ACalPressure Calibration Software User Manual

Additel Corporation

2017.04

Content

Overview

ACal is a pressure calibration system running under network environment,it has a simple and friendly interface and supportsthe cooperation of Multi-user. The system has calibration function as well as a powerful instrument management function.

Main features

ΔSupport the cooperation of Multi-user in the environment of network

ΔCalibration and a powerful management of instrument

ΔHas a simple and friendly interface, and can be easy to operate

ΔA powerful function of scan and print QR code, with which can help reduce import time

ΔSupport user authority administration to cater to the habit of measuring industry

ΔThe testing subsystem based on the principle of test solution makes the processeasier and intuitive.

ΔThe system had preset many test solutions and allow user to customize new test solution

ΔCan calibrate variety pressure instrument

ΔCan calibrate several instruments at a time

ΔThe procedures of test, calculate, build certificate complies with the regulation of metrology.

ΔSupport function of reminder and create calibration plan

ΔSupport independent function of managing certificate, print and export certificate in batch

ΔSupport customize certificate template

ACalSoftware Version

		ACal Network	ACal Professional	Acal Basic
Networking function	Business data sharing	√	×	×
	Collaborative	√	×	×
Software version upgrade	Upgrade to ACal Professional	N/A	N/A	√
	Upgrade to ACal Network	N/A	√	√
Calibration	Supported DUT type	1.Dial pressure gauge 2.Digital pressure gauge 3.Pressure transmitter 4.Pressure switch	1.Dial pressure gauge 2.Digital pressure gauge 3.Pressure transmitter 4.Pressure switch	1.Dial pressure gauge 2.Digital pressure gauge 3.Pressure transmitter 4.Pressure switch
	Automatic verification scheme	√	√	×
	Calibration records management	√	√	√
DUT management	DUT management	√	√	√
	Reminder and plan	√	√	√
Reference management	Reference instrument management	√	√	√
	Reminder and plan	√	√	√
Calibrator Task Management	Task download	√	√	√
	Task upload	√	√	√
QR code	Scan QR code to find DUT	√	√	×
	Print QR code	√	√	×

说明：

【1】Automatic verification scheme: ADT780, ADT760, ADT761 pressure controller / calibrator instrument support automatic pressure control function in ACal network edition and ACal Professional Edition and these can only be used as reference in ACal Basic edition .

Chapter 1 Installation AndOverview

1.1 Software environment requirements

1.1.1 Operating system

Windows 7, Windows 8, Windows 8.1, Windows 10, Windows Server SP2, Windows Server, Windows Server, R2 XP, Windows Server, Windows, Windows Server 2012 R2, SP2,

1.1.2 Computer hardware

System memory: not less than 2GB

Hard disk: 4 GB disk space

Processor: Pentium III and above processors (processor speed 1 GHz or faster)

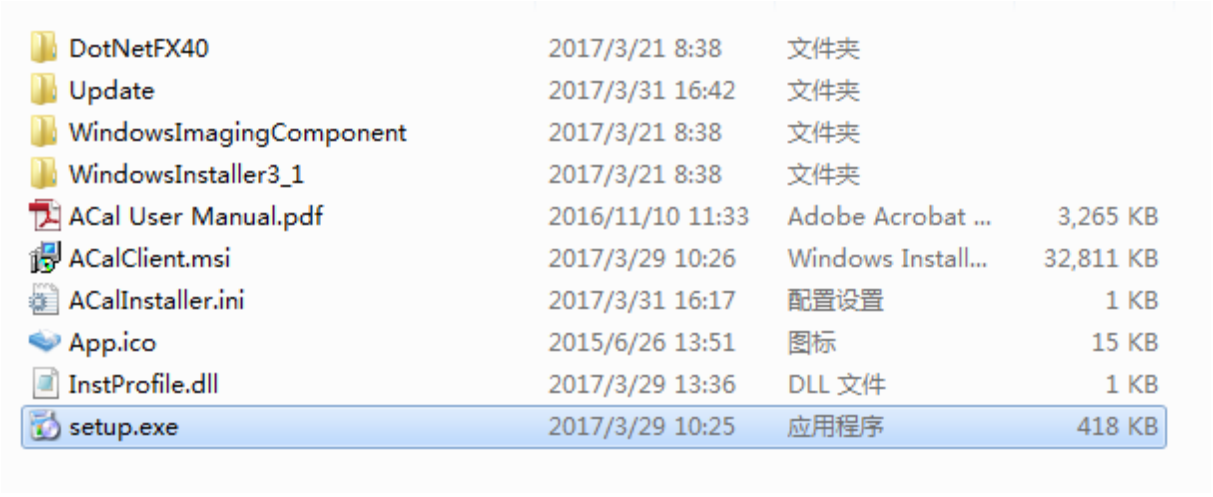
1.1.3 Application software

Test software to generate certificate function requires Microsoft Office version 2007 and above, the user is installed Microsoft Office 2007, also need to install SaveAsPDFandXPS.exe, the plug-in can be found in the software installation disk.

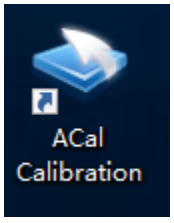
1.2 Software installation

Note: this only applies to the installation of ACal calibration system software. If it is the network version, ACal server management software installation method see "ACal software installation manual"

Locate the "setup.exe" file in the installation CD and double click to install it.



When the installation is complete, there will be a shortcut on the desktop



1.3 Software login

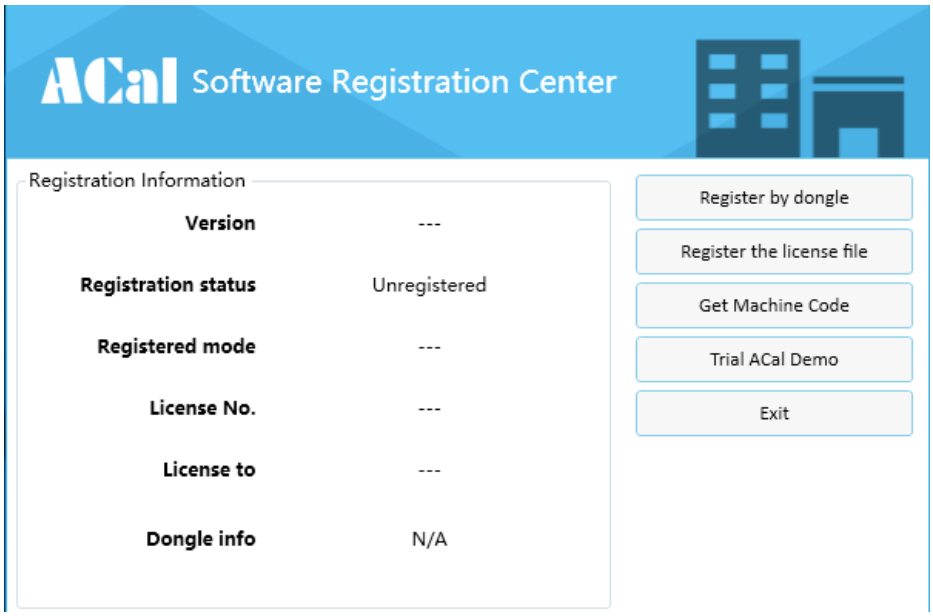
ACal verification calibration system software installed, double-click the shortcut, open from the desktop, the following picture for the software login screen

ACal system for the user preset 3 login account, as shown in the following table, the user can use the admin account login system to create a user account.

User name	Password
admin	admin
engineer	engineer
operator	operator

1.4 Software Registration

Users first run the software, click on the login will automatically pop up the registration interface.



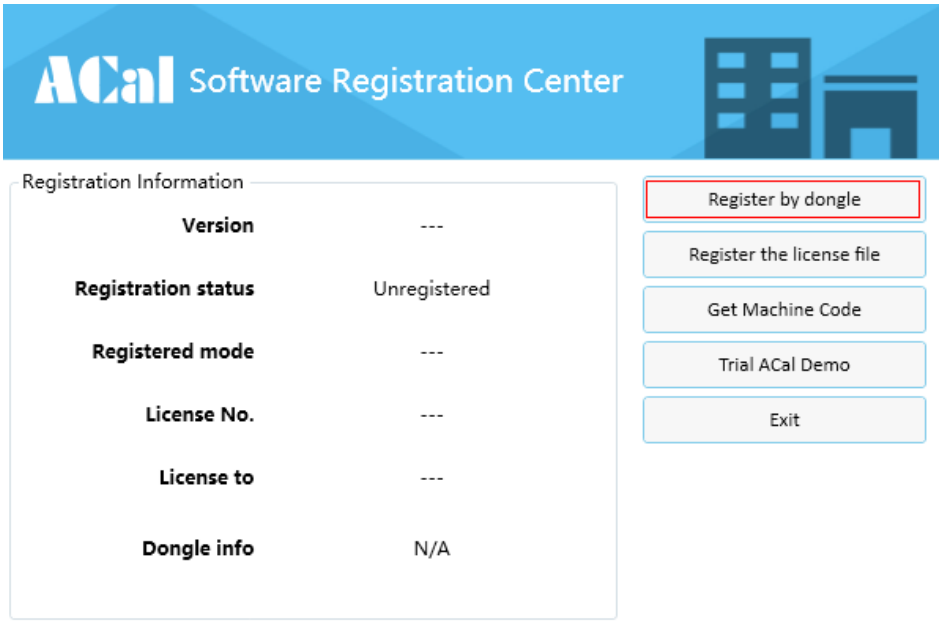
There are two ways to register software:

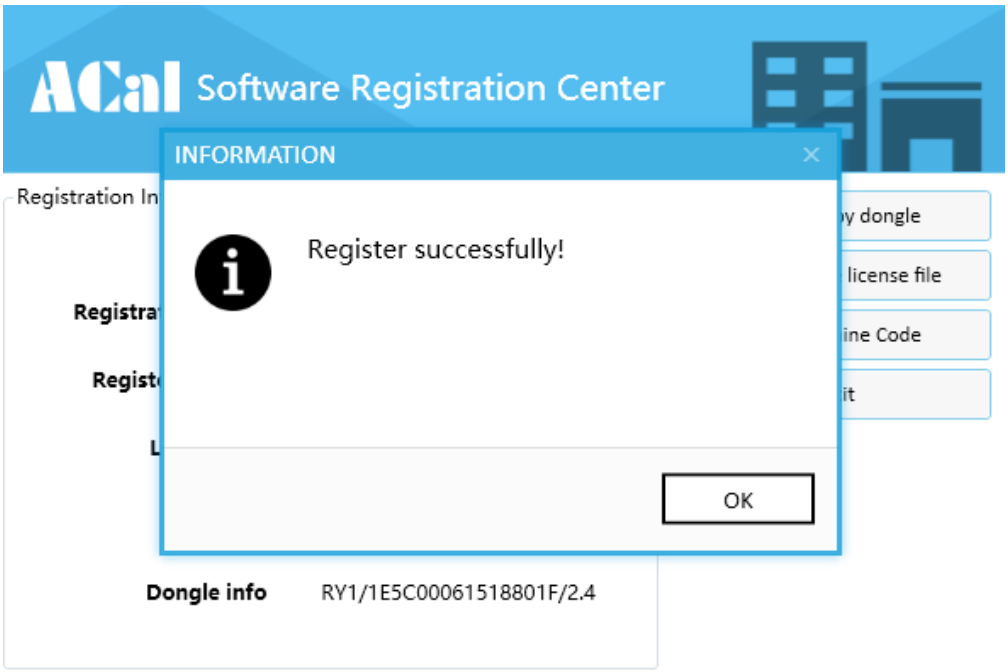
- **Software dog registration**
- **Register by license**

1 Registration by dongle

Step 1: plug the software dog on the computer.

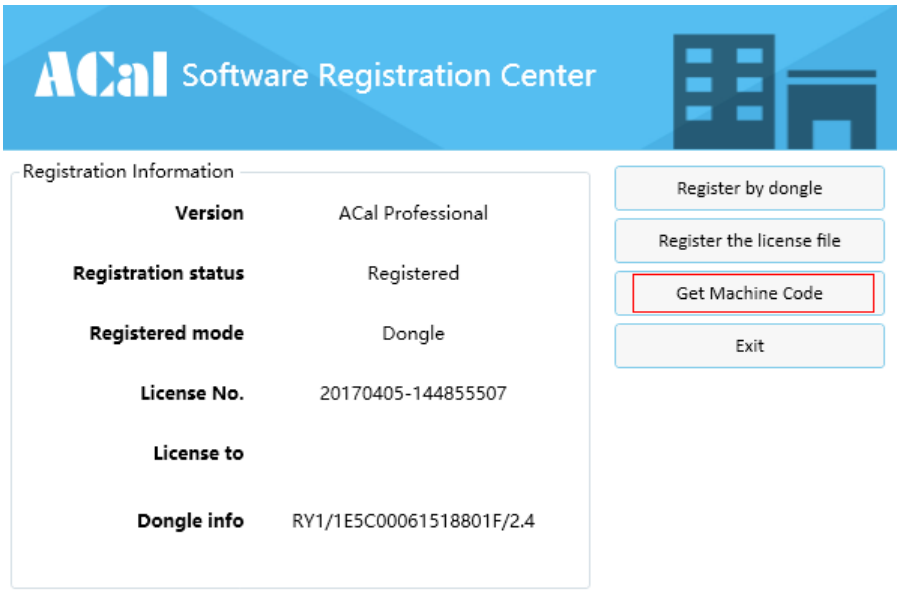
Step 2: click on the registration interface through the software dog registration software".





2 Registration the license file

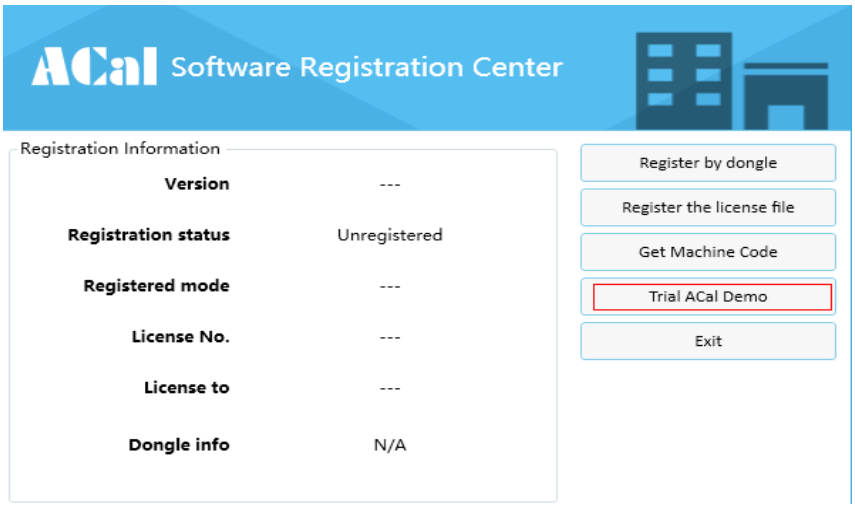
Registration the license file need machine code file,click [Get Machine Code],and then send the file exported to the supplier, the supplier will return license file according to the machine code , this file can only be registered in the current computer



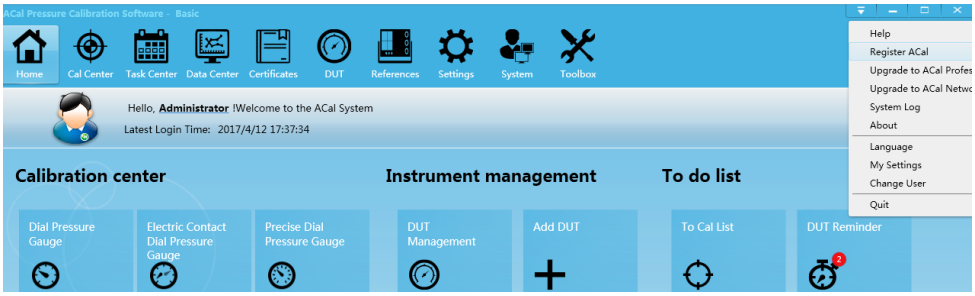
Click the " registration the license file" button, select the license file to complete the registration

1.5 Software Trial

We also provide the ACalDemo , you can click[trail ACal Demo] to use it.



In this version ， you can Register in this way.



1.6 Software version upgrade

See Appendix D for promotion.

1.7 Standard

ISO/IEC17025:2005

1.8 Architecture

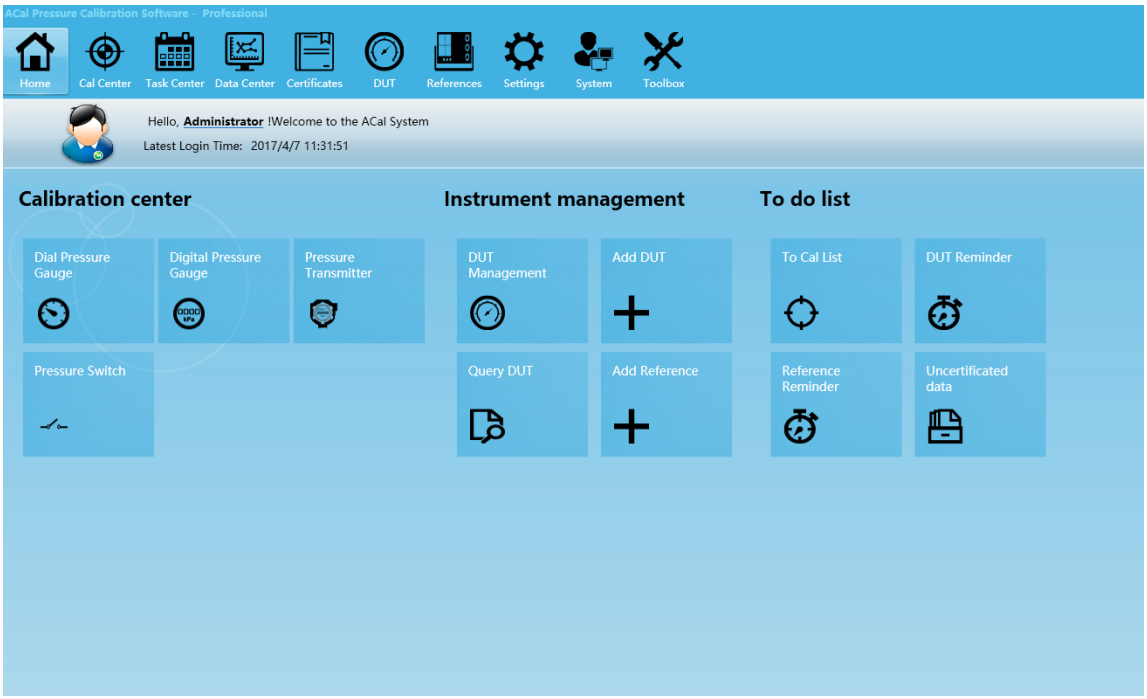


Figure1-1

As shown inFigure1-1,ACalhas eight parts:

1)Home: Offer shortcut for main functions, such as Calibration center, To do list, and so on.

2)Cal Center: Add Calibration Solution, Configuration, Start Cal, etc

3)Data Center: Data Management, include Create, Delete, Update, Check, Build Certificate,etc

4)Certificates:Search, Preview, Print, Export certificate, etc

5)DUT: Manage DUT Information, Calibration Reminder, Calibration Schedule, Customers, etc

6)References: Manage References Information, Calibration reminder, Calibration schedule

7)Settings: Manage laboratories, Calibration standards, User calibration solutions, Serial numbers, Instrument Manage Categories, QR code

8)System: Manage User accounts, Operation Logs

Chapter 2 System management

2.1 User management

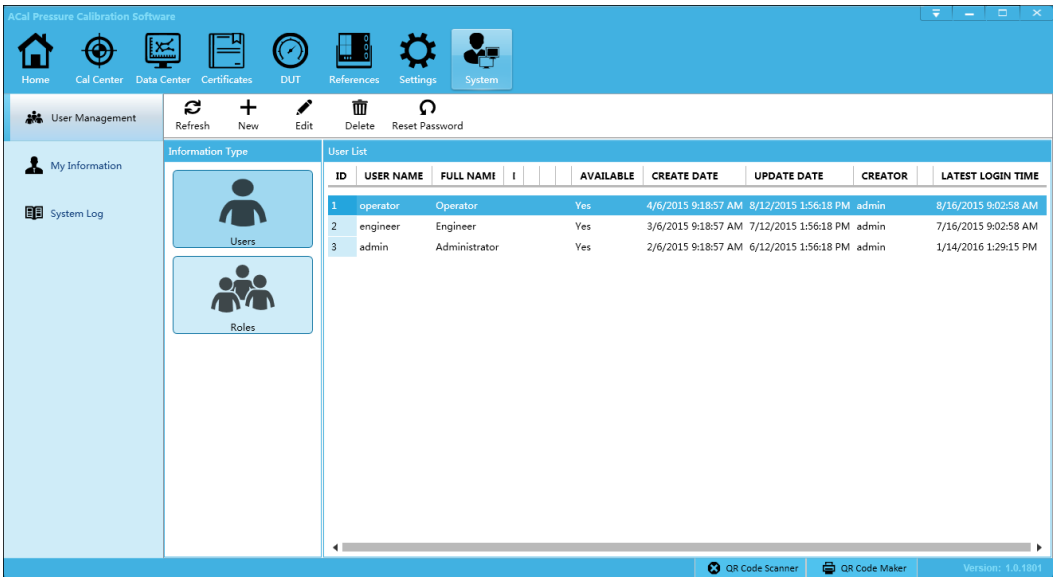


Figure 2-1

Steps: [System]→[User Management]

This part manage ACal users, administrator manage user number depend on needs, and assign user to corresponding role.

