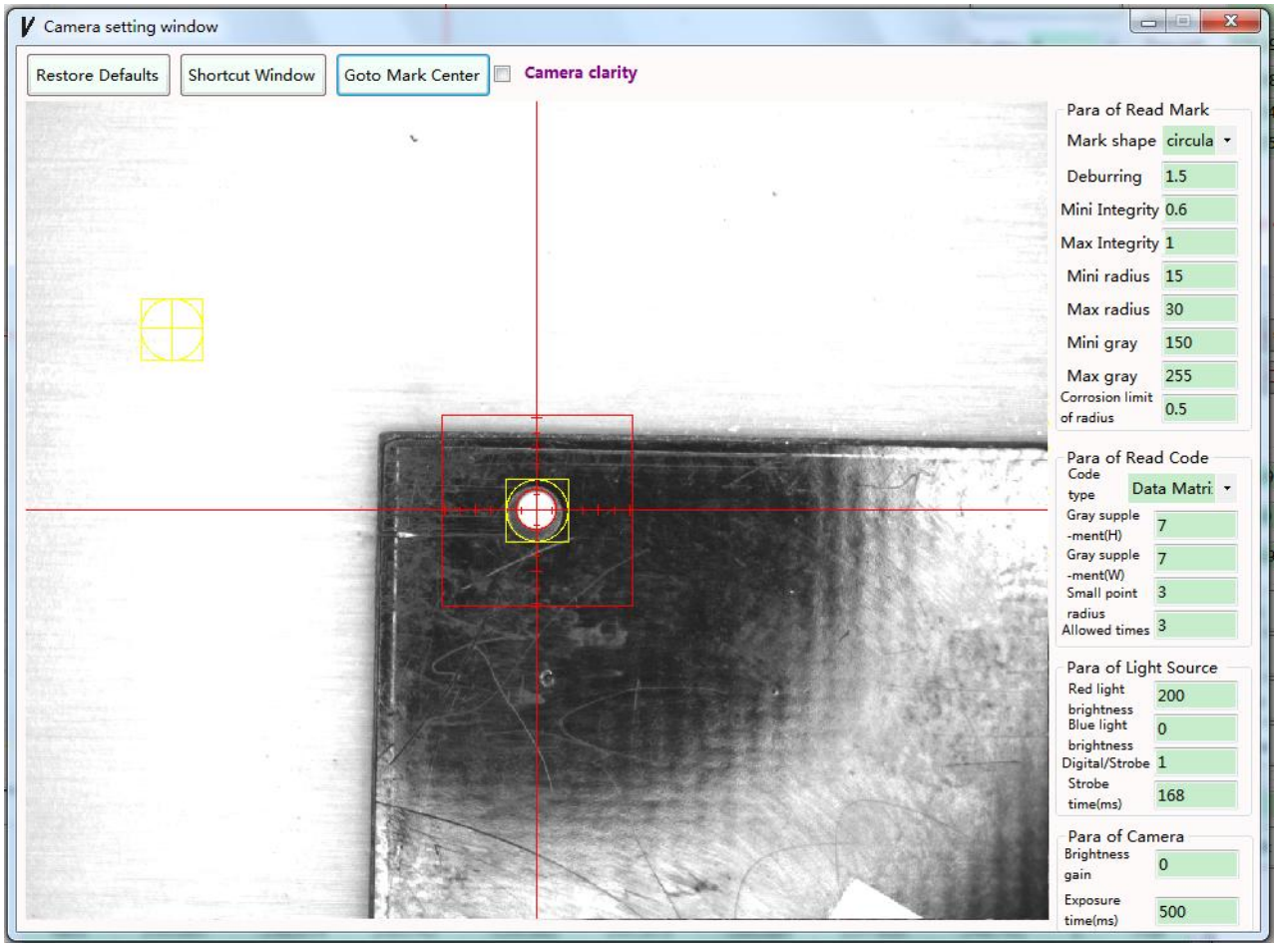
Clicked “Execute”, as shown in the figure below;

Clicked “Y” confirmed;

③Logical deviation: The deviation of the system theory does not represent the true deviation between the camera and the spindle. This value can be edited (you can verify that the actual deviation is correct by copying the value on the “actual deviation”);

二.Camera Parameter Setting

Place a PCBA board with Mark points on the equipment processing platform, click "Camera Parameter Settings",



（1）Mark parameter: Important parameters are minimum ra

dius, maximum radius, minimum radius gray value, maximum gray value;

①Mark shape: support "circularity" only;

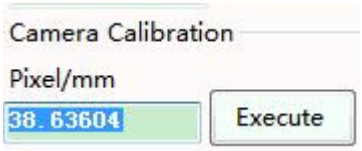
②Deburring: Remove burrs from image refinement and improve recognition rate;

③Mini integrity: The minimum value is 0.1, and the smaller the value, the lower the quality requirement for Mark;

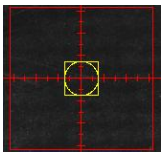
④Max integrity: The maximum value is 1. The higher the value, the higher the quality requirement for Mark;

⑤Mini/Max radius: This value is in "pixels" and needs to be set according to the value of "camera calibration" in "machine parameter settings".

As shown in the following figure (1), 37.665862 represents 1 mm; as shown in Figure (2), in the camera cross cursor, each small square represents 0.5 mm.



（1）



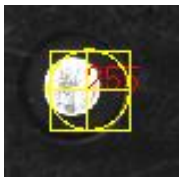
（2）

According to the size of the current Mark, the diameter is about 1 mm, then the minimum radius, fill in 18, fill in the maximum radius 38;

⑥Min/Max Gray: This value needs to be set according to the current Mark, the gray value displayed by the camera; move the mouse cursor outside the edge of the Mark, click the right mouse button, and the display is as show

n in the following figure (1), the display is 37; move the mouse cursor to the edge of the Mark, Click the right mouse button and the display is as shown in the following figure (2). The display is 255;

（1）

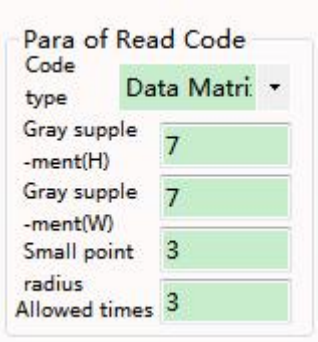


（2）

Therefore, the mini gray value theory is 37 (actually, in order to make the camera better obtain Mark, the minimum gray value is appropriately increased); the maximum gray value theory is 255;

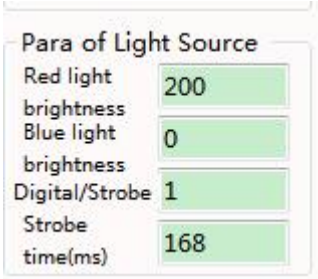
⑦Radius corrosion limit: The setting range is 0~1. The larger the value, the higher the quality of the Mark.

（2）Decode Parameter: According to the size of different codes (such as DM code, QR code), the corresponding settings are made to achieve the best effect. This function is customized;

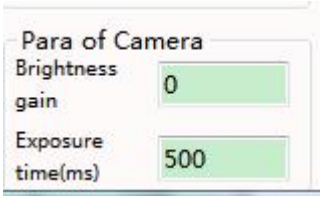


（3）Light source parameter: The red light corresponds to the cold color plate, the blue light corresponds to the warm color plate (the value range should be 0 to 250), and the device uses the red light source, so the red light

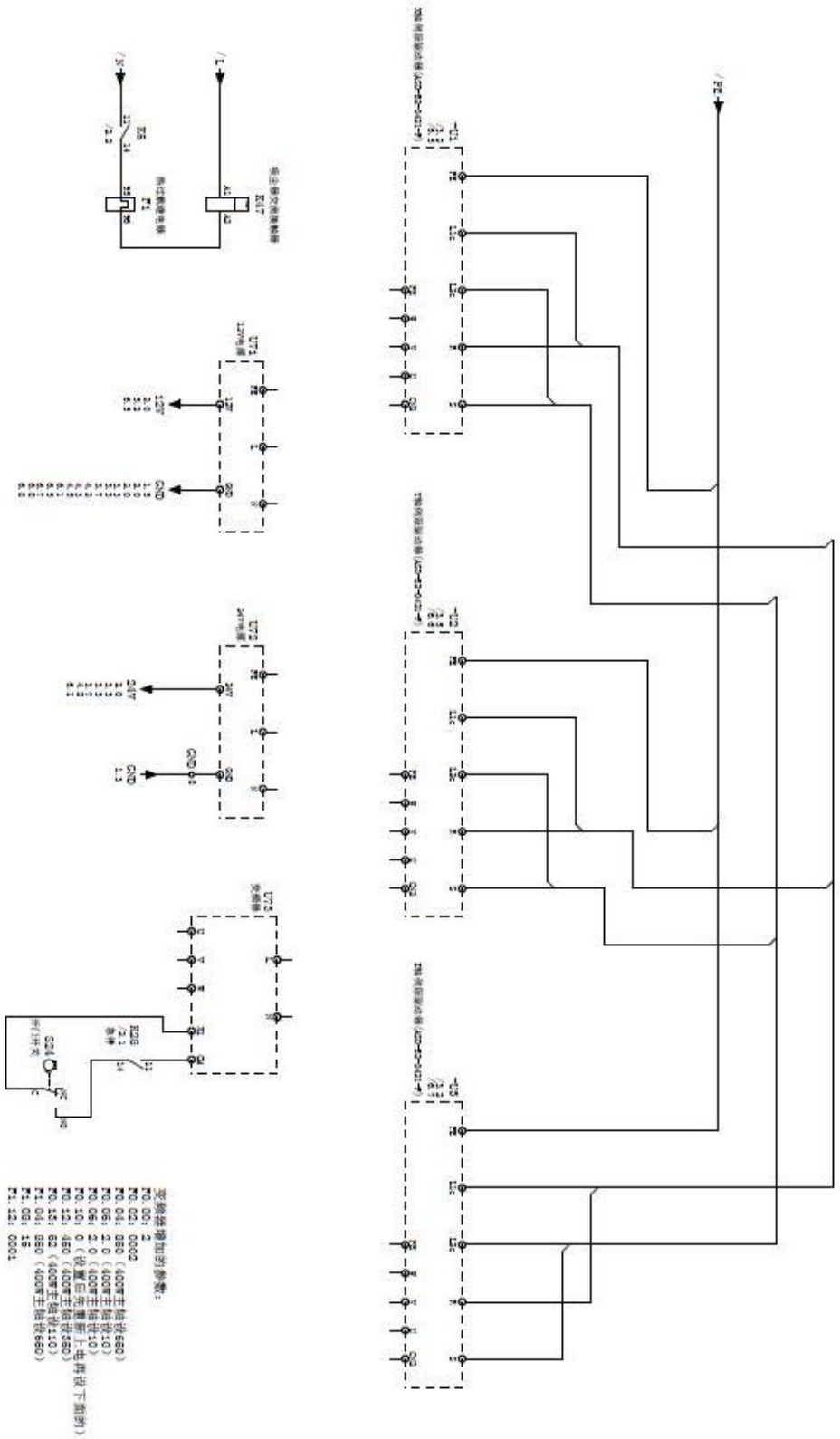
brightness can be finely adjusted here; the higher the value, the brighter the light source;



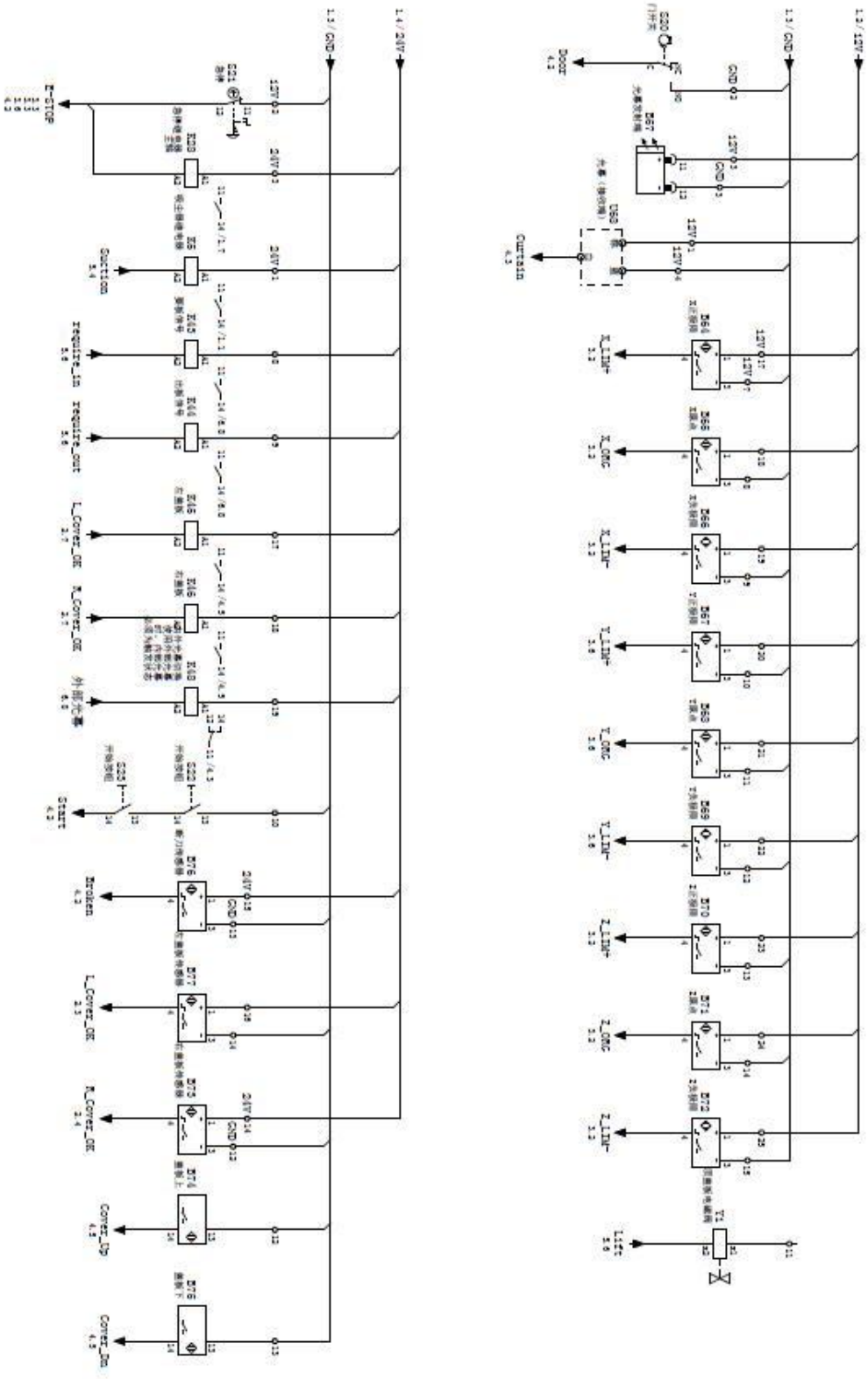
（4）Camera Parameter：Adjust the "exposure time" according to different plates; achieve the best imaging results when the camera gets Mark;



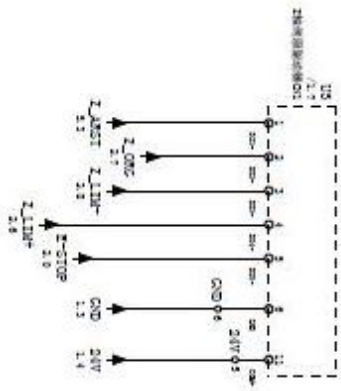
Chapter Four、Machine Circuit Diagram

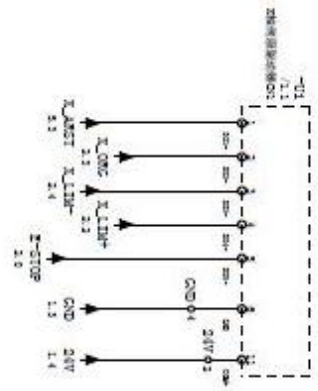


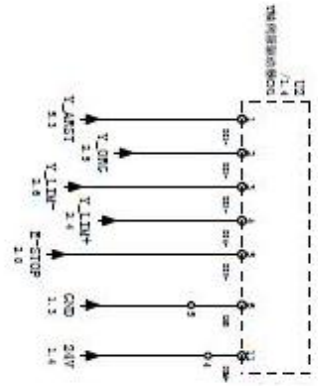
AC power supply diagram

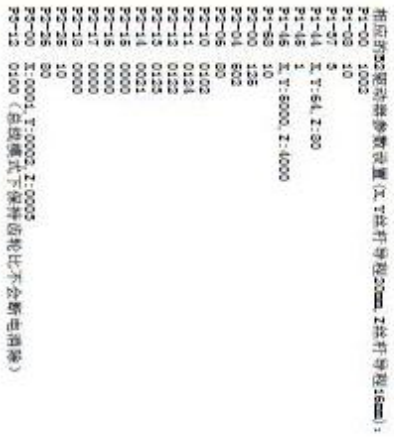


Relays and Sensors

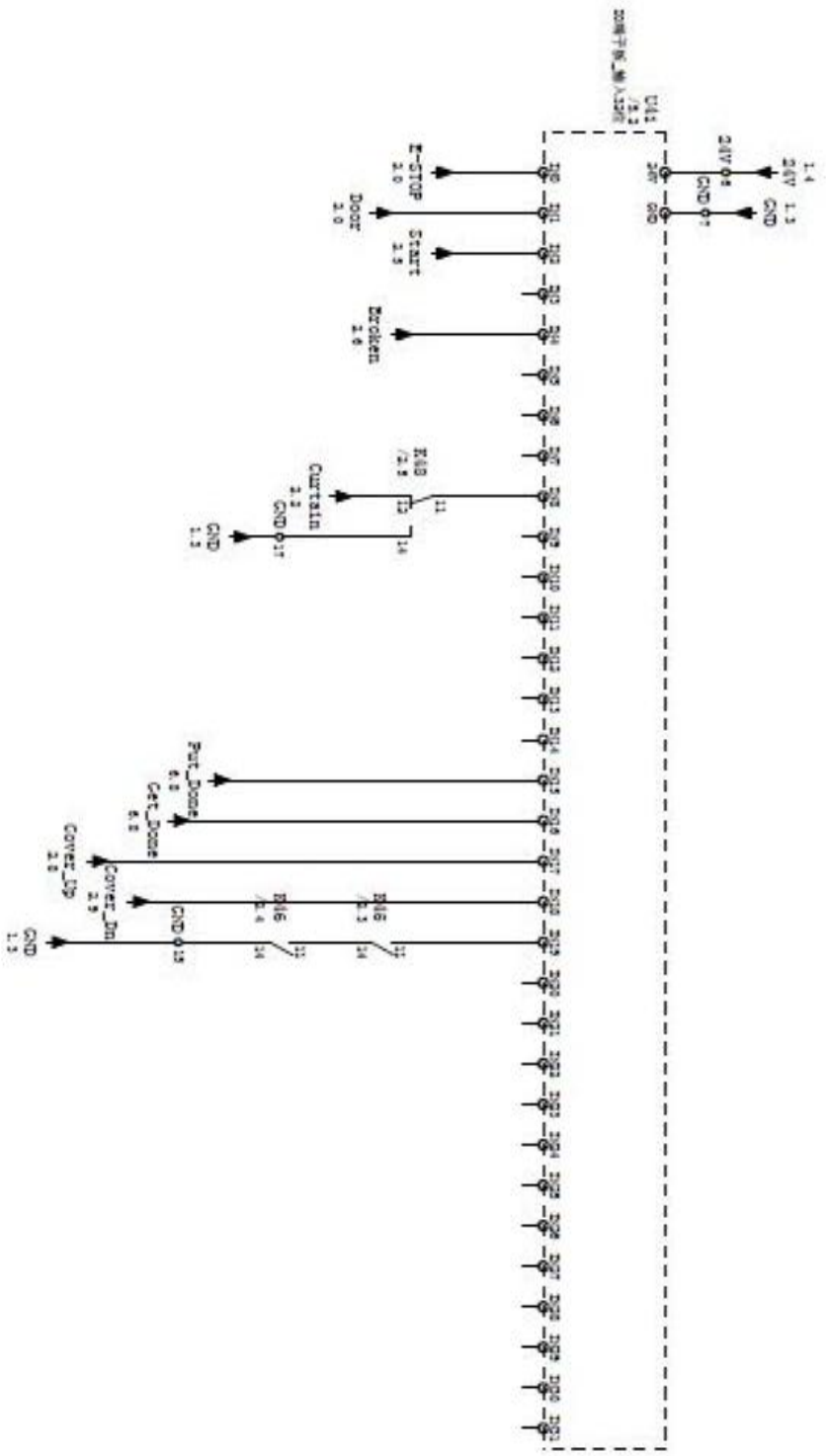




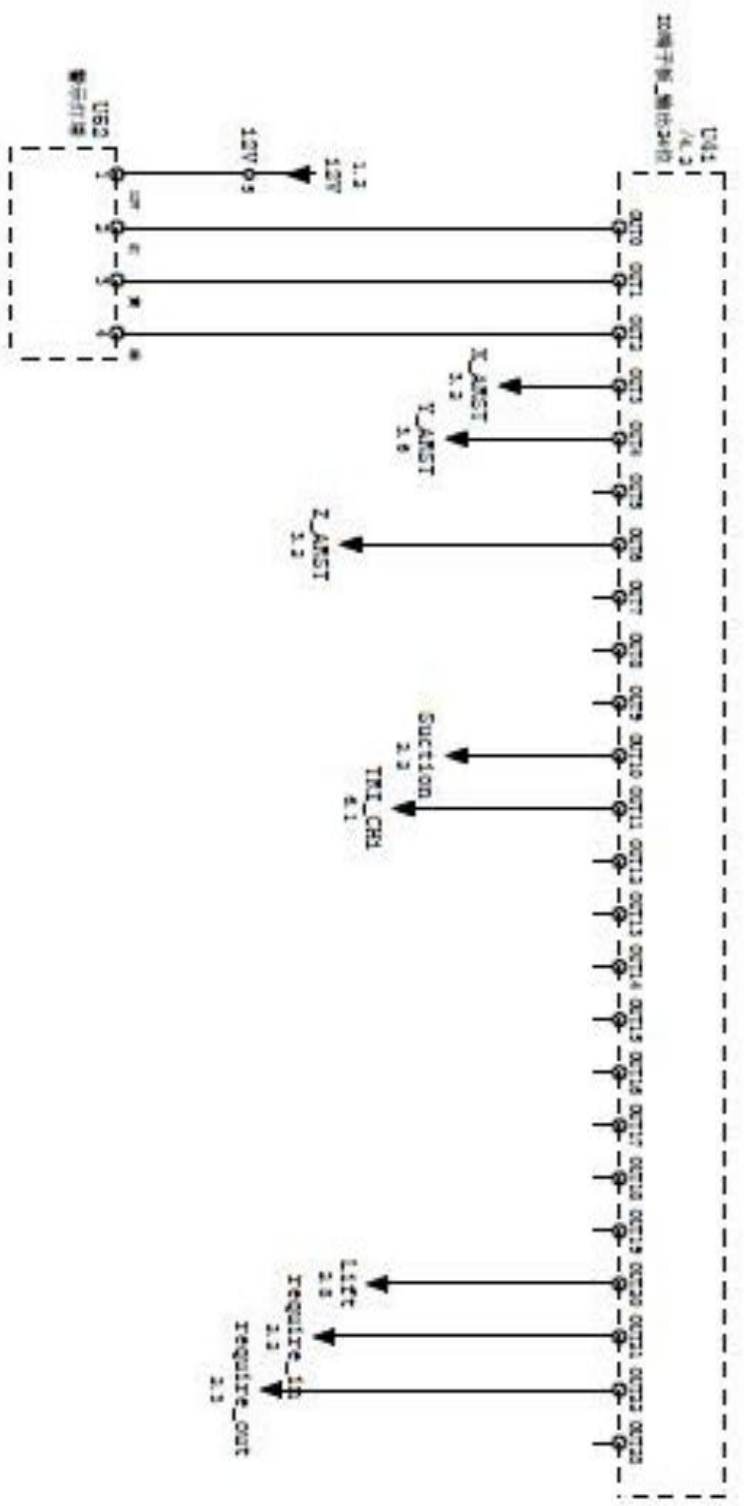




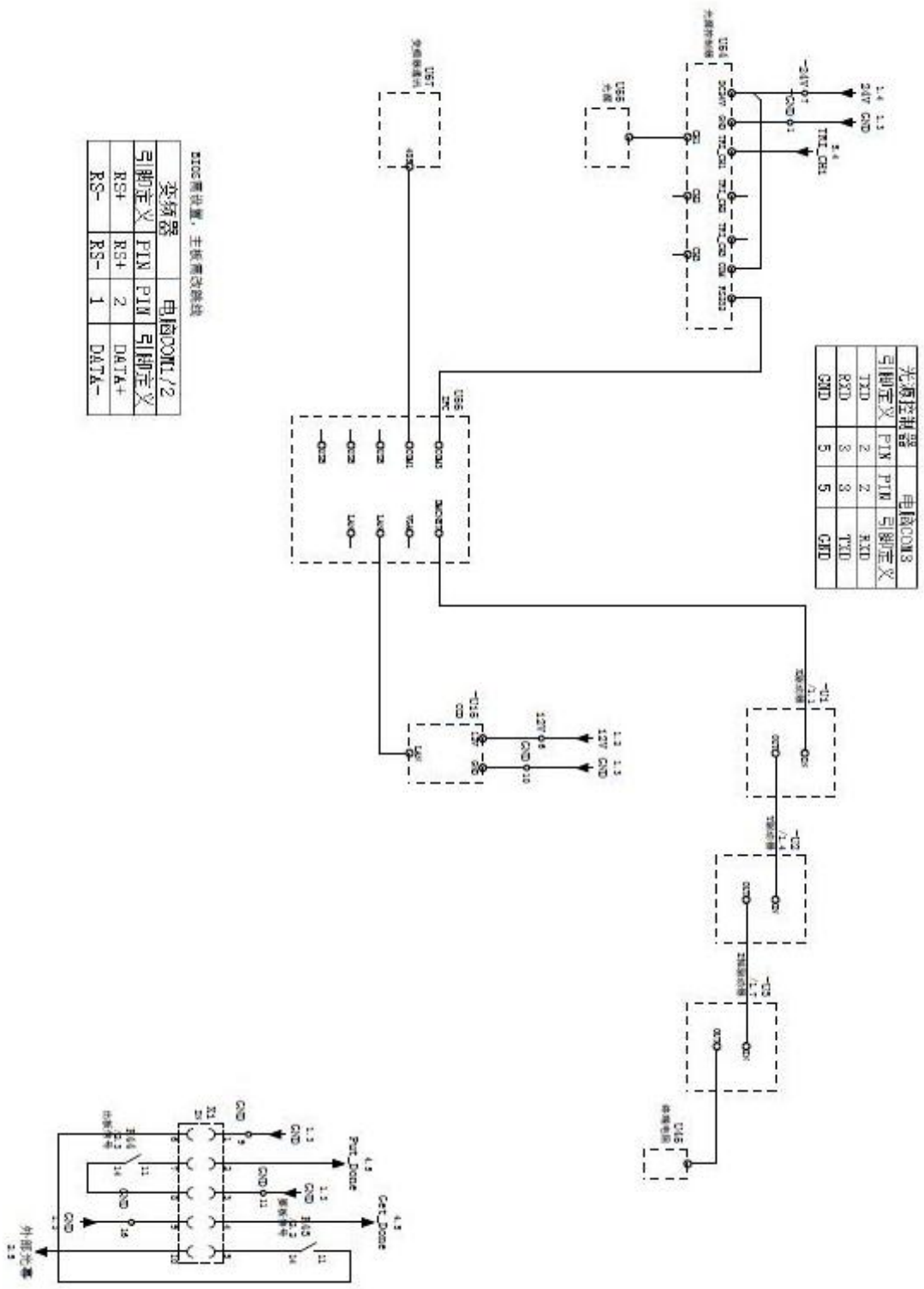
Servo wiring diagram



IO connection diagram (input)



IO connection diagram (output)



Control circuit diagram

Chapter Five、Troubleshooting Guide

一、Easy troubleshooting

1.Power cannot be connected

★Check for power input.