2.1.1 Create user

Steps: [System]→[User Management]→[Users]→[New]

Create user account steps:

1) Enter basic information: include username, password, full name, department, etc

2)Assign roles: choose a corresponding role on right side, you can choose more than one role

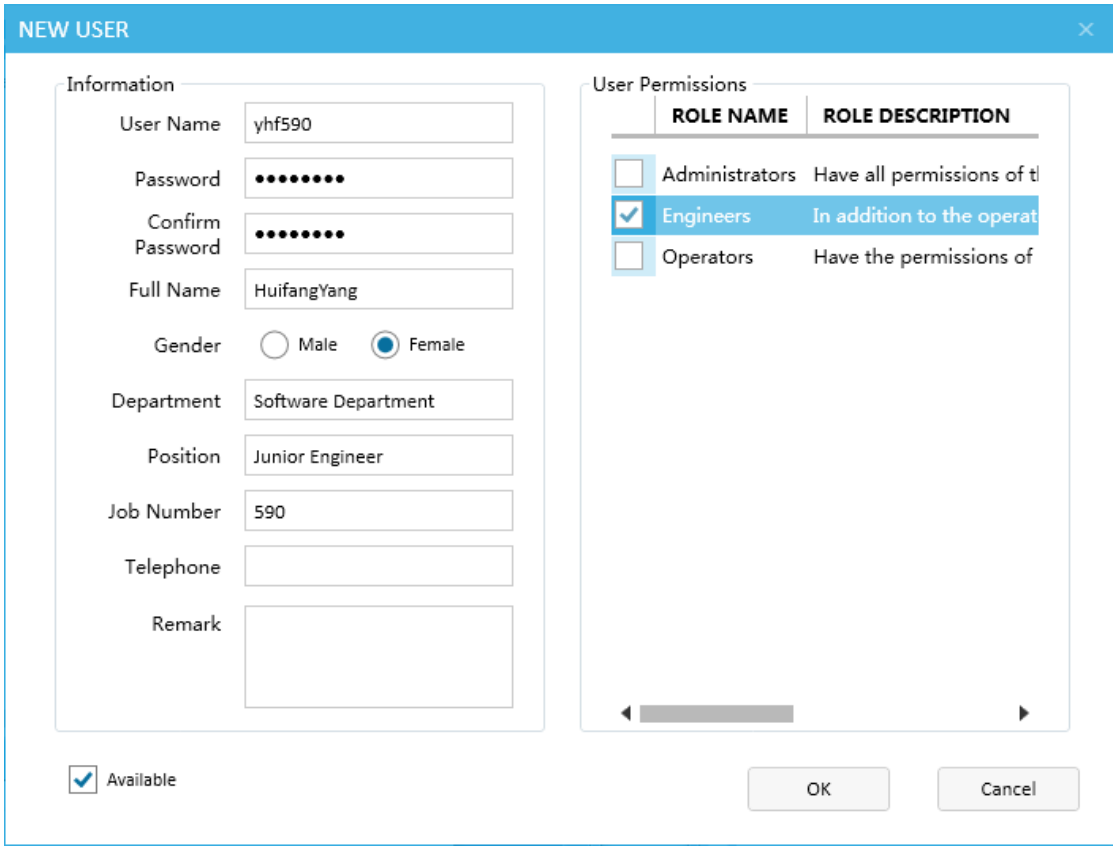


Figure 2-2

2.1.2 Reset password

If you lost your password, you can preset it with the help of administrator
Steps: [System] →[User management]→[Users]→[Reset password]

2.1.3 Create role

ACal preset 3 kinds of role:
1) Operator: have the permission of manage and calibrateDUT.
2) Engineer: have the permission of configuration in setting beyond the operator permission.
3) Administrator: Have all permissions.
If those preset roles can't meet your needs, you can create new roles with different authorities.
Steps: [System]→[user management]→[Roles]→[New]

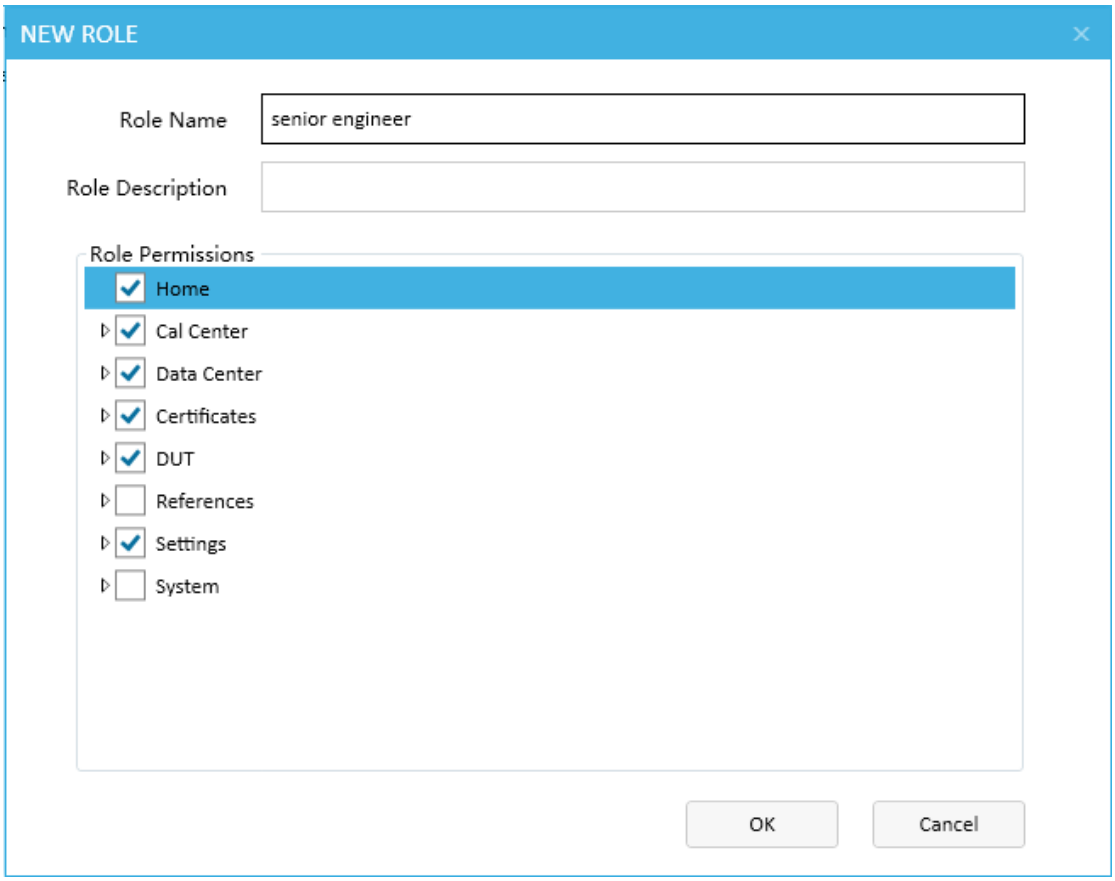


Figure 2-3

2.2 Operation log

ACalhas the relevant function of operation log and traceability, it record main operation which include:

1) Login and logout
2) Save, edit and delete calibration data
3) Build, preview, print and export certificate
4) DUT's and Reference's add, edit and delete
5) Modification of settings

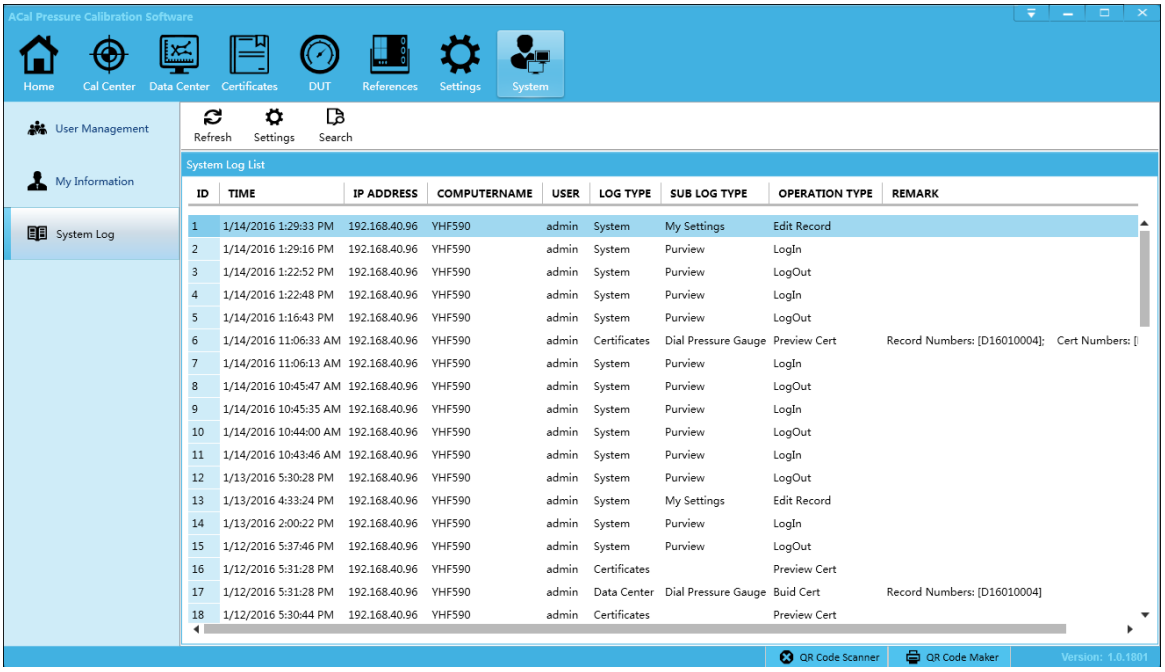


Figure 2-4

2.2.1 Settings

Steps: [System]→[System Log]→[Settings]

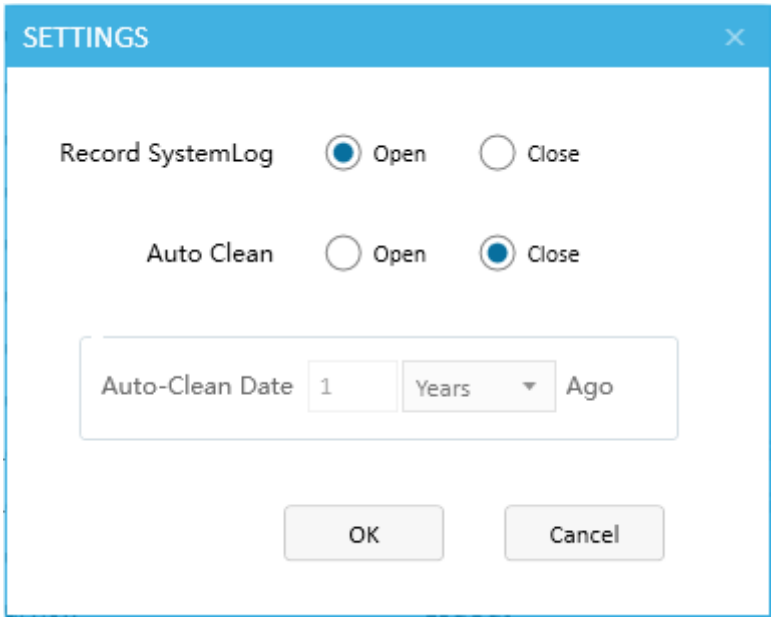


Figure 2-5

Record SystemLog: whether enable the function, when you choose to close, it will stop recording the system operation log.ACal enable it by default.

Auto clean: Clean automatically,When you set the Auto-Clean date, the system will delete the operation log which beyond your periodic automatically.ACal disable it by default.

2.2.2 Search log

Administrator can search the log depend on the conditions of operation time ,IPaddress, login account, items, operation type, etc.

Steps: [System]→[System Log]→[Search]

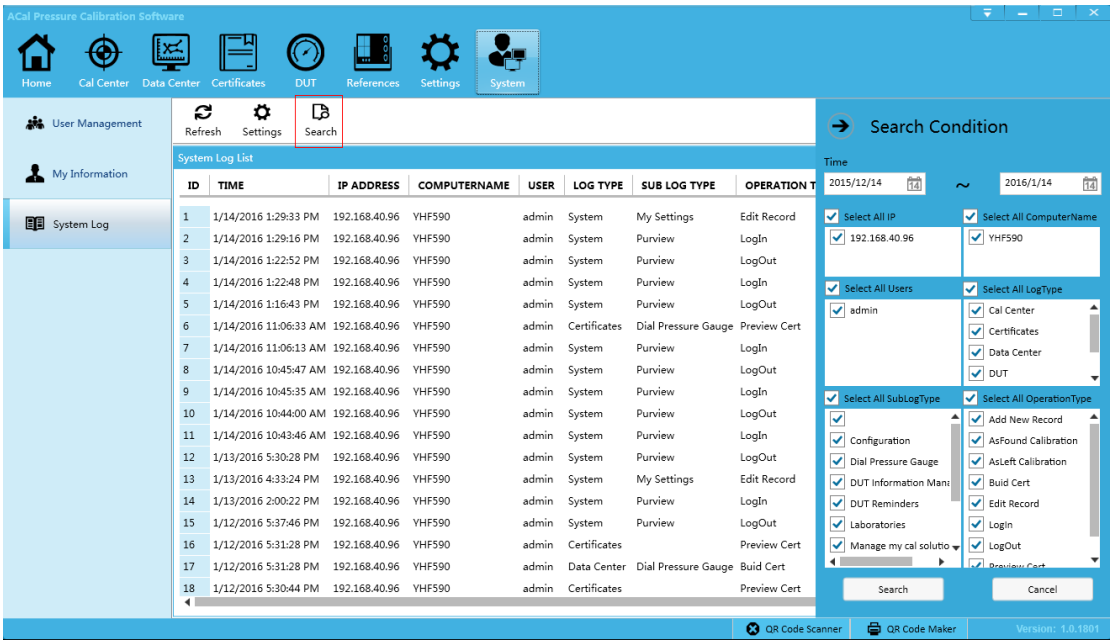


Figure 2-6

Chapter 3 Settings

3.1 Laboratories

Laboratory information is an important part of certificate information. The default laboratory will saved in calibration record. So you shouldconfigure and select it before your calibration.

Steps: [Settings]→[laboratories Log]

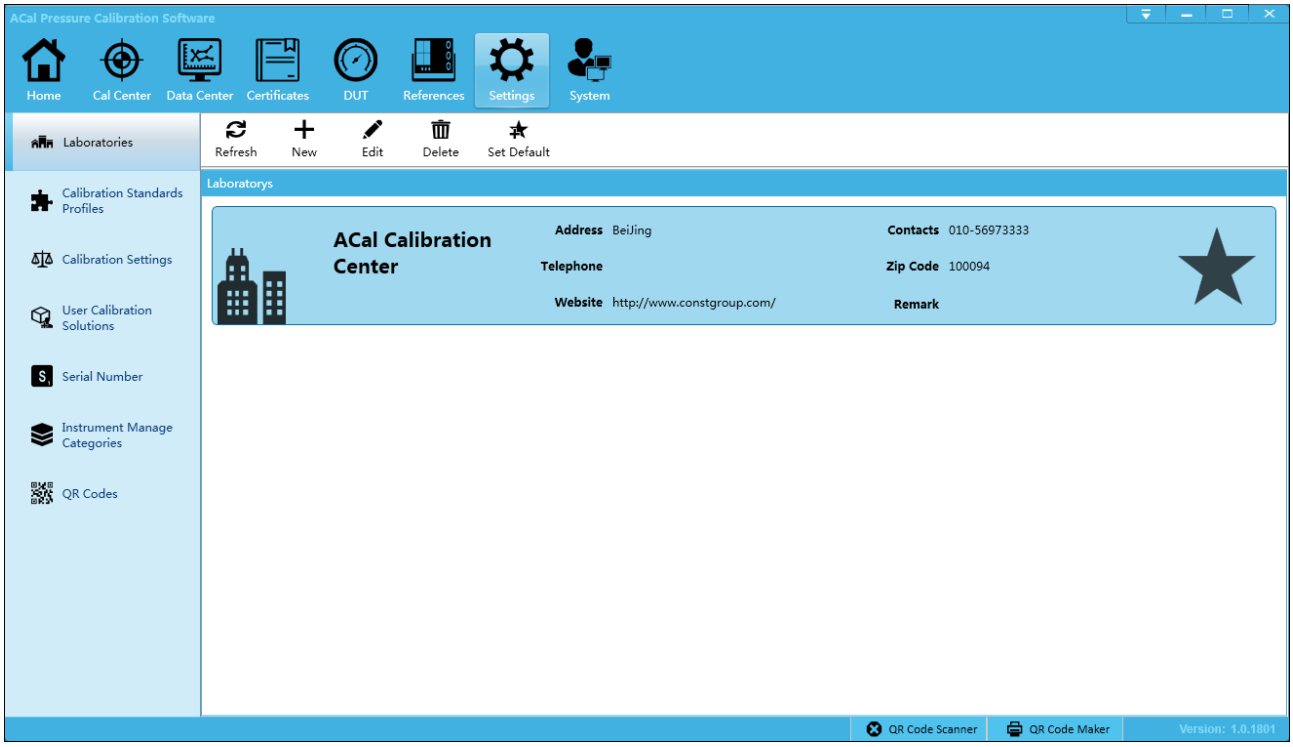


Figure 3-1

3.2 Calibration Standards Profiles

Steps: [Settings]→[Calibration Standards Profiles]

Generally, the calibration of the software is based on corresponding standard. In tradition test software, one DUT usually follows one standard.You can configure whether to enable the standard and the certificate template type depend on your needs.

You are suggested to configure them before your calibration.

1) Enable and set default of standard

Like shown above, you can enable and set default of standard for each type of DUT.

2) Enable custom template

By default, ACal print, export certificate with preset template, if you want to use your own template, you can enable function of 'Enable custom template', you can modify template following Appendix A<Customize Certificate Help File>.

3) Enable Customizing tables printing

Customizing tables printing is only print data in a paper on which already have fix format.

ACaldisable the Customizing tables printing function unless you enable it and modify the Customizing tables printing template following Appendix A: <Customize Certificate Help File>.

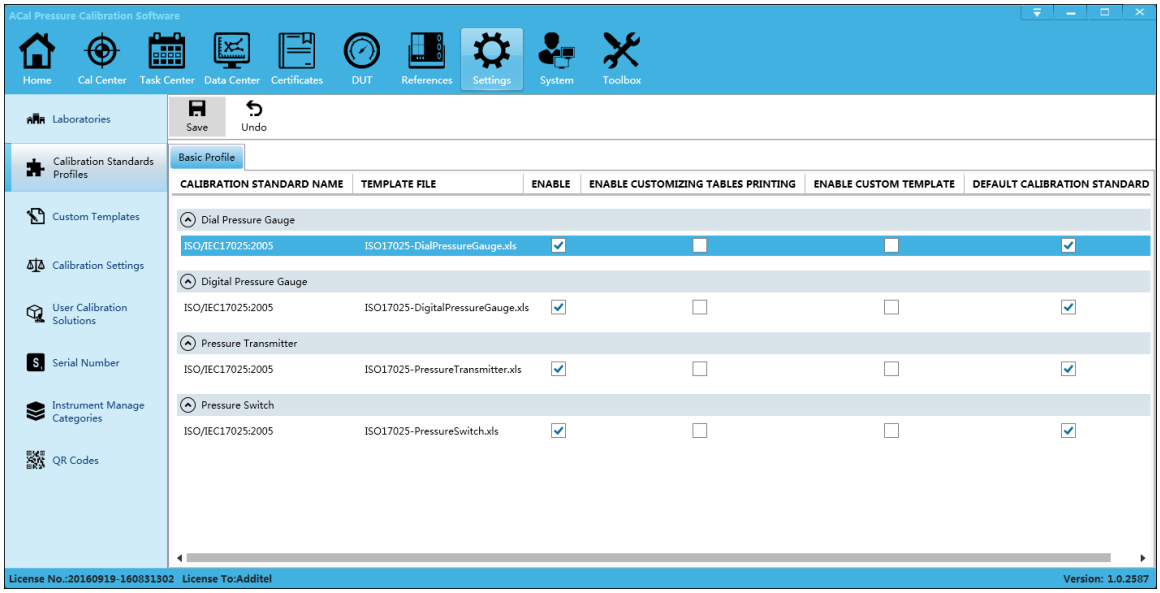


Figure 3-2

3.3 Custom Templates

See appendix A< Customize Certificate Help File>.

3.4Calibration settings

ACalprovide the calibration parameter, certificate backup, DUT No., etc. settings.
Steps: [Settings]→[Calibration settings]

3.5 Calibration solutions

Solutions defined the references were used during calibration, and were fixed the role in calibration. Usually, one complete solution is consists of:

1)Pressure source: The necessary instrument that provide the required pressure during calibration, such as cylinder.

2) Pressure Controller: Instrument that provide function of control pressure, such as Additel780、Additel781、Additel782、Additei761,etc.

3) Pressure Reference: The necessary instrument that show current standard pressure to compare with DUT's indication, such as Additel672, Additel681, etc.

4)Multimeter: The necessary instrument that used in Pressure Transmitter, Pressure Switch and electric Contact Dial Pressure Gauge, to Measuring the electrical value of the DUT.

Example 1: Additel780 Pressure Calibration Solution (Gas Cylinder)

1)Pressure source: Gas Cylinders
2) Pressure Controller: Additel780 Pressure Controller, Control pressure
3) Pressure Reference: Additel780 Pressure Controller, Measure standard pressure
4)Multimeter: Additel780 Pressure Controller, Measure electrical signal

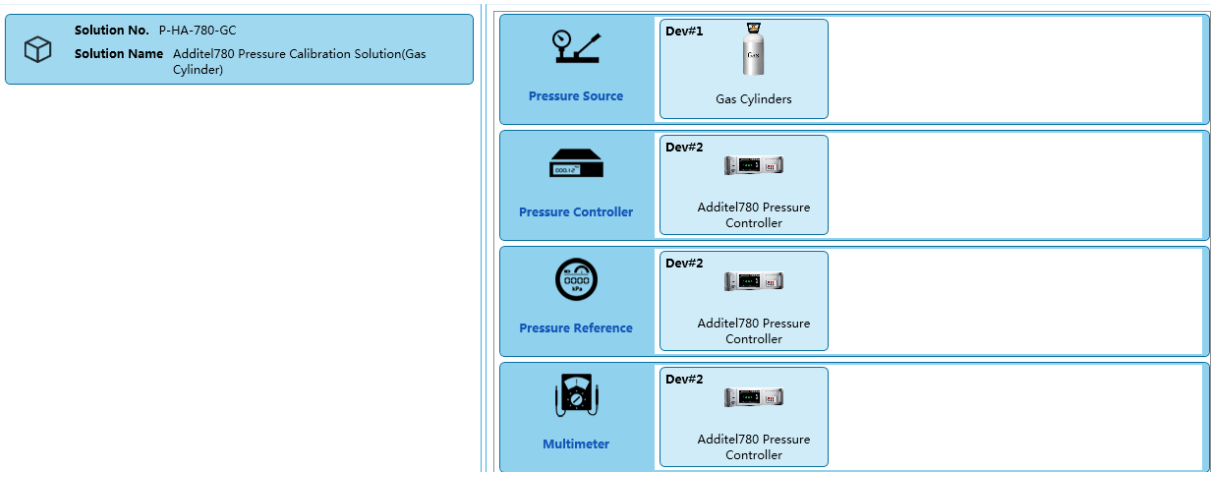


Figure 3-3

This solution can calibrate Dial Pressure Gauge, Digital Pressure Gauge, Pressure Transmitter, and Pressure Switch.