★Check the switch of the power distribution or if the switch is broken.

★Confirm that the emergency stop of the equipment is turned off and the emergency stop switch of the equipment has been released.

2.Equipment shakes sharply during processing

★Make sure that the four fixed foot cups of the machine are locked and that the axes are running stably.

3.Processing positioning is not accurated

★Check if the X, Y, and Z axis couplings are loose.

★Is the camera loose?

★Check the hardware components and perform a mechanical calibration again through the software.

4.Positioning clamping cylinder error

★Check if the air supply is stable.

★Check if the sensor of the cylinder is working.

5.Milling cutter is easy to break

★The processing speed is too fast and the cutting speed should be reduced speed. Or confirm if there is a problem with the quality of the milling cutter.

6.Poor dust collection

★Make sure that the dust collector motor rotates in the correct direction. If the direction is wrong, you can change the rotation direction of the motor by swapping any two of the three power cables.

★Check if the PVC pipe of the connected dust collector is loose and cracked.

Chapter Six、Maintenance Service

一、Replace the bit

Note: When the operator replaces the milling cutter, the spindle motor must be stopped to operate.

二、Spindle maintenance

Regularly clean the spindle and cutter fixtures and it is recommended to clean them once a week.

Note: Do not use compressed air or ultrasonic instruments to clean the spindle. The cleaning agent should not be allowed to enter the inside of the spindle during the cleaning process.

三、Lubricating

Ball screw pairs and other rolling friction transmission components can be considered to work with almost no wear as long as abrasive particles and chemically active substances are avoided. However, if dirt falls on the raceway or dirty oil is used, it will not only hinder the normal operation of the ball, but also sharply increase the wear.

The long-term use of equipment and the accumulation of dust during the production process will inevitably lead to increased wear of the ball screw, linear slide and bearing. Therefore, it is necessary to periodically inspect and inject new lubrication shafts for each transmission component. It is recommended that the inspection period be one month, but it should be changed depending on the frequency of use of the equipment. Lithium Grease can be used, which is waterproof and heat resistant.

（1）Carefully clean the oil on the rails and the surface of the screw, especially the oil in the grooves; pay attention to the oil in the mounting holes of the rails.

（2）Grease the inside of the transmission chamber with the grease gun nozzle until the internal dirt is completely squeezed out, and the extruded oil is removed to prevent the oil from corroding the guide rail.

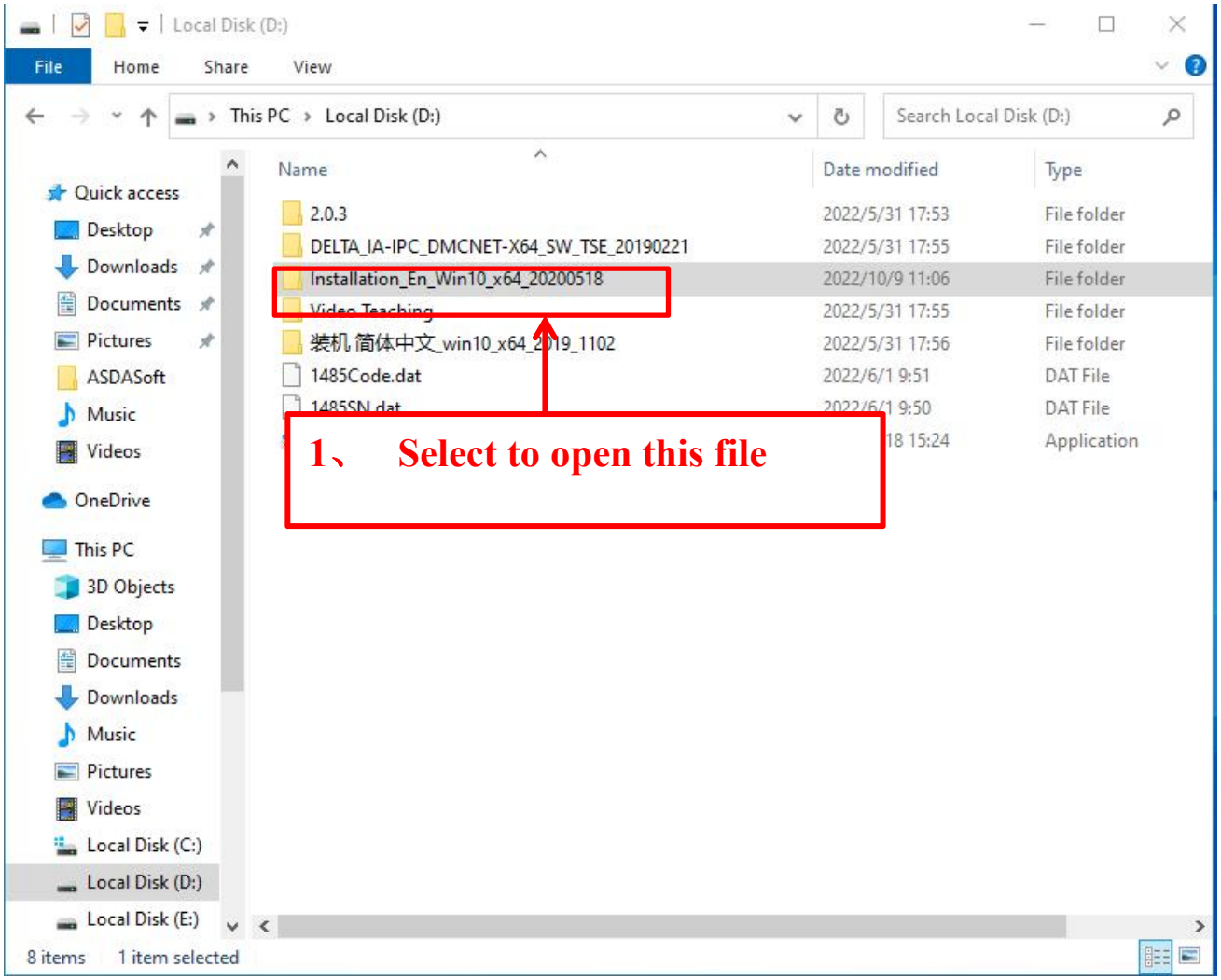
（3）Apply a small amount of grease to the inner groove of the ball screw with your fingers to maintain the lubricity.

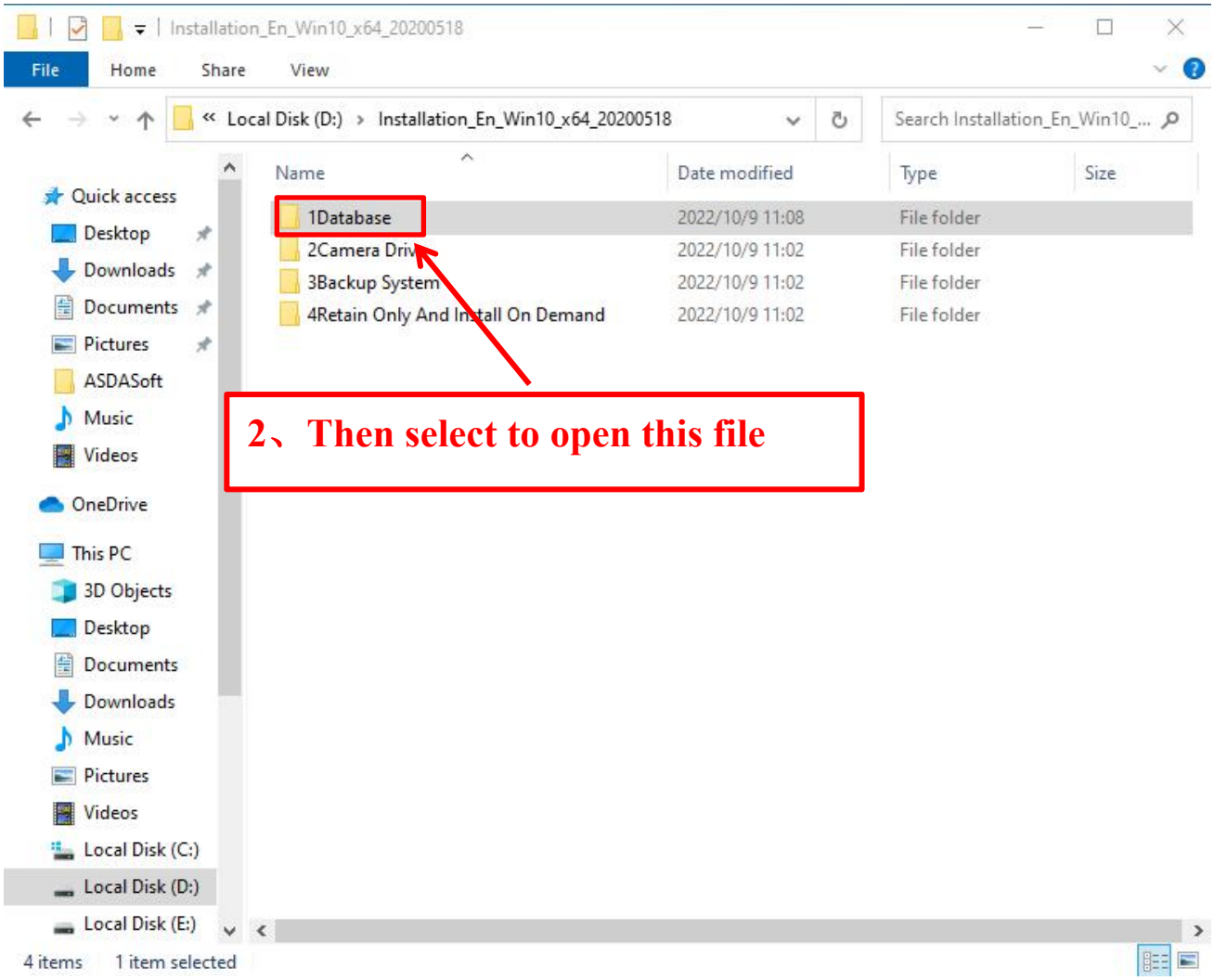
（4）Check the support bearings regularly. Check if the connection between the screw support and the machine is loose and the bearing is damaged. If there is any problem, tighten the loose parts and replace the support bearings in time.

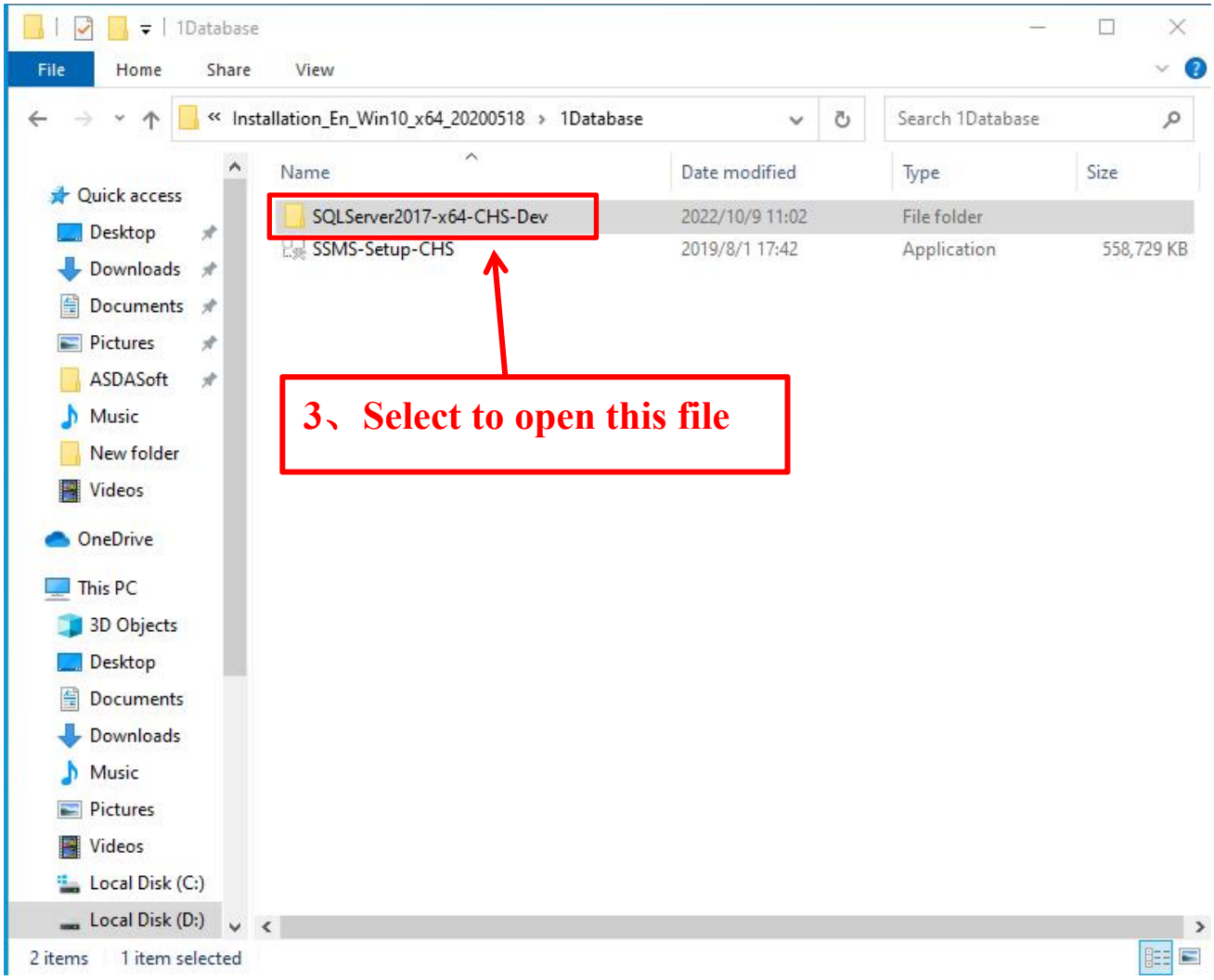
Add Function:

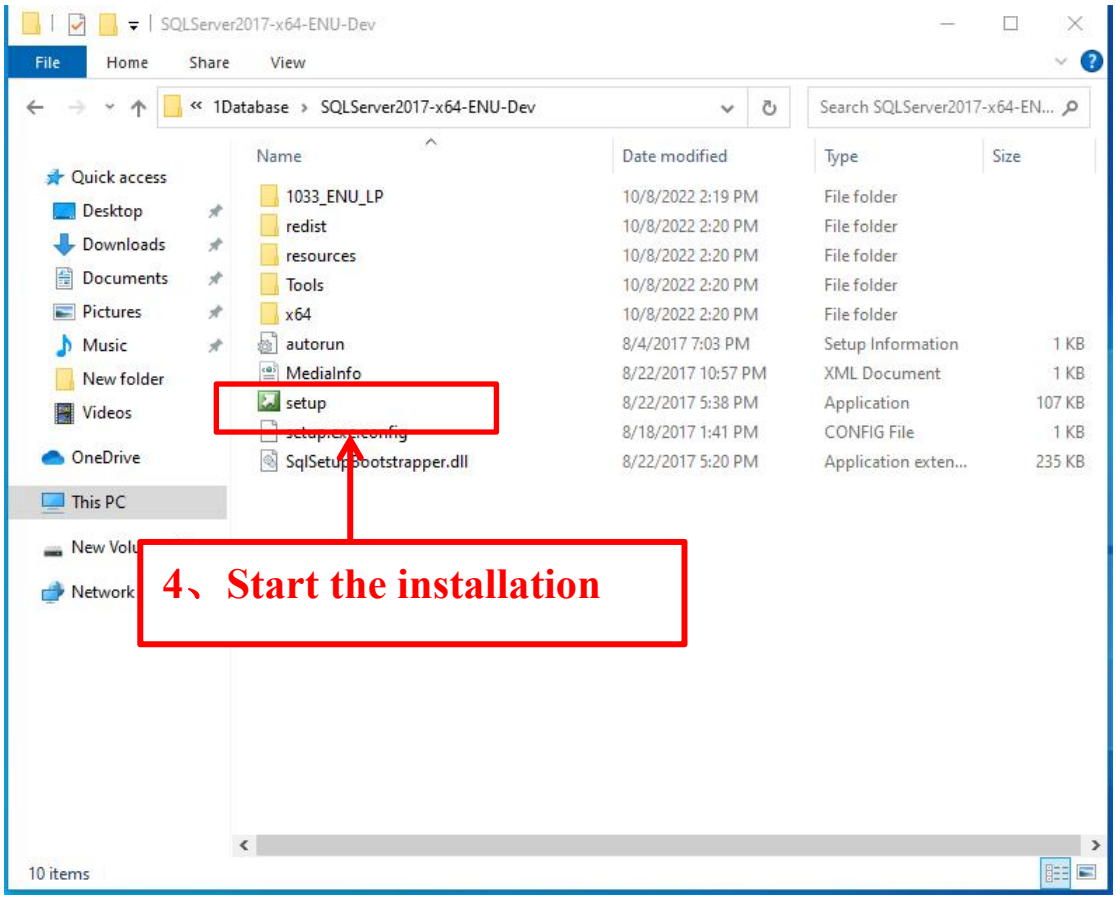
Machine Driver Installation Instruction

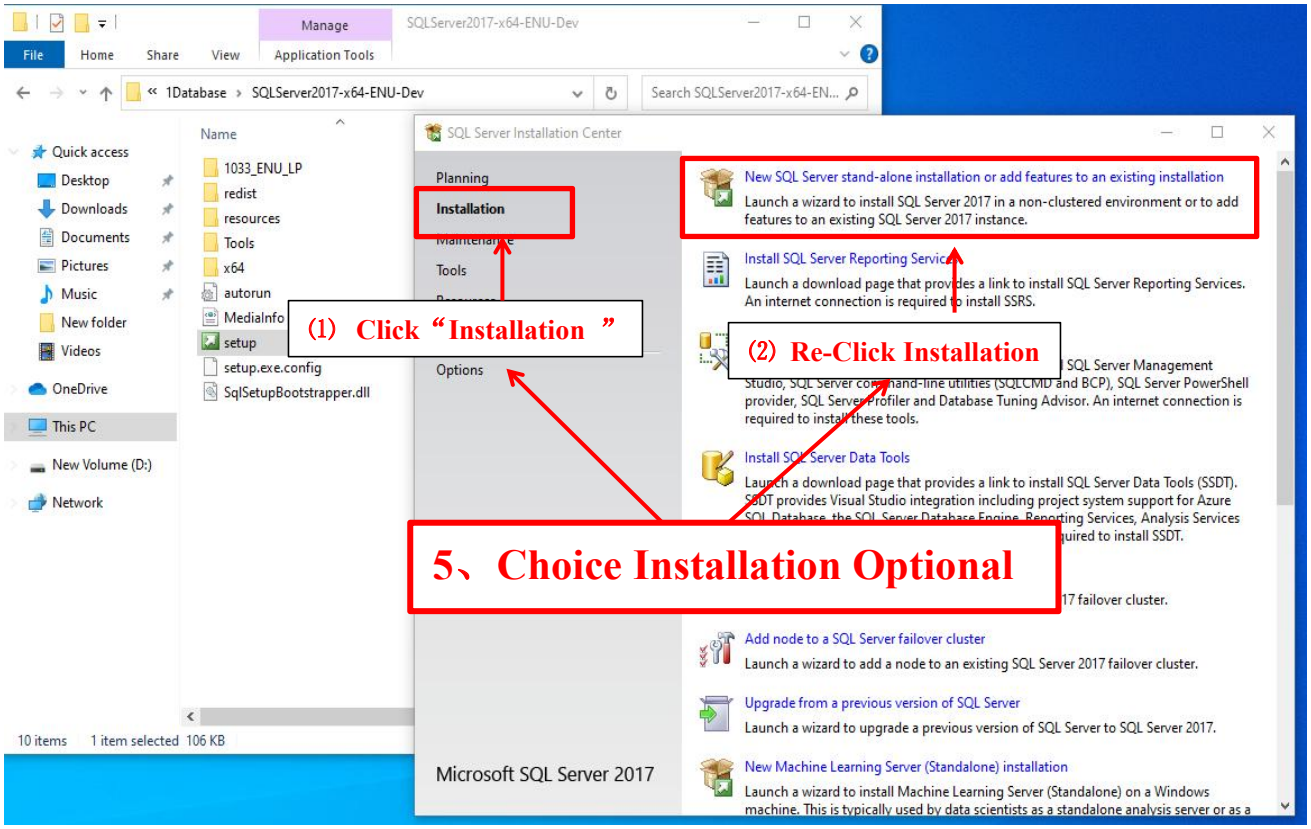
Part 1: Database Installation

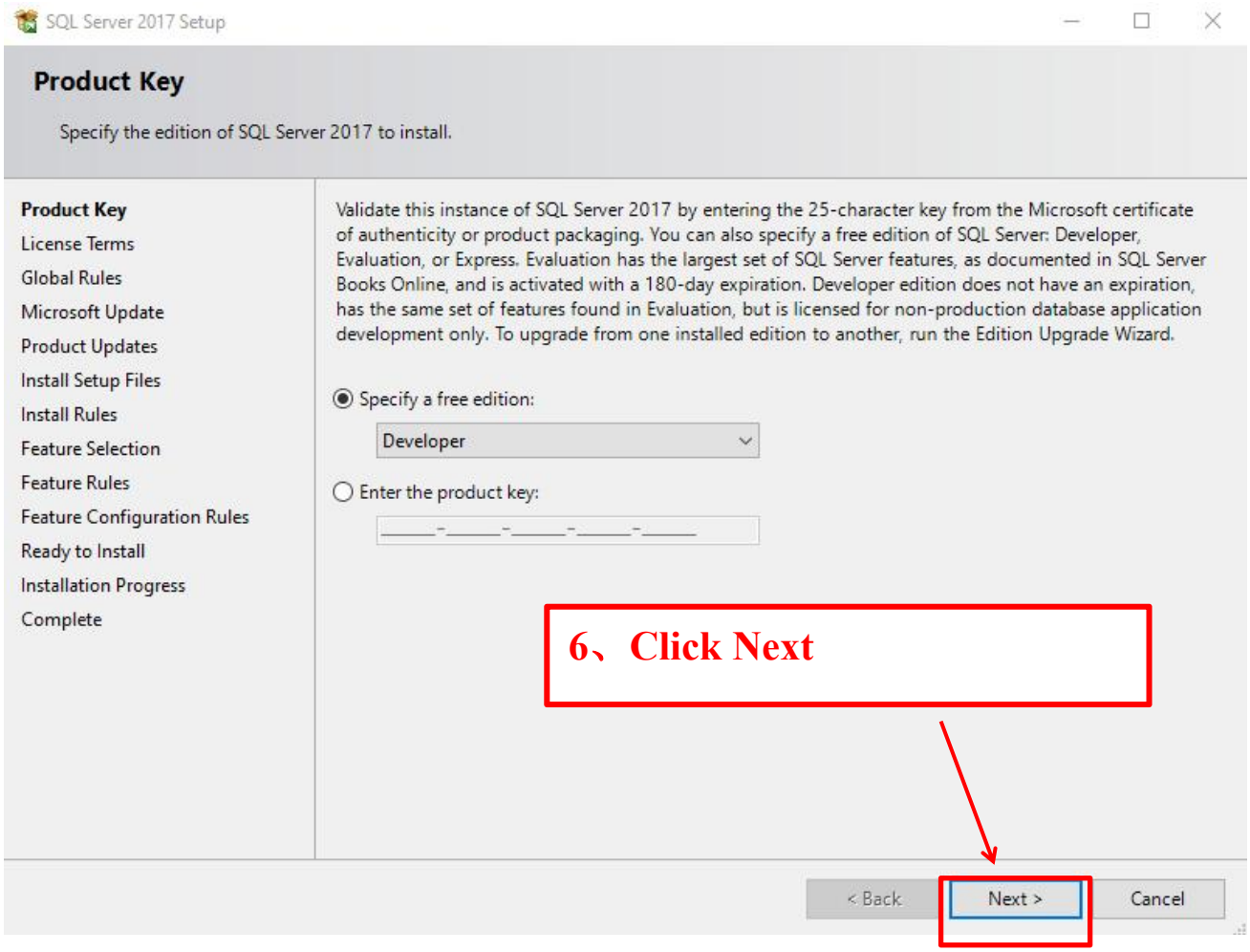


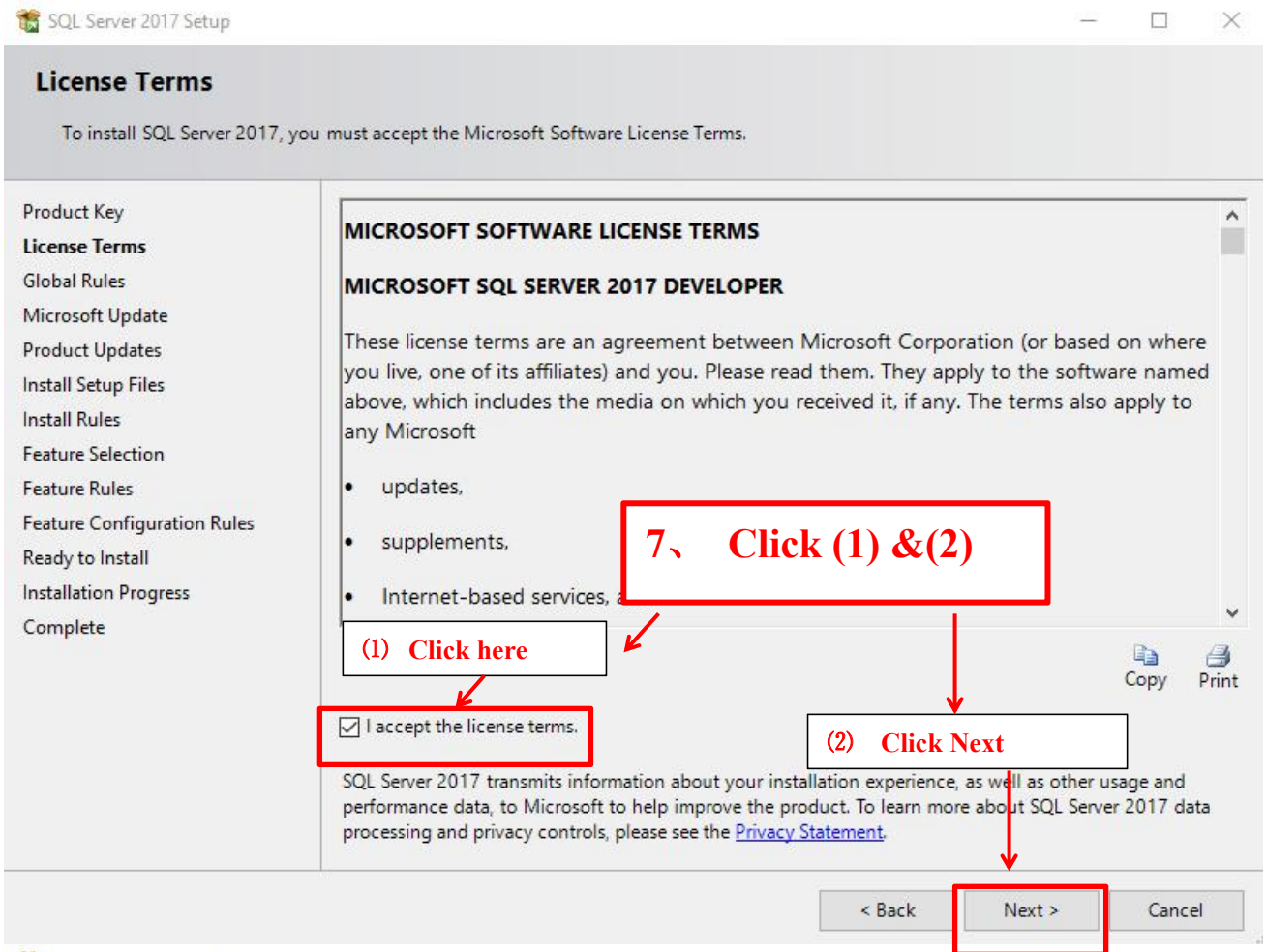

Installation_En_Win10_x64_20200518
File
Home
Share
View
Local Disk (D:) › Installation_En_Win10_x64_20200518
Search Installation_En_Win10_...
Quick access
Desktop
Downloads
Documents
Pictures
ASDASoft
Music
Videos
OneDrive
This PC
3D Objects
Desktop
Documents
Downloads
Music
Pictures
Videos
Local Disk (C:)
Local Disk (D:)
Local Disk (E:)
Name
Date modified
Type
Size
1Database
2022/10/9 11:08
File folder
2Camera Driv
2022/10/9 11:02
File folder
3Backup System
2022/10/9 11:02
File folder
4Retain Only And Install On Demand
2022/10/9 11:02
File folder
2、Then select to open this file
4 items
1 item selected