Example 2: Additel681 Pressure Calibration Solution
1)pressure source: Pressure Pump
2) Pressure Controller: none
3) Pressure Reference: Additel681 Digital Pressure Gauge
4)Multimeter: none

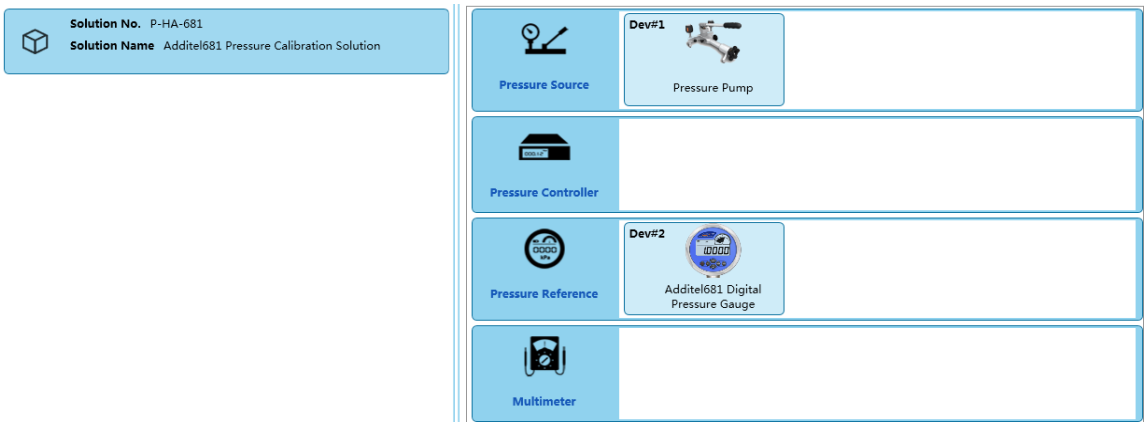


Figure 3-4

This solution can calibrate Dial Pressure Gauge, Digital Pressure Gauge, cannot calibrate Pressure Transmitter, and Pressure Switch.

3.6 Series Numbers

The serial numbers char include:

1) DUT: Factory No., ACal No., cert No., Record No.

2) Reference: Reference No.

3)Schedule: DUT schedule number, Reference schedule number

ACal has defined ‘Calibration record number’, ‘Calibration certificate number’, ‘Reference asset number’, ‘DUT schedule number’, ‘Reference schedule number’, etc. You can define new char with serial number before your calibration and you’d better not change anything once you defined them in case of any confusion.

Steps: [Settings]→[Series Numbers]

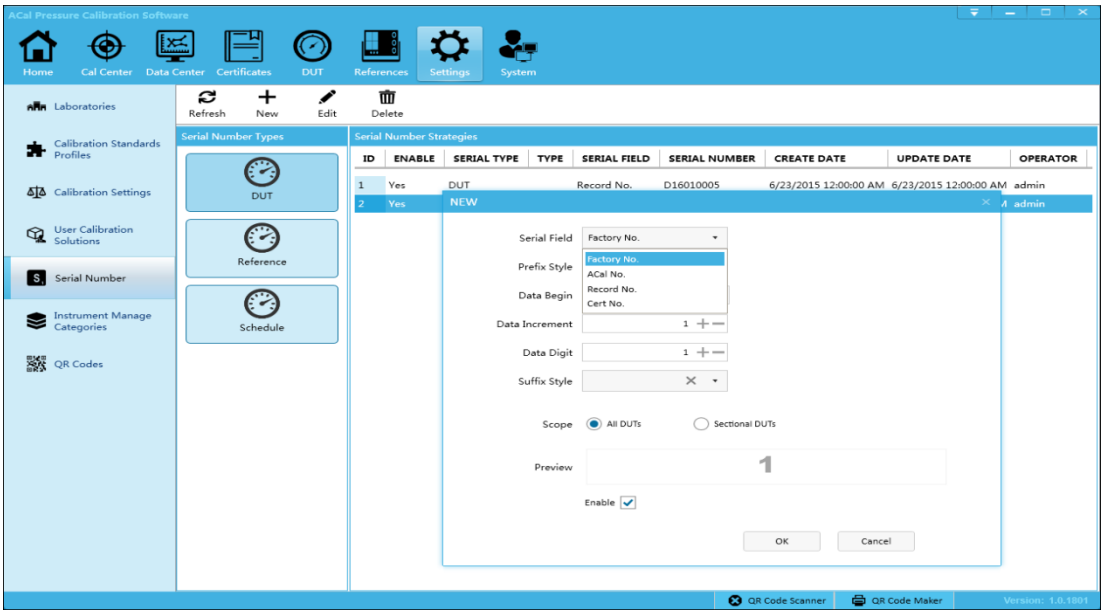


Figure 3-5

3.7 Instrument manage categories

Steps: [Settings]→[Instrument manage categories]

In order to retrieve and manage instrument, ACal allows users to define a set of category names for DUT to choose from.

Instrument manage categories can be used in reminder by enable the ‘reminder enable’ check. You are suggested to configure them before your calibration.

3.8 QR Codes

See appendix B< Scanners and QR Maker>.

Chapter 4 DUT

4.1 DUT management

4.1.1 Create DUT

Steps: [DUT]→[DUT management]→[New]

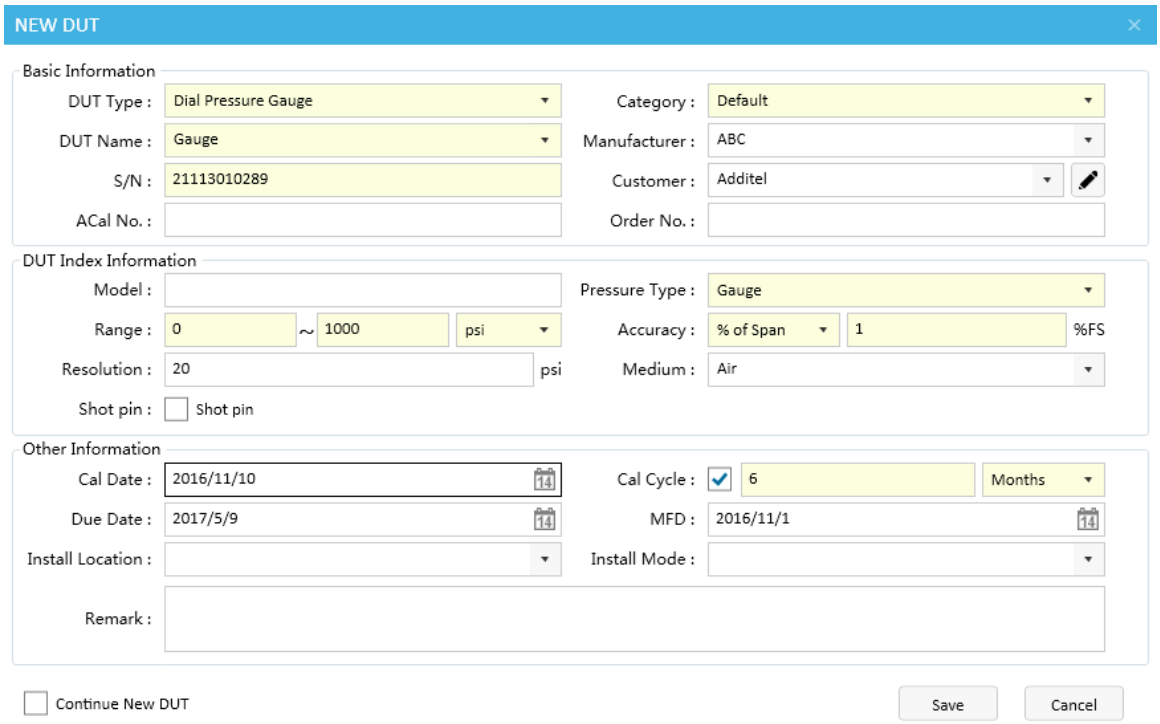


Figure 4-1

4.1.2DUT search

ACalprovidesvariant char to search, include: DUT category, custom, periodic, data type, order No., ACal No., Model, Pressure Range, Operator, etc.

Steps: [DUT]→[DUT management]→[Search]

4.1.3 Build schedule

ACal allows user to build or add DUT to schedule.Click [DUT]→[DUT schedule] can manage schedules that had been created.

4.1.4ADD to calibration list

ACal allows user to add DUT to be calibrate to the calibration list.

4.1.5Start Cal

ACal allows user to Start Cal after select DUTs to be calibrate.

4.1.6 View Data

System will jump to [Data center] to view the corresponding DUT history calibration data.

4.1.7 View Certificate

System will jump to [Data center] to view the corresponding DUT history calibration Certificate.

4.2 DUT Reminder

You can define a reminder in ACal,it can remind you to calibrate the DUTs about to fall due, and you can start calibrate them directly.

Steps to create a reminder: [DUT]→[DUT reminder]→[New]

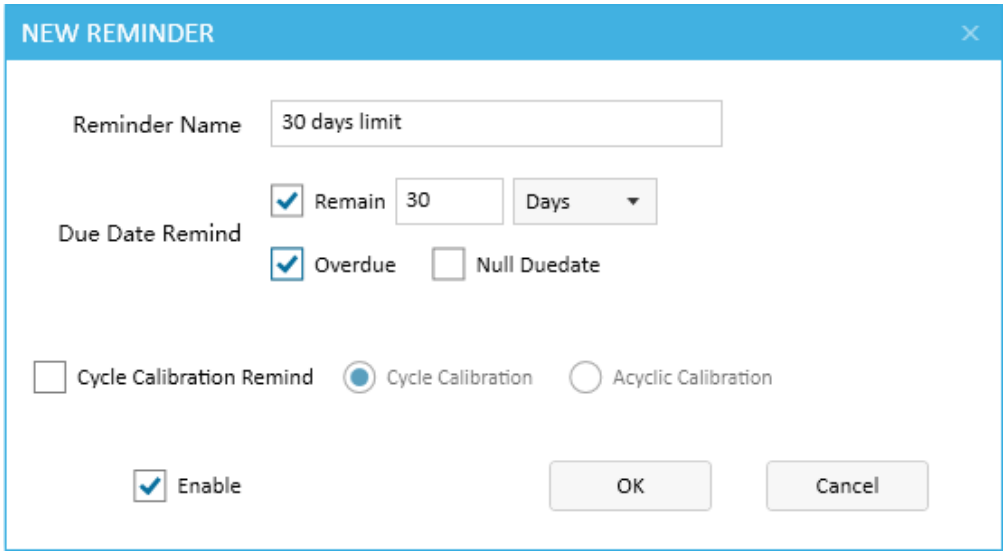


Figure 4-5

4.3 Customers

[DUT]→[Customers]

Chapter 5 References

5.1 Reference management

References is an important part of the certificate, You are suggested to add them to ACal before your calibration.

Reference that can communicate with ACal,likeAdditel 780, when it is linked with ACal, ACal will association it with database automatically based on the instrument's factory No.. If it does not exist in the database ,ACal will create a new reference information automatically. And you should complete its information before you build certificate.

Reference that can't communicate with ACal directly, like piston manometer, you may have to select or create Reference information manually.

There are three steps to create a reference:

1) Enter basic info: Reference Type, Reference Category, Device Name, Factory No., Reference No., Model, Manufacturer, etc.

2) Enter Technical: Range, Fluctuation, medium, etc.

3) Enter Calibration Information: calibration No., Traceability Institution, Calibration Date, Due date, Traceability standard, customer, etc.

Steps to create a reminder: [References]→[Reference management]→[New]

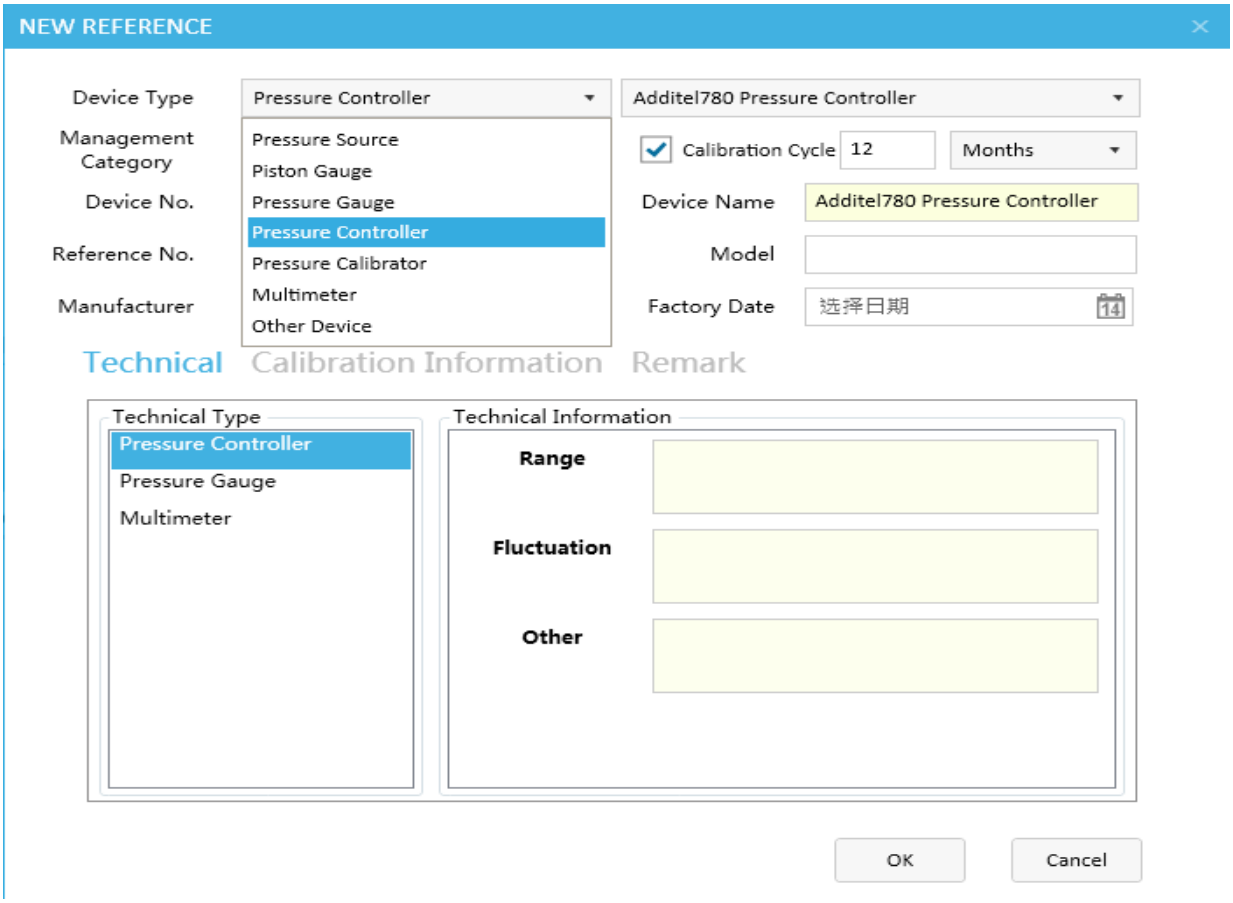


Figure 5-1

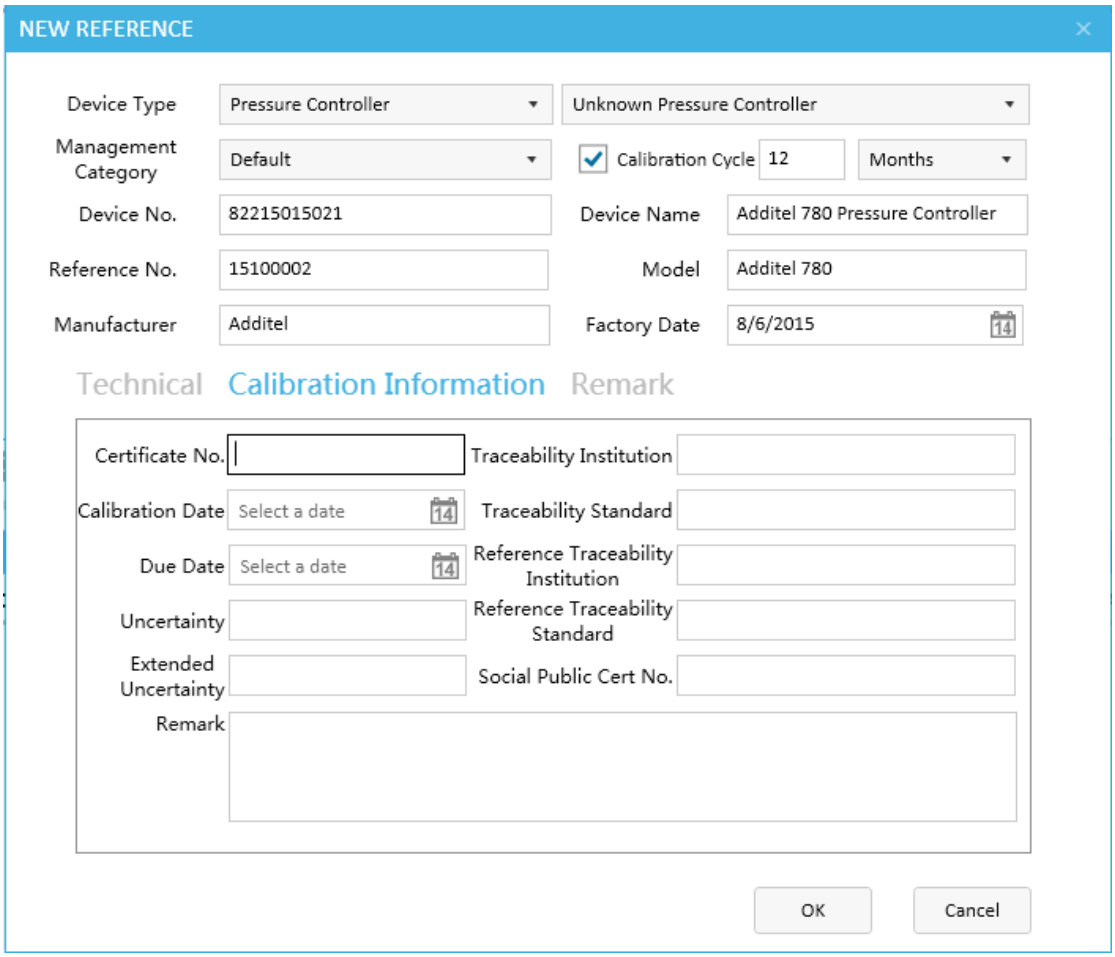


Figure 5-2

5.2 Reference schedule

Similar to DUT,and you can consult DUT schedule.

5.3 Reference reminders

Similar to DUT, and you can consult DUT reminders.

Chapter 6Calibration

In ACal, there are six basic steps to complete one Calibration:
1) Select Calibration solution
2) Select DUT
3) Calibrate
4) Save Calibration data
5) Build certificate
6) preview/print certificate

6.1Add and configure calibration solution

Add and configure calibration solution

If it is your first time to calibrate, you can add the preset solution according to the Device you bought. ACal has preset about 20 solutions to select.

Steps: [Cal Center]→[Manage my cal solution]

You can check the required solution from the solution list, click [Add to my cal solution] to confirm the select. And if you need to custom your solution, please click [New Custom Solution] in Calibration solution center interface.

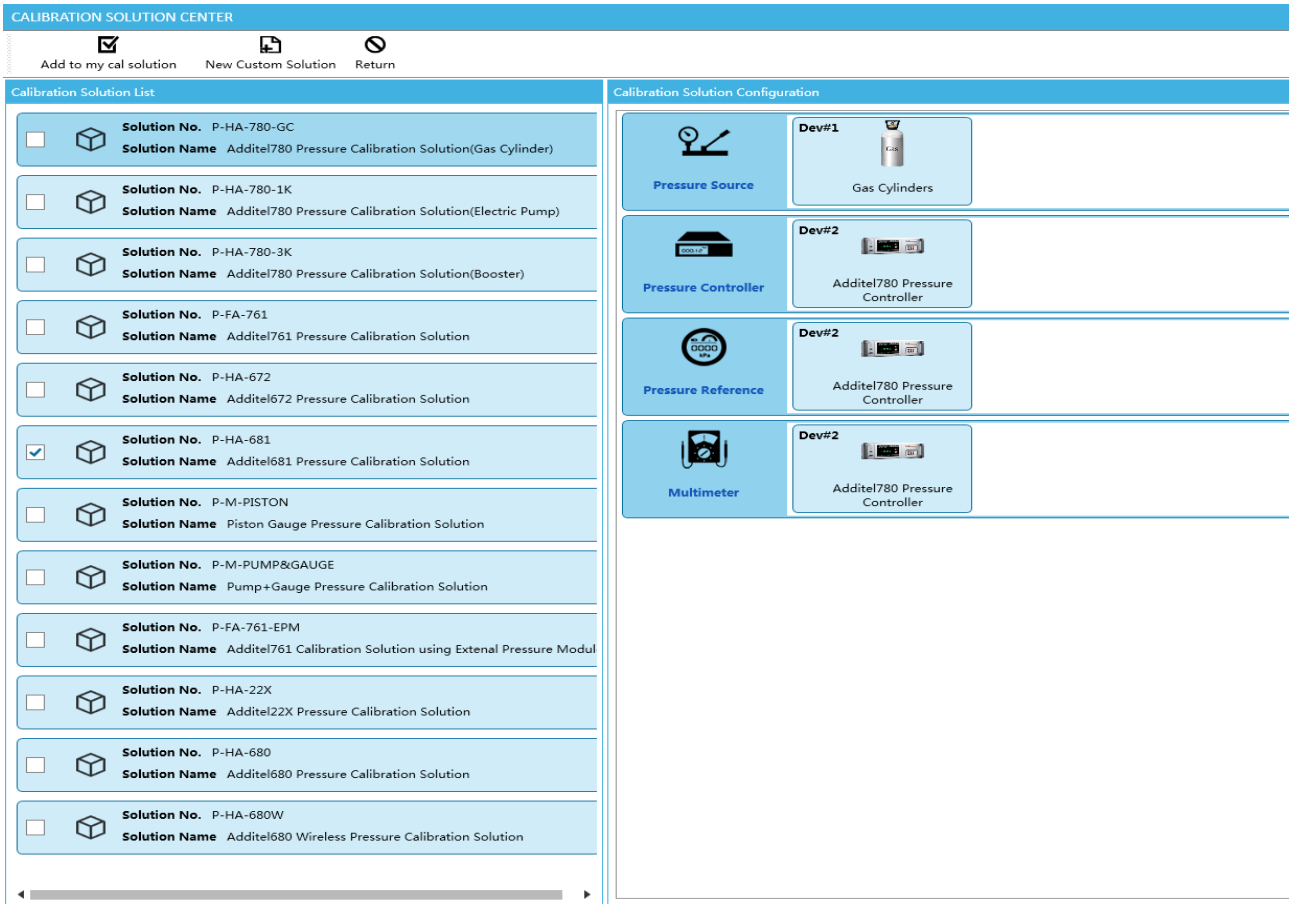


Figure 6-1

Configuration

After your add solution, you should complete the communication configuration with the corresponding devices and reference profile

Steps: [Cal Center] →[configuration]

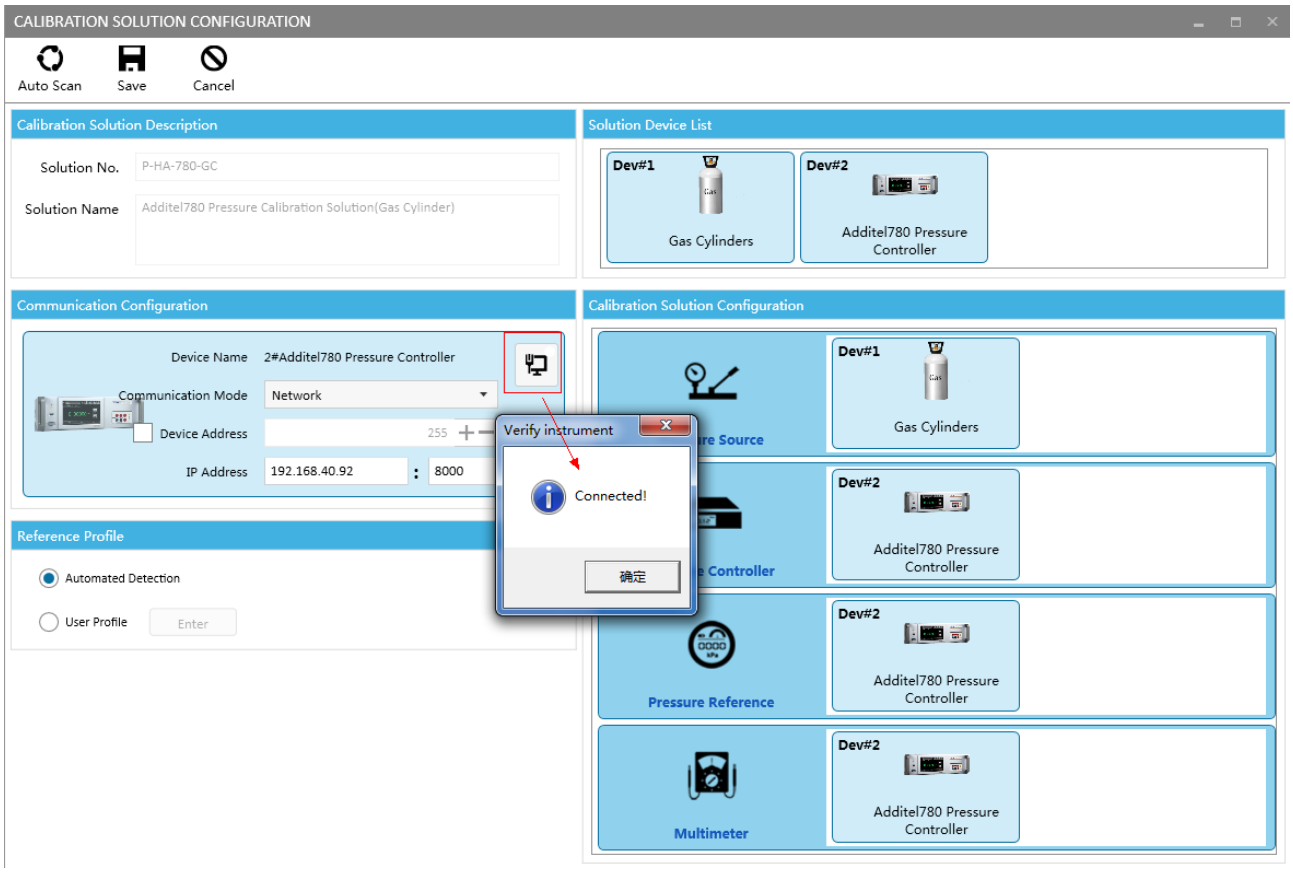


Figure 6-2

Reference profile:

1)Automatically detection

ACal can automatically match the reference in database according to instrument's Reference No. if it didn't exist the corresponding devices information in database, ACal would create a new message to record the instrument information, and you'd better complete it before you build certificate.

2) User Profile

Users are allowed to configure reference information manually,it can be used in all calibration which used the solution

Click [Start Cal], and if it pop-up an interface as below, it means the communication is unconnected, you have toreconfigure it again.

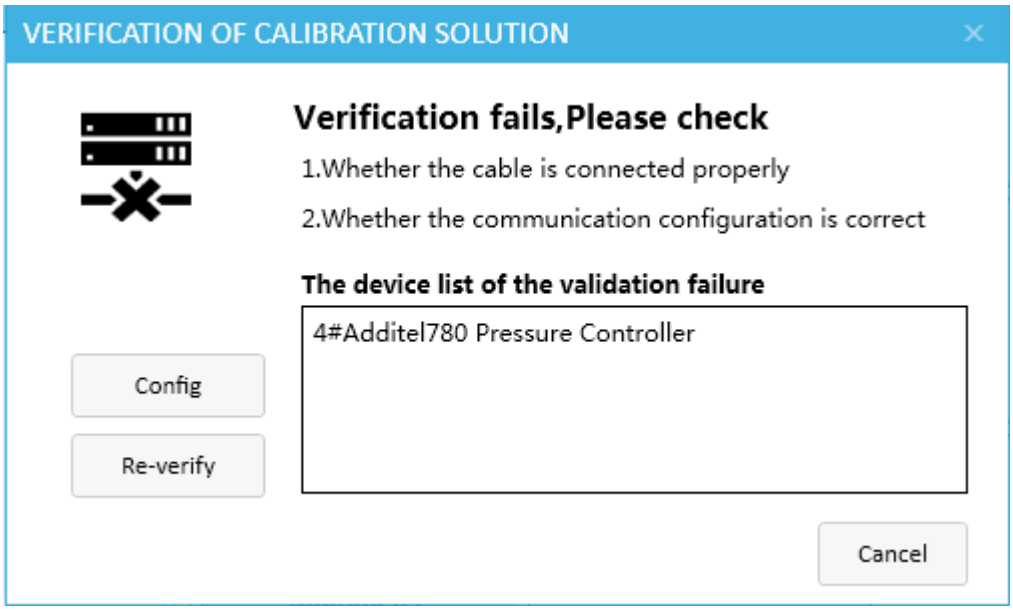


Figure 6-3

6.2Calibration

6.2.1 Ways to enter calibrating interface

1) Home; 2) Cal Center; 3) Data Center;4) DUT

1),2): When you click [Start Cal], the system will default following the process: Select calibration solution first, and then add DUT.

3),4):When you click [Start Cal], the system will default following the process:Select DUT first, and then select calibration solution.

6.2.2 Calibrating interface

Before Calibrating, the buttons in toolbar are:

1) Start: Start Calibrating, Please select or add DUT first

2) Cal Profiles: Configure the parameters include: Calibration Mode, set points, etc.

3)References:Select or Edit the Reference used in the calibration. Andif you want to calculate TAR, you may have to complete the reference gauge technical information.

4) Remark: The remark will be saved with the data.

5) Save: Save the calibration result

6) New Cal: Close current calibration, start a new calibration

7) To Cal List:Select DUT from calibration List

8) DUT Search: Select DUT from database directly

9) Add DUT: Edit and add a new DUT

10) Close: Close the interface

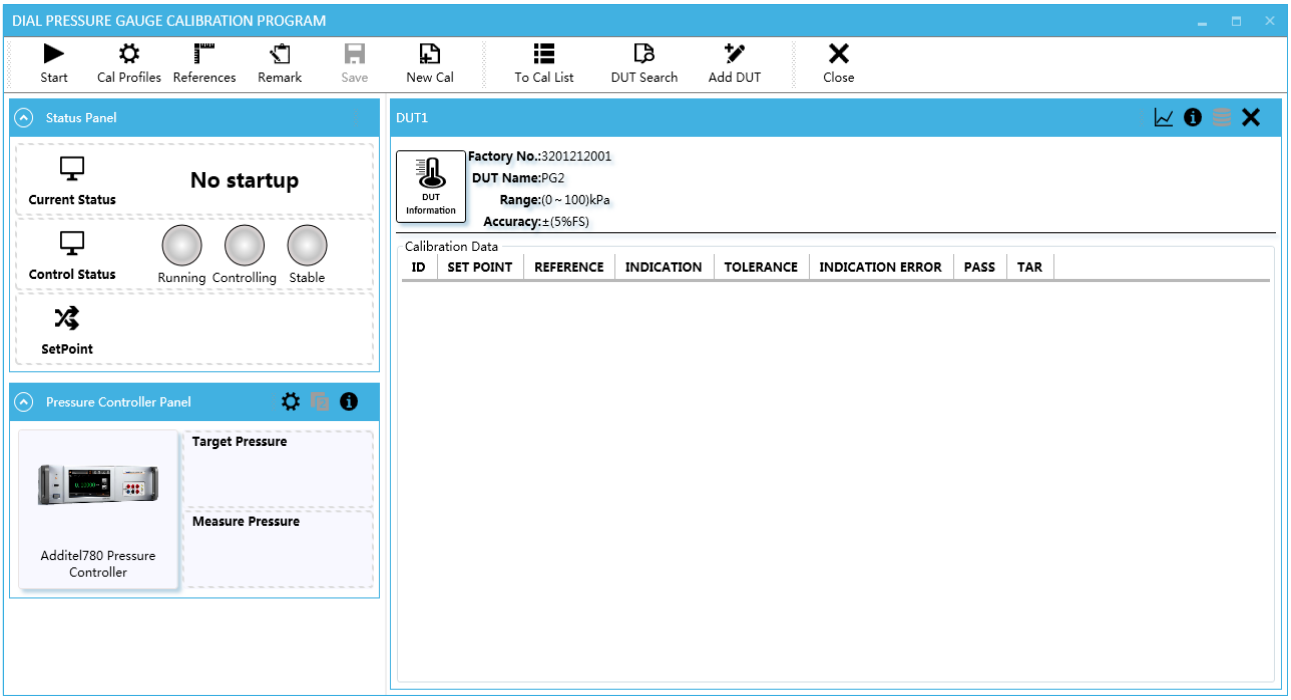


Figure 6-4

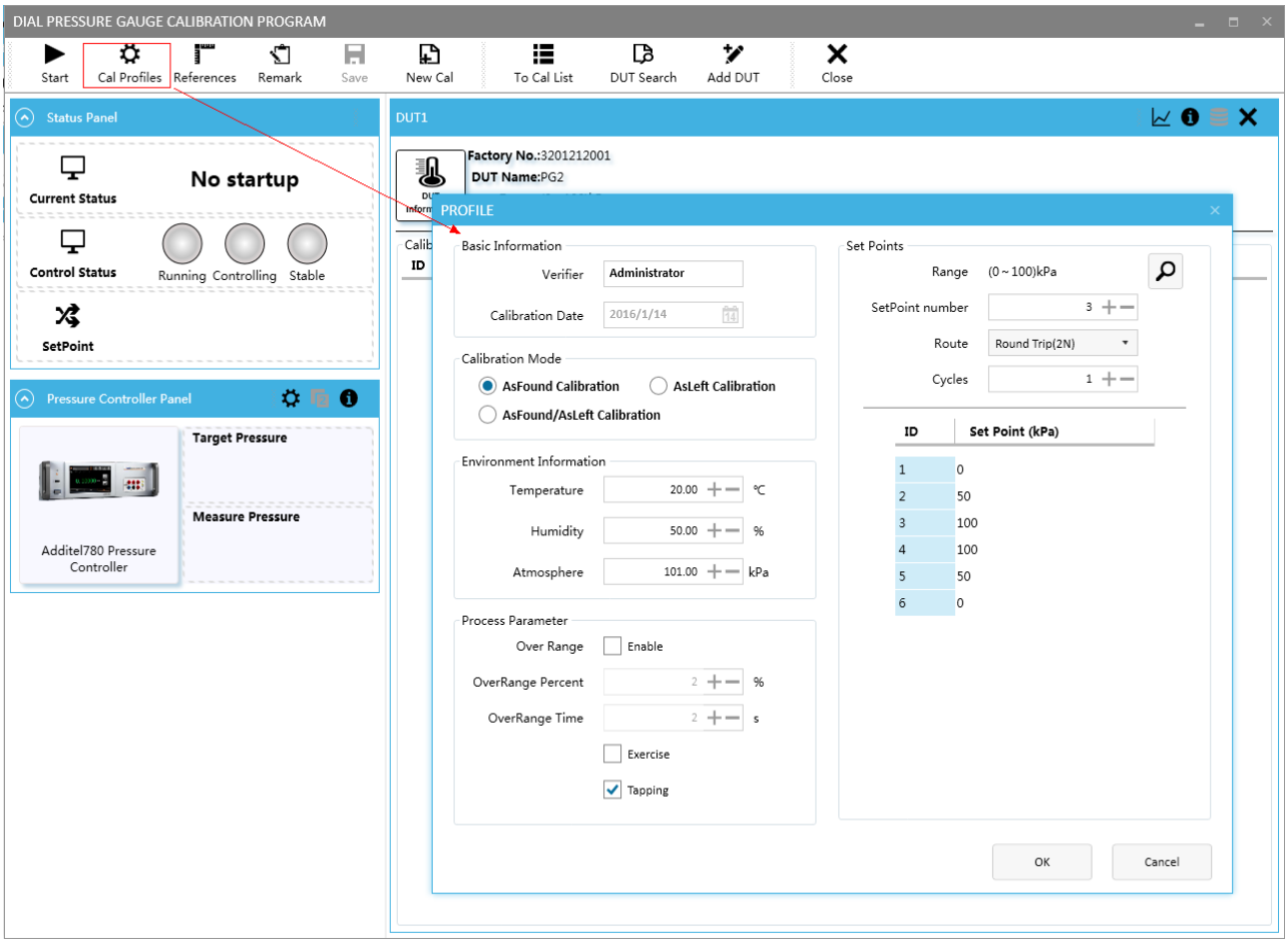


Figure 6-5

In Calibrating, the interfaces are:

1) Status Panel: Show the system, control and setpoint's status

2) Pressure Controller Panel: Show the set value and measure info

3) DUT: Show the info of DUT and its indicating value

4) Calibration Data: Record data

5) Calibration Data Input Panel: Enter the current setpoint's value of the Devices. The detail of the operation is shown in Appendix C <Dial Pressure Gauge Control That Input Indication>

After complete the calibration, click [Save] to save data. Then the data will be saved in data center, you can view them by click the icon on the interface(as shown in Figure 6-8) or go to data center.

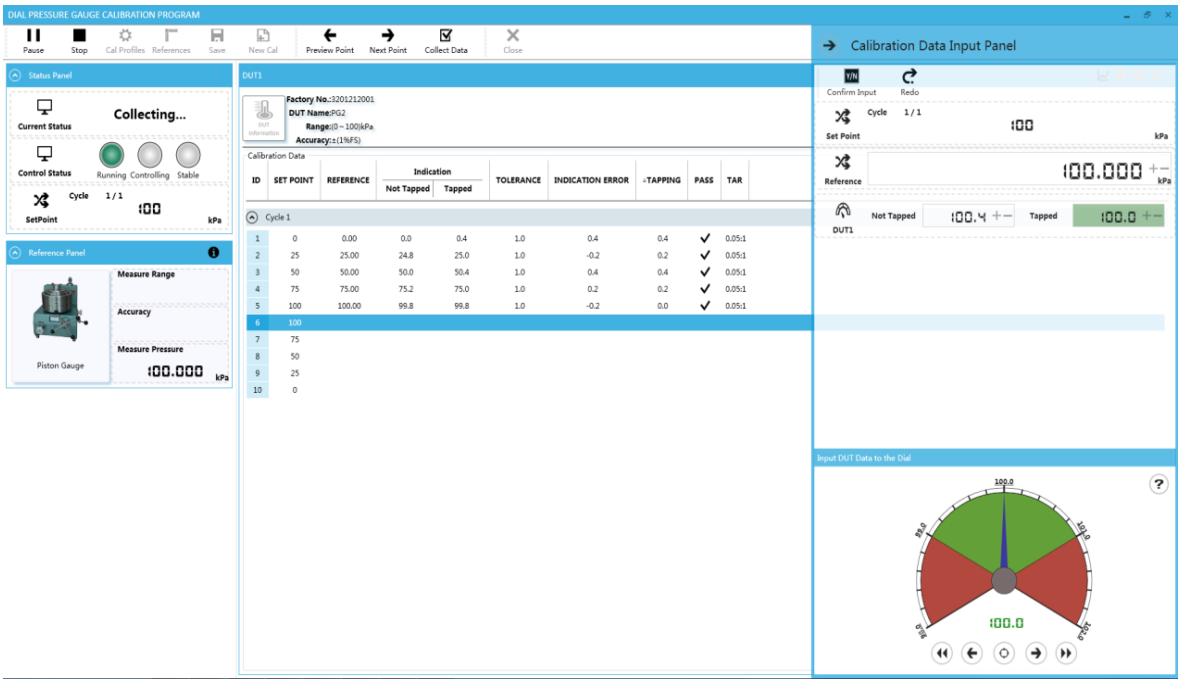


Figure 6-6

Tips:

1)Tolerance Accuracy Ratio, or TAR for short, is to measure the standard degree of the reference to DUT. In real case, TAR=Reference's accuracy/DUT's accuracy. So in a general way, the bigger the TAR is, the much better the choice of reference is and the more reliable the calibration is.

2) If you want to calculate TAR, you may have to complete the reference gauge technical information and select it as reference gauge in calibration interface.

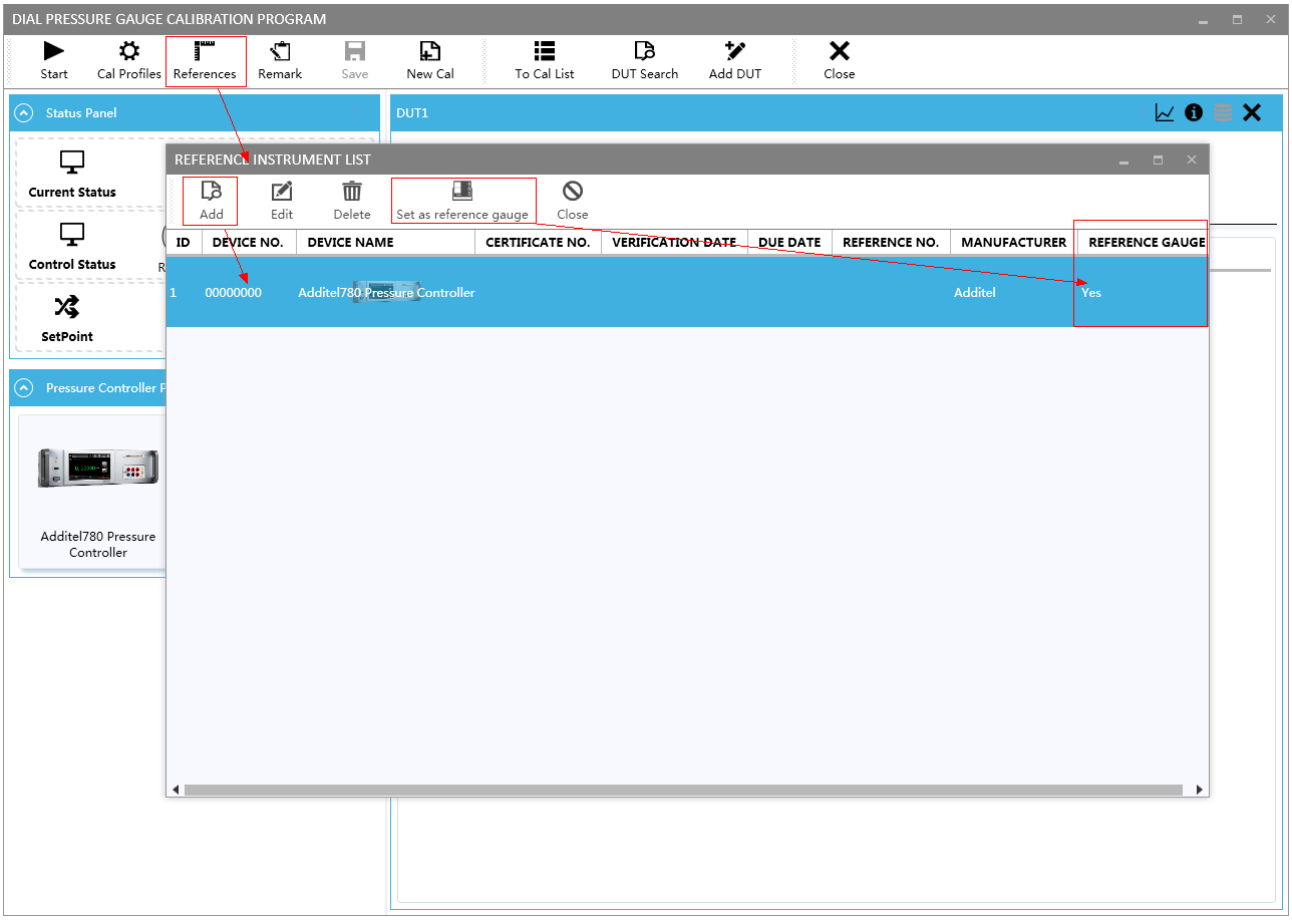


Figure 6-7

6.2.3 View calibration record

After saving the data, you can click the data icon on the top right corner to view calibration record, as shown in Figure 6-8. You can also view the record in Data Centeras shown in Figure 6-9.

In Record interface, you can view and update other DUT and calibration information, and you can save again after you complete.