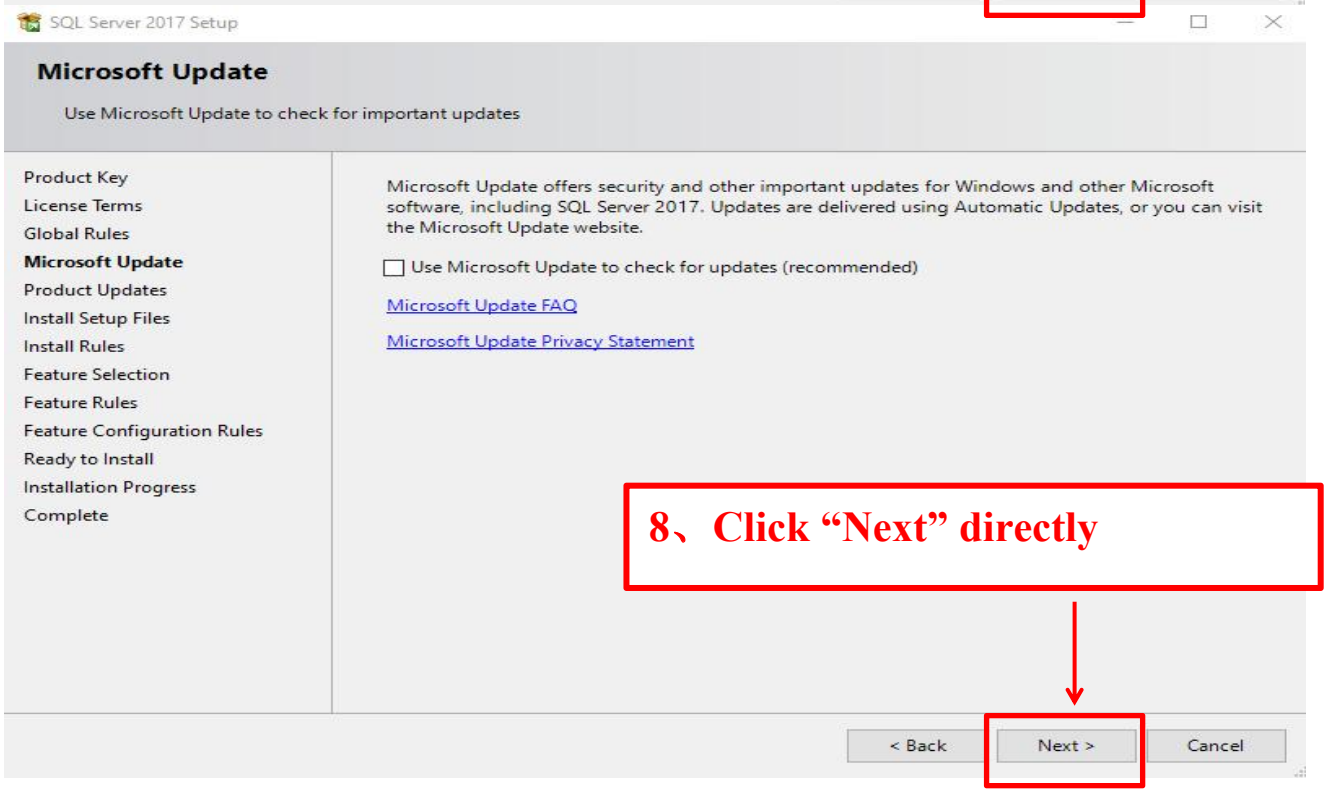

1Database
File
Home
Share
View
Installation_En_Win10_x64_20200518 › 1Database
Search 1Database
Quick access
Desktop
Downloads
Documents
Pictures
ASDASoft
Music
New folder
Videos
OneDrive
This PC
3D Objects
Desktop
Documents
Downloads
Music
Pictures
Videos
Local Disk (C:)
Local Disk (D:)
Name
Date modified
Type
Size
SQLServer2017-x64-CHS-Dev
2022/10/9 11:02
File folder
SSMS-Setup-CHS
2019/8/1 17:42
Application
558,729 KB
3、Select to open this file
2 items
1 item selected

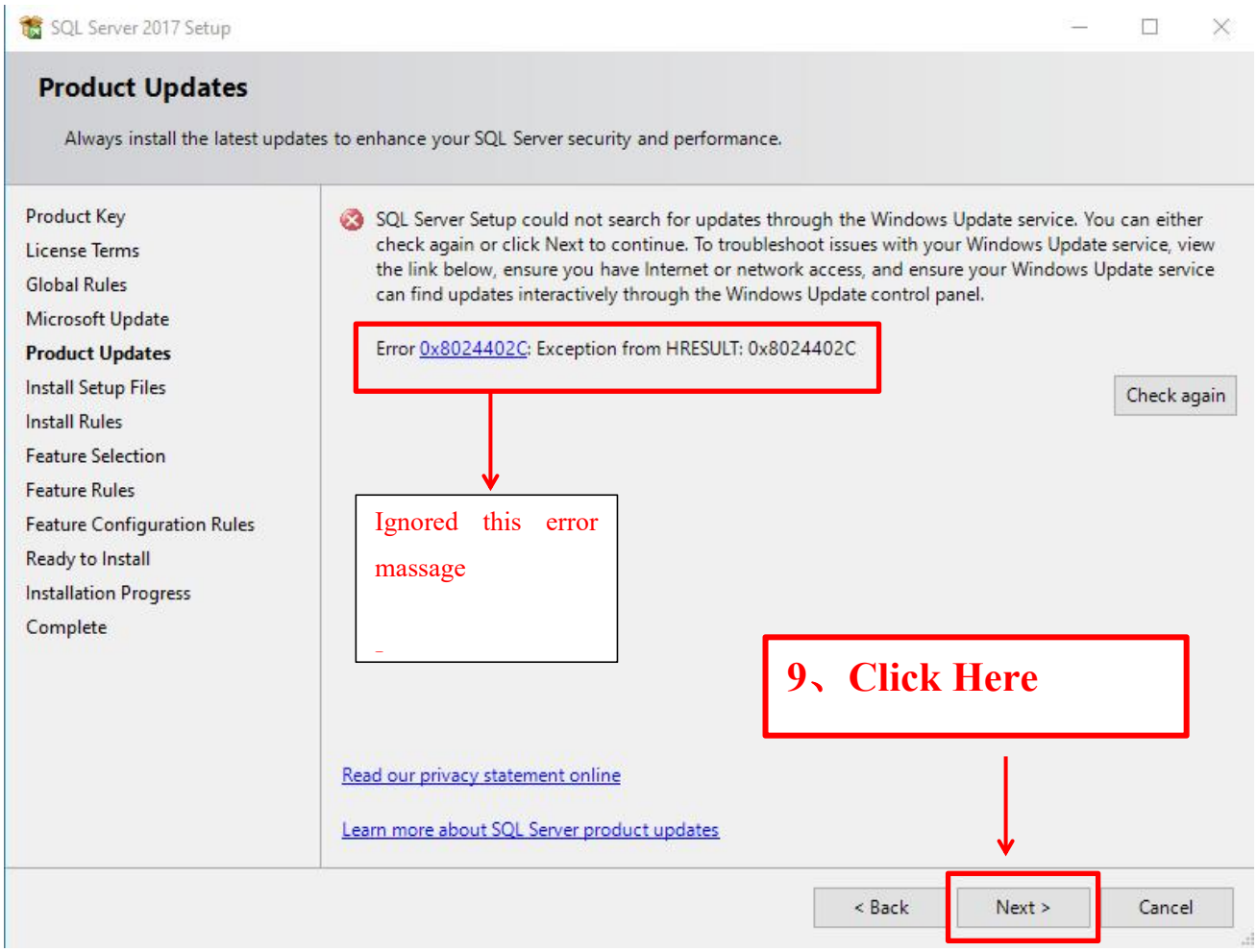

SQLServer2017-x64-ENU-Dev
File
Home
Share
View
1Database › SQLServer2017-x64-ENU-Dev
Search SQLServer2017-x64-EN...
Quick access
Desktop
Downloads
Documents
Pictures
Music
New folder
Videos
OneDrive
This PC
Network
Name
Date modified
Type
Size
1033_ENU_LP 10/8/2022 2:19 PM File folder
redist 10/8/2022 2:20 PM File folder
resources 10/8/2022 2:20 PM File folder
Tools 10/8/2022 2:20 PM File folder
x64 10/8/2022 2:20 PM File folder
autorun 8/4/2017 7:03 PM Setup Information 1 KB
MediaInfo 8/22/2017 10:57 PM XML Document 1 KB
setup 8/22/2017 5:38 PM Application 107 KB
8/18/2017 1:41 PM CONFIG File 1 KB
SqlSetupBootstrapper.dll 8/22/2017 5:20 PM Application exten... 235 KB
4、Start the installation
10 items

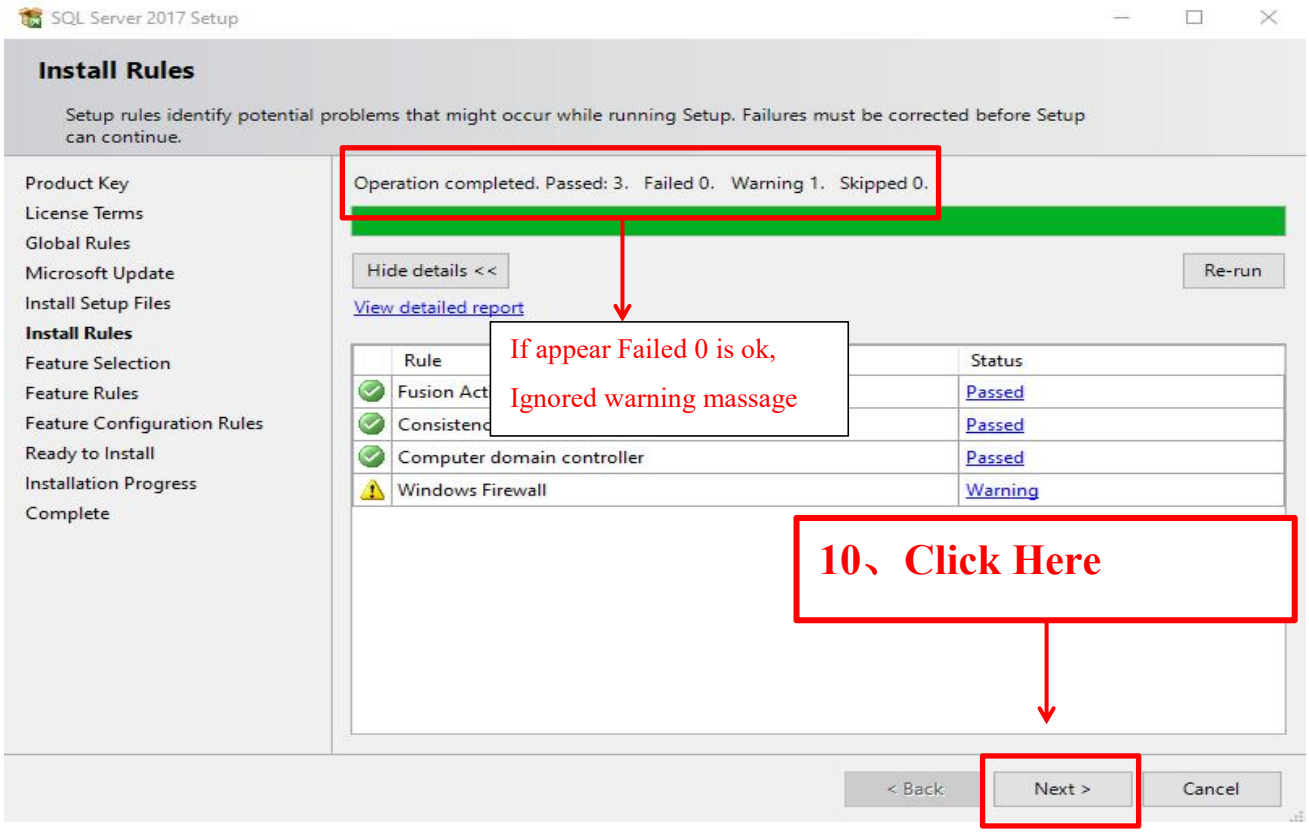

Manage
SQLServer2017-x64-ENU-Dev
File
Home
Share
View
Application Tools
1Database › SQLServer2017-x64-ENU-Dev
Search SQLServer2017-x64-EN...
Quick access
Desktop
Downloads
Documents
Pictures
Music
New folder
Videos
OneDrive
This PC
New Volume (D:)
Network
Name
1033_ENU_LP
redist
resources
Tools
x64
autorun
MediaInfo
setup
setup.exe.config
SqlSetupBootstrapper.dll
10 items
1 item selected 106 KB
SQL Server Installation Center
Planning
Installation
Maintenance
Tools
Resources
Options
New SQL Server stand-alone installation or add features to an existing installation
Launch a wizard to install SQL Server 2017 in a non-clustered environment or to add features to an existing SQL Server 2017 instance.
Install SQL Server Reporting Services
Launch a download page that provides a link to install SQL Server Reporting Services. An internet connection is required to install SSRS.
SQL Server Management Studio, SQL Server command-line utilities (SQLCMD and BCP), SQL Server PowerShell provider, SQL Server Profiler and Database Tuning Advisor. An internet connection is required to install these tools.
Install SQL Server Data Tools
Launch a download page that provides a link to install SQL Server Data Tools (SSDT). SSDT provides Visual Studio integration including project system support for Azure SQL Database, the SQL Server Database Engine, Reporting Services, Analysis Services
required to install SSDT.
17 failover cluster.
Add node to a SQL Server failover cluster
Launch a wizard to add a node to an existing SQL Server 2017 failover cluster.
Upgrade from a previous version of SQL Server
Launch a wizard to upgrade a previous version of SQL Server to SQL Server 2017.
New Machine Learning Server (Standalone) installation
Launch a wizard to install Machine Learning Server (Standalone) on a Windows machine. This is typically used by data scientists as a standalone analysis server or as a
Microsoft SQL Server 2017
(1) Click “Installation ”
(2) Re-Click Installation
5、Choice Installation Optional

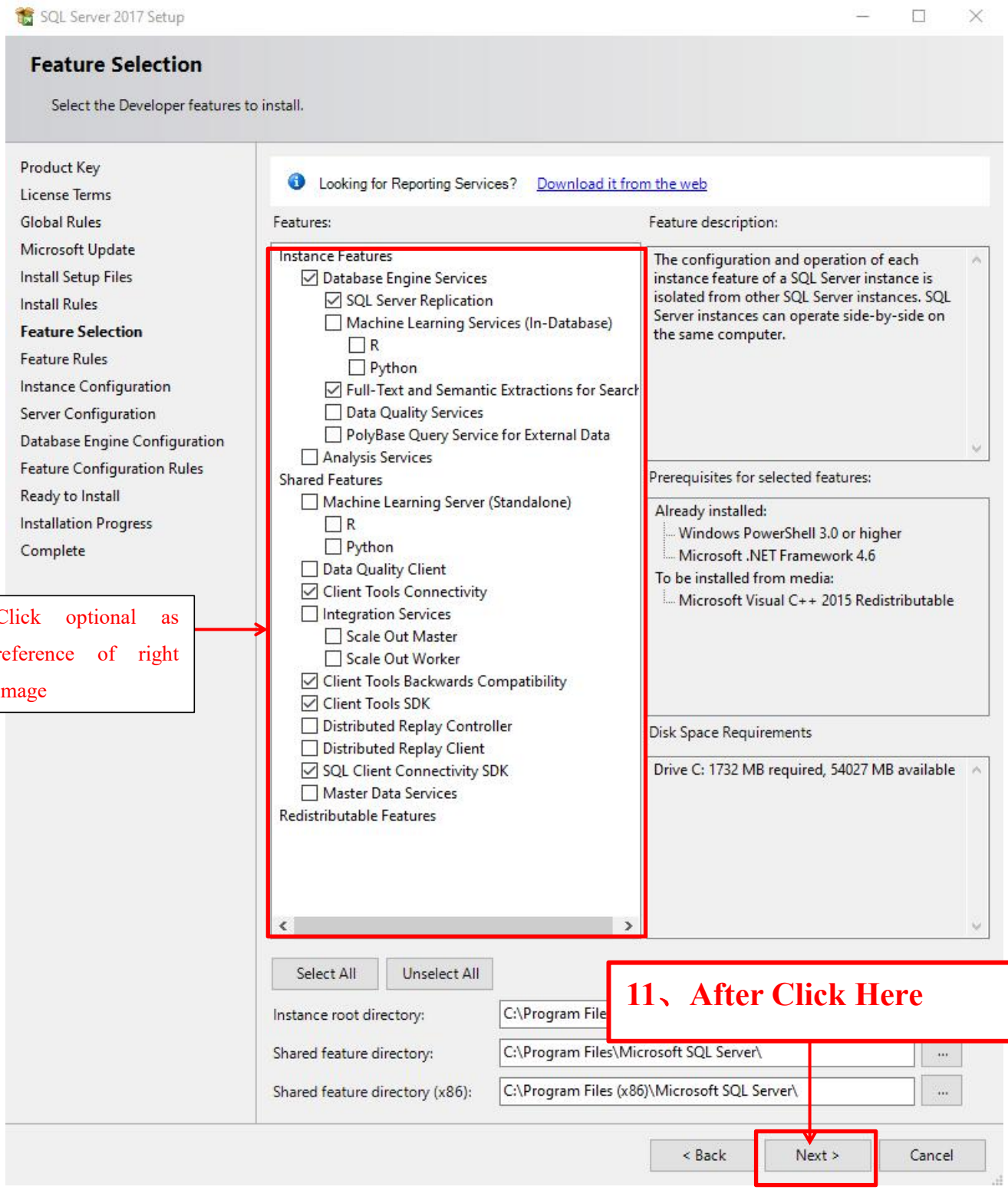

SQL Server 2017 Setup
Product Key
Specify the edition of SQL Server 2017 to install.
Product Key
License Terms
Global Rules
Microsoft Update
Product Updates
Install Setup Files
Install Rules
Feature Selection
Feature Rules
Feature Configuration Rules
Ready to Install
Installation Progress
Complete
Validate this instance of SQL Server 2017 by entering the 25-character key from the Microsoft certificate of authenticity or product packaging. You can also specify a free edition of SQL Server: Developer, Evaluation, or Express. Evaluation has the largest set of SQL Server features, as documented in SQL Server Books Online, and is activated with a 180-day expiration. Developer edition does not have an expiration, has the same set of features found in Evaluation, but is licensed for non-production database application development only. To upgrade from one installed edition to another, run the Edition Upgrade Wizard.
Specify a free edition:
Developer
Enter the product key:
6、Click Next
< Back
Next >
Cancel

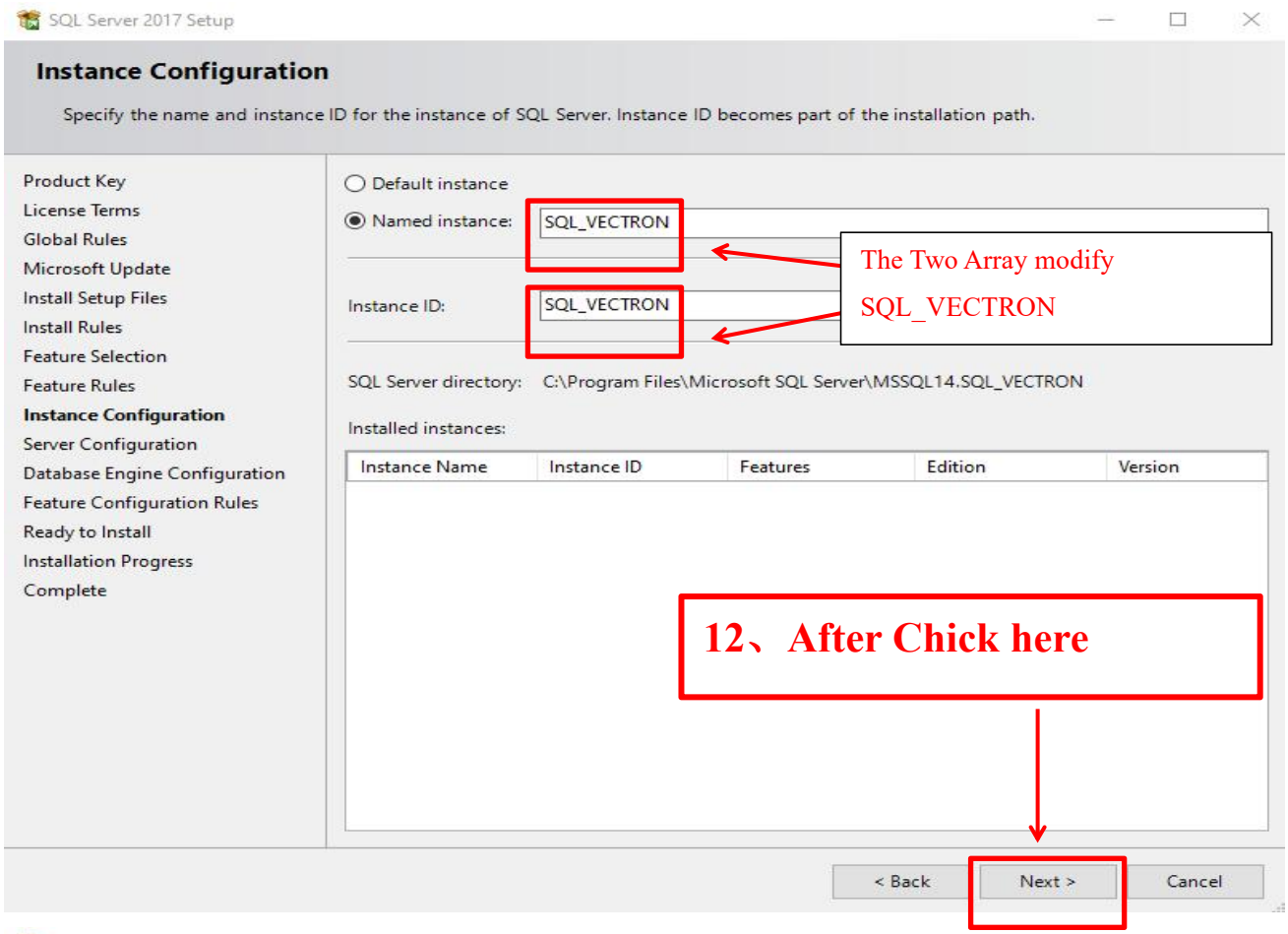

SQL Server 2017 Setup
License Terms
To install SQL Server 2017, you must accept the Microsoft Software License Terms.
Product Key
License Terms
Global Rules
Microsoft Update
Product Updates
Install Setup Files
Install Rules
Feature Selection
Feature Rules
Feature Configuration Rules
Ready to Install
Installation Progress
Complete
MICROSOFT SOFTWARE LICENSE TERMS
MICROSOFT SQL SERVER 2017 DEVELOPER
These license terms are an agreement between Microsoft Corporation (or based on where you live, one of its affiliates) and you. Please read them. They apply to the software named above, which includes the media on which you received it, if any. The terms also apply to any Microsoft
updates,
supplements,
Internet-based services,
7、 Click (1) &(2)
(1) Click here
Copy
Print
I accept the license terms.
(2) Click Next
SQL Server 2017 transmits information about your installation experience, as well as other usage and performance data, to Microsoft to help improve the product. To learn more about SQL Server 2017 data processing and privacy controls, please see the Privacy Statement.
< Back
Next >
Cancel