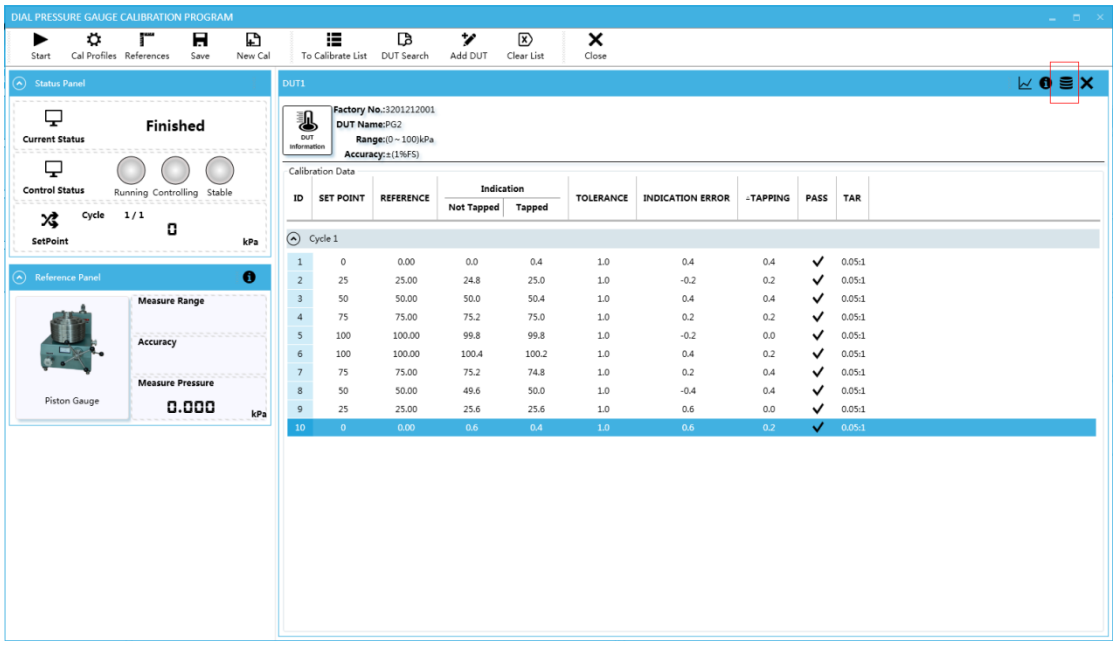


Figure 6-8

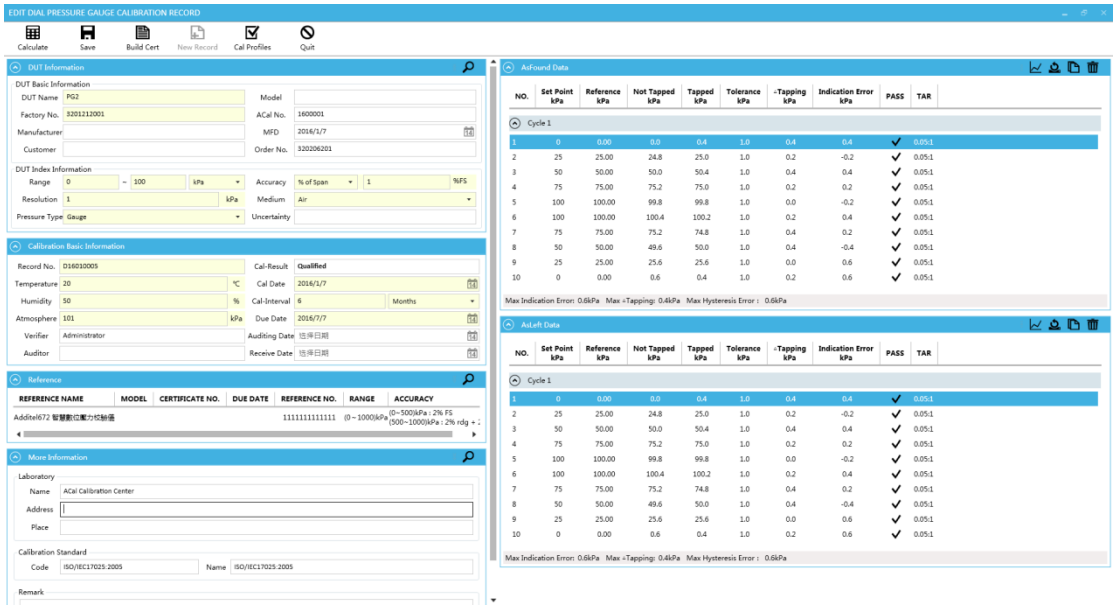


Figure 6-9

Chapter 7Data Center

After saving the calibration result, youcan enter data center to view the data and complete the other calibration information.

Functions in Data Center include:

1) Complete the information of DUT and Calibration information

2) View the record. You can view the data, the error chart and copy data, etc.

3) Build certificate

Select one data item and after your completing of all information,and click at [BuildCert] to build certificate of the corresponding DUT.

4) Re-Calibrate

Select one data item and Click at [Start Cal] to re-calibrate the corresponding DUT, and the calibration data will be update when you save your new calibration data.

5) Create a new Data record

Click at [New], it will add a new DUT data item, and then you can operate it as normal.

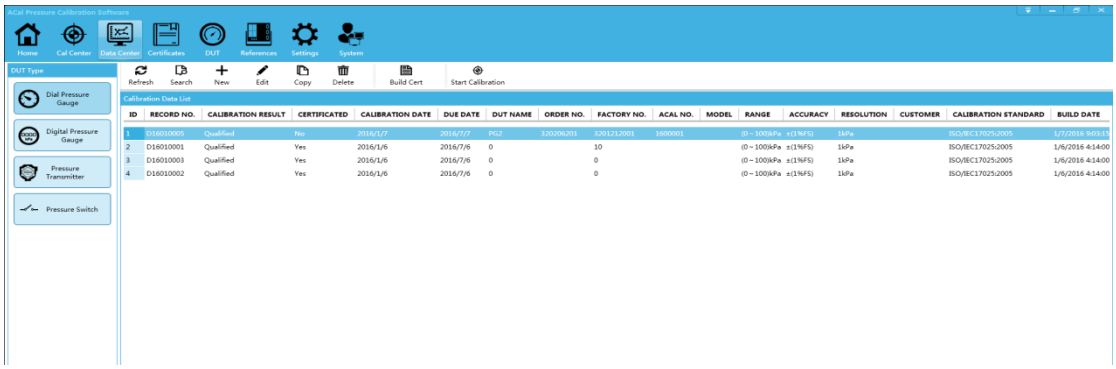


Figure 7-1

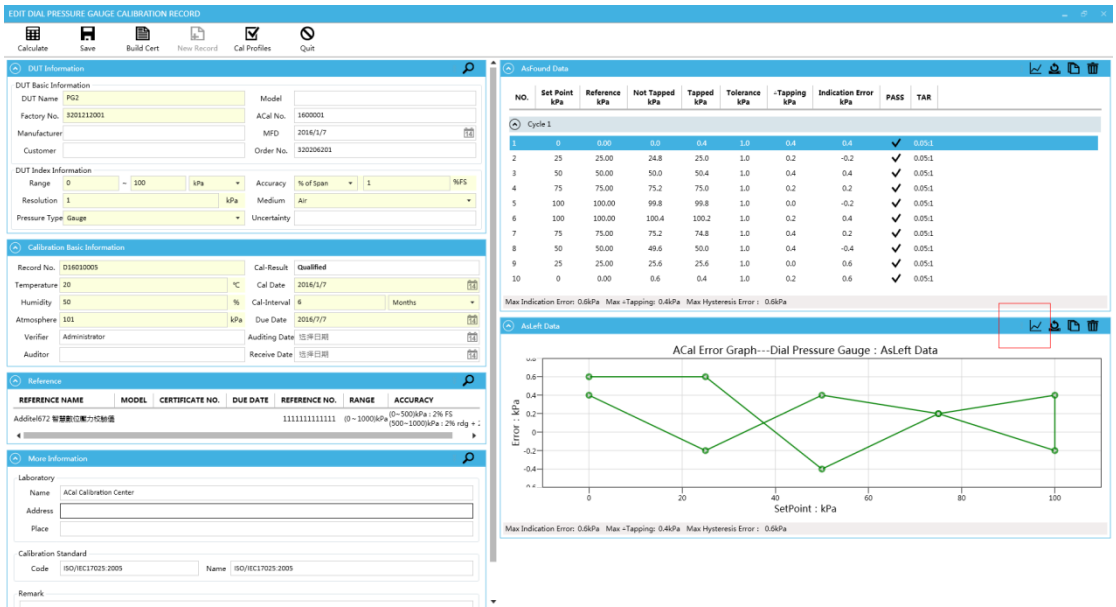


Figure 7-2

Chapter 8 Certificates

After building certificate, you can enter [Certificates] to operate Certificates. The Certificate offers search, print, preview, export certificate functions, and support export certificate in Excel and PDF format.

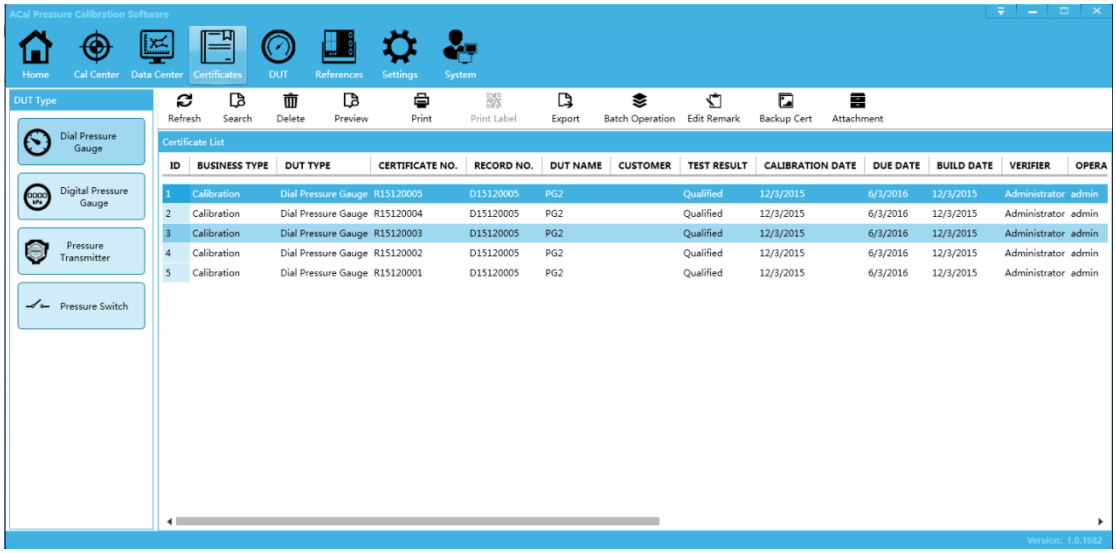
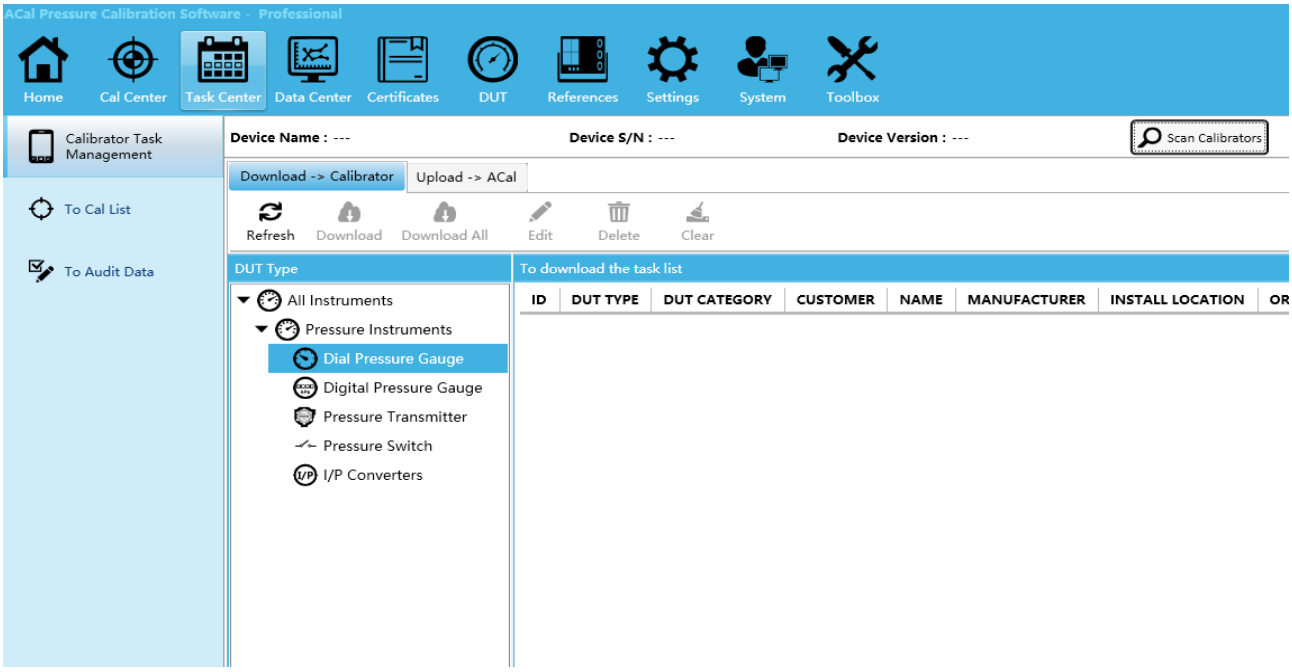


Figure 8-1

Chapter 9 Calibrator Task Management



Calibrator task management is for this situation that verification personnel who do not carry

the computer but carry the calibrator go to the scene to finish the verification according to the tasks of Calibrator. verification personnel can set the tasks in the ACal calibration software, and then download the task to the calibrator, after verification, he will upload the calibration data back to the ACal software ,and then View data or generate a certificate. This usually includes the following steps:

1 download the task from the ACal calibration software to the calibrator

2 calibration instrument in the field

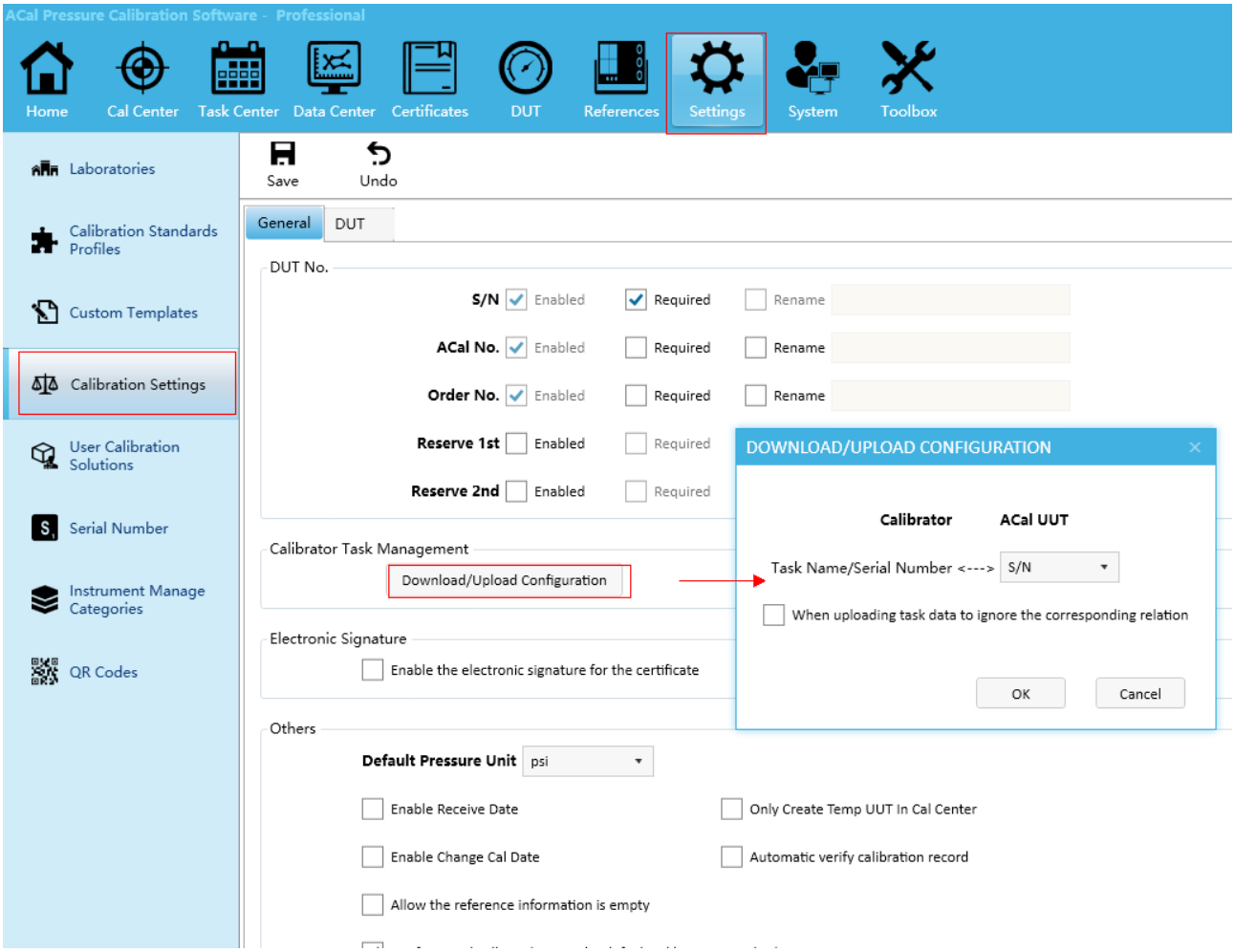
3 upload task data to ACal calibration software

Note: this function only supports Additel760, Additel761

9.1 Calibrator Task Management Setting

Before using the calibration task management work, you need to configure it.

Open [ACal] →[Settings]→ [Calibration setting] →[Download/Upload configuration]



There are two parameters in this setting:

1 the Task Name/Serial Number value :you can set S/N , ACal No .Order No. as this value when you download tasks.

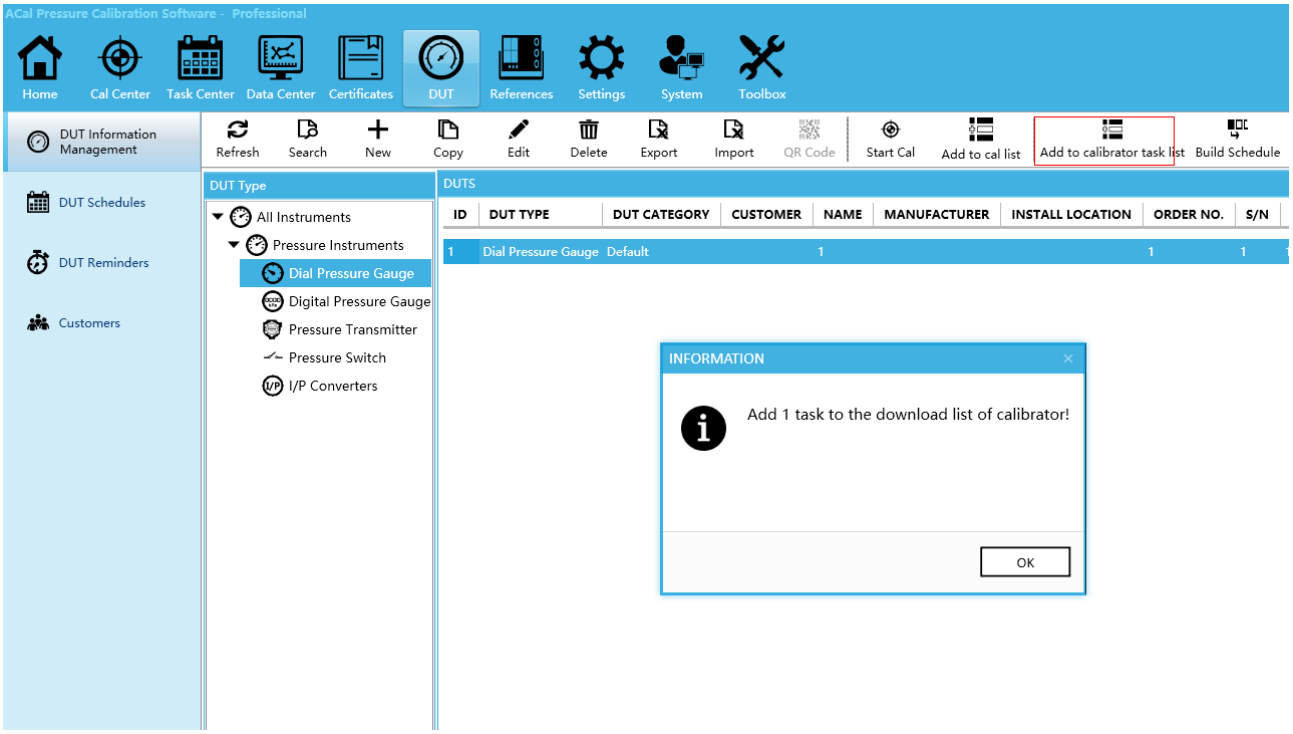
2 When uploading task data to ignore the corresponding relation :if it is not checked ,when you

upload the task data ,ACal can fill this data with other missing data from database according to parameter1.such as Install Location ,Install Mode .if it is checked, you will manually add other missing data by yourself.

9.2 Download the task from the ACal calibration software to the calibrator

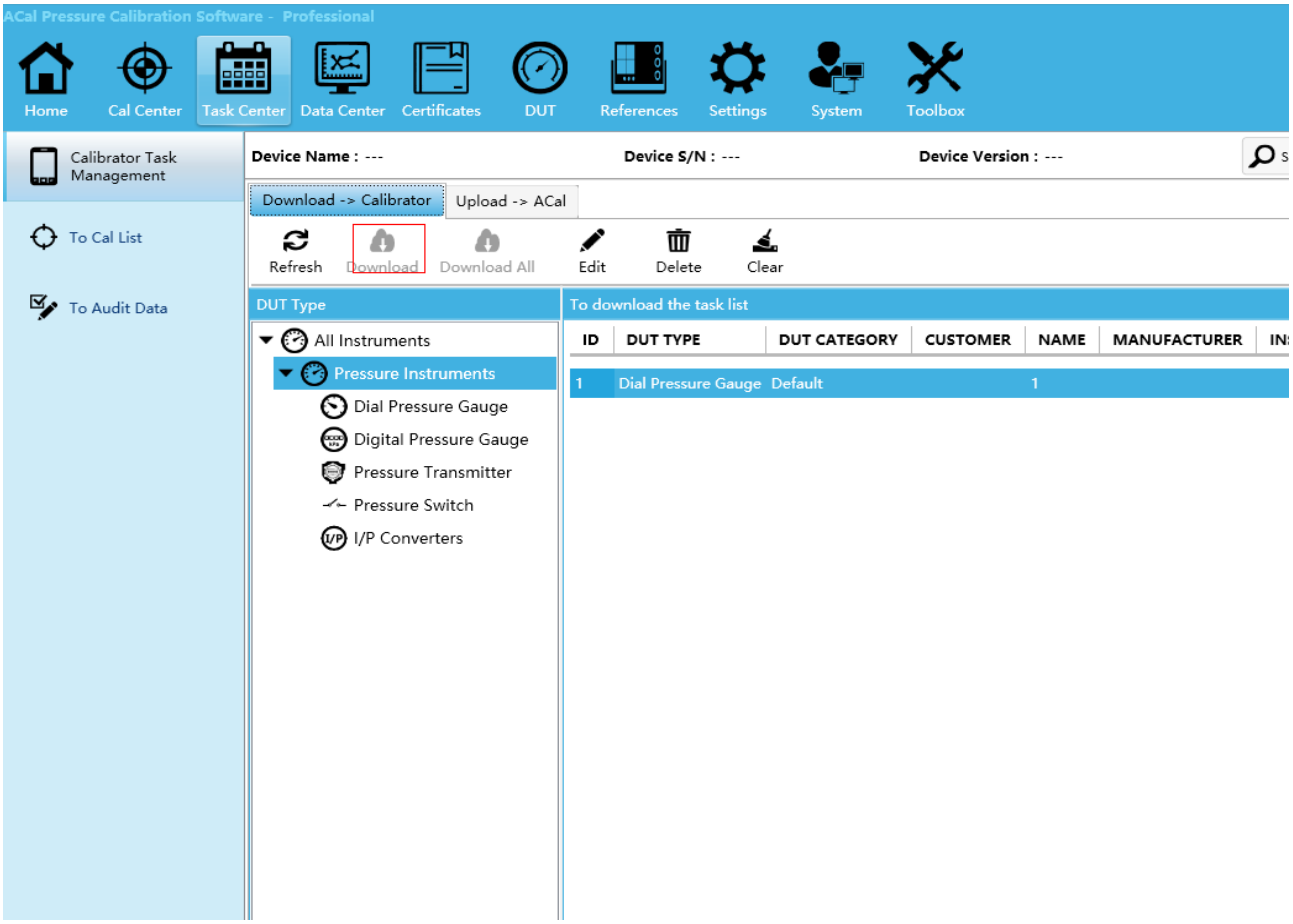
9.2.1 Add to calibrator task list

Open [DUT] →Select Tasks→ [Add to calibrator task list]