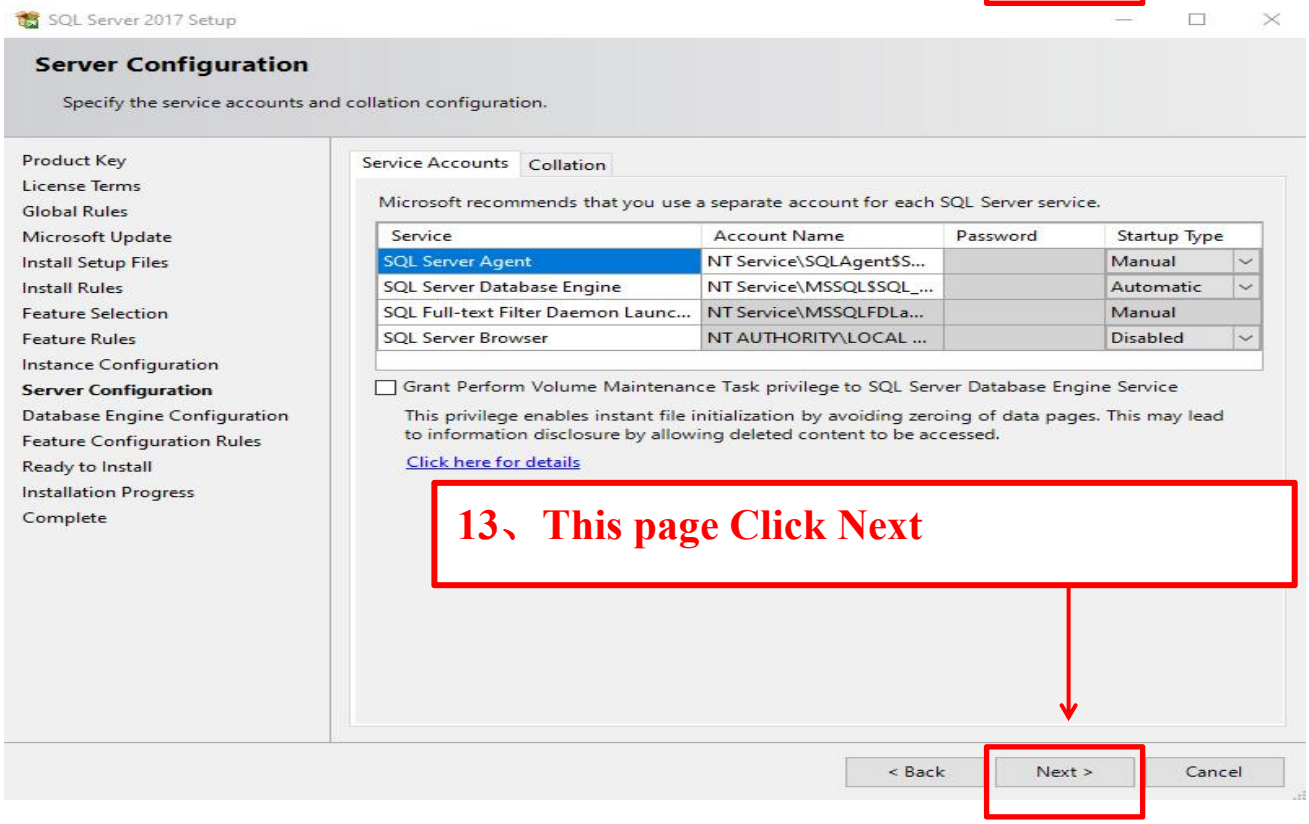

SQL Server 2017 Setup
Microsoft Update
Use Microsoft Update to check for important updates
Product Key
License Terms
Global Rules
Microsoft Update
Product Updates
Install Setup Files
Install Rules
Feature Selection
Feature Rules
Feature Configuration Rules
Ready to Install
Installation Progress
Complete
Microsoft Update offers security and other important updates for Windows and other Microsoft software, including SQL Server 2017. Updates are delivered using Automatic Updates, or you can visit the Microsoft Update website.
Use Microsoft Update to check for updates (recommended)
Microsoft Update FAQ
Microsoft Update Privacy Statement
8、Click “Next” directly
< Back
Next >
Cancel

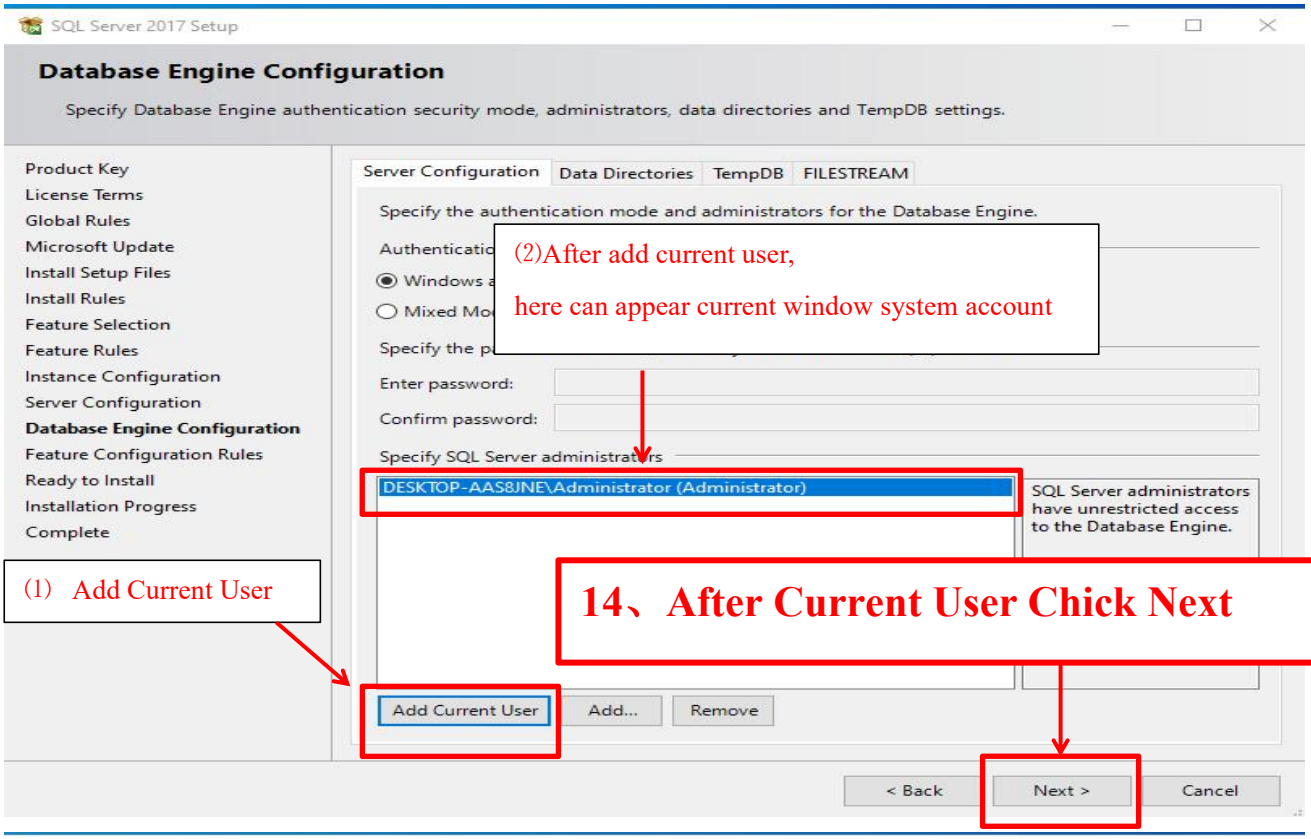

SQL Server 2017 Setup
Product Updates
Always install the latest updates to enhance your SQL Server security and performance.
Product Key
License Terms
Global Rules
Microsoft Update
Product Updates
Install Setup Files
Install Rules
Feature Selection
Feature Rules
Feature Configuration Rules
Ready to Install
Installation Progress
Complete
SQL Server Setup could not search for updates through the Windows Update service. You can either check again or click Next to continue. To troubleshoot issues with your Windows Update service, view the link below, ensure you have Internet or network access, and ensure your Windows Update service can find updates interactively through the Windows Update control panel.
Error 0x8024402C: Exception from HRESULT: 0x8024402C
Check again
Ignored this error massage
9、Click Here
Read our privacy statement online
Learn more about SQL Server product updates
< Back
Next >
Cancel

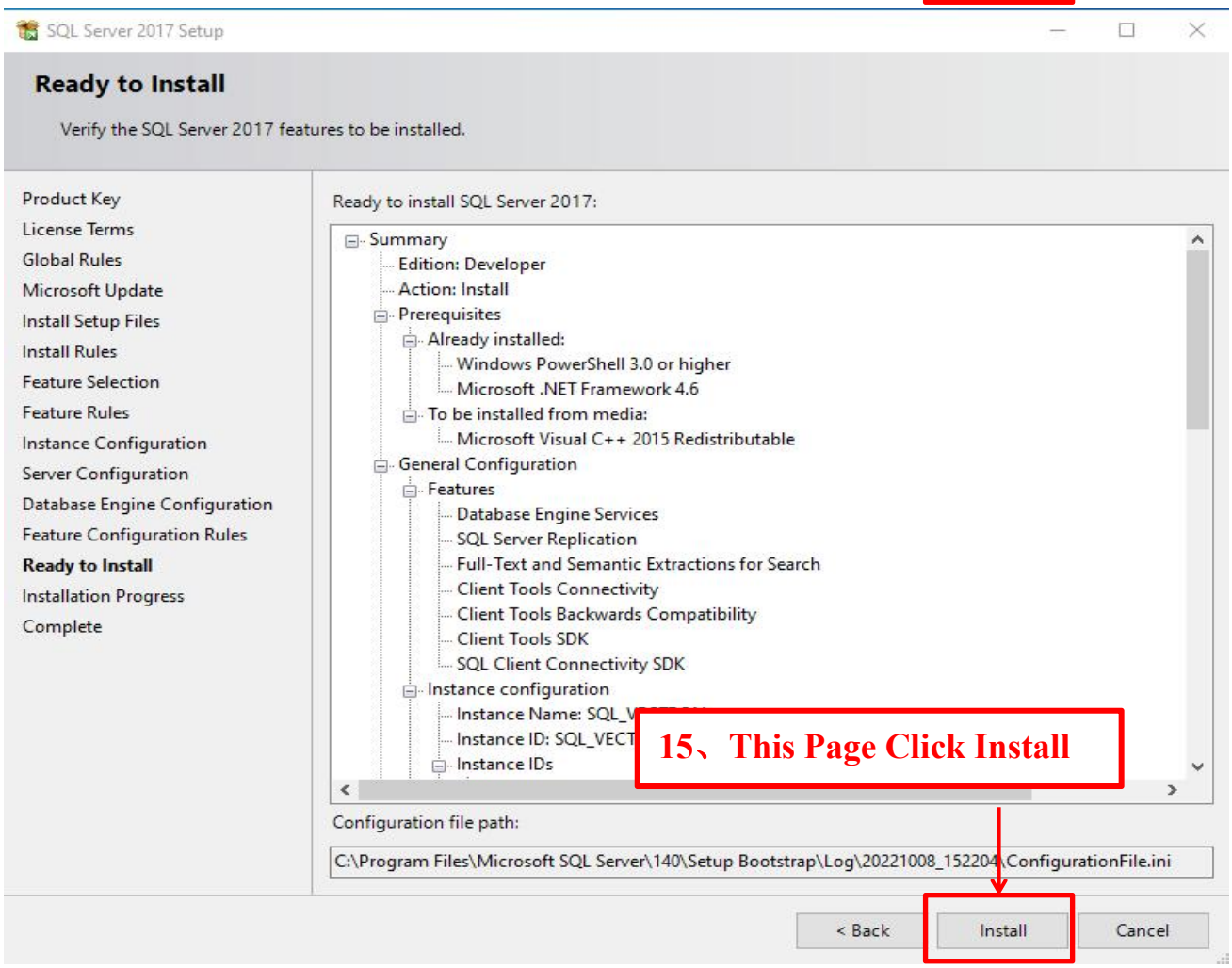

SQL Server 2017 Setup
Install Rules
Setup rules identify potential problems that might occur while running Setup. Failures must be corrected before Setup can continue.
Product Key
License Terms
Global Rules
Microsoft Update
Install Setup Files
Install Rules
Feature Selection
Feature Rules
Feature Configuration Rules
Ready to Install
Installation Progress
Complete
Operation completed. Passed: 3. Failed 0. Warning 1. Skipped 0.
Hide details <<
Re-run
View detailed report
If appear Failed 0 is ok,
Ignored warning massage
Rule
Status
Fusion Act
Passed
Consistenc
Passed
Computer domain controller
Passed
Windows Firewall
Warning
10、Click Here
< Back
Next >
Cancel

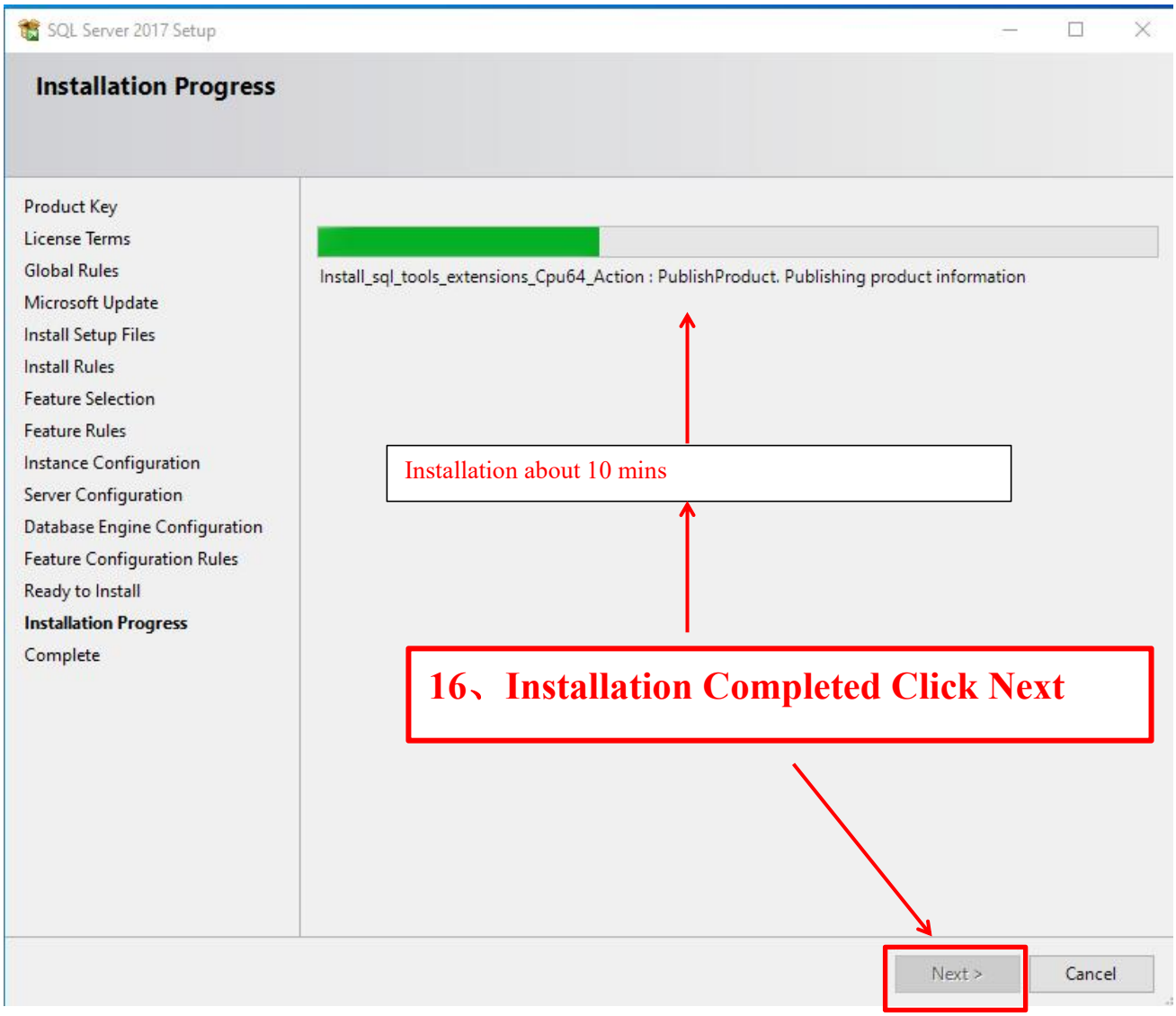

SQL Server 2017 Setup
Feature Selection
Select the Developer features to install.
Product Key
License Terms
Global Rules
Microsoft Update
Install Setup Files
Install Rules
Feature Selection
Feature Rules
Instance Configuration
Server Configuration
Database Engine Configuration
Feature Configuration Rules
Ready to Install
Installation Progress
Complete
Looking for Reporting Services? Download it from the web
Features:
Instance Features
Database Engine Services
SQL Server Replication
Machine Learning Services (In-Database)
R
Python
Full-Text and Semantic Extractions for Search
Data Quality Services
PolyBase Query Service for External Data
Analysis Services
Shared Features
Machine Learning Server (Standalone)
R
Python
Data Quality Client
Client Tools Connectivity
Integration Services
Scale Out Master
Scale Out Worker
Client Tools Backwards Compatibility
Client Tools SDK
Distributed Replay Controller
Distributed Replay Client
SQL Client Connectivity SDK
Master Data Services
Redistributable Features
Feature description:
The configuration and operation of each instance feature of a SQL Server instance is isolated from other SQL Server instances. SQL Server instances can operate side-by-side on the same computer.
Prerequisites for selected features:
Already installed:
Windows PowerShell 3.0 or higher
Microsoft .NET Framework 4.6
To be installed from media:
Microsoft Visual C++ 2015 Redistributable
Disk Space Requirements
Drive C: 1732 MB required, 54027 MB available
Select All
Unselect All
Instance root directory:
C:\Program File
Shared feature directory:
C:\Program Files\Microsoft SQL Server\
Shared feature directory (x86):
C:\Program Files (x86)\Microsoft SQL Server\
< Back
Next >
Cancel
Click optional as reference of right image
11、After Click Here

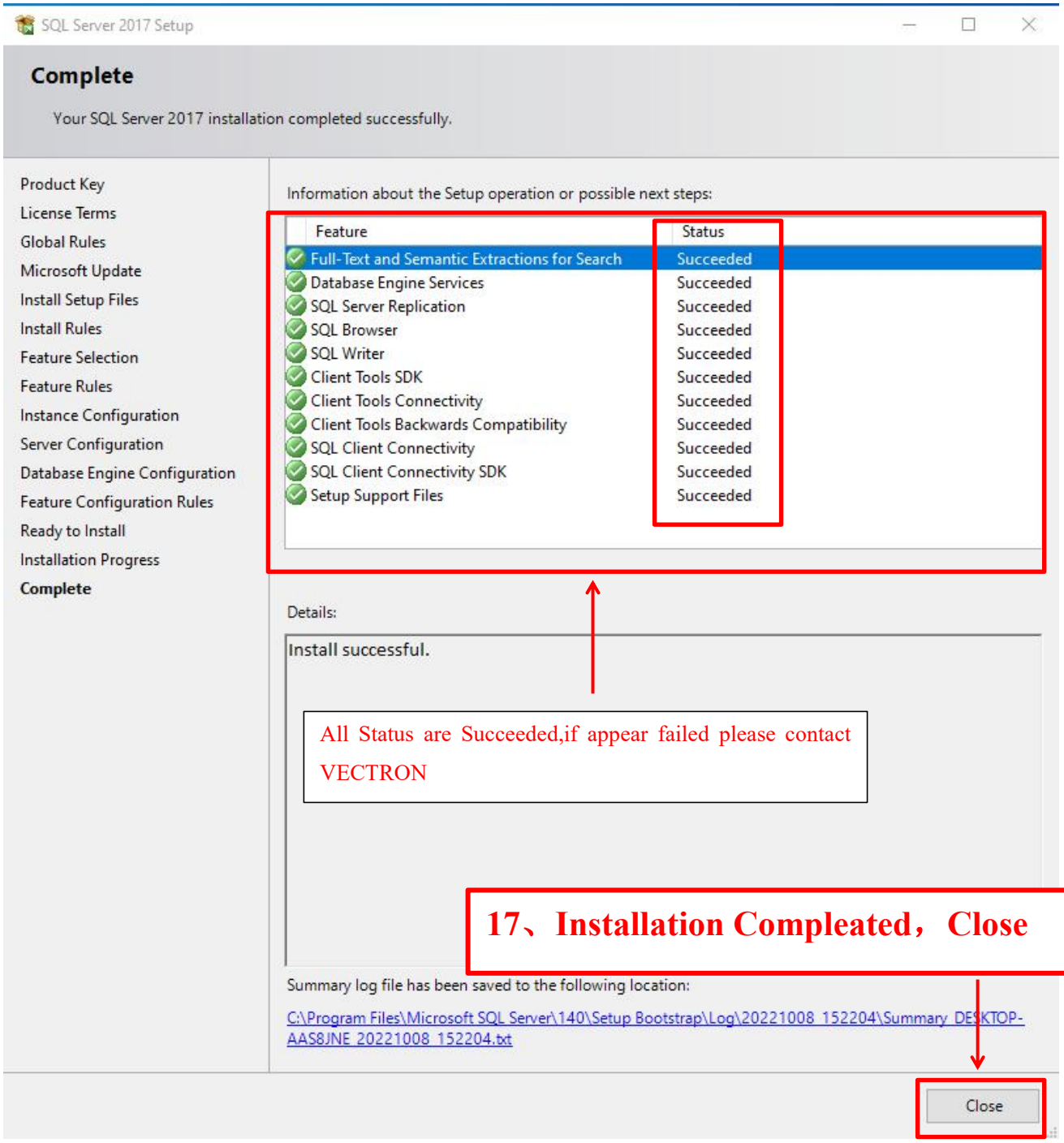

SQL Server 2017 Setup
Instance Configuration
Specify the name and instance ID for the instance of SQL Server. Instance ID becomes part of the installation path.
Product Key
License Terms
Global Rules
Microsoft Update
Install Setup Files
Install Rules
Feature Selection
Feature Rules
Instance Configuration
Server Configuration
Database Engine Configuration
Feature Configuration Rules
Ready to Install
Installation Progress
Complete
Default instance
Named instance:
SQL_VECTRON
Instance ID:
SQL_VECTRON
The Two Array modify
SQL_VECTRON
SQL Server directory: C:\Program Files\Microsoft SQL Server\MSSQL14.SQL_VECTRON
Installed instances:
Instance Name
Instance ID
Features
Edition
Version
12、After Chick here
< Back
Next >
Cancel


SQL Server 2017 Setup
Server Configuration
Specify the service accounts and collation configuration.
Product Key
License Terms
Global Rules
Microsoft Update
Install Setup Files
Install Rules
Feature Selection
Feature Rules
Instance Configuration
Server Configuration
Database Engine Configuration
Feature Configuration Rules
Ready to Install
Installation Progress
Complete
Service Accounts
Collation
Microsoft recommends that you use a separate account for each SQL Server service.
Service
Account Name
Password
Startup Type
SQL Server Agent
NT Service\SQLAgent$S...
Manual
SQL Server Database Engine
NT Service\MSSQL$SQL_...
Automatic
SQL Full-text Filter Daemon Launc...
NT Service\MSSQLFDLa...
Manual
SQL Server Browser
NT AUTHORITY\LOCAL ...
Disabled
Grant Perform Volume Maintenance Task privilege to SQL Server Database Engine Service
This privilege enables instant file initialization by avoiding zeroing of data pages. This may lead to information disclosure by allowing deleted content to be accessed.
Click here for details
13、This page Click Next
< Back
Next >
Cancel

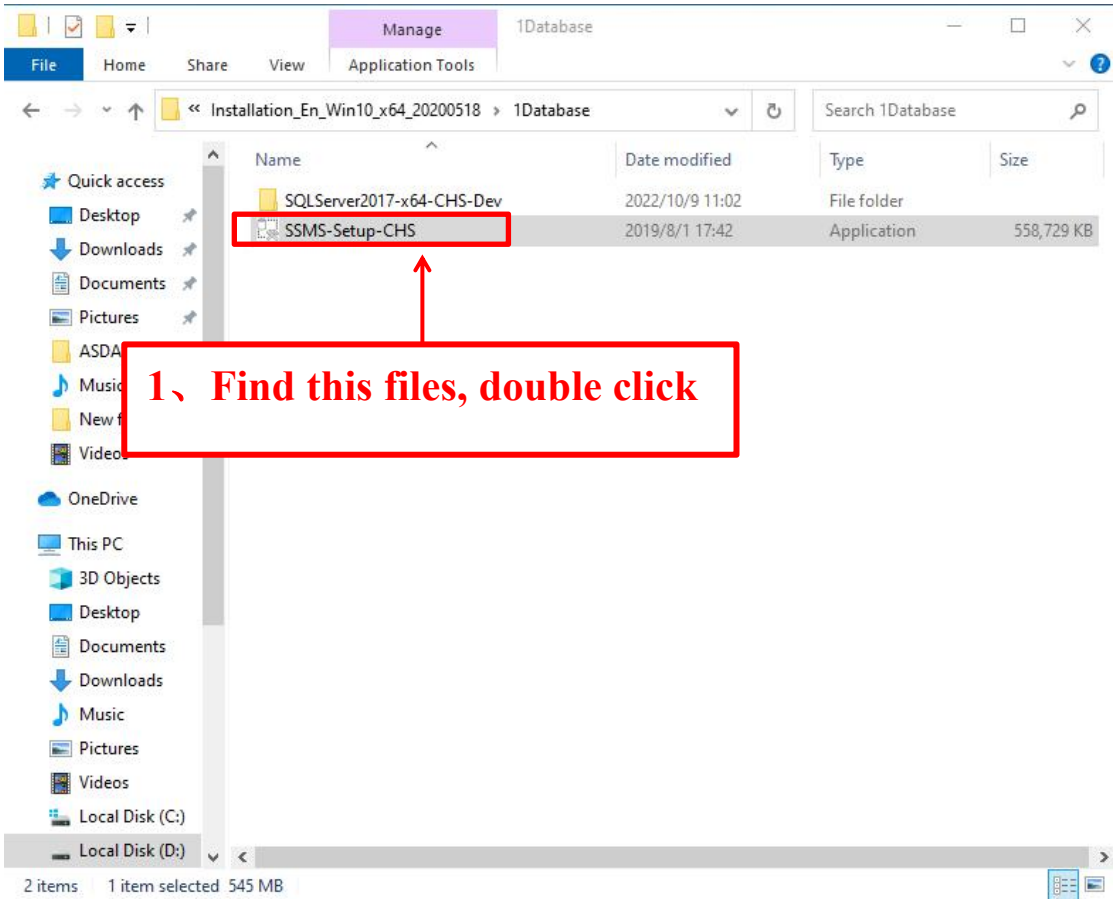

SQL Server 2017 Setup
Database Engine Configuration
Specify Database Engine authentication security mode, administrators, data directories and TempDB settings.
Product Key
License Terms
Global Rules
Microsoft Update
Install Setup Files
Install Rules
Feature Selection
Feature Rules
Instance Configuration
Server Configuration
Database Engine Configuration
Feature Configuration Rules
Ready to Install
Installation Progress
Complete
Server Configuration
Data Directories
TempDB
FILESTREAM
Specify the authentication mode and administrators for the Database Engine.
(2)After add current user,
here can appear current window system account
Enter password:
Confirm password:
Specify SQL Server administrators
DESKTOP-AAS8JNE\Administrator (Administrator)
SQL Server administrators have unrestricted access to the Database Engine.
(1) Add Current User
14、After Current User Chick Next
Add Current User
Add...
Remove
< Back
Next >
Cancel