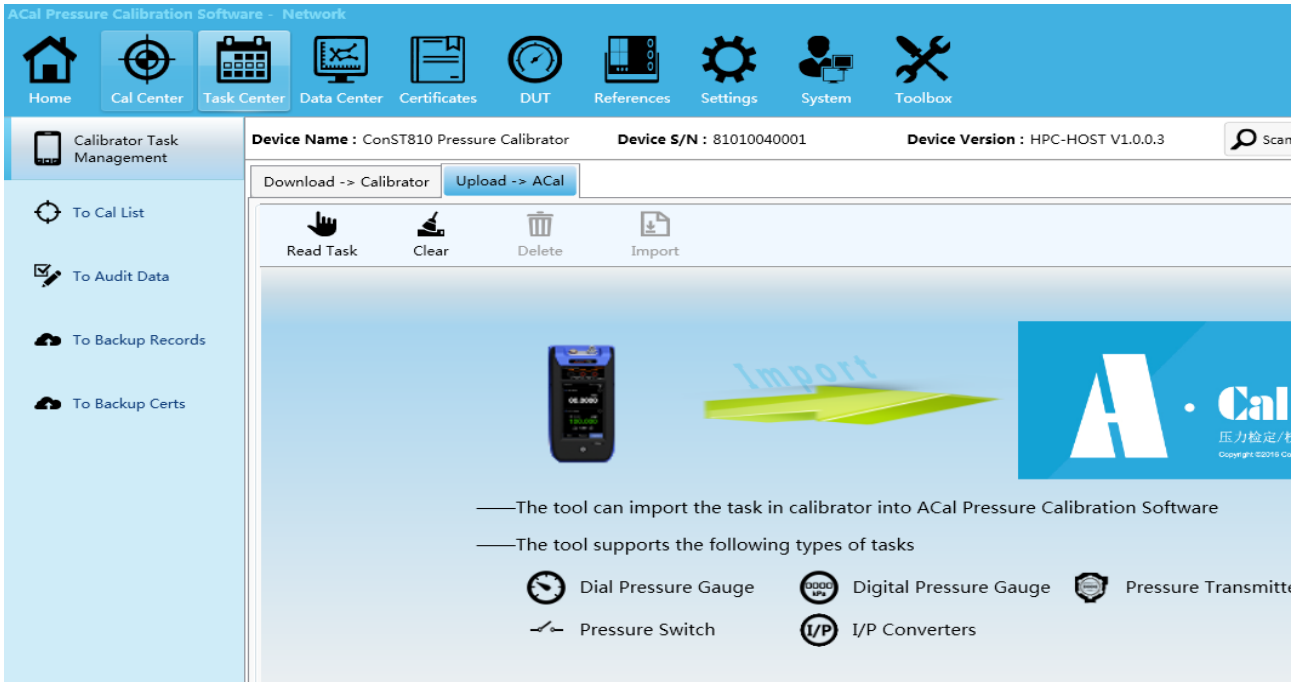
9.2.2 download the tasks to the calibrator

Open [Task Center] →[Calibrator Task Management]→ [Scan Calibrators] → [Download->Calibrator] →Select tasks→Click[Download]



9.3 upload task data to ACal calibration software

Open [Task Center] →[Calibrator Task Management]→ [Scan Calibrators] → [Upload->Calibrator] → [Read Task] →Select task to upload.



A、 Customize Certificate Help File

1 Introduce

You can access the function by following operation:

Open [Settings]→[User Template Center], as shown in Figure1

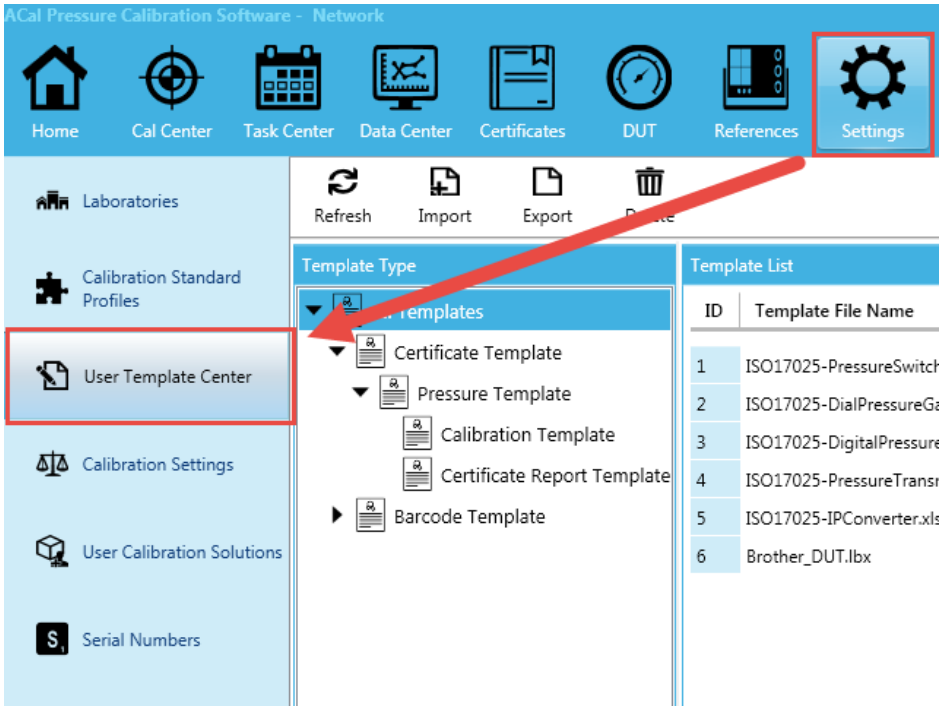


Figure 1

Custom Template Steps:

Step1: Download the template by click the corresponding button. And save it wherever depend on yourself.There are two ways to get the template: get the preset template and get the custom template.

(1) Get the preset template, as shown in Figure2

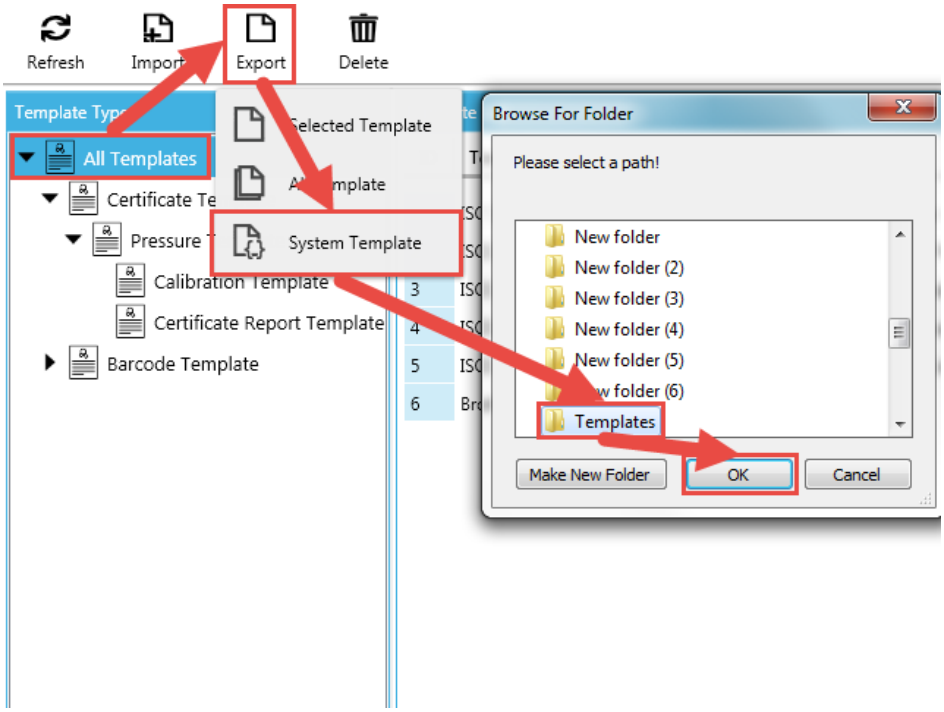


Figure 2

(2) Get the custom template, as shown in Figure3.

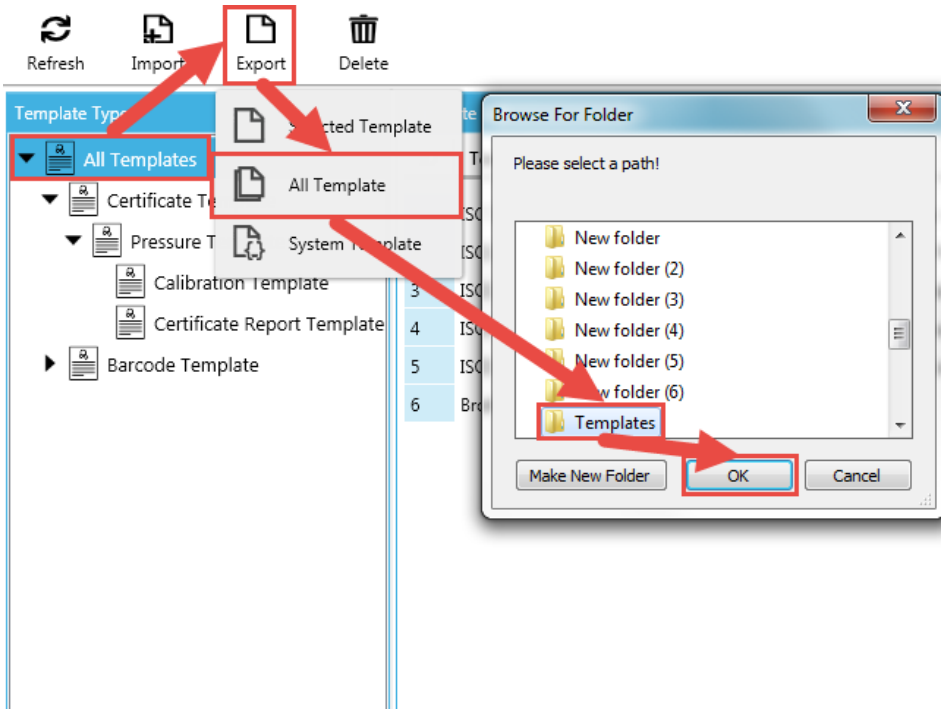


Figure 3

Step2: Open and design the template file that you want to modify and then save it. The specific operation is shown in chapter2: Modify Certificate TemplatesMethod and chapter3: Modify Report Templates Method.

Step3: Import your template to ACal Server, as shown in Figure4.

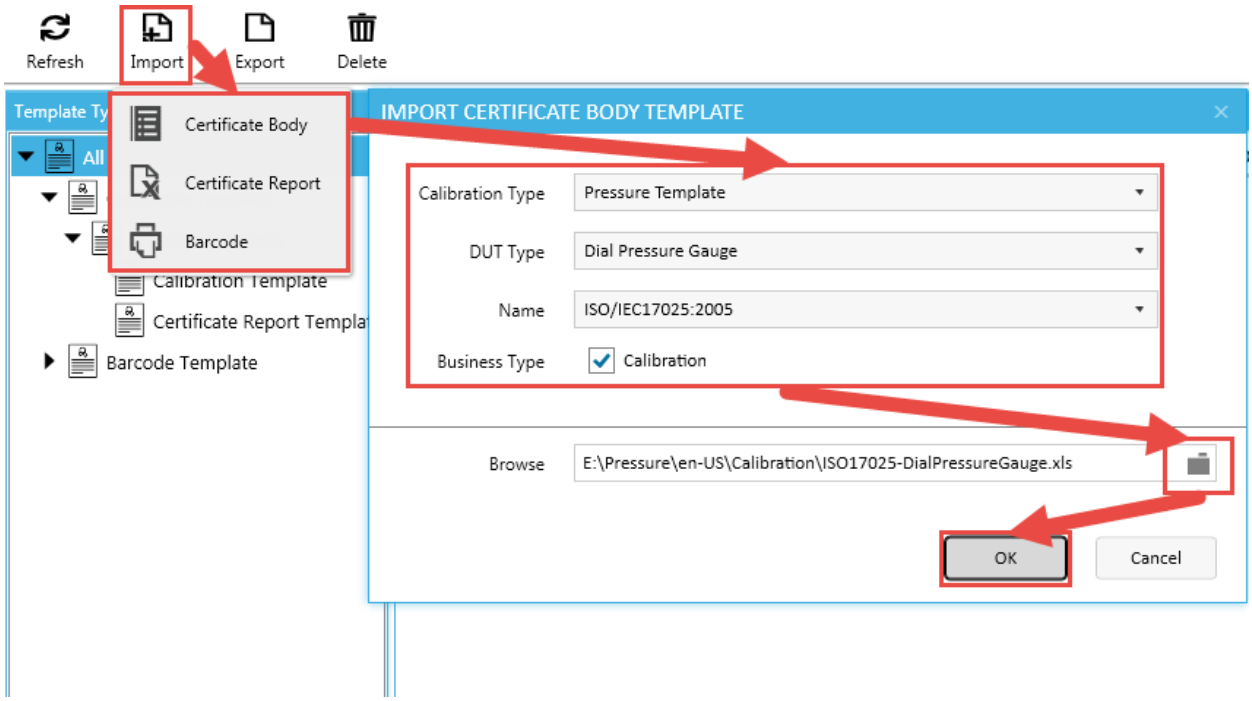


Figure 4

Tips:

(1) Don't try to modify the template's file name.

(2) ACal's factory preset template is placed on the local and custom template is placed in server, so they won't cover each other.

2 Modify Certificate TemplatesMethod

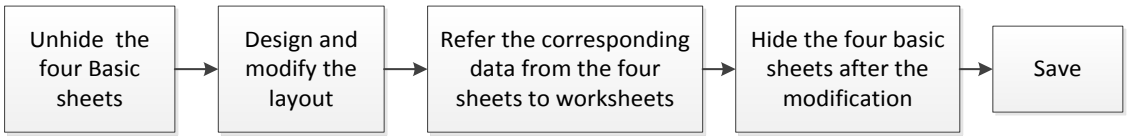
(1) There are four hidden basic sheets beside the several worksheets:

- BaseInfo
- CalData1
- CalData2
- Initial

(2) The four basic sheets receive data from ACal software directly, and they keep certificate information and calibration data and other information.

So, the core party of the customize template is complete the data reference from the basic sheets to worksheets.

Step:



Step1: Open the target template, Right click at the place of worksheet names, and select unhide.

Step2: Modify the worksheet

For example, as shown in Figure 5, if you want to add Calibration Result in Certificate worksheet of template <ISO17025-DialPressureGauge.xls> , add the item in wherever you need.

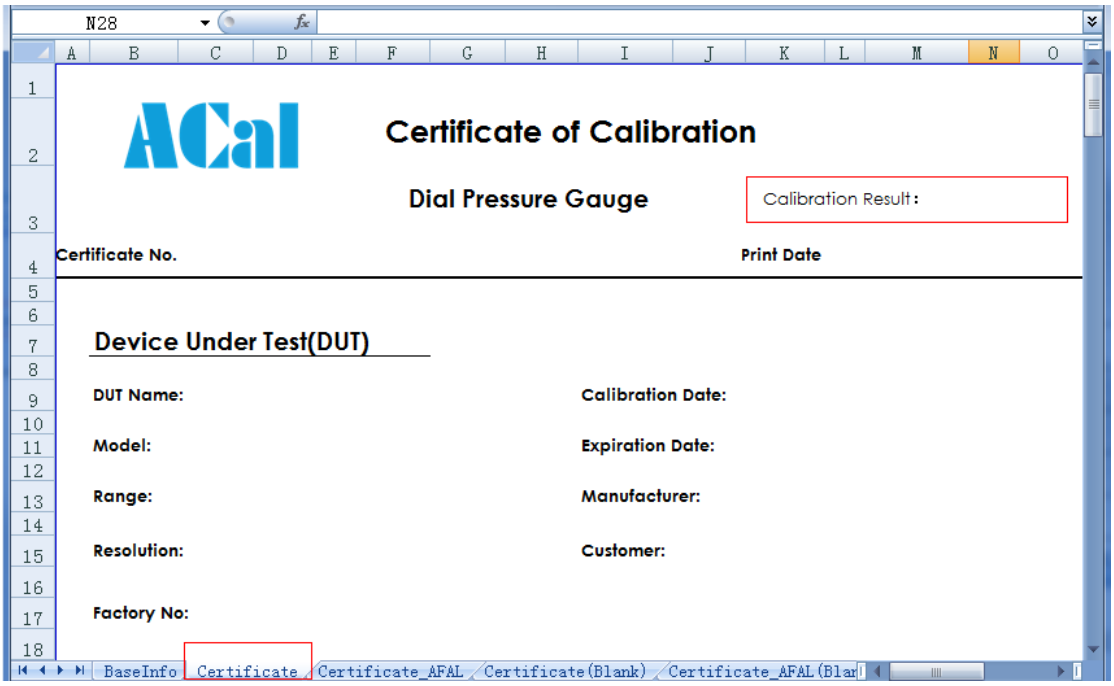


Figure 5

Step3: Find the corresponding item [Cal Result] in BasicInfo, We can see the cell behind the Cal Result cell is G28, as shown in Figure 6. Then fill the cell which we set in step2 with "=BasicInfo!G28",as shown in Figure 7.

When generate certificate, the value of cell N3 in Certificate worksheet will be update synchronized with the value of cell G28 in BasicInfo sheet.

Step4: Hide the four basic sheets. When you complete the modification, you must hide the four basic sheets before save the template, or the information will lost when you generate certificate.

If the operation above is correct, when you generate corresponding certificate, the result would be shown as Figure 8.

So, when you want to add other information, you can do like above: find the corresponding cell and reference it in target cell.

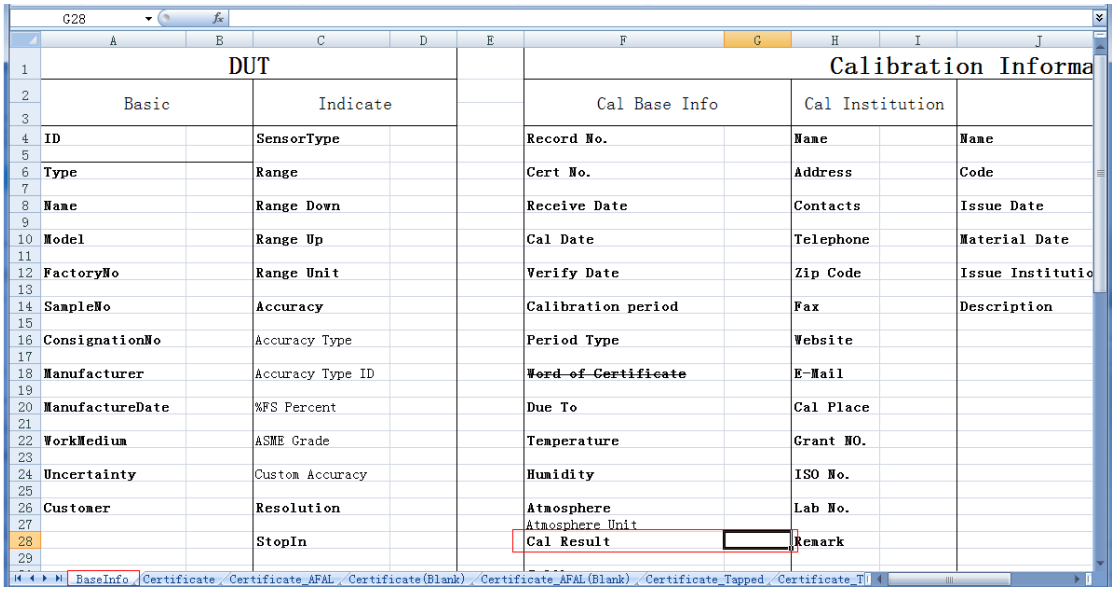


Figure 6

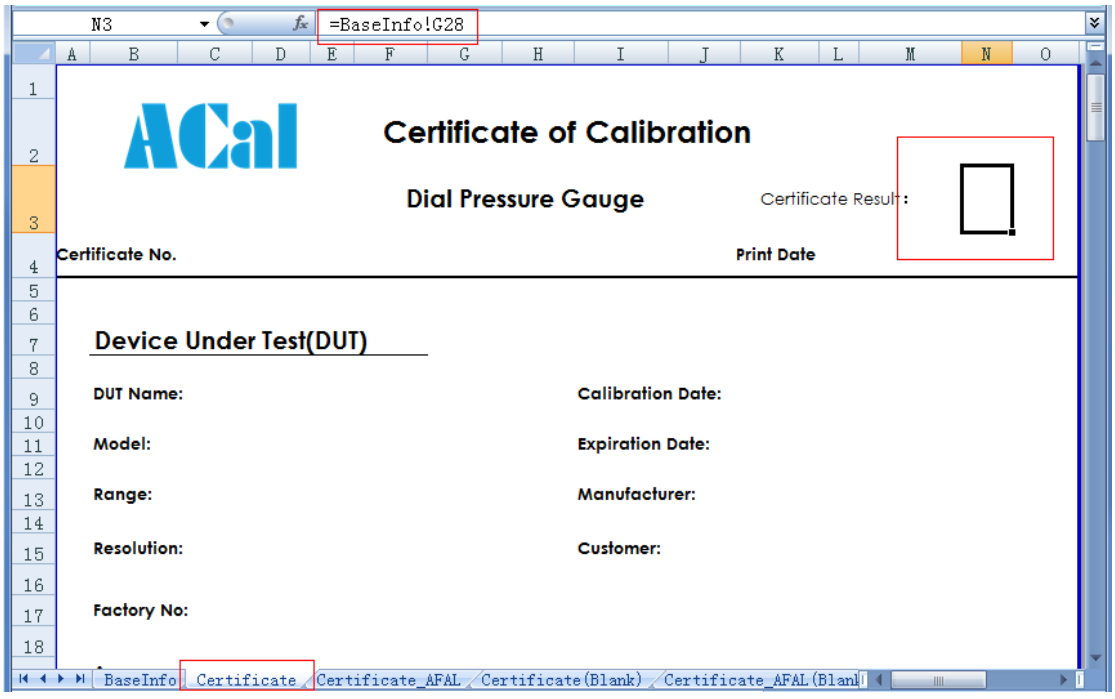


Figure 7

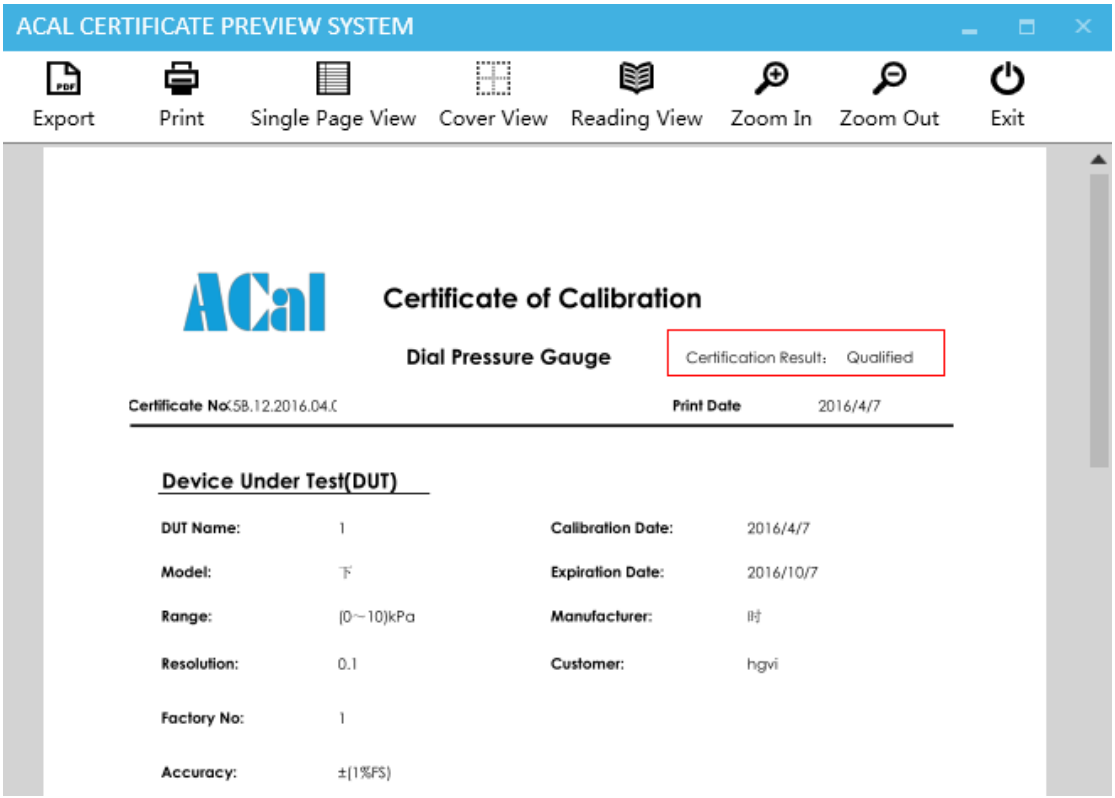


Figure 8

3 Modify ReportTemplatesMethod

Report template file contains export reports of all DUT types andconfiguration hiding tables corresponding toeach DUT typeofreport. You can modify the report form and the corresponding configuration table to modify the report ofspecifies DUT type.