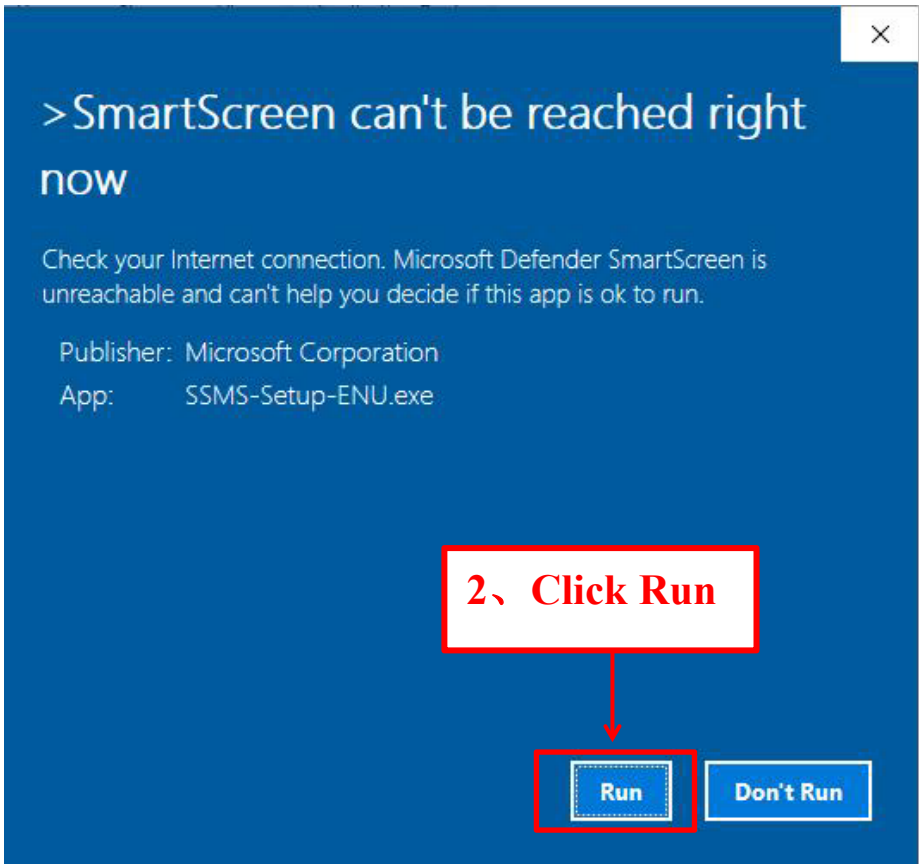

SQL Server 2017 Setup
Ready to Install
Verify the SQL Server 2017 features to be installed.
Product Key
License Terms
Global Rules
Microsoft Update
Install Setup Files
Install Rules
Feature Selection
Feature Rules
Instance Configuration
Server Configuration
Database Engine Configuration
Feature Configuration Rules
Ready to Install
Installation Progress
Complete
Ready to install SQL Server 2017:
Summary
Edition: Developer
Action: Install
Prerequisites
Already installed:
Windows PowerShell 3.0 or higher
Microsoft .NET Framework 4.6
To be installed from media:
Microsoft Visual C++ 2015 Redistributable
General Configuration
Features
Database Engine Services
SQL Server Replication
Full-Text and Semantic Extractions for Search
Client Tools Connectivity
Client Tools Backwards Compatibility
Client Tools SDK
SQL Client Connectivity SDK
Instance configuration
Instance Name: SQL_V
Instance ID: SQL_VECT
Instance IDs
15、This Page Click Install
Configuration file path:
C:\Program Files\Microsoft SQL Server\140\Setup Bootstrap\Log\20221008_152204\ConfigurationFile.ini
< Back
Install
Cancel

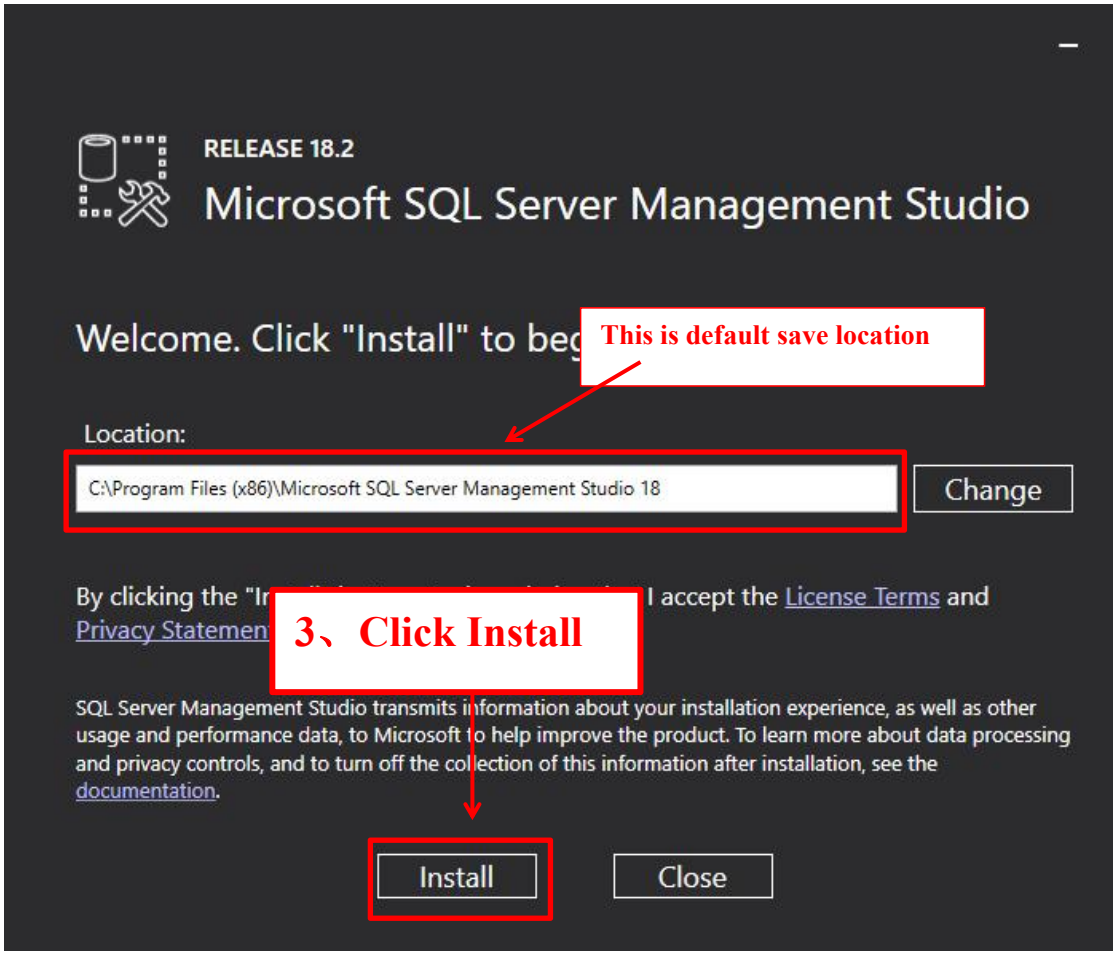

SQL Server 2017 Setup
Installation Progress
Product Key
License Terms
Global Rules
Microsoft Update
Install Setup Files
Install Rules
Feature Selection
Feature Rules
Instance Configuration
Server Configuration
Database Engine Configuration
Feature Configuration Rules
Ready to Install
Installation Progress
Complete
Install_sql_tools_extensions_Cpu64_Action : PublishProduct. Publishing product information
Installation about 10 mins
16、Installation Completed Click Next
Next >
Cancel

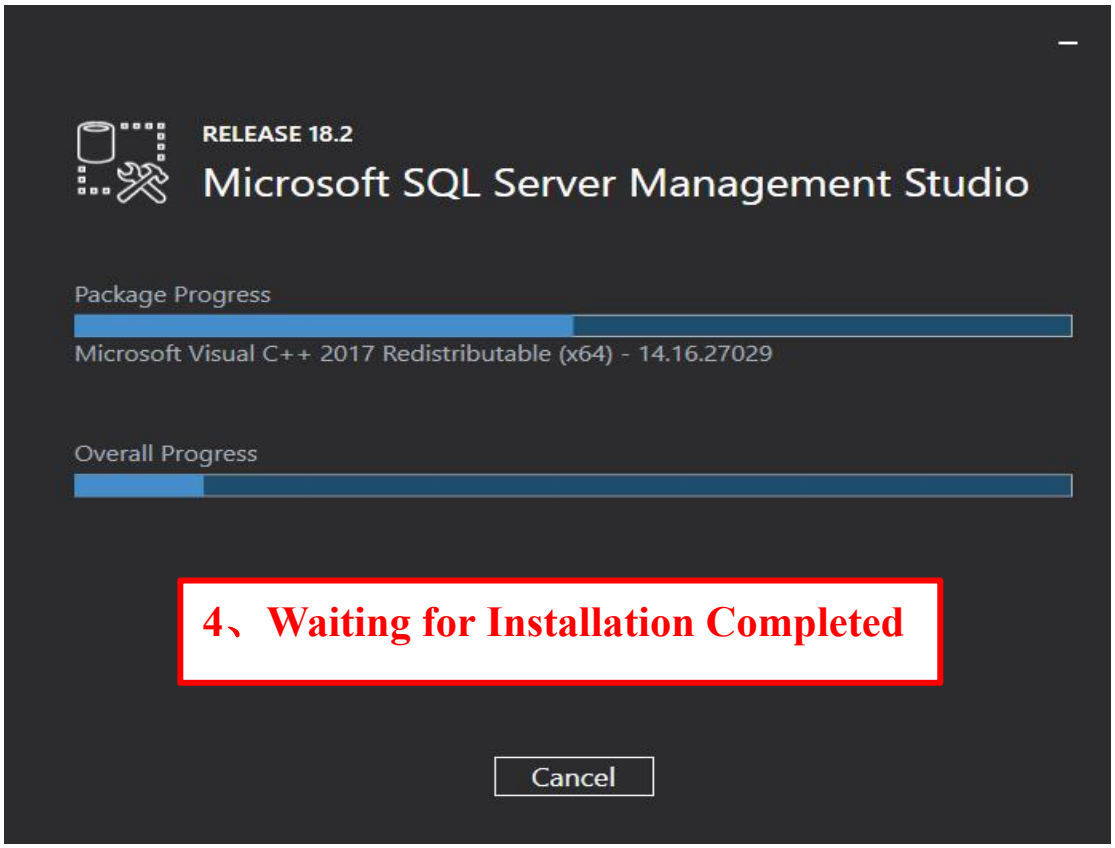

SQL Server 2017 Setup
Complete
Your SQL Server 2017 installation completed successfully.
Product Key
License Terms
Global Rules
Microsoft Update
Install Setup Files
Install Rules
Feature Selection
Feature Rules
Instance Configuration
Server Configuration
Database Engine Configuration
Feature Configuration Rules
Ready to Install
Installation Progress
Complete
Information about the Setup operation or possible next steps:
Feature
Status
Full-Text and Semantic Extractions for Search
Succeeded
Database Engine Services
Succeeded
SQL Server Replication
Succeeded
SQL Browser
Succeeded
SQL Writer
Succeeded
Client Tools SDK
Succeeded
Client Tools Connectivity
Succeeded
Client Tools Backwards Compatibility
Succeeded
SQL Client Connectivity
Succeeded
SQL Client Connectivity SDK
Succeeded
Setup Support Files
Succeeded
Details:
Install successful.
All Status are Succeeded,if appear failed please contact VECTRON
17、Installation Compleated，Close
Summary log file has been saved to the following location:
C:\Program Files\Microsoft SQL Server\140\Setup Bootstrap\Log\20221008_152204\Summary_DESKTOP-AAS8JNE_20221008_152204.txt
Close

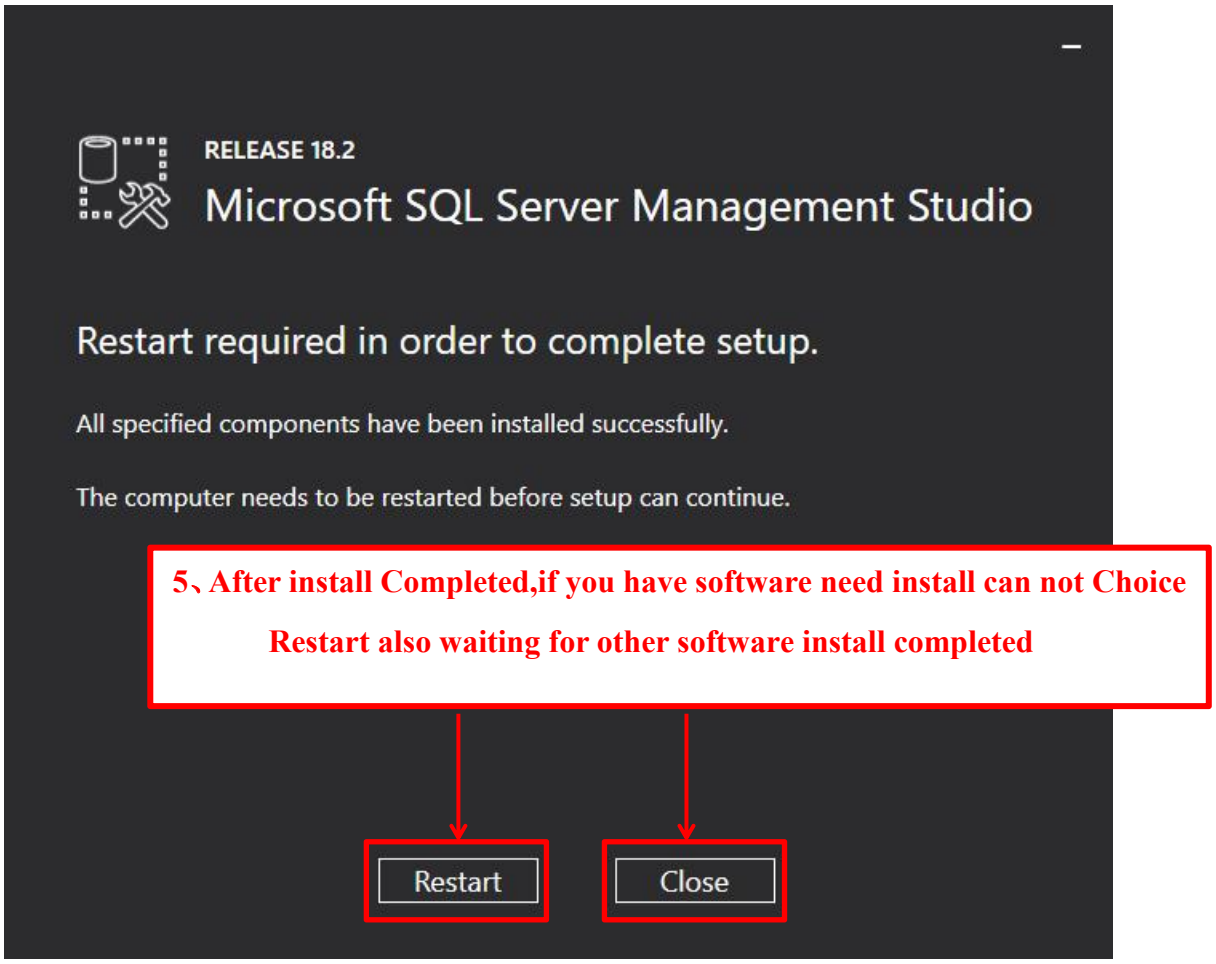
Part 2 Database Management Tool Installation



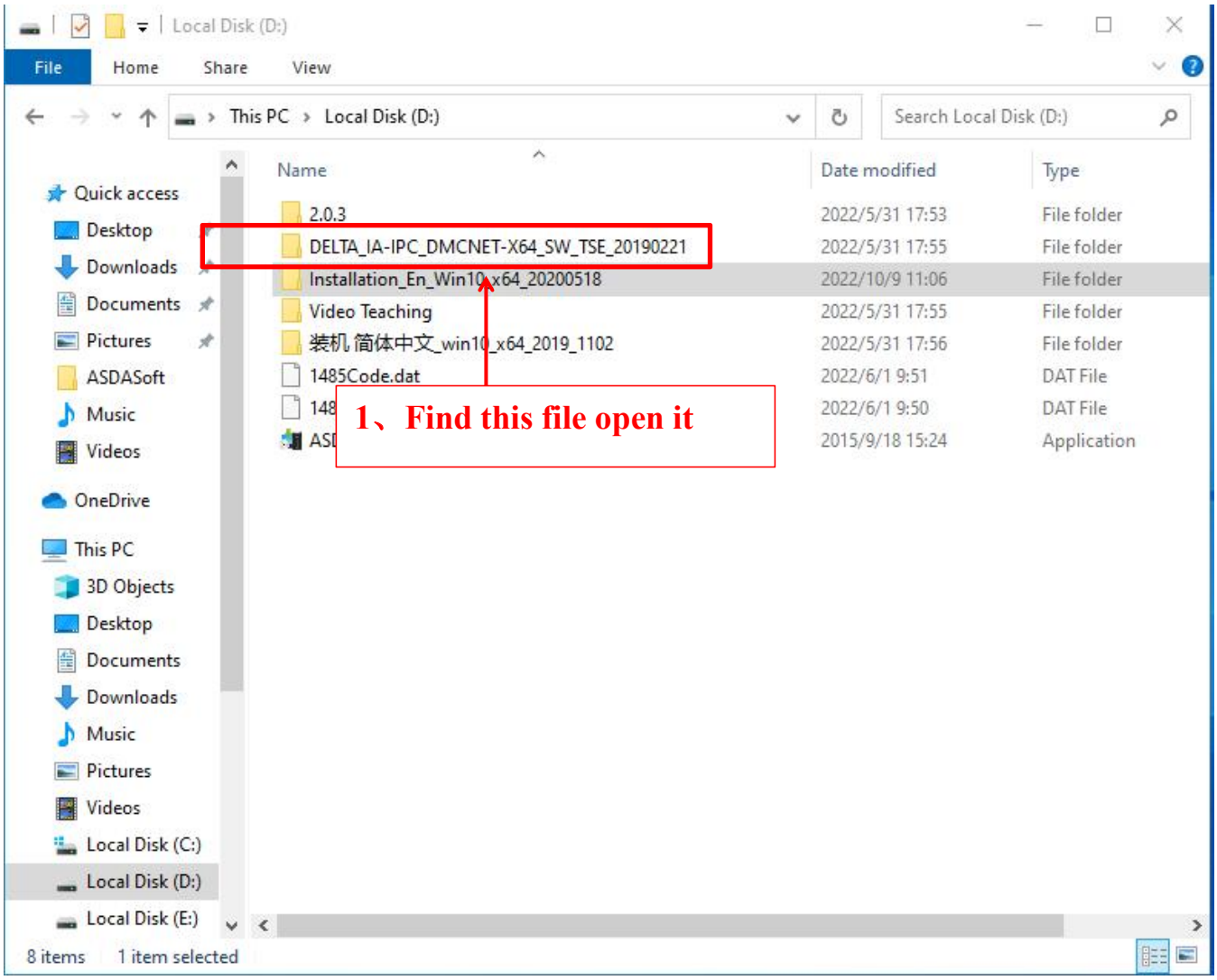

>SmartScreen can't be reached right now
Check your Internet connection. Microsoft Defender SmartScreen is unreachable and can't help you decide if this app is ok to run.
Publisher: Microsoft Corporation
App: SSMS-Setup-ENU.exe
2、Click Run
Run
Don't Run

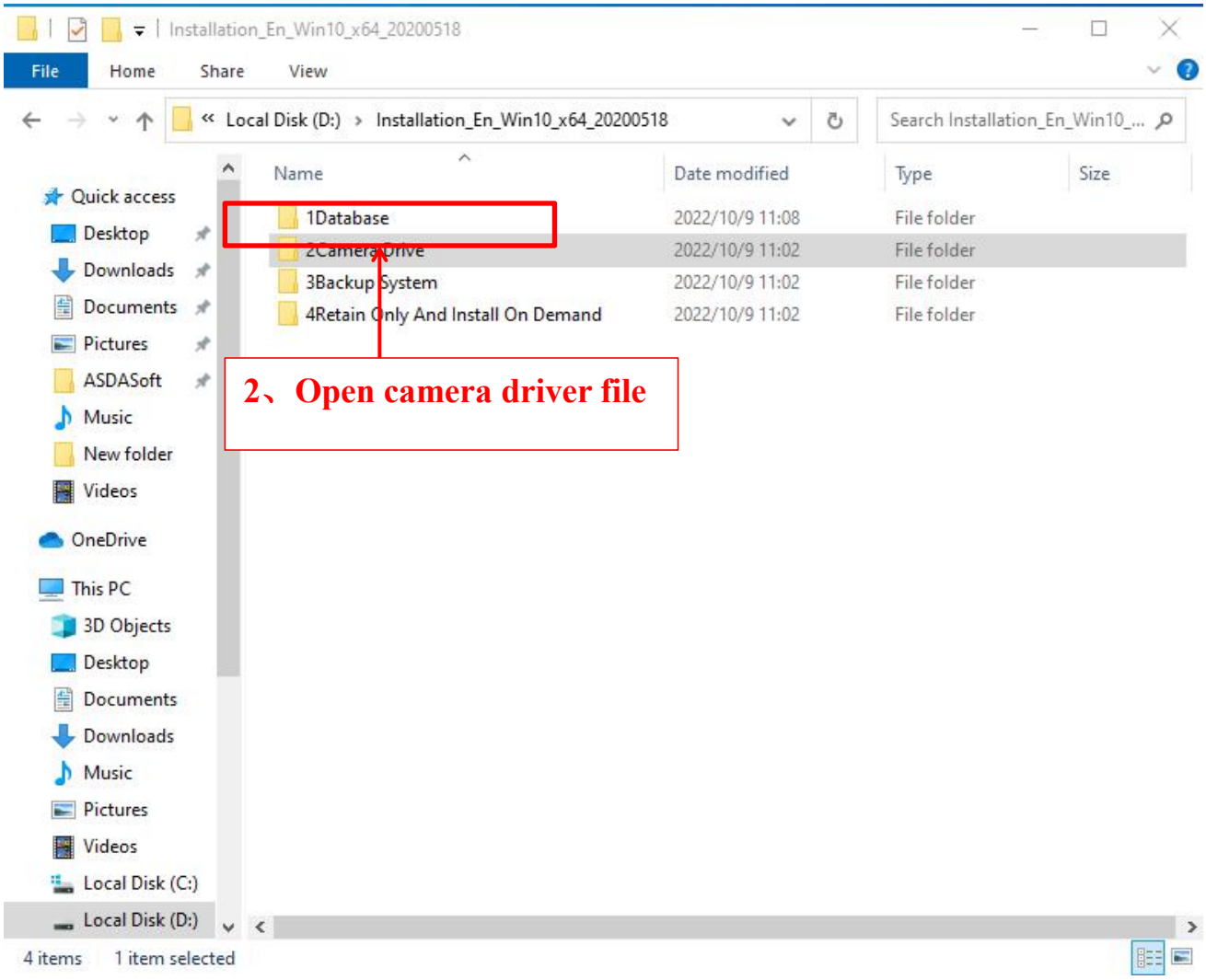

RELEASE 18.2
Microsoft SQL Server Management Studio
Welcome. Click "Install" to beg
This is default save location
Location:
C:\Program Files (x86)\Microsoft SQL Server Management Studio 18
Change
By clicking the "I
I accept the License Terms and
Privacy Statemen
3、Click Install
SQL Server Management Studio transmits information about your installation experience, as well as other usage and performance data, to Microsoft to help improve the product. To learn more about data processing and privacy controls, and to turn off the collection of this information after installation, see the documentation.
Install
Close

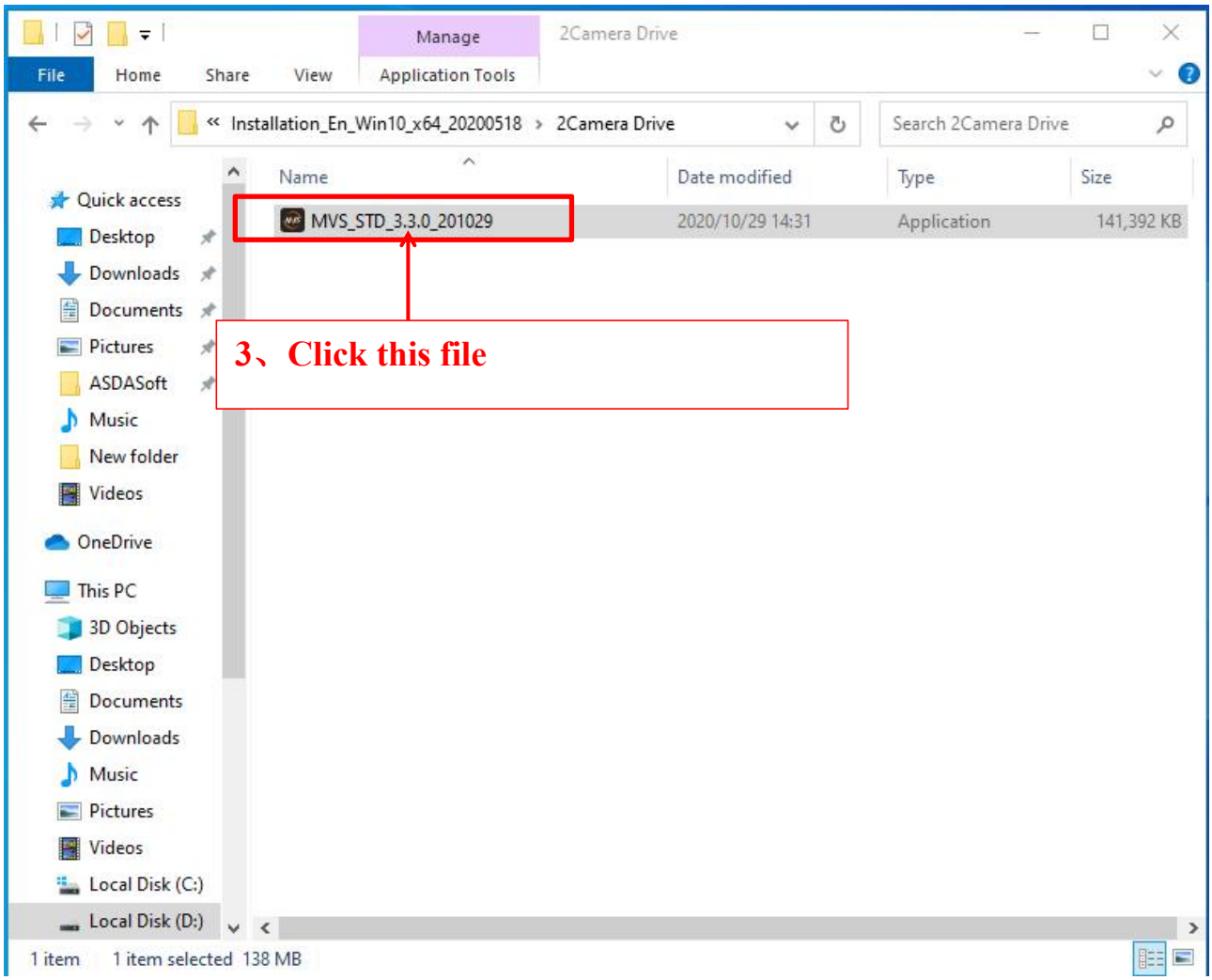

RELEASE 18.2
Microsoft SQL Server Management Studio
Package Progress
Microsoft Visual C++ 2017 Redistributable (x64) - 14.16.27029
Overall Progress
4、Waiting for Installation Completed
Cancel

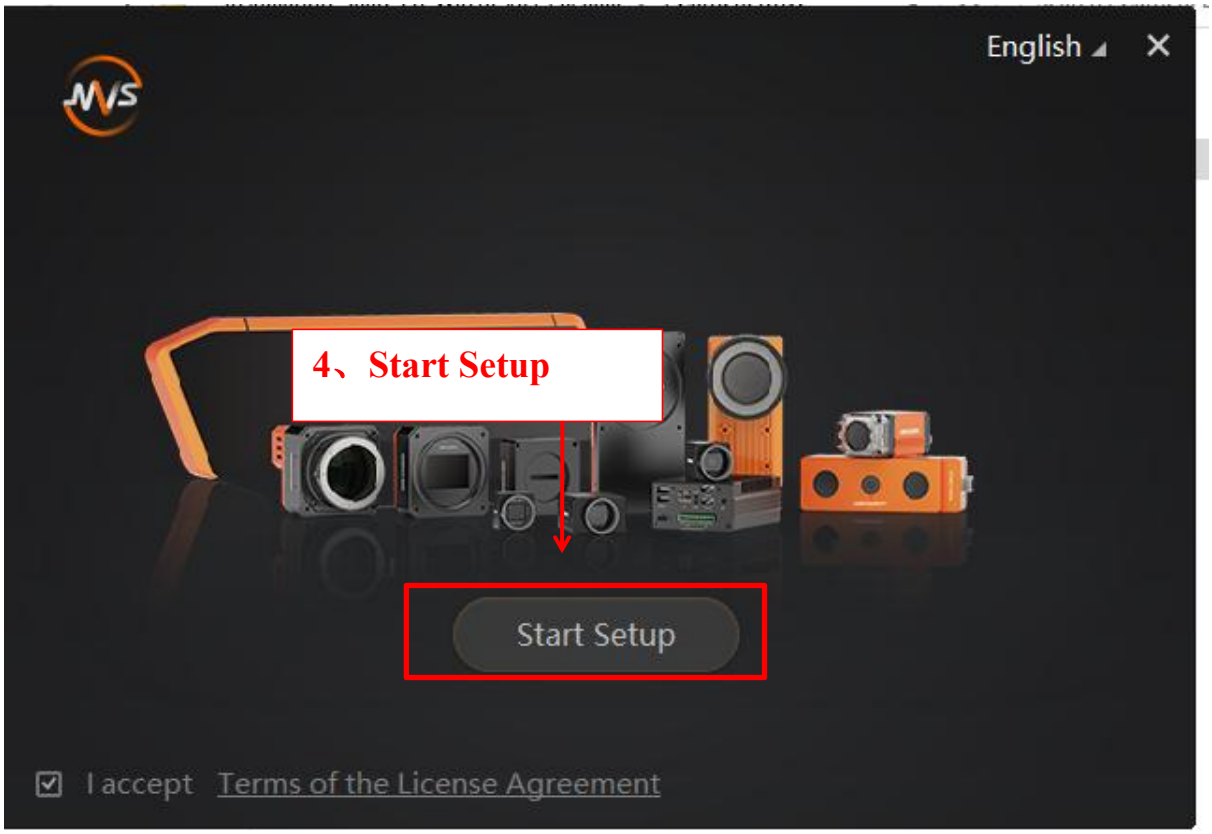

RELEASE 18.2
Microsoft SQL Server Management Studio
Restart required in order to complete setup.
All specified components have been installed successfully.
The computer needs to be restarted before setup can continue.
5、After install Completed,if you have software need install can not Choice
Restart also waiting for other software install completed
Restart
Close

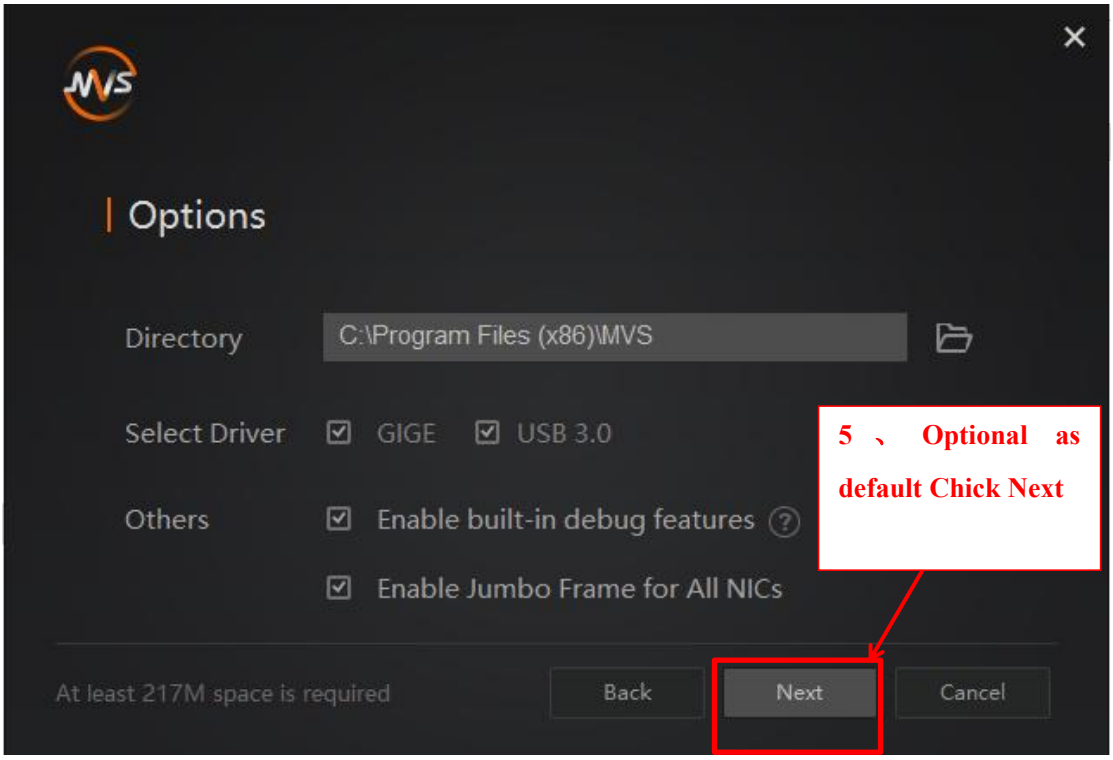
Part 3 Camera Driver Software Installation



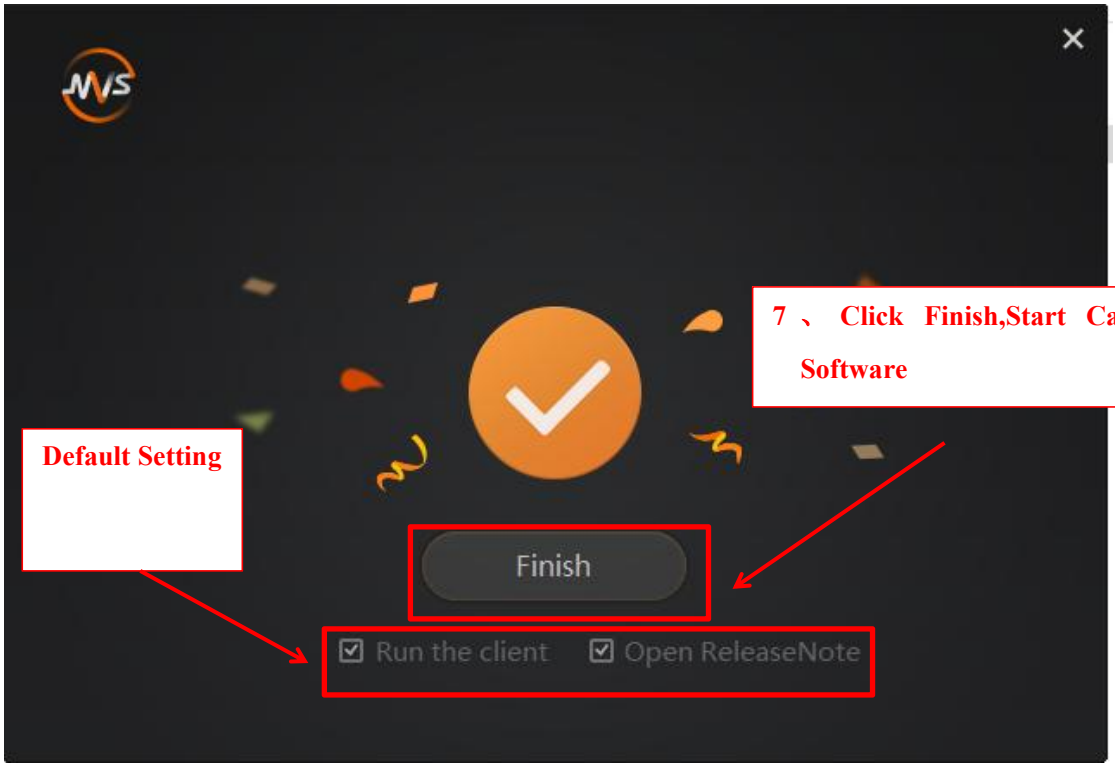

Installation_En_Win10_x64_20200518
File
Home
Share
View
Local Disk (D:) › Installation_En_Win10_x64_20200518
Search Installation_En_Win10_...
Quick access
Desktop
Downloads
Documents
Pictures
ASDASoft
Music
New folder
Videos
OneDrive
This PC
3D Objects
Desktop
Documents
Downloads
Music
Pictures
Videos
Local Disk (C:)
Local Disk (D:)
Name
Date modified
Type
Size
1Database
2022/10/9 11:08
File folder
2CameraDrive
2022/10/9 11:02
File folder
3Backup System
2022/10/9 11:02
File folder
4Retain Only And Install On Demand
2022/10/9 11:02
File folder
2、Open camera driver file
4 items
1 item selected

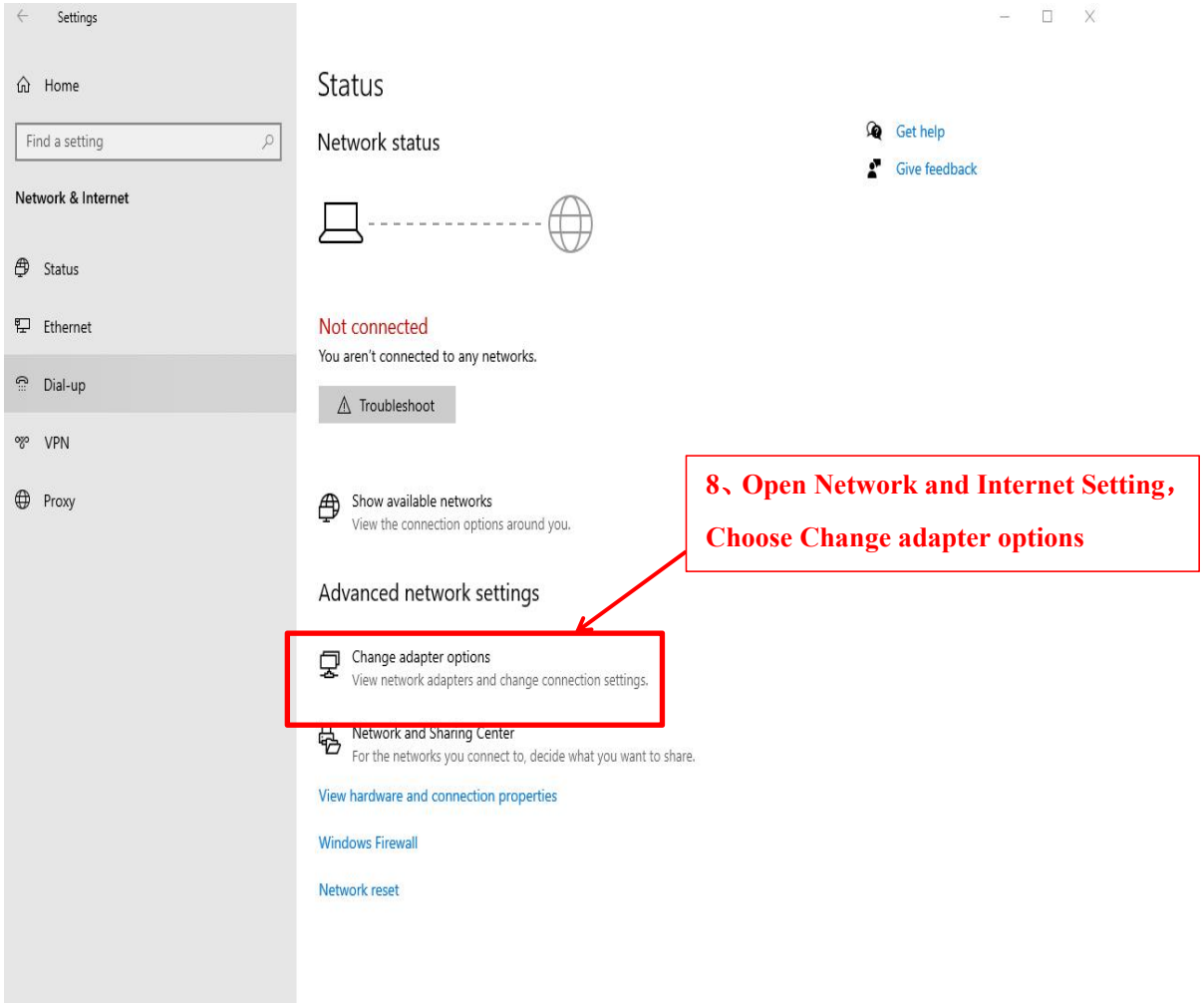

Manage
2Camera Drive
File
Home
Share
View
Application Tools
Installation_En_Win10_x64_20200518 › 2Camera Drive
Search 2Camera Drive
Name
Date modified
Type
Size
MVS_STD_3.3.0_201029
2020/10/29 14:31
Application
141,392 KB
3、Click this file
Quick access
Desktop
Downloads
Documents
Pictures
ASDASoft
Music
New folder
Videos
OneDrive
This PC
3D Objects
Desktop
Documents
Downloads
Music
Pictures
Videos
Local Disk (C:)
Local Disk (D:)
1 item
1 item selected 138 MB

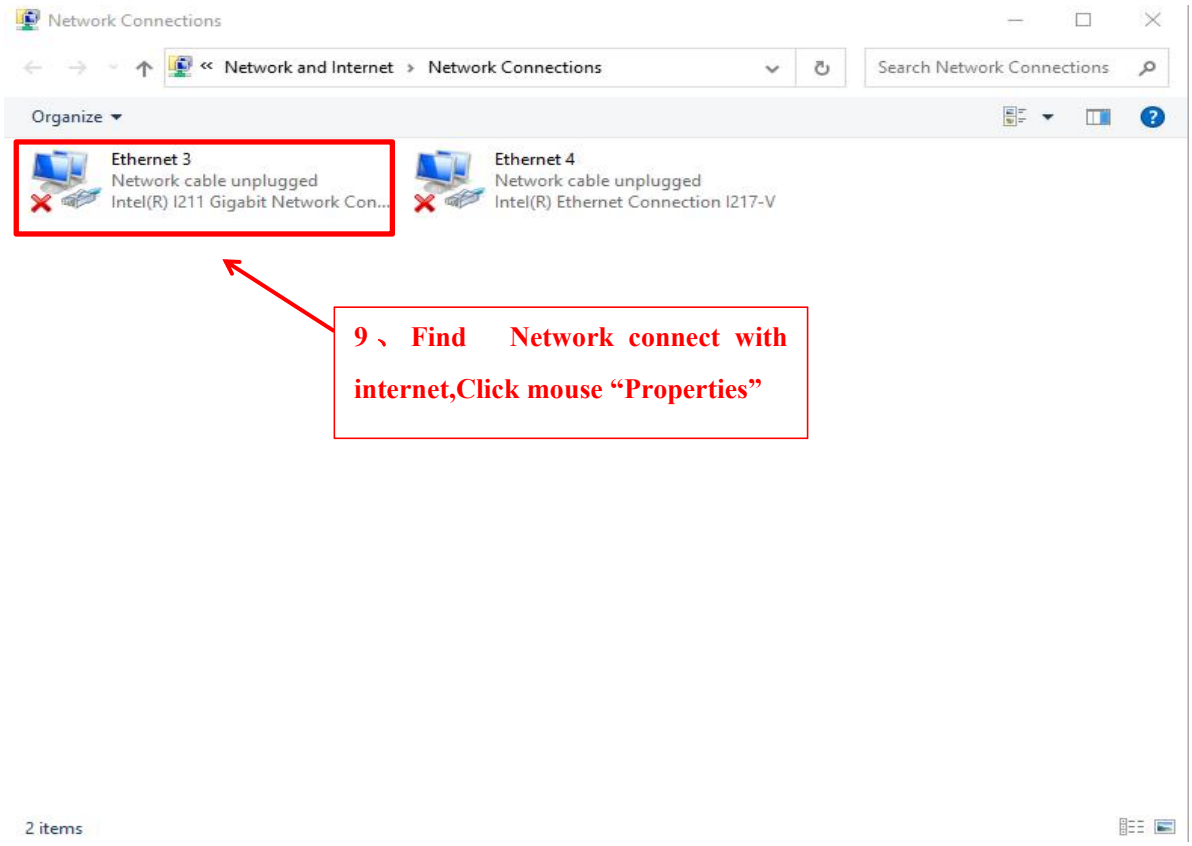

English
4、Start Setup
Start Setup
I accept Terms of the License Agreement


Options
Directory
C:\Program Files (x86)\MVS
Select Driver
GIGE
USB 3.0
Others
Enable built-in debug features
Enable Jumbo Frame for All NICs
At least 217M space is required
Back
Next
Cancel
5 、 Optional as default Chick Next

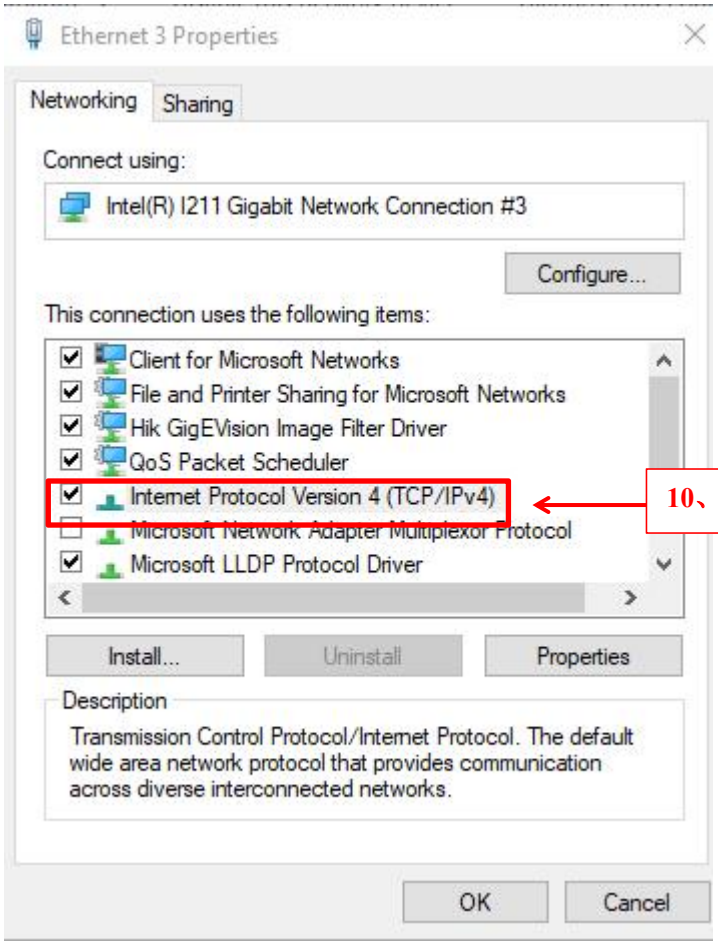

6、Installation
Decompressing files...


Default Setting
7 、 Click Finish,Start Camera Software
Finish
Run the client
Open ReleaseNote

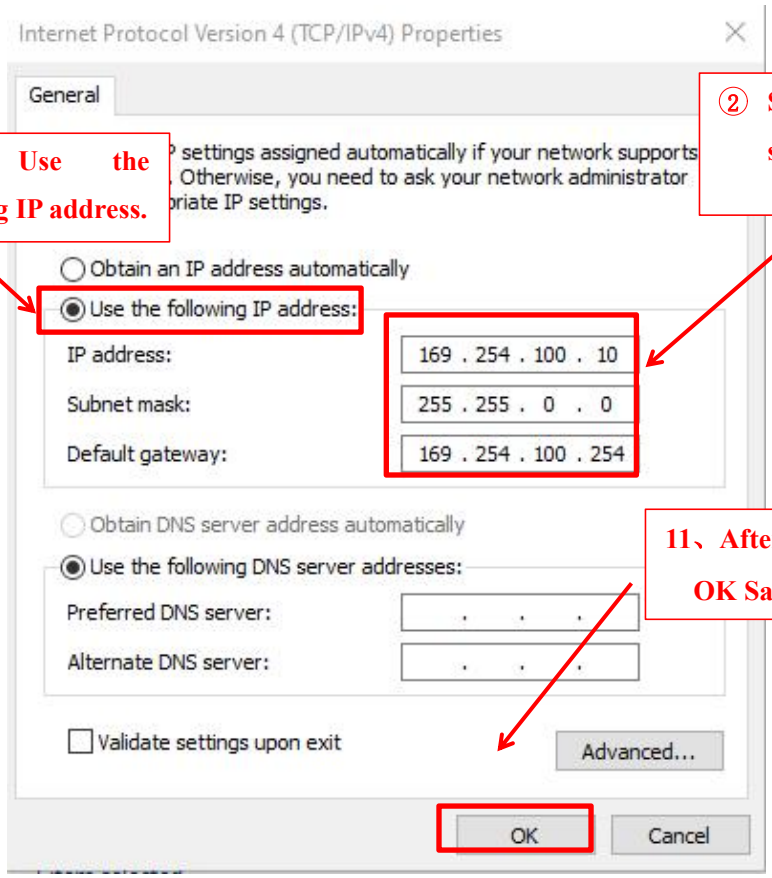

Settings
Home
Find a setting
Network & Internet
Status
Ethernet
Dial-up
VPN
Proxy
Status
Network status
Get help
Give feedback
Not connected
You aren't connected to any networks.
Troubleshoot
Show available networks
View the connection options around you.
8、Open Network and Internet Setting，Choose Change adapter options
Advanced network settings
Change adapter options
View network adapters and change connection settings.
Network and Sharing Center
For the networks you connect to, decide what you want to share.
View hardware and connection properties
Windows Firewall
Network reset

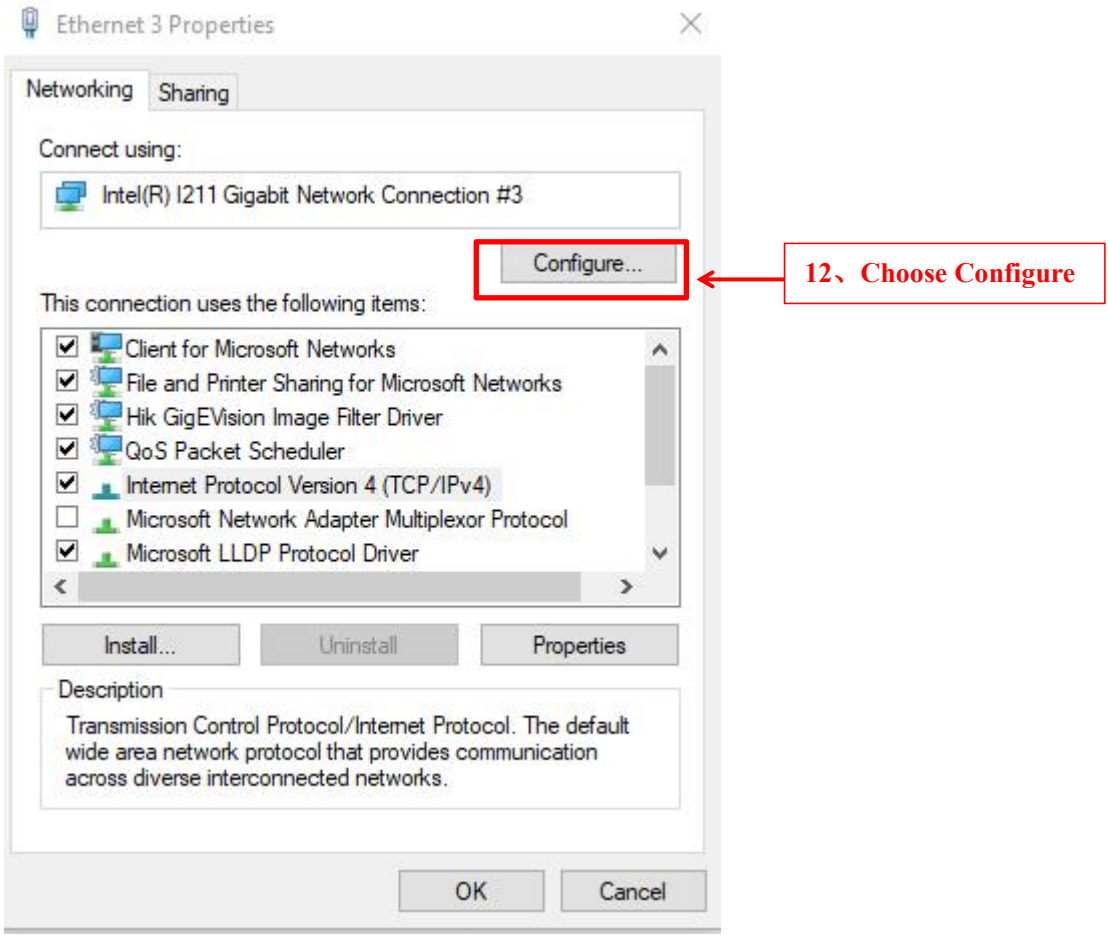


9、 Find Network connect with internet,Click mouse “Properties”

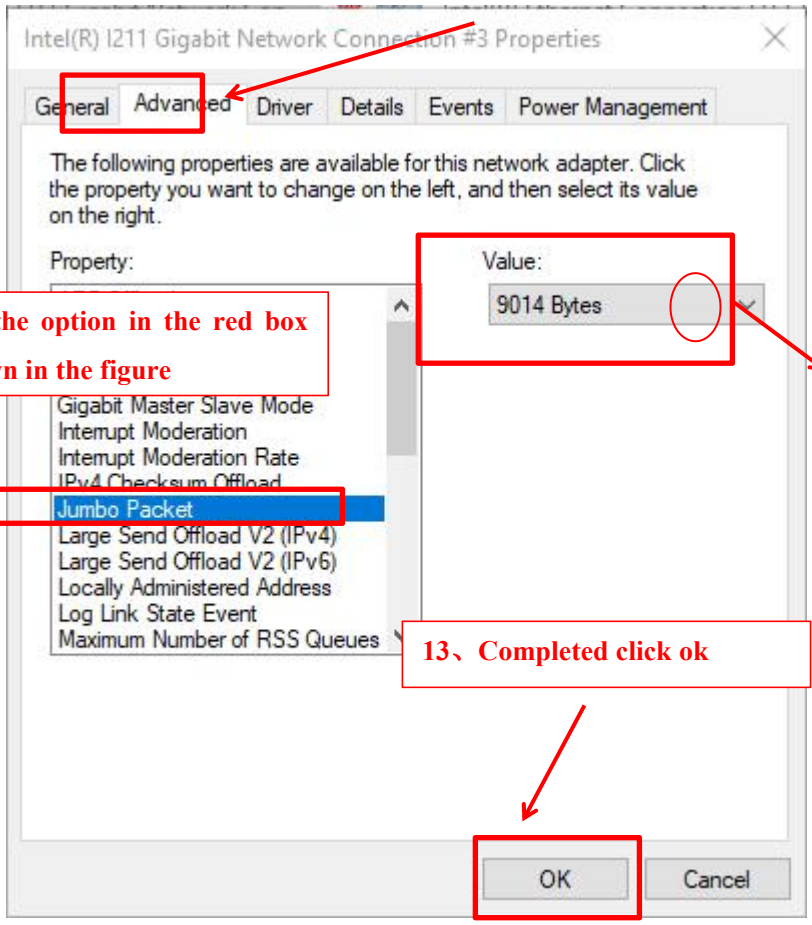


10、Open IPv4 Setting


Internet Protocol Version 4 (TCP/IPv4) Properties
General
Select Use the following IP address.
② Set the same IP address as shown in the figure
Obtain an IP address automatically
Use the following IP address:
IP address: 169 . 254 . 100 . 10
Subnet mask: 255 . 255 . 0 . 0
Default gateway: 169 . 254 . 100 . 254
Obtain DNS server address automatically
Use the following DNS server addresses:
11、After setting IP Click OK Save
Preferred DNS server:
Alternate DNS server:
Validate settings upon exit
Advanced...
OK
Cancel