Step:

Step1: Open the target template, Right click at the place of worksheet names, and select unhide.

Step2: Modify the worksheet that you want to modify. For example, to modify the<Dial Pressure Gauge(ISO)>: As shown in Figure 9, if you want to Exchange columns ID and Customer,and change column S/N to column Custom No.

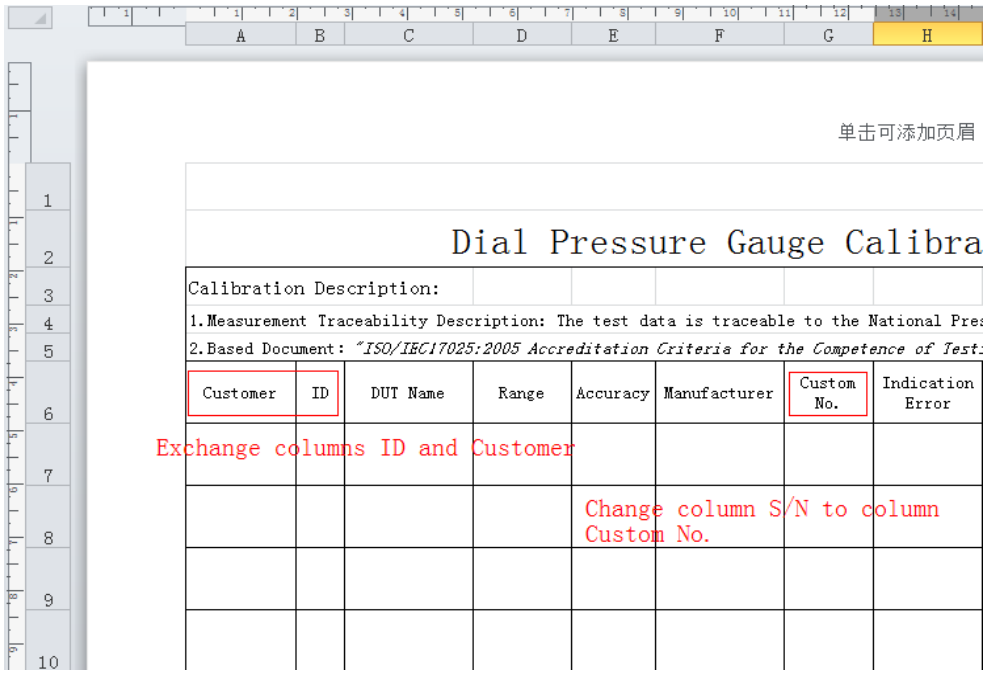


Figure 9

Step3: In the worksheet <Dial Pressure Gauge Config(ISO)> to find the revised column name, and re-fill the corresponding column information, as shown in Figure 10.

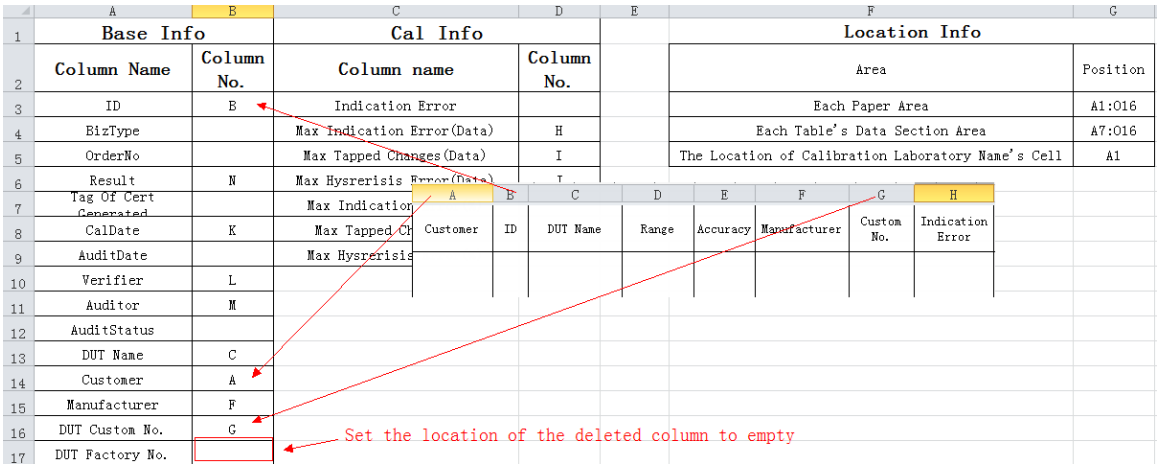


Figure 10

You need to configure the location information of the configuration table to ensure that the data is filled in the correct position. The software can output the calibration laboratory name set by the user in the software to a specific location. If the user does not need the software to automatically output the laboratory name,set the check laboratory name's cell location to empty, as shown in Figure 11.

Location Info	
Area	Position
Each Paper Area	A1:O16
Each Table's Data Section Area	A7:O16
The Location of Calibration Laboratory Name's Cell	

Figure 11

Step4: When you have finished modifying the worksheet, hide all configuration worksheets and import the modified template files into the Acal software. If the operation above is correct, when you generate corresponding report, the result would be shown as Figure 12.

Dial Pressure Gauge Calibration Record Report

Calibration Description:

1. Measurement Traceability Description: The test data is traceable to the National Pressure Benchmark through this measurement

2. Based Document: *"ISO/IEC17025:2005 Accreditation Criteria for the Competence of Testing and Calibration Laboratories"*

Customer	ID	DUT Name	Range	Accuracy	Manufacturer	Custom No.	Indication Error	Tapped Changes	Hysrerisis Error	Cal Date	Verifier	Auditor	Result	Cert No.
Metrology	1	Dial Pressure Gauge	(0～100)MPa	±(5%FS)	ConST	102030405	0.00%	/	0.00%	2017/6/13	Cary	Simon	Qualified	R17060105

Figure 12

4 Supplement

(1) ACal Template Description

ACal system's certificate templates were made in Excel, and only support excel 2003, if you use office 2007 or higher version, you should pay attention for the format in which file saved.

There are many worksheets in one template, and the system can determine the target one depending on your choice during build wizard automatically.

(2) Customize ACal certificate template

There are four hidden worksheets BaseInfo, CalData1, CalData2 and Initial. When exporting certificate data, UUT information, Reference information, calibration information, calibration

standard, etc. will be stored in BaseInfo. Calibration data include asfound data and asleft data will be stored in CalData1 and CalData2. And Initial will store some configuration of the template. You'd better not change anything about them, or some unknown errors will occur to generate exceptions during building the certificate.

B、 Scanner and QR Maker

ACal offered the functions of QR printing and Scanner.

QR printer

1) The interfaces that support to print QR code: 1 DUT; 2 References; 3 Certificates.

2) You should configure the QR code content which include graphic and text before printing in sub-setting [QR Codes] of [Settings] interface

3) ACal has been preset the QR code printer intermecPF8t, Brother and intermecPC43t. You should connect a QR code printer correctly first and then select the corresponding printer in ACal system.

Scanner

1) After scanning one QR code, if there's no corresponding data item exit, it will show blank. For instance, if the scanner identified the QR code was a certificate whose Certificate No. is 001, and no corresponding certificate whose Certificate No. is 001 in the system can be found, it will show blank in Certificates interface.

2) The type of the QR code content that can be scanned: 1 DUT; 2 References; 3 Certificates

3) It can scan all instruments' QR codes of our company, and also can recognize the DUT whose QR code content is one string.

4) ACal has been preset MS1690，Xenon1900，USB HID scanner，USB Keyboard scanner， and serial port scanner. You should connect a scanner correctly first and then select the corresponding scanner in ACal system.

1) QR printer

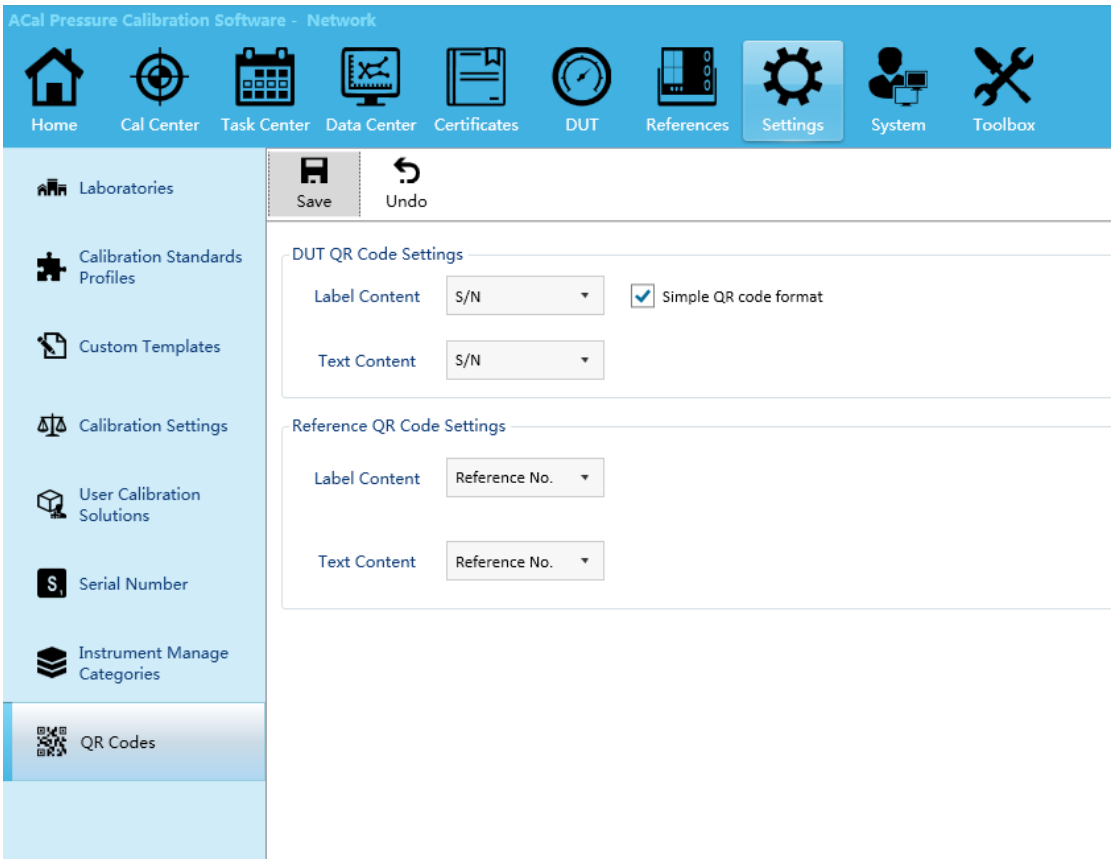
Tips: the system only supports the preset printers

Step1: Connect printer

Connect the QR code printer correctly with the computer.

Step2: Configure the QR code

[Settings]→[QR Codes] →[Save]



(1)DUT

Configure the DUT QR code graphic and text content.

(2) References

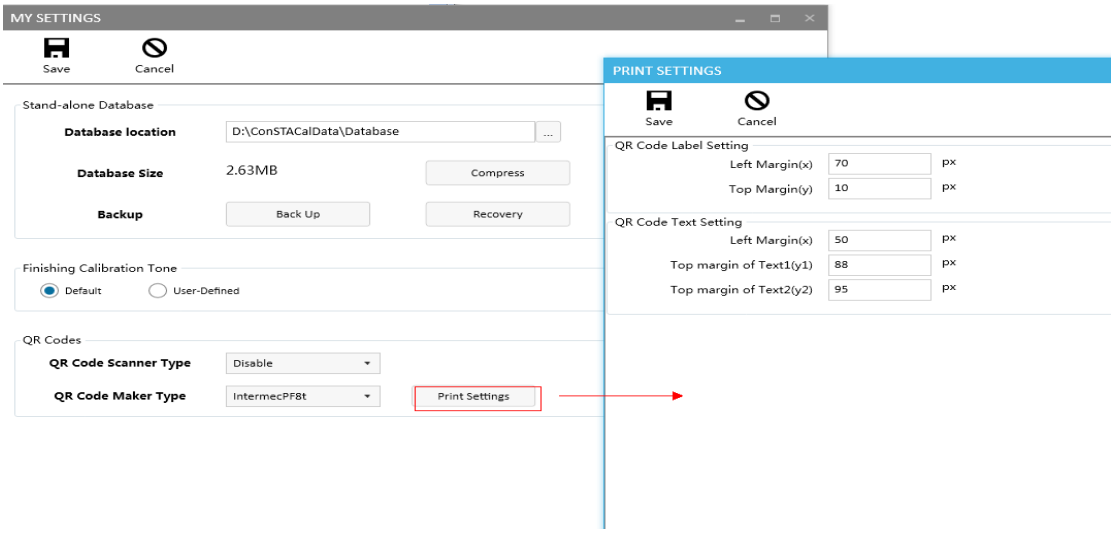
Configure the References QR code graphic and text content.

(3) Certificates

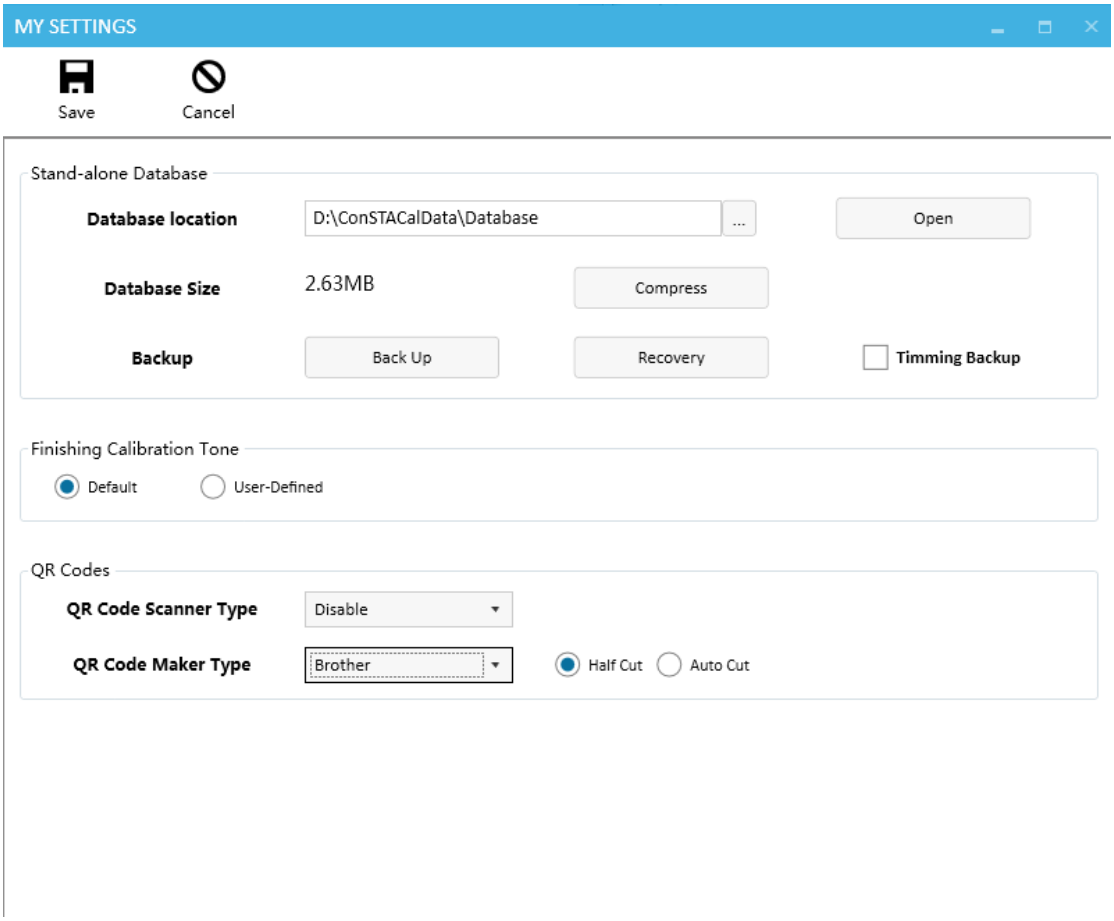
ACal do not allow users to configure the content of Certificate. And the system default the QR code graphic content is: Type/GUID No./Certificate No. in database, and the text content is : Certificate NO.

Step3: Configure the printer

1 intermecPF8t、intermecPC43t



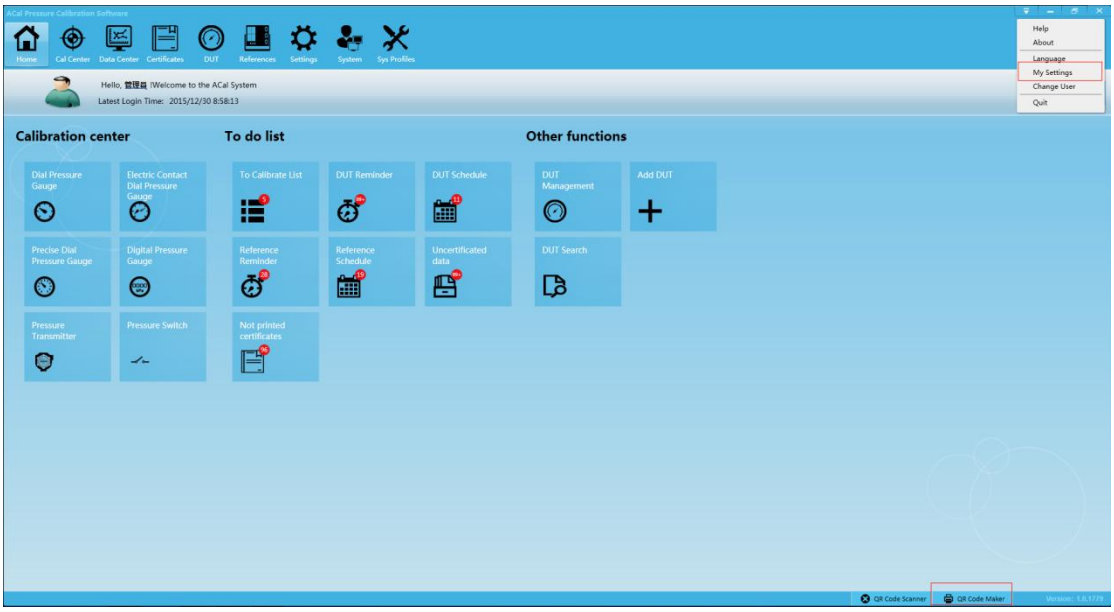
2 Brother

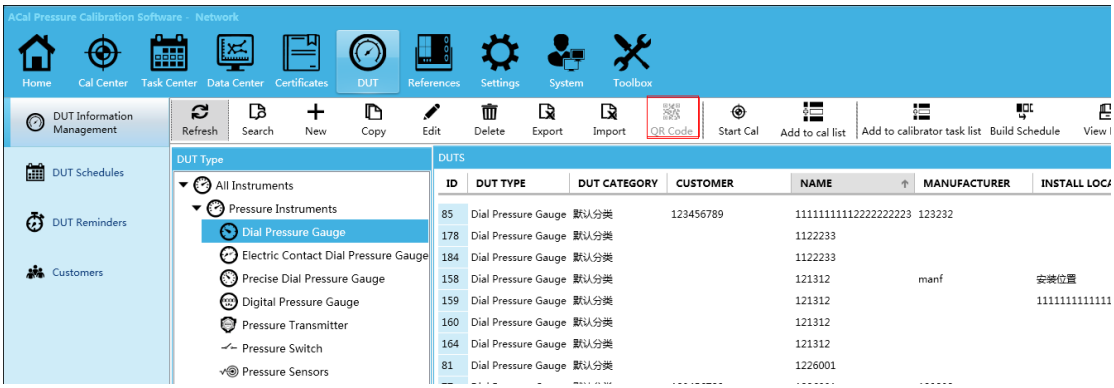


the Half Cut or The Auto Cut function depend on the support of the printer.

Step4: Print

After completing the steps above, you can choose items from DUT, References or Certificates to print.





2) Scanner

Tips:

(1) ACal system only supports the preset scanners

(2) You should scan the QR code in corresponding interface, for example, you can not scan certificate QR code in test interface.

Step1: Connect scanner

Connect the scanner correctly with the computer.