Ethernet 3 Properties
Networking
Sharing
Connect using:
Intel(R) I211 Gigabit Network Connection #3
Configure...
12、Choose Configure
This connection uses the following items:
Client for Microsoft Networks
File and Printer Sharing for Microsoft Networks
Hik GigEVision Image Filter Driver
QoS Packet Scheduler
Internet Protocol Version 4 (TCP/IPv4)
Microsoft Network Adapter Multiplexor Protocol
Microsoft LLDP Protocol Driver
Install...
Uninstall
Properties
Description
Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.
OK
Cancel

① **Choose Advance**



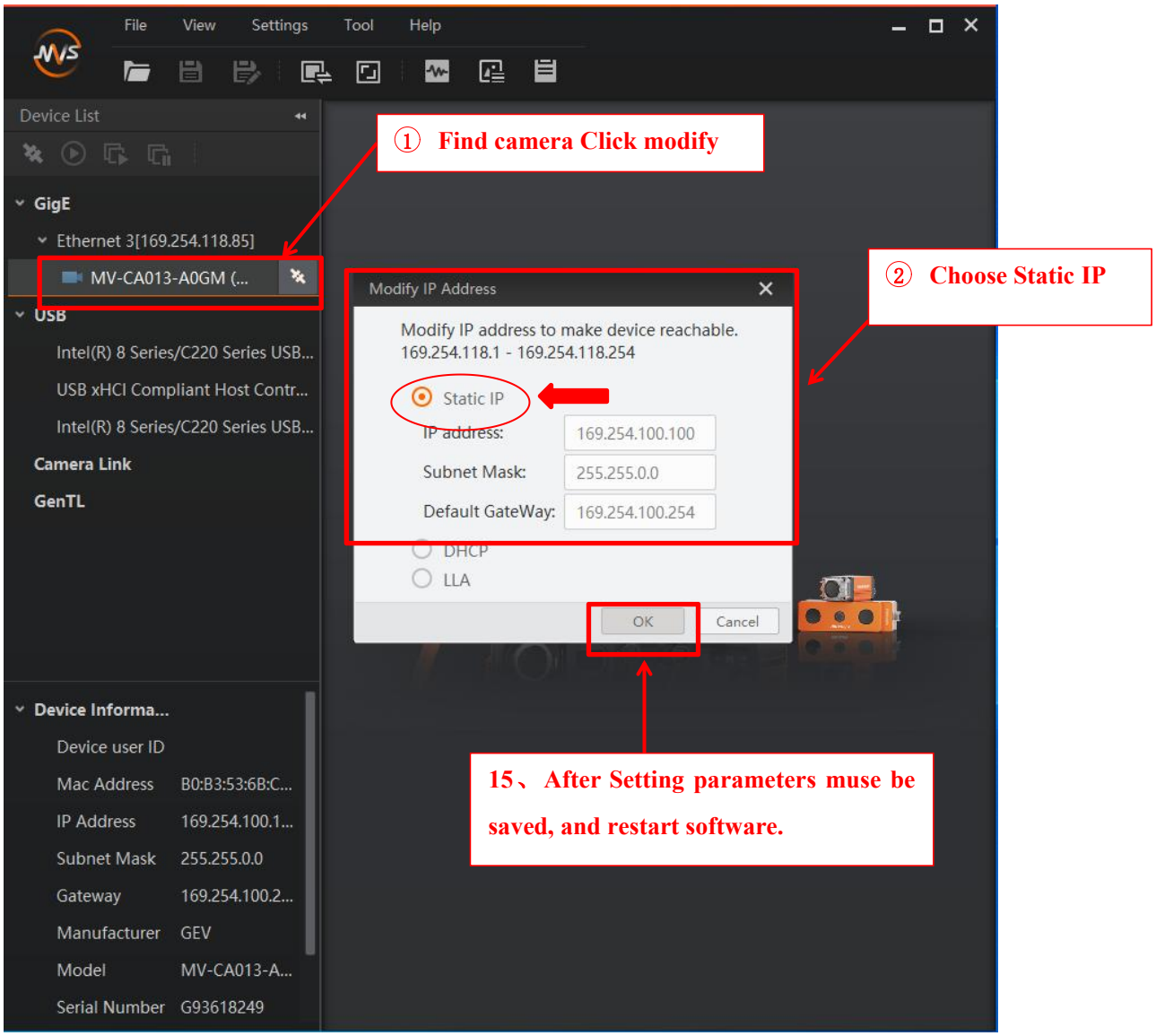
③ **Select the option in the red box as shown in the figure**

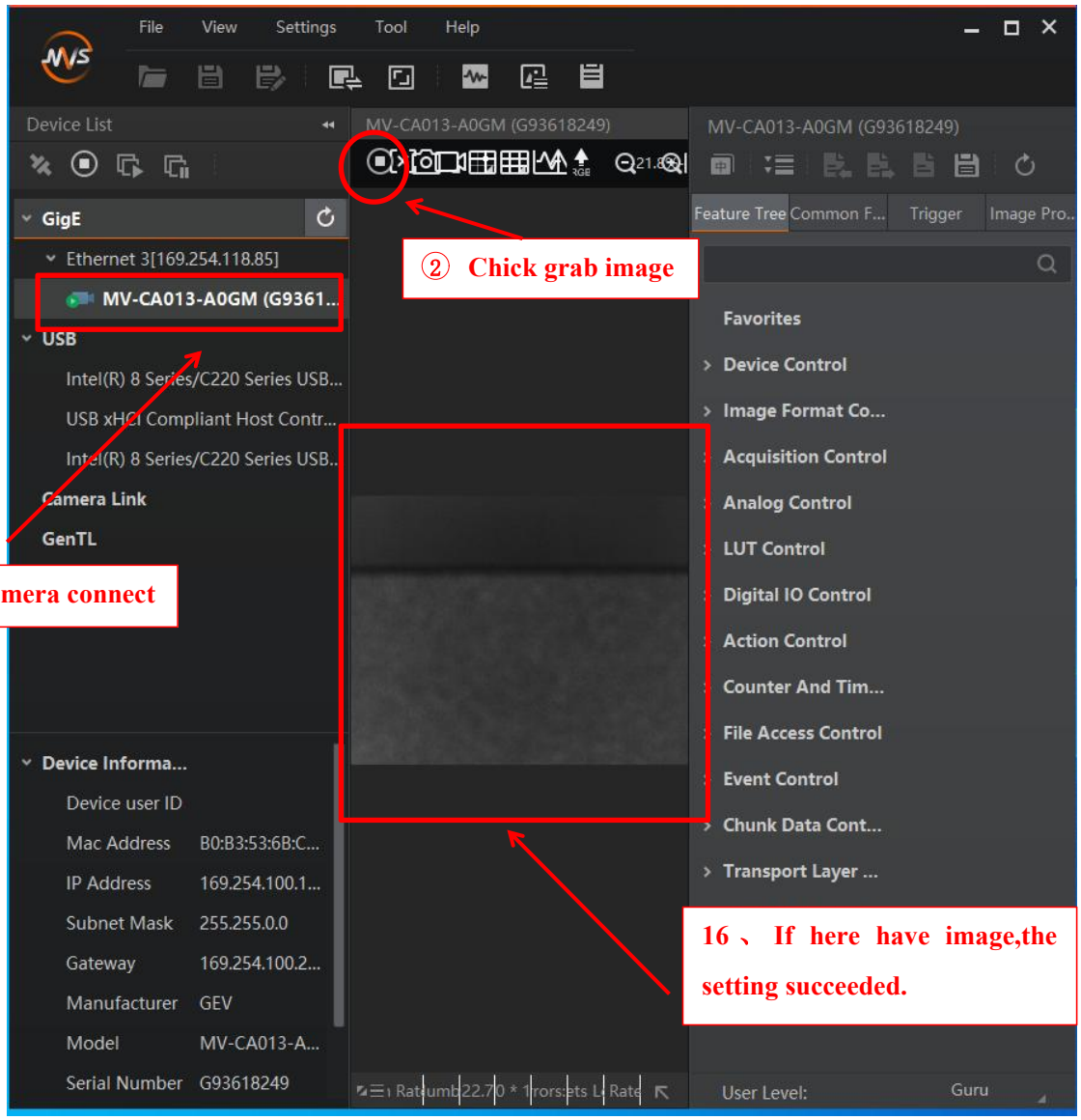
④ **Select the one with the largest value in the list，as the figure 9014 Bytes**

13、Completed click ok

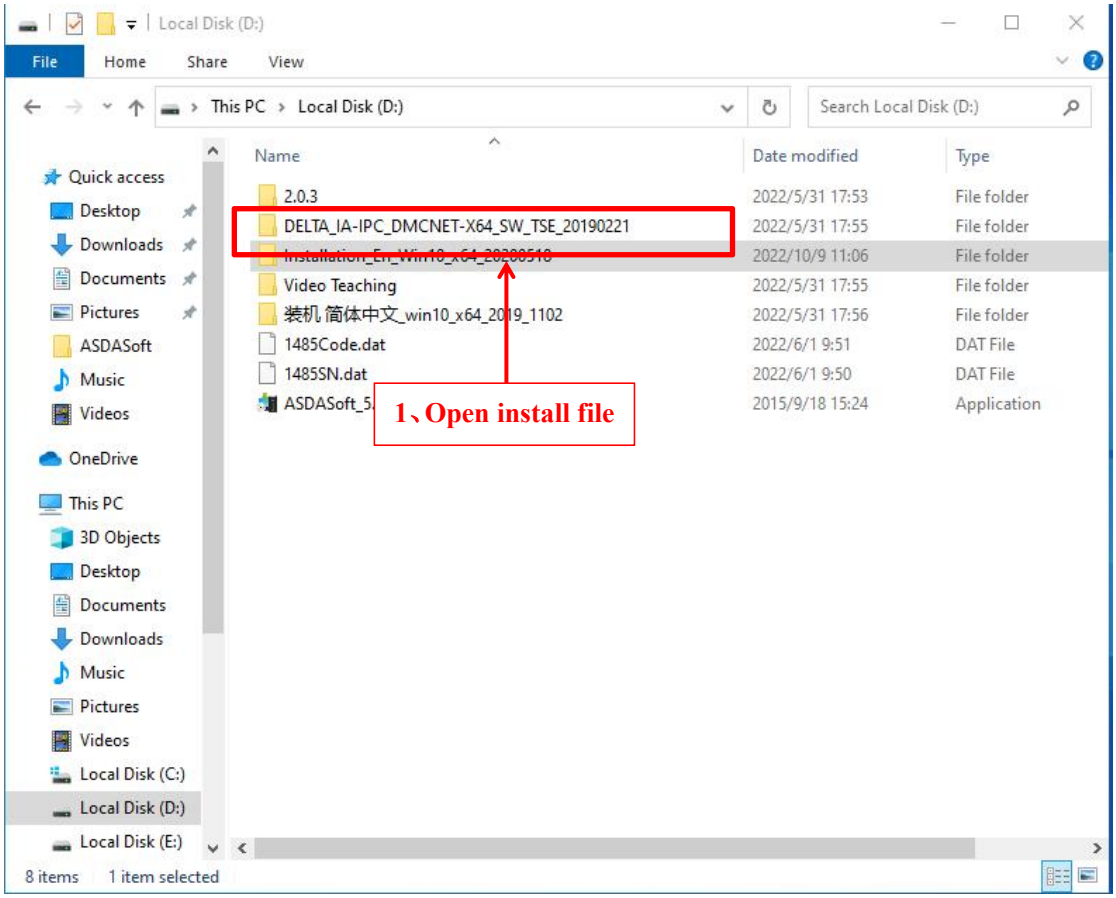
③

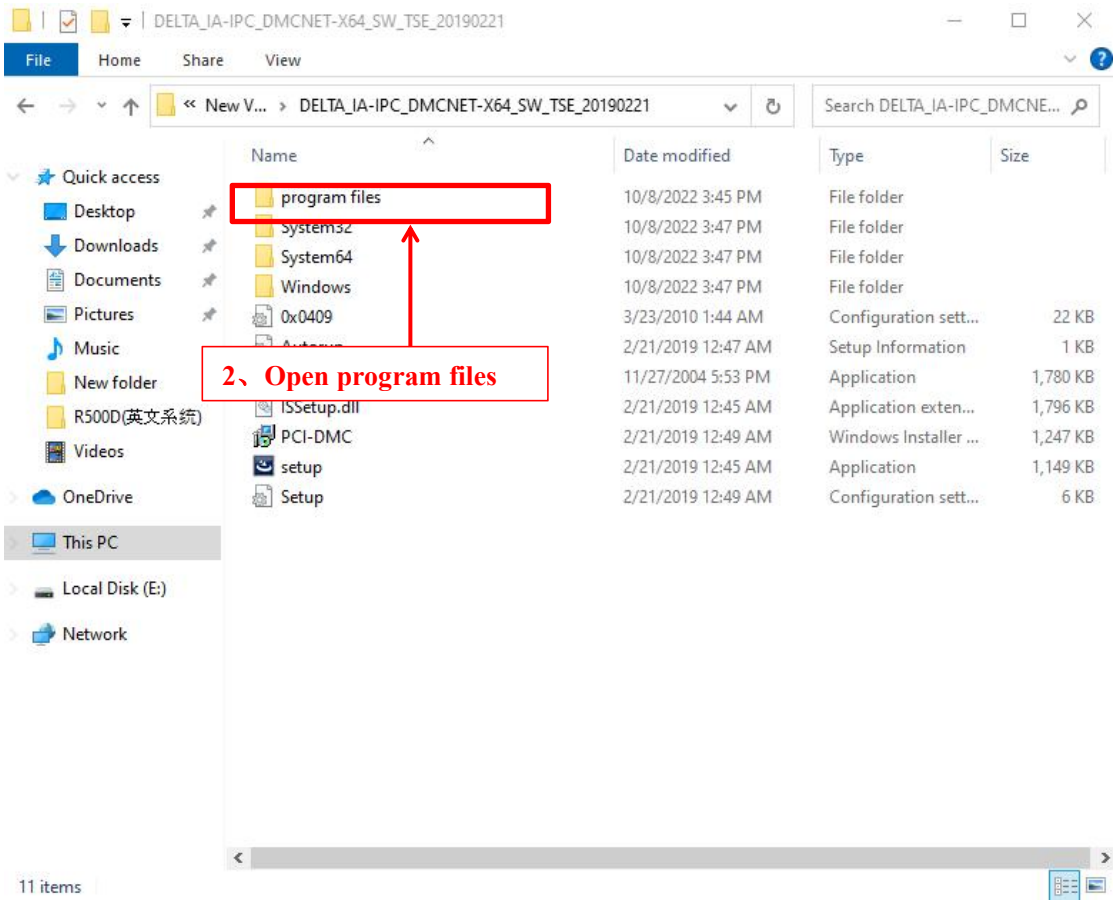
14、Back to Computer desk start Camera Software

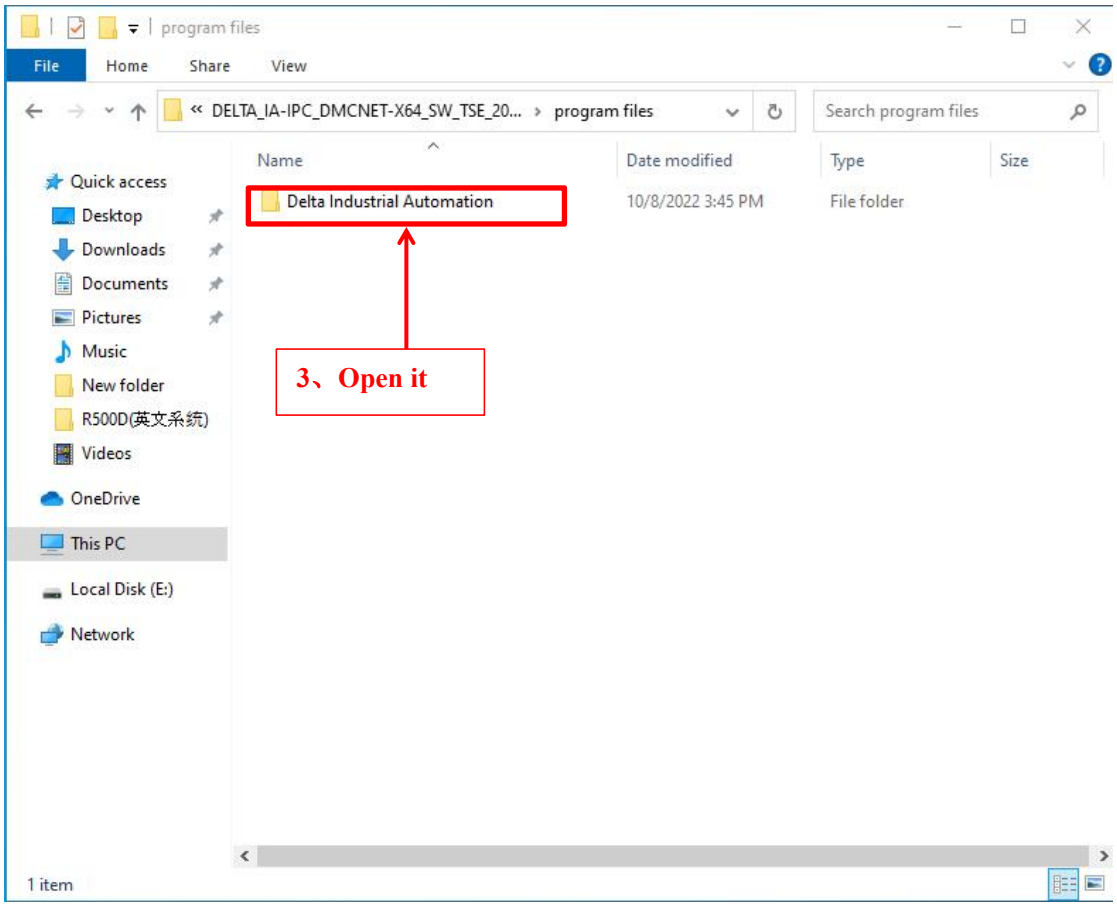

File
View
Settings
Tool
Help
Device List
GigE
Ethernet 3[169.254.118.85]
MV-CA013-A0GM (...
USB
Intel(R) 8 Series/C220 Series USB...
USB xHCI Compliant Host Contr...
Intel(R) 8 Series/C220 Series USB...
Camera Link
GenTL
Device Informa...
Device user ID
Mac Address B0:B3:53:6B:C...
IP Address 169.254.100.1...
Subnet Mask 255.255.0.0
Gateway 169.254.100.2...
Manufacturer GEV
Model MV-CA013-A...
Serial Number G93618249
① Find camera Click modify
② Choose Static IP
Modify IP Address
Modify IP address to make device reachable.
169.254.118.1 - 169.254.118.254
Static IP
IP address: 169.254.100.100
Subnet Mask: 255.255.0.0
Default GateWay: 169.254.100.254
DHCP
LLA
OK
Cancel
15、After Setting parameters muse be saved, and restart software.

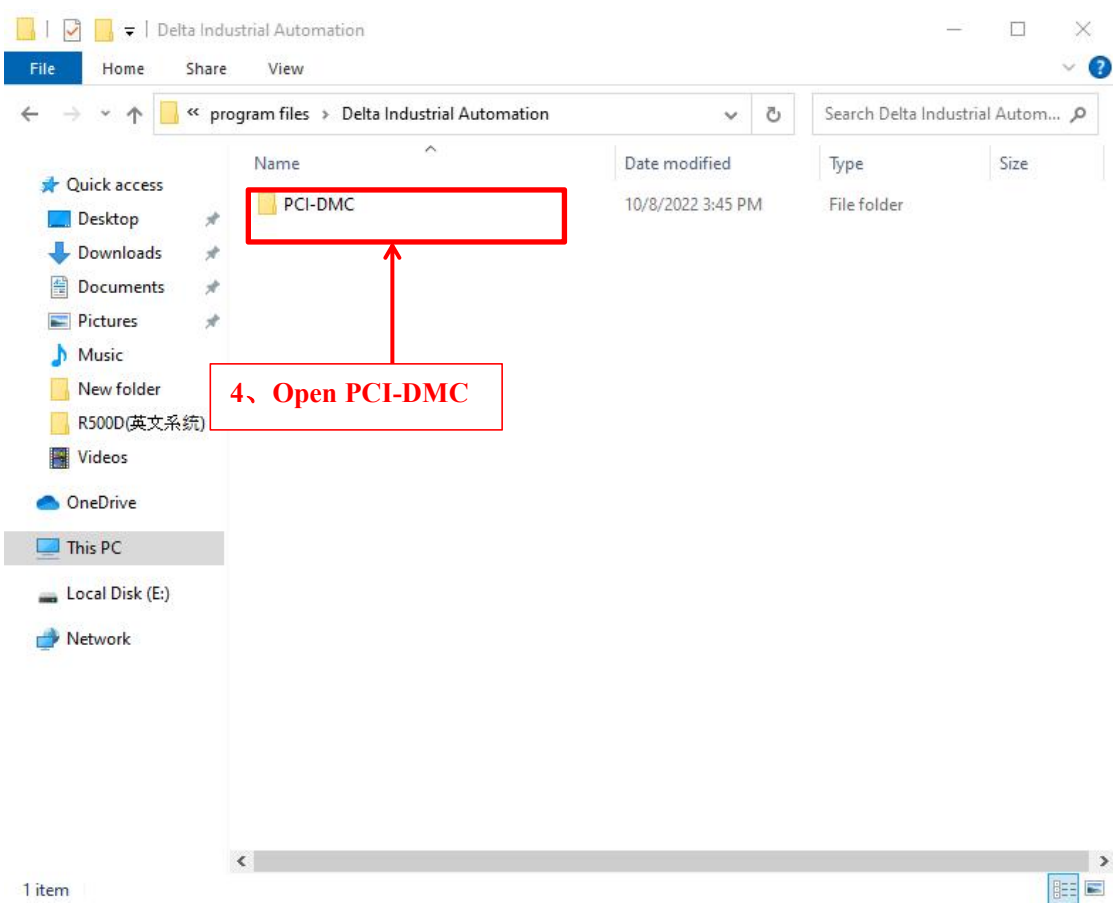

File
View
Settings
Tool
Help
Device List
GigE
Ethernet 3[169.254.118.85]
MV-CA013-A0GM (G9361...
USB
Intel(R) 8 Series/C220 Series USB...
USB xHCI Compliant Host Contr...
Intel(R) 8 Series/C220 Series USB...
Camera Link
GenTL
Device Informa...
Device user ID
Mac Address B0:B3:53:6B:C...
IP Address 169.254.100.1...
Subnet Mask 255.255.0.0
Gateway 169.254.100.2...
Manufacturer GEV
Model MV-CA013-A...
Serial Number G93618249
MV-CA013-A0GM (G93618249)
MV-CA013-A0GM (G93618249)
Feature Tree
Common F...
Trigger
Image Pro...
Favorites
Device Control
Image Format Co...
Acquisition Control
Analog Control
LUT Control
Digital IO Control
Action Control
Counter And Tim...
File Access Control
Event Control
Chunk Data Cont...
Transport Layer ...
User Level:
Guru
① Find Camera connect
② Chick grab image
16、If here have image,the setting succeeded.

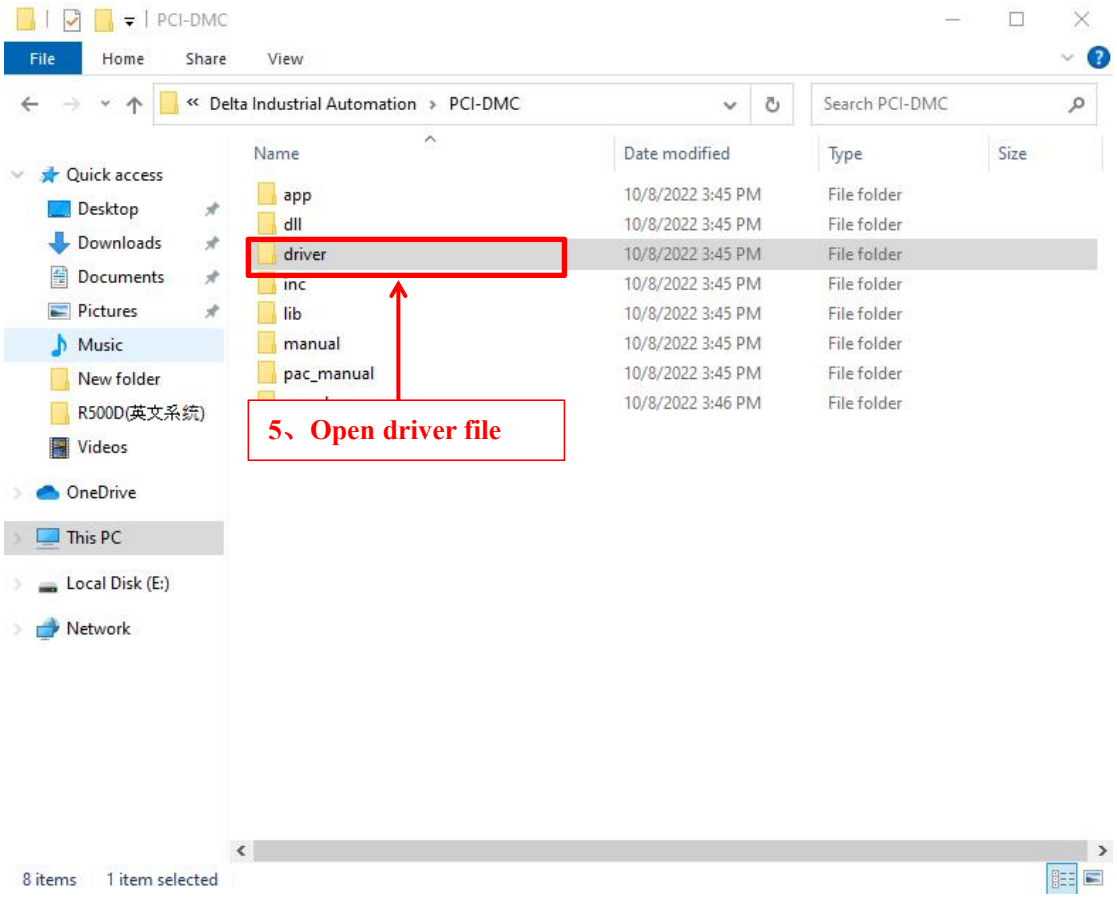
Part4 Motion Control Card Installation

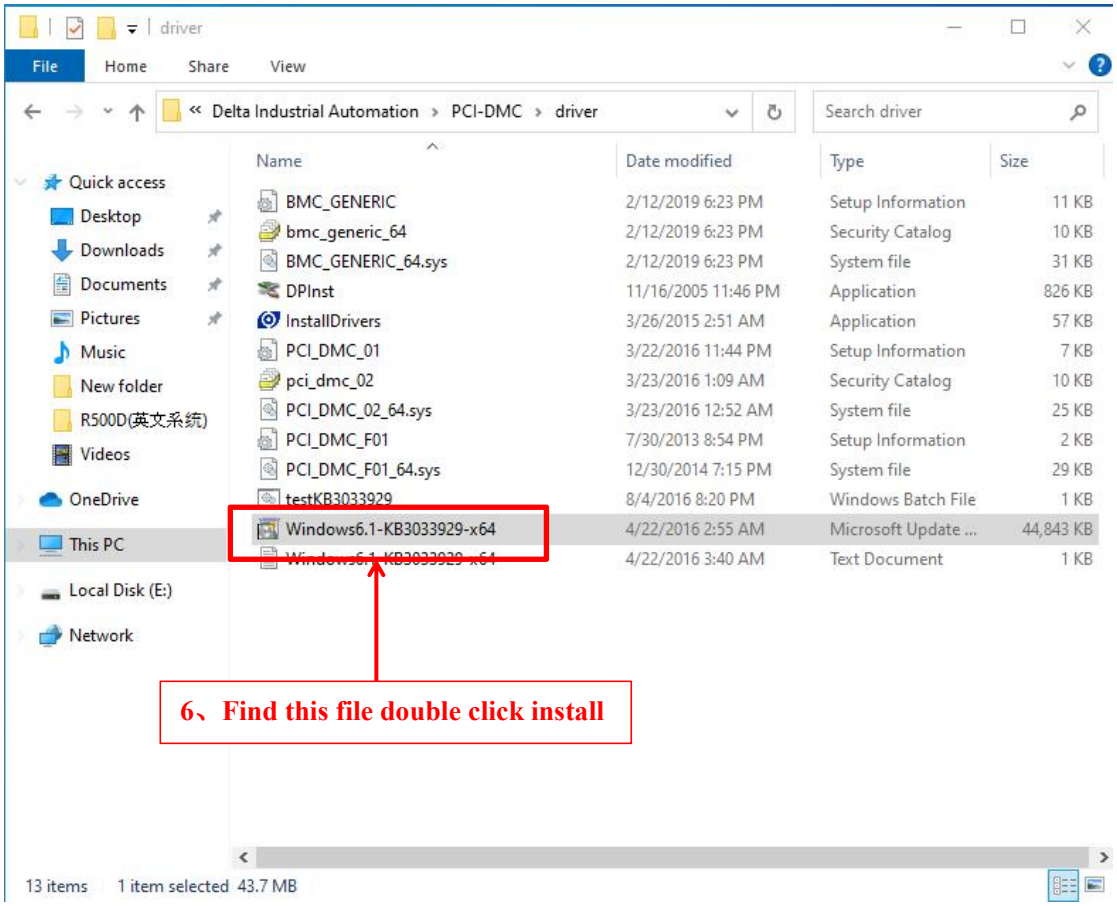


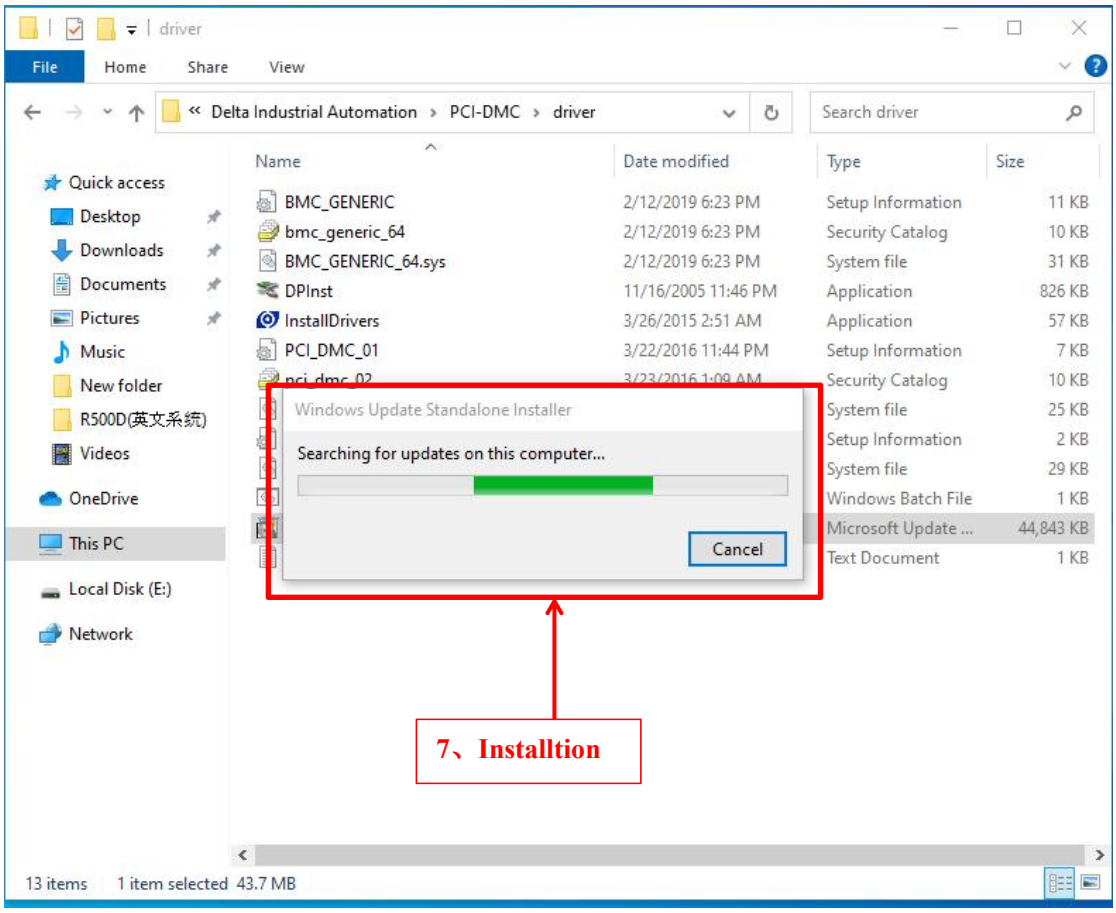



program files
File
Home
Share
View
DELTA_IA-IPC_DMCNET-X64_SW_TSE_20... › program files
Search program files
Name
Date modified
Type
Size
Quick access
Desktop
Downloads
Documents
Pictures
Music
New folder
R500D(英文系统)
Videos
OneDrive
This PC
Local Disk (E:)
Network
Delta Industrial Automation
10/8/2022 3:45 PM
File folder
3、Open it
1 item

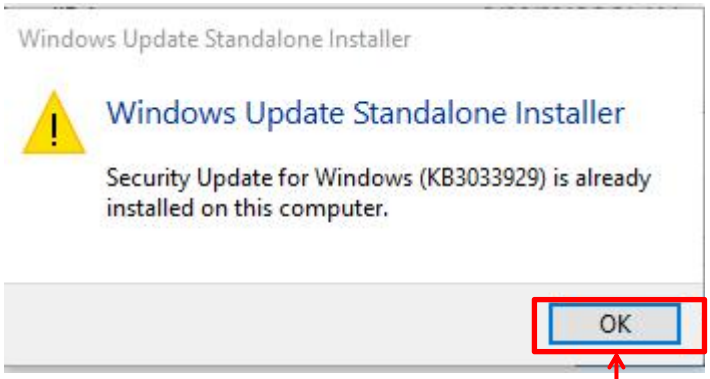

Delta Industrial Automation
File
Home
Share
View
program files › Delta Industrial Automation
Search Delta Industrial Autom...
Name
Date modified
Type
Size
Quick access
Desktop
Downloads
Documents
Pictures
Music
New folder
R500D(英文系统)
Videos
OneDrive
This PC
Local Disk (E:)
Network
PCI-DMC
10/8/2022 3:45 PM
File folder
4、Open PCI-DMC
1 item


PCI-DMC
File
Home
Share
View
Delta Industrial Automation › PCI-DMC
Search PCI-DMC
Quick access
Desktop
Downloads
Documents
Pictures
Music
New folder
R500D(英文系統)
Videos
OneDrive
This PC
Local Disk (E:)
Network
Name
Date modified
Type
Size
app 10/8/2022 3:45 PM File folder
dll 10/8/2022 3:45 PM File folder
driver 10/8/2022 3:45 PM File folder
inc 10/8/2022 3:45 PM File folder
lib 10/8/2022 3:45 PM File folder
manual 10/8/2022 3:45 PM File folder
pac_manual 10/8/2022 3:45 PM File folder
10/8/2022 3:46 PM File folder
5、Open driver file
8 items
1 item selected

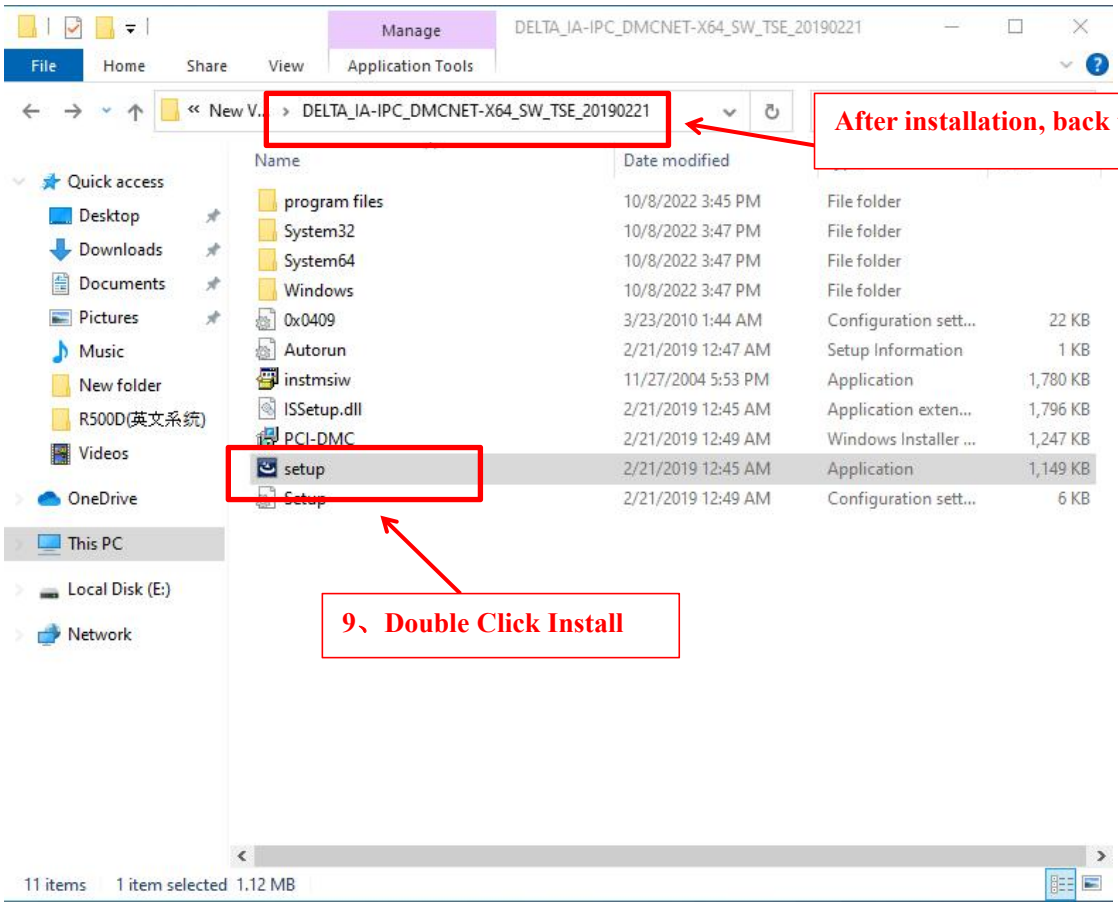

driver
File
Home
Share
View
Delta Industrial Automation › PCI-DMC › driver
Search driver
Quick access
Desktop
Downloads
Documents
Pictures
Music
New folder
R500D(英文系統)
Videos
OneDrive
This PC
Local Disk (E:)
Network
Name
Date modified
Type
Size
BMC_GENERIC 2/12/2019 6:23 PM Setup Information 11 KB
bmc_generic_64 2/12/2019 6:23 PM Security Catalog 10 KB
BMC_GENERIC_64.sys 2/12/2019 6:23 PM System file 31 KB
DPInst 11/16/2005 11:46 PM Application 826 KB
InstallDrivers 3/26/2015 2:51 AM Application 57 KB
PCI_DMC_01 3/22/2016 11:44 PM Setup Information 7 KB
pci_dmc_02 3/23/2016 1:09 AM Security Catalog 10 KB
PCI_DMC_02_64.sys 3/23/2016 12:52 AM System file 25 KB
PCI_DMC_F01 7/30/2013 8:54 PM Setup Information 2 KB
PCI_DMC_F01_64.sys 12/30/2014 7:15 PM System file 29 KB
testKB3033929 8/4/2016 8:20 PM Windows Batch File 1 KB
Windows6.1-KB3033929-x64 4/22/2016 2:55 AM Microsoft Update ... 44,843 KB
4/22/2016 3:40 AM Text Document 1 KB
6、Find this file double click install
13 items
1 item selected 43.7 MB

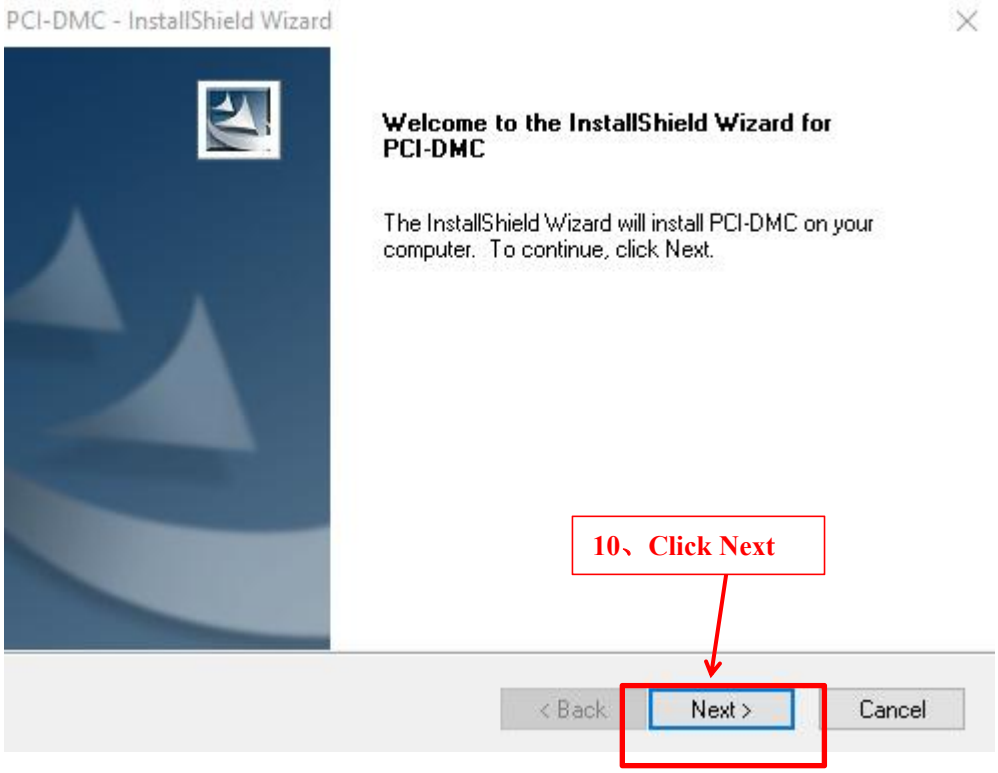


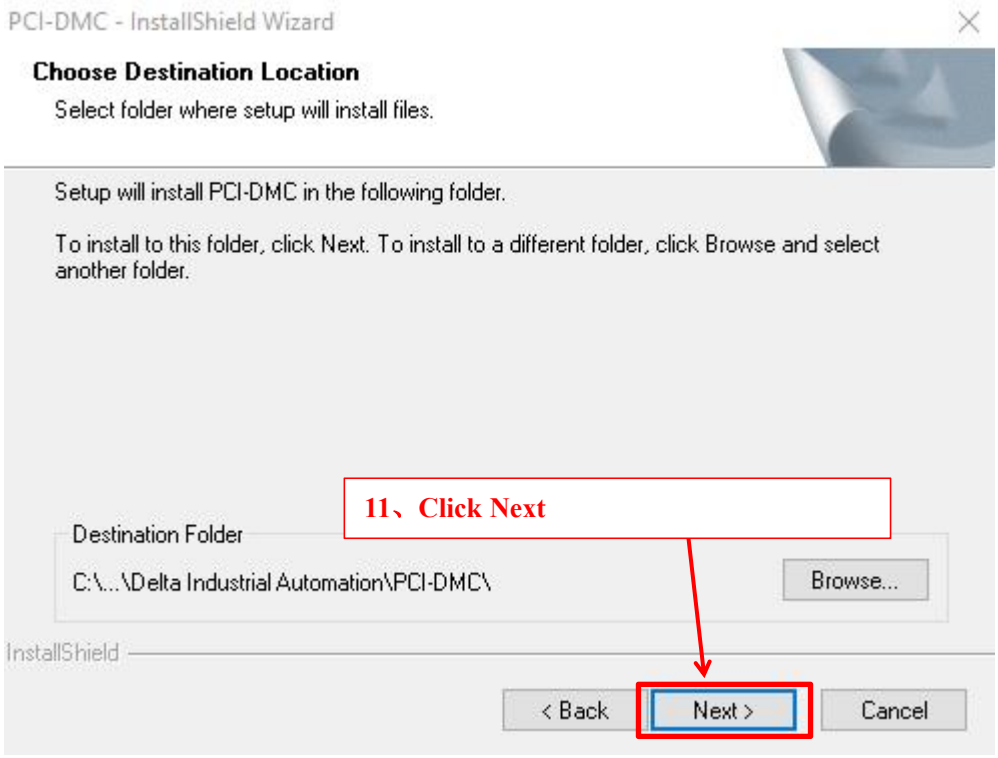
7、Installtion

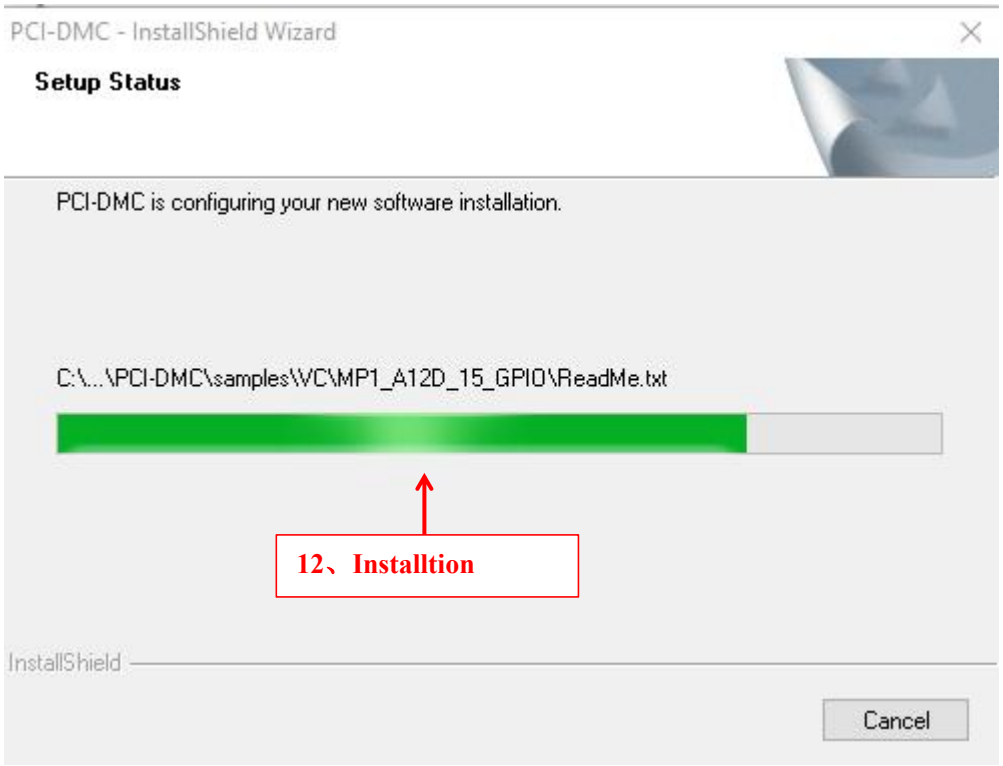


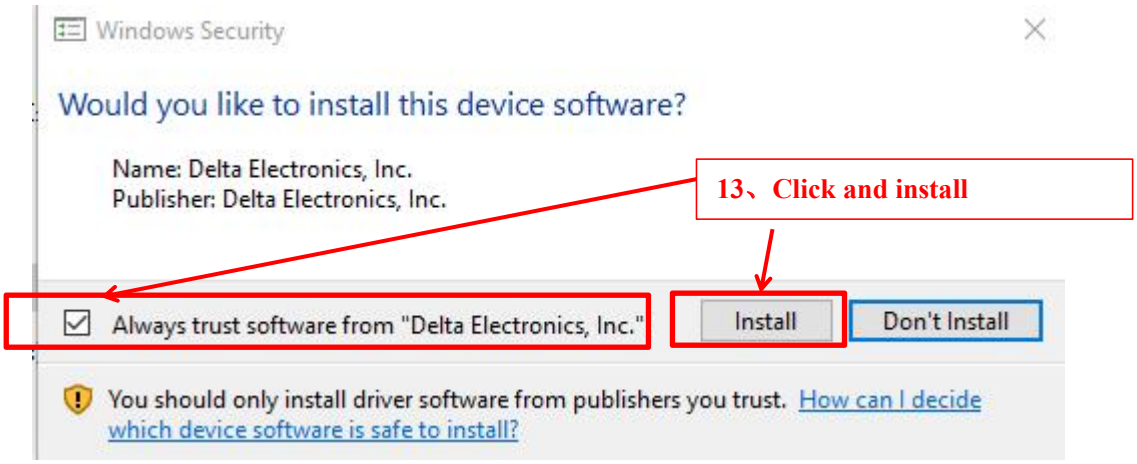
8、Completed install click ok

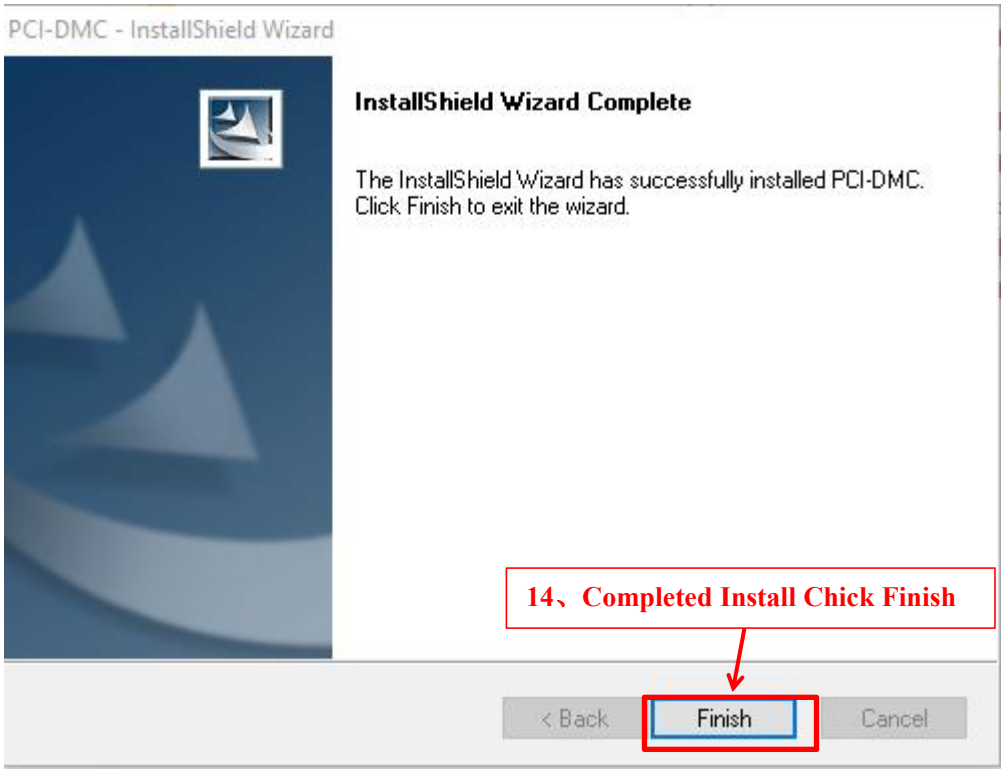

Manage
DELTA_IA-IPC_DMCNET-X64_SW_TSE_20190221
File
Home
Share
View
Application Tools
« New V...
DELTA_IA-IPC_DMCNET-X64_SW_TSE_20190221
After installation, back to this files
Quick access
Desktop
Downloads
Documents
Pictures
Music
New folder
R500D(英文系统)
Videos
OneDrive
This PC
Local Disk (E:)
Network
Name
Date modified
program files 10/8/2022 3:45 PM File folder
System32 10/8/2022 3:47 PM File folder
System64 10/8/2022 3:47 PM File folder
Windows 10/8/2022 3:47 PM File folder
0x0409 3/23/2010 1:44 AM Configuration sett... 22 KB
Autorun 2/21/2019 12:47 AM Setup Information 1 KB
instmsiw 11/27/2004 5:53 PM Application 1,780 KB
ISSetup.dll 2/21/2019 12:45 AM Application exten... 1,796 KB
PCI-DMC 2/21/2019 12:49 AM Windows Installer ... 1,247 KB
setup 2/21/2019 12:45 AM Application 1,149 KB
Setup 2/21/2019 12:49 AM Configuration sett... 6 KB
9、Double Click Install
11 items
1 item selected 1.12 MB


PCI-DMC - InstallShield Wizard
Welcome to the InstallShield Wizard for PCI-DMC
The InstallShield Wizard will install PCI-DMC on your computer. To continue, click Next.
10、Click Next
< Back
Next >
Cancel


PCI-DMC - InstallShield Wizard
Choose Destination Location
Select folder where setup will install files.
Setup will install PCI-DMC in the following folder.
To install to this folder, click Next. To install to a different folder, click Browse and select another folder.
11、Click Next
Destination Folder
C:\...\Delta Industrial Automation\PCI-DMC\
Browse...
InstallShield
< Back
Next >
Cancel


PCI-DMC - InstallShield Wizard
Setup Status
PCI-DMC is configuring your new software installation.
C:\...\PCI-DMC\samples\VC\MP1_A12D_15_GPIO\ReadMe.txt
12、Installtion
InstallShield
Cancel


Windows Security
Would you like to install this device software?
Name: Delta Electronics, Inc.
Publisher: Delta Electronics, Inc.
13、Click and install
Always trust software from "Delta Electronics, Inc."
Install
Don't Install
You should only install driver software from publishers you trust. How can I decide which device software is safe to install?


PCI-DMC - InstallShield Wizard
InstallShield Wizard Complete
The InstallShield Wizard has successfully installed PCI-DMC. Click Finish to exit the wizard.
14、Completed Install Chick Finish
< Back
Finish
Cancel