Tips: if you want to connect with Xenon1902 via USB, you should scan the barcode as shown inFigure 4 to set the scanner to HID mode.

Figure 4

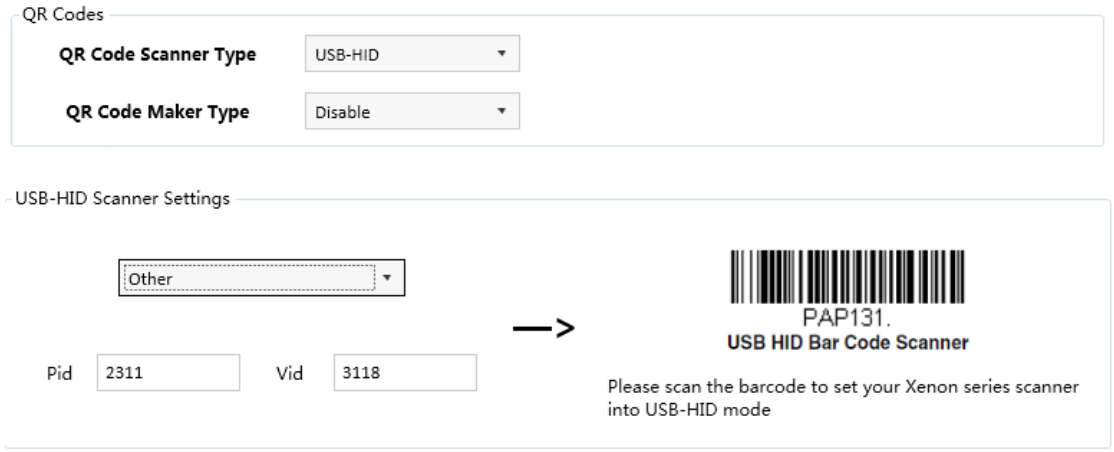
Step2: Configure printer

[My Settings]→[QR Code scanner Type] →Configuration →[Save]

(1)MS1690，Xenon1900

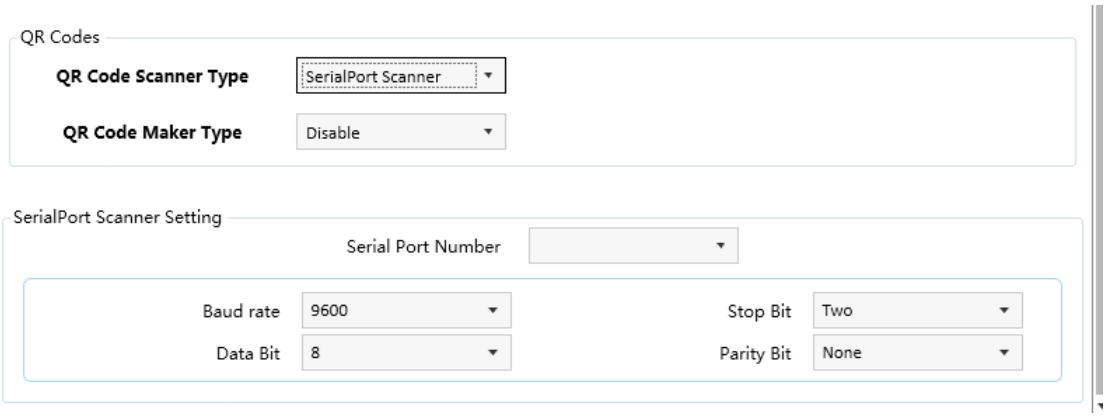
ACal has Built-in parameters，you can use it directly.

(2)USB HID scanner&& USB Keyboard scanner



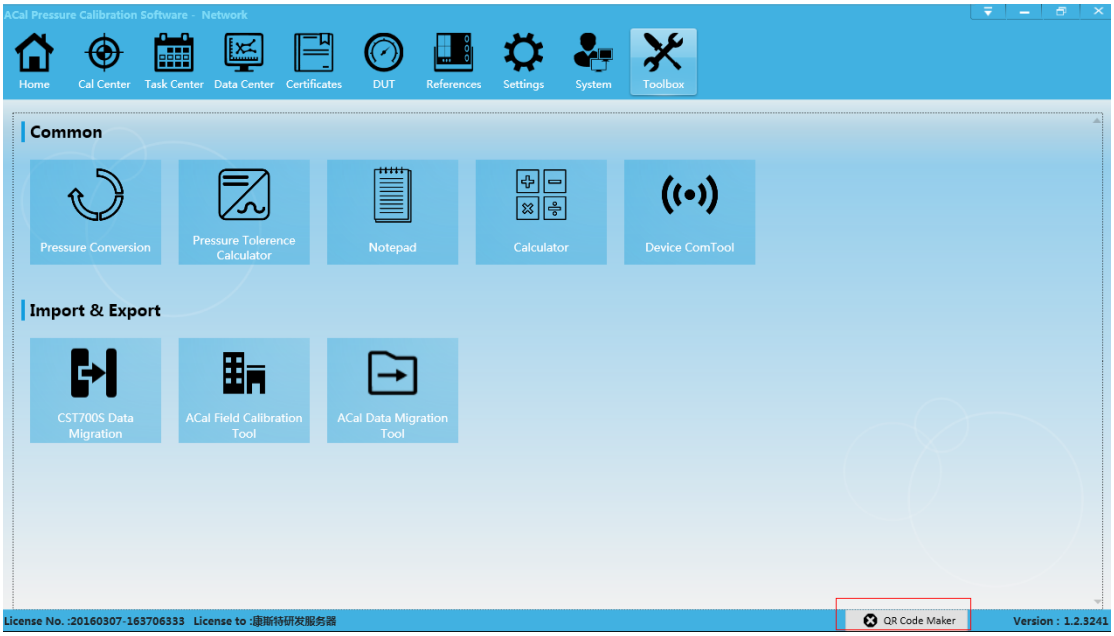
you should know Vid，Pid.

(3) Serial Port scanner



you should fill these parameters with right value.

if you set it successfully ,the scanner will be online, you can set it online or not.



Step3: Scan QR code

(1) Main interface

There are eight main interfaces in ACal, when scan QR code, the logic relationship between them and the QR code content type are:

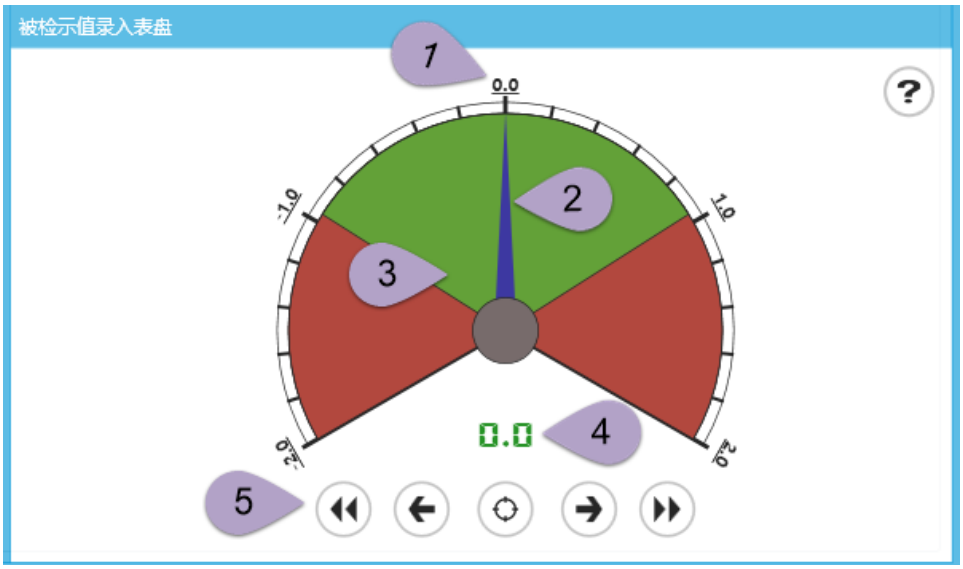
Operation interface	QR code content type	Action
All	Reference	Go to the References interface and select the corresponding reference
	Certificate	Go to the Certificates interface and select the corresponding Certificate
Home	DUT	Go to the DUT interface and select the corresponding DUT
Cal Center		Bring up the TO Calibration list interface , find the DUT through the whole DUTs and then add it into the Calibration list
Data Center		Search and select the history data record item of the DUT
Certificates		Search and select the history certificate item of the DUT
Other interfaces		Nothing will happen

(2) Other interfaces

Operation interface		QR code content type	Action
Test interface	Test Program	DUT	Add the DUT to the test program interface
	DUT search		Search the DUT and add to the list
	To calibration list		Search the DUT and add to the list
	Reference	Reference instrument list	Search the Reference and add to the list

C、Dial Pressure Gauge Control That Input Indication

1、 Main interface of the Control



① Scale value

The analog dial panel has five maximum scales which are the main scales and 20 minimum scales that each of them shows the minimum estimated value.

② Pointer

The Pointer of the analog panels shows the current indicated value.

③ Background color

The background color of the analog panel was divided into the green and the red ,the green area shows the tolerance range of the indication and the red area shows the range that exceeding the tolerance range.

④ Current indication

Display the current indicated value that shows by the pointer.

⑤ Buttons

The control buttons can be operated by mouse click and touch-screen.

2、 Operations

① Buttons Operation


The button can make the pointer in the analog panel jump to the left-most scale


The button can make the pointer in the analog panel move a minimum scale to left


The button can input the current indication of the analog panel


The button can make the pointer in the analog panel move a minimum scale to right


The button can make the pointer in the analog panel jump to the right-most scale

② Mouse click and Touch-screen Operation

When mouse enters into the analog panel ,the pointer will move following the movement or the sliding of the mouse and then click left mouse button to input the current indication ;Click the buttons below can reach the corresponding operation

③ Keyboard and Shortcut Operation

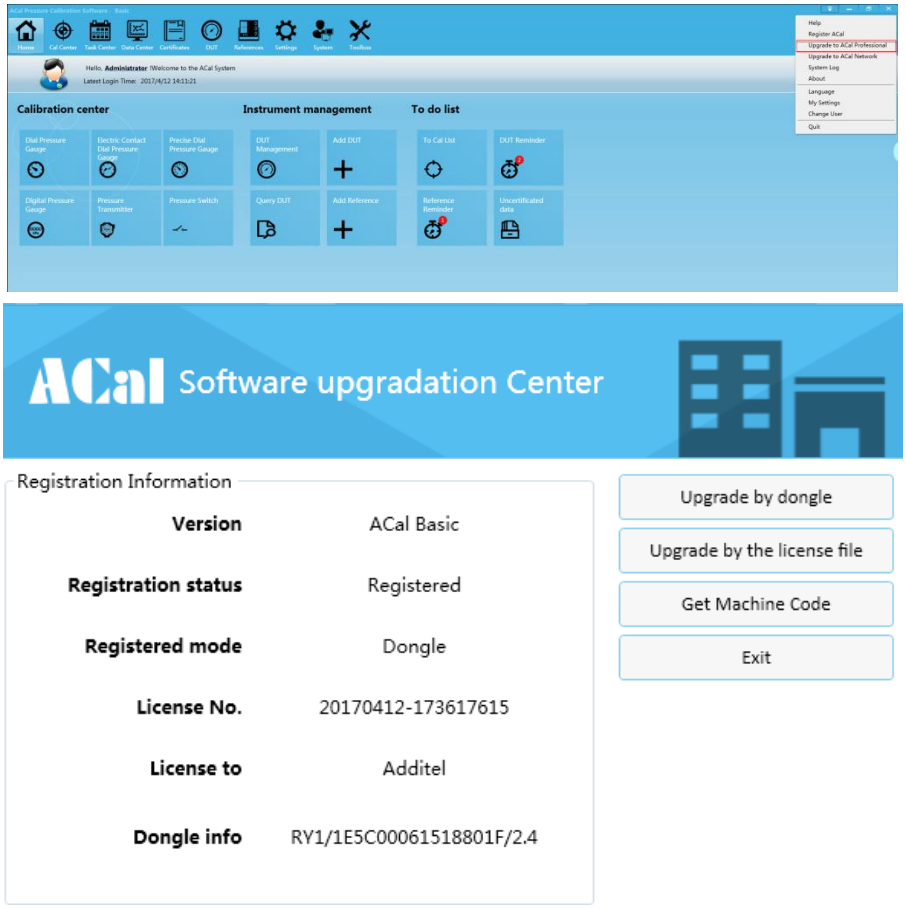
[Enter]:Input the current indication of the analog panel
[Space]:Reset the analog panel to initial state
[Left]:Move the pointer a minimum scale to left
[Right]:Move the pointer a minimum scale to right
[Up]:Move the pointer a maximum scale to right(which equals five minimum scales)
[Down]:Move the pointer a maximum scale to left(which equals five minimum scales)
[0]:Make the pointer jump to the middle scale of the analog panel
[1-9]:Make the pointer jump to one of the ninecorresponding scales in the right of the analog panel
[F1-F9]:Make the pointer jump to one of the ninecorresponding scales in the left of the analog panel

D、ACal version upgrade process

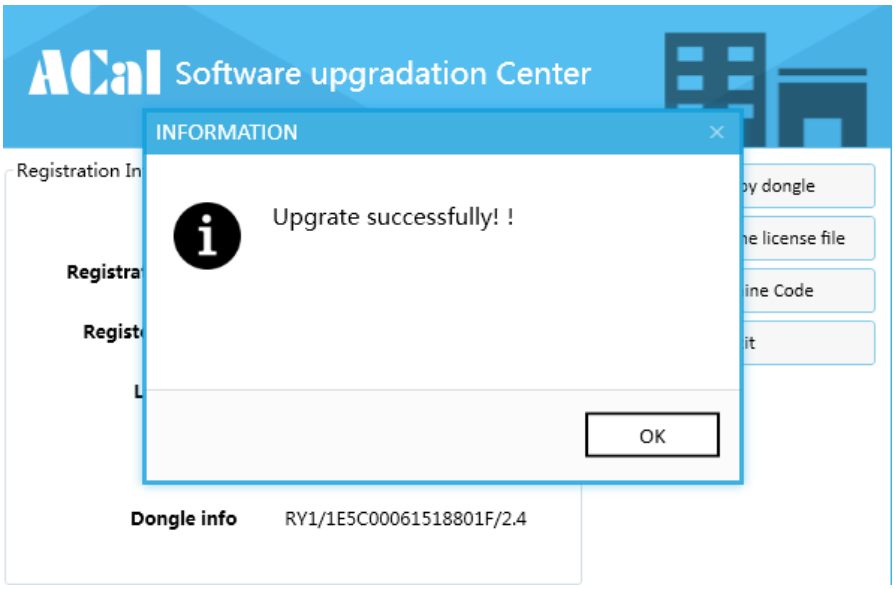
1、ACal Basic upgrade to ACalProfessional

Step 1：Purchase professional software licenses from suppliers.

Step2: Open the software upgradationform.



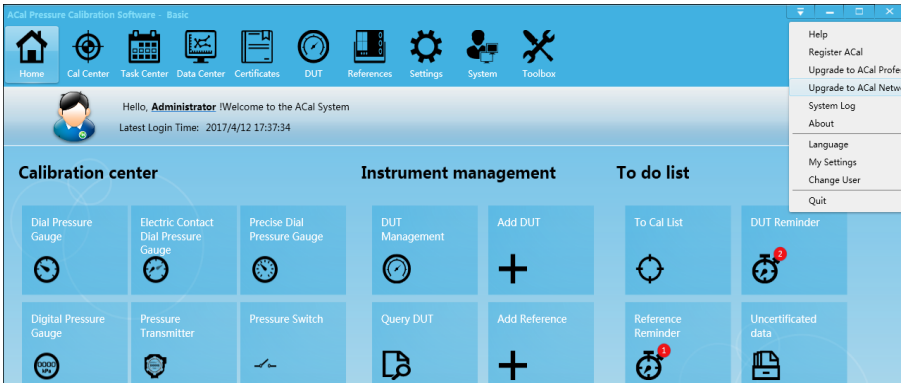
Step3：Registration（dongle or license file）



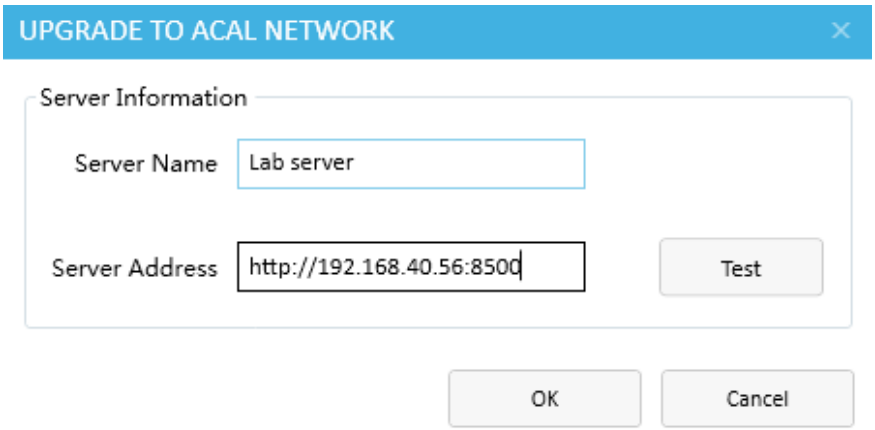
2、ACal Basic/ACalProfessional upgrade to ACal Network

Step1: Contact the Supplier to buy ACal network version, the supplier will provide the ACal server installation package and network license, you need to install the server management software according to the " ACal Installation Guides", register the software and finally get the server address.

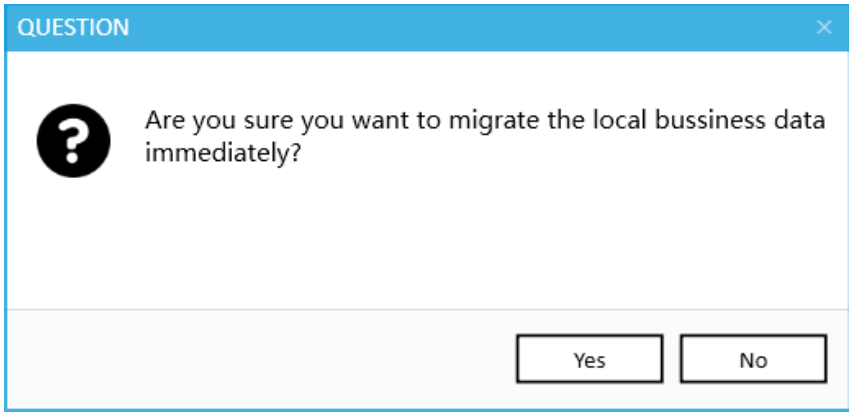
Step2:Select[Upgrade to ACal Network]



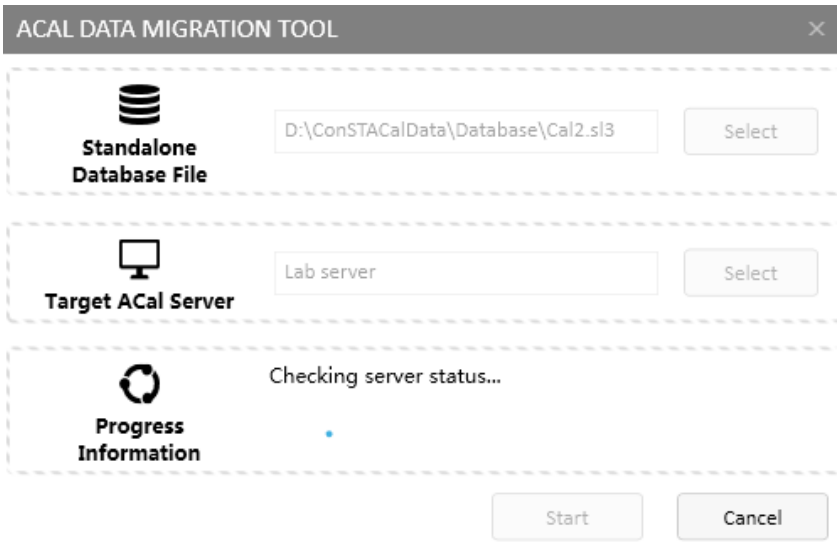
Step3: Fill in the server address of step 1



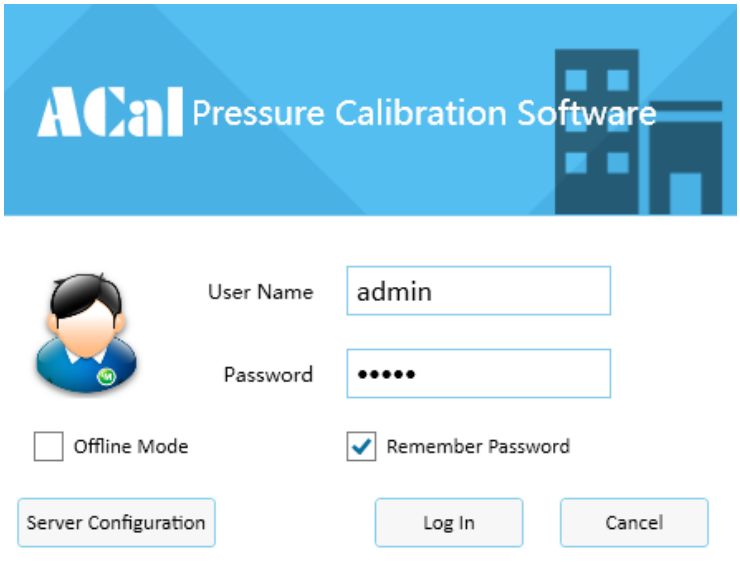
Step4: DataMigrate

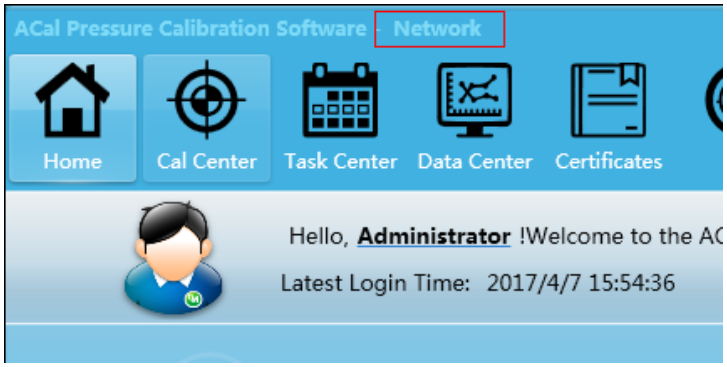


If you select Yes ,the data in the local database will copy to the server database .If you choose no ,you also can do that by ACal Data Migration Tool.



After the completion of the data migration ,it will automatically restart,and it has turned to the ACal network.





PS. ACal Data Migration Tool

ACal Data Migration Tool can copy the data of the local database to server database and also can copy data of server A to server B.

Open[Toolbox] →[ACal Data Migration Tool]

Choose the Migration Mode and Select source and Target ,then click [Start